Volume 6, Issue 2 (XVII)
April - June 2019

ISSN 2394 - 7780

International Journal of
Advance and Innovative Research

Indian Academicians and Researchers Association
www.iaraedu.com

International Journal of Advance and Innovative Research

Volume 6, Issue 2 (XVII): April - June 2019

Journal - 63571

UGC Journal Details

Name of the Journal :	International Journal of Advance & Innovative Research
ISSN Number :	
e-ISSN Number :	23947780
Source:	UNIV
Subject:	Multidisciplinary
Publisher:	Indian Academicians and Researchers Association
Country of Publication:	India
Broad Subject Category:	Multidisciplinary

International Journal of Advance and Innovative Research

Volume 6, Issue 2 (XVII) : April - June 2019

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Research Papers

International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019

ISSN 2394 - 7780

A STUDY AND REVIEW OF PRADHAN MANTRI MUDRA YOJANA (PMMY) IN THE STATE OF MAHARASHTRA

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ABSTRACT
An economy like India with a population of more than 1.25 billion cannot sustain, if it does not have vibrant small, medium and micro enterprises to create jobs for the burgeoning population. Today small, micro and medium scale provide employment to more than 20% of the working population in India. So it is necessary that this MSME enterprises are provided with government support in the form of loans, training, exposure and support in marketing of their products. The major problems faced by small businesses or micro enterprises includes, lack of information, financial illiteracy, entry level policies, high cost, lack of infrastructure, lack of financial access and technologies barriers. Government of India came up with MUDRA loans in 2015 to support this enterprises by giving collateral free loans. The schemes has been successful in providing loans to MSME sector. Also it was found that over 93% of the mudra loans disbursed are below Rs.50000. In the light of this issues, it is necessary to study and review PMMY in the state of Maharashtra. This project will seek to understand the status of Mudra loans in the state of Maharashtra. It is found that Mudra scheme has been fairly successful in the state of Maharashtra, but more need to be done for financial inclusion of all categories of people.

Keywords: Mudra, Maharashtra, Impact, Micro Enterprises

INTRODUCTION
An economy like India with a population of more than 1.25 billion cannot sustain, if it does not have vibrant small, medium and micro enterprises to create jobs for the burgeoning population. As per World Bank report, growth alone will not be enough to attain the higher employment rates enjoyed by other developing countries. More than 1.8 million young people will reach working age every month in South Asia through 2025 and the good news is that economic growth is creating jobs in the region, said Martin Rama, World Bank South Asia Region Chief Economist (Bank, 2018). But providing opportunities to these young entrants while attracting more women into the labour market will require generating even more jobs for every point of economic growth, Rama added. Today small, micro and medium scale provide employment to more than 20% of the working population in India. So it is necessary that this MSME enterprises are provided with government support in the form of loans, training, exposure and support in marketing of their products.

Micro enterprises face many problems. They are in backward position compared to large corporates in India. The major problems faced by small businesses or micro enterprises includes, lack of information, financial illiteracy, entry level policies, high cost, lack of infrastructure, lack of financial access and technologies barriers. Finance Minister Shri Arun Jaitely has introduced in his budget speech in 2015-2016 that there are some 5.77 crore (NSSO survey data) small business units and micro units, majorly sole proprietorship, which are functioning as small manufacturing, trading or service businesses. 62% are held by the Scheduled Cast, Scheduled Tribe and Other Backward Class. For these low income groups, weaker sections, it is difficult to approach formal financial services and credit. Government of India (GOI) has introduced some major steps to funding the unfunded micro enterprises segment through a new financial inclusion initiative like Pradhan Mantri Mudra Yojana (PMMY).

PMMY is a flagship scheme launched by the Union Government on April 8, 2015 for providing loans up to Rs. 10 Lakh to the non-corporate, non-farm small/micro enterprises. Under PMMY, all banks i.e., Public Sector Banks, Private Sector Banks, Regional Rural Banks, State Co-operative Banks, Foreign Banks and Non-Banking Financial Institutions (NBFC)/Micro Finance Institutions (MFI) are required to lend to non-farm sector income generating activities below Rs. 10 Lakh. These loans are classified as MUDRA Loans under PMMY. For implementing the Scheme, Government has setup a new institution named, MUDRA (Micro Units Development & Refinance Agency Limited) for development and refinancing activities relating to micro units, in addition to acting as a micro finance sector, in general.

MUDRA provides refinance to all banks seeking refinance of small business loans given under PMMY. Thus, MUDRA refinances to all last mile financiers –Non Banking Finance Companies of various types engaged in financing of small business, Societies, Trusts, Non-Cooperative societies, Small banks, Scheduled Commercial banks and Regional Rural Banks-which are in the business of lending to Micro/Small business entities engaged

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in manufacturing, trading and other services. MUDRA has been formed with the primary objective of developing the micro enterprise sector in the country by extending various supports like the financial support of refinance and entrepreneurship assistance. The MUDRA loan objective of "Funding the Unfunded" has twin purposes, seeding new entrepreneurs and expanding existing units. Allocation under PMMY has been doubled in Union Budget in 2017-2018 at Rs. 2.44 Lakh Crore from previous 1.22 Lakh Crore with priorities to Dalits, Tribals, Backward class, Minorities and Women.

MUDRA LOAN- AN INTRODUCTION

MUDRA (Micro Units Development and Refinance Agency Limited) Bank was formed in April 2015 by the Government of India's Union Budget. It aims to provide integrated financial support to the micro enterprises sector which includes small manufacturing units, food service units and small industries to name a few. The basic motive of establishing MUDRA is to extend the facility of institutional finance to small business entities involved in various trading, manufacturing and service activities. Along with MUDRA, the PMMY (Pradhan Mantri MUDRA Yojana) was also launched. Under the PMMY scheme, everyone from the non-farm income generating sector can seek loans up to Rs. 10 lakhs.

The following are some of the key features and characteristics of the Pradhan Mantri MUDRA Yojana:

Loan amount offered- The scheme has three categories under which loans are disbursed:

1. **Shishu –** For loan amount up to Rs. 50,000
2. **Kishore-** For loan amount from Rs. 50,001- Rs 5 lakhs
3. **Tarun-** For loan amount more than 5 lakhs and up to Rs 10 lakhs

Who can borrow- Any businessperson or business who/which has not been a defaulter on any loan repayment previously is eligible to borrow under the PMMY (Pradhan Mantri MUDRA Yojana). Thus individual business owner, private limited companies, public sector companies, proprietary firms or any other legal business entity can apply for the Mudra loan.

Purpose of Loan assistance- As MUDRA loan is a business loan, the loan amount cannot be used for personal needs. It is provided to small businesses that carry out specific activities in the manufacturing, services or trading sectors. Businesses can utilize the capital obtained from a MUDRA loan for marketing purposes, increasing the available working capital or for acquiring capital assets to grow the business.

Maximum Tenure– As per existing rules of the PMMY, the maximum repayment period for a MUDRA loan can extend to 5 years, however, the repayment period can be shorter if the lender decides so while sanctioning the loan.

MSME SECTOR IN INDIA

Micro, Small and Medium Enterprises (MSME) is second largest employment generating sector after agriculture sector. MSME is second largest employment generating sector after agriculture sector. It provides 80% of jobs in industry with just 20% of investment. It contributes around 31% to nation's GDP and 45% and 34% share of the overall exports and manufacturing output (2017 report). The government has given a new turnover based classification of MSMEs in February 2018. As per this new classification, the MSMEs are categorized in term of business turnover. This is in place of the previous classification based on investment made in plant and machineries if they are operating in the manufacturing sector and investment in equipment for service sector companies. As per the new classification, the same turnover based criteria have been applied for all type of MSMEs including those operating in the services sector.

Though the primary responsibility of promotion and development of MSMEs is of the State Governments, the centre has passed an Act in 2006 to empower the sector and also has formed a Ministry (Ministry of MSMEs). It was the Micro, Small and Medium Enterprises Development (MSMED) Act which was notified in 2006 that defined the three tier of micro, small and medium enterprises and set investment limits. The new turnover criteria will better suit with the GST Network (GSTN) and other formats of segregating the MSMEs.

OBJECTIVES OF THE STUDY

1) To study the status of Mudra loans in the state of Maharashtra.
2) To analyse and measure the extent of impact on various categories like SC, ST, OBC, Women micro enterprises in terms of loan sanctioned.
3) To study the gaps in providing Mudra loans to Micro enterprises.

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REVIEW OF LITERATURE

Raj Kumar identifies the role of innovative schemes offered by the banking sector in the upliftment of MSMEs in India. They found that Micro, Small and Medium Enterprises' (MSMEs) contribution in the development of world economy has been significant, both in terms of contribution to GDP and creation of employment opportunities. The researchers analysed the growth in Bank credit for the MSME sector over the last decade. The review showed that the Bank credit has increased significantly for the MSME sector since the priority sector lending norms were implemented but still there is a significant gap that needs to be fulfilled when it comes to the fulfilment of the credit needs of the MSME sector.

(Purnima Rao, 2017) in this exploratory study investigates the financing issues faced by Indian small and medium enterprise (SME) owners. It also classifies the financing constraints into four financing gaps, namely, demand, knowledge, supply and benevolence. The findings reveal the real-time issues being faced by SME owners. SMEs faced both demand- and supply-side constraints. The most common financing challenges are high cost of credit, complex procedures of lending institutions, information asymmetry, creditworthiness and self-abstaining from external financial resources. Issues pertaining to lack of knowledge and awareness about the financial products and services are also being noticed by the researchers. (Dixit, 2017) found that ending to women-owned micro, small, and medium enterprises (MSMEs) is still unexplored when compared to lending to other MSMEs in India. Due to a lack of segmental focus and with a higher perception of risk, formal financial institutions have not made much effort to understand this segment. This study assesses the gap in demand and supply of finance to women owned SMEs, to focus on the opportunity in serving women entrepreneurs, and present initiatives taken by financial institutions in improving access in India. Above research paper review suggest that there has been gap in providing credit to micro enterprises. Also review measures the effectiveness of microenterprise loans on increasing entrepreneurs' incomes and innovation. It is found that microenterprise loans associated with proper business skills, information, and technologies be provided by MFIs with careful screening and monitoring to ensure the effective utilization of loan capital. Also lending to women-owned micro, small, and medium enterprises (MSMEs) is still unexplored when compared to lending to other MSMEs in India.

(Irani Arráiz, 2011) using a firm-level panel dataset of the Colombian manufacturing sector from 1997 to 2007, studied the effect of a policy by which government-backed partial credit guarantees are automatically granted to firms lacking collateral in order to lift their credit constraints. Authors found that firms that gain access to credit backed by the NGF guarantees are able to grow in terms of both output and employment, and increase the average wages they pay. They do not find, however, an impact on labour productivity or investment and the evidence with regards to the impact on total factor productivity is mixed. Their results suggest that firms use the new funds as a source of working capital to grow their businesses rather than as a source for investment in new fixed assets. (Lestari, 2017) in their research paper analysed the Kredit Usaha Raky (KUR) programme, the guaranteed microcredit programme for supporting the development of SMEs in Indonesia. By gaining access to credit, SMEs are expected to develop while also creating employment and generating income for the poor and near poor. This paper shows that KUR's role in accelerating poverty reduction is still questionable as there are many poor households unable to access the programme. Hence, the main policy challenges are: first, improving the design of KUR to reduce information asymmetry; second, ensuring that KUR meets its anti-poverty objectives by reaching the right sectors and the right regions; and third, strengthening the KUR Policy Committee's oversight and ability to coordinate across key stakeholders.

(Simon BoatengEmail, 2018) examined the constraints to accessing finance among women-owned small businesses in the Lower Manya Krobo Municipality in the Eastern Region, Ghana. The study revealed that there are constraints of poor market demand and lack of capital and credit. In furtherance, although collaterals exist for small businesses, they are being discriminated against women micro-entrepreneurs due to the patrilineal inheritance system of the area. Again, it was found that the financial institutions generally considered giving loans as risky as a result of lack of codified business strategy and plan, proper costing of business and informational asymmetries about business Owners and their businesses. The study, therefore, recommends that the activities of women micro businesses in the private sector of the economy should be urgently recognised within the lending models and structures as they constitute a valuable area of economic growth. (Girish S, 2016) in their research paper studies how small-scale industries and startups play a major role in increasing the living standards of our population especially rural India. Various policies have been brought in by the current government to encourage these MSMEs, and MUDRA (Micro units Development and Refinance Agency) is another milestone to ensure that these units are provided with the sufficient funds required to fund these units. This paper focuses on the importance and the need to utilize the benefits of this policy specifically in Karnataka. In this paper they found that these facilities are available and are accessible at any bank to provide financial aid

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to the unskilled and uneducated population. Form above review, it can be summarized that firms that gain access to credit backed by the guarantees are able to grow in terms of both output and employment, and increase the average wages they day. Also it is found that firms use the new funds as a source of working capital to grow their businesses rather than as a source for investment in new fixed assets. Some paper suggest that collateral free loans role in accelerating poverty reduction is still questionable as there are many poor households unable to access the programme. Also Small-scale industries and startups play a major role in increasing the living standards of our population especially rural India. It is clear that there is mixed view in literature regarding impact of loans on employment, income generation and standard of living.

RESEARCH METHODOLOGY

Research Design: The research will be descriptive in nature. The paper studies and reviews the status of Mudra loans in the state of Maharashtra.

Data collection

Sources of data: Secondary data is collected through reference books, Newspaper, websites, discussions with bank officials. Both Qualitative and Quantitative data is collected.

Data Analysis and Interpretation

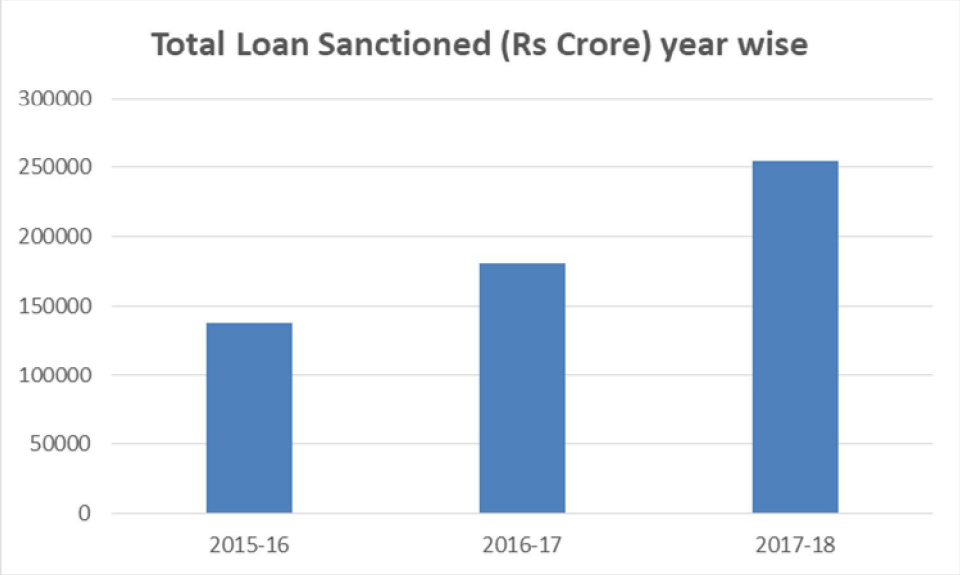
Performance of Mudra scheme in India-

Table 1: Total Sanctioned Amount from 2015-2018 (All India)

Sr. No	Year	Total Amount Sanctioned (Rs. Crores)	Percentage increase (Year on Year)
1	2015-16	137449.3	-
2	2016-17	180528.5	31.34
3	2017-18	253677.1	40.52

Source: https://www.mudra.org.in/

Chart-1: Total Loan Sanctioned (Rs Crore) year wise:



From the chart, it can be seen that the number of loan sanctions and the sanctioned amount has been increasing year on year. It shows, banks are implementing government scheme in a very positive way.

Table-2: State-Wise Performance of Top 10 States –PMMY

Sr. No.	State	Sanctioned (In Rs. Crores) (2017-18)	Sanctioned (In Rs. Crores) (2016-17)	Sanctioned (In Rs. Crores) (2015-16)
1	Tamil Nadu	25331.68	18,052.68	15,846
2	Karnataka	23009.73	18,002.55	16,861
3	Maharashtra	22751.4	17,286.66	13,806
4	West Bengal	20552.19	15,695.01	8,034
5	Uttar Pradesh	22077.89	15,282.61	12,276

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6	Bihar	15919.4	12,190.60	7,554
7	Madhya Pradesh	14886.15	10,506.45	8,097
8	Rajasthan	13862.55	9,024.71	5,485
9	Odisha	11558.91	7,891.34	5,695
10	Gujarat	11386.52	7,781.94	6,035

Source: https://www.mudra.org.in/

From the table, it can be seen that Maharashtra is among top three states in all the last three years. It shows the success of Mudra in Maharashtra. Out of total loan sanctioned for all India, 13 to 15% is sanctioned for the state of Maharashtra.

Table-3: Performance according to category in Maharashtra

Category/ Year	Shishu		Kishor		Tarun	
	Number of Accounts	Sanctioned Loan (Rs Crores)	Number of Accounts	Sanctioned Loan (Rs Crores)	Number of Accounts	Sanctioned Loan (Rs Crores)
2015-16	3337382	6695.06	154441	3645.03	43242	3466.39
2016-17	3054130	6961.75	220662	5082.03	69362	5242.88
2017-18	3145685	8093.38	354818	7529.9	96117	7128.12

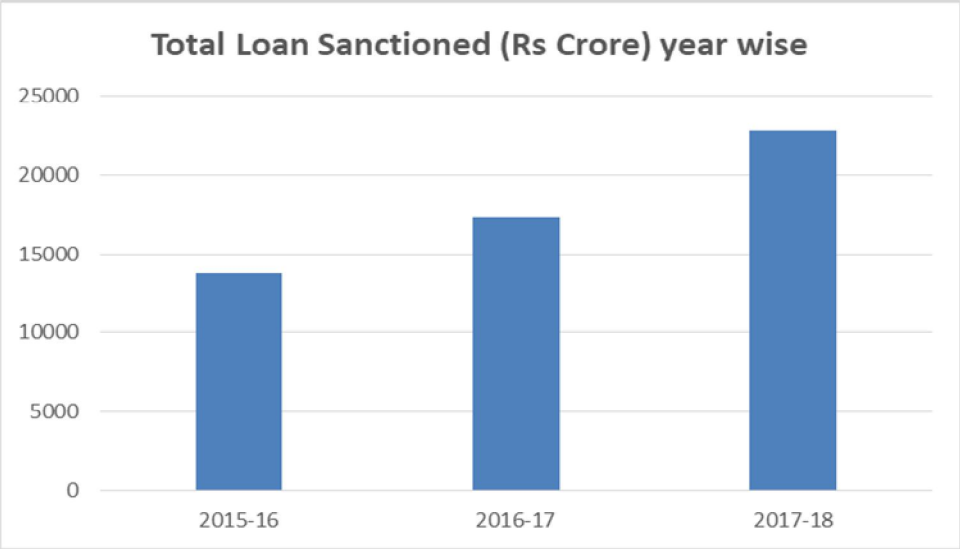
Source: https://www.mudra.org.in/

Table-4: Total Loan Sanctioned (Rs Crore) year wise: (Maharashtra State):

Sr. No	Year	Total Amount Sanctioned (Rs. Crores)	Percentage increase (Year on Year)
1	2015-16	13806.48	-
2	2016-17	17286.66	25.2
3	2017-18	22751.4	31.61

Source: https://www.mudra.org.in/

Chart-2: Total Loan Sanctioned (Rs Crore) year wise: (Maharashtra State)



From the chart, it can be seen that the number of loan sanctions and the sanctioned amount has been increasing year on year in Maharashtra state. It shows, banks are implementing government scheme in a very positive way. The percentage increase in the sanction of loans is more than 25% and 31% year on year.

Also in 2017-18, 40% of loan amount sanctioned was the share of women borrowers in total loan amount sanctioned. The share of women in the Shishu category is at 75%, in terms of number of accounts under Shishu, and it formed 95.78% of the loan accounts of women borrowers. This is mainly due to the high share of MFIs in Shishu loans, where women are the major beneficiaries of micro finance loan. The participation of the weaker

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sections (SC/ST/OBCs) of the society in the PMMY programme was at 55%, in terms of loan accounts, and 34% in terms of loan amount sanctioned. The share of SC, ST and OBC categories were 18%, 5% and 32%, respectively, in terms of the loan accounts sanctioned. Here again, the major portion of their share belongs to Shishu category.

The average loan size under PMMY during FY 2017-18 increased to 52,739 crore as against 45,472 crore in the previous year. Similarly, the average loan size under shishu category at 24,883 crore has been marginally higher than that of 23,316.67 crore in the previous year. There is a decrease in average loan size under Kishor and Tarun Category.

Among the three categories, Shishu loan had the highest share of 88.65% in terms of number of accounts and which was followed by Kishor and Tarun in 2017-18. The share of Kishor loan accounts increased to 9.67% in FY 2017-18 compared to 6.71% in FY 2016-17. Share of Tarun loan also increased slightly. The number of new loan accounts during FY 2017-18 was at 26% of the total loan accounts and 38% in terms of the sanctioned amount. There were nearly 1.25 crore new loan accounts sanctioned under PMMY during the year, which was more than 1 crore accounts sanctioned during the previous year.

FINDINGS

1) Mudra loans has seen steady increase in sanction of loan to micro enterprises in India.

2) Major portion of loan category belongs to Shishu category.

3) It can be seen that the number of loan sanctions and the sanctioned amount has been increasing year on year in Maharashtra state. The percentage increase in the sanction of loans is more than 25% and 31% year on year.

4) It shows, banks are implementing government scheme in a very positive way.

5) The participation of the weaker sections (SC/ST/OBCs) of the society in the PMMY programme was at 55%, in terms of loan accounts, and 34% in terms of loan amount sanctioned.

6) Also in 2017-18, 40% of loan amount sanctioned was the share of women borrowers in total loan amount sanctioned.

7) The share of women in the Shishu category is at 75%, in terms of number of accounts under Shishu, and it formed 95.78% of the loan accounts of women borrowers.

8) It can be seen that Maharashtra is among top three states in all the last three years. It shows the success of Mudra in Maharashtra. Out of total loan sanctioned for all India, 13 to 15% is sanctioned for the state of Maharashtra.

9) The share of SC, ST and OBC categories were 18%, 5% and 32%, respectively, in terms of the loan accounts sanctioned. But the major portion of their share belongs to Shishu category.

RECOMMENDATIONS

1) The loans sanctioned are mostly in shishu category. For wider development, loans to kishor and tarun category should be increased.

2) Though the share of women is very high, it is only in shishu category and the loan size is very small.

3) It is necessary to increase loans to open category economically backward class people. No mention of this category in the report of Mudra.

4) In Maharashtra, there is need of more efforts to increase the size of loans as Maharashtra is a industrialized state in India.

5) The share of SC, ST and OBC categories is good but it is shishu category, It should be increased to kishor and tarun categories.

6) The number of new loan accounts during FY 2017-18 was at 26% of the total loan accounts and 38% in terms of the sanctioned amount.

CONCLUSION

Thus, Pradhan Mantri Mudra Yojana (PMMY) continues to be a major initiative of the Government of India providing credit to millions of unfunded micro units in the country. The programme has benefited 12.27 crore loan accounts with a sanction of nearly Rs. 5.71 lakh crore in the last three years. It has also resulted in benefiting about 3.50 crore new loan accounts/entrepreneurs, thereby providing employment to a large number

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of people across the country. Also it has helped women's, SC/ST, OBC category entrepreneurs in India. Also due to launch of this scheme financial inclusion has increased towards positive direction. In Maharashtra, Mudra scheme has been successful. But more needs to be done. Because there is still a big gap in providing loans to the entrepreneurs. Also there is further scope of research in terms of assessing actual impact of Mudra loans on income generation, employment generation and business expansion.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

A STUDY OF NON-TAX REVENUE RECEIPT ANALYSIS BY E-GOVERNANCE IN GOVERNMENT FINANCIAL SYSTEM OF THE GUJARAT STATE

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ABSTRACT
E-governance is the application of Information and Communication Technology (ICT) tools in governance functioning. This is far beyond than mere computerization and implies fundamental change in the way government operates. According to the World bank "E-Government is to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions."

Keyword: E-Governance, Non-Tax Revenue Receipt Analysis

INTRODUCTION
The Constitution of India provides for the manner in which the accounts of the Government have to be kept. Article of the Constitution provides for creation of a Consolidated Fund of India, Contingency Fund and Public Account. All revenues received, loans raised and all moneys received by the Government in repayment of loans are credited to the Consolidated Fund of India and all expenditures of the Government are incurred from this fund. Money can be spent through this fund only if appropriated by the Parliament. The consolidated Fund has further been divided into Revenue and Capital divisions. All other moneys received by or on behalf of Government are credited to the Public Account.

OBJECTIVE OF THE STUDY
Present article is based on the Study of Non-Tax Revenue Receipt analysis by E-Governance in Government Financial System of the Gujarat State.

PERIOD OF STUDY
The study period is to be converted 5 years; from 2012-13 to 2016-17.

NO. OF SAMPLE
Researcher has considered State of Gujarat as a Universe for the present study Researcher has considered only Deficit Analysis from Finance base parameters for present study.

Table-1: Non-Tax Revenue Receipt of Government of Gujarat for the Period from 2012-13 to 2016-17
(Rs. in Crore)

Non-Tax Revenue	2012-13	2013-14	2014-15	2015-16	2016-17	Average
Interest Receipts	1325.84	1267.18	1011.47	843.00	2580.10	1405.52
Non-ferrous mining and metallurgical Industries	1847.16	1578.34	4285.85	3350.19	3746.50	2961.61
Major and Medium irrigation projects	714.13	897.51	1034.91	1028.42	1086.10	952.21
Port and light houses	577.68	636.84	742.08	922.24	933.49	762.47
Medical and Public health	126.34	111.88	243.57	171.51	981.98	327.06
Police	163.84	177.81	214.20	219.82	248.88	204.91
Dividends & Profits	54.31	277.44	89.54	96.06	110.10	125.49
Others	1207.69	2071.31	1920.99	3562.27	3658.51	2484.15
Total Non-Tax Revenue	**6016.99**	**7018.31**	**9542.61**	**10193.51**	**13345.66**	**9223.42**

Source: www.cag.gov.in (Annual Report on State Finance by CAG 2012-17)

Table-2: Trend Percentage of Non-Tax Revenue Receipt of Government of Gujarat for the Period from 2012-13 to 2016-17

Non-Tax Revenue	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Average**
Interest Receipts	22.03	18.06	10.60	8.27	19.33	**15.66**

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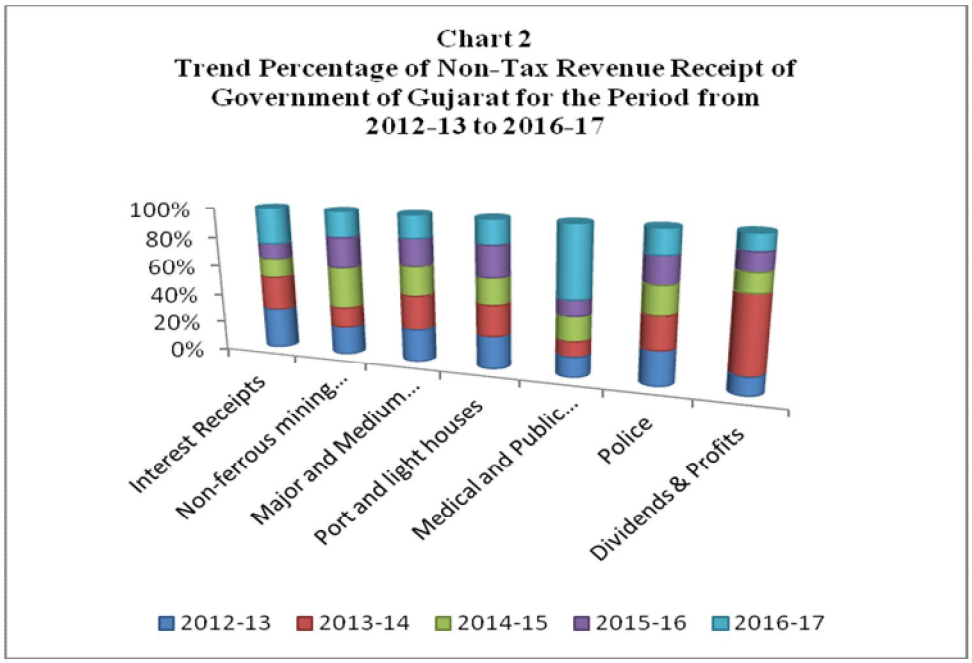
Non-ferrous mining and metallurgical Industries	30.70	22.49	44.91	32.87	28.07	**31.81**
Major and Medium irrigation projects	11.87	12.79	10.85	10.09	8.14	**10.75**
Port and light houses	9.60	9.07	7.78	9.05	6.99	**8.50**
Medical and Public health	2.10	1.59	2.55	1.68	7.36	**3.06**
Police	2.72	2.53	2.24	2.16	1.86	**2.30**
Dividends & Profits	0.90	3.95	0.94	0.94	0.82	**1.51**
Others	20.07	29.51	20.13	34.95	27.41	**26.41**
Total Non-Tax Revenue	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

➢ GRAPHICAL PRESENTATION



It is evident from above table and graph that Government of Gujarat is receiving highest percentage income from Non-ferrous mining and metallurgical industries with an average 32 percentages during research period while other non-tax revenue receipt is showing an average with 26 percentages during research period. Interest income as non-tax revenue is showing on third stage with an average 15.66 percentage during research period. While major and medium irrigation projects is showing with 10.75 average percentage during research period and port and light houses is showing with an average 8.5 percentage. Medical and public health with 3.06 percentages, police department is showing an average 2.30as an average percentage during the year while least income from no-tax revenue is dividends and profits with an average1.51 percentage during research period.

CONCLUSION

For the present study researcher has attempted to study the non-tax revenue analysis by E-governance in Government Financial System of Gujarat State It is found moderate non-tax revenue is generating by Government during research period.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

BIO-BASED NANOCOMPOSITE FILMS FOR FOOD PACKAGING - A REVIEW

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ABSTRACT

Concerns on environmental waste problems caused by non-biodegradable petrochemical-based plastic packaging materials as well as the consumer's demand for high quality food products has caused an increasing interest in developing biodegradable packaging materials using annually renewable natural biopolymers such as polysaccharides and proteins. So Biofilms have arised, Several edible materials have had their film forming properties studied, to produce edible films to be used in food packaging. But these biofilms have poor mechanical and physical characteristics so this is replaced by bio-nanocomposite edible films, which have better properties similar to petroleum-based polymers. The nanocomposites are having the improved mechanical properties. Both the water uptake and the diffusion coefficient of water were found to decrease. The nanocomposites are prepared by three major pathways- In situ polymerization, In solution intercalation, In melt intercalation. Starch-Based Nanocomposites, Cellulose-Based Nanocomposites, Chitosan-Based Nanocomposites, Protein-Based Nanocomposites are prepared by any of these three major path ways. The food packaging application of these films found better results as the active packaging for enhanced food quality, safety and innovative packaging.

This review concludes that by replacing the biofilms with the bio nanocomposite films there is an improvement in the mechanical and physical characteristics of the films similar to the petroleum based polymer films. Therefore these petroleum-based films can be replaced to some extent and can reduce the packaging related pollution problems.

Keywords: active packaging, bio-films, bionanocomposite, food packaging, nanocomposite, Natural biopolymer,

INTRODUCTION

At the turn of the 20th century, most non-fuel industrial products like inks, dyes, paints, medicines, chemicals, clothing, synthetic fibres and also plastics were made from biologically derived resources. However, 70 years later petroleum-derived chemicals to a major extent replaced these.

Now, at the turn of the 21st century recent developments are raising the prospects that naturally derived resources again will be a major contributor to the production of industrial products. Currently, scientists and engineers successfully perform developments and technologies that will bring down costs and optimize the performance of biobased products. At the same time, environmental concerns are intensifying the interest in agricultural and forestry resources as alternative feed stocks. A sustained growth of this industry depends on the development of new markets and cost and performance competitive biobased products. A potential new market for these materials is food packaging, a highly competitive area with great demands for performance and costs.

Food and beverage packaging is responsible for about 70% of the packaging market in the united states, and more than half the worldwide market. Most of this large volume of food packaging material is meant to be discarded without recycling, because of recycling costs and difficulties in polymer separation.

To come across the recycling and other pollution problems, several biodegradable food packaging materials are used for reducing the usage of non biodegradable material. Edible materials have had their film forming properties studied, to produce edible films for food packaging, not to completely replace synthetic plastics, but rather to improve their efficiency, thus reducing the amount of synthetic polymers required for each application.

So Biofilms have arised but they are of poor mechanical and physical properties. And now these Biofilms are replaced by bio-nanocomposite edible films, which have better properties similar to petroleum-based polymers.

The use of edible materials serve a number of important functions, such as extending the food shelf life, enhancing food quality, biodegradability. Azeredo. (2009)

Cooksey.(2005) studied on establishing methods for coating low-density polyethylene film or barrier films with methyl cellulose as a carrier for nisin and found that they significantly reduced the Listeria monocytogenes in solutions and vacuum packed hot dogs. And also studied the use of chitosan in films to inhibit the Listeria monocytogenes. These were found effective.

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BIO-BASED MATERIALS

In general, biobased polymers may be divided into three main categories based on their origin and production:

Category 1: polymeric materials

Polymers are extracted from marine and agricultural products. Examples are polysaccharides such as cellulose, starch and chitin, and proteins such as casein, whey, collagen and soy.

All these polymers are by nature hydrophilic causing processing and performance problems especially in relation to packaging of moist products. On the other hand, these polymers make materials with excellent gas barriers.

Category 2: polymeric materials

Polymers produced by classical chemical synthesis using renewable biobased monomers. A good example is polylactic acid, a biopolyester polymerized from lactic acid monomers. The monomers themselves may be produced via fermentation of carbohydrate feedstock.

To date, polylactic acid (PLA) is the polymer showing the highest potential for a commercial major-scale production of renewable packaging materials. The PLA materials have a good water vapour barrier and have also relatively low gas transmittance.

The feedstock can be agricultural resources, e.g. corn or wheat, or alternatively agricultural waste products, such as whey or green juice.

Category 3: polymeric materials

Polymers produced by microorganisms or genetically modified bacteria. To date, this group of biobased polymers consists mainly of the polyhydroxyalkonoates , but developments with, for example, bacterial cellulose are in progress.

Poly (hydroxyalkanoate)s (PHAs) are a family consisting of renewable, biologically degradable, biocompatible, optically active polyesters. They are produced by many bacterial species in the form of intracellular particles, functioning as an energy and carbon reserve material.

The presence of functional groups in the side chains of the polymer makes it possible to modify the polymer chemically, increasing the number of potential food-packaging applications of PHAs. Presently, the production of PHAs is not cost-effective for the production of packaging materials.

Bacterial strains of *Acetobacter xylinum* and *A. pasteurianus* can produce an almost pure form of cellulose (homo- β -1,4-glucan). Its chemical and physical structure is identical to the cellulose formed in plants. It also has an enormous potential within the food-packaging industry, but is so far largely unexploited.

Masaya *et* al.(2008)Transparent polymers were reinforced by bacterial cellulose BC nanofibers, which are 10_50 nm ribbon-shaped fibers. They exhibited high luminous transmittance at a fiber content as high as 60 wt %, and low sensitivity to a variety of refractive indices of matrix resins. Due to the nanofiber size effect, high transparency was obtained The optical transparency was also surprisingly insensitive to temperature increases up to 80 °C. As such, BC nanofibers appear to be viable candidates for optically transparent reinforcement.

Table-1: Category 1 polymers directly extracted from biomass

Polysaccharides	Proteins	Lipids
Starch	***Animal source***	Bees wax
Potato	Casein	Cadellila wax
Maize	Whey	Triglycerides
Wheat	Collagen/gelatine	Acetylated monoglycerides
Rice	Fish myofibrillar protein	Fatty acids
Derivatives	Keratin	Fatty alcohols
	Egg white	Sucrose fatty acid esters
		Resins such as shellac and terpene resin.

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Cellulose Cotton Wood Other derivatives	***Plant source*** Zein Soya Gluten cotton seed protein Protein from sorghum - kafrin Rice bran Peanuts Pea	
Gums Guar Locust bean Alginates Carragenan Pectins Derivatives		
Chitosan /Chitin		

(Webert 2002)

Category 2: polylactic acid (PLA), other polyester.

Category 3: poly(hydroxyalkanoate)s (PHAs), bacterial cellulose. (Webert 2002)

NATURAL BIOPOLYMER-BASED FILMS

These are the materials often formulated with natural biopolymers, such as polysaccharides, proteins, and natural gums, capable of forming a cohesive and continuous matrix.

Film is regarded as a stand-alone thin layer of materials composed of a polymer matrix providing structural integrity. Generally, films are prepared from polymers for matrix formation and other additives. The formulation of films needs the use of at least one component capable of forming a structural matrix with a sufficient cohesiveness. Only high molecular weight polymers, owing to their sufficient cohesive strength and capacity for coalescence, can produce such film structure.

Natural biopolymer films can be prepared with various hydrocolloids (polysaccharides and proteins), lipids, and their composites as polysaccharide films, protein films, lipid films, composite films.

Abayomi *et* a/.(2008) prepared Rice bran protein-based edible films and reported that the puncture strength (PS) of RBP films increased up to pH 8.0 and then decreased.

Wang *et* al.(2007) assessed the film-forming abilities of six types of proteins, as well as six types of polysaccharides at various concentrations (proteins: 0-16%; polysaccharides: 0-4%) and heating temperatures (60-80 C). Biopolymer films evaluated included: sodium caseinate (SC), whey protein isolate (WPI), gelatine (G); caboxymethyl cellulose (CMC), sodium alginate (SA) and potato starch (PS). Screening trials showed that optimal film-forming conditions were achieved and good tensile strength, flexibility, tear strength, puncture resistance, respectively.

The commercial use of edible films has been limited because:

- In some instances relatively poor mechanical properties
- Many are relatively hygroscopic nature.
- The present low level of production and high cost.

Therefore to develop biodegradable plastics with properties comparable to petroleum-based plastics an attractive option is the biobased nanocomposite materials.

NANOCOMPOSITES

Nanocomposites refer to multiphase materials where at least one of the constituent phase has one dimension less than 100nm.

A VARIETY OF NANOFILLERS INCLUDE

- Solid layered clays
- Synthetic polymer nanofibers

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- Polysaccharide nanocrystals
- Carbon tubes.

IMPORTANCE OF BIO-NANOCOMPOSITE FILMS

When polymers are combined with nanofillers, resulting in bio-nanocomposites exhibit significant improvements in

- Mechanical properties
- Dimensional stability
- And solvent or gas resistance
- Low density
- Transparency
- Good flow
- Better surface properties
- Recyclability.

Up to now only the layered silicate attracted the attention of packaging industry. And polysaccharides are among the most promising sources for the production of nanoparticles.

Zhao *et al.* (2008).

A) POLYSACCHARIDE NANOCRYSTALS

Stable aqueous suspensions of polysaccharide nanocrystals can be prepared by acid hydrolysis of the biomass. The suspended colloidal particles include whiskers (elongated rod-like nanoparticles), nanocrystals and monocrystals.

a) Cellulose and chitin colloidal aqueous suspension

- The biomass is generally first submitted to a bleaching treatment with NaOH in order to purify the cellulose or chitin by removing other constituents.
- The bleached material is then disintegrated in water, and the resulting suspension is submitted to a hydrolysis treatment with acid. The amorphous regions of cellulose or chitin act as structural defects and are responsible for the transverse cleavage of the microfibrils into short monocrystals under acid hydrolysis.
- The resulting suspension is subsequently diluted with water and washed by successive centrifugations. Dialysis against distilled water is then performed to remove free acid in the dispersion.
- Complete dispersion of the whiskers is obtained by a sonication step.
- The dispersions are stored in the refrigerator after filtration to remove residual aggregates with the addition of several drops of chloroform. Then these solutions are used for reinforcing the polymers to form bio-nanocomposite film.

Azeredo *et* al. (2009) developed cellulose reinforced mango puree edible films and found that the addition of CNF was effective in improving the water vapor barrier strength, tensile strength, effective young's modulus of the films.

Leitner *et* al.(2007) prepared sugar beet cellulose nanofibril sheets and found higher strength and stiffness than the non-homogenised cellulose sheets.

Alemdar and sain. (2008) isolated and characterized cellulose nanofibers from agricultural residues wheat straw and soy hulls and found that their degradation temperature reached beyond 290 degrees c. These can be used for reinforcing the polymers.

Wang *et* al.(2009) studied on preparation and properties of nanocomposite films composed of cellulose nanocrystals and polyvinyl alcohol. They found that rod like cellulose nanocrystals were approximately 20nm in diameter and 200nm in length, the nanocomposite films were uniform and stable, showed an increase in thermal stability and tensile strength with an increase of the filler content.

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Daniell and Kritiina (2007) studied on Biodegradable nanocomposites based on 5 wt% cellulose nanowhiskers (CNW) and polylactic acid (PLA). The results from mechanical testing showed a maximum modulus for the composite with 5 wt% surfactant and as the surfactant content increased, the CNW dispersion improved and the tensile strength and elongation at break was improved compared to its unreinforced counterpart.

B) Starch Nanocrystals Aqueous Suspension

Aqueous suspensions of starch nanocrystals can be prepared according to the "lintnerization" procedure.

The kinetics of lintnerization shows two main steps.

During the initial step, the hydrolysis kinetics is fast and corresponds to the hydrolysis of amorphous domains.

In the second step, the hydrolysis kinetics is slow and corresponds to the hydrolysis of crystalline domains.

With a starch concentration of 14.69 wt%, the preparation of aqueous suspensions of starch nanocrystals was achieved after 5 days of hydrolysis with 3.16 molIL H2SO4 at 40 °C and 100 rpm, with a yield of 15.7 wt%. Waxy maize starch nanocrystals consist of platelet-like particles about 5-7 nm thick, 20-40 nm long, and 15-30 nm wide.

The use of sulfuric acid for preparing polysaccharide nanocrystals leads to more stable aqueous suspensions than the use of hydrochloric acid. Then these nanocrystal solutions are used for reinforcing the polymers to form bio-nanocomposite film.

