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Institute of Commerce and Science

Affiliated to University of Mumbai

International Conference

On

Sustainability in Digital World

7th March 2020

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The Synthetic & Art Silk Mills Research Association (SASMIRA) a Research Association registered under The Societies Registration Act XXI of 1860 and Bombay Public Trust Act, 1950 and having its registered office at Sasmira Marg, Worli, Mumbai 400030, Maharashtra, India, linked to the Ministry of Textile, Government of India established on 12th January 1950 under Registration No. 2505 of 1949-1950. It is a cooperative venture set up by the man-made textile industry of India after independence as a multi- functional institute to serve its scientific and technological needs. It is the Premier Research and Development Organization and Centre of Excellence in Agro-tech with facilities for demonstration, product development, incubation, testing & certification and training in textiles.

SASMIRA has multifaceted development activities including R & D, Testing and Technical Services, Skill Development. The major areas of functioning of SASMIRA are:

Research & Development	Testing Services
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“Sasmira Institute of Commerce & Science (SICS)” is an Institute located at Worli, Mumbai. It is affiliated to University of Mumbai and offering the Undergraduate Courses in Management and Science. It is an initiative of SASMIRA (The Synthetic & Art Silk Mills' Research Association), started in Year 2016 to impart quality education in the field of Commerce and Science.

SASMIRA as Parent Body Linked to the Ministry of Textile, Govt. of India was established on 12th January 1950 under Registration No. 2505 of 1949-1950 granted under Societies Act XXI of 1860 and is a cooperative venture set up by the Man-Made Textile industry of India after independence as a multi-functional institute to serve its scientific and technological needs.

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Message from the President

Sasmira's Institute Commerce & Science (SICS) has always aimed at excellence and in their endeavor. In order to continue with their motto, they are organising their Second International Conference on "Sustainability in the Digital World". In all areas of life is set to bring about dramatic changes to our lives, our societies, our country and our Governance. Digitalization started quite a long time ago globally and in our country. We're just at the beginning of a deep transformation to a digitalized society. This rapid digitalization is challenging our fundamental values, constitutional principles, and legal environment. We need to deliberate and find solutions that are sustainable and workable.

The Research Conference will see a lot of Research Scholars, Teachers, Students and Industry professionals who will come together and share their ideas and finding on the theme. This will be a very good platform for deliberations and further research. I congratulate the Research team and would like to see many more such intellectual deliberations at SASMIRA.

Shri. Maganlal H. Doshi
President, SASMIRA



Message from the Vice President

Sasmira's Institute of Commerce and Science (SICS) is organizing its Second International Conference which is a Research based event on "Sustainability in the Digital World". I would like to congratulate the team at SICS for taking this initiative. Digital Innovations have become companions in our daily life. A lot of hopes and expectations go along with this development. However, despite the potential innovations and possibilities of digital development, a lot of uncertainties and open questions remain. While a lot of focus has been on innovation and new technology as well as the "Green through IT" aspect, there was little discussion on what impact this has on supporting sustainable development of the society as a whole. Research on the above topics is very relevant and required in today's world.

I wish the Conference leads to a lot of deliberations and throws up intellectually studying body of information, research and learning for the students and the researchers. I wish the Research Team all the best.

Shri. Mihir R Mehta
Vice-President, SASMIRA



Message from the Executive Director

SASMIRA has always aimed at providing intellectual platforms for the best quality of education and research encompassing all the sub domains of industry. SICS (Sasmira's Institute Commerce & Science) is organising its Second International Conference on "Sustainability in the Digital World". The main objective of which is to provide a platform to research scholars, faculties, students and Industry professionals to ponder over Digitalization and Sustainability in varied fields.

I am sure there will be a great gathering of intellectuals who will meet and share a vast body of knowledge which will give rise to several fruitful discussions and further research.

Dr. U.K. Gangopadhyay
Executive Director, SASMIRA



Message from the Principal

Sasmira's Institute of Commerce and Science (SICS), affiliated to University of Mumbai, is a young institute with a vast body of work. Since our inception in 2016, we have tried to excel in all forms of intellectual activities be it for the students or faculty. Continuing our tradition, we are organizing our 2nd International Conference on "Sustainability in the Digital World".