IMPROVEMENTS

- The nanocomposites are having the improved mechanical properties.
- Due to hydrogen bonding the theinial stabilization of the composite is upto 500k, the temperature of degradation.
- Both the water uptake and the diffusion coefficient of water were found to decrease.
- Natural rubber reinforced with waxy maize starch nanocrystals showed reduced oxygen diffusion, permeability and water vapour transmission rate.
- The sorbitol plasticized pullulan films reinforced with starch nanocrystals showed enhanced barrier properties at higher filler contents
- The water vapour transmission rate of cotton nanocrystals reinforced CMC films was found to decrease slightly in heat treated nanocomposites.

Dufresne.(2008).

B. Clay nanoscale fillers

These are the nanofillers which include

- Montmorillomite
- Hectrite
- Saponite
- Pristine layered silicates.

These are combined with polymeric materials to form nanocomposites.

Among all these the Montmorillonite (MMT) is of particular interest and has been studied widely.

MMT

MMT is a clay mineral consisting of stacked silicate sheets with a high aspect ratio (length to thickness ratio) and a plate-like morphology. Chemically, MMT consists of two fused silicate tetrahedral sheets sandwiching an edge-shared octahedral sheet of either magnesium or aluminum hydroxide.

These clays usually contain hydrated sodium or potassium ions and in this state these silicates are miscible only with hydrophilic polymers such as poly(ethylene oxide)(PEO), poly(vinyl alcohol) (PVOH), and natural biopolymers such as starches and proteins.

In the interlayer region of MMT there exists Na+ and Ca2+,which can be replaced by the alkylammonium and alkylphosphonium ions, rendering the clay into an organophilic nature. Which plays an important role for producing the nanocomposite.

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When these organoclays are mixed with a polymer, three types of composites are commonly obtained:

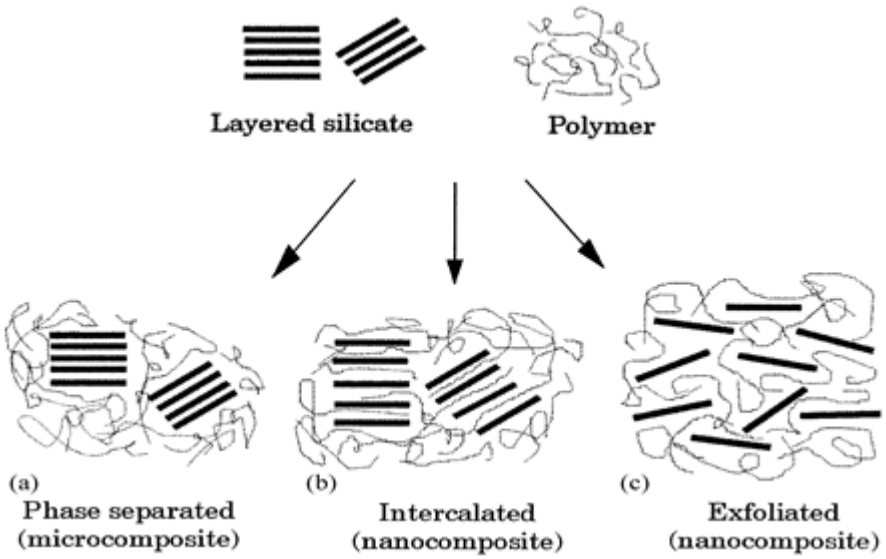
- Tactoid,
- Intercalated,
- and Exfoliated structures.

TACTOID NANOCOMPOSITE
Complete clay particles are dispersed within the clay matrix and the layers do not separate.

INTERCALATED NANOCOMPOSITE
Often a single polymer chain will be driven between the clay silicate layers, but the system still remains quite well ordered in a stacked type of arrangement.

EXFOLIATED NANOCOMPOSITE
The silicate layers are completely delaminated from each other and are well-dispersed. The exfoliated nanocomposite, which has been shown to exhibit the most significant improvements in physical properties.

Figure-1



SYNTHESIS OF NANOCOMPOSITES
There are three major pathways for the formation of nanocomposites.

In situ polymerization
It involves the combination of clay and monomer, followed by the polymerization of the monomer, which ideally locks the exfoliated clay particles.

In solution intercalation
The clay is first swollen in a solvent and the polymer (intercalant) is dissolved in the solvent. Both solutions are then combined, and the polymer chains intercalate and displace the solvent within the interlayer of the clay.

In melt intercalation
The clay and polymer are added together above the melting temperature of the polymer. They may be held at this temperature for a period of time, put under shear, or other conditions to encourage the intercalation and the exfoliation of the clay.

NATURAL POLYMER-BASED NANOCOMPOSITES (WITH CLAY NANOFILLERS)
Starch-Based Nanocomposites
Starch is one of the natural biopolymers most widely used to develop environmentally-friendly packaging materials to substitute for petrochemical-based non-biodegradable plastic materials.

Native starch is not a true thermoplastic but it can be converted into a plastic-like material called "thermoplastic starch". In the presence of plasticizers at high temperature (90-180ºC) and under shear, starch readily melts and flows, allowing for its use as an injection, extrusion or blow molding material, similar to most conventional synthetic thermoplastic polymers. However, the pure thermoplastic starch still has the same

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limitations as native starch: it is mostly water sensitive and has poor mechanical properties. In order to improve the properties, including the resistance to water and mechanical properties of starch plastics, reinforcement of starch with nano-scale minerals has been considered without interfering in the biodegradability of the composites.

Cyras *et al.* (2008) prepared on Glycerol-plasticized potato starch/clay nanocomposites films to study the effect of the nanoclay in the properties of starch. They found an improvement in the thermal resistance of starch. The water absorbed by the nanocomposites was reduced and improvement in the Young's modulus up to 500% for the nanocomposite containing 5 wt% of clay.

Cellulose-Based Nanocomposites

Cellulose is the most abundant naturally occurring biopolymer. It is composed of unbranched, linear chains of D-glucose molecules, linked to one another by 1,4-β-D glucosidic bonds. Hubbe.(2008).

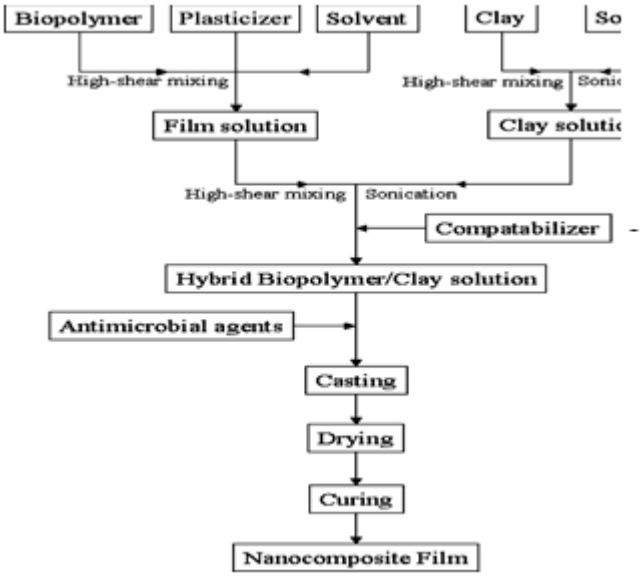
Leitner *et a/.* (2007) prepared polyvinyl alcohol and phenol-formaldehyde films reinforced with cellulose nanofibers and obtained the best mechanical, tensile, modulus of elasticity performance of the films.

Chitosan-Based Nanocomposites

Chitosan is a partially deacetylated derivative of chitin. It is the second most abundant natural biopolymer next to cellulose. Structurally, chitosan is composed of glucosamine and Nacetylglucosamine units linked by the β-1-4 glucosidic bond.

Rhim, Perry.(2007)

Figure-2



Preparation flow chart for nanocomposite film

Protein-Based Nanocomposites

α-Amino acids are the basic structural units of proteins. These are highly complex polymers made of 20 different amino acids.

In proteins, four levels of protein structure exist: primary, secondary, tertiary, and quaternary. Due to these complexity in their composition and structure they possess multiple function properties, such as solubility, gelation, elasticity, emulsification, and cohesion-adhesion.

Zhao et al.(2008), Rhim, Perry et al.(2007)Nayak *et* a/.(2008) prepared polycaprolactone (PCL)/soy protein isolate (SPI) blend with Organoclay and found great enhancement of tensile, dynamic mechanical properties and strong shear-thinning behavior, percolated network of clay particles in melted state.

APPLICATIONS IN THE FOOD PACKAGING

The use of proper packaging materials and methods to minimize food losses and provide safe and wholesome food products have always been the focus of food packaging. In addition, consumer trends for better quality, fresh-like, and convenient food products have intensified during the last decades. Therefore, a variety of active packaging technologies have been developed to provide better quality, wholesome, and safe foods and also to limit package related environmental pollution and disposal problems.

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These bio-nanocornposites can exhibit many advantages. Followings are some examples:

- Biodegradable;
- Enhanced organoleptic characteristics of food, such as appearance, odor, and flavor; Reduced packaging volume, weight, and waste
- Extended shelf life and improved quality of usually non-packaged items.
- Individual packaging of small particulate foods, such as nuts and raisins;
- Function as carriers for antimicrobial and antioxidant agents
- Controlled release of active ingredients
- Annually renewable resources.

Because of these advantages they are useful for packaging different food products for different purposes.

Active packaging

It is a type of packaging that changes the condition of the packaging to extend shelf-life or improve the safety or sensory properties while maintaining the quality of the food. Examples are antimicrobial packaging, antioxidant packaging.

As one of the innovative active packaging methods, antimicrobial packaging, applying antimicrobial compounds in combination with food packaging materials, has been receiving considerable attention as a potential application for a variety of foods including meat, fish, poultry, bread, cheese, fruits and vegetables. The potential application of these films with antimicrobial activities would allow surface contact with food that could help control the growth of pathogenic and spoilage microorganisms.

Dutta *et al* (2009) studied on the perspectives for chitosan based antimicrobial films in food applications and found that they exhibited high antimicrobial activity against a wide variety of pathogenic and spoilage microorganisms.

Antioxidant packaging will protect the packaged food like cut apples from undergoing oxidation and avoid browning of the foods.

Disposable tableware

The use of compostable tableware opens up for new perspectives for, for example, fast-food restaurants. If all packagings and tableware for the consumption of burger meals were produced using compostable packagings, it would be possible to dispose all waste from fast-food restaurants by composting. Several companies are aiming at developing a suitable biobased and compostable burger clamshell.

Chilled or frozen products

PHA and PLA materials have relatively low gas and water vapour barriers, which makes them interesting for a long range of food applications. Especially, dairy products have been suggested as a very likely application for PLA.

Weber et al.(2002); Zhao et al.(2008); Nayak et al.(2008).

CONCLUSION

The usage of large volumes of packaging materials in food and beverage industries should ultimately discarded causing environmental pollution due to reduced recycling problems. So to avoid this, edible materials which have the film forming properties are used to produce biofilms but has poor application. This resulted in bio-nanocomposite films. They have improved properties which are similar to the petroleum-based packaging materials and so have better application in food packaging. For the production of bio-nanocomposite films they use the agricultural waste, byproducts of food industry, and are biodegradable which ultimately reduces the pollution problems.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

A STUDY OF TAX REVENUE RECEIPT ANALYSIS BY E-GOVERNANCE IN GOVERNMENT FINANCIAL SYSTEM OF THE GUJARAT STATE

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ABSTRACT
E-governance is beyond the scope of e-government. While e-government is defined as a mere delivery of government services and information to the public using electronic means, e-governance allows direct participation of constituents in government activities. E-governance is not just about government web site and e-mail. It is not just about service delivery over the Internet. It is not just about digital access to government information or electronic payments. It will change how citizens relate to governments as much as it changes how citizens relate to each other. It will bring forth new concepts of citizenship, both in terms of needs and responsibilities.

Keyword: E-Governance, Tax Revenue Receipt Analysis

INTRODUCTION
The State Government enacted the Gujarat Fiscal Responsibility Act, 2005 to ensure prudence in fiscal management and fiscal stability by progressive elimination of revenue deficit, sustainable debt management consistent with fiscal stability, greater transparency in fiscal operations of the Government and conduct of fiscal policy in a medium term fiscal framework. The State Government had enacted the amendments to give effect to various milestones of the fiscal consolidation roadmap as recommended by the Thirteenth Finance Commission.

OBJECTIVE OF THE STUDY
Present article is based on the Study of Tax Revenue Receipt analysis by E-Governance in Government Financial System of the Gujarat State.

PERIOD OF STUDY
The study period is to be converted 5 years; from 2012-13 to 2016-17.

NO. OF SAMPLE
Researcher has considered State of Gujarat as a Universe for the present study Researcher has considered only Deficit Analysis from Finance base parameters for present study.

Table-1: Tax Revenue Receipt of Government of Gujarat for the Period from 2012-13 to 2016-17 (Rs. in Crore)

[a] Tax Revenue [a]						
Tax Revenue	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Average**
Taxes on Sales, Trade etc.	39465	40976	44145	44091	46314	42998.20
State Excise	85	110	140	123	152	122.00
Taxes on Vehicles	2276	2283	2695	3008	3213	2695.00
Stamps and registration Fees	4427	4749	5503	5549	5783	5202.20
Land Revenue	2208	1727	1893	2529	1999	2071.20
Taxes on goods and passengers	211	834	211	265	66	317.40
Other Taxes	5225	5694	6753	7084	6916	6334.40
Total Tax Revenue	**53897**	**56373**	**61340**	**62649**	**64443**	**59740.40**
Source: www.cag.gov.in (Annual Report on State Finance by CAG 2012-17)						

Table-2: Tax Revenue Receipt in Trend Percentage of Government of Gujarat for the Period from 2012-13 to 2016-17 (Rs. in Crore)

[a] Trend Percentage of Tax Revenue [a]						
Tax Revenue	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Average**
Taxes on Sales, Trade etc.	73.22	72.69	71.97	70.38	71.87	72.02
State Excise	0.16	0.20	0.23	0.20	0.24	0.20
Taxes on Vehicles	4.22	4.05	4.39	4.80	4.99	4.49
Stamps and registration Fees	8.21	8.42	8.97	8.86	8.97	8.69

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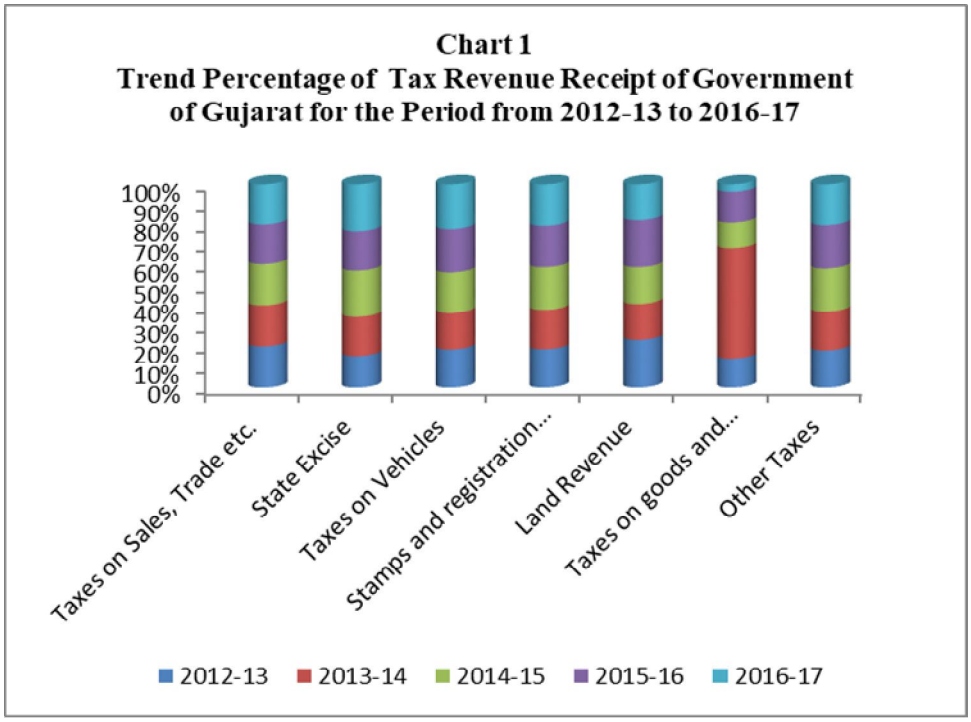
Land Revenue	4.10	3.06	3.09	4.04	3.10	3.48
Taxes on goods and passengers	0.39	1.48	0.34	0.42	0.10	0.55
Other Taxes	9.69	10.10	11.01	11.31	10.73	10.57
Total Tax Revenue	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Source: www.cag.gov.in (Annual Report on State Finance by CAG 2012-17)						

➢ GRAPHICAL PRESENTATION



It is evident from above table and graph that Government of Gujarat is receiving highest percentage income from taxes on sales and trade which is more than 70 percent of total tax revenue during respective research year. Other taxes are following to taxes on sales with average 10 percent of total tax revenue during each such respective research year. Stamps and registration fees is on third highest with an average of 8.69 percentage during research period. Taxes on vehicle and land revenue is achieving with an average 4 percentages during research period while state excise and taxes on goods and passengers are showing less than one percentage during research period.

CONCLUSION

For the present study researcher has attempted to study the tax revenue analysis by E-governance in Government Financial System of Gujarat State It is found major portion of tax revenue of the Government is from taxes on sales during research period.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019

ISSN 2394 - 7780

PREVENTION OF NPAs AND LITIGATION MANAGEMENT

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ABSTRACT

Non Performing Assets (NPAs) are those assets which are not profitable anymore for those financial institutions/banks that provide advances or credits to the borrowers. There are several causes for an account to become NPA, causes attributable to borrowers includes failure to bring in required capital, too ambitious project, longer gestation period, unwanted expenses, over trading, imbalances of inventories, lack of proper planning and lack of expertise, dependence on single customers, poor quality management, poor credit collection, diversion of funds and heavy borrowings. The causes attributable to banks includes wrong selection of borrowers, poor credit appraisal, unhelpful in supervision, tough stand on issues, too inflexible attitude, lack of motivation, system overloaded, delay in sanction, lack of trained staff, lack of commitment to recovery, lack of technology. Other causes include willful defaults, industrial recession, business failures, and changes in government policy, project not completed in time and lending practices of banks. The impact of NPA on banks includes insufficient liquid cash flow, loss of goodwill and brand equity in the market and net profitability of the bank. Strong banking sector is one of the most significant prerequisite of strong economy because it channels the savings into the investment. A fragile banking sector will give way to fragile economy. The other biggest sector that causes massive chunk of NPAs is the Infrastructure sector. Because of massive amount of NPA in infrastructure, the banks are now reluctant to fund this sector. As the infrastructure is one of the most important sectors in economy which fuels the growth of other sectors, draining of resources to infrastructure may hamper the growth of Indian economy. Other sectors will also directly or indirectly affect the overall economic scenario due to the exposure to the bad loans. Hence it is high time to take stringent measures to curb NPAs and steps to be taken to convert Non-performing assets to Now-performing assets. The banks and financial institutions should take strict actions to control the increasing number of NPAs. It is rightly said, "Prevention is better than cure" and it fits aptly in today NPA scenario. Banks and financial institutions should follow three steps programme; the first step should be that they should follow a conservative approach for loan disbursement in cases where the repayment tenure is stretched over a long period of time. The second step is to take a right action from the time a loan request is raised from the borrowers i.e. to restructure the loans requested by the borrowers. The third step is to adopt an innovative means of tacking NPA by using advance tools to get insights on customer behavior and repaying capacity. They must also aid to contact borrowers for recovering loans installments in case of failures intake legal actions whenever required. Litigation management is designed to help banks and financial institutions by automating their recovery process and seamlessly accessing legal information about borrowers, NPA accounts, bank's recovery etc. Unlike few years ago when banks were reluctant in adopting litigation management system and its capabilities, demand for such software has increased significantly. Five ways of Litigation management that can help in NPA recovery includes case hearing date management which stores important dates and sends reminders in advance and also puts a pressure for the legal personnel to abide without fail, centralized case tracking which will help to secure all the information at a centralized repository that is easy to access , case expense management that will help to record and authenticate all expenses incurred and generate detailed reports on expenditures and budget , effective communication that will help to bridge the gap between the other departments and the legal department by promoting quick actions , and making it accessible anywhere and anytime.

Keywords: Non-performing assets, conservative approach, restructure loans, Litigation manage

INTRODUCTION

Commercial Banks' assets are of various types. All those assets which generate periodical income are called as Performing Assets (PA) while all those assets which do not generate periodical income are called as Non Performing Assets (NPA). If the customers do not repay principal amount and interest for a certain period of time then such loans become Non-Performing assets (NPA).

DEFINITION

A 'Non-Performing Asset' (NPA) was defined as ' an asset should be classified as non-performing, if the interest and/or principal amount have not been received or remained outstanding for one quarter from the day such income/installments has fallen due.

Technical definition by RBI on NPA on different cases NPA is a loan or an advance where…..

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- Interest and/or installment of principal remain overdue for a period of more than 90 days in respect of a term loan,
- The account remains 'out of order' for a period of more than 90 days, in respect of an Overdraft/Cash Credit (OD/CC).
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted; the installment of principal or interest thereon remains overdue for two crop seasons for short duration crops. Such as paddy, jawar and bajara.
- The installment of principal or interest thereon remains overdue for one crop season for long duration crops.
- Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts.
- As a facilitating measure for smooth transition to 90 days norm, banks have been advised to move over to charging of interest at monthly rests, by April1, 2002. However, the date of classification of an advance as NPA should not be changed on account of charging of interest at monthly rests. Banks should, therefore, continue to classify an account as NPA only if the interest charged during any quarter is not serviced fully within 180 days from the end of the quarter with effect from April 1, 2002 and 90 days from the end of the quarter with effect from March 31, 2004.

TYPES OF NON PERFORMING ASSETS

1. Standard Assets: A standard asset is one in which the borrower fails to make repayment regularly and on time.
2. Sub-Standard Assets: A sub-standard asset is one which has been NPA for a period not exceeding 12 months. It is an asset in which bank has to maintain 15% of its reserves.
3. Doubtful Assets: A doubtful asset is one which has been NPA for more than 12 months.
4. Loss Assets: A loss asset is one where the loss has been identified by the bank, through the internal or external auditor or by the central bank inspectors. The amount has not been written off, wholly or partly.

CAUSES OF NPAS

There are several causes for an account to become NPA, causes attributable to **borrowers** includes Failure to bring in required capital, too ambitious project, longer gestation period, unwanted expenses, over trading, imbalances of inventories, lack of proper planning and lack of expertise, dependence on single customers, poor quality management, poor credit collection, diversion of funds and heavy borrowings. The causes attributable to banks includes wrong selection of borrowers, poor credit appraisal, unhelpful in supervision, tough stand on issues, too inflexible attitude, lack of motivation, system overloaded, delay in sanction, lack of trained staff, lack of commitment to recovery, lack of technology. Other causes include willful defaults, industrial recession, business failures, and changes in government policy, project not completed in time and lending practices of banks.

IMPACT OF NPAS

The impact of NPA on banks includes insufficient liquid cash flow, loss of goodwill and brand equity in the market and net profitability of the bank. Strong banking sector is one of the most significant prerequisite of strong economy because it channels the savings into the investment. The other biggest sector that causes massive chunk of NPAs is the infrastructure sector. Because of massive amount of NPA in infrastructure, the banks are now reluctant to fund this sector. As the infrastructure is one of the most important sectors in economy which fuels the growth of other sectors, draining of resources to infrastructure may hamper the growth of Indian economy. Other sectors will also directly or indirectly affect the overall economic scenario due to the exposure to the bad loans. Stress in banking sector causes less money available to fund other projects, therefore, negative impact on the larger national economy. Higher interest rates by the banks to maintain profit margin. Redirecting funds from the good projects to the bad ones. As investments got stuck, it may result in it may result in unemployment. In the case of public sector banks, the bad health of banks means a bad return for a shareholder which means that government of India gets less money as a dividend. Therefore it may impact easy deployment of money for social and infrastructure development and results in social and political cost.

STEPS TAKEN BY RBI

Steps taken by RBI and Government in last few years to curb NPA Government has launched 'Mission Indradhanush' to make the working of public sector bank more transparent and professional in order to curb the menace of NPA in future. Government has also proposed to introduce Bankruptcy code. RBI introduced number

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of measures in last few years which include tightening the Corporate Debt Restructuring (CDR) mechanism, setting up a Joint Lenders' Forum, prodding banks to disclose the real picture of bad loans, asking them to increase provisioning for stressed assets, introducing a 5:25 scheme where loans are to be amortized over 25 years with refinancing option after every 5 years, and empowering them to take majority control in defaulting companies under the Strategic Debt Restructuring (SDR) scheme.

- The Debt Recovery Tribunals (DRTs) – 1993 To decrease the time required for settling cases. They are governed by the provisions of the Recovery of Debt due to Banks and Financial Institutions Act, 1993. However, their number is not sufficient therefore they also suffer from time lag and cases are pending for more than 2-3 years in many areas.
- Credit Information Bureau – 2000 A good information system is required to prevent loan falling into bad hands and therefore prevention of NPAs. It helps banks by maintaining and sharing data of individual defaulters and willful defaulters. Lok Adalats – 2001 They are helpful in tackling and recovery of small loans however they are limited up to 5 lakh rupees loans only by the RBI guidelines issued in 2001. They are positive in the sense that they avoid more cases into the legal system.
- Compromise Settlement – 2001 It provides a simple mechanism for recovery of NPA for the advances below Rs. 10 Crores. It covers lawsuits with courts and DRTs (Debt Recovery Tribunals) however willful default and fraud cases are excluded.
- Sarfaesi Act – 2002 The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 – The Act permits Banks / Financial Institutions to recover their NPAs without the involvement of the Court, through acquiring and disposing of the secured assets in NPA accounts with an outstanding amount of Rs. 1 lakh and above. The banks have to first issue a notice. Then, on the borrower's failure to repay, they can: Take ownership of security and/or Control over the management of the borrowing concern. Appoint a person to manage the concern. Further, this act has been amended last year to make its enforcement faster. ARC (Asset Reconstruction Companies) The RBI gave license to 14 new ARCs recently after the amendment of the SARFAESI Act of 2002. These companies are created to unlock value from stressed loans. Before this law came, lenders could enforce their security interests only through courts, which was a time-consuming process.
- Corporate debt restructuring – 2005 It is for reducing the burden of the debts on the company by decreasing the rates paid and increasing the time the company has to pay the obligation back. 5:25 rule – 2014 Also known as, Flexible Structuring of Long Term Project Loans to Infrastructure and Core Industries. It was proposed to maintain the cash flow of such companies since the project timeline is long and they do not get the money back into their books for a long time, therefore, the requirement of loans at every 5-7 years and thus refinancing for long term projects.
- Joint Lenders Forum – 2014 It was created by the inclusion of all PSBs whose loans have become stressed. It is present so as to avoid loan to same individual or company from different banks. It is formulated to prevent the instances where one person takes a loan from one bank to give a loan of the other bank.
- Bad Banks – 2017 Economic survey 16-17, also talks about the formation of a bad bank which will take all the stressed loans and it will tackle it according to flexible rules and mechanism. It will ease the balance sheet of PSBs giving them the space to fund new projects and continue the funding of development projects.

RECOMMENDATIONS FOR MANAGEMENT OF NPAS

RBI should revise existing credit appraisals and monitoring systems. Banks should improved upon and strengthen the loan recovery methods Credit appraisal and post - loan monitoring are crucial steps which need to concentrate by all the public sector banks. There must be regular follow-up with the customers and it is the duty of banker to ensure that there is no diversion of funds. This process can be taken up at regular intervals. Personal visits should be made after sanction and disbursal of credit and further close monitoring of the operations of the accounts of borrowed units should be done periodically. Managers under credit monitoring and recovery department should have dynamism in their work. RBI may initiate actions against defaulters like, publishing names of defaulters in News papers, broadcasting media, which is helpful to other banks and financial institutions. As a part of curative measures, bankers may resort to Compromise Settlement or One Time Settlement. Lok Adalats and Debt Recovery Tribunals are other ways for the recovery of dues. It has been observed that Banks these days are highly resorting to SARFAESI Act for the management of NPA. If the delinquencies are due to reasons beyond the control of borrower which are namely draughts, floods, or other

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natural calamities, the banker should suitably restructure the loans taking into account the genuine difficulty of the borrowers.

LITIGATION MANAGEMENT

Litigation is the process that the lawsuit goes through after it has been formally filed. Litigation can be very expensive, since it involves legal council, gathering evidence, depositions, filings with the court, etc. Paralegals are not licensed to practice law and cannot represent clients or provide legal advice. A litigator is a lawyer who litigates - assists clients with prosecuting or defending lawsuits. Some litigators will appear in court and go to trial but much of the work of litigation occurs outside trial.

Litigation is the process that the lawsuit goes through after it has been formally filed. Litigation can be very expensive, since it involves legal counsel, gathering evidence, depositions, filings with the court, etc. Paralegals are not licensed to practice law and cannot represent clients or provide legal advice. A litigator is a lawyer who litigates – assists clients with prosecuting or defending lawsuits. Some litigators will appear in court and go to trial but much of the work of litigation occurs outside trial.

Litigation and Legal Management Systems are designed to help banks and financial institutions by automating their recovery processes and seamlessly accessing legal information about borrowers, NPA accounts, bank's recovery etc. LMS is used to manage and automate all the legal proceedings in banks. It is responsible for issuing notices to defaulters, reminding court hearing, managing lawyer fee and other expenses, maintaining database of cases, generating reports and more. Unlike few years ago when banks were reluctant in adopting LMS and its capabilities, demand for such software has increased significantly. Here are the top 5 ways how an ideal Litigation Management Software can help banks in NPA recovery:

1. Case hearing date management

Attending to the deadlines is the key in any profession and even the legal personnel must abide by them without fail. A lawyer who handles the case of NPAs in a bank might also have numerous other lawsuits to take care of. Remembering the hearing dates of multiple cases often becomes tedious for the lawyers. Litigation Management Software effortlessly stores the important dates and also sends reminders for the same in advance, on emails/texts etc.

2. Centralized case tracking

The lawyers handling loan recovery cases have an information overload of hearing dates, case summary, previous history of hearings etc. the must have access to all of this data instantaneously. For this, they need their data in a single place. A good Litigation Management System secures all the information at a centralized repository that is easy to access in only a few clicks.

3. Case expense management

Legal professionals have to manage all expenses incurred manually, and if not documented properly, it can lead to confusion and mismanaged budgets. A comprehensive LMS can record and authenticate all expenses incurred in the court/case easily and generate detailed reports on the allocated budget, expenditure and liabilities.

4. Effective communication

For lawyers, staying up-to-date with the case details is critical. They cannot afford to miss out on any information about the case that can benefit the banks. LMS bridges the gap between other departments and the legal department by promoting quick actions e.g. issuing of now notices etc. it encourages better utilization of time and efforts at the right place.

5. Accessible (anytime, anywhere)

Lawyers can access all information about their cases in the courtroom or at home, having a basic internet connection and a device. As most LMS today works online, it empowers the bank lawyers to work anywhere in remote areas of metros while accessing all relevant case data on-the-go.

RECOVERY ALTERNATIVES

It is very important to consider an individual and his capacity to repay his debt. Thus it is necessary to provide alternatives to the borrower that can help the bank to recover the loans either fully or partially. Alternatives such as collateral submission, gold deposition, fund raising time and period extension can be done which can help the bank to recover amount and also exerts the pressure on the borrower to repay the loan within a stipulated time.

1. Collateral submission: It is possible that the borrower may not have the cash inflow in his account due to business failure. This results in incapacity of the borrower to repay the loan. However it is possible that he

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might possess personal assets of that amount which can be seized and can help bank to recover loan amount from that collateral submission.

2. Gold deposition: Gold deposition can help the bank to recover the interest and the principal amount. It can also be an easy option for an individual to repay loans and can give the bank a strong hold on all the bad loans.
3. Fund raising time: Sometimes an individual is willful to repay the loans but the current financial position of that individual is not at a good state. Hence if a bank can provide fund raising time to an individual to settle his own business and also give a chance to raise fund through his goodwill from other sources which in turn can help the bank to recover the NPAs.
4. Period extension: Period extension can be done for the borrowers thereby reducing the installments amount and extending the period which will be easier for the borrower and creates ease environment to repay and recover for both the borrower and the bank.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

PUTTING CHERRIES ON THE CAKE: INFUSION OF INNOVATIVE PRACTICES IN ENRICHING INTERNSHIP OF TEACHER PREPARATION PROGRAMME

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ABSTRACT
In this era of globalization, teaching is becoming increasingly challenging and complex due to the increased rigor of the standards set for all students to reach and the level of thinking. Hence, to maintain parity with the changing needs of the 21st century learners, teacher preparation programmes are in need of innovation. So, the teaching internship may be redesigned and modified in order to enrich as well as enhance practical experience of teachers. With this background, the present article focuses on certain innovative pedagogies and practices those are needed to be practiced by the prospective teachers to cater the need of the hour. Those practices may be proved to be fruitful in making teaching internship programmes more efficient to master trainee teachers with appropriate teaching skills. The present article is based on literature survey, with the major objectives as: to point out certain innovative practices in order to enrich Internship in preparation of teacher for secondary level of education, to discuss how the innovative practices can be introduced in teacher preparation programmes and to discuss the plausible challenges towards effective implementation of those innovative practices. The suggestions regarding the means of implementation of the proposed innovations contribute to the uniqueness of the study.

Keywords: active classroom, co-teaching, Innovative practices, mentoring, self-monitoring, teacher preparation programme

I. INTRODUCTION

Teacher preparation programmes are planned and designed with the intension of empowering the prospective teachers with teaching skills and competencies. Internship is the heart of any teacher preparation programme. Internship provides the scopes to trainee teachers to apply the learned pedagogical skills in order to enrich their teaching experiences in real classroom situation. This is the most crucial and deterministic phase of the teacher preparation programme where the prospective teachers may be groomed to attain optimal mastery in pedagogical skills.

School education mainly the secondary level of education in India has remained a prime concern for a long time. Many policies have also been introduced in order to mitigate the problems regarding primary, upper-primary and secondary level of education. Some recent policies like Sarva Shiksha Abhiyan (SSA) in 2000-01, The Right of Children to Free and Compulsory Education Act or Right to Education Act (RTE) in 2009 and Rashtriya Madhyamik Siksha Abhijan (RMSA) in 2009 was implemented with the expectation to increase access, enrolment, retention as well as to enhance quality of school education. Some reports on school education shows the present status of education at different levels which does not reveal satisfactory results. One major area of concern is that average annual drop-out rate in School Education during 2014-15 is 17.06% (overall), 19.36% for Scheduled Caste students and 24.68% for Scheduled Tribe students (Ministry of Human Resource and Development, 2018). Although it is expected from a student completing the final year of free and compulsory education (i.e. class-VIII) to master the foundational skills, about 73% students enrolled in Class-VIII can read at least a Class-II level text whereas about 44% of children in Class-VIII can solve a 3-digit by 1-digit numerical division problem correctly. It is more alarming that the figures have gone down from 2016 to 2018 in many states (ASER, 2019).

It is quite doubtless to say that school education and teacher education have a synergistic relationship from the quality improvement perspectives (National Council for Teacher Education, 2009). The teacher education programmes are expected to develop skills among prospective teachers in enabling them to cater quality classroom transactions (Government of India, 2013). The only way to improve learning outcomes is to improve classroom transactions (Ministry of Human Resource and Development, 2009). Evidently, the school internship is the heart of any teacher preparation programme. But, time and again one issue became prominent that "Repeated 'practice' in the teaching of a specified number of isolated lessons is considered a sufficient condition for professional development" (Ministry of Human Resource and Development, 2012, p. 17). The present article focuses on certain innovative practices those may enrich the Internship of teacher preparation programme, how those practices can be implemented in those programmes and what may the plausible challenges in this context.

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II. OBJECTIVES

The present article focuses on the following major objectives:

I. To point out certain innovative practices in order to enrich Internship in preparation of teacher for secondary level of education.

II. To discuss how the innovative practices can be introduced in teacher preparation programme.

III. To discuss the plausible challenges towards effective implementation of those innovative practices.

III. METHOD OF STUDY

The present study is actually based on survey of literature obtained from different primary and secondary sources of data.

IV. NEED FOR INNOVATIONS IN INTERNSHIP OF TEACHER PREPARATION PROGRAMME

The prime focus of the teacher preparation programmes is to develop professionalism among the prospective teachers. For this purpose, the novice teachers should be empowered with knowledge, attitude and pedagogical skills. Hence, teaching internship should be accordingly planned so that the trainee teachers may get ample scope to apply their knowledge and skills in order to enrich their teaching experiences. But, the traditional approaches have been criticized by many for not preparing novices to do the complex work of teaching thus leaving them to figure out how to teach on the job. Present need of teacher education programmes calls for providing more emphasis on their practical experiences that is on the internship. This focus on practice of teaching skills is in contrast to previous approaches teacher preparation those have enabled teachers with theoretical knowledge about teaching and learning but have not done enough in preparing them to enact practice (Peercy & Troyan, 2017). Hence, more extended and embedded opportunities to engage trainee teachers in practice have emerged. This need is actually pointing towards the introduction of innovations in Internship programs.

Again, in this era of globalization, teaching is becoming increasingly challenging and complex due to the increased rigor of the standards set for all students to reach and the level of thinking. Hence, to maintain parity with the changing needs of the learners, teacher preparation programmes are in need of innovation. The 21st century skills like communication, collaboration, creativity and critical thinking are to be fostered among students through classroom learning. Hence, teachers are to be equipped with appropriate teaching skills. So, there is an urgent need to reorient, rejuvenate internship programme to ensure the preparation of skilled, professional and competent teachers. With this background, the present article focuses on certain innovative pedagogies and practices those are needed to be practiced by the prospective teachers to cater the need of the hour.

V. THE 'CHERRIES': INNOVATIVE PRACTICES IN TEACHING INTERNSHIP

The following practices may be useful to enrich of internship and hence, effective inculcation of teaching skills among trainee teachers may be ensured:

5.1Practice-1: Creating 'Active Classrooms'

Earlier classroom teaching-learning process in schools was supremely teacher-driven and teaching was a unidirectional and autocratic process. Students were considered as passive listeners. In order to make learning meaningful, learners must be treated as active agents. From constructivist perspective, learners should learn through construction of knowledge by their own where teachers only facilitate the process of learning. Active participation and involvement of students in classroom teaching-learning process ensures effective learning. This can be done by integrating physical activities into classroom teaching-learning process. So, trainee teachers should learn and plan how to integrate activities in classroom teaching. These activities turn pedagogies into 'Active' pedagogies. In this way traditional classrooms may be transformed to an 'Active Classrooms' when teachers use active pedagogies those make students active through involving them in actual learning process. Hence, appropriate skills for applying those active pedagogies in classrooms are to be fostered among the trainee teachers.

The skills of trainee-teachers of using active pedagogies in classrooms may be enhanced by enabling them to use group activities, inviting students' real life experiences, involving them in hands-on activities and making learning joyful. Teachers must plan to use physically active methods and should develop a habit of using those. They should also make decision on the effectiveness in the classroom context and also on the appropriate improvisation in those activities, if required. Hence, Teacher preparation programmes must develop a positive attitude of practitioners towards integrating activities in classroom teaching.

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Enabling students to be physically active during classroom instructions, students' learning may be enhanced. This enhanced learning may be experienced with respect to the following student behaviours:

i. Stimulated interest and curiosity

ii. Motivation to learn

iii. Improved level of concentration

iv. Improved retention of learning

v. Sense of enjoyment in learning

Enjoyment is a dominant factor of motivation in participating purposefully in those activities and also enjoyment is the main cause behind acceptance of the activities (Martin & Murtagh, 2015). Such enjoyment may be catered by arranging interesting pair or small group activities related to the academic lesson under discussion. Such arrangements may encourage positive social interaction with the peers and also with the teachers (Martin & Murtagh, 2015). The three main factors those enables teachers to use those pedagogies are: i. efficient classroom management and control, ii. Keeping relevant connection between activities and lessons, and iii. Ease of administration from teachers' perspectives and enjoyment from students' perspectives.

5.2Practice-2: Self-monitoring Practices

Self-monitoring practices are behavioural practices those involve observations and insight into one's own behavior in a certain situation, recording those observations and scrutinizing those observations in order to make decisions on how to improve one's own performance at that given situation (Rispoli, Zaini, Mason, Brodhead, Burke, & Gregori, 2017). Self-monitoring allows teachers to more accurately evaluate, polish and refine their instructional practices. Trainee-teachers are considered to be the reflective practitioners, who can reflect on their own behaviours, strengths and weaknesses. So, they are also able to reflect on their performance in classrooms i.e. on their teaching behaviours. Researches have shown that teachers who self-monitor their teaching behaviours, may not only improve their teaching skills and practices but also the learning outcomes of the students (Rispoli et al., 2017).

Apprentice teachers may be asked to maintain a personal diary to note down their observations and insights regarding their own classroom teaching. They may get ground level information by perceiving students' behavior and learning in the classroom about the effective use of teaching skills, teaching behavior and teaching methods. The teacher may also record day by day progress and may be able to develop skills in order be in tune with the students in classroom context. This diary may be supervised during internship and further may be evaluated by the teacher educators at the end of the practice teaching programme. Hence, prospective teachers may be taught self-monitoring which may serve the following purposes:

i. Development of the ability to perceive students' behaviour and how much they learned.

ii. Development of insight into teacher's own teaching behaviours

iii. Development of perception about effectiveness of teaching methods during classroom instruction

iv. Decrease in use of ineffective strategies

v. Increase the frequency of using effective strategies

vi. Evaluation the degree to which teachers implement effective practices with confidence in classroom

5.3 Practice-3: Enhancing teaching through professional collaboration-A Triad Model

Indeed the trainee teachers need sound experiences of 'solo' teaching as in future they have to face the whole class themselves with no second person to help. However, Ball and Forzani (2010 as cited in Rigelman & Ruben, 2012) argue that practicing alone is not sufficient for teacher learning rather, systematic and rigorous inquiry into teaching behaviours ultimately enrich their teaching experiences. Again, Ball and Cohen (1999 as cited in Rigelman & Ruben, 2012) suggested that trainee teachers through self-inquiry on their own teaching practices may improve their instruction in order to enhance student learning. This is supported by Johnson (2010, p. 28 as cited in Rigelman & Ruben, 2012) who found that it was "carefully supervised apprenticeship experiences whereby students and 'master teachers' engage in reflective dialogue" that made the difference, "not necessarily the number of hours of coursework or field experiences". Campbell-Evans and Maloney (1997 as cited in Rigelman & Ruben, 2012) concluded that teachers participating in such collaborative dialog with mentors were proved to be better prepared than those attending the traditional teacher preparation programmes.

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Teaching is a complex task that can be considered as a collaborative endeavour (Grisham, Berg, Jacobs, & Mathison, 2002 as cited in Rigelman & Ruben, 2012). Such professional collaboration provides the scopes to trainee teachers to link their learning with their own instructional practices (Loucks-Horsley, Love, Stiles, Mundry, & Hewson, 2003; Murphy & Lick, 2005; Smith, 2001 as cited in Rigelman & Ruben, 2012). Naturally, it is better to supervise the teaching skills of trainee teachers by some others who can scaffold instead of only self-reflection by the trainee itself. Such professional collaboration may be planned by designing a Triad Model.

5.3.1 The Triad Model

The said professional collaboration may be arranged through planning a reflective dialogue among three members: i. A teacher educator (experienced teacher), ii. A peer trainee teacher, and iii. The trainee teacher of central importance. The trainee-teacher with central focus along with another trainee and the teacher educator creates a three-person team that collaboratively engage each other. This collaboration may be represented by the Triad Model:

Figure: The Triad Model of Professional Collaboration

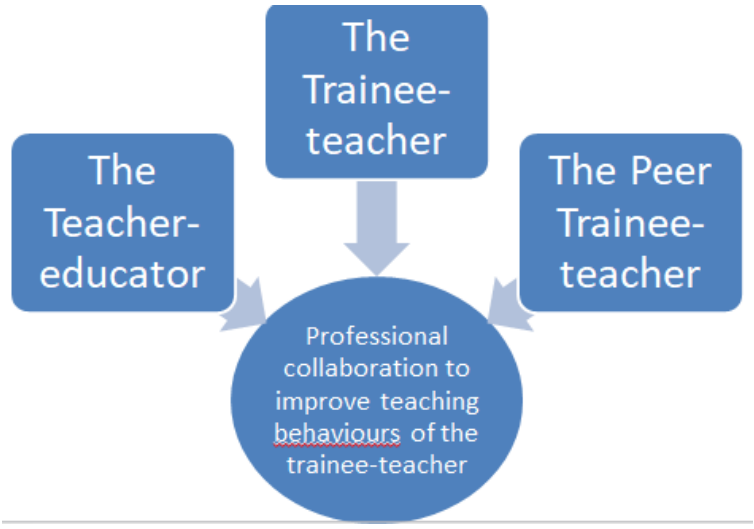

Figure 1. The Triad Model for Professional Collaboration among trainee teacher, one peer trainee teacher and the teacher educator during school internship

Triads provide opportunities for both the trainee-teachers to engage in highly reflective practice (Rigelman & Ruben, 2012). Bullough et al. (2002 as cited in Rigelman & Ruben, 2012) found that triads encouraged the processing required to improve behavioural practices of trainee teachers. Such collaboration eliminates the commonly reported isolation felt by trainees (Lieberman & Mace, 2010; Little, Gearhart, Curry, & Kafka, 2003; Lortie, 1975 as cited in Rigelman & Ruben, 2012) and proved as a potential to reignite teachers' motivation towards meaningful teaching-learning process (Buffum & Hinman, 2006 as cited in Rigelman & Ruben, 2012). One interesting effect of this collaborative triad model is that improvement of one affects others. If one perceives others success, one may learn from that. The more involvement of other members in the triad, the more potential learning experiences of the trainee may arise. This allows the trainee teacher to acquire thrice the experience in the same amount of time.

The triad participants will perform the following activities: a) co-plan the lessons, co-assess the classroom instruction and then collectively and individually reflect on the efficacy of their work, b) Build a collaborative stance where each team member contribute to learning of the trainee how to teach better, and c) evaluate the classroom instruction and presentation of content to give feedback on strength and weakness of the trainee from their perspectives. In this way internship contributes to practice-based professional development of the trainee teachers (Ball & Cohen, 1999; Smith, 2001 as cited in Rigelman & Ruben, 2012). This approach engages all the members in collaboratively planning lessons, intensely observing in one another's classrooms, and analyzing and reflecting on teaching.

5.4 Practice-4: Co-teaching - From 'Solo' teaching to Blended experiences

Professional development of trainee teachers is based on active learning, reflective thinking, and collective participation (Darling-Hammond & Richardson, 2009; Desimone, 2009 as cited in Rytivaara & Kershner, 2012). Co-teaching bears collaborative or productively creative characteristics. Co-teaching is the teaching process that allows a trainee-teacher to teach alongside other cooperating trainee-teacher in the same class

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through collaboratively planning, instructing, and assessing the classroom activities. Here both the trainee-teachers partly perform and partly observe the teaching behaviours of each other and hence go through a blended experience instead on single-mode experience through solo teaching. So, they get a two-way perspective on their skills of teaching: i. In the form feedback on performed teaching, and ii. In the form of observing other's teaching to improve own teaching. The following activities may be performed to serve the above purposes:

i. Planning of lessons and activities primarily may be done individually
ii. Co-instructional strategies i.e. one teach-one observe and one teach-one assist in addition to solo time to be performed
iii. Co-teachers implemented various approaches in co-planning, co-instructing, and co-assessing the classroom instruction
iv. One trainee-teacher receive feedback from the cooperating trainee teacher based on class observation
v. Co-teachers reflected on lessons collaboratively, moving beyond feedback in order to improve their teaching behaviours

Success of co-teaching depends upon the extent of active involvement of both trainee-teachers in the task of classroom instruction, and true sharing of the experiences and feedback. Sharing practical responsibility for the classroom and the students brings dynamic and practice-based knowledge to both of them through field experiences. Collaboration is a means for the co-construction of further knowledge as well as serving as a shared repository for current memories and shared knowledge. Thus, in a collaborative context, trainee-teachers would have more knowledge to apply in practice than when working alone (Harrison et al., 2005; Park et al., 2007 as cited in Rytivaara & Kershner, 2012).

5.5 Practice-5: Reshaping the Teaching Experiences: Mentoring the trainee teachers

School Internship focuses on development, shaping and reshaping teaching behaviours of trainee-teachers through real life field experiences. It is quite evident that ongoing professional development of trainees and teachers is a continuous and life long process. Now, collaboration in terms of mentoring may able trainee teachers thrive, feel empowered, and make a positive difference in learning as well as on achievement of students (Falconio & Carlough, 2016 as cited in Bressman, Winter, & Efron, 2018). Mentoring in teacher preparation may be promoted for trainee teachers as it provides scopes for meaningful collaboration in order to master teaching skills and develop professional knowledge in order to face the uncertainty associated with the complexity of classroom practices (Hobson, Ashby, Malderez, & Tomlinson, 2009; Loughran, 2002 as cited in Mena, Hennissen, & Loughran, 2017).

Mentoring is a process where an experienced teacher educator (the mentor) offers support, guidance, suggestions and encouragement to the trainee-teachers (the mentee) with the specific purpose of improving teaching skills and behaviours (Barrera, Braley, & Slate, 2010; Hudson & Hudson, 2010 as cited in Bressman et al., 2018). Kemnis, Heikkinen, Fransson, Aspfors, and Edwards-Groves (2014 as cited in Mena et al., 2017) described tripartite role of the professional collaboration in terms of mentoring as: 1. Support: traditional mentoring as providing support to trainee-teachers through constructive dialogue those may improve their teaching behaviours, 2. Supervision: addressing and assessing trainees in order to find weaknesses and negative aspects of teaching behaviours and further suggesting for improvement, and 3. Collaborative self-development: peer-group mentoring i.e. mentoring process administered by the group of peer trainee-teachers.

Using direct classroom observation or using video recording, the mentor may be able to undergo more focused, in-depth and thorough analysis of specific issues related to classroom teaching and learning process of the trainee-teachers (Borko, Jacobs, Eiteljorg, & Pittman, 2008; Coles, 2013 as cited in Hoynes, Klemp, & Nilssen, 2019). The main focus of mentoring is how to orchestrate the trainee-teacher on the basis of whole class dialogues keep the view on learning outcomes and achievement of the students. The process of mentoring becomes effective when the mentee develops a good relationship with the mentor so that a perfect synchronization of the perspectives may be established. The improvement on teaching behaviours become optimal when the mentee comes to know that the intension of the mentor is not concerned with formal evaluation rather focused on possible improvement of teaching bevaviours (Efron et al., 2013 as cited in Bressman et al., 2018). So, mentoring encourages as well as provides large scope to trainee-teachers to use their insight about their own teaching with the aim of continuous professional development.

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VI. CHALLENGES TOWARDS IMPLEMENTATION OF THE INNOVATIVE PRACTICES

The introduction of any innovation always has to face certain challenges. The innovative practices in internship discussed above are not the exceptions. The plausible challenges are one by one discussed below:

Practice-1: The role of teachers actually dictates the success of integration of activities in classroom instruction, because teachers largely control and manage students' activities in the classroom. Students can never be physically active in real classroom settings without appropriate guide and support of teachers. So, teachers' classroom management skills and leadership skills must be developed as per the expectation. This is one challenge to activity integration in instruction. Again, the perception and attitude of teachers towards activities in classroom may be proved to be the cause in determining the success or failure of the above intervention which emerges as another challenge. Teachers must feel satisfied and willing enough to change or at least modify their methods of teaching showing deliberate inclination towards integrating activities in classroom teaching.

Practice-2: The success of self-monitoring practices solely depends upon reflexivity of the prospective teachers. The scope of subjectivity becomes one challenge towards making this practice fruitful. Again, appropriate monitoring and frequency of monitoring along with issues of evaluations of these practices stand as the major challenges towards its introduction in school internship.

Practice-3: In order to make the profession collaboration meaningful and fruitful, there must be coherence of thoughts among all the partners of the 'Triad'. Every member can reap the benefits only through contributing in positive and constructive sharing of active experiences among each other.

Practice-4: Personal satisfaction and individual differences may cause occasional inequality of experiences of trainee-teachers. The members involved in co-teaching may face the conflict between their individual teaching styles and problems in setting up co-planning and reflection on teaching behaviours of each other (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010; Gurgur & Uzuner, 2011 as cited in Rytivaara & Kershner, 2012). Lack of balance in participant roles may emerge as a general problem in such collaborative teacher learning (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Erickson, Minnes Brandes, Mitchell, & Mitchell, 2005; Nilsson & van Driel, 2010 as cited in Rytivaara & Kershner, 2012). However, making one's practical knowledge explicit might be easier with peers, which further supports one's learning and reflective thinking in the context of teaching practice (Putnam & Borko, 2000 as cited in Rytivaara & Kershner, 2012).

Practice-5: Hobson and Malderez (2013 as cited in Bressman et al., 2018) warn about one undesirable impact that negative and harmful mentoring may have adverse the professional growth of trainee-teachers those may carried forward in future. However, trainee-teachers and their mentors together may apply data-based decision making instead of applying judgements on the performance with the intension to facilitate the conversations on enriching teaching experiences to improve student learning outcomes (Hobson & Malderez, 2013 as cited in Bressman et al., 2018).

VII. EDUCATIONAL IMPLICATIONS

Transforming thoughts into reality requires small-scale intervention through experimentation. The abovementioned innovative practices may be introduced to an internship programme to study the effect of those practices on trainee teachers' performance in the class as well as on the learning outcomes of the students. If found fruitful, that intervention may magnified in order apply it in the large scale. So, the teacher educators and the policy planners may get some input in order to redesigning the internship of teacher preparation programmes.

VIII. DISCUSSION AND CONCLUSIONS

In order to meet the need of the time, the school internship in teacher preparation programmes may be re-planned and reoriented by introducing certain innovative practices like creation of active classrooms, self-monitoring of teaching practices, co-teaching, introducing the triad model for shaping teacher behavior and mentoring the trainee teachers. These practices may be able to shape the teaching behaviours of the practitioners, may provide the scope to focus on the teaching skills and teachings behaviours of the trainees, may develop their reflective and critical minds and may help to gain thorough understanding of real classroom situation. This may make school internship more practical as it is more practice-based. However, the above practices are still to have any practical base. Hence, in order to ensure the effectiveness in reality, this practices need to be implemented as small scale interventions by the teacher educators in teacher education institutions. Hence, contextual validations of those discussed innovative practices require experiment under real context.

ISSN 2394 - 7780

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

QUANTITATIVE AND QUALITATIVE ASPECTS OF NON-FARM EMPLOYMENT - SOME MACRO TRENDS AND MICRO LEVEL CASES

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ABSTRACT
The development status of an economy is determined by the sectoral participation of workers and the related earnings there from. Employment strategy also depends on this development status. Presence of significant percentage of unemployment particularly in the rural areas demands much attention on rural employment generation.

In the context of India, diversification in rural employment has gained significant importance over time. The studies based on the analysis of secondary data reveal that the excessive dependence on agriculture as a source of livelihood show a steady decline and the rural economy has witnessed a modest degree of diversification. The significance of non-farm employment as an instrument of rural poverty alleviation is highly regarded in policy thinking. However, the emergence and the growth of the non-farm sector vary across places and its impact on livelihood is also mixed. The presence of significant percentage of rural people below the poverty line (28% in 2004-05) makes not only the employment generation but also the analysis of the qualitative aspects of employment the most pressing concern. Present analysis reveals the there is a need of third sector for their sustainable livelihood and empowerment. Accordingly, present paper first discusses the definition of rural non-farm sector, ii) analyses the quantitative significance of non-farm employment in India i.e the incidence and size of Rural Non-farm workers in India .iii) Qualitative aspects of employment iv) Summary of findings and Case References for sustainable livelihood and women empowerment.

Keywords: Female participation, Quality of work, Rural Non-farm sector, Women empowerment

INTRODUCTION

The necessity for the expansion of the non-farm activities for rural development, improvement of employment, productivity and earnings, and poverty reduction, have been gaining significance in terms of policy in the developing world. In the peasant economies characterized by demographic pressures and an ever–increasing land–man imbalance, agriculture alone cannot provide the ultimate solution to rural un or under employment and poverty (Bhalla, 1993a: Chadha, 1994, ch-9). Again, with the process of economic development in the developing countries, agriculture and modern formal sectors are found to be unable to absorb growing amount of labour force (Samal, 1997). So, for highly populated developing countries where majority of the population depends on agriculture and where agricultural sector is oversaturated, the growth of rural non-farm sector is considered as desirable sector as it creates employment opportunities in the economy, particularly for rural poor.

According to some scholars the expansion of employment in the rural non-farm sector in India has not been significant since the early 1990s. Analyzing post 1991 development Bhalla (1997) observed that rural India suffered a structural retrogression in as much as non-farm employment decline sharply during this period. Acharya and Mitra (2000) also observed that positive non-farm employment trends that were visible during 1980s were no longer in evidence during the 1990s. Bhaumik (2002b) has shown that incidence of non-farm employment (male plus female combined), on all India bases, increased gradually during the period 1972-73 to 1987-88, which actually halted between the period 1987-88 and 1993-94. But the situation seems to have changed during 1993-94 to 1999-00 when the trend shows an upturn. Incidence of the rural non-farm employment in all India during the period 1999-00 to 2011-12 also shows an increasing trend.

Present paper first discusses the definition of rural non-farm sector in Section 2. Section 3 analyses the quantitative significance of non-farm employment in India i.e the incidence and size of Rural Non-farm workers in India .Qualitative aspects of employment are presented in Section 4. Summary of findings and Case References are presented in Section 5.

Defining the Rural Non-Farm Sector (RNFS) The non-farm 'sector' includes all economic activities except agriculture, livestock, fishing and hunting (Lanjouw and Lanjouw, 2001).Therefore, non-farm workers are engaged in mining and quarrying, manufacturing, utilities, construction, trade, hotel and restaurant, transport, storage and communication and services (includes financial intermediation, real estate, renting and business activities, public administration and defense, education, health and social work and other community, social and personal services).

ISSN 2394 - 7780

Approximately one fifth of total rural non-farm employment is estimated to be generated by public sector services, primarily public administration and education (Lanjouw and Shariff, 1999). While manufacturing activities are often the first that come to mind when discussing the non-farm sector, the other important sectors in terms of employment shares were found to include retail trade, personal services, construction, road transport and textiles.

Therefore, the RNFS is not a homogenous sector. The non-farm sector consists of heterogeneous set of activities which are best classified in terms of capital use, productivity and production relation rather than product categories (Mukhopadhyay and Lim, 1985). A distinction needs to be made between categories of enterprises and individual workers in the non – farm sector. Such a classification of non – farm employment is useful from the point of view of policy implementation.

Within the non-farm sector, we had three different sources of employment and earnings- non-farm self-employment, regular employment and casual employment. Non-farm self-employed included activities related to processing industry (e.g. husking paddy, weaving, pottery, bamboo work etc), trade (e.g. tailoring, goldsmith, barber, vendor etc), repair and processing industries (e.g. carpenter, electrician, plumber, and cycle-rickshaw-van repair etc), transport (e.g. cycle rickshaw, trolley etc),business (Grocery, ration shop, decorators, seed seller, fertilizer shop, bookshop etc) and others (e.g. tuition, LIC agency, medical practice, domestic helper etc).

Regular employment included service in the formal sector. Some common type of regular activities are the jobs of school teacher, workers in Panchayets, government sponsored rural development project like ICDS (Integrated Child Development Scheme), Bank clerk, School Clerk, Border Security Force, Central Reserve Police Force etc. It also included regular employment in the informal sector like working in shops on regular and permanent basis.

Casual employment included various kinds of jobs some of which lasted for fortnight to six months a year.

Thus, rural non-farm sector includes all economic activities outside the farm sector in the rural areas. The distinction between rural and urban employment is based on the place of residence of workers, so those who commute to a job in a nearby urban centre are considered to be rural workers. Rural is usually defined as to include settlements about 20000 or fewer inhabitants (NABARD, 1994).

INCIDENCE AND SIZE OF RURAL NON-FARM EMPLOYMENT

Proposition-I: The percentage share of Rural Non-farm employment is increasing during the period 1993-94 to 2011-12, in India: Table-1a is based on NSSO (National Sample Survey Organisation) estimates, gives the incidence of rural non-farm employment in all India during the period 1993-94 to 2011-12.It is clear from Table-1a that the incidence of rural non-farm employment (US-PS+SS basis, person) on all-India basis, increased gradually between the periods 1993-94 to 2011-12.It increased from 21.6 percent in 1993-94 to 32.0 percent in 2011-12.

If we look at the incidence of rural non-farm employment (US-PS+SS basis) in all India separately for males and females, it can be clearly observed that the increase has been more pronounced in the case of male workers. It increased from 25.9 percent in 1993-94 to 37.2 percent in 2011-12 for male workers and from 13.9 percent in 1993-94 to 20.7 percent in 2011-12 for females.

Proposition-II: The absolute number of rural Non-farm workers has increased during the period 1993-94 to 2011-12: The expansion of non-farm employment in rural India could also visualize from the absolute figures of non-farm employment in different points of time. The absolute size of non-farm employment has been increasing continuously since 1993-94 (see Table-1b). As shown in Table-1b, at the all India level, the number of rural non-farm employment increased by 2.91 million persons per year during 2004-05 and 2011-12 as against 1.24 million persons per year during 1993-94 and 1999-00.

However, if we look at the incidence of rural non-farm employment separately for males and females, it emerges that increased has been more pronounced in case of male workers all through the period of 1993-94 to 2011-12. Table-1b shows that the non-farm employment increased by 2.59 million per year for the males during the period 2004-05 and 2011-12 as against only 0.19 million per year for the females.

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Table-1a: Percentage of Rural Non-Farm workers to total workers in All-India US-PS+SS basis

NSS Round	Year	Size of Non-Farm Employment(in million)			US-PS+SS basis		
		Male	Female	Person	Male	Female	Person
50th	July1993-June'94	48.66	14.67	63.22	25.9	13.9	21.6
55th	July1999-June'00	55.96	15.25	70.65	28.7	14.8	23.8
61st	July2004-June'05	73.31	20.70	93.47	33.5	16.8	27.3
68th	July2011-June'12	86.25	21.66	108.01	37.2	20.7	32.0

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

Table - 1b: Average yearly change of Rural No-farm Employment in All-India (US-PS+SS Basis)

Average yearly change(in million)	Male	Female	Person
1993-94 and 1999-00	1.22	0.10	1.24
1999-00 and 2004-05	3.47	1.09	4.56
2004-05 and 2011-12	2.59	0.19	2.91

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

QUALITY OF EMPLOYMENT

In India, the reported status of a workers as 'employed' does not necessarily imply a reasonable level of earnings; nor does it reflects the status of living of workers (See Annual Report to the People on Employment, July,2010). It is evident from the fact that while the unemployment rate even by the highest estimate was 8.3 percent, the percent of people living below the poverty line was as high as 28 percent in 2004-05. Therefore, problem is not only of unemployment, the earnings from their present employment are also very low. The analysis of quality of employment now becomes as important as the quantity of employment.

To analyze the qualitative aspect of employment we consider some characteristics of employment in India.

i) Presence of underemployment: The NSSO data presents a comparative account of usually employed persons and persons employed on the basis of Current Daily Status (CDS) during a year; the difference in the level of employment reveals underemployment in the rural sector. Here underemployment means that the person employed on the basis of their usual status are not getting employment for a sufficient number of man days to be termed as employed on the basis of CDS (Jha, 2007). Table-2 presents the percent distribution of usually employed persons by their broad CDS of employment. It shows that the proportion of man days of the usually employed utilized for work, in rural and urban areas, was about 92 percent and 96 percent respectively for males and 69 percent and 85 percent respectively for females during the year 2011-12. The Table-2 also indicates that out of one hundred usually employed rural males more than 8 percent of rural males were either unemployed or not in the labour force during the year 2011-12. The same percentage, for their female counterparts was high as 31% in the year 2011-12. Under employment is highest among the rural females. It is important to note that in the current daily status, most of the females classified as workers in the usual status withdraw from the labour force rather than reporting themselves as unemployed, resulting in significantly higher percentage of the usually working females 'not in the labour force' in the CDS and the percentage is significant for rural females (26.5%) in the year 2011-12.

Table - 2: Percent distribution of US (PS+SS) workers by their broad current daily status of employment during the reference year

CDS	*R-M*				*R-F*				*U-M*				*U-F*			
	1993-94	1999-00	2004-05	2011-12	1993-94	1999-00	2004-05	2011-12	1993-94	1999-00	2004-05	2011-12	1993-94	1999-00	2004-05	2011-12
Employed	90.9	89.7	89.3	91.6	66.4	67.6	65.7	69.2	94.8	94.2	94.5	96.1	76.6	79.1	79.8	84.6
Unemployed	4.0	5.2	6.1	4.7	3.0	4.1	4.7	4.3	2.7	2.7	3.7	2.3	2.4	2.2	3.1	2.4
Not in Labour Force	5.1	5.1	4.6	3.8	30.6	28.3	29.6	26.5	2.5	3.1	1.9	1.6	21.0	18.7	17.1	13.1
All	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

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ii) Increasing Casualisation within the non-farm sector: Mode of employment mainly characterized as self-employed, regular and casual, is usually used as a broad indicator of assessing quality of employment of employed persons. Table-3a shows the percentage distribution of non-farm workers by status of employment. The percentage share of casual employment shows an increasing trend during 1993-94 to 2011-12. The share of self-employment decreases during the period 2004-05/2011-12.Table-3b shows growth of non-farm employment by status. Growth rate of self-employment and regular employed non-farm workers show a declining trend. The growth rate of casual employment increases from 4.04 percent during 1993-94/1999-00 to 7.99 percent during 2004-05/2011-12.

Table - 3a: Percentage Distribution of Rural Non-farm workers by Status

Percentage Distribution of Non-farm workers by Status				
	1993-94	1999-00	2004-05	2011-12
SE	51.06	48.96	49.58	43.65
RE	25.56	24.50	23.53	21.43
CL	23.38	26.54	26.89	34.92

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

Table - 3 b: Growth of Rural Non-farm Employment by Status

Growth of Rural Non-farm Employment by Status			
	199394/1999-00	**1999-00/2004-05**	**2004-05/2011-12**
SE	**1.16**	**5.85**	**0.51**
RE	**1.16**	**4.74**	**1.19**
CL	**4.04**	**6.49**	**7.99**

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

In India approximately 54 percent of the rural labour force and 41 percent of the urban labour force are self-employed (see Table-4). The proportion of self-employed has shown significant increase during the period 1999-00/2004-05 but it shows a declining trend in between 2004-05/2011-12. Regular employed has remained stagnant at around as low as 7 percent in rural areas and 41 percent in urban areas in the period 2011-12. One depressing feature of the labour market is the recent increase in casual employment at the cost of self-employment, with the proportion of the latter declining from 60.14 percent to 54.17 percent in rural areas and from 45.48 percent to 41.14 percent in urban areas between 2004-05/2011-12 (Table-4). We get the same trend in the urban areas if we consider farm and non-farm sector separately. However, non-farm regular workers in rural areas show a marginal increase during the period 2004-05 and 2011-12.

We have computed an index of casualisation (ICL) for all workers and also for non-agricultural workers.ICL are defined as

ICL= (percentage share of casual workers/percentage share of regular workers)*100.

Table-4 (last column) reveals that casualisation of non-farm workers is more in the rural areas than the urban areas. It is more significant among the females compare to their male counterparts. Index of casualisation for all workers also shows significant presence of casual employment in the rural area for both male and female workers. Again the intensity is more for females than rural males.

Table - 4: Percentage Distribution of workers in the Farm and Non-farm sector on the basis of their Status of employment and by sex

		SE			RWE			CL			ICL-ALL	ICL-NON-AGRI
		AGRI	NON-AGRI	ALL	AGRI	NON-AGRI	ALL	AGRI	NON-AGRI	ALL		
RURAL MALE	**1993-94**	45.21	12.30	57.50	1.45	7.05	8.50	27.49	6.15	33.63	396	87
	1999-00	41.81	13.18	54.99	1.32	7.72	9.04	28.25	7.72	35.97	398	100
	2004-05	42.49	15.75	58.24	0.92	8.06	8.97	23.26	9.52	32.78	365	118
	2011-12	38.21	15.36	53.38	0.73	8.04	8.59	23.95	13.16	37.29	434	164
RURAL FEMALE	**1993-94**	50.61	8.23	58.84	0.61	2.13	2.74	35.06	3.35	38.41	1402	157
	1999-00	48.16	9.03	57.19	0.67	2.68	3.34	36.45	3.01	39.46	1181	112
	2004-05	53.82	9.79	63.61	0.31	3.06	3.36	29.05	3.36	32.42	965	110
	2011-12	46.74	8.81	55.56	0.38	4.21	4.60	32.18	5.36	37.55	816	127
RURAL PERSON	**1993-94**	47.07	10.81	57.88	1.13	5.41	6.53	30.18	4.95	35.14	538	91
	1999-00	44.12	11.51	55.64	0.96	5.76	6.71	31.18	6.24	37.41	558	108

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	2004-05	46.47	13.44	60.14	0.68	6.38	7.06	25.28	7.29	32.57	461	114
	2011-12	40.69	13.48	54.17	0.49	6.62	7.35	26.47	10.78	37.25	507	163
URBAN MALE	**1993-94**	5.37	36.28	41.65	0.38	41.65	42.03	3.07	12.86	15.93	38	31
	1999-00	4.05	37.45	41.51	0.39	41.31	41.70	2.12	14.29	16.41	39	35
	2004-05	3.15	29.10	32.24	0.26	28.96	29.23	1.05	9.31	10.35	35	32
	2011-12	3.87	37.20	41.07	0.18	41.62	41.80	1.84	14.73	16.57	40	35
URBAN FEMALE	**1993-94**	14.19	30.97	45.16	0.00	28.39	28.39	10.32	15.48	25.81	91	55
	1999-00	9.35	35.97	45.32	0.72	32.37	33.09	7.91	12.95	20.86	63	40
	2004-05	11.45	36.75	48.19	0.60	35.54	36.14	6.63	10.24	16.87	47	29
	2011-12	7.25	34.06	41.30	0.00	39.13	39.13	6.52	13.04	18.84	48	33
URBAN PERSON	**1993-94**	7.20	35.16	42.36	0.29	39.19	39.48	4.61	13.54	18.16	46	35
	1999-00	5.04	37.39	42.43	0.30	39.76	40.06	3.26	13.95	17.21	43	35
	2004-05	5.75	39.73	45.48	0.27	39.18	39.45	2.47	12.33	15.07	38	31
	2011-12	4.57	36.29	41.14	0.29	41.14	41.43	2.86	14.29	17.14	41	35

Source: Estimates based on 'Employment and Unemployment Survey' of NSSO during 1993-94, 1999-00, 2004-05 and 2011-12.

Note: AGRI=Sections A+B according to NIS code 2004.Non-Agri= Sections C to Q according to NIS code 2004.

III) WAGES AND EARNINGS

a) Average daily wage and Gender Bias in wage payment: Casual wage labourers are one of the most disadvantaged groups in the labour market. Poor working condition, low wages push them below poverty line. As shown in Table-5a in 2004-05, the average daily wage of casual males and females was Rs 55 and Rs 35 respectively in rural areas and Rs 75 and Rs 44 respectively in urban areas. In 2011-12, the same for rural males and females was Rs 101.53 and Rs 68.94 respectively and in urban areas the average daily wage was Rs 131.92 for males and Rs 76.73 for females. On an average the casual workers received far less wages than those received by regular workers.

In addition to low wage of casual workers, there is also gender bias[1] in wage payments. It is important to note that the gender bias in casual wage payment is low in rural areas (0.63 in 2004-05 and 0.68 in 2011-12) than in urban areas (0.58 both in 2004-05 and in 2011-12). Gender bias is also noticeable in case of regular workers and it is more in rural area than in urban area.

Table - 5a: Average Daily Wage (in Rs.) of Regular and Casual Workers (15-59 Years)

Segment	2004-05			2011-12		
	M	**F**	**IGB**	**M**	**F**	**IGB**
	Regular					
Rural	**144.93**	**85.53**	**0.59**	**249.15**	**155.87**	**0.63**
Urban	**203.28**	**153.19**	**0.75**	**377.16**	**308.79**	**0.82**
Casual						
Rural	**55.03**	**34.94**	**0.63**	**101.53**	**68.94**	**0.68**
Urban	**75.10**	**43.88**	**0.58**	**131.92**	**76.73**	**0.58**

Source: Estimates based on 'Employment and Unemployment Survey' of respective NSS Rounds, 1993-94, 1999-00, 2004-05 and 2011-12

b) Decline in the growth rate of Real Wage of Adult Casual Labourers during the first decade of twenty-first century compare to the early years of economic liberalisation:

Table-5b shows that there was a significant slowdown in the growth rate of real wage of casual workers during the first decade of twenty-first century compare to the early years of economic liberalisation. The decline in the growth rate of real wages of non-farm casual workers is more significant than that of the farm workers in rural areas.

For urban male and female workers, the growth rate of real wage[2] show a declining trend. Again, the decline is more significant for non-farm urban workers than the farm workers.

[1] IGB: Index of Gender Bias. IGB in wage payment has been calculated as the ratio of female wage to male wages. Smaller ratio indicates high gender bias.

[2] In the year 1999-00, absolute wage of the adult casual male and female agricultural workers in the rural and urban areas are Rs 40.45, 28.56, 49.72 and 32.23 respectively and CPIAL is 309 (base 1986-87=100).We inflated the absolute wage by CPIAL to get real wage for rural males and females. Similarly, we inflated absolute wages of urban workers by CPIIW

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Table - 5b: Rate of Growth of Real Wages of Adult (15-59) Casual Labourers: All India 1993-94 to 2011-12 Rate of Growth (Per cent per annum)

Segment/Period	*1993-94 / 1999-00*	*1999-00 / 20011-12*
Rural Males		
Farm	2.78	2.21
Non- Farm	3.70	1.86
All Activities	3.59	2.67
Rural Females		
Farm	2.94	2.84
Non- Farm	4.07	2.92
All Activities	5.04	3.18
Urban Males		
Farm	2.73	1.67
Non- Farm	2.93	1.43
All Activities	3.09	1.52
Urban Females		
Farm	2.96	2.21
Non- Farm	4.18	0.69
All Activities	3.91	1.13

Source

1. For rural areas, an estimate for the period 1993-94/1999-00 is taken from Sundaram (2001, 2007).
2. For Urban areas, an estimate for the period 1993-94/1999-00 is drawn from Sundaram (2007).
3. For the period 1999-00/2011-12, growth rates of real wages in both rural and urban areas have been computed from published reports (Nos. 515 and 554) of NSS Employment-Unemployment Surveys for 1999-00 and 2011-12.
4. We used CPI for Agricultural Labour (CPIAL) and CPI for Industrial Workers (CPIIL) of respective periods to derive the growth rate of real wage.

SUMMARY AND CONCLUDING OBSERVATIONS:

Our study reveals that significant percentage of workers is dependent on non-farm sector for their livelihoods. But, the job in which they are participating is casual in nature. Due to lack of proper skill and training, access to formal credit and other infrastructural facility they participate in some low paid casual work for their livelihoods. Assessing the qualitative aspects of employment in which workers are participating, becomes an important research issue, since qualitative aspects of employment plays an important role to reduce poverty.

Expansion of regular employment and particularly self-employment are important to improve the quality of work and hence the earnings of the households particularly in the rural areas for sustainable livelihood. The ***caselet*** is described as under.

Again, as there is a significant variation across the states regarding the incidence of non-farm employment and poverty, there are considerable variations across the regions within a state also. The regional level analysis can be useful in identifying the broad factors that influence non-farm growth. In order to foster non-farm activity at the micro level it would be useful to know how and why various segments of the non-farm sector develop. Again, the qualitative aspects of employment are as important as the quantitative aspects of employment. It is also important to know the nature of jobs in which individuals are participating, their conditions of work and the wage they receive from their present job. For such analysis, we need information at the household or at the individual workers level to provide proper policy measures.

(=433.33base 1982=100)) in 1999-00 to get real wage for urban male and female workers. Similarly we calculate real wages for rural males and females and for the urban males and females by using absolute wages and CPIAL (=530, base 1986-87=100) for rural areas and CPIIW (=777.42 base 1982=100) for urban areas for 2011-12.These values of real wages are then used to calculate growth rate of real wages.

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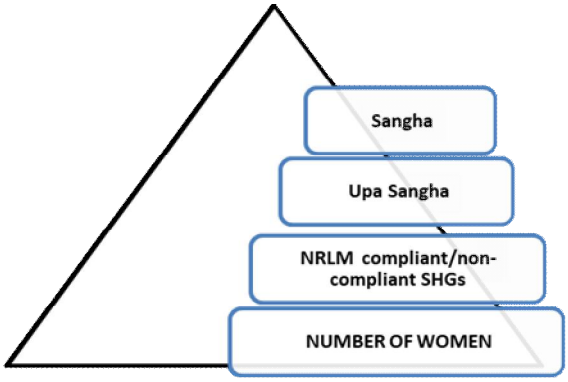
CASELET



SUCCESS STORY OF 'KALI MATA SWANIRBHAR DAL'

Now-a-days, everywhere there is a trend among women, to overcome the rural poverty, through Self-Help Groups (Swanirbhar Dal). We present here the Case of a small village, named Rupdaha of Nowpara-II Panchayat under Krishnagar-II Development Block.

For self-dependence, 10 women from this village formed a Self-Help Group - Kalimata Swanirbhar Dal on 2nd May, 2005. They started their journey through monthly savings by Rs. 15/- per head. After some time, this Self-Help Group (SHG) passed the 1st grading, and received the cash credit loan amounting to Rs. 50,000 (including Revolving Fund (RF)- Rs. 5,000) from Bangiya Gramin Vikash Bank (BGVB) Sonatala. Through discussions among the members, the SHG decided to form a Nursery. It started to cultivate saplings of different fruits and flowers in the nursery. This activity generated extra income for the members of the SHG.

Thereafter, the SHG passed the 2nd Grading and received Rs. 2,00,000 as a Project Loan (including Rs. 72,000/- as subsidy). By this fund, the SHG extended the nursery and increased cultivation of saplings. The Group diversified from small flower saplings to commercial varieties like Shawl, Teak, Mahogany, Neem etc. At present time, the SHG supplies saplings to all the Panchayats of Krishnagar-II Development Block. The Group also started to supply saplings to local markets. In this way every member of the SHG are now earning about Rs. 3500 to Rs. 4000 per month. Previously, the members were earning between nil to Rs. 1500. In future, the SHG wants to extend its business to other blocks of the district.

According to the members, a new way of income has been generated by them through their combined effort. Their little contribution helped to place them into an important role in their family life. The women, who were socially neglected, have now achieved a great success and are more empowered towards sustainable livelihood.

SUCCESS STORY OF 'VIVEKANANDA PALLY SWANIRBHAR DAL'

Belpukur is one of the villages of Krishnagar-II Block in Nadia, where many families lead their life under poverty level. Most of their family incomes are insignificant and it mainly depends on cultivation.

For a better future of their family 10 women of that village formed a SHG name "Vivekananda Pally Swanirbhar Dal" on 18th September'2006. They opened their Savings Account in BGVB Belpukur Branch by contributing Rs. 50 each. After some days, they also opened their Cash Credit A/C.

After receiving the B.O.P training by block they appeared for the first gradation by Krishnagar-II Block and District Rural Development Cell (DRDC). After that, they received Rs. 5000 as Revolving Fund by DRDC and opened their Cash Credit A/C. Their first cash credit (C/C) limit was Rs. 18,000/- which was like a dream amount for those needy women.

First time, two members of this SHG brought handloom and started weaving by this C/C loan and other members utilized their C/C loan in other family need. The SHG members also started to repay their C/C loan to

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bank. After full recovery, of the C/C loan, the Bank enhanced their C/C limit for 2nd time by sanctioning amounting to Rs. 100000 (Rupees One lac) only. Then some other members of SHG moved to their own profession and engaged themselves in income generating. After recovery of the 2nd limit of C/C loan they appeared for the 2nd Gradation and received Rs. 2,20,000 (Rupees Two Lac Twenty Thousand) only as their Project Loan for 'Handloom' project with a subsidy of Rs. 80,000/-. Then the rest of the members started their professional work. Some of them weaved cloths, some worked for spinning. In this way, they earned Rs. 55 for each saree as their own income. After a short period of time, their monthly income increased up to Rs. 2000 to Rs. 2500, which was a great success in their life. They started to contribute Rs. 100/- per head for their savings A/C.

At present they sell their ready clothes in local market and participate in many exhibitions for selling their products. In future they want to buy machinery and looms and promote their business into the next level.

Photographs have been sourced from respective DRDC Office.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

RESPIRATORY RESPONSES OF *GARRA MULLYA* (SYKES) UNDER BIFENTHRIN AND CARBOSULFAN INTOXICATION IN SUB LETHAL TENURES

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ABSTRACT
Aquatic Pollution Due To Wide Array Of Xenobiotic Compounds Causes Serious Threats To Plants And Animals Living In The Water. Pesticides Discharged In The Aquatic Bodies Though Get Diluted But Forms Sublethal Concentration And May Affect Functioning Of Organisms. The Prominent Manifestation Of Pesticidal Toxicity Is Either Altered Respiration Or Over Stimulation. Respiratory Responses Of Fresh Water Fish Garra Mullya (Sykes) Were Studied Under Sublethal Tenure Of Bifenthrin And Carbosulfan. Acclimatized Fishes Were Exposed To Pesticides And The Rate Of Oxygen Consumption Was Recorded After 7, 14 And 21 Days. Present Study Revealed Initial Increase Followed By Decrease In The Rate Of Oxygen Consumption.

Keywords: Bifenthrin, Carbosulfan, Garra Mullya, Oxygen Uptake, Sublethal Dose.

INTRODUCTION
Aquatic pollution due to various chemicals including pesticides is the most critical and burning environmental issue of the centuries.(Magar and Shaikh,2012) Most of the pesticides are species specific but when they enter into aquatic environment may disturb the life of non target species. Except some anaerobic organisms life without oxygen in impossible and hence respiration is said to be the vital process of any organism that provides oxygen for oxidation of food material to release energy. This energy is then utilized for various life activities and normal development of an individual. Oxygen consumption is a very sensitive physiological process. The activity of animal can be measured in terms of O2 uptake. Respiratory activity is the first physiological response given by the fishes when exposed to various toxic substances present in the aquatic bodies. Aquatic organisms respire through gills which are in continuous contact with water. Toxic pesticides present in the aquatic environment may bring about the changes in the gill architecture that finally affect rate of oxygen consumption. An abnormal opercular movement is an indicator of respiratory stress but more direct method to measure pesticide stress on any aquatic organism is the estimation of oxygen consumption. Any change in respiratory activity, including altered rate in opercular movement indicates physiological stress in pollutant exposed animals (Anderson, 1971; Sharp *et.al,* 1979). All aquatic organisms including fishes shows stress responses which are dependent on concentration of pesticides as well as the duration of pesticidal contact. More the exposure more will be the physiological stress. Lethal concentration of pesticides causes death of organisms but pesticides in sublethal concentrations though not causing death, tend to accumulate in the tissues of aquatic organisms and brings severe lesions in them affecting normal functioning of the system.

According to Klein (1959) and Jones (1973) oxygen consumption is an important physiological parameter to assess the toxic stress in animals. It is the valuable indicator of expenditure of energy and the metabolic processes in general. In the present study an attempt has been made to find out the effect of sub lethal concentrations of Bifenthrin and Carbosulfan on the rate of oxygen consumption of fresh water fish *Garra* mullya (Sykes).

MATERIALS AND METHODS
The fresh water fishes *G. mullya* (Sykes) were collected from Bhaware Dam, Tal-Navapur, and acclimatized to the laboratory condition for 7-8 days. Healthy fishes measuring 9-10 cm in length and 5-7gms in weight were considered for experimentation. The acclimatized fishes *G. mullya* were exposed to sub lethal (LC50/10 values of 96 hours) concentrations of pesticides i. e. Bifenthrin (0.1253 ppm) and carbosulfan (0.6980 ppm). After an interval of 7 days up to 21 days the oxygen consumption by control and treated groups was determined by standard Winkler's method.