Digitalization influences nearly every aspect of our life. The seemingly endless global flow of digital information has revolutionized not only our economy by creating manifold application opportunities. In fact, the Internet of Things, Big Data, and digital innovations embody a megatrend. While this development offers various intriguing opportunities, it also includes manifold serious challenges. Besides data security and property rights, one of the biggest questions to answer is whether we can shape a sustainable digitalization.

I am sure that there will be high level of deliberation on the theme, and there will be learning for all who are part of this Conference. We are pleased that several research scholars, teachers, students and industry professionals have shown interest in our conference and contributed to the same.

I am thankful to each of them for taking interest in the conference and helping in our mission of intellectual development

Dr. Ritu Bhattacharyya
Principal, SICS

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An Empirical Study on Customers' Extensive Usage of Netbanking Facility in Gobichettipalayam, Erode District

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ABSTRACT

Indian economy is moving towards the cash less transaction. The world of cashlessness is possible through digital banking. Subsequently, steps towards demonetization of the economy has resulted in tremendous growth in digital transactions in India. The government has encouraged more transparency in transactions and increased internet facilities towards empowering the country's economy. The government's focus on cashless transactions and globalization has forced to adopt digital banking, but, there still is apprehensions on the users. This study focuses on customer's perceptive on adaptability to these revolutionary changes in banking. A primary survey was conducted using a structured questionnaire on the 100 respondents in Coimbatore, district in Tamil Nadu. The collected data through the questionnaire were analyzed statistically by using chi square technique. The results indicate that the motivations for adopting digital banking have association with income levels of the consumer usage of digital banking. The attitude towards the banks' digital usage was mainly determined by easy usage, time saving, banking services, the reliability and security and safety of transaction accounted 68 percent. The study finally analyses the satisfaction level of the consumers using digital banking services. The main factors which determine customer satisfaction in digital banking are safety, accessibility, risk and safety level, easy reach of service, amenable service. There is a significant relationship among customer experience, satisfaction and loyalty, which is related to banking performance. The study establishes the fact that customers are in the process of getting accustomed with digital banking and that despite all the challenges, their perception towards digitalization is fast changing.

Keywords: Customers' Perception, Digital Banking, Adaptability, usage, Consumer motivations, Customers' satisfaction.

INTRODUCTION

Digitalisation of banking services is a move towards providing banking services online which offers a lot of advantages to the banks involved as well as to its customers. The shift from traditional to digital banking is, to an extent, measured as the degree of civilisation.

Financial liberalisation and technological revolution have allowed the developments of new and more efficient delivery and processing channels as well as more innovative products and services in banking industry. Many banks, today, have digitalized their services and have offered more convenience to their customers in accessing them. Customer retention and satisfaction have been their focus, of late. The acceptance of online has become challenging in rural part of the country where people need awareness and need to be more educated in availing the facilities.

Recognition to electronic transactions is provided by the Government of India as per its Information Technology Act, 2000. The Reserve Bank of India regulates and supervises all the transactions put through, electronically. The RBI has also issued its guiding principles with regard to risk and exercised control on the computer and telecommunication system.

Jackfen S and Nattika (2016), bankers consider 'minimizes inconvenience', 'minimizes cost of transactions' and 'time saving' to be important benefits and 'chances of government access', 'chances

of fraud' and 'lack of information security' to be vital risks associated with electronic banking. Banking industry is also one of the influenced industries adopting technologies which are helpful in providing better services to customers. Quality of service is improved by using technological innovations and has been made cost effective. But, however, customers' adoption of these facilities is still posing to be a challenge in such rural areas.

Many studies focused on customer preferences of specific banks have proved that they go in for attributes like ease of banking, facilities offered by the banks, reputation of the bank and their interest rates. Customers, today, do not prefer physically going to the banks and availing their services or facilities. They prefer handiness. Hence, they prefer banking from home or using digital banking services offered by their banks.