Only one fish was introduced into each respiratory chamber. Once the fish was completely settled in the respiratory chamber, the initial sample was collected. The next sample was collected from the respiratory chamber at an interval of 7 days up to 21 days. One chamber without fish was maintained throughout the experiment to record initial amount of oxygen. Simultaneously control was also maintained to find out the rate of oxygen consumption in *G. mullya* when exposed to sub lethal concentrations of pesticides.

OBSERVATION AND RESULTS
In the present study significant alteration in the rate of oxygen consumption was noted. Increased opercular movements, clogging of the gill surface with mucous, surfacing phenomenon and gulping of air in the early

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exposure period was the noticeable behavioural changes which were more in Bifenthrin exposed fishes than Carbsulfan. The comparative data on the rate of oxygen consumption of control and experimental fish, calculated per gram body weight per hour after chronic treatment of Bifenthrin and Carbosulfan for *G. mullya* was given in the Table. The results of the control and experimental values are graphically represented in Fig by taking time on X axis and the amount of oxygen consumed per gram body weight on Y axis.

Table: The rate of oxygen consumption of *Garra mullya* (Sykes) after sublethal exposure of Bifenthrin and Carbosulfan.

Sr.No	Treatment	Average oxygen consumption ± S.D. ml/gm/hr/lit en		
		7 days	14 days	21 days
1	Control	0.44 ± 0.024	0.44 ± 0.017	0.38 ± 0.021
2	Bifenthrin	0.21 ± 0.027** 51.63 %	0.36 ± 0.030* 18.67 %	0.29 ± 0.011** 22.09 %
3	Carbosulfan	0.28 ± 0.028** 35.03 %	0.37 ± 0.041^{NS} 15.30 %	0.20 ± 0.05* 46.01 %

1. Each value is a mean of three observations ± S.D

2. (+) or (-) indicate present variations over control.

3. Values are significant at N. S. = Not Significant

* = P < 0.05

** = P < 0.01

*** = P < 0.001

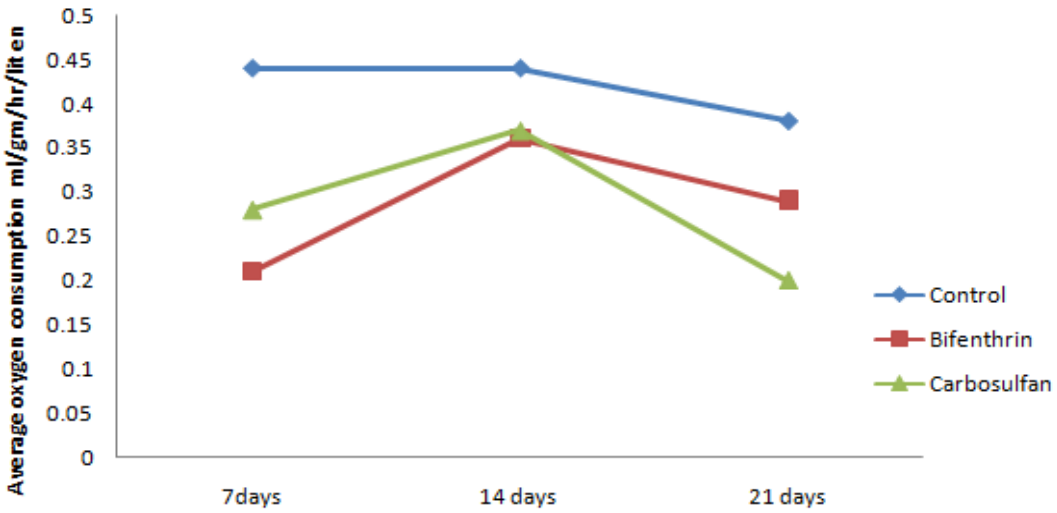

Fig: The rate of oxygen consumption of *Garra mullya* (Sykes) after sublethal exposure of

Bifenthrin and Carbosulfan.

Initial increase after 7th day of exposure followed by decrease in the rate of oxygen consumption after 14th day was observed in Bifenthrin and Carbosulfan exposed fishes which was 51.63%, (P < 0.001), 18.67% (P < 0.05) and 22.09% (P < 0.01) in Bifenthrin and 35.03% (P < 0.01), 15.30% (NS) and 46.01% (P < 0.05) in Carbosulfan exposed *G. mullya* on 7th, 14th and 21st day.

DISCUSSION

Most fishes are gill breathers and transports oxygen from surrounding water to the tissue level. Pesticidal discharge into aquatic bodies changes chemical properties of water that reflects abnormal ventilatory activity of the gills which are in intimate contact with surrounding environment. Alteration in the architecture of gill lowers its diffusion capacity that results in decreased oxygen consumption. Luther Das *et.al* (2000) reported increased rate of oxygen consumption during initial period in fresh water fish *Labeo rohita* exposed to cypermethrin. Similar observations were also reported by Nagaraju, And Venkata Rathnamma (2013), Rajmannar and Manohar (1992) and Sambasiva Rao et al (1981).

Present study shows agreement with these investigators. *G. mullya* showed steady decrease in the rate of oxygen consumption in the control group but initial elevation of oxygen uptake was reported in Bifenthrin and

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Carbosulfan exposed fishes. Gradual decrease in the rate of oxygen uptake can be attributed to the starvation of fishes as starved fishes shows reduced metabolic rates. Stress imposed by the pesticides in the aquatic environment make the animal active to combat the stress and this may be the reason of initial increase in the uptake of oxygen to incur an increased energy requirement. It can be explained that the sudden rise in the oxygen uptake during early period of exposure up to 7th day might be due to the adjustment efforts of the fish *G. mullya* to the toxic stimulus of pesticides. The decrease in the rate of oxygen consumption at the later period can said to be a protective measure to ensure low intake of the toxic substance. According to Jhingran (1983) reduction in oxygen uptake after subsequent exposure of pesticides might be due to failure of fishes to attempt boosting oxidative exposure period. Tilak et al; (2005a) correlated reduction in oxygen uptake with the extent of damage of gill epithelium.

CONCLUSION

From the observations and analysis of the data of the present work it can be evidenced that pesticides Bifenthrin and Carbosulfan have shown profound effect on respiratory activity in fresh water fish *G. mullya*. Pesticide induced stress causes increased metabolic activity to combat its harmful effect thus increases oxygen uptake similarly clogging of gill surface to avoid the direct contact of pesticides as a defence may be responsible for the decreased rate of respiration. Estimation of respiratory rate in aquatic organisms can be used as a potential tool for assessment of aquatic pollution.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

YOUTH'S PERCEPTION TOWARDS DIGITAL MARKETING

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ABSTRACT
Digital marketing plays a vital role in economic development of a country. Owing to the introduction of digital India, there is more scope for the growth of digital marketing in India. Digital marketing targets users of all kinds of electronic devices from desktop computers to smart phones in order to successfully promote a business online and engage an audience. Companies are being visible on as many types of digital marketing platforms as possible, from search engines to social media sites and smart phones. Our youth has been identified as the driving force behind online shopping. Hence, researchers made an attempt to study youth's perception towards digital marketing. This research paper focuses to find out reasons for the growth of digital market, to highlight the benefits of digital marketing and to exhibit youth's perception towards Digital marketing. The sample size for the study was 100. Random sampling method was used for the present study. Chi-square was used for testing the hypothesis. The present study revealed that too much digital marketing de-motivates the customer from buying a product. The study also discloses that customers are more attracted towards social media marketing.

Keywords: digital marketing, youth perception, online marketing, consumer's behaviour, e-marketing

INTRODUCTION
Digital marketing first began in India in the decade of 1990s. This type of marketing is the backbone of modern capitalism, allowing anyone with an idea, thought, product or service to reach the widest audience possible. Digital marketing is the means of informing as well as influencing the general public to buy a product or services. A product or service is advertised to create awareness in the minds of potential buyers through various advertising mediums such as Newspaper, Magazines, Television, Radio, Posters, Hoardings, Billboard and in recent time digital marketing. In the present day world of mass production and distribution, digital marketing serves as a powerful tool in the marketing process.

RESEARCH OBJECTIVE
- To know the reason for the growth of digital marketing
- To highlight the benefits of digital marketing
- To project youth's perception towards digital marketing

RESEARCH METHODOLOGY
This study is based on both primary data and secondary data. Secondary data was collected from internet, journals, articles, books. Researchers have collected primary data through structured questionnaire with the sample size of 100. Random Sampling method is used to distribute the questionnaires among youth. Tabular form and diagrams (bar chart, pie chart) are used for presenting the data and for testing the hypothesis chi-square test has been used.

HYPOTHESIS
Hypothesis 1

H_0: Effectiveness of digital marketing and demand for the product are independent.

H_1: Effectiveness of digital marketing and demand for the product are dependent.

Hypothesis 2

H_0: Repetitive online ads do not motivate customer.

H_1: Repetitive online ads do motivate customer**.**

NEED FOR THE STUDY
In the rapidly growing economy, digital marketing is widely used by almost all the companies in order to survive the growing market. It acts as a helping hand to many of the start-ups to make their mark. Thus, there is a need to study the reason for the growth of digital marketing and its benefits to customer, society and organisation. As the saying goes

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"too much of anything is too bad", too much digital marketing also may sometime cause the downfall of a company due to the negative impact on consumer behaviour. Hence, researchers made an attempt to study youth's perception towards digital marketing.

LITERATURE REVIEW

Kierzkowski Mc Quade, Waitman and Zeisser (1996) explain digital marketing as promotion ofproducts and services via one or more form of digital or electronic media.

Bird (2007) defines digital marketing as a communication activity conducted over media using digital transmission that establishes a direct relationship between a company and its customers or prospects as an individual.

Kotler and Armstrong, (2009) defines digital marketing as a form of direct marketing which links consumers with sellers electronically using interactive technologies like emails, websites, online forums and newsgroups, interactive television, mobile communications etc.

A study was conducted by Dr. S. Sivasankaran (2017 Vol. 4) on the digital marketing and its impact on buying behaviour of youth. By making use of 100 youngsters he found out that youth's buying behaviour, purchasing power and awareness about the product etc. have a greater influence on the family's buying behaviour.

FINDING OF THE STUDY

Reasons for the growth of digital marketing

India is a densely populated country with a population of 1.3 million (2019), as per the estimates of Worldometers' RTS algorithm and internet has now become an integral part of everybody's life. When it comes down to the business, no doubt the trend of digital marketing is on the boom, this is because everyone wants to market their products and services through the internet to increase the reach. With the changing times, people want everything at their fingertips so people and the marketers are going gaga over this digital marketing trend. Even the start-ups are launching their business via digital marketing as this platform eases the process of every business. It offers a wide range of economical, contemporary mechanisms and mediums of marketing. It is said that "Being Digital is Being Global" and this is the reality as the reach of digital platforms is so huge that one can connect with almost everyone now. Even the educational institutions are offering certification programs in digital marketing that has a practical approach. Metros are already a part of the digital economy but now as the scope of digital marketing are increasing; the towns and cities are also getting highly connected with digital mediums. When compared with other marketing platforms, digital marketing is one of the most affordable media to promote the product with higher engagement rate. The most important reason for the growth of digital marketing in India is the "Digital India" initiative taken by Government of India. In order to transform the ecosystem of public services through information technology, the Government of India launched the Digital India programme in 2015 with the vision to transform India into a digitally empowered society and an economy of knowledge. In simple words, one can say that there is a lot happening in digital marketing space which is why digital marketing is growing rapidly.

BENEFITS OF DIGITAL MARKETING

To Organisation

- Traditional marketing methods like print, broadcast, etc. require a lot of capital and provide limited output but on the other hand, Digital Marketing is cheap; it suits all types and sizes of business.
- Mobile users are growing day by day and in 2019 the number of mobile phone users are forecasted to reach 4.68 billion thus targeting mobile users and converting them into customers is the key for business growth and digital marketing is making it possible.
- Digital marketing is an effective medium to convey a clear message and attract huge website traffic for the purpose of increasing sales.
- Return on Investment (ROI) is an important factor in any marketing strategy and digital marketing is the best method to expand customer base and gain high return on investment.
- When targeting an audience, diversification plays an important role in the marketing and advertising campaign. With digital marketing diversification becomes a lot easier.
- With digital marketing it is easy to set up a marketing campaign at any time that is convenient for an organisation.
- Digital marketing opens up opportunity for small businesses to make their stand.

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To Society

- One of the ways in which digital marketing benefits society is by informing and educating consumers. Marketing generally has a persuasive intent, but it begins when a company identifies a customer's need and seeks to describe how its products or services meet that need.
- Digital marketing strategies translate into expansion, job creation, higher tax revenue for governments and, eventually, overall economic growth.
- Digital marketing improves the standard of living of the society.
- Digital marketing brings about sophistication in society.

To Customers

- Customers can make use of pricing that may change regularly or take advantages of special offers that last for a limited period as they can access pricing information 24 hours a day/7 days a week with the help of digital marketing.
- Digital marketing offer clear and consistent product information to all internet users as there is little to no chance of misinterpretation or mishearing in digital marketing.
- Digital marketing helps customers to stay up to date with the new trends and fashions.
- Digital marketing provides a means of learning about new products and what they do. It also includes practical information to assist the customer in making a purchase, such as addresses, phone numbers, product release dates, store hours and Web addresses.
- Digital marketing channels (SMS marketing) reaches the customers even in the remote areas.

Youth perception towards digital marketing

Table-1: Personal profile of the respondents

Age	**Frequency**
18-21	26
22-25	52
26-30	22
Gender	**Frequency**
Female	68
Male	32

Source: Primary data

The survey was conducted on 100 youths out of which 26 were from the age group of 18-21, 52 were from the age group of 22-25and 22 were from the age group of 26-30. In this study 68% of youth were females and 32% were males.

Table-2: Perception on: digital marketing introducing youth to a new product

Age	**Yes**	**No**	**Total Frequency**
18-21	19	7	26
22-25	37	15	52
26-30	20	2	22
Total Frequency	76	24	100

Source: Primary data

Table 2 indicates that digital marketing have introduced 19 of the youths between the age group of 18-21 to a new product. Under the age group of 22-25, 37 youths have been introduced to a new product and 20 youths between the age group of 26-30 have been introduced to new product due to digital marketing.

Table-3: Youth perception towards necessity of online ads to sell more products

Age	YES	NO	TOTAL
18-21	24	2	26
22-25	46	6	52
26-30	22	0	22
TOTAL	92	8	100

Source: Primary data

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Table 3 indicates that 24 youths between the age group of 18-21 think that online ads are necessary for a company to sell more products. Under the age group of 22-25, 46 youths think that online ads are necessary to sell more products. 22 youths between the age group of 26-30 think that online ads are necessary for a company to sell more products.

Table-4: Youth participation in viral marketing

Age	Always	Sometimes	Never	Total Frequency
18-21	0	15	11	26
22-25	2	24	26	52
26-30	2	15	5	22
Total Frequency	4	54	42	100

Source: Primary data

Table 4 indicates that only 4% of the youth always take part in viral marketing. 52% of youth take part in viral marketing only sometimes and 42% of youth never take part in viral marketing. By observing the above data we can say that viral marketing is not so effective in digital marketing.

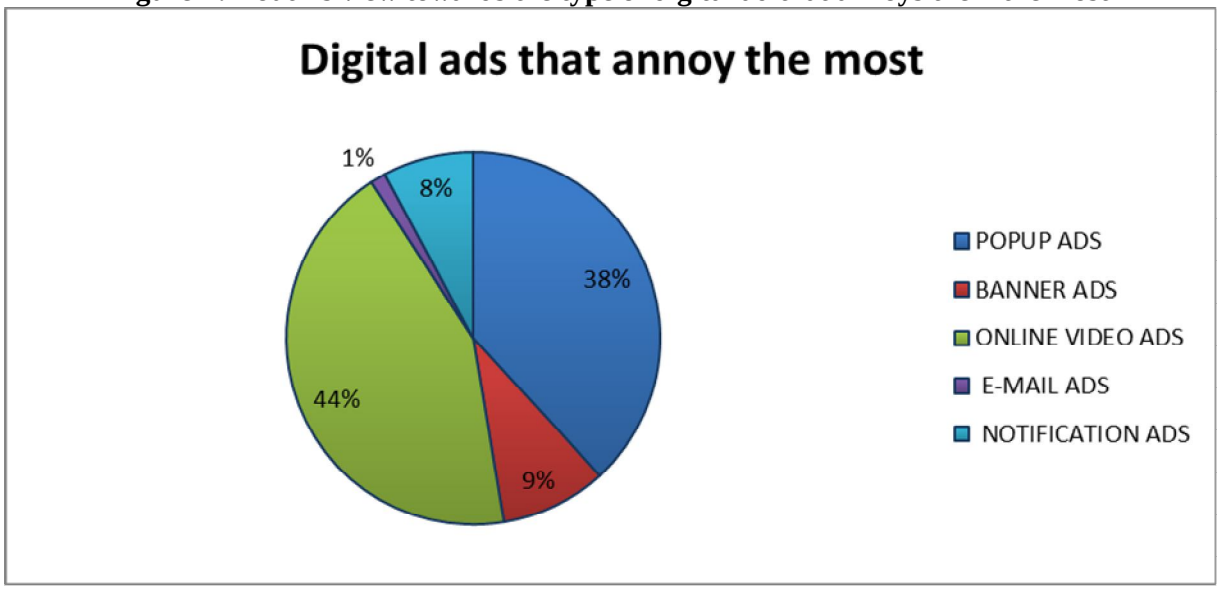
Table-5: Youth's opinion towards online ads being an annoyance

Age	Yes	No	Total Frequency
18-21	17	9	26
22-25	40	12	52
26-30	19	3	22
Total Frequency	76	24	100

Source: Primary data

Table 5 indicates that out of 100 youth 76 of them find online ads annoying. 24 youths do not find online ads annoying.

Figure-1: Youth's view towards the type of digital ad that annoys them the most



Source: Primary data

Out of the 76 youths who found online ads annoying in reference to **Table 5**, **Figure 1** indicates that 44% of the youth get annoyed by online video ads, 38% get annoyed by popup ads, 9% of the youth get annoyed by banner ads and 8% youth get annoyed by notification ads and only 1% youth get annoyed by e-mail ads.

Table-6: Youth perceptions on relationship between increased ads and increased competition

Age	YES	NO	TOTAL
18-21	22	4	26
22-25	45	7	52
26-30	22	0	22
TOTAL	89	11	100

Source: Primary data

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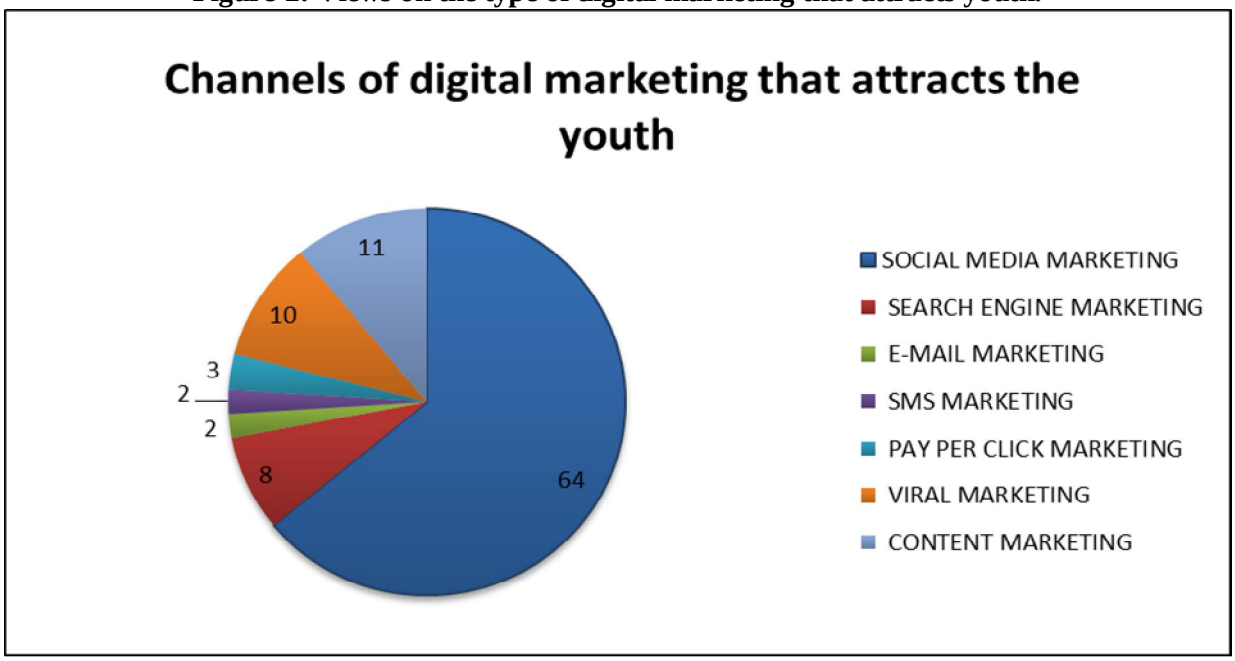
Table 6 indicates that 89 youths think that ads are increasing due to increasing competition, 11 youths think that increasing ads and increasing competition do not have any relation.

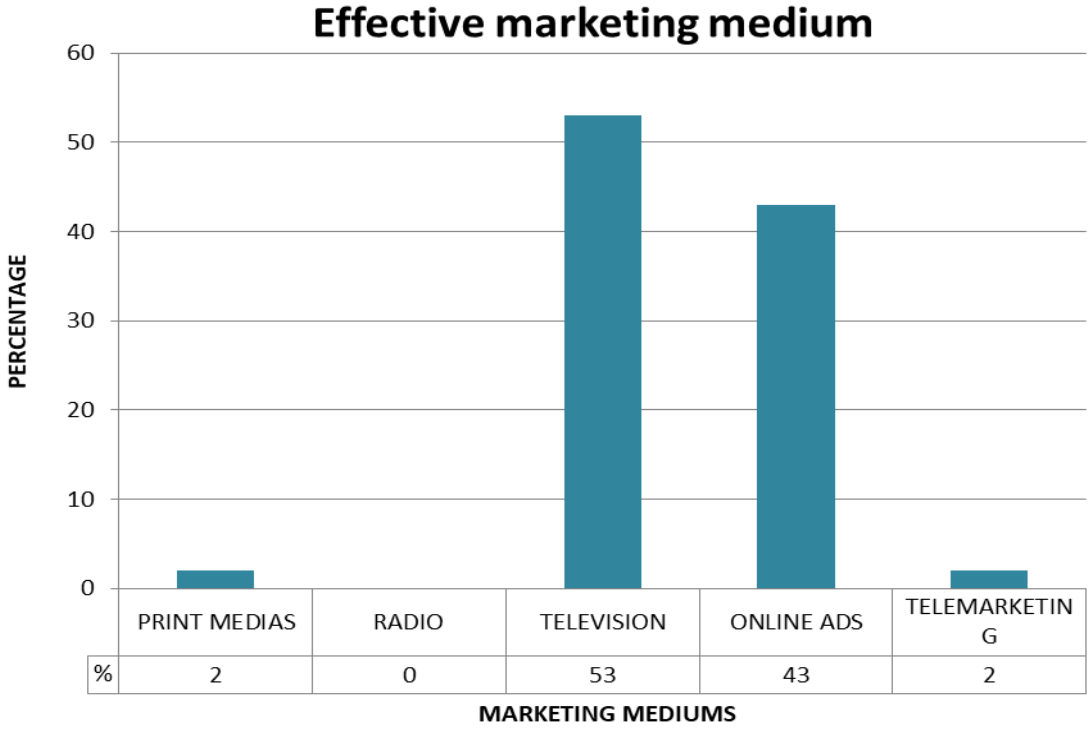
Figure-2: Views on the type of digital marketing that attracts youth.



Source: Primary data

Figure 2 clearly indicates that 64% of the youth get attracted towards social media marketing, content marketing attracts only 11% of the youth, and viral marketing attracts 10% of the youths and 8% of the youth get attracted towards search engine marketing. Pay per click marketing attracts only 3% of the youth followed by SMS marketing and e-mail marketing which attracts only 2% of the youth.

Figure-3: Youth perception on effective marketing medium



Source: Primary data

Figure 3 clearly indicates that according to 53% of the youth it's the television that is an effective marketing medium closely followed by online ads with 43% youth agreeing to it. Telemarketing, print media and radio are not a very effective marketing medium as only 2% of youth think print media and telemarketing is an effective marketing medium with 0% youth thinking that radio is an effective marketing medium.

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TESTING OF HYPOTHESIS 1

H_0: Effectiveness of digital marketing and demand for the product are independent.

H_1: Effectiveness of digital marketing and demand for the product are dependent.

The degree of freedom is 1

The level of significance α is 5%

Calculated value	Critical value
4.208	3.84

Since **chi-square** = 4.208 is more than 3.84, **H_0**is rejected.

Interpretation: Here alternative hypothesis H_1 is accepted, therefore effectiveness of digital marketing and demand for a product are dependent.

TESTING OF HYPOTHESIS 2:

H_0: Repetitive online ads do not motivate customers.

H_1: Repetitive online ads motivate customers.

Table 7: Cause and effect relation between Repetitive ads and its impact

How often do you see ads while using internet?	Do you think too much online ads will de-motivate you from purchasing a product?		
	Yes	**No**	**Total**
Always	24	8	32
Sometimes	43	25	68
Total	67	33	100

Source: Field survey data

The degree of freedom is 1

The level of significance α is 5%

Calculated value	Critical value
1.36	3.84

Since **chi-square** = 1.36 is less than 3.84, **H_0**is accepted.

Interpretation: The chi-square analysis shows that the null hypothesis, "repetitive online ads do not motivate customers" has been accepted. Hence the alternative hypothesis has been rejected.

CONCLUSION

People are consuming more and more digital content on a daily basis and companies have recognised this and have implemented it. That's why a rapid growth can be seen in digital marketing field. Moreover, the benefits of digital marketing are much more than that of traditional marketing. Hence digital marketing is necessary for a company to survive in this cut-throat competitive world but even now most of the youth prefer T.V ads over online ads. Having too much digital marketing will eventually have an adverse effect on the company as it will de-motivate customers from buying products and services. So the companies must make sure that they do not over use the concept of digital marketing. Thus, companies must maintain a perfect balance between digital marketing and traditional marketing.

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WEB RESOURCES

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

AN ANALYSIS OF CORPORATE SOCIAL RESPONSIBILITY (CSR) WITH SPECIAL REFERENCE TO SELECTED INDIAN COMPANIES

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ABSTRACT
Business is an integral part of social system and it is influenced by elements of society on the other hand society is also affected by business. The definition of business has been undergoing many changes with the passage of time. Business, in past was considered as a unit which aims at profit maximization to business these days as an entity which is performing socially responsive actions. An effort has been made in this article to define business unit as an entity which is performing for the betterment of society. To justify social performance of business, author has presented the definition of corporate social responsibility, Evolution of CSR in Indian and Global context, top 10 Indian companies' CSR initiatives and their spending on CSR from 2014-15 to 2017-18 which enable readers to understand the importance of Corporate Social Responsibility in India.

Keywords: Business, Corporate, CSR, CSR Initiatives and Spending, Society,

INTRODUCTION

Business is an integral part of social system and it is influenced by elements of society on the other hand society is also affected by business. The term "Business" is used in different senses is referred to functions or activity of an organization which exchanges goods and services. Sometimes it is referred as enterprise business. Traditionally business is a commercial activity aimed at profit making. In modern trend definitions of business is different. Here profit is secondary objective. There are any organizations both in public and private sectors, which do not aim at profit in a sense profit, is a very narrow concept. Today business is regarded as social institution, which is an integral part of social system. According to **Davis,** "Business is a social institution performing a social mission and having broad impact on people's living and working."

OBJECTIVES OF THE STUDY

- To understand the CSR and Evolution of CSR in Global and Indian context
- To understand the importance of CSR.
- To analyze the CSR initiatives and spending to Top 10 Indian Companies
- To justify business as an entity performing socially responsive action through CSR

SCOPE OF STUDY

- This study is useful to reader in understanding the CSR and Evolution of CSR in Global and Indian context
- This study is useful to reader in understanding the importance of CSR.
- Readers will be benefited by the analysis of the CSR initiatives and spending to Top 10 companies
- This study roadmap to those businessmen which is not aware about CSR and wants to perform socially in future

METHODOLOGY

The study is a descriptive type in nature. Secondary data has been used for the study. Secondary data is collected from library, reference books, text books, and journals, articles from news papers and from relevant websites of companies available on internet. By using that information I am trying to come up with some assumptions and recommendations.

EVOLUTION OF CSR

GLOBAL CONTEXT

1950-1960s: The focus was on business doing good deeds for society. The drivers of change were events, people and ideas who were instrumental in characterizing the emerging social changes.

1970s: Thinkers such as Carrol ensured the change in thought which argued that 'firms have responsibilities to societies including economic, legal, ethical and discretionary.

1980s: Taking from Donaldson and Dunfee who highlighted the 'tacit social contracts between the firms and society' was characterized by enhanced responsiveness towards stakeholders.

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1990s: CSR becoming a strategic issue focusing on Freeman's stakeholder theory. It correlated with current CSR definition that views it as a concept 'whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders.

Indian context:

Before 1947: The concept itself manifested through charity that was carried out by businessmen and philanthropists with a strong religious sentiment.

Post 1947: The Gandhian philosophy of trusteeship was popular. It advocated the role of PSUs as important elements fulfilling the development agenda.

Post 1991: The era allowed the entry of global players which enhanced the competition in the market. The global standard of CSR motivated the local players to respond to the needs and enhanced the brand value and meet consumer satisfaction.

Post 2000: The global information sharing allowed the Indian government to incorporate the best practices that made India the first country to mandate CSR. The undertone has been focused on partnership and triple bottom line of engagement and not just on monetary alliance.

Companies Act 2013: As per as Corporate Social Responsibility is concerned, the Companies Act, 2013 is a landmark legislation that made India the first country to mandate and quantify CSR expenditure. The inclusion of CSR is an attempt by the government to engage the businesses with the national development agenda. The details of on corporate social responsibility are mentioned in the Section 135 of the Companies Act, 2013. The Act came into force from April 1, 2014, every company, private limited or public limited, which either has a net worth of Rs 500 crore or a turnover of Rs 1,000 crore or net profit of Rs 5 crore, needs to spend at least 2% of its average net profit for the immediately preceding three financial years on Corporate social responsibility activities.

WHAT IS SOCIAL RESPONSIBILITY?

"In real sense, social responsibility implies recognition and understanding of the aspirations of society and determination to contribute towards their achievements."

-George A. Steiner

"By social responsibility, we mean the intelligent the objective concern for the welfare of the society that restrains individual and corporate behavior form ultimately destructive activities, no matter how immediately profitable, and leads in the direction of positive contribution to human betterment, variously as the latter may be defined."

- Kenneth R. Andrews

"Social Responsibilities refer to the businessman's decision and action taken for reasons at least partially beyond the firm's direct economic or technical interest."

-Keith Davis

"Social Responsibility is to pursue those policies and decision to follow those lines of actions which are desirable in terms of the objective and value of our society."-**H.R. Bowen**

WHY CORPORATE SOCIAL RESPONSIBILITY IS IMPORTANT?

Improves Public Image: Companies that show their commitment to various causes are perceived as more philanthropic than companies whose corporate social responsibility actions are nonexistent. Remember, consumers feel good shopping at institutions that help the community.

Increases Media Coverage: How much good a company can do in its local communities, or even beyond that, is corporate social responsibility is beneficial to company only when media is ready to cover the stories and showcase it to public which will ultimately increase media visibility. But when media is ready company should be very conscious while taking any step because we know bad news spreads quicker than good news.

Boosts employees engagement: When companies show that they are dedicated to improving their communities through corporate giving programs, they are more likely to attract and retain valuable, hardworking, and engaged employees. Happy employees mean better output.

Attracts & Retains Investors: Corporate should not only have sound business plans and budgets, but also have a strong sense of corporate social responsibility. This will surely induce investors to pour their money in companies. Investors are more likely to be attracted to and continue to support companies that demonstrate a commitment not only to employees and customers, but also to the society as a whole.

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Positive Workplace Environment: Instilling a strong culture of corporate social responsibility within every employee from the top down will help to create a positive and productive environment where employees can thrive.

Boosts creativity and innovation: Employers have identified creativity as one of the most important leadership qualities that an employee can possess. By incorporating comprehensive philanthropic programs, companies can help employees become more productive and creative.

Encourages professional and personal growth: By helping those in need and volunteering as teams, employees learn to work better together on important projects. When employees contribute their time and money to worthy causes, they develop professionally and personally.

Promotes Individual Philanthropy: When employees notice that the company they work for is involved in charitable endeavors, they play follow the leader and begin to engage in their own philanthropic activities**.** Employees become more philanthropically aware when they work for companies that are socially responsible.

Increased brand awareness and recognition: If company is committed to ethical practices, this news will spread. More people will therefore hear about your brand, which creates increased brand awareness.

An advantage over competitors: By implementing CSR, you stand out from competitors in your industry. You establish yourself as a company committed to going one step advance by considering social and environmental factors.

Attracts and retains customers: If you are performing some socially responsive actions, you should shout it from the rooftops. Post it on your social media channels and create a story out of your efforts. Furthermore, you should show your efforts to local media outlets in the hope they'll give it some coverage. Customers will follow this and engage with your brand and operations.

Business social responsibilities towards different sections:

Business has to identify and need to discharge the social responsibility towards the various sections of society. These are as under:

RESPONSIBILITY TOWARDS
Investors/Shareholders/Creditors

- Ensuring safety of their investment
- Regular payment of interest
- Timely repayment of principal amount.
- To provide timely dividend
- Listen to their complaints
- To design long term plans for the growth of the enterprise this ultimately benefits the shareholders.
- To provide adequate and timely information about the functioning of the company.
- Money should be used for the productive purpose only.

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Responsibility towards suppliers

Giving regular orders for purchase of goods.

- Dealing on fair terms and conditions.
- Availing reasonable credit period.
- Making timely payment of dues.
- Creating a long term and healthy relation with them.

Responsibility towards employees

- Timely and regular payment of wages and salaries.
- Suitable working conditions and welfare amenities.
- Opportunity for better career prospects.
- Job security as well as social security like facilities of provident fund group insurance, pension, retirement benefits, etc.
- Better living conditions like housing, transport, canteen, etc.
- Well-timed training and development.
- Creating a healthy relation between management and staff.
- Attempts must be made to improve the morale of employees.
- If possible, there should be workers participation in the management.
- Good grievances redresal system.

Responsibility towards customers

- Products and services must be able to take care of the needs of the customers.
- Product and services must be qualitative
- There must be regularity in supply of goods and services.
- Price of the goods and services should be reasonable and affordable.
- All the advantages and disadvantages of products as well as procedure to use the products must be informed to the customers,
- There must be proper after-sales service and services of repairs so that their loyalty remains with the company.
- Grievances of the consumers, if any, must be settled quickly.
- Ensuring the easy availability of goods and services.
- Unfair means like under weighing the product, adulteration, etc. must be avoided.

Responsibility towards Government

- Setting up units as per guidelines of government
- Payment of fees, duties and taxes regularly and honestly.
- Not to indulge in monopolistic and restrictive trade practices.
- To comply with pollution control norms set up by government.
- Not to indulge in corruption through bribing and other unlawful activities
- Not to use political favors for getting the work done.
- To furnish necessary information which government demands and that also fair.

Responsibility towards society

- To help the weaker and backward sections of the society.

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- To preserve and promote social and cultural values.
- To generate employment.
- To protect the environment.
- To conserve natural resources and wildlife.
- To promote sports and culture.
- To provide assistance in the field of developmental research on education, medical science, technology, etc.
- Give donation, doing welfare activities, etc.
- Establishing peaceful industrial relations.
- At time of natural calamities providing the basic necessities like food, medicine
- Aiding in the development of Social and Cultural resources of the community through corporate Philanthropy.

Responsibility towards competitors

- Not to offer exceptionally high sales commission to distributors, agents, etc.
- Not to offer to customers heavy discounts and, /or free products in every sale.
- Not to defame competitors through false or ambiguous advertisements.

Responsibility towards environment

- Production of safe items.
- Using biodegradable packages.
- Educating consumers on Product use and disposal.
- Being truthful in advertising, and establishing a procedure for dealing with consumer complaints.
- Progressive economic stability.
- Safeguarding Public interest or safety.
- Protecting the environment.

CSR INITIATIVES OF TOP 10 COMPANIES

Reliance Industries: Reliance Industries takes CSR initiative in following manners:

- Reliance takes initiatives in education, health, environment and social development forms a sizeable chunk of Reliance's community outreach programmes. Its initiatives have reached millions over the years and nearly 4, 00,000 people benefit from our continuing programmes every month.
- A large number of initiatives are focused on developing community infrastructure and protecting the environment. Reliance has developed infrastructure for water conservation and constructed community halls, schools, and health centers in various locations.
- Environmental impact assessment and qualitative risk analysis are central to all our new projects. Reliance has converted acres of arid lands into major green zones.
- Reliance nurtures and sponsors many projects designed to educate, employ and empower women and youth.
- Reliance conducts several livelihood training programmes and has provided aid and equipment to the physically challenged
- Project Jagruti - A project to uplift and bring dyslexic students from the underprivileged segment into the main stream.
- Reliance has a scheme for supporting meritorious students and providing financial aid to the toppers for pursuing higher studies in engineering and medical streams.
- Reliance adopted a Primary Health care centers in Gujarat for catering to the community health needs under the National Rural Health Mission Programme.

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- Reliance HIV/DOTS Therapy Centre: This centre's programme for the underprivileged is run with the support from various governmental and non-governmental organizations.
- Dhirubhai Ambani Hospital**:** The hospital plays a significant role in improving the quality of life with its prompt and specialized services and by prov**iding free** lifesaving treatment.

Oil and Natural Gas Corporation (ONGC): CSR has emerged in ONGC as a vital tool for social value creation with Triple Bottom Line Approach - People, Planet & Profit. The approach is to create a Positive Impact on Society, Shared Value for business and communities and involving maximum Stakeholder Participation.

- **Akhsay Patra**– A centralized fully automated mechanized kitchen with a capacity to provide mid-day meals to two lakh children from Govt. schools per day in the District of Surat.
- **Varisthtajan Swastha Seva Abhiyan** in the form of provision of health care support to more than 20,000 elderly beneficiaries per day through Mobile Medicare Units.
- **Stakeholder's engagement** by prioritizing key stakeholders, develop CSR & Sustainability Development Policy, Communication Strategy for stakeholders' engagement and conducting stakeholder's meet.
- **CSR and Sustainability Development Projects** in backward district for e.g. installation of a large wind power project at Jaisalmer wherein 20 wind turbines were installed during the last fiscal.
- **Aids & Appliances to 45,000 physically challenged beneficiaries** from 39 operational areas and 61 Backward Districts in collaboration with Artificial Limbs Manufacturing Corporation of India (ALIMCO) to cater to the needs of orthopedic, hearing and visually challenged people.
- **Quality health care services** were provided through Catheterization Laboratory and facilities for Open Heart Surgery in Assam Medical College, Dibrugarh.
- **A 26 bedded Community Hospital in Lakhimpur-Kheri**, Uttar Pradesh catering to the Health Service requirements from Economically Backward Class families was adopted as a PPP (public private partnership) model in CSR.
- **ONGC Mission Ujala** for eye screening of 50,000 children in Government Schools in NCR under National Blindness Control Programme of Govt. of India was undertaken and Spectacles to 3,000 children detected with refractive errors along with medicines were provided through the NGO Praani.
- **Construction and setting up of school for providing free education** with food, clothing, study material and healthcare to under-privileged children of Mahoba , a backward district identified under BRGF with joint collaboration of Shirdi Sai Baba Temple Society.

Tata Consultancy Services: TCS takes CSR initiative in following manners:

TCS' CSR policy is aimed at demonstrating care for the community through its focus on education & skill development, health & wellness and environmental sustainability including biodiversity, energy & water conservation. Also embedded in this objective is support to the marginalized cross section of the society by providing opportunities to improve their quality of life.

HDFC Bank: HDFC Bank has undertaken several interventions and projects through the year to create a positive impact on society while doing business. These projects take shape in many ways from corporate philanthropy, to employee driven projects.

- Sustainable livelihood
- Sanitation
- Education
- Skilling
- Community initiative

Infosys: Infosys takes CSR initiative in following manners:

- Infosys committed to contributing to the society and established the Infosys Foundation in 1996 as a not-for-profit trust to support our social initiatives. The Foundation supports programs and organizations devoted to

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the cause of the destitute, the rural poor, the mentally challenged, and the economically disadvantaged sections of the society. The Foundation also helps preserve certain cultural forms and dying arts of India.

- Community Services: Through our Computers @ Classrooms initiative launched in January 1999, we donated 2,567 computers to various institutions across India. Additionally, we have applied to the relevant authorities for permission to donate computers to educational institutions on an ongoing basis in the future. Microsoft Corporation continues to participate in this initiative by donating relevant software. We would like to place on record our appreciation for their continued support.
- **Social commitment in education:** Infosys' Education & Research group has the pride of anchoring the Infosys Extension Program (IEP), which consists of the Infosys Fellowship Program, Rural Reach program, Catch Them Young and Train the Trainer.

NTPC: NTPC proud that our CSR initiatives and programmes are benefitting over a million of our countrymen in over 500 odd villages in the neighbourhood of our stations and plants thanks to a vigorous structure, well documented policies and a streamlined process.

- NTPC is also a member of Global Compact Network, India and confirms its involvement in various CSR activities in line with 10 Global Compact principles and shares its experiences with the world via "Communication on Progress", a public disclosure.
- Like the colours of a rainbow, The Corporation's involvement in community development projects/ CSR covers a diverse range of issues such as basic infrastructure development, education, community health & sanitation, capacity building and gender empowerment. The projects are customised based on specific local requirements and guided by extensive Need Assessment Surveys and consultations through various participative forums like Village Development Advisory Committee, Rehabilitation and Periphery Development Advisory Committee etc. The active participation/engagement and ownership of these initiatives by the local communities is the key to the smooth and successful implementation of these schemes.

ITC: ITC takes CSR initiative in following manners:

- ITC's e-Choupal Ecosystem
- ITC's Afforestation Programme
- ITC's Watershed Management Programme
- ITC's Sustainable Agriculture Programme
- ITC's Livestock Development Programme
- ITC's Women empowerment
- ITC's Primary education
- ITC's Skilllig and vocational training
- ITC's Health and sanitation
- ITC's Solid waste management

Indian Oil Corporation: IOC takes CSR initiative in following manners:IndianOil's Kaushal Vikas Kendra, Barauni started functioning from March 2017 with an aim to provide skill training to the youth of Begusarai district, in which Barauni Refinery is located. At present, skill training is provided in 5 trades viz. Plumbing, Masonry, Welding, Fitter & Electrician.

- Skill Training in Plastic Engineering trades in Assam, Odisha & West Bengal
- Assam Oil School of Nursing (AOSN) was established in 1986. It offers 3-year Diploma course in General Nursing and Midwifery (GNM) and 4-year B.Sc. (Nursing) course to 60 young girls (30 in each course) every year.
- Assam Oil Division Hospital at Digboi (with 200 beds) was established in 1906. This hospital caters to the population residing in Digboi and other nearby areas of the North East. During 2017-18, 14,669 non-employee patients were treated at this hospital .

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- Swarna Jayanti Samudayik Hospital at Mathura (with 50 beds), established in 1999, provides medical treatment to residents near Mathura Refinery, Uttar Pradesh.
- During 2017-18, 57,752 patients were treated at this Hospital, out of which operative procedures were conducted on 767 patients .
- Indian Oil's unique CSR initiative titled "Sarve Santu Niramaya" (Good health to all) was launched in December 2012 to provide free health consultation and free medicines to human beings as well as livestock in the villages near Digboi Refinery.
- Indian Oil Gyanodaya scheme in Govt. ITIs & Polytechnics
- Supporting and sustaining 5 schools at 5 Refinery units
- Assistive devices to Divyangjans in Andhra Pradesh, Punjab, Odisha & Bihar

Tata Steel Company : Tata Steel Co takes CSR initiative in following manners:

- Eradicating hunger, poverty and malnutrition
- Promoting health care including preventive Healthcare
- Making Available safe Drinking Water
- Sanitation
- Employment enhancing Vocational skills especially to Women, Children, Differently abled
- Livelihood enhancement projects
- Promoting gender equality and empowering women
- Reducing inequalities faced by socially and economically backward groups
- Environmental sustainability, protection of flora & fauna, agro forestry ,animal welfare, resource conservation, maintaining quality of soil, air, water
- Promotion and development of traditional arts and handicrafts
- Protection and restoration of national heritage, Promotion of art, culture, handicrafts, setting up public libraries etc
- Promotion of Rural, Nationally recognised, Paralympic and Olympic sports especially training
- Setting up homes, hostels, old age homes, day care centres for women, orphan, elderly
- Rural development projects (infrastructure and other developments)

WIPRO: Wipro Co takes CSR initiative in following manners:

- Education: Engaging in deep and meaningful systemic work in the area of school and college education
- Community Ecology and Health Care: Engaging with the community on issues of Health Care, Ecology and Education for the underprivileged Business Sustainability: Reducing and minimizing the environmental footprint of our operations and enhancing the biodiversity quotient of our facilities
- Diversity: Encouraging and enhancing diversity at the workplace and outside on gender, nationality and persons with disability
- School Education in India: We work on systemic issues in school education in India through a network of partner organizations. Over the past 14 years, we have associated with 60 organizations at different levels and have worked closely with 35 organizations working in improvement of school education.
- Primary Health Care: Our work in primary health care touches the lives of 50000 people in 45 village communities in the areas of Waluj, Amalner, Mysore, Tumkur and Hindupur in India. Apart from this, we have engaged in a number of significant post-disaster rehabilitation projects, most notable of which have been the Gujarat earthquake, the Tamil Nadu tsunami and the Karnataka floods.

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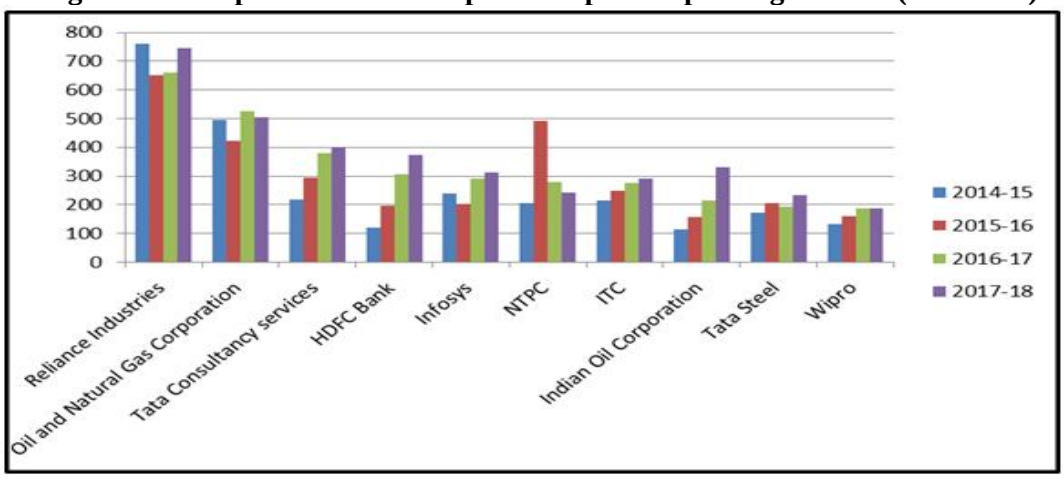
Top 10 companies spending on CSR (Rs Crore):

Name of companies	2014-15	2015-16	2016-17	2017-18
Reliance Industries	760.58	651.57	659.20	745.0
Oil and Natural Gas Corporation	495.23	421.00	524.97	503.4
Tata Consultancy services	219.00	294.00	379.77	400.0
HDFC Bank	118.55	194.81	305.42	374.5
Infosys	239.54	202.30	289.44	312.6
NTPC	204.15	491.80	277.81	241.5
ITC	214.05	247.45	275.96	291.0
Indian Oil Corporation	113.79	156.68	214.00	331.0
Tata Steel	171.46	204.46	193.61	231.6
Wipro	132.70	159.82	186.31	186.6

Diagrammatical presentation of Top 10 Companies spending on CSR (Rs. Crore)



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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

CHILD MALNUTRITION IN INDIA: REGIONAL DISPARITY AND CONCENTRATION

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ABSTRACT
Among so many problems India is handling for a long time of its development, one important is child malnutrition. Not only in short run, in long run it also hampers the labour productivity and so the growth of the country. In this paper, malnutrition is measured in terms of stunting as it captures long and persistence effect of malnutrition. Objective of this paper is to find the depth of child stunting in different regions of the country, find out inequality among different socio-economic groups in terms of child stunting and to find out whether child malnutrition is pro-poor across all the regions or not. Here NFHS 4 (2014-15) unit level data is used for the detail analysis. Based on the level of child stunting, the country is divided in four regions-highest, higher, lower and lowest stunting regions. Analysis found that depth of stunting is highest in highest stunting region. For child nutrition there is no significant inequality across regions, across religion-caste, across education-employment of mothers. However, there is significant level of inequality of child nutrition across place of residence. At the same time poorer households almost in every region and across socio-economic classes bear heavier burdens of child stunting.

Keywords: Malnutrition, stunting, inequality, concentration, socio-economic variables

INTRODUCTION
It is clear to all that India bears a disproportionate burden of malnourished children of the world. More than one fifth of the global child death due to malnutrition occurs in India (Pratham, 2011). It is also known to us that India, as the largest country in the region—in terms of both geography and population—shares the bulk of the problem, with over half of its children undernourished according to various measures. One puzzling picture is that Indian child malnutrition level is far worse than the corresponding levels in countries with lower per capita income than India. In fact, Arnold *et al.* (2004) compares India with 58 developing countries and finds only one country (Niger) with a higher level of underweight, two countries (Burundi and Madagascar) with higher levels of stunting and six countries (Burkina Faso, Chad, Cote d'Ivoire, Mali, Niger and Cambodia) with higher levels of wasting. Deaton & Dreze (2009) further observe that, despite high economic growth in India, the proportion of underweight children (below three years) has decreased only marginally, from 43% in 1998 - 1999 to 40% in 2005 - 2006. Clearly, recent economic growth in India has had no significant bearing on under-nutrition levels. Huge child malnutrition rate, slow progress in the reduction of neonatal mortality and low attendance rate in Anganwari centres for supplementary nutritional program (though the enrolment rate is quite impressive) are some alarming signals to the central authority. Indian Government, too, is concerned with this picture and has taken several policy measures to address the situation. Among them, some important ones are Public Distribution System, Mid Day Meal etc. If one goes through the policies of the Government regarding this issue it is very clear that government primarily attempts to manage the issue of child malnutrition through food security. Majority of the literature have attempted to measure the incidence of child malnutrition by estimating the share of the child population with respective z scores lying below -2 or -3 of its SD. This is, however, similar to the measurement of poverty just by Head Count Ratio (HCR), which identifies the share of population living below the poverty line. However, literature of poverty identifies that it is absolutely critical to know the distribution among the poor. Policies targeting poor people should differ among different categories of poverty. Similarly, just allocating similar supplementary food to all children, without recognising their nutritional and health needs, might not effectively reduce the burden. In addition, the policy maker should know to what extent a child is malnourished. Following medical literature, policies might differ between the moderately stunted and severely stunted child. Then only policies can be more target-oriented and effective. It is extremely important to know that below the margin of malnutrition, where most of the children are concentrated. The intervention should be done accordingly. Considering these gamut of issues, I attempt to locate the depth, distribution and concentration of the poor across economic and social classes in India.

According to the definitions provided by World Health Organization, under-nutrition can be of two types: Protein Energy Malnutrition (PEM) and Micro Nutrients Deficiency (MND). PEM manifests early during the age of 6 months – 2 years, resulting from irregular or no breastfeeding, introduction to low protein food and different types of infections (FAO, 2004). It is measured by indicators like under-weight, stunting and wasting. *Wasting* represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent illness causing weight loss and the result of malnutrition.

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Children whose weight-for-height (WAZ) is below (-3 SD) minus three standard deviations from the median of the reference population are considered to be severely wasted and those below minus two standard deviation are called wasted. The height-for-age (HAZ) index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age or *stunted* and are chronically malnourished. Similarly when this Z score is less than minus three standard deviation (-3SD), the child is called severely stunted. Stunting reflects failure to receive adequate nutrition over a long period and is also affected by recurrent and chronic illness. Weight-for-age is nothing but a combination of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as *underweight*. Normally stunting is considered as the best indicator to measure the long-term malnutrition among children, and hence this paper focuses on height-for-age category. The measurement of the related z scores are calculated based on the reference population and it's median. Normally, it is measured by specific software like ANTHRO provided by World Health Organization.

Over last ten years, India has witnessed around six percent fall of stunting children (Table 1). All states of this country are also having lower percentage in 2014-15 than 2005-06. Next table (Table 2) is showing the ranking of states in terms of child stunting level. A state ranked 1, where the child stunting is lowest. Thus, according to NFHS IV data, Kerala has lowest percentage of stunting children in 2014-15. Then comes Punjab, Himachal Pradesh, Tamil Nadu. Chhattisgarh, Gujarat, Maharashtra, Haryana, Orissa and Punjab have improved their relative position in terms of child stunting within 2005-06 to 2014-15. On the other hand, relative condition is worsening for Assam, Bihar, Jharkhand, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu and Uttaranchal. Of these, the condition of Rajasthan has fallen drastically.

Table-1: Child-stunting across states in three rounds of NFHS

States	NFHS I (1992-93)	NFHS II (1998-99)	NFHS III (2005-06)	NFHS IV (2015-16)
Andhra Pradesh	**NA**	**47.2**	**38.4**	**31.4**
Arunachal Pradesh	54.0	30.3	37.0	29.3
Assam	56.4	54.0	41.1	36.4
Bihar	60.9	58.4	50.1	48.3
Chhattisgarh	NA	60.8	52.6	37.6
Gujarat	50.1	52.0	49.2	38.5
Haryana	50.5	55.6	43.3	34
Himachal Pradesh	NA	48.8	34.3	26.3
Jammu and Kashmir	40.8	44.6	33.1	27.4
Jharkhand	NA	54.1	47.2	45.3
Karnataka	47.6	41.9	42.4	36.2
Kerala	32.8	28.0	26.5	19.7
Madhya Pradesh	NA	55.1	46.5	42
Maharashtra	47.0	47.1	44.0	34.4
Orissa	50.8	49.1	43.9	34.1
Punjab	45.2	45.2	34.7	25.7
Rajasthan	45.5	59.0	40.1	39.1
Tamil Nadu	NA	35.2	31.1	27.1
Uttar Pradesh	59.5	60.7	52.4	46.2
Uttaranchal	NA	52.5	39.6	33.5
West Bengal	NA	50.4	41.8	32.5
India	52.0	51.0	44.9	38.4

Source: NFHS I, NFHS II, NFHS III and NFHS IV

Table-2: rank of states with respect to child nutrition level (measured by stunting) in different NFHS

States	NFHS I (1992-93)	NFHS II (1998-99)	NFHS III (2005-06)	NFHS IV (2015-16)
Andhra Pradesh	NA	8	7	7
Arunachal Pradesh	10	2	6	6
Assam	11	14	10	14

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Bihar	13	18	19	21
Chattishgarh	NA	21	21	15
Gujarat	7	12	18	16
Haryana	8	17	13	10
Himachal Pradesh	NA	9	4	3
Jammu and Kashmir	2	5	3	5
Jharkhand	NA	15	17	19
Karnataka	6	4	12	13
Kerala	1	1	1	1
Madhya Pradesh	NA	16	16	18
Maharashtra	5	7	15	12
Orissa	9	10	14	11
Punjab	3	6	5	2
Rajasthan	4	19	9	17
Tamil Nadu	NA	3	2	4
Uttar Pradesh	12	20	20	20
Uttaranchal	NA	13	8	9
West Bengal	NA	11	11	8

Source: Table 1

Incidence of any vulnerability might not be uniform across regions, economic groups and social classes. Thus, it is important not only to focus on the average incidence, but its distribution within different groups. According to Béteille (1983), there are two aspects of inequality: the distributional inequality and the relational inequality. Relational inequalities considers social structure in the form of relations of 'super ordination' or 'subordination', distributional inequality implies interpersonal differences in wealth or outcome indicators like health or educational status. According to Kunst *et al.* (2004), it is vital that the measurement of socioeconomic inequalities must be based on both measures of "relative inequalities" and measures of "absolute differences". However, relative measures are used in most analyses as they are generally helpful for most analytical interest. Regidor (2004) said that to measure health inequality, it is better to use univariate measures in the distribution of health like, Gini index or index of dissimilarity. However, when the objective is to estimate socioeconomic inequality for the health, there are two options. Firstly, incorporate the socioeconomic dimension in the popular measures of inequality like Gini index. But there is a problem of these types of measures as they may give Problem with these measures is that they may give similar results at the time when the actual relation between socio economic status and health is different. The second option is to use the 3 types of measures mentioned: potential impact, association, and measures based on the ranking of the socioeconomic variables. Thus, there is no concrete criterion about the most appropriate measure. According to him, problem of most of these measures is that they can reflect socioeconomic inequalities in health when the socioeconomic variables are ranked hierarchically.

Wagstaff *et al.* (1991) outlined that the slope index (see Notes) and the concentration index of inequality are giving a perfect idea about socioeconomic inequalities in health in spite of range or Lorentz curve. They prove it through different empirical examples. In another paper Wagstaff (2000) used Achievement Index (see Notes) that captures both the average level and the absolute level of inequality of malnutrition and found thought provoking interesting results. They found that stunting, focusing on the Achievement index, moves Egypt from sixth position to fourth, higher than Brazil and Russia (countries with high income inequality).

However, before going into detailed discussions of measurement of inequality, it must be recognised that there should be no value judgement that inequality is always bad and equality is always good. A homogenous group performing worse economic indicators would show low values of inequality measure, which must not be accepted as good outcome.

SLOPE INDEX OF INEQUALITY

Pamuk (1985) use occupational and social class mortality data of England and Wales to check the trend in the size of class differentials in mortality from 1921 to 1972 for married women, adult men, infants. Using summary measures like rate-ratios (consists of over time changes in the relative sizes of the social classes), results show that among adult men and married women, absolute inequality in mortality increased during the 1950s and 1960s and for all three groups, relative inequality has increased.

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Economists have attempted to look at inequality in different ways. Murray *et al.* (1995) proposed a uni-variate approach to examine the distribution of health without considering other population characteristics which can influence this health distribution. They actually tried to analyse health inequality in terms of public policies only and thus uses the concept of regional inequality. On the contrary, Braveman *et al.* (2000) posit that health inequality occurs due to other socio-economic factors like poverty which makes a barrier to the people to be healthy. Thus, membership of specific social groups plays an important role.

According to Murray *et al.* (1999), both health inequalities and health differences across social groups are important aspects of measuring population health. There is considerable doubt about the health differences among different social groups, health inequality measurement. With a significant recognition of their strength many high and low-income countries, according to them, because of non-availability of measurement strategies, standard definitions and indicators there is a concrete doubt about the comparisons between and within countries.

According to Clarke *et al.* (2002), concentration index is used extensively in the international field to compare any income-related inequality in health. At the same time, the problem of this extremely sensitive measure is that it is sensitive to the estimated variable i.e. whether it is health or morbidity. Another way out will be to use the generalized concentration index which captures absolute, not the relative health differences.

Anand (2002) posits that Indian economy has more unequal distribution in health than the inequality in income. Among different dimensions of health, inequalities in infant and child mortality are likely to be higher than it is for others. He mentioned that inequality across certain population groups, like socially backward classes, is likely to be greater than another categorization.

To find out the magnitude of mortality inequality across different social groups in some European countries, Kunst *et al.* (2004) used relative inequality measures and absolute difference measures through two steps. First, for each educational level or occupational class, directly death rate, standardise by age, were calculated. Second, the extent of the mortality differences was sum up by inequality indices that helped the comparison over time. Relative inequalities and absolute difference measures shows the level to which the burden of mortality is unequally distributed between socio-economic groups. Such a distributional measure is a useful complement to calculate the overall level of mortality in a country. This emphasis on the distributional indices corresponding to the factors underlies some other measures of relative income inequalities (e.g. the Gini coefficient) between the size of the total pie and the share of each group in this pie.

A Blinder–Oaxaca decomposition was applied by Van *et al.* (2009) to decompose the difference in children's average height-for-age z scores between ST and SC population, using data from Indian Demographic Health Survey (1998-99). This decomposition is useful to study health inequalities ethnically as it allows for behavioural effects. The results did not point to discrimination against ST/SC regarding health care or education. However, according to them, in the quest to increase health care use and education among ST/SC, policy makers will have to take into account all the barriers to these services, including those related to cultural sensitivity and acceptability. Swain (2008) has applied the framework of income poverty measure to analyse child under-nutrition in two villages of India. There he found no significant difference between the two villages.

According to Mishra and Mishra (2009), for the assessment of undernourishment, there is a need of Foster Greer Thorbecke (FGT) with the fixed difference between measuring malnourishment among children and head-count measure of poverty. This is helpful not only for assessing inequality and intensity of malnutrition, but to make a valid comparison on levels of undernourishment across situations, it also can adjust the head count accounting for both.

Though there have been a large number of studies with respect to health inequality in general, not much analysis is located to identify the inequality in terms of child nutrition, within and across countries. One of the few exceptions is study by Mukhopadhyay (2011), mean of squared deprivation gaps (MSDG) captures the dimensions of level, severity and depth of under-nutrition. One can analyse group level inequality in nutritional deprivation of the children using the subgroup consistency features of the MSDG for each wealth quartile. Joe (2015) also studied the intersectional inequalities of immunization in India and also suggested a level-sensitive progress as the assessment method. Group analogue Gini coefficient is used in the study to capture the level of intersectional inequality and the comprehension of its association with immunization level. The results show the vulnerability of socially neglected intersectional groups and try to draw attention of the authority to the shortfalls among female SC-ST (scheduled castes and tribes) children from rural areas.

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CONCENTRATION INDEX OF INEQUALITY

Using Concentration Index, one study on Ecuador shows that income is a crucial factor of health inequality (Larrea *et al.*, 2005). Kakwani *et al.* (1997) have analysed how heath inequality can be explained using grouped data, where groups are created on the basis of socio economic status. They have used mainly two widely used indices of health inequality, namely, Gini coefficient and Concentration Index. It also creates some asymptotic estimators for their level of variances and analysed the role that demographic standardization plays for the analysis of socioeconomic inequalities in health sector.

Joe *et al.* (2009) have mentioned that the distribution of resources are significant in making larger gap between the child malnutrition among non-poor and poor households. They also examined the inter group inequality of child malnutrition and made a conclusion that child groups privileged in terms of income, mother's nutritional status and education have lower malnutrition, whereas the group adverse in all three characteristics endures the most. They suggested that the policies to reduce malnutrition inequalities should recognize the endowment revisions and they can be more effective if appended with interventions of behaviour.

Studies from different countries is showingthat the relative mortality gap between higher and lower socioeconomic groups was more during the 1970s and 1980s. Based on this, Kanbur (2006) did a study with concentration index to find new estimates of changes in socioeconomic inequalities of mortality between the 1980-1990 in different European countries. The estimates have some specific aims regarding the illustration of large variations within and between countries, in the way by which socioeconomic inequalities in mortality changed over time and the considerable extent to which the trends may be related to data and methodological choices made. Trends in mortality were discussed by analysing the trends in group-specific standardised mortality rates and measures of the level of mortality differences between different socioeconomic groups. However, important variations were observed in the way of change, within countries, among men and women, and among age groups. In addition, a wide relative inequality was found to occur with fall in life expectancies of the underprivileged groups, and at the same time, rising life expectancies in many other cases.

In terms of interpersonal distribution of wealth or income, the concept and measurement of inequality have not paid adequate attention to the need for reckoning inequality across social groups (Chakraborty, 2001). Sen *et al.* (2009) mentioned that there should be a method which measures *inter-sectionality* as for health policy there are multiple sources of disadvantage, such as race, class, caste, ethnicity, gender, and so forth, function together to influence health.

Using NFHS III unit-level data, Mazumder (2010) locates that there is strong association between income inequality and inequality in malnutrition and poverty. He has analysed the inequality by the concentration index, which is again decomposed to find out the factors related with inequality in malnutrition. Poverty, in terms of the wealth index, has significant impact on average rates of malnutrition, indicating a huge burden of malnutrition on the poor. Macro-economic data is showing, average socio-economic inequality is moderately related with the inequality of nutrition. On decomposition, poverty explains more than fifty percent of the inequality in malnutrition, which actually explains the poverty–nutrition inequality linkage.

Ataguba *et al.* (2015) found out social determinants of health of South Africa with the help of standard Concentration Index (CI). The analysis shows that government commitment in terms of budgetary allocation is increasing for the key sectors (i.e. social protection, employment, housing, education, and other appropriate infrastructure). Attention is being paid to equity in benefits through government expenditure. With that, to reduce the disease burden, health sector needs to play a vital role.

OBJECTIVES:

Given the literature background, objectives of the paper are

1. To find out depth of child stunting in different regions of the country. Regions are made by different level of child malnutrition across states. It will show inter personal inequality in terms of child malnutrition level across regions.
2. To find out inter group inequality in terms of child stunting in India. These groups are different socio-economic groups.
3. To find out whether child malnutrition is pro poor or not i.e. whether poor children are mostly affected by stunting or not.

Data base

In this paper, secondary data is used from NFHS 1 (1992-93), NFHS 2 (1998-99), NFHS 3(2005-06) and NFHS 4 (2015-16). For further analysis of current health scenario of Indian children, unit level data is collected from

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NFHS 4 (2015-16). NFHS 4 has data from 29 states and 6 union territories, 157 districts are surveyed. Here unit level data is of household level. 628900 households are the sample size of NFHS 4. Of this 699686 are women and 112122 are men. In this survey, data of 265653 children whose age is within 0-5 years is there.

For the inequality analysis of child malnutrition in India, I have used the nationally representative data of National Family Health Survey Third Round [NFHS IV] (2015-16). It covers 29 states of which I have taken 14 major states and clubbed 8 north eastern states into one heading called Northeast region. In this subsection, I intend to carry out national level and region level analysis. Initially WHO measurement standard norm of anthropometric measures is used to divide 14 major states of India into four regions based on the level of child malnutrition. Next, I would perform inequality analysis based on Malnutrition Gap Index which is very similar to Poverty Gap Index, Group analogue Gini Coefficient, simple Gini coefficient and Concentration Index.

Methodology

In our case, the groups are formed on the basis of percentage share of stunted children in the states. Among all three measures of inequality, we have considered 'stunting' as the measure of child malnutrition for my paper as it captures the long run impact of malnutrition. Based on this I have divided 14 major states of the country into 4 regions- highest stunted, higher stunted, lower stunted and lowest stunted. Finally, 8 north eastern states are clubbed into one region called North-east. Thus, my groups are well defined, mutually exclusive and exhaustive as well and they represent a kind of typology among the states.

To locate **interpersonal inequality**, we use Gini coefficient which captures a positive value if there is any mismatch between the cumulative proportion of malnourished children and cumulative proportion of population share. To find out inequality with respect to any socio-economic variables like wealth, the commonly used method is Concentration Index. It assesses the distribution of a health variable against the variable measures income, wealth or living standard. I use this measure to find out inter group inequality vis-a-vis wealth and interpersonal inequality with respect to some socio-economic variables as well.

These measures of inequality are elaborated below:

1. Malnutrition Gap Index

To start with, initially we have used a measure named Malnutrition Gap Index which is very similar to the poverty gap index. Poverty Gap Index (PGI) is calculated as

$$PGI = \frac{1}{N}\sum_{j=1}^{q}\left(\frac{Y_i - Z}{z}\right)$$

Here, N= total population, z= poverty line, y_i= income of i^{th} person, q= number of people living below poverty line. In my analysis, I have used the same formula with a change of the meaning of the notations. In my case N= total population in the area, z= value of HAZ below which a child is called stunted= -2SD, y_i= value of HAZ of i^{th} child, q= number of children stunted in this region.

z score= (observed value –median value of the reference population)/standard deviation value of reference population. According to WHO, if z score is less than -2SD, he/she is classified as stunted. If the Z score is less than -3SD this particular child is called severely stunted.

2. Group Utilization Lorenz Profile (GULP) and Group Analogue of the Gini Coefficient

GULP is a graphical method to measure the extent of inequalities present between the groups where the groups are well defined by certain characteristics as mentioned earlier. Say, there are k sub groups (K>=2) and the subgroups are mutually exclusive and exhaustive. Unlike rate ratios and rate differentials, GULP can make inequality if number of groups exceed two. Here groups should be ranked in a non-decreasing order i.e. child nutrition level will increase with increase in rank.

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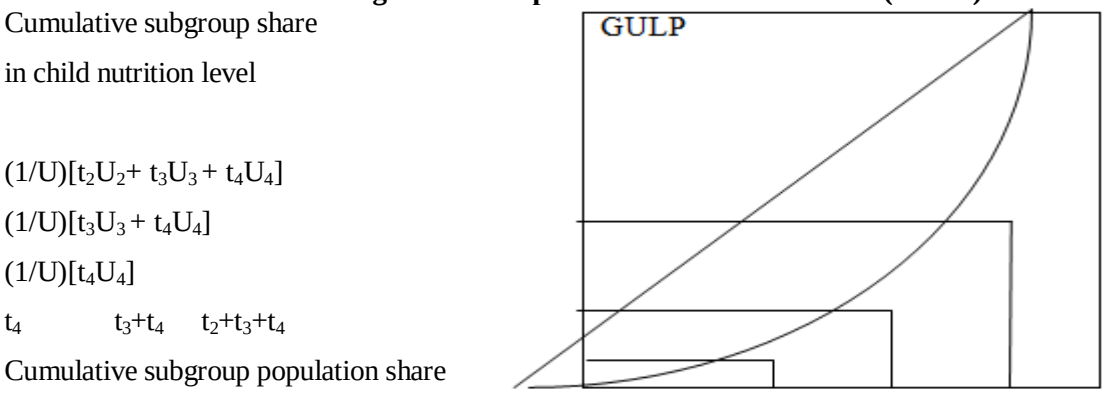
Figure-1: Group Utilization Lorentz Profile (GULP)



Source: Subramanian, 2009

Figure 1 shows a typical GULP which is the pictorial representation of the inter group inequality. In the figure x-axis plots cumulative subgroup population share and y-axis plots cumulative sub-group share in total utilisation. The GULP in Figure 1 is a special case where k=4 since there are four regions. The interpretation of GULP is similar to Lorenz curve i.e. further the GULP from the diagonal higher is the degree of inter-group inequality. So, if there are disparities in the distribution of the utilisation it will be captured by the curve in the contrary if the utilisation is equally distributed the curve will coincide with the diagonal.

This graphical device was used by Kondo *et al*. (2009) to obtain group analogue of Gini coefficient for the group poverty profile. The group analogue Gini coefficient G (h) is arrived at geometrically by measuring the area between the line of equality and GULP. It captures the group perspective of the inequality in the maternal healthcare utilization. Say the number of sub-groups be k, k≥2, then the formula of G (h) to capture the magnitude of inter group inequality is as follows:

$$G(h) = 1 + \frac{\left[\sum_{j=1}^{k} t_j^2 U_j - 2\sum_{j=1}^{k} t_j T_j U_j\right]}{U}$$

Here U_j is the health variable for the jth group, t_j is population share of jth group, T_j is the cumulative population share and U is the weighted average of the health variable. Here, $= \sum_{j=1}^{k} t_j U_j$, where the group specific health variable (U_j) is multiplied by population share and then summed to arrive at U. The range of G(h) is from 0 to 1. 0 means there is no group inequality and any positive value shows inequality. Higher the value of G(h), higher is the inequality between the groups.

3. Gini Coefficient

Gini coefficient is used to measure the inequality in the utilization and this inequality is measured at the individual level. Thus, it is an individualistic approach. It gives inter personal inequality. Gini coefficient is also derived from the Lorenz Curve. In case of Lorenz curve, individuals are arranged in such a way that if rank increases the child nutrition level also increases. So the child with lowest Z score is ranked first and the child with highest Z score ranked last. The diagonal of the Lorenz curve is the line of equality. Further the curve from the diagonal more is the inequality. Gini coefficient is the area between the line of equality and the Lorenz curve i.e. the proportion of area beneath the diagonal. The measure of G` is given below:

$$G' = \frac{1}{N}\left[N + 1 - 2\frac{\sum_{i=1}^{n}(n+1-i))U_i}{\sum_{i=1}^{n} U_i}\right]$$

G´ is calculated taking into account all population. N is the total number of individuals in the population. U_i is the health variable of the i^{th} individual. The individuals of the population with U_i are indexed in a non-increasing order of their health (i.e. $U_i \geq U_{i+1}$, i=1,…, k-1). The G´ ranges from 0 to 1. G´ takes 0 when there is complete equality of the health variable and more the positive value, more the inequality.

4. Concentration Index

It is the most commonly used measure to access the extent of socio economic inequality in health outcomes such as child malnutrition. The concentration index is derived from the more fundamental idea of Concentration Curve, similar to Lorenz Curve that measures income inequality. The concentration curve is accessed the distribution of a health variable with respect to a variable measuring living standard like income or wealth. It plots the cumulative percentage of the health variable on the vertical axis and cumulative percentage of the

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sample on the horizontal axis. These two groups are matched on the line of equality, where all individuals are getting same health share. If poor groups are worse off than the richer groups in terms of health indicator, it is a '*pro-rich inequality'*. If there is pro-rich inequality in terms of 'ill-health' (like malnutrition, mortality etc.), the concentration curve lies below the diagonal. In my analysis, the variable is z score, which is a positive indicator. The more the value of z, the better is the status of health. Thus it is not an "*ill-health*" variable. The further the curve lies above the line of equality, more the concentration of 'ill-variable' among the poorer section of the society. The Concentration Index is defined as twice the area between Concentration Curve and line of equality. If the concentration curve lies above the diagonal, the value of concentration index is negative. If there is perfect equality, the concentration curve lies on the line of equality; the value of concentration index is zero. The most convenient formula to measure the concentration index is

$CI= 2cov(y_i, R_i)/\mu$

Where y is the health variable whose inequality is measured, μ is the mean and R_i=rank of i^{th} individual in terms of the socio economic variable.

At first, we present inter-region analysis of inequality of child nutrition on the basis of Group analogue Gini Coefficient . The same analysis is repeated with respect to religion, education and employment status of mothers and place of residence. Then I calculate the Concentration Index of the country as a whole with respect to wealth index (as calculated by NFHS IV), so that one can understand that to what extent the child nutrition inequality is dependent on the wealth available to the households. Finally, I will measure the inequality with respect to some socio economic factors only among the stunted children . The concentration index helps to do this. Also, the inequality among the stunted children is a point of concern from equity perspectives and my last subsection would deal with it.

RESULTS AND DISCUSSION

1. Measurement of Child Malnutrition by WHO Norm: Region Level Analysis

At first, we want to disaggregate India in terms of different versions of child malnutrition. Here the country is divided in four regions namely- lowest, lower, higher and highest. These four regions are segregated according to the quartile values. In our analysis, we have considered 17 major states and clusters of seven sister states clubbed under North East. The following table (Table 3) shows, according to WHO norm, the picture of child malnutrition in different states in terms of different indicators of malnutrition.

Table-3: Distribution of states in terms of different types of child malnutrition

	Stunted	Wasted	Underweight
Lowest	Punjab, Kerela, Tamil Nadu, Jammu & Kashmir	Punjab, Andhra Pradesh, Utter Pradesh, Jammu & Kashmir, Maharashtra	Jammu & Kashmir, Punjab, Kerela, Andhra Pradesh, Karnataka
Lower	Northeast, Karnataka, Andhra Pradesh, Himachal Pradesh, Uttaranchal,	Northeast, Karnataka, West Bengal, Kerala, Haryana	Tamil Nadu, Maharashtra, Himachal Pradesh, Utter Pradesh, Northeast
Higher	Rajasthan, Orissa, West Bengal, Maharashtra, Haryana	Orissa, Chhattisgarh, Gujarat, Uttaranchal, Himachal Pradesh	West Bengal, Uttaranchal, Jharkhand, Orissa, Haryana,
Highest	Jharkhand, Utter Pradesh, Madhya Pradesh, Gujarat, Chhattisgarh, Bihar	Rajasthan, Tamil Nadu, Bihar, Madhya Pradesh, Jharkhand	Rajasthan, Gujarat, Chhattisgarh, Madhya Pradesh, Bihar

Source: NFHS III unit level data

From different types of measurement of malnourishment, some interesting observations emerge from Table 3. On one hand, Punjab and Jammu & Kashmir belong to the group with lowest incidence of child malnourishment for *all* three types of measurement. On the other hand, Orissa belongs to the higher group according to all three types. One can find that Madhya Pradesh and Bihar belong to the cluster of states with highest incidence of stunting, wasted and underweight children. Gujarat, one of the richest states in India is a surprise addition in the group with the highest incidence of stunting and underweight children, in the same bracket with the most vulnerable states like Madhya Pradesh and Bihar. One interesting situation is in Tamil Nadu, which belongs to the lowest shares of stunted children and emerges within the group with highest share of wasted children.

Among all those measuring units of child malnutrition, in our analysis, we have considered stunting only for our subsequent discussions, as it is already mentioned that it captures the long run impact of child malnutrition.

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Figure 3 represents the quartile distribution of shares of stunted children across four regions graphically. However, the extent or specifically, the depth of malnutrition is not captured by this. Thus, in the next section, we will discuss the depth of child stunting.

2. Depth of stunting

To capture the depth of child malnutrition, we have followed the similar measurement like poverty gap index. Poverty gap index is a measure of intensity of poverty. It measures the depth of poverty i.e. how far on an average, the poor are from the poverty line. In this sense, it is an improvement over HCR, which only indicates how many people are poor. Just HCR, in our case, section 1 indicates how many children are malnourished in different states with respect to different types of malnutrition measurement. However, there is no information regarding how far they are from the margin. Thus, the similar index of child stunting is created following the formula of poverty gap index. As we know, the formula of Poverty Gap Index (PGI) is

$$PGI=1/N \sum^{q}_{j=1}\{(yi-z)/z\}$$

Where N= total population; q =total population who are living on or below poverty line; z= poverty line and y_i is the income of i^{th} poor individual. The poverty gap index is a percentage between 0 and 100%. Sometimes it is reported as a fraction between 0 and 1. Theoretically, zero implies there is no one below poverty line and 1 implies everyone in the population is poor.

In our analysis we have followed this formula to capture the depth of child stunting across regions. Like poverty line, here the margin is -2SD. The children whose Height-for-age is below it is considered as stunted. The following table (Table 4) is showing the depth of child malnutrition region wise.

Table-4: Region wise depth of child stunting

Region	Mean depth of stunting
Highest stunting region	0.59
Higher stunting region	0.41
Lower stunting region	0.54
Lowest stunting region	0.44
North-eastern	0.51

Source: Analysis of NFHS IV unit level data

Table 4 shows that mean depth of child malnutrition from the standard (-2SD) is maximum in highest stunted region, followed by lower, north eastern, lowest and lower stunted regions. It implies not only percentage, but depth of stunting is also the maximum in highest stunted region. Though the share of stunted children is lower in *lower stunted region*, the depth of stunting in this region is second highest. On the contrary, in higher stunted region, the depth is minimum. That result implies that most of the stunted children have their respective z score very close to -2SD there in this region.

3. INEQUALITY OF CHILD NUTRITION

3.1 Inter group inequality

The Group Analogue Gini coefficient G(h) is arrived geometrically by measuring the area between the line of equality and Group Utilization Lorentz Profile (GULP) (as discussed in methodology section). Group Analogue Gini coefficient captures the magnitude of group inequality. In our study, the Group Analogue Gini coefficient across regions is 0.015 (Table 5) which is very low. It implies that regional disparity in terms of child nutrition is very small, when we consider the individual child separately.

Table 5 provides decomposed Group Analogue Gini coefficients across some socio- economic characteristics. The objective here is to find out inter group inequality in child nutritional status, the HAZ score. For religion-related inequality, the total population is divided in four categories of religion-caste- Hindu General, Hindu others, Non-Hindu general and Non-Hindu others. Hindu general is ranked as 4, Hindu others as 3 etc. In terms of employment-education status of the mothers, total sample is divided in four categories- illiterate unemployed, illiterate employed, literate unemployed and literate employed. We have given rank to each of them also in this order. That means illiterate unemployed mothers are considered as maximum deprived and assume rank 1. In case of place of residence, rural is ranked one and urban area is ranked 2.

Table-5: Group Analogue Gini for some socio-economic variables and for regions

Categories	Group Analogue Gini Coefficient
Region	0.015

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Religion & Caste	0.011
Mothers' status of education and employment	0.023
Place of residence	0.455

Source: NFHS IV unit level data

After making the groups either on the basis of malnutrition level or on the basis of some socio-economic variables, we have calculated group analogue Gini for all those groups at all India level to check whether there is any intergroup inequality or not. In case of religion caste, the value is very small (0.011) i.e. there is no significant inequality of child nutrition across different groups in terms of region-caste. This is also true in case of education-employment (0.023). But, in case of place of residence the value (0.455) shows that there is significant inequality of child nutrition across the regions in terms of place of residence. Children belonging to rural areas suffer from stunting in far higher proportions.

Next, we want to check intra-group inequality across regions with respect to some socio- economic variables.

3.2 Inter personal inequality with respect to wealth index

Table-6: Intra-group Concentration Index in terms of some socio-economic variables

		Highest	Higher	Lower	Lowest
Religion	Hindu	0.031	-0.034	0.024	-0.056
	Muslim	0.039	-0.233	-0.042	-0.084
Caste	General	-0.007	-0.115	0.009	-0.171
	SC	0.097	-0.068	0.026	0.168
	ST	-0.007	0.041	0.103	-0.066
Place of residence	Urban	-0.001	-0.021	0.014	-0.085
	Rural	0.085	0.086	0.059	-0.016

Source: NFHS IV unit level data

There may not be significant inequality across regions with respect to child nutrition level, but in each of these groups, there may be inter-personal inequality in terms of the same child nutrition level. In this sub-section, I am going to check this. Concentration Index (CI) depicts the wealth related inequality. For the total sample, the value of CI is -0.152 i.e. it is a pro-poor situation. It implies poor households have higher burden of child stunting.

Table 6 depicts inter-personal inequality in terms of child nutrition level with respect to some socio-economic factors across quartile groups of child nutrition. As it is explained earlier that in case of health variables, negative Concentration Index (CI) means it is a pro-rich situation and for ill-health negative CI means a pro-poor situation. Here our variable, that is, the HAZ z score, is a normal health variable, not representing ill-health or negative situation. As z score increases, the child is expected to be less stunted. Among the Hindu population, in highest and lower stunted regions, the CI are positive i.e. it is a pro-poor situation. Poorer households have higher child malnutrition than their counterpart. Opposite is true in case of higher and lowest stunted regions. However, among the Muslim only highest stunted region has pro-poor situation. In all other regions, there is a small pro-rich bias among the children belonging to Muslim households. Among the general caste, only lower stunted region represents a pro-poor bias. Among SC population, more child are malnourished among poor in highest, higher and lowest stunted regions. Among ST population, more malnourished children are in poor households in case of higher and lower stunted regions. In case of urban population, poor households have more malnourished children in lower stunted region. However, in rural household this is true in highest, higher and lower stunted regions. The figures, however, are small in value in all groups and regions. Largest inequality is observed among the Muslim children in higher region (-0.233), followed by general caste population in the lowest (-0.171) and SC children in lowest region (0.168).

This result actually proves that specific location of the state and household/parental characteristics determine the extent of child malnutrition differently, which gives scope for differential policy interventions.

3.3 Inter-personal inequality among the stunted children only

Till now, we have considered total population i.e. nourished and malnourished children as a whole. Now in next section we will check the interpersonal inequality only among malnourished children with respect to some socio economic factors, which indicate backward section of the society. This analysis is essential to identify the

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difference in degree of child stunting. In the earlier study, the results might have got mixed due to inequality among the non-stunting children, especially the occurrence of obesity among urban rich population.