The service-quality attributes that the Internet banks must offer to induce consumers to switch to online transactions and keep using them are perceived usefulness, ease of use, reliability, responsiveness, security, and continuous improvement.

REVIEW OF LITERATURE

Sathye (1999) in a study attempted to observe the factors which may affect the adaptation and usage of Internet banking by customers in Australia and found that's absence of awareness and concerns about security of information were the prime reasons coming in the way of adaptation to Internet Banking among the customers. He recommended ways to overcome the said obstacles and said that distribution/delivery of financial services should be made part of wholesome customer service strategy.

Tan and Teo (2000) in their research analysed the factors influencing the adoption of Internet Banking by the users in Singapore using Theory of Diffusion Model (Rogers, 1983) and the Theory of Planned behaviour (Ajzen, 1985). The research study aimed at analysing the factors like social norms and perceived behaviour control influencing the adoption and use of internet banking. They concluded that attitudinal and perceived behaviour control factors were more as compared to social influence factors that affected them from adopting internet banking. The users had perceived it to be risky to use internet banking but their confidence in the government's support helped them overcome this fear and adopt internet banking.

Suganthi, Balachandher, & Balachandran (2001) in their study in understanding the factors influencing adoption of internet banking in Malaysia, found that convenience, ease and cost of accessibility were most influencing factors for adoption of internet banking services. They recommended that awareness among the consumers be increased by conducting campaigns for the same.

OBJECTIVE OF THE STUDY

The objectives of the current study are –

1. To ascertain the perception of digital banking in rural areas of Erode district
2. To assess the factors influencing the customers to adopt digital banking.
3. To ascertain the level of satisfaction of customers on digital banking.

METHODOLOGY INVOLVED

The Study: Period of the study was from May 2019 to December 2019. The study comprised of different malls, university students, business people of Gobichettypalayam, Erode district in Tamilnadu.

Secondary: M.Phil / PhD Thesis, Journals and other periodicals.

Sample and Design: The study is designed to find the factors contributing to the customer adoptability and usage regarding net banking with regard to their services provided by their respective banks. 100 banking customers of various banks were surveyed. The respondents belonged to the age group of 18 to 60 years. Demographic and socio-economic factors like age, gender, occupation and income were considered to be independent variables.

Tool for Data Collection: An interview schedule was administered to banking customers residing in Gobichettipalayam. Snow ball sampling technique was adopted for the purpose

Tools for Data Analysis: Data has been analyzed using statistical packages. Frequency analysis was used to analyse the demographic profile of the respondents. Hypothesis testing was done using Chi-Squared test for socio-economic and banking habits at 5% significance level. Factor analysis was conducted to reduce 27 statements into factors five factors. Factor analysis was adopted to capture the banking services mix on customer satisfaction in adopting the digital tool.. Factor analysis used to analyse the data based on PCA with varimax rotation.

Bartlett’s test of sphericity and Kaiser-Olkin (KMO) measure were used to find out the suitability of data set for factor analysis. The values that were high between 0.5 and 1 confirmed their suitability for factor analysis, and any value lower than 0.5 showed their inappropriateness for the analysis.

Impact of Demographic Factors on Customer Satisfaction

RESULTS AND DISCUSSIONS

I. SOCIO ECONOMIC AND DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Figure 1: Age wise/ gender-wise classification of the respondents

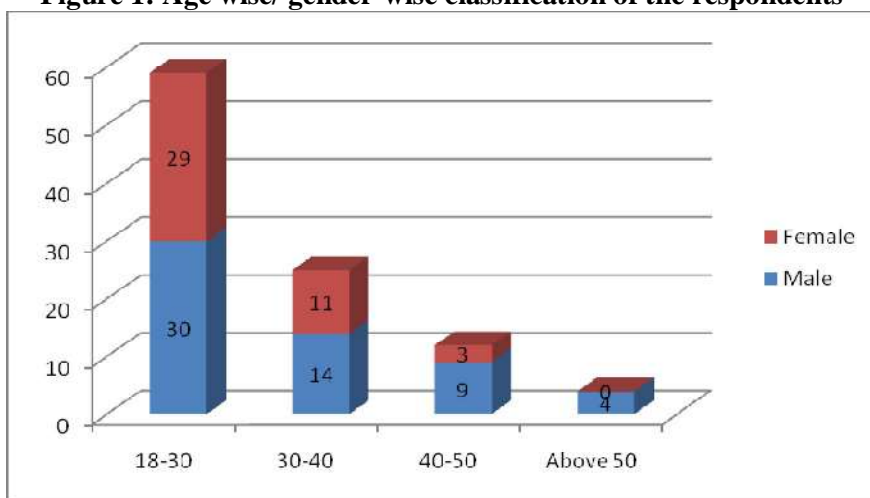
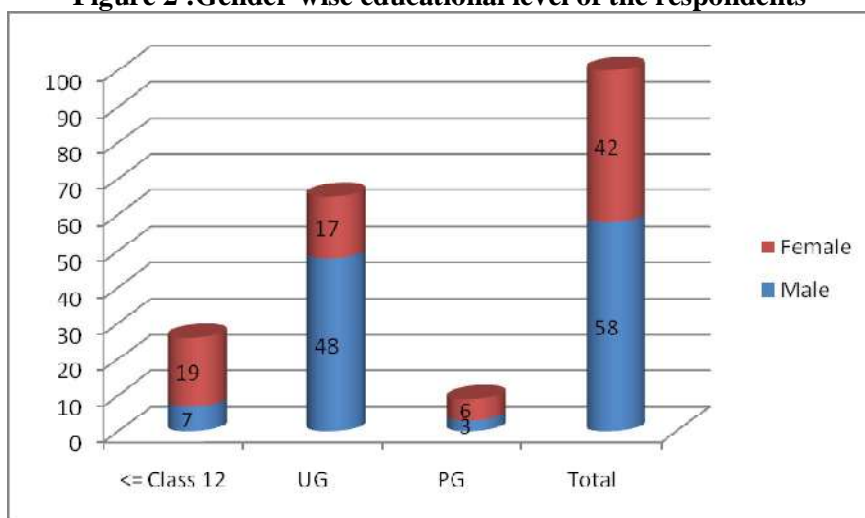


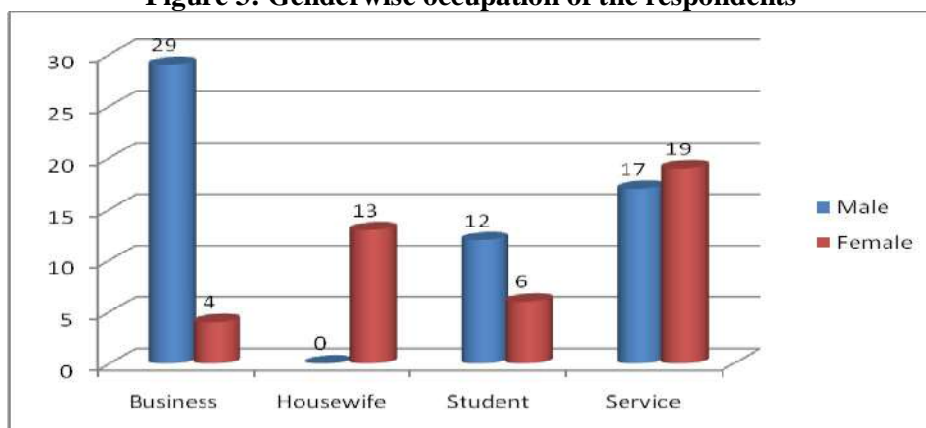
Figure 1 shows that, from among the respondents using digitalised banking services, a majority (59 per cent) turned out to be males in the age group of 18-30 while, the older group constituted only 4 percent and none among them were female.

Figure 2 :Gender-wise educational level of the respondents



It can be seen from the above figure that most of the male respondents (48 percent) are graduates.