Table-7: Concentration Index (CI) among stunted children with respect to some socio-economic factors across regions

	All India	Highest	Higher	Lower	Lowest
CI All	-0.03	-0.029	-0.021	-0.032	-0.031
CI-Rural	-0.027	-0.028	-0.024	-0.029	-0.028
CI- rural uneducated mothers	-0.048	-0.103	0.022	-0.189	0
CI rural uneducated ST	-0.018	-0.02	-0.013	-0.018	-0.014

Source: NFHS IV unit level data

Table 7 explains the interpersonal inequality among stunted children with respect to same socio-economic indicators. With respect to wealth in all the regions including India as a whole, the situation is pro-poor i.e. poorer households have more severely stunted children. In case of rural population also, the picture is same. In case of children with rural uneducated mothers, the picture is same everywhere except higher stunted region. There is absence of any significant inequality in case of lowest stunted region where the value is close to 0, though in lower region the inequality is pretty high (-0.189). For children belonging to rural ST households and having uneducated mothers, the situation is again same in all the regions, representing a clear pro-poor bias. Thus, one can conclude that in most of the regions, the poorer segment of the population bear the higher burden in terms of depth of stunting.

CONCLUSION

Exploration on extent, depth and inequality of child stunting in this chapter posits that:

- Punjab and J&K always belong to the group with lowest incidence of child malnourishment for all types of measurement. On the contrary, Orissa belongs to the higher group according to all types of measurement.
- Madhya Pradesh and Bihar are in the cluster of states with highest incidence of stunting, wasted and underweight children. Gujarat, one of the richest states in India is in the group with the highest incidence of stunting and underweight children, in the same bracket with the most vulnerable states like Madhya Pradesh and Bihar.
- Malnutrition Gap Index shows that mean of the depth of child malnutrition from the standard (-2SD) is the highest in highest stunted region, followed by lower, north eastern, lowest and lower stunted regions. It implies not only percentage, but depth of stunting is also the highest in highest stunted region. However, lower-stunted region has far higher Malnutrition Gap, second only to the highest-stunted region.
- With respect to wealth, India as a whole does not show any significant level of inequality.
- For child nutrition there is no significant inequality across regions, across religion-caste, across education-employment of mothers. However, there is significant level of inequality of child nutrition across place of residence. Thus, whether the child is living in rural area or not, really matters.
- For Hindu population, in most of regions (except higher stunted region), incidence of child malnutrition is concentrated among the poor whereas in case of Muslims (except highest stunted region) all regions show child malnutrition is more concentrated among the rich.
- Except lower stunted region, all regions show that urban child malnutrition is more concentrated among the rich whereas except lowest stunted region, the opposite is true for rural children.
- Finally, among the stunted children only, the poor are far more prone to have lower z scores and hence incidence of severe stunting, thus hinting to the fact that poorer households almost in every region and across socio-economic classes bear heavier burdens of child stunting.

NOTES

Slope Index of Inequality

Slope Index of Inequality (SII) is used to reflect socio economic dimension of inequality of health. It calculates the mean of each socio-economic variable and then rank classes by their socio-economic status. SII is the linear regression coefficient shows the relation between the level of health or the frequency of a health problem in each socioeconomic category and the hierarchical ranking of each socioeconomic category on the social scale

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Achievement Index

Achievement Index is introduced by Wagstaff (2002) defined as weighted average of health levels of people in the sample where higher weights are attached to poorer people.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

CONSUMER PERCEPTION TOWARDS SERVICE QUALITY IN HOTEL INDUSTRY

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ABSTRACT
This study looks at the relationship between consumer perception and service quality. It further examines the role of service quality in achieving customer loyalty. The study proves that, if the service performance meets or exceeds customers' expectation, customers will remain loyal. The objectives of this study are to highlight the problems and prospects of hotel industry and to evaluate the service quality along with analyzing the relationship between consumer loyalty and service quality. The study also deals with the factors considered by the customers while visiting the hotel. The random sampling method was used by researchers for distributing questionnaire. The total samples collected were 150 covering area in and around Udupi and Mangalore city.

Keywords: Hotel industry, Service quality, Customer loyalty

INTRODUCTION
A service dominated economy is an attribute of developed countries. Service industries accounted for more than three-fifth of the global GDP and employed more than one-third of the labor force. Accommodation is an important aspect in any country. The hotel industry is one of the important components of service industry. It includes catering for customer who requires overnight accommodation and other facilities. It is firmly affiliated with the travel industry and the hospitality industry. At the end of 2018-2019 the hotel industry is expected to pose the robust growth of 7%-9% as per the report by Care Ratings. Various categories of customer visit hotel every day, the categories may be domestic and foreign, literate and illiterate, rural and urban. They visit hotel with different motives. The individual value, perception, preference and behavior pattern differs from one person to another. Since the perceptions of customer are highly dynamic the hotels have to cope-up with the changes.

RESEARCH OBJECTIVES
- ✓ To study the problems and prospects of hotel industry.
- ✓ To evaluate the service quality and relationship between consumer loyalty and service quality.
- ✓ To highlight the factors considered by the customer while visiting the hotel.

RESEARCH METHODOLOGY
Sampling
The random sampling method was used by researchers for distributing questionnaire. The total samples collected were 150 covering area in and around Udupi and Mangalore city.

Tools used for study
For the present study researchers used both primary and secondary data. Secondary data was collected from internet, journals, articles, books. Primary data has been collected through structured questionnaire. For scaling purpose, likert's scale was used for certain questions. For analysis and interpretations, researchers used simple statistical tools and some of the relevant and interesting data are presented in the tabular form. Chi-square test was used for testing the hypothesis.

HYPOTHESIS
Ho: The service quality has no significant effect on customer loyalty.

H1: The service quality has significant effect on customer loyalty.

SCOPE OF THE STUDY
Identifying service quality is essential for hotel industry which ultimately drives towards customer loyalty. In this context the coverage of study is broad and valuable. The level of quality service will lead hotelier to gain loyal customers.

SIGNIFICANCE OF THE STUDY
The study is very important from the point of view of dealing and developing the service quality in hotel industry. In the cutting edge competition, only those industries will survive who will maintain quality services. The present study is an attempt to highlight the perceptions of customers towards the service quality provided

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by hotel industry. This study also deals with the various factors considered by the customer while visiting the hotels and also other elements which make them loyal.

LITERATURE REVIEW

Rahman, et.al. (2010) concluded that identifying the perceptions of customers, the dimensions of service quality, and their relative importance for customers for each specific segments of the hotel industry would definitely help managers in the challenge of increasing customer satisfactions.

Omanukwue (2011) concluded that perception of service quality is best reflected by the perception of staff behavior. Moreover, customer loyalty is a direct result of customer satisfaction. Finally, customer satisfaction is best reflected by the perception of overall service quality; desired self-congruence only plays a minor role.

FINDINGS OF THE STUDY

Problems and prospects of the hotel industry

The task of hotel management is not always easy. The hospitality industry is one of the fastest growing sectors in the world. However, the problems in hotel industry are being the hurdles for the rapid growth. In this study, the researchers listed the following problems which are generally found in the field of hotel industry.

- **Low customer satisfaction**

Most of the hotels provide low quality foods to their customer due to lack of food resources and staffs. It is very difficult to regain good position if bad impression is created in the minds of the customers. From the customer's point of view, satisfaction is nothing but providing quality foods, amenities and better service. Hence, understanding customer perception will be the major problem in hotel industry. The hotelier has to undertake necessary measures to cope up with it.

- **Unavailability of productive chefs and managers**

The difficult task in managing the hotel industry is finding the right cooks, labors and managers. However, five star hotels recruit professional cooks at high cost, whereas the low budget hotels fail to do so. The taste and quality of foods falls in their hands. Human resource plays a critical role in hotel industry. Thus, lack of productive chefs and qualified managers may be huge problem for hoteliers.

- **Cleanliness issue**

Having an efficient housekeeping team is a key to achieve customer loyalty. The low quality furnishings, broken lights, patches on walls, dirty bathrooms, fingerprints on windows and mirrors are the few cleanliness issues which are often experienced during lodging in hotels.

- **Cutthroat competition**

Hotel industry is a vast business. It is also connected with travel and tourism industry. Due to high demand in accommodation, the competition is also high in this area. It becomes a major challenge to withstand high competition. To reap high profit, the hotelier has to face the competition with the best quality service at standard rates.

- **Unprofessional marketing efforts**

Marketing efforts helps to gain brand image and demand. Due to the technological advancement the marketing have become easy. Since, the continuous fluctuations in the field of technology most of the hoteliers failed to adopt professional marketing techniques. The loop holes in the marketing efforts make customers unaware about the services of hotel.

- **Energy management flaws**

The increase in electricity prices, pressure to cut carbon emissions, saving energy tops the priority list of the hotelier. Providing luxury services sometimes results in misuse of energy resources. Since, the high cost is involved in managing the energy the hotelier has to pay attention to this field.

- **Security challenges**

The major problems in security industry are the security issues. The following are the different security challenges which the hotelier experience under different circumstances.

- General theft
- Identity theft
- Racial discrimination
- Terrorism

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- Credit card fraud
- Risk of food poisoning
- Silent invasions
- No security audit
- Unauthorized visitors
- Parking area theft
- Armed robbery
- Data security issues
- Employee fraud

The future scenario of Indian hotel industry looks extremely bright and promising. The Indian government has approved nearly 300 hotel projects, half of which are in luxury range. The hotel industries in India flourish largely because of the growth in tourism and travel. Since, the increase in tourism with rising foreign and domestic tourists, hotel sector is expected to grow. There is an emergence of budget hotels in India to cater too much of the population who seeks reasonable stay. In the long term, the demand-supply gap in India is very real and there is necessity for more hotels. The shortage is mainly true within the budget hotels and the midmarket hotels segment. There is an urgent need for budget and the mid-market hotels in the country as travelers look for safe and cheap price.

Table-1: Respondents Profile

Age	Frequency
18-28	124
29-39	14
40 & above	12
TOTAL	150

Source: Field survey data

The survey was conducted on 150 people out of whom 124 were from the age group of 18-28, 14 were from the age group of 29-39, and 12 were from the age group of 40 and above.

Table-2: Facilities preferred by the respondents

Facilities	Frequency
2 Star hospitality	14
4 Star hospitality	31
5 Star hospitality	28
Don't often look at standards	77
TOTAL	150

Source: Field survey data

Table 2 indicates that out of 150, 14 people prefer two stars hospitality facilities, 31 people prefer four stars hospitality facilities, 28 people prefer five stars hospitality facilities and the remaining 77 people don't often look at any of these standards.

Table-3: Opinion of the respondent on loyalty

LIKERT'S SCALE	First impression of hotel have huge impact on customer loyalty	Technology is an advantage to build customer loyalty	Quality service provided by hotel make customer loyal
Strongly Agree	80	38	77
Agree	67	103	50
NANDA	-	-	-
Disagree	3	9	23
Strongly disagree	-	-	-

Source: Field survey data

The above table is about opinion of respondents regarding the loyalty statement. Out of 150, 80 people strongly agree, 67 people agree and 3 people disagree that the first impressions of hotel have huge impact on customer

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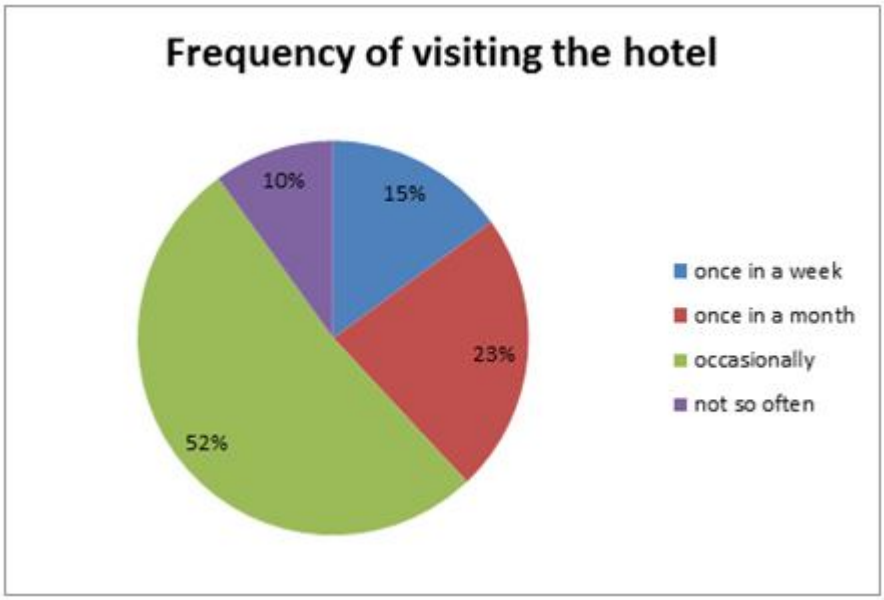
loyalty. Out of 150, 38 people strongly agree, 103 people agree and 9 people disagree that the technology is an advantage to build customer loyalty. Out of 150, 77 people strongly agree, 50 people agree, 23 people disagree that the quality service provided by hotels will make customers remain loyal.

Figure-1: Frequencies of visiting hotel



Source: Field survey data

Figure 1 clearly indicates that 52% of people visit hotel on occasional basis. 23% of people visit hotel once in a month. 15% of people visit hotel once in a week and 10% of people visit hotel not so often.

Table-4: Factors considered by respondents for selecting the hotel

Likert's scale	Unimportant	Important	Very important
Location	5	99	46
Ease of parking	14	89	47
Price/value of money	8	83	59
Knowledgeable staff	13	99	38
Speed of service	4	74	72
Friendly/polite/helpful staff	10	84	56
Brand name/fame	36	87	27
Overall cleanliness	4	65	81
Entertainment	39	92	19
Nutritious food	10	82	58
Tasty food	5	67	78
Fresh food	6	55	89
Online booking & food order	30	84	36
Privacy in the hotel	18	78	54
Contribution to the society	22	95	33

Source: Field survey data

Table 4 shows the ratings given by the customer regarding the importance of various factors which they consider while visiting the hotel. Researchers used Likert's 3 point scale including the options as unimportant, important, and very important. Out of 150, 74 people considered speed of service as the important factor, 72 as very important and remaining 4 as unimportant. 89 people choose fresh food as very important factor whereas, 92 people considered entertainment as important factor. Major number of respondents accepts cleanliness, privacy and online booking are essential factors when they select the hotel.

TESTING OF HYPOTHESIS

Table-5: Chi-square Analysis

Chi-square	Table value	Significance
20.42	9.49	Highly Significant

Source: Field survey data

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The chi-square analysis shows that the alternative hypothesis, service quality has significant effect on customer loyalty. Hence, the alternative hypothesis was accepted and null hypothesis was rejected. Thus we can conclude that the service quality has significant effect on customer loyalty.

CONCLUSION

Service quality is an important aspect for hotelier to gain more number of loyal customers. It is necessary that the hotelier has to understand the perceptions of customer so that they can meet the expectations of the customer and reduce the gap between customer perception and service provided. In present study respondents felt that friendliness of staff, design of the hotel, ease of parking, entertainment, nutritious food, price or value of money are the important factors while choosing the hotel. In this paper researcher identified that there is a close relationship among the service quality and customer loyalty.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019

ISSN 2394 - 7780

CRITICAL ASSESSMENT OF AFFORDABLE HOUSING POLICY IN THE REPUBLIC OF MAURITIUS VIS A VIS FIVE PRINCIPLES OF HOUSING ADEQUACY

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ABSTRACT
Mauritius is an island nation east of African continent. It is a developing country and following neo-liberal policies to boost the economy. On the flip side the country is witnessing housing shortage and numerous affordable housing schemes by the Government have failed to address the deficit. One of the main reasons of housing crisis is the land ownership pattern in the country which is dominated by the private landlords. This paper attempts to assess the affordable housing policy of Mauritius from housing adequacy perspective and attempts to provide solution to the same.

This paper is reproduced from the Authors academic assignment in the International Course on Housing and Urban Development (ICHUD2019) at Institute for Housing and Urban Development (IHS) Rotterdam.

Keywords: Adequacy, Assessment, Affordable, Housing, Mauritius

1.0 INTRODUCTION: HOUSING CHALLENGE IN MAURITIUS

Mauritius is a microcosmic representative of housing crisis in the Global South. The island country of 1.3 Million population is witnessing affordable housing shortage and manifestation of many informal squatter settlements.(Habitat 2012b) Typical of the global south this is caused by a combination of multiple factors including the most common of inadequate and ineffective housing delivery mechanism (Davis 2007) and more peculiar of limited availability of public land.(Habitat 2012a) It is worth noting that majority of land is owned by the former landlords of Franco-Mauritian origin who constitute only 2% population of the country.(Habitat 2012b)

Mauritius housing policy as formulated by the Ministry of Housing and Lands(MHL) is dictated by the mission statement of 'to provide/facilitate access to a variety of affordable housing to cater for the different and evolving needs of present and future generations'.(MHL 2019) The affordable housing delivery is dominated by public sector entities and is implemented as top-down approach. (See Table 1 & 2) The supply of housing is mandated to a public company under MHL called National Housing Development Company(NHDC).(NHDC 2019) Mauritius Housing Company Ltd(MHC) is responsible for providing housing finance and credit.(MHC 2019) Another agency providing affordable housing is National Empowerment Foundation under Ministry of Social Integration. Despite having clear mandates there exists lack of coordination in the roles of these agencies e.g. MHL and NHCL also build housing independently of NHDC.(Gooding 2016)

The disparity of landownership affects the development of affordable housing which is undertaken as per the availability of land and does not necessarily concur with the National Development Strategy (NDS). In many cases the affordable housing is located at far off locations resulting in the socio-economic exclusion and spatial injustice. This is evident by the fact that 15% of the govt low income housing is abandoned in Mauritius.(Gooding 2016) Following sections discuss the housing sector in Mauritius in detail.

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Table 1
Housing Sector in Mauritius : Analysed based on Chiodelli Approach (Compiled by Author)

Scheme/ By	Components of International Policies	What	How	Who
1. Providing Low Income Housing Units **Government (**NHDC under MHL)	Top-Down Project Oriented Approach	Low Cost Housing Units of 39 sq.m. (to be increased to 50 sq.m.)	2/3 Subsidy by the Government 1/3 Loan to Beneficiaries from NHDC	Households falling under Rs 6200 per month income (to be increased to Rs 10000)
2. Financial Assistance for improving housing **Government (**NHDC under MHL)	Top-Down Project Oriented Approach Aided Self-Help	Grant of Rs 65000 for casting a roof slab. (to be increased to 75000)	Direct Financial Assistance	Beneficiaries Owning Land and under Rs 8500 per month of HH income. (to be increased to Rs 10000)
		Grant of Rs 40000 for casting of roof slab	Direct Financial Assistance	Beneficiaries Owning Land and Rs 10000 to Rs 15000 per month of HH income.
3. Providing Land Tenure **Government (**NHDC under MHL)	Project Oriented Approach Aided Self-Help	Securing tenure by providing land title.	NHDC Buying Land of 10 perches area at a nominal prices of Rs 2000 and transfers Title to the dwellers.	Beneficiaries with house units on Government leased land
4. Sugar Sector Package Deal **Private** Sugar Industry (restructuring and diversification of the sugar industry)	Project Oriented Approach Site and Services	Serviced Plots to the sugar sector employee	As part of VRS rehabilitation. Houses to be built by the beneficiaries.	Sugar Industry employees rendered unemployed due to industry closure.
5. Integrated Resort Scheme (IRS) since 2002 **Private** Landowners. Former Sugarcane farmlords. Majorly belonging to Franco-Mauritius ethnicity (2% of the population)	Policy Oriented Approach Neo-Liberal Private Enablement	Luxury Villas starting $500,000. Liesure amenities like Golf Course and Wellness Centre	Permits Landowners **(Private sector**) to act as the Developers. **Facilitating** by allowing development in non-urbanisable land. **Incentivising** by relaxed tax regime. Flat rate and very low (27% to 1%) social contribution.	Super Rich category of Non-Citizens, Expatriates, Investors and Speculators,
6. Real Estate Scheme (RES)/ Invest Hotel Scheme (IHS) since 2007 **Private** Landowners. Former Sugarcane landlords. Majorly belonging to Franco-Mauritius ethnicity (2% of the population)	Neo-Liberal	Luxury Hotels and Tourist Resorts in the coastal region.	Similar to IRS by engaging, facilitating and incentivising landowning private sector.	Foreign investors, International Tourists

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1.1 PUBLIC HOUSING SECTOR IN MAURITIUS

The government housing provisions are delivered through three types of schemes (see Table 1 schemes 1,2 and 3) namely; providing low cost housing units through subsidy and loan, providing financial assistance through direct subsidy for the construction of roof slab for those who own land and providing land tenure to the lease occupants of the government land.(Habitat 2012b, NHDC 2019) The three schemes target wide economic sections from poor to middle class and provide diverse and specific solutions, e.g. provision for built-up houses is for the Household monthly income of Rs.6200 while the improvement scheme is meant for Household monthly income from Rs. 8500 to Rs. 15000.(Gooding 2016) In this manner housing ladder is bridged more effectively.It can be seen that the schemes take into account the existing state of the beneficiary and provide a need based housing product as classified by (Chiodelli 2016) as basic housing units, site and services, upgrading and enablement. (Also See Table 2) Further, the housing benefits decrease as we go up the income pyramid, e.g. the grant of Rs. 65000 is provided to the monthly income of Rs 8500 while this is reduced to Rs. 40000 for monthly income range between Rs 10000 to Rs 150000. This is a more fair distribution of benefits, thus making the housing schemes equitable.(Hoek-Smit 2015) While, the schemes cater to both supply and demand side of housing supply;(Olsen 1987, Fingleton 2008) it can also be seen that they are project oriented and delivered as the Top-Down packages.(Chiodelli 2016)As a criticism to the government housing policy and schemes three major points can be raised as; first, they target housing ownership i.e. no attention is paid towards rental housing; second, that squatters on private land are excluded from any housing or rehabilitation schemes; and finally the effectiveness of the policies in providing mass housing, as a result of limited availability of public land.(Habitat 2012a, Awtar 2014) As stated earlier large part of land is owned by the private sector,(Habitat 2012b) which gives rise to the private development dictated by the neo-liberal policies discussed in next section.

Table 2 Characteristics of Housing Schemes in Mauritius (by Author, based on Chiodelli)

Category		Site and Services		Upgrading		Neoliberal Enablement	
Scheme		Providing Low Income Housing Units	Sugar Sector Package Deal	Financial Assistance for improving housing	Providing Land Tenure	Integrated Resort Scheme (IRS)	Real Estate Scheme (RES)/ Invest Hotel Scheme (IHS)
By		Govt-NHDC	Private	Govt-NHDC	Govt-NHDC	Private	Private
				What			
Physical Assets	Public Housing	Y				Y (Luxury category)	
	Basic Housing Units	Y					
	Lots		Y				
	Infrastructure and Services	Y	Y			Y	Y
Regulation	Titling and Regularisation	Y	Y		Y	Y	Y
	Land-use and building regulations	Y	Y			Y	
	Institutional Structure	Y		Y	Y		
Financing	Credit	Y					
	Direct-Subsidy	Y	Y	Y	Y		
				How			
	Project-Oriented Approach	Y	Y		Y		
	Policy-Oriented Approach			Y		Y	
	Top-Down	Y	Y	Y	Y	Y	
	Bottom-Up						
				Who			
	New Settlements	Y	Y			Y	Y
	Existing Settlements			Y	Y		
	Homeowners	Y	Y	Y	Y	Y	
	Renters						

1.2 NEO-LIBERAL AGENDA AND SOCIAL INJUSTICE

The private housing development is governed by the neo-liberal; referred by (Chiodelli 2016) as enablement policies of the government (See Table 2), aimed at generating capital through foreign direct investment.(Awtar 2013) Various schemes like Integrated Resort Scheme (IRS) started in 2002 and subsequent Real Estate Scheme (RES) and Invest Hotel Scheme (IHS) started in 2007, permits private land owners to act as developers with liberal tax regime and incentives. (see table 1 schemes 5 and 6) However, these schemes have resulted in greater socio-economic disparities and spatial injustice. (See Pic 1)

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Pic-1: Spatial Distribution and Diparities of (L-R) Squatters and Luxury Housings. Source: Apple Maps

The private developers target rich category of expatriates or foreigners with luxury villas and amenities as products.(Gooding 2016) As a paradoxical outcome the housing thus created price-out needy population in favour of the investors and speculators. As the greater consequence this neo-liberal development results in social exclusion and spatial injustice.(Bridgit 2018) Since, these premium housings are located at prime sites, often on the coastal edge, they restrict the access of ordinary population to the beach, which are legally considered as public zones in the country. Further, as these housing are gated complexes they increase the sense of socio-spatial exclusion. (See Pic 1)

Further, these housings are permitted to be developed on the ecologically sensitive zones like agriculture land and coastal strips, adversely impacting the ecology and environment of the country.(Weber 2014) Overall, it can be deduced that the neo-liberal agenda is resulting in socio-spatial injustice and restricting the right to the city to the majority of the common population.(Parnell 2010, Marcuse 2014)

While, it is evident that neo-liberal development is resulting in the social exclusion and spatial injustice, the greater cause is the landownership in the country, which is skewed towards private sector. In the Housing Value Chain(Ferguson 2008), the availability of land is the first link of the housing supply and thus is crucial for inclusive and adequate housing development. (See Table 3) When the private and public schemes are analysed in the Housing Value Chain it can be seen that the government affordable housing schemes (Table 3-scheme 1to 3) are devised circumventing the requirement of the land, while the private housing schemes (Table 3-scheme 5 & 6) is seen to be utilising the land availability. As a consequence supply of new affordable housing is restricted due to non-availability of the public land.

Table 3
Housing Value Chain (Author)

Housing Value Chain / Schemes	Land Assembly/ Acquisition	Tenure	Bulk infrastructure	House Construction	Sales and Transfer	Maintenance and ongoing improvements	Social and economic infrastructure
1. Providing Low Income Housing Units	Y	Y	Y	Y	Y	N	Y
2. Financial Assistance for improving housing	N	N	N	N	N	Y	N
3. Providing Land Tenure	N	Y	N	N	N	N	N
4. Sugar Sector Package Deal	Y	Y	Y	N	N	N	N
5. Integrated Resort Scheme (IRS) since 2002	Y	Y	Y	Y	Y	Y	Y
6. Real Estate Scheme (RES)/ Invest Hotel Scheme (IHS) since 2007	Y	Y	Y	Y	Y	Y	Y

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Housing Value Chain in Table 3 also highlights the lack of provisions of infrastructure and amenities in the affordable housing schemes as compared to the private housing development. As housing is more than shelter (Howard 2014) and requires a combination of amenities, infrastructure and opportunities to function adequately and sustainably, lack of amenities and infrastructure in the affordable housing category will result in the failure of such housing projects. It is not thus surprising to know that 15% of affordable housings in Mauritius are abandoned.(Gooding 2016) Housing adequacy can be assessed for effectively as a function of five principles which comprehensively cover the housing value chain. The same is discussed in detail in the next section.

2.0 FIVE PRINCIPLES OF ADEQUATE HOUSING (5A'S)

The Institute of Housing and Urban Development has determined the Five principles of Adequate Housing also called as 5 A's. These principles namely Availability, Accessibility, Affordability, Acceptability and Adaptability provides a comprehensive and qualitative comprehension of housing beyond the prevalent understanding of quantitive supply-demand.(Ayala 2018) Since, the definitions of five principles are interrelated; thus provide a cross-sectional understanding of housing adequacy as described in the following sections (Also See Table 4).

Table 4
Application of Five A's in Low Income Housing Schemes of Mauritius (Author)

5A's/ Scheme	Availability	Accessibility	Affordablity	Acceptability	Adaptability
1. Providing Low Income Housing Units	X	X	X	X	N
2. Financial Assistance for improving housing	N	X	X	Y	X
3. Providing Land Tenure	N	X	X	Y	X
		Y= Yes	N=NO	X=Partial	

The government of Mauritius has diverse schemes to address the low income housing supply as explained in the previous section. On the paper, the **availability** of the housing is addressed by the construction of low cost housing units (Scheme 1) and making it **accessible** and **affordable** through the direct government subsidy and credit to the economically weaker group. In reality, since the supply of such housing units is limited due to lack of government land, a significant number of people are left out in the waiting list. Further, in most of the cases these housings are located far away.(Gooding 2016) The principles of **accessibility** to jobs and amenities and **affordability** due to increase in the transportation cost are adversely affected. It may be said that the principles of **availability, affordability** and **accessibility** are partially addressed. While **acceptability** due to the location is affected, the houses are **not adaptable** for no provision of incremental additions as well as no sustainability measures. (Ayala 2018)

The second scheme of providing grant for the casting of roof slab addresses the principles of **acceptability** by providing *in-situ* improvement of the shelter and **adaptability** because it provides better resilience from the climatic conditions and also opening the possibility of vertical incremental additions. It also partially addresses **accessibility** and **affordability** by providing direct subsidy. The provision of land tenure in the third scheme enhances **acceptability** due to benefit of tenure security. It should also be noted that land tenure makes the resident eligible to other schemes and benefits like credit and scheme 2 in particular. Thus, it indirectly enhances **accessibility** and **affordability**. The tenure security also permits the resident to carry out incremental additions thus partially addresses the principle of **adaptability**.(Ayala 2018)

Based on above discussion on the 5A's it may be concluded that the worst addressed principle is **availability**. It is only partially addressed in the scheme one and both second and third schemes do not address to the housing **availability** as they are targeting upgradation of existing settlements. This again reiterates the pretext of limited availability of the public land for the creation of affordable housing.

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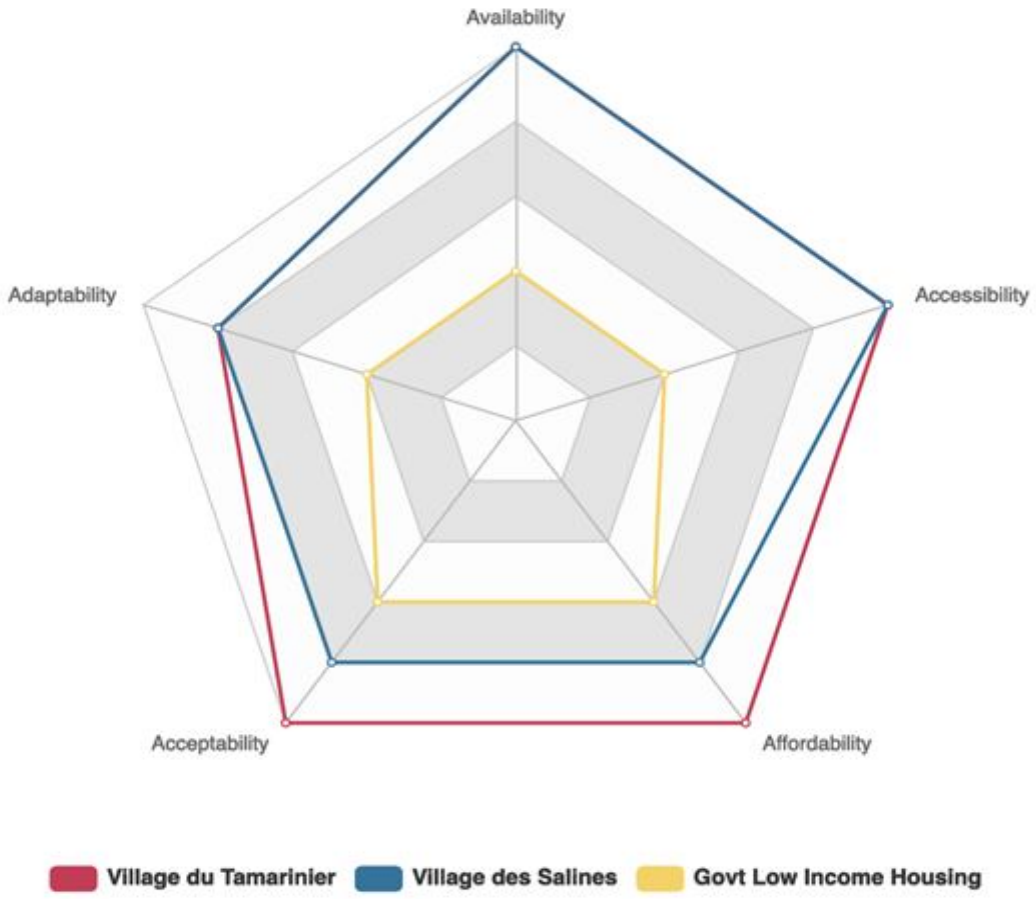
2.2 COMPARATIVE ANALYSIS OF HOUSING PROJECTS

The planning of low income housing is often prescriptive without giving consideration to socio-economic and cultural preferences of the target group.(Neuwirth 2005) As a result housing adequacy as a function of 5A's is compromised. This section analyses (See Chart 1) the two housing projects of Village du Tamarinier and Village des Salines in Mauritius which are remarkable for achieving housing adequacy through participatory planning approach.(Gooding 2016)

Chart 1. Radar Chart comparing 5A's in the housing projects. (Author)



In both the projects new housing units were constructed for the people already residing on the site in informal settlements augmenting housing **availability**. In the Village du Tamarinier additional housing was also constructed for the people relocated from the site exchanged with the land owner of the project site. Further, the **accessibility** was addressed by making housing credit available to the beneficiaries of Village du Tamarinier. Since the project was executed by NHDC, it required the beneficiaries to match 1/3 of the cost through loan, which was guaranteed by the NGO spearheading the project. This collaboration of NHDC and NGO considerably enhanced the principles of **availability** and **accessibility**. While the beneficiaries of Village des Salines were given houses for free, the subsidies and credit made available by NHDC made housing **affordable** in the Village du Tamarinier**.**. In Village du Tamarinier residents were surveyed for their **affordability** by the NGO and housing units were provided accordingly. Further, the repayment of the instalments was facilitated by the NGO **saving** the transport expenses to visit the NHDC office. The location of the project of Village du Tamarinier was same as earlier, the housing of Village des Salines was in the close vicinity of the earlier location. In this manner, the projects became more **acceptable, affordable** by reducing the transport cost and **accessible** to the amenities and jobs.(Gooding 2016, Ayala 2018)

In both the projects the beneficiaries were consulted from the beginning about the location of their unit, choice of neighbours and house design, as a result this enhanced the **acceptability** of the project. In both the cases incremental additions were carried out as the plot given was large enough to allow expansions, thus permitting **adaptability** to the residents.(Gooding 2016, Ayala 2018) However, there are no provision of sustainability measures adopted in these projects thus not addressing to the environmental **adaptability**. There are few cases in the Village des Salines where residents were not able to meet utility bills as houses given were large in size and given for free. These isolated cases slightly affecting the **acceptability** and **affordability** of the residents.

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If we compare (See Chart 1) the two projects with the government Low-income Housing projects it can be said that all the principles of housing adequacy and specially **availability, accessibility** and **adaptability** are lacking in the government housing. While **availability** and **accessibility** is largely attributed to the limited supply of land, the principles of **acceptability** and **adaptability** are largely dependent on housing need assessment. As evident from the two projects, the three aspects imparting **acceptability, affordability** and **adaptability** to the housing projects are location, provision for incremental addition and aided self help housing. Further, collaborative planning in the form of community participation, stakeholder consultation helps in determining the desirables, undesirables and cultural aspects; resulting in increased housing **adequacy** and sustainable housing.(Chiodelli 2016, Ayala 2018)

3.0 CONCLUSION AND RECOMMENDATION

While it is seen from above that ineffectiveness of public housing sector and neo-liberal policies have given rise to the socio-economic disparity and spatial injustice, it is also evident that the root cause of this situation is the scarce land availability for public purposes including affordable housing. As it is understood that land is the first link in the housing value chain (Ferguson 2008); lack of public land is making the housing policy ineffective in Mauritius. While housing adequacy is severely impacted by the limited availability; it is furthered by the marginal location of the low income housing projects. Due to the availability of the land, the low income housings are often located far away from amenities and jobs, thus compromising the principles of accessibility, affordability and acceptability in the housing adequacy.(Ayala 2018) It is not surprising to know that the result of this situation is that 15% of the government low income housing is abandoned in Mauritius.(Gooding 2016) It is clearly evident that any policy, scheme or project provisioning housing supply will not be effective until land is made available.

As a possible solution large land holdings which are a result of colonial history may be abolished in the public interest; as done by another British colony India, soon after attaining Independence by first constitutional amendment.(Guha 2008) But it is beyond doubt that such a reform will require very strong political will, since many years have passed after the independence in Mauritius. Similarly, the option of undertaking large scale land acquisition will need enormous funding as compensation to the landowners. It is obvious that these strong interventions will not be feasible given the requirement of funding and political measures. Given the circumstances, the solutions have to be more innovative and indigenous.(Neuwirth 2005, Davis 2007)

One of the viable solution can be land sharing in lieu of land-use conversion. As an earlier case when government negotiated transfer of 2000 acres of land from Sugar Production Association in return of land-use conversion of sugarcane farms into residential zones. This however, didn't work to the favour of the low income housing development as the land shared by the association was located on the East Mauritius, far away from employment opportunities and amenities.(Gooding 2016) If the same model is adopted but on the same location then it will be successful. So, as a solution the private land owner will surrender (say 10-20%) of his agricultural land to the government in return of land-use conversion.

Second solution can be to formulate and enact Land-Pooling policy. Land-pooling is a more formal and institutional method of land sharing as discussed above. Land-Pooling grants control of the land to the government agencies and results in regulated development. Further land-pooling is a less complicated and cost effective model in comparison to the land acquisition. As a result it is widely adopted by Indonesia, Nepal, India and Malaysia and other global south countries.(Archer 1992, Venkataraman 2015) Needless to say that government can use its share of land for providing low income housing and other amenities.

Another practical solution can be to integrate the provision of low income housing with the neoliberal development projects. At present Government has imposed nominal social contribution on these projects, which is not significant enough to pass on any benefit to the other sections of the society.(Gooding 2016) In place of the social contribution the onus of providing low income housing should be linked to these projects. This is similar to many countries in the Global South that have made it mandatory for private housing developments to include 15-25% of low income housing.(Venkataraman 2015, WB 2015) The projects under IRS, RES and IHS scheme should be sanctioned on the condition of providing low income housing in an inclusive and integrated manner. This will also address the spatial and social injustice created by the gated enclaves. These provision can be implemented through enactment of planning regulations.

It is very much evident that privatisation and neo-liberal model is here to stay. Many Governments have withdrawn the direct role from many sectors including housing.(Bridgit 2018) In such a situation collaboration of private sector into social development as a symbiotic model should be explored to meet the housing shortage in the developing countries and Mauritius as discussed in the paper.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

PERCEPTION TOWORDS INTERNET USAGE: A STUDY WITH REFERENCE TO UNDER-GRADUATE AND POST-GRADUATE STUDENTS

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ABSTRACT
Internet is the most useful technology of modern times which helps us not only in our daily life but also in professional life. For student education purposes, it is widely used to gather information and to do research or add to the knowledge of various subjects. The internet is the world of knowledge. Students get relevant study materials from many sites about the subject they are studying. Many universities have opened up free courses for the benefit of students which are accessible for them free of cost. This is really a big advantage for the students as they can get lectures, video sessions without spending any charges. Development of internet technology that is modern and sophisticated not only benefits users, but also has an effect that is not good for users, especially among students. From a study of 150 graduate and post graduate students sampled, the entire student respondents using internet for one to two hours every day, the researchers found that 72% respondents use internet for education purpose and the rest are using internet for other activities.

Keywords: Internet usage, E-learning, E-Library, Online education, Higher Education

INTRODUCTION

The history of the internet begins with the development of electronic computers in the 1950's. Initial concept of wide area networking originated in several computer science laboratories in the United States, United Kingdom, and France. The US department of Defence awarded contracts as early as the 1960's, including for the development of ARPANET project, directed by Robert Taylor and managed by Lawrence Roberts. Nowadays students whenever they need information they use the search engines like Google, YouTube, etc.

The internet is a very important tool for educators. The internet and its application is user friendly and makes student life easy. Nowadays internet has become an integral part of not only economy, but also the integral part of modern education. As compared to the past internet is rapidly growing. Most of the students prefer to use the internet more rather than using the library for information. The internet contains more information than the world's largest library. By using the internet students feels more independent for their assignment and exams. It can improve the quality of education in many ways. It opens doorways to wealth of information and knowledge.

OBJECTIVES

- To highlight the advantages of internet for students.
- To analyse the effect of internet on students.
- To project students' perception towards internet usage.

RESEARCH METHODOLOGY

For the purpose of study the researchers selected under graduate and Post graduate students on the basis of stratified random technique. The researchers contacted 150 students in Udupi city. The study is descriptive and analytical in nature. It is based on primary and secondary data. Secondary data was collected from books and internet. Primary data is collected by the researcher through a structured questionnaire provided to the students. For analysis and interpretation researchers have used simple statistical tools like percentage and some of the relevant and interesting data are presented in the tabular form and diagram (pie chart, bar chart), chi-square test was used for testing hypothesis.

HYPOTHESIS

H_0: There is no significant difference between internet usage of students for education and other activities.

H_1: There is a significant difference between internet usage of students for education and other activities.

SIGNIFICANCE OF THE STUDY

- **Access to information**

It is one of the main advantages to a student as it provides ability to access all types of information from library resources all over the world. This information increases the learning potential of students by providing them with the latest information.

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- **Online education**

If the student could not attend regular classes, they can also access the information through online by using internet. It helps the student to save travelling expenses.

- **Easy contact**

Students can contact other students or their lecturers if they have queries about any information, or discussion on a particular subject etc.

- **Easy education system**

Not only gaining knowledge, it also simplifies every part of the education system such as students can also take online courses, take classes on research, etc. Nowadays the scope of internet in education is very wide and equal to all.

- **Helpful research**

Researching is the activity related to creativity. Although many students don't like this type of activity because it is time consuming and needs proper concentration but the students who want to do research needs to work hard to innovate anything.

- **Reliable communication**

The internet is useful in many aspects as discussed above. But the internet not only provides education, it also provides a path between students and between students and teachers from where students can share their ideas and teachers listen to them and inform the students about their performance and about their ideas regarding studies. Many social networking sites are available on the internet from where students can stay in touch with their teachers, other students and also with professionals.

- **Career planning**

In addition to letting students gain information, it also helpsstudents to find and apply for open jobs upon course, diploma or degree completion.

- **Quick answer**

The internet contains vast amount of information that can be readily accessed by anyone with a computer. By using internet a student can collect information very quickly.

LITERATURY REVIEW

Vani Madhavi and Kommula A (2013) studied that most of the students were using the internet service in the college for their education.

Unnikrishnan (2008) to access the latest knowledge students will prefer internet over text book.

Adithya Kumari and Mahadeva Murthy argued that internet was a most common and useful instruments for all students.

Fayaz Ahmad loan (2012) found that students from different disciplines used internet for communication, information, entertainment, academic purposes. But majority of the students accessed the internet for knowing new things.

Singh Dhyan and Nutan Sharma (2013) found that most of the students used the internet for their education purpose and the use of internet among college student was increasing swiftly day by day.

FINDINGS OF THE STUDY

Table 1: Sample size

Educational qualification	Post-graduate	Under-graduate	Total
No. of respondents	85	65	150

Source: Primary data

The majority percentage 56.7% of respondents are post-graduates and the rest are under-graduates.

Table-2: Usage of internet

Usage of internet	No. Of respondents	Percentage (%)
Every day	138	92
Once a day	6	4
More than once a day	6	4
Total	150	100

Source: Primary data

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The table indicates that out of 150 students, 138 students use the internet everyday and 6 students use once a day and rest use more than once a day.

Table-3: Usage place

Place	No. of respondents	Percentage (%)
Home	98	65.33
College	26	17.33
Café	5	3.33
Library	5	3.33
Others	16	10.68
Total	150	100

Source: Primary data

The table indicates that 98 students use the internet at home and 26 students in college and rests use the internet in other places.

Table-4: Purpose of internet usage

Purposes	No. of respondents	Percentage (%)
Education	80	53.33
WhatsApp	40	26.67
Others	30	20
Total	150	100

Source: Primary data

The table indicates that majority of the students, that is 80 students use the internet for education purpose and 40 students use for WhatsApp purpose and rest use internet for other activities such as music, gaming, Facebook, etc.

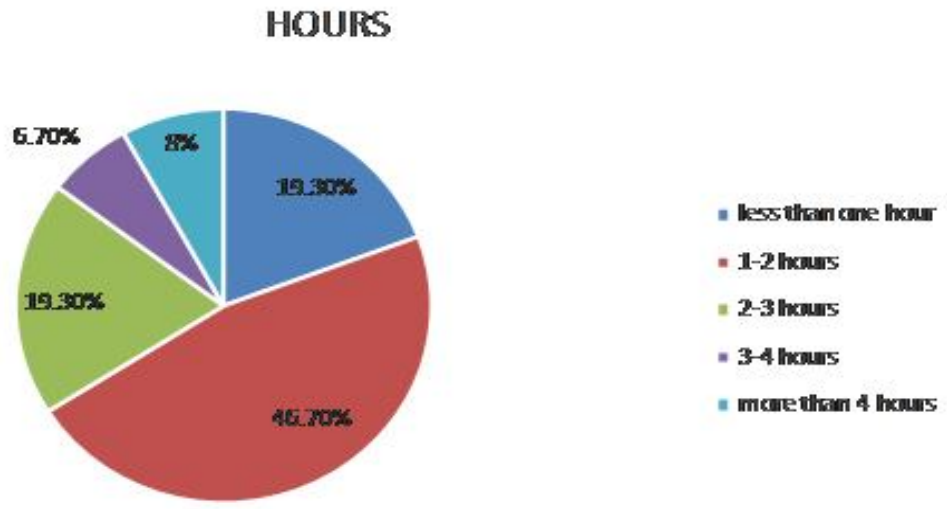
Table-5: Benefits of internet

Benefits for	No. of respondents	Percentage (%)
Education	108	72
Other activities	42	28
Total	150	100

Source: Primary data

The table indicates that 108 students use internet for education and the rest that is 42 students use internet for other activities.

Figure-1: Basis of education purpose



Source: Primary data.

Out of the 150 students 70 students are using the internet 1-2 hours for their education purpose, 29 students are using 2-3 hours, 10 students are using 3-4 hours, 29 students are using internet less than one hour and remaining 12 students are using more than 4 hours per day.

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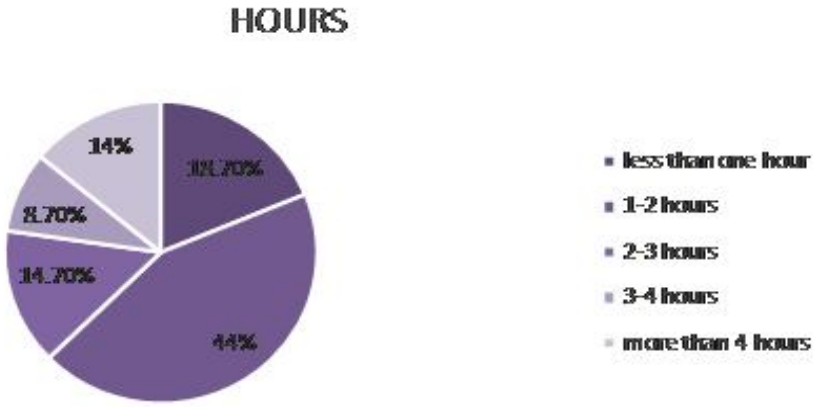
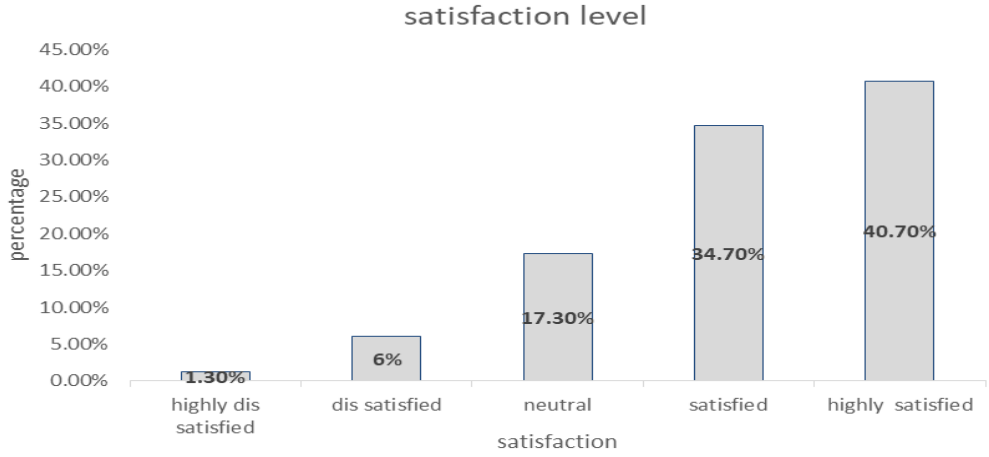
Figure-2: Basis of other activities



Source: Primary data.

Out of 150 students 66 students are using internet 1-2 hours for other activities, 28 students are using less than one hour, 22 students are using 2-3 hours, 13 students are using 3-4 hours and 21 students are using internet more than 4 hours per day.

Figure-3: Respondents Satisfaction level on use of Internet for education



Source: primary data.

Majority of students are highly satisfied by using internet for their education purpose and 1.3% that is 2 members are highly dissatisfied by using internet for their education purpose.

Figure-4: Respondents satisfaction level on use of Internet for education

Source: Primary data

Majority of students are highly satisfied by using internet for other activities and 4 students are highly dissatisfied by using internet for other activities.

TESTING OF HYPOTHESIS

H_0: There is no significant difference between internet usage of students for education and other activities.

H_1: There is a significant difference between internet usage of students for education and other activities.

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Table 6: Internet usage of students for education and other activities

	Education	Other activities	Total
Under-graduation	43	30	73
Post-graduation	56	21	77
Total	99	51	150

Source: Primary data

Chi-square value	Table value	Significance
2.97	3.84	H_0: Accept H_1: Reject

Source: Primary data

Since the calculated value is less than the table value, the null hypothesis, 'there is no significant difference between internet usage of students for education and other activities' is accepted and the alternative hypothesis is rejected.

CONCLUSION

The rapid growth of internet in the world is providing many opportunities to students to improve their learning system. The internet can be used as a tool to learn the latest news all around the world as well as getting any kind of information. Therefore, it can be said that the internet is the source of spreading information quickly to a large audience within a limited time. The use of internet among students has been bringing fundamental changes in their life styles and their study habits. The students spend 2-3 hours on the internet daily to satisfy their various needs like education purpose, chatting with friends. Majority of students are using internet in their cell phones. Internet has both positive and negative aspects. The positive consequence of internet usage includes enhancing self-confidence and maintaining a good relationship with friends. The negative aspect is that students are highly addicted to internet. However, internet plays a very important role in a student education which cannot be ignored.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

STUDENTS' PERCEPTION ON ROLE OF YOUTUBE IN HIGHER EDUCATION: ASTUDY WITH REFERENCE TO UDUPI CITY

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ABSTRACT
The modern Internet has forever changed how we conduct business, engage with other people and how we learn. Online videos are now used for classroom lectures, institutional promos, bulletins and newsletters, and teacher training, with YouTube leading the charge as the most versatile medium for disseminating video content in the classroom and beyond. The advantages of YouTube on higher studies are abundant. Nowadays, there is a greater impact of YouTube on students. Hence, researchers made an attempt to study students' perception on role of YouTube in Higher Education. For the present study, the sample size was 104. The survey indicates that 63.46% of YouTube users for education purpose are Post-graduates whereas the rest 36.54% users are from Under Graduation. The research results suggest that students found the use of YouTube in their courses to be a positive learning experience.

Keywords: Social network, E-learning, Web-based class rooms, Technology-driven classes, learning resources.

INTRODUCTION

YouTube is a video-based platform that allows people to upload and share their videos. Created in 2005, YouTube is now the Second most visited website in the world (Alexa, 2018). With over 1.9 billion active monthly users, 30+ million active daily users, 5 billion videos watched per day, 300 hours of content uploaded per minute and providing services in 88 countries in 76 languages, YouTube is being looked towards by Google as its next driver of growth. Many YouTubers are catching on to just how useful the educational side of YouTube can be. The CEO of YouTube, Susan Wojcicki, noted at the 2018 Code Media Conference that the educational related views alone on YouTube reaches One billion a day.

Universities are integrating free video platforms like YouTube into their classrooms. Sessions are produced either by content developers or by lecturers themselves and uploaded to YouTube. Outside of the classroom, YouTube is just as useful as inside of it. The short, easy to understand videos available can explain difficult concepts as well as textbooks, and are free.

Thus, YouTube is a powerful educational tool, and one that should not be ignored. It is rapidly becoming an important part of the educational sphere, and is changing how we learn.

RESEARCH OBJECTIVES

- To highlight the advantages of YouTube on higher studies.
- To analyse the impact of YouTube on students.
- To project the students' perception towards role of YouTube in higher education.

RESEARCH METHODOLOGY

This study is based on both primary and secondary data. The study is descriptive and analytical in nature. Secondary data was collected from internet, articles, journals and books. Researchers have collected primary data through structured questionnaire with sample size of 100, covering the area in and around Udupi. Random sampling method was used for distributing the questionnaire among college students. 5 point likert scale & 3 point likert scale was used for certain questions. Tabular form and diagram (pie chart, bar chart) are used for presenting the data and for testing the hypothesis chi-square test has been used.

HYPOTHESIS

H_0: The role of YouTube in higher education is not significant.

H_1: The role of YouTube in higher education is significant.

NEED FOR THE STUDY

Many underestimate the potential of YouTube as an educational tool. But for hundreds of millions of people around the world, YouTube and dozens of other free video platforms are shaping up to be a new educational model. From how-to instructional videos to TED talks, YouTube could well be the most important educational tool of our time. Nearly every major educational institution in the world now hosts its own collection of videos

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featuring news, lectures, tutorials, etc. Because we can now sift through thousands of resources while navigating a single repository, the potential for inspiration and growth in the field of education has reached a new height. The present study highlights the vital role YouTube plays in higher education.

SIGNIFICANCE OF THE STUDY

YouTube videos can be particularly entertaining and re-watched as many times as students wish. This is why the video-sharing website YouTube can provide unlimited opportunities to enhance students' eLearning course by not only using the countless videos they can find in it, but also creating their own to help the other audiences in YouTube to achieve their learning goals and objectives. Some of the main reasons why application of YouTube is prominent in the higher education system are as follows:

- **It is really easy to integrate**

Adding YouTube videos to your eLearning course is an easy task, due to the variety of authoring tools and learning management systems out there.

- **It can be used to create an eLearning community**

Using YouTube as a social learning platform offers you the opportunity to build a strong eLearning community where everyone can comment, contribute and share their opinions and ideas.

- **It generates and promotes online discussions**

ELearning videos are particularly effective facilitators for analysis. After viewing a YouTube video, students can clear their doubts by starting online discussions with other viewers.

- **It is ideal for mobile learning**

Students can access and view YouTube videos on the go via their smartphones and tablets, devices used in mobile learning. It doesn't matter how small the screen is.

- **It allows for micro learning**

Using videos for micro learning ensures that complex procedures and demonstrations of specific skills are delivered in small quantities, which enhance knowledge retention. Furthermore, because YouTube is available on all devices and allows learners to watch longer eLearning videos in short segments, audience can watch the videos whenever they like and take their own time to absorb the information being offered.

- **It encourages the development of note-taking skills**

Note-taking skills are important for students, as the ability to analyse information and focus on important points helps dealing with the information overload of the modern world. Using YouTube videos as part of your eLearning course encourages your audience to develop their note-taking skills by viewing, rewinding and replaying the YouTube video materials until they have fully grasped its essence and key points.

- **It enhances comprehension of complex concepts**

Certain subjects can be difficult to explain; using YouTube as a virtual library to support eLearning content by providing students with access to YouTube videos allows them to better comprehend complex concepts, procedures and ideas.

LITERATURE REVIEW

According to Kathy L. Guthrie, YouTube serves as a beneficial learning tool in the availability of videos for critical review making it accessible for multiple learning styles.

YouTube can enrich the learning experience by providing videos to accompany readings and course lectures (Conway, 2006).

Educators can create YouTube playlists that create a structure lesson plan for a topic (Snelson, 2011).

Teachers must educate students on how to seek information through YouTube. This will develop them into lifelong learners (Cayari, 2011).

FINDINGS OF THE STUDY

Table-1: Education wise distribution of usage of YouTube

Education Wise respondents	Searched and watched YouTube videos		TOTAL	Percentage
	yes	no		
UG respondents	38	0	38	36.54
PG respondents	63	3	66	63.46
TOTAL	101	3	104	100

Source: Primary data

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Inference: The above table indicates that the number of users of YouTube in UG is 38 whereas in PG is 66. So, the number of users of YouTube is more in PG than in UG.

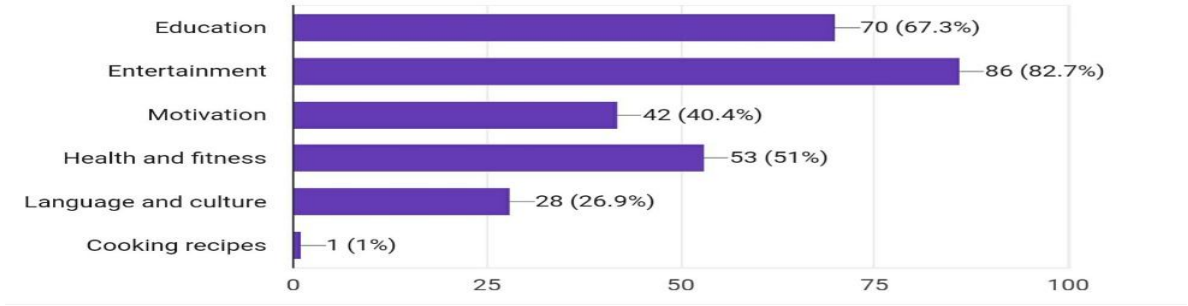
Table-2: Frequency of watching YouTube videos

Education wise respondents	No. of times YouTube is used on a weekly basis				TOTAL
	0-1 times	2-5 times	6-10 times	11 or more times	
UG respondents	3	10	12	13	38
PG respondents	7	27	18	14	66
TOTAL	10	37	30	27	104

Source: Primary data

Inference: In the survey conducted, a specific question was posed to the respondents regarding their frequency of watching YouTube videos. The above table shows that among 104 respondents, 10 respondents use YouTube 0-1times, 37 respondents use YouTube 2-5 times, 30 respondents use YouTube 6-10 times and 27 respondents use YouTube 11 or more times in a weekly basis. Hence, the most frequency in watching YouTube videos in a weekly basis is 2-5 times.

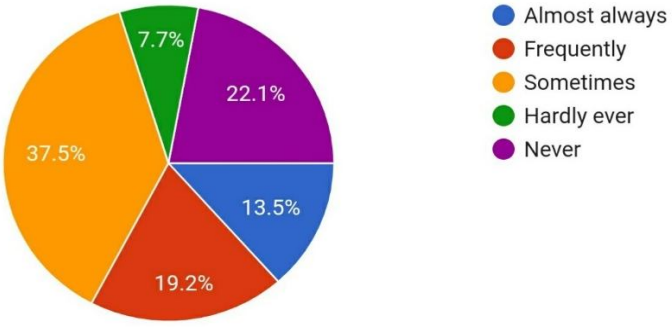
Figure 1: Purpose of watching YouTube videos



Source: Primary data

Inference: As per the table, 67.3% of respondents use YouTube for education purpose, 82.7% use for entertainment, 40.4% use for motivation purpose, 51% use for health and fitness, 26.9% use for language and culture and 1% use for cooking recipes. Thus, we can say that YouTube has greater impact on the Entertainment sector.

Figure 2: Recommendation of educational YouTube videos to friends



Source: Primary data

Table 3: Role of YouTube in higher education

Scale of agreement	Extends the classroom setting into home	Reduces students' dependency on teachers for learning	Acts as a supplemental resource for learning	Helps to get relevant and up-to-date information	Lecture videos are clear and concise	Total no. of respondents
Strongly agree	13	19	17	33	15	104
Agree	44	44	54	51	38	104
Neutral	31	25	24	18	32	104
Disagree	12	9	8	1	8	104
Strongly disagree	4	7	1	1	11	104

Source: Primary data

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Table-4: Impact of YouTube on higher studies

Level of impact	Positive impact	No impact	Negative impact	Both positive and negative impact	Uncertain	Total
No. of respondents	51	14	3	27	9	104

Source: Primary data

Inference: As per the above table, out of 104 respondents, in terms of higher studies, YouTube has positive impact on 51 respondents, no impact on 14 respondents, negative impact on 3 respondents, both positive and negative impact on 27 respondents and an uncertain impact on 9 respondents. Thus, the above table indicates that YouTube has more positive impact on higher studies.

TESTING HYPOTHESIS

H_0: The role of YouTube in higher education is not significant.

H_1: The role of YouTube in higher education is significant.

Table-5: Significance of role of YouTube in higher education

Purpose of using YouTube is educational	YouTube lecture videos enhances the learning experience and keeps students engaged in the course content			TOTAL
	Agree	Neutral	Disagree	
Frequently	8	26	1	35
Sometimes	9	31	6	46
Never	1	3	19	23
TOTAL	18	60	26	104

Source: Primary data

Table-6: Chi Square analysis

Chi-square analysis	Table value	Significance
51.4044	13.3	Significant

Source: Primary data

The Chi-Square analysis shows that the null hypothesis **H_0**, 'the role of YouTube in higher education is not significant' is rejected. Hence, the alternative hypothesis **H_1**, 'the role of YouTube in higher education is significant' is accepted.

CONCLUSION

YouTube has an important part in higher education, because it allows students to learn more about a particular topic or subject just by watching a short video. Having YouTube incorporated in the higher education system can help students get the one-on-one time with their lecturers and the most necessity of students, video-on-demand. YouTube has created an opportunity for them to learn skills that can help improve their lives. The process of creating, developing and editing video is a learning opportunity in itself. Thus, YouTube is a treasure trove of education content that can turn a one-dimensional lesson into an interactive discussion that really taps into the imagination of students. It is an unmatched resource for videos, with content gathered from all over the world and from all eras. It is a very powerful eLearning tool which adds a dynamic element to the students' eLearning courses, improves their knowledge transfer, demonstrates complex procedures and helps explain difficult topics.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

STUDIES ON "*O*-NITROBENZALDEHYDE DERIVATIVE OF 1, 2-DIPHENYLETHANE-1, 2-DIENE HYDRAZONE OXIME

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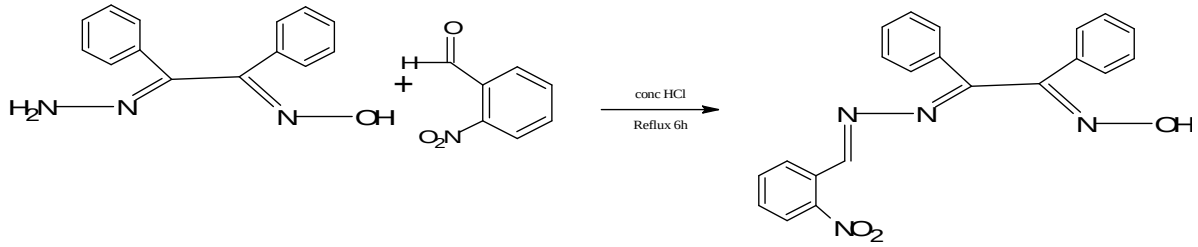
ABSTRACT
Reaction between hot ethanolic solution of α-benzilmonoximehydrazide (HBMOH) and o-nitrobenzaldehyde (o-NBA) yields Benzilmonoximehydrazide-o-nitrobenzaldehydes (HBMHONB). Synthesized compound were characterized on the basis of various physico-chemical and spectral techniques such as UV-Visible, PMR and IR spectra.

INTRODUCTION
Schiff's base is the organic compound in which aldehyde or ketone like compounds in that, the carbonyl group is replaced by an imine or azomethine group[1]. Schiff bases and their metal complexes are used in various biological systems as a catalyst as well as in the manufacturing of polymers and dyes also.[2-6]

α-Benzilmonoximehydrazone is one of the example of Schiff base derived compound and its various metals complexes are studied recently.[3-8] In view of this we wish to report *o*-nitrobenzaldehyde derivative of 1, 2-diphenylethane,1-2-diene hydrazone oxime. The structure of synthesize compound elucidated by various physico-chemical and spectral studies. The IUPAC name of the title compound is 2-(2-nitrobenzylidene)hydrazinylidene-1,2-diphenylethanimine for sake of convenience able as HBMHNB.

MATERIAL AND METHODS
All chemical used were of analytical reagent grade. Distilled water obtained from a glass distillation unit. UV-visible spectra of the compound were recorded on JASCO V-650 spectrophotometer, methanol and 0.1N NaOH was used as a solvent to record UV- spectrum of the compound. FT(IR)spectra KBr discs were recorded on Perkin-Elmer spectrum 100 model. PMR spectra were recorded on Brucker AV300 NMR spectrometer using TMS as internal standard.

PREPARATION OF COMPOUND
α-Benzilmonoxime was prepared by reported by method[4-8]. The title compound was prepared by hot ethanolic solution of 3.107gm.(0.013 mol) of α-benzilmonoximehydrazide (HBMOH) and 2ml conc HCl was added in 100ml three necked RBF(Round Bottom Flask), stirred 15min, then added 2.012gm(0.0135mol) of *o*-nitrobenzaldehyde (*o*-NBA) under stirring. Final mixture was reflux 6 hours and after refluxed, the reaction mixture was cool, filters the precipitated washed with hot water.



RESULT AND DISCUSSION
Characterization of the prepared compound is done by using analytical data obtained from UV-VISIBLE, FT(IR), ^{1}H NMR spectroscopy and elemental analysis etc. The molecular weight of proposed compounds is 372gmol^{-1} determined by Rast method[9]; they are melts at 210-215^{0}C. They are yellowish brown crystalline solids, soluble in common organic solvents such as, methanol, chloroform, acetone, DMF, DMSO, dioxane, dilute alkali etc. partially soluble in ethanol. Structural studies of the synthesized compounds of FTIR, PMR, UV-VISIBLE spectroscopy and elemental analysis etc. the prepared compounds are monobasic in nature by compounds-KOH titration curve.

ELEMENTAL ANALYSIS

%	C	H	N	O
Theoretical	67.7	4.3	15.0	12.8
Observed	66.3	4.1	14.7	12.4

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SPECTRAL MEASUREMENTS

A) UV- Visible spectrum (In methanol Solvents)

The electronic spectrum of HBMHONB in methanol for the UV region shows two high intensity bands at 264nm and 227nm respectively. These bands are due to π→π* transition possible for oximino and Azomethine group in the synthesized molecules.

Table-1: UV-Visible spectra of the *o*-nitrobenzaldehyde derivatives α-Benzilmonoximehydrazide

λ nm	Abs.	ε	Transition	Assignment
264	1.505	20476	π→π*	Oximino group > C=N-O
227	0.445	6054	π→π*	Azomethine group > C=N-N

B) FT(IR) Spectrum

In FT(IR) spectrum of HBMHONB compound, absence of band between 3300 - 3350cm^{-1} due to the –NH_2 vibration reported[8] at 3387cm^{-1} in α-Benzilmonoximehydrazide, indicates a successful replacement of the amino group by the hydrazonyl group during Schiff base formation. The spectrum of HBMHONB shows peak at 3235.97cm^{-1}, assigned as the hydroxyl group of the oxime. The bands at 1616.06 and 1571.70 are due to (C=NN) and (C=No) i.e. Azomethine and oximino respectively.

Table-2: FT(IR) spectra of the *o-nitro*-benzaldehyde derivatives α-Benzilmonoximehydrazide in cm^{-1}

Bands	Assignments
3235.97	-OH (Oximino)
3118.33	-Ar (C=C)
2949.59	-Ar (C-H)
1616.06	>C=NN (Azomethine)
1571.70	>C=NO (Oximino)
1365/1332	-NO2 (Two bands)

C) PMR- Spectrum

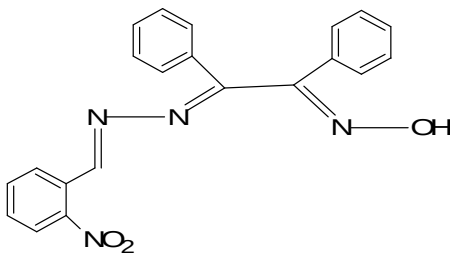
^{1}H NMR spectra of the synthesized compound was recorded in d_6 DMSO solvent and important bands summarized in **Table-3**. The pmr spectrum of HBMH*o*NB reveals a broad singlet at δ10.17 due to –OH of oximino group. A multiple observed around δ8.15-8.43 due to phenyl rings in the compound. Another singlet observed at δ2.51 assigned as –CH= group of the title compound.

Table-3: PMR data of *o*-substituted nitrobenzaldehyde derivatives α-benzilmonoximehydrazide in ppm

δ (PPM)	Assignments
10.17(*s*)	-OH (oximino proton)
8.15-8.43 (*m*)	Phenyl rings
2.508(*s*)	-CH=(methane group)

CONCLUSION

The synthesized compound is insoluble in water but it is soluble in dilute alkali and common organic solvents. The synthesized compound structure elucidated by spectral studies such as UV-Visible, pmr, FT(IR) spectra and this structure assigned as;



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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

SYNTHESIS AND CHARACTERIZATION OF NEWLY SYNTHESIZED COMPOUND OF (2*E*)-2-[(2*E*)-(2-BROMOBENZYLIDENE) HYDRAZINYLIDENE]-1, 2-DIPHENYLETHANIMINE

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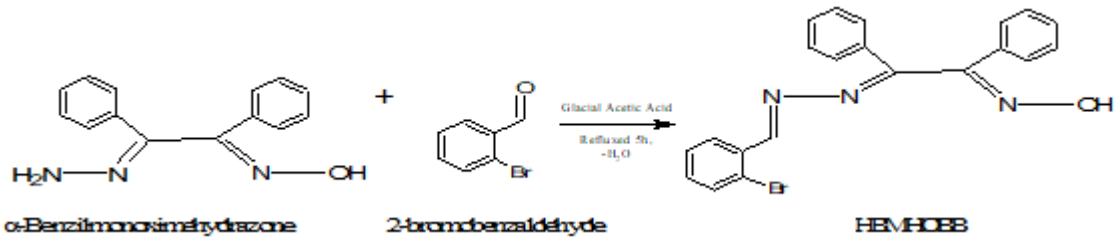
ABSTRACT
The '(2E)-2-[(2E)-(2-bromobenzylidene) hydrazinylidene]-1,2-diphenylethanimine' compound, were prepared by condensation between α-Benzilmonoximehydrazone and o-bromobenzaldehyde in the presence of Acetic acid and methanol. Synthesized compounds structure elucidated by elemental analysis, IR, UV spectra, PMR spectra. The bromobenzaldehyde derived compound have high melting point, indicate that strong bonding between all the atoms. Proposed compound insoluble in water, but soluble in common organic solvents.

Keywords: α-Benzilmonoxime, Schiff base, Oximino group, Bromobenzaldehyde

INTRODUCTION
A large number of Schiff bases and their various metal complexes have been studied for their important properties. Many Schiff bases reported their catalytic activity[1], photochemical properties[2] and from the complexes towards some toxic metals[3-7]. Schiff bases and their various metal complexes were plays n important role in the development of coordination chemistry. They are providing important and essential ways for chemical and biological activity of compounds. The high affinity for the complexation of the Schiff bases towards the transition metal ions utilized in preparation of their solid complexes. Schiff base with donors (N, O etc.) have structural similarities with natural biological systems, imports in elucidating the mechanism of transformation, recemination reaction in biological systems physiological and pharmacological activities associated with them[6-7], Schiff bases derived α-benzilmonoxime and their metal complexes reported earlier[8-13]. A-Benzilmonoxime derivatives are known to better coordinating agents. In view of this, we wish to report Spectral studies of '(2*E*)-2-[(2*E*)-(2-bromobenzylidene) hydrazinylidene]-1, 2-diphenylethanimine' and title compound abbreviated as HBMHOBB. The prepared compound was characterized by IR, UV spectra, PMR, elemental analysis.

EXPERIMENTAL
All reagents and chemicals used AR grade. All solvents were purified by before using. Melting point determined in an Electrothermal 9200. ^{1}H-NMR spectrum in CDCl3 was recorded on Brucker AV300 NMR spectrometers using TMS as internal standard. The FT-IR spectrum was recorded in the range 400–4000 cm^{-1} by KBr pellet using a 'Perkin- Elmer spectrum 100' model FT-IR spectrophotometer. The UV–Vis spectrum in methanol was recorded with a JASCO V-650 Spectrophotometer.

PREPARATION OF HBMHOBB
α-Benzilmonoximehydrazone was prepared by reported method[14]. The title ligand was prepared by mixing of methanolic solution of the α-Benzilmonoximehydrazone (0.10mol) and 2-bromobenzaldehyde (0.15mol), added 2-3 drops of glacial acetic acid. The resulting mixture was refluxed 5h using water condenser. After complete refluxation the solution was cooled at room temperature, solid separated, dried at 110^{o}C in oven.



RESULTS AND DISCUSSIONS
A novel compound '(2*E*)-2-[(2*E*)-(2-bromobenzylidene) hydrazinylidene]-1,2-diphenylethanimine (HBMHOBB) has been synthesized and reported first time. The first H in the abbreviation of the compound assigned to the presence of one ionizable proton. Characterization of the HBMHOBB is done by using analytical data obtained from FTIR, PMR, UV-VISIBLE spectroscopy, elemental analysis etc. Physical data of the ligand (**Table-1**) corresponds to the molecular formula $C_{21}H_{16}N_3OBr$, molecular weight is 406g/mole. The molecular weight determined by Rast method[15], which is in agreement with the molecular weight calculated

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from molecular formula. The HBMHOBB is obtained in a crystalline form, which decompose at 205^0C. Synthesized compound found yellow crystalline solid, soluble in chloroform, acetone, DMF, DMSO, 1,4-Dioxane, dilute alkali etc. and is partially soluble in methanol and ethanol. Since HBMHOBB is soluble in dilute alkali solution indicating the acidic nature. The HBMHOBB has ionizable proton, yet our studies reveal that it is monobasic in nature.

Table-1: Analytical and physical data for HBMHOBB compound

Compounds	Color	% Yield	MP in ^{0}C	% of the expected (observed)				
				C	H	N	O	Br
HBMHOBB	Yellow	76.98	205	62.08 (61.92)	3.97 (3.88)	10.34 (10.02)	3.94 (3.85)	19.67 (19.00)

UV-Visible Spectra

The UV- spectra of the prepared compounds in the ultra-violet region show high intensity band at around 339nm (ε = 12723dm^{3}mol^{-1}cm^{-1}), 226nm (ε = 20905dm^{3}mol^{-1}cm^{-1}). These bands are due to the $\pi \rightarrow \pi^*$ (allowed) transitions of azomethine and oximino environment in the synthesized molecule. In many isonitrosoketones[16-17], a bands occurs at similar positions and intensity, are reported as the ($\pi \rightarrow \pi*$) transitions in the present compound.

Table-1: UV-Visible spectra of the *o* -substituted bromo-benzaldehyde derivatives α-Benzilmonoximehydrazone

Compounds	λ (nm)	ε (dm^{3}mol^{-1}cm^{-1})
HBMHOBB	339	12723
	249	20905

PMR

PMR spectrum of the synthesized compound was recorded in $CDCl_3$ solvent and important bands summarized in **Table-2**. A significant feature of the PMR spectrum of HBMOBB is the absence of any singlet band between δ7.5-8.0 ppm, due to the Amino group, reported at δ7.9 ppm in α-benzilmonoximehydrazone[14], indicating a successful replacement of the Amino group by the methine group during condensation process. This observation also support by new singlet band observed at δ2.5 ppm ascribed to the methine group in the prepared compound. The singlet at observed at δ10.17ppm (*s, 1H)* region indicated oximino proton in the prepared compound and since it is expected to be rather acidic and therefore the weakest shielded proton in the molecules. The multiplets in the region δ 8.15 - 8.43ppm were ascribed to the aromatic ring protons in synthesized compound.

Table-2: ^{1}H NMR data of *o* -substituted bromo-benzaldehyde derivatives α-Benzilmonoximehydrazone in ppm

Compounds	-OH	-CH=	Phenyl rings
HBMHOBB	10.17	2.5	8.15-8.43

FTIR Spectra

A significant feature of the FT(IR) spectra of the *o* -substituted bromo-benzaldehyde derivatives α-Benzilmonoximehydrazone is the absence of band between 3300 - 3400cm^{-1} due to the –NH_2 vibration reported[14] at 3387cm^{-1} in α-Benzilmonoximehydrazone indicating a successful replacement of the amino group by the methine group during condensation reaction. The spectrum shows a band at 3209cm^{-1} due to the presence of –OH of the oximino in the synthesized compound and another band observed at 3082cm^{-1} in the FT(IR) spectra of the synthesized compound is ascribed to aromatic C-H stretching vibrations and the aliphatic C-H group band is merged into aromatic C-H stretching which are observed in synthesized compound. Rest of the bands observed in title compounds are almost at the same frequencies in comparisons with bands of benzilmonoximehydrazone[14].

Table-3: FT(IR) spectra of the *o* -substituted bromo-benzaldehyde derivatives α-Benzilmonoximehydrazone in cm^{-1}

Compounds	-OH	ν(C=NO)	ν(C=NN)	ν(N-O)	ν(N-N)	Ar(C=C)	Ar(C-H)	ν(Ph-Br)
HBMHOBB	3209	1569	1625	1018	1095	3107	3082	740

CONCLUSION

The title compound is soluble in most of the common organic solvents and they have high melting point, indicating strongly bonded all functional groups and other molecules. The synthesized compound is monobasic

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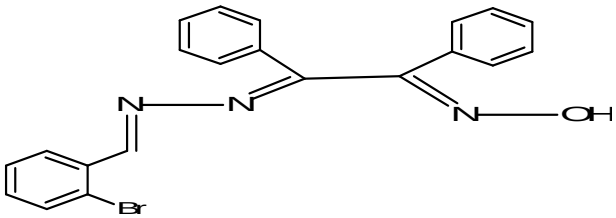
in nature concluded on the basis of the compounds-KOH titration curve method. On the basis of the spectroscopic methods tentatively assigned the structures of the proposed compound as follow;



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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

THREE STEP RECOGNITION ALGORITHM FOR THE APPLICATION OF HAND GESTURE RECOGNITION USING MATLAB

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ABSTRACT
Based on the shapes of different hand gestures, it is possible to recognize and classify them differently. We have taken different hand gestures from American Sign Language (ASL), which represent different signs including numeric numbers. This paper therefore discusses a simple recognition algorithm that uses three shape-based features of a hand to identify what gesture it is conveying. The recognition algorithm used has three main steps: segmentation, feature calculation, and classification. The algorithm starts by acquiring the input image and then three features of the input image are calculated, two based on compactness and one feature based on radial distance. The parameters identified in the classification step were obtained empirically using 200 hand images. The algorithm was tested on another 200 hand images, and was able to successfully classify 184 images, or with an overall success rate of 92 percent.

Index Terms: human hand gesture, feature extraction, compactness, Euclidean distance, image segmentation

I. INTRODUCTION
We humans use our hands for almost every single job in our daily life; one of the most important things that our hands are used for is expressing our ideas and actions through gestures. Therefore it makes hand gesture recognition an important and popular topic of discussion in the vision and pattern recognition field. Hand gestures are the representation of different hand shapes or finger orientation, these gestures if interfaced with computer systems, as already done using different methods, can be of tremendous application. Many methods of interfacing are there, which use different algorithms to recognize the hand gestures. Most of these algorithms focus on either one complex feature, as in [3], [4], or a combination of various features for classification, as in [5], [6]. Some algorithms even use neural network and learning schemes for which proper training is required besides the availability of sample data, as in [3], [5], [6] and [7]. As the computer technology evolved, the complex algorithms were used with more speed and accuracy that what it used to be. Amid this trend in hand gesture recognition, this paper aims to use three simple shape- based features to classify ten different hand gestures with less complexity and minimum computational cost. Methodologies described in [1], [2] is closely related to the approach taken in this paper, the difference lies in the employment of different features and testing on more images. The approach proposed in this paper requires no formal training and no complex feature calculations are needed. The parameters for the recognition algorithm are retrieved factually from analyzing a set of sample images. The feature that has not been employed in other recognition algorithms is taking the thumb as one of the three features, but in the algorithm proposed in this paper, we have treated thumb as one of the three features. There are three main steps in this algorithm, which are: image segmentation and enhancement, feature calculation, and classification. The different hand gestures, referred to as patterns hereafter, are shown in Fig 1.

Fig-1: Sample set of patterns representing the numeric signs in ASL from 0-9 in anti-clockwise fashion from top left.

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In the first step, an input image is retrieved and prepared for use by letting it go through various image processing techniques. In the next step, the algorithm calculates three features of the image: compactness of the whole image, compactness of the left-half of the hand, and the total number of fingers by using radial distance scheme. In the third and last step the algorithm identifies and classifies the type of pattern based on these three features. All of these steps are elaborated in their respective sections.

II. METHOD

A. Segmentation

In this paper the segmentation process is the main topic of interest, it is discussed here only for the sake of its importance in fulfilling the three step Algorithm, so we have used the traditional segmentation methods. Input image is prepared through the steps including its conversion from RGB to binary and morphological operations, as described in [9], but here Otsu's method is used for segmentation instead of using a fixed threshold value. Otsu's Algorithm is described in [8]. The segmentation process here is kept colour invariant, that means the algorithm will not be needing any colour information, thus making this algorithm robust to varying light conditions. Arm removal from the image in this segmentation process is achieved as proposed in [9]. The outlined procedure in [9] calculated the distance between the upper and bottom edges of the arm, and cut the arm exactly at the wrist, where the total distance between the two edges increases rapidly. For varying hand and arm sizes, this procedure uses proportional changes in distances between upper and lower edges of the arm instead of fixed distance changes. Same method is used in [1]. All images are captured using a low- cost camera to make sure that this Algorithm of discussion holds practical applications on moderate quality images as well.

B. Feature calculation

This is the step where different features of patterns are calculated. In this paper we have used shape-based features to recognize ten hand patterns. As the hands can assume different shapes, therefore shape- based features are not widely used in hand gesture recognition algorithms. In-spite of this, we have used these shape based features and to overcome the problem for which it is not one of the most preferred methods is by using the three- shape based features in combination. These features are described in the following section.

1) *Compactness I (C_A):* The first feature of the image to be computed is compactness and it is the shape based descriptor. The compactness of a shape is found by using the following equation (Eq. 1)

$$\text{Compactness} = \frac{\text{Perimeter}^2}{4\pi(\text{Area})} \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

From the equation given above, it can be easily seen that compactness can be defined as the ratio of the squared perimeter of the shape to its area. This also implies that the two patterns with same ratios will have the same compactness value, therefore it is possible that some of the patterns would have overlapping compactness values. This possibility of same compactness value is overcome by another feature, where the thumb is considered for recognition.

2) *Compactness II (C_L):* As already mentioned the second feature to be calculated is that of the thumb. Other algorithms treat the hand as one whole area, but in our algorithm we divide the hand(pattern) into two halves: one half, that contains the thumb and the other half that contains the four remaining fingers, these two halves will be addressed to as Left- half and Right- half respectively.

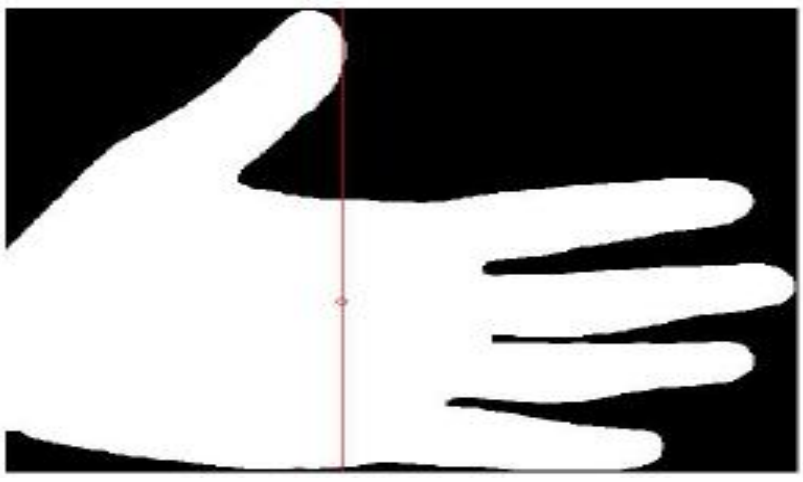

Fig-2: Hand partitioning example, the small circle represents the centroid and along the vertical line partitioning is carried out.