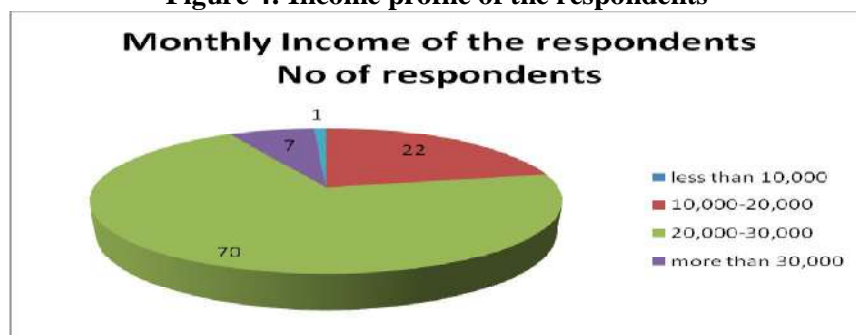
Figure 3: Genderwise occupation of the respondents



A Majority of the male respondents (29 percent) had their own business while 19 percent of the female respondents were working.

II.SOCIO ECONOMIC PROFILE AND BANKING HABITS OF THE RESPONDENTS

Figure 4: Income profile of the respondents



The above figure shows that over 70 percent of the respondents earned between rs 20,00 andRs 30,000 and only one of the respondents earned above rs 30,000. Eighty three respondents saved their incomes and were sixty seven percent of them held savings bank account while twenty five percent of them held both saving and current account. Almost all of them used mobile banking. Majority (89 per cent) of the respondents have been using mobile banking between one and three years. It should also be noted that 55 percent of the respondents held their accounts with reputed public sector banks.

HYPOTHESES TESTING USING CHI-SQUARE ANALYSIS

H0:There is no significant impact of customers income on usage of net banking.

Table 1 Age- wise usage of net banking

Income	Usage of Net banking		Total	Chi-Square	Df	P value
	Yes	No				
Below2500	2	0	2	13.39	6	.05
2500-5000	20	0	20			
5000-10000	42	1	43			
10000-15000	27	0	27			
15000-20000	4	0	4			
25000-30000	3	0	3			
Above 30000	1	0	1			
Total	99	1	100			

From the above table it is observed that $p < 0.05$, income plays an important role in the adoption of digital usage and proved that this is positively correlated with the income level of the respondent.

H0:There is no significant impact of customers education on usage of digital banking.

Table 2 Educational profile of the respondents using net banking

Income	Usage of net banking		Total	Chi-Square	Df	P value
	Yes	No				
High school	10	1	2	8.173	2	0.017
UG	61	0	20			
PG	28	0	43			
Total	99	1	27			

From the above table it is observed that $p < 0.05$, education plays an essential role in the adoption of digital usage of the respondent. More Educated people are expected to have more favorable attitudes towards adoption of innovations. Therefore the null hypothesis is rejected.

H0: There is no significant impact of customers age on usage of digital banking.

Table 3 Income profile of the respondents using net banking

Income (in Rs 000)	Usage of digital anking		Total	Chi-Square	Df	P value
	Yes	No				
18-30	59	0	59	13.030	3	0.03
30-40	24	1	25			
40-50	12	0	12			
ABOVE 50	4	0	4			
Total	99	1	100			

From the above table it is observed that $p < 0.05$, age plays an significant role in the adoption of digital usage level of the respondent.

H0: There is no significant impact of customers education on the frequency of usage of digital banking.

Table 4 Educational profile and their usage of net banking

Education	Frequently do you use net bank						Total	Chi-Square	Df	P value
	Daily-once	Daily Several times	Weekly-Once	Weeklys everal times	Monthly -once					
High school	6	2	3	0	0	11	23.507	8	.006	
UG	22	13	25	0	1	61				
PG	3	5	19	1	0	28				
Total	31	20	47	1	1	100				

From the above table it is observed that $p < 0.05$, education also plays an significant role in the frquency of digital usage and proved that this is positively correlated with level of the respondent.

EFFECTS OF DEMOGRAPHIC FACTORS ON CUSTOMER SATISFACTION

III. FACTORS INFLUENCING THE RESPONDENTS TO USE DIGITAL BANKING SERVICES

All the respondents used digital banking services. They all used mobile banking which confirms their awareness. From among the respondents surveyed, a majority(54 per cent) of the respondents are aware about mobile banking through their friends and relatives and a significant amount of them (48 percent) came to know about mobile mobile banking from the personnels of the banks with which they hold their accounts.

IV. CUSTOMER PERCEPTION ABOUT DIGITAL BANKING

1.Popularity of digital banking

Table 5: Reasons to use digital using on Convenience factor

Reasons for preferring mobile banking	Number of respondents
24*7 Access	89
Time saving	83
Prompt service	67
Easy and quick transactions	72
Highly reliable	69
Easy to learn and use	81

Table 6 Reliability Statistics for Convenience factor

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.649	.692	6

Table 6 shows us the reliability statistics of convenience factor. It can be said that based on the six factors of convenience, they been contributing the popularity of mobile banking the below listed are the sub-factors under convenience factor.

Table 7 Inter Correlation Matrix for Convenience factor

Inter-Item Correlation Matrix						
	24*7 access	Time saving	Prompt service	Easy and quick transactions	Highly reliable	Easy to learn and use
24*7 access	1.000	.777	.415	.474	.157	.351
Time saving	.777	1.000	.238	.372	-.011	.218
Prompt service	.415	.238	1.000	.092	.121	.197
Easy and quick transactions	.474	.372	.092	1.000	.227	.254
Highly reliable	.157	-.011	.121	.227	1.000	.205
Easy to learn and use	81	.218	.197	.254	.205	1.000

Over 80 percent of the respondents prefer using digital banking as it gives them 24*7 access, time saving and its easy to learn and use the app. While over 60 percent of them opined that they use digital banking because of its prompt service, ease of transactions, high reliability and simple service.

Cronbach's reliability show the factors responsible for the popularity of digital banking. These six factors have contributed greatly to the popularity of digital banking among the respondents of the are.

Table 8 depicts the problems or concerns of digital opined by the respondents as perceived by them

Table 8 Reliability Statistics for Accessibility factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.710	.716	4

Table 8 shows the reliability test for accessibility factors put together. From the above table, it can be said that accessibility is one of the factors which has contributed to the popularity of mobile banking. The below given are the sub-factors of accessibility.

Table-9 Accessibility factors

Concerns of the users	No of respondents
Safety of personal information and hacking	76
Worried about security IN transaction	77

Digital battery consumption of the apps	70
Customer queries getting resolved promptly	69

Over 70 percent of the respondents were worried about their safety and personal information getting leaked, how secure would their transactions be, avoiding getting hacked and disconnection of network or the specific transaction while transacting. They were also concerned about the receptivity of the services and how soon their queries would be addressed by the customer care executives.

Their satisfaction parameters could be measured by frequency of usage. About 51 percent of them put through banking transactions using their mobile phones everyday. While over forty per cent of them used it several times a day and they opine that ease of use, time saving factor and user friendly are the aspect that made them use net banking extensively.

Table 11 Reliability Statistics for Risk factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.663	.675	2

Table 11 shows the reliability statistics for risk factors. This confirms the risks, as opined the respondents are prevalent in net banking.

The reliability statistics table

Table 10 Inter-Item Correlation Matrix for Risk factors

Factors	Safety of personal information and Hacking	Worried about security IN transaction	Digital battery consumption of the apps	Customer queries getting resolved promptly
Safety of personal information and hacking	1.000	.684	.376	.374
Worried about security IN transaction	.684	1.000	.238	.272
Digital battery consumption of the apps	.376	.238	1.000	.374
Customer queries getting resolved promptly	.374	.272	.374	1.000

Table 12 Reliability Statistics for Receptive factor

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.747	.731	4

Table 13 Item-Total Statistics for Receptive factor

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Safety of personal information and hacking	11.3700	2.417	.654	.623	.620
Worried about security IN transaction	11.3600	2.374	.717	.699	.583

Digital battery consumption of the apps	11.6400	2.293	.652	.463	.619
Customer queries getting resolved promptly	12.0400	3.635	.182	.096	.846