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The concept of centroid comes into play to divide the pattern into two halves. The centroid of a digital image can be found by calculating the image moment using

$M_{ij}= \sum_x xi \sum_y xj\, I(x,y)$ ……. (2)

Where I(x,y) represents the intensity at coordinate (x,y). The coordinate of the centroid ($\bar{x},\bar{y}$) is found by using

$$\bar{x} = \frac{M10}{M00}$$ ……. (3)

$$\bar{y} = \frac{M01}{M00}$$ ……. (4)

As the centroid of the hand lies within the hand, therefore the same is suitable for separating the thumb from the other fingers. An example of image partitioning is shown in fig 2. Due to the peninsula- like shape of the thumb, it significantly increases the compactness value. Hand patterns that include thumb pointing towards the palm will have noticeably lower compactness value in the left half than hand patterns where thumb is pointing away from the palm. The heavily shape dependent property of compactness and being rotation, scaling, and translation invariant (RST-invariant) makes it possible for one hand pattern to produce different compactness values because human hands come into different shapes. To make sure that the recognition process is successful, it is necessary to use a feature that produces discrete values.

3) *Radial distance:* The plot of the Euclidian distance between all boundary points and a reference point within a hand makes a radial distance profile. The term radial distance was coined in [10] and also used in [1] and [2] to find the number of fingers and their angles. The Euclidian distance is calculated using the equation given below:

$$ED(p,q) = \sqrt{(x_p - x_q)^2 + (y_p - y_q)^2}$$ ……..... (5)

Where q is taken as the reference point and p includes all the boundary points. The center of the wrist was taken to be the reference point previously, as describes in [9]. Here, the reference point is taken at the centroid, and any boundary points on the left of the centroid are not included in the radial distance profile. Therefore the focus remains on the right half of the hand, where the total numbers of fingers are calculated in the hand pattern. In this step we also make sure that any discontinuous regions are not taken into consideration, hence discarded. At seventy five percent of the maximum distance away from the centroid of the hand, we define a threshold line to extract the number of fingers. Now we count the total number of intersections that this threshold line makes with the radial distance function, these numbers of intersections determine the number of fingers. The expected result of this feature calculation method is given in Table 1.

Table-1: Expected number of peaks for each pattern

Pattern	Number of Peak (s)
0	NA
1	1
2	2
3	3
4	4
5	4
6	1
7	1
8	2
9	3

III. RUNNING THE CODE IN MATLAB

After opening the MATLAB program, we run the code for hand gesture recognition. Using this code, we can take the test images and compare them with the ones saved in the database for each gesture. The below given series of screen-shots from the MATLAB window will make the steps of recognition clear.

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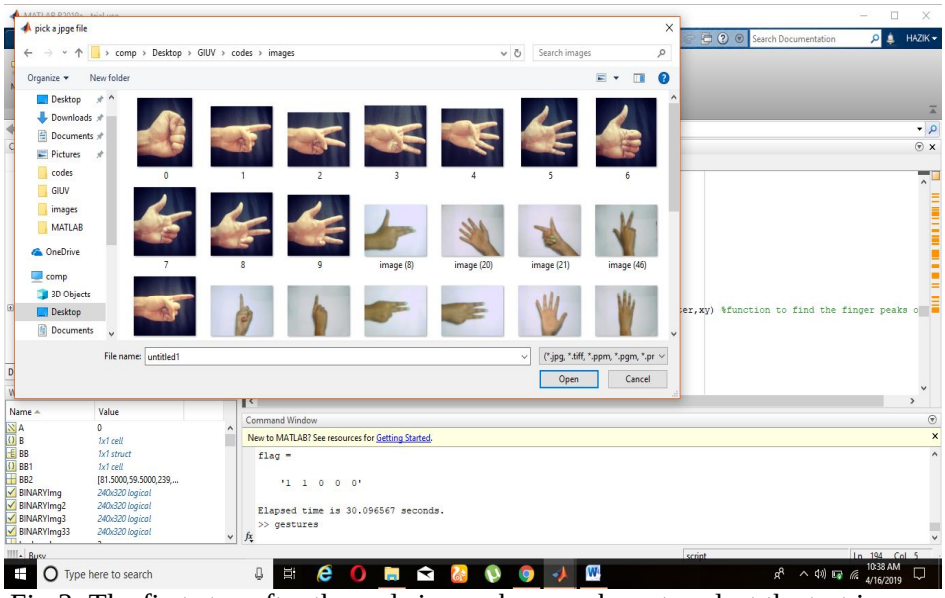

Fig-3: The first step after the code is run, here we have to select the test image.

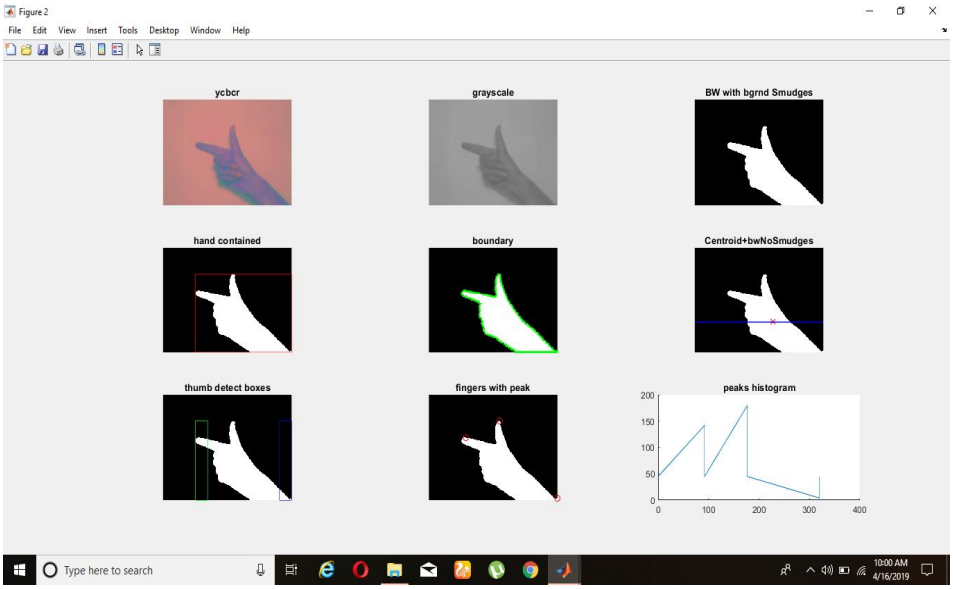

Fig-4: Features of the test image are calculated and the gesture is identified using the peaks histogram.

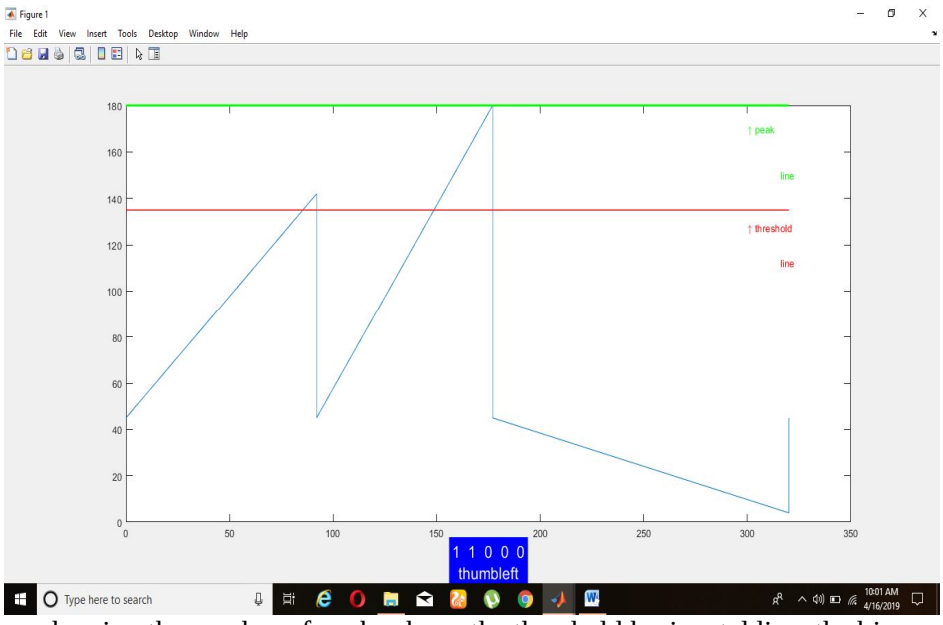

Fig-5: Histogram showing the number of peaks above the threshold horizontal line, the binary numbers at the bottom indicates the finger for 1 and closed finger for 0.

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IV. EXPERIMENTAL RESULTS

To test the effectiveness of the three features mentioned previously, 200 images were used. The reason behind this testing is to define three parameters that can be used in the three step recognition scheme to classify the hand gestures.

A. Compactness I(C_A)

The resulting plot of compactness values of all test images is shown in Fig. 6. The values of compactness are plotted between the actual pattern numbers for analysis purposes. It is clear from the Fig. 6 that the compactness values of all hand gestures fall into three distinct groups. And like we discussed earlier about the parameter square and area ratio (compactness value) is same for some patterns and this is proven correct by this plot. We now classify any pattern with compactness value (C_A) less than 1.65 as Pattern zero. This value was manually selected from the plot. In addition to this, we classify any image with value of compactness (C_A) between 1.65 and 2.53 as either Pattern one or Pattern six.

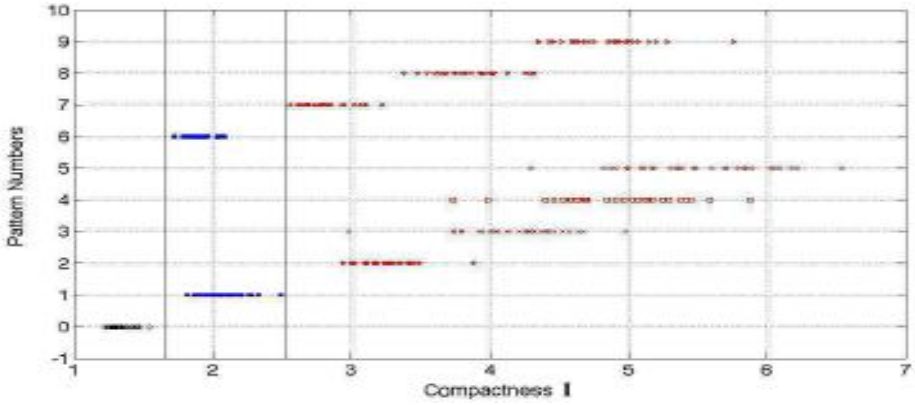

Fig. 6 Resulting plot of compactness values (C_A) of all test patterns.

B. Compactness II(C_L)

The resulting plot of the compactness values for the left half of the hand is shown in Fig. 7. Similar to Fig. 6, the graph is plotted between the actual pattern numbers for analysis purposes. As expected, the patterns with a thumb produce more compactness value than the patterns without a thumb.

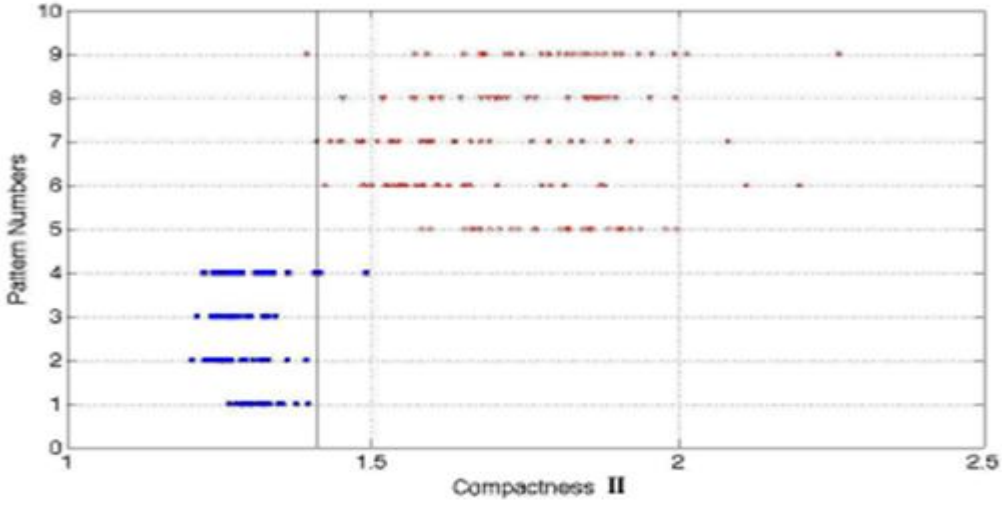

Fig-7: The Resulting plot of the compactness values (C_L) for the left- half of the hand.

Now we define a second parameter C_L, for compactness of the left half and classify any image as Pattern one, two, three, or four whose C_L value is less than 1.47, this value of C_L is again obtained manually from the given plot. Any image with C_L greater than 1.47 is classified as either pattern five, six, seven, eight, or nine. Unlike Compactness I (C_L), here all of the ten hand patterns are classified.

C. Radial distance

Threshold line at 75 percent of the maximum value along with the sample radial distance plots are shown in Fig. 8. The third parameter P is here defined as the number of fingers obtained from the radial distance plot. P holds the value of any positive integer between one and four. Using the three parameters a decision making flowchart is made and is shown in Fig. 9. The threshold values as discussed above are used for every pattern.

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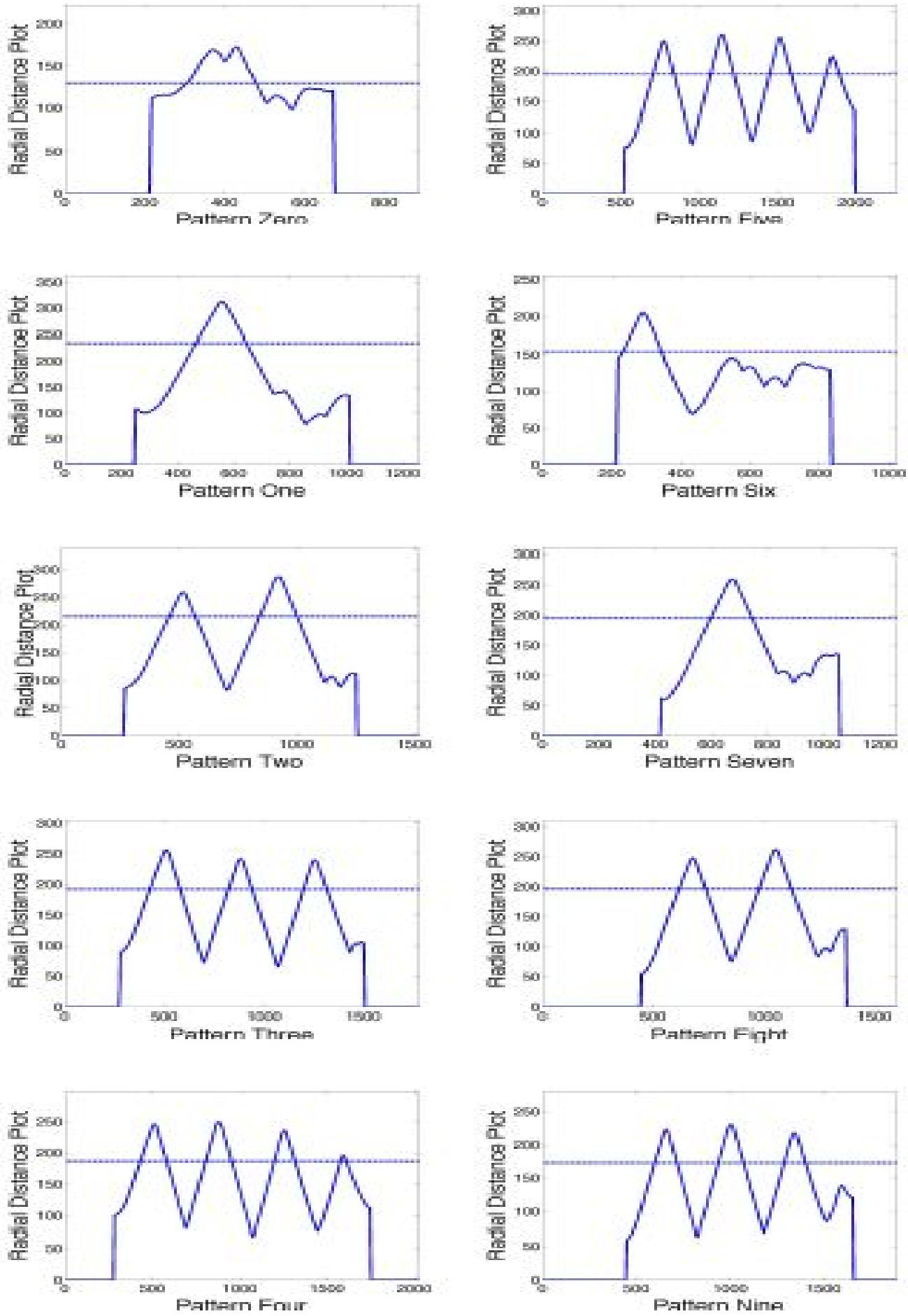

Fig-8: Sample Radial distance plot for patterns from pattern zero to pattern nine.

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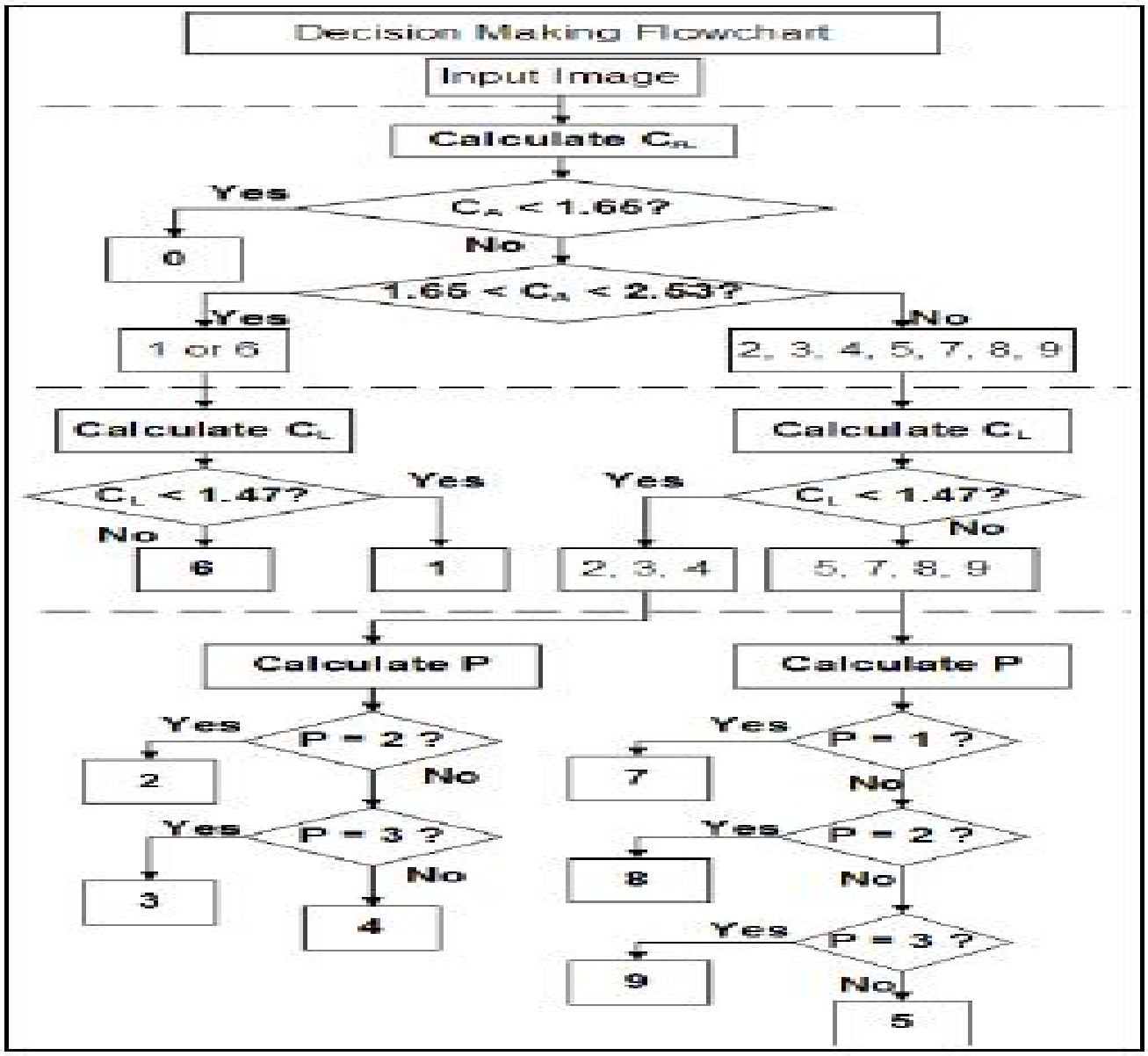

Fig-9: Three step based decision making flowchart with the corresponding threshold values.

V. DISCUSSION

This three-step based recognition algorithm was tested on 200 additional input images and the success rate was found to be more than what it was before. This algorithm follows the same flowchart that is given in Fig. 9. Table II shows results of the tests carried out on 200 different images using the said algorithm and it was found that out of total 200 input images 184 patterns were correctly identified and as many as 16 patterns were falsely identified, thus achieving a success rate of 92 percent.

Table-II: Hand Recognition Results

Pattern	No. of input Images	Successful Cases	Success Percentage (%)
0	20	19	95
1	20	19	95
2	20	19	95
3	20	19	95
4	20	16	80
5	20	20	100
6	20	20	100
7	20	17	85
8	20	20	100
9	20	17	85
All	200	184	92

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Table-III: Confusion Table										
Actual Pattern	0	1	2	3	4	5	6	7	8	9
0	19	0	0	0	0	0	1	0	0	0
1	0	19	0	0	0	0	0	1	0	0
2	0	0	19	0	0	0	0	0	1	0
3	0	0	0	19	0	0	0	0	0	1
4	0	0	0	0	16	0	0	1	0	0
5	0	0	0	0	0	20	0	0	0	0
6	0	0	0	0	0	0	20	0	0	0
7	0	0	0	0	0	0	0	17	2	1
8	0	0	0	0	0	0	0	0	20	0
9	0	0	1	0	0	1	0	0	1	17

Table III shows the confusion table, where the number of falsely recognized patterns are given. It is apparent that most of the errors in recognition arise while extracting the value of "P", that is the number of fingers from the radial distance function.

We can take an example from the confusion table, where pattern four was mistaken as pattern three for three times, the same error can be seen for pattern seven, which was mistaken for pattern eight for two times. Now we consider the adequacy of the component figuring strategies utilized, and understand that imperfections exist in the last two. Hand partitioning, as portrayed in Section 2.2, plans to isolate the thumb from the remainder of the fingers, yet by utilizing a line parallel to the picture's edge, any picture with changing hand orientation would make some portion of the thumb to be incorporated into the right half.

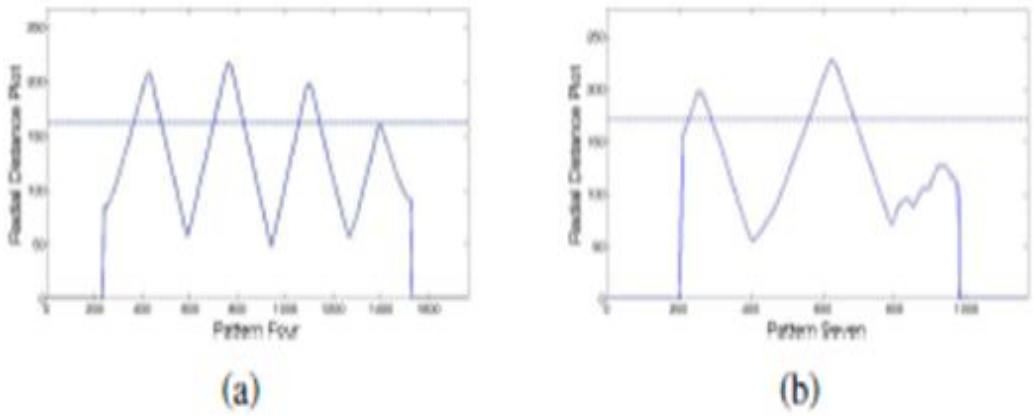

Fig-10: Radial distance plot for pattern four and pattern seven illustrating the "false finger error".

This would in turn affect the plot of radial distance and thus create a "false" finger. Fig 10(b) illustrates this said error. Finger extraction method as described previously in Radial distance section uses a horizontal line to determine the number of fingers, which is responsible for a lot of problems in pattern four, because the little finger is comparatively shorter than other three fingers, and thus wouldn't show up on the horizontal line. This error is shown in the Fig. 10(a).

The changing orientation of hand is likely responsible for the above given errors. This problem can be prevented by using a more sophisticated partitioning method. This algorithm can be made orientation invariant by using a method that analyses the direction of the thumb using slope or line information of the fingers.

VI. CONCLUSION

There are numerous ways to deal with hand gesture recognition, and each methodology has its qualities and shortcomings. The quality of the proposed algorithm in this paper is the blend of three important features. There are many algorithms which use only one of the three features and hence become dependent on that one single feature and any blunder there would risk the whole algorithm. The property of these three features being independent on each other and at the same time covering each other's limitations makes this algorithm unmatchable and reliable than other available algorithms. The same can be deducted if we compare this algorithm with the one given in [9], the results vary by a considerable margin. The shortcoming of this technique is the absence of a methodical way to deal with characterizing certain parameters. In this paper the threshold values for the three parameters were acquired empirically. To minimize the chances of errors and increase the success rate, we can use the neural network techniques, which would find more accurate threshold

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values. However that would increase the computational cost and will make the recognition algorithm more complex. As the radial distances are deducted from the centroid of the hand, this makes the current algorithm more robust to varying hand orientation; previously the radial distances were calculated from the center of the wrist, as used in [9]. One more important accomplishment in this algorithm is the application of varying threshold to determine the number of fingers (P) because the threshold line is not fixed and varies according to the maximum radial distance.

Several improvements can be made in this algorithm for a more accurate and robust recognition. Aligning the hand properly before any feature calculations are made and using orientation information for partitioning, are two possible ways to achieve the advanced accuracy and robustness. Among these two possible options, a proper partitioning method is a better choice over proper hand aligning, because aligning the hand properly would require spatial manipulation of the hand image. The future scope of this algorithm lies in the changes made in the number of images, patterns and this project can be expanded to recognize images from video sequences or conducting hand gesture recognition in real time.

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International Journal of Advance and Innovative Research
Volume 6, Issue 2 (XVII): April - June, 2019
ISSN 2394 - 7780

THE STRATEGIC HUMAN RESOURCE MANAGEMENT EFFECTIVENESS AND ITS IMPACT ON THE ORGANIZATIONAL PERFORMANCE

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ABSTRACT
This research paper study aims to study the linkage between the effectiveness of strategic human resource and its effects on the organizational level outcomes. The strategic human resource management helps in enhancing the quality of human capital and human effectiveness. SHRM reduces the employee turnover and increases the overall market performance assessment

INTRODUCTION
In present scenario globalization and upcoming technology is dominating the world. The organizations cannot just rely upon rich material capital, inexpensive labor force and plenary monetary fund of its own to make it larger & stronger. Instead, the organization should work hard on innovation, competitive advantages for their survival. Under such situation, how should organization deal with competitions and challenges from various aspects? How to maintain its survival to the changing external environment? All these threatening questions provoke the organizations to go for continuous improvement, innovation, develop the competitive advantages. These all things are possible with only and only Human Resource who are the carrier of organization's activities and the most active factor of productive forces .The Employees are no more liabilities for the organization rather they are main and active asset of the organization which are very actively involved in the growth of the organization and helps in achieving the objectives of the company. The growing competition, technology and innovation have lead to the development of strategic Human Resource Management over the traditional human resource management. This research paper aim to analyze how strategic human resource management influences the organizational performance

Strategic Human Resource Management is a part of Strategic Planning. The essence of strategic planning is to ask "where are we now as business where we want to be and how should we get there". Then formulate specific strategies (Human Resources and other) to have the company from where it is now to where he or she wants it to be. The Strategic Human Resource Management deals with all the aspects of human resource management and utilizing it to the utmost level. Thus SHRM means strategically utilizing the human resource management. SHRM is introduced as the modern concept of HRM

Strategic Human Resource Management means formulating and executing human resource policies and practices that produce and develop the employee competencies and behavior the company needs to achieve its strategic aims. Strategic HRM is a process that involves the uses of overarching approaches to the development of HR Strategies, which are integrated vertically with the business strategy and horizontally with one another. These Strategies define intentions and plans related to the overall organizational considerations such as organizational effectiveness, and to more specific aspects of people management, such as: resourcing, learning and development, reward and employee relations. Strategic HRM focuses on actions that differentiate the firm from its rivals. Strategic HRM has a clear focus on implementing strategic change and growing the skill base of the organization to ensure that the organization can compete effectively in the future. SHRM facilitates the development of a human capital that meets the requirements of Business competitive strategy, so that organizational goals and mission will be achieved.

OBJECTIVES OF THE STUDY
- To explain the concept of Strategic HRM
- To study the impact of strategic HRM on the organizational Performance.
- To discuss the growing importance of Strategic HRM and its various benefits to the organization.

RESEARCH METHODOLOGY
This is an exploratory study in which basically the secondary data is used for this conceptual study. The data has been collected from Journals, Magazines, and various website.

REVIEW OF LITERATURE
SHRM can be defined as linking the human resource management with strategic goals and objectives of the organization in order to improve the overall business of the organization. The importance of human resource has

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increased more in the last two decades due to which now days every organization is giving more importance to Human Resource Management. SHRM emphasizes on all around development of the employees along with achieving the goals and objectives of the organization. It also gives importance to the way so that the individual goals can be aligned with the overall goals of the organization. The primary goal of Human Resource Management is to focus on increasing the productivity of the employees by focusing on the external as well as internal obstacles. SHRM not only giving importance to achieving the organizational goals but also to the overall around development of its manpower which is done by providing Training and Development ,taking their contribution in the decision ,management games etc. These efforts make the employee feel stick with the organization and they are motivated to give their best in order to enhance the productivity of the organization.

NATURE OF STRATEGIC HRM

Strategic Human Resource Management implies a managerial orientation that ensures that human resources are employed in a manner conducive to the attainment of organizational goals and mission. The concept of Strategic Human Resource Management (SHRM) evolved in the 1990s with an increased emphasis on a proactive, integrative and value-driven approach to human resource management Strategic HRM focuses on several issues including the fit between human resource management practices and organizational strategic goals, the integration of human resource management in the organizational strategic management, the involvement of human resource function in senior management teams, the devolvement of human resource practices to line managers and taking of strategic approach to employee selection, compensation, performance appraisal and the value that is added to the organizational performance by HRM. It has also been defined as the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals

The Strategic Human Resource Management Process

The Strategic Human Resource Planning is a process that identifies current and future human resources needs for an organization to achieve its goals. The SHRM serve as a link between Human Resource Management and the overall strategic plan of an organization

1. Scanning the Environment: The process starts with the scanning of the internal and external environments of the organization. The external environment includes the political, legal, technological, economic, social and cultural forces that have a great impact on the functioning of the business. The internal factors include the organizational culture, hierarchy, business processes, SWOT analysis, industrial relations, etc. that play a crucial role in performing the business operations.

The role of the HR department is to collect all the information about the immediate competitors – their strategies, vision, mission, strengths, and weaknesses. This can be done through the resumes being sent by the candidates working with the other rivalry firm. Through these, HR professionals can identify the workforce, work culture, skills of the staff, compensation levels, reasons for exit and other relevant information about the competing firm.

2. Identify Sources of Competitive Advantage: The next step in the strategic human resource management process is to identify the parameters of competitive advantage that could stem from diverse sources as product quality, price, customer service, brand positioning, delivery, etc.

The HR department can help in gaining the competitive advantage by conducting the efficient training programmes designed to enrich the skills of the staff.

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3. Identify HRM Strategies: There are major four strategies undertaken by an organization to enrich the employees capabilities:

a) **Learning as Socialization:** This strategy includes the techniques as training courses, coaching sessions, education programmes to ensure that the employees abide by the rules, value and beliefs of an organization and are able to meet the performance targets.

b) **Informal Learning:** This strategy helps in making the employees aware of the learning opportunities and the career development.

c) **Engineering:** This strategy focuses on creating and developing communities of practice and social networks within and outside the organization.

d) **Empowered Informal Learning:** Through this strategy, the HR department focuses on developing the learning environment such as knowledge about the new processes, designing of new work areas and the provision of shared spaces.

4. Implementing HR Strategies: Once the strategy has been decided the next step is to put it into the action. The HR strategy can be implemented by considering the HR policies, plans, actions and practices.

5. Monitor and Evaluation: The final step in the strategic human resource management process is to compare the performance of the HR strategy against the pre-established standards.

At this stage, certain activities are performed to evaluate the outcomes of the strategic decision: establishing the performance targets and tolerance levels, analyzing the deviations, executing the modifications.

STRATEGIC HRM AND ORGANIZATIONAL PERFORMANCE

Many Researches has been recently conducted to find the linkage between strategic HRM and organizational performance. According to Noe et al. (2007) the traditional HRM practices and policies influence the behaviors, attitudes and performance of employees. They basically focus s human resource planning, recruitment, selection, training and development, compensation, performance management and employee relations. Pfeffer reshapes these practices into seven HRM practices; these practices are expected to enhance organizational performance and enable the organization to gain a competitive advantage (1998). Such practices are detailed as follows : 1. Employment security. 2. Selective hiring of new personnel. 3. Self-managed teams and decentralization of decision-making as the basic principles of organizational design. 4. Comparatively high compensation contingent on organizational performance. 5. Extensive training. 6. Reduce status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels. 7. Extensive sharing of financial and performance information throughout the organization.

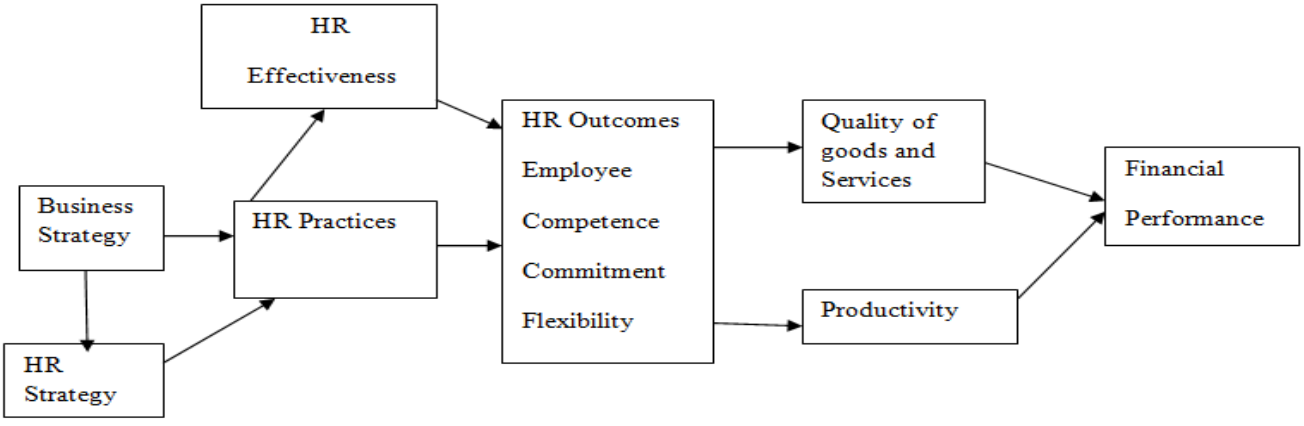

Fig-1: The Relationship between Strategic HRM and Performance

The Fig.1 shows that there is a direct influence of strategic HRM on the financial performance. The HR strategies are generated on the basis of Business Strategy. It is must, that before drafting the Business strategy, we must analyze the competences of the staff, the way how they motivate, the types of skills and knowledge employees. So the realization of business strategy comes through integration of workforce opportunities, their expectations and other factors that influence inside and outside the organization. The performance outcomes of HRM can be viewed in different ways: 1. HRM outcomes such as turnover, absenteeism, job satisfaction, commitment. The organizational outcomes, such as productivity, quality, service, efficiencies, customer satisfaction. 3 The Financial accounting outcomes, such as profits, sales, return on assists, return on investment. 4 Capital market outcomes such as market share, stock price, growth.

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Strategic management of human resources represents a transformation that is relatively new in the field of human resource management. An important role of strategic human resource management is about focusing the management in employees as a tool to gain competitive advantage. Now, organizations are made aware that successful human resources policies and practices of appropriate can increase performance in various areas such as productivity, quality and financial performance. Performance management is a planned process in which key elements are different measurement, feedback, positive reinforcement and ongoing dialogue between managers and employees. It has to do with measurement results in the form of performance achieved in comparison with the expectations expressed as objectives. Also, it has to do with the inputs and values. Inputs are the knowledge, skills and behaviors necessary to produce the expected results. Needs are identified by defining these requirements and evaluate the degree to which the expected levels of performance are achieved through effective use of knowledge and skills, appropriate behavior. Performance management strategy has to do with all the business and not just the managers. So managers are not only responsible for delivering the required performance. Managers should have the confidence to distribute authority and responsibility throughout the organization.

Managers and their teams are jointly responsible for the results and are both involved in agreeing what they should do and how they should do it. Performance management processes are part of sweeping across the organization. Managers and other employees of the organization should work together to jointly commit to achieving the performance. Performance management strategy should focus on the development to a continuous and flexible process involving managers and all the organization that operate as a single team. This should determine how they can best work together to achieve the required results. This makes it possible to focus on the planning of future performance and performance improvements existing. HRM Strategy provides the basis for regular dialogue and frequent between managers and other employees about performance needs and further development of the organization.

The HRM discipline has witnessed a great deal of change over the last 25 years. The change was observed when the concept of HRM dominated over the personnel management while in the second phase there was a transformational of HRM to strategic HRM. The second transformational depicts that in addition to coordinating HR policies and practices, they need to be directly associated with the organizational strategy. Strategic Human Resource Management is based upon the recognition that organizations can be more effective if their human resources are managed with human resource policies and practices that deliver the right number of people with the appropriate behaviors, the needed competencies and the necessary level of motivation to the organization. Strategic human resource management may bring a number of benefits to the organization :1) Contributing to the goal accomplishment and the survival of the company, 2) Supporting and successfully implementing business strategies of the company, 3) Creating and maintaining a competitive advantage for the company, 4) Improving the responsiveness and innovation potential of the company, 5) Increasing the number of feasible strategic options available to the company, 6) Participating in strategic planning and influencing the strategic direction of the company as an equally entitled member of top management, 6) Improving cooperation between the HRM department and line managers.

Strategic Human Resource Management is dominating because of its greater commitment towards the organizational achievement and effectiveness through proper linkage between human resource strategies and organizational strategies

CONCLUSION

The academic research proves that it is the human resources which are the ladder for the success of any organization. Now the human resource is no more an liabilities on the organizations rather they are asset or capital for the organization which are very essential for the organization which are very essential for the organizational growth and sustainable development . The expenses done on human resource is not expenditure rather it is an investment which pays you high returns by enhancing the organizational growth and building the healthy and motivational environment . This is all possible through strategic HRM.

The manager everywhere face the same challenges of tackling complex problems with limited resources ,determining priorities ,motivating staff , initiating change and demonstrating measurable results. Strategic HRM in concept and practice is about managers standing in the frontline to tackle these challenges to achieve organizational objectives. It has been analyzed that strategic HRM practices creditably play the role in developing the motivation and supportive workplace. The organizations should consider benefits of integrating their HR function with its overall strategies and operations.

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2. Book review must contain the name of the author and the book reviewed, the place of publication and publisher, date of publication, number of pages and price.
3. Manuscripts should be typed in 12 font-size, Times New Roman, single spaced with 1" margin on a standard A4 size paper. Manuscripts should be organized in the following order: title, name(s) of author(s) and his/her (their) complete affiliation(s) including zip code(s), Abstract (not exceeding 350 words), Introduction, Main body of paper, Conclusion and References.
4. The title of the paper should be in capital letters, bold, size 16" and centered at the top of the first page. The author(s) and affiliations(s) should be centered, bold, size 14" and single-spaced, beginning from the second line below the title.

First Author Name1, Second Author Name2, Third Author Name3

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3Author Designation, Department, Organization, City, email id

5. The abstract should summarize the context, content and conclusions of the paper in less than 350 words in 12 points italic Times New Roman. The abstract should have about five key words in alphabetical order separated by comma of 12 points italic Times New Roman.
6. Figures and tables should be centered, separately numbered, self explained. Please note that table titles must be above the table and sources of data should be mentioned below the table. The authors should ensure that tables and figures are referred to from the main text.

EXAMPLES OF REFERENCES

All references must be arranged first alphabetically and then it may be further sorted chronologically also.

- **Single author journal article:**

Fox, S. (1984). Empowerment as a catalyst for change: an example for the food industry. *Supply Chain Management*, *2*(3), 29–33.

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- **Multiple author journal article:**

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Liu, W.B, Wongcha A, & Peng, K.C. (2012), "Adopting Super-Efficiency And Tobit Model On Analyzing the Efficiency of Teacher's Colleges In Thailand", International Journal on New Trends In Education and Their Implications, Vol.3.3, 108 – 114.

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Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2007). *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies* (3rd ed.). New York: McGraw-Hill.

S. Neelamegham," Marketing in India, Cases and Reading, Vikas Publishing House Pvt. Ltd, III Edition, 2000.

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Young, M. E., & Wasserman, E. A. (2005). Theories of learning. In K. Lamberts, & R. L. Goldstone (Eds.), *Handbook of cognition* (pp. 161-182). Thousand Oaks, CA: Sage.

- **Electronic sources should include the URL of the website at which they may be found, as shown:**

Sillick, T. J., & Schutte, N. S. (2006). Emotional intelligence and self-esteem mediate between perceived early parental love and adult happiness. *E-Journal of Applied Psychology, 2*(2), 38-48. Retrieved from http://ojs.lib.swin.edu.au/index.php/ejap

- **Unpublished dissertation/ paper:**

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Central Bank of India (2005). *Income Recognition Norms Definition of NPA.* Retrieved August 10, 2005, from http://www.centralbankofindia.co.in/ home/index1.htm, viewed on

7. The submission implies that the work has not been published earlier elsewhere and is not under consideration to be published anywhere else if selected for publication in the journal of Indian Academicians and Researchers Association.

8. Decision of the Editorial Board regarding selection/rejection of the articles will be final.