Table 14 Reliability Statistics for availability

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.744	.744	7

Table 15 Item-Total Statistics for availability

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A high number of softwares	20.4600	5.705	.491	.356	.706
Wide range of anytime, anywhere access to financial services	20.4600	5.867	.484	.449	.708
Bank providing information /data	20.4700	5.646	.615	.457	.677
Banks provides material associated with its services	20.9000	6.394	.367	.219	.733
Address security concerns by outlining security measures	21.0600	6.340	.397	.194	.727
Front-line staff in promotion of mobile banking	21.1200	6.187	.493	.292	.707
Websites that allow an easy visualization	21.0300	6.474	.369	.210	.732

Table 16 CRONBACH'S RELIABILITY TEST

S.No	Groups	Cronbach's Alpha
1	Convenience	0.649
2	Accessibility	0.710
3	Risk	0.663
4	Receptive	0.747
5	Available	0.744

Table 16 depicts that customer satisfaction is based on the above four factors as the Cronbach's Alpha is above 65% for Convenience, Accessibility, Risk, Receptive, Available.

Figure -5 path diagram for consumer usage of net banking

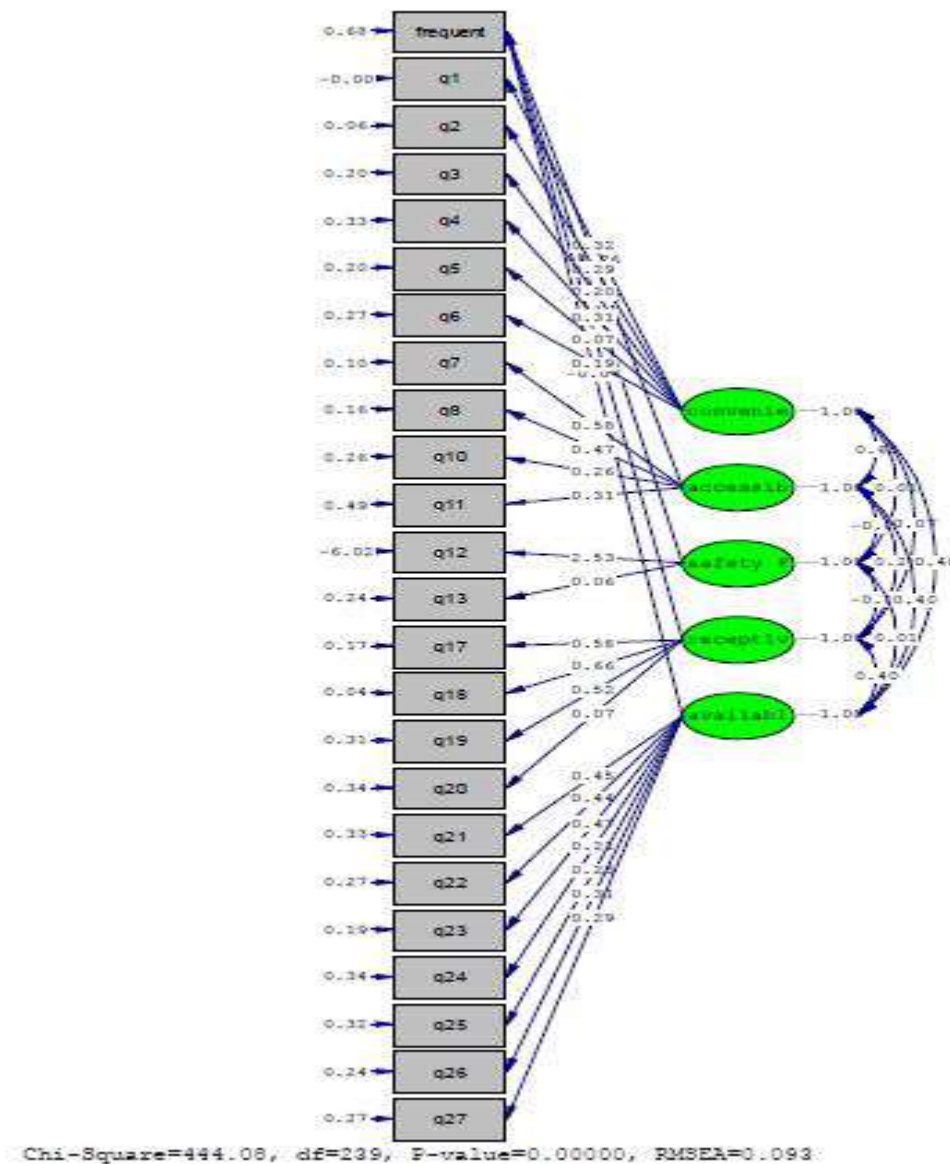


Table -17 Chi-Square Test of Model Fit

Value	444.08
Degrees of Freedom	239
P-Value	0.00
χ^2 /df	1.86

The null hypothesis is that there is no difference between the patterns observed in these data and the model specified. So, unlike many cases where you are hoping to reject the null hypothesis, in this case the investigators certainly do NOT want to reject the hypothesis that this is a good fit. As you can see from my chi-square value above, this model is acceptable.

The Chi-Square Test shows the model fit and p value shows its significance level, Although the seems good, it is also appropriate to check the value of Chi-Square divided by df (Wheaton, Muthen, Alwin and Summers,1977) as the Chi-Square statistic is particularly sensitive to sample sizes (that is, the probability of model rejection increases with increasing sample size, even if the model is minimally false), and hence chi-square divided by degrees of freedom is suggested as a better fit metric (Bentler

and Bonnett, 1980). It is recommended that this metric not exceed five for models with good fit (Bentler, 1989). For the current CFA model, as shown in above table Chi-Square is 1.86, suggesting acceptable model fit.

Another measure of goodness of fit is the root mean square error of approximation (RMSEA).

Table-18 RMSEA Test of Model Fit

Estimate	0.093	
90 Percent C.I.	0.079	0.11
Probability RMSEA	< 0.05	0.00

An acceptable model should have an RMSEA less than .05. You can see above that the estimate for RMSEA is .093, the 90 percent confidence interval is 0.11, .079 and the probability that the population RMSEA is less than .05. Again, consistent with our chi-square, the model appears to fit. This can be interpreted as meaning that the model explains the correlation to within an average error of 0.093 (Hu and Bentler, 1990). Hence the model shows an overall acceptable fit. The model is an over identified model.

Table-19 Inter Construct Correlation Matrix

	Convenience	Accessibility	Risk	Receptive	Available
Convenience	1				
Accessibility	0.63	1			
Risk	0.01	0	1		
Receptive	0.07	0.26	-0.05	1	
Available	0.48	0.4	0.01	0.4	1

Table 19 depicts the correlation matrix of independent the hypotheses is tested relating to the pattern of causal structure linking several variables that bear on the construct of usage intention of internet banking. Usage Intention is influenced by the Convenience, Accessibility, Risk, Receptive and Available on Internet Banking.

Table-20

Hypotheses	β	Supported/ not supported
Convenience related to the usage of net banking	-0.26*	supported
Accessibility related to the usage of net banking	-0.022*	supported
Risk related to the usage of net banking	0.42*	supported
Receptive related to the usage of net banking	-0.036*	supported
Available related to the usage of net banking	0.68*	supported

*Significant at 0.01 level

All hypotheses are accepted. Consumer intention to use internet banking is influenced by Convenience ($\beta=- 0.26$), Accessibility ($\beta=0.22$), Risk ($\beta=0.42$), Receptive ($\beta=0.036$), and Available ($\beta=0.68$).

Hypotheses	Latent construct	β	Supported/ not supported
24h Access related to the usage of net banking	Convenience	0.32*	supported
Time saving related to the usage of net banking	Convenience	0.29*	supported
prompt service related to the usage of net banking	Convenience	0.20*	supported

in speedy retrieval of account information related to the usage of net banking	Convenience	0.31*	supported
services ;easy and quick related to the usage of net banking	Convenience	0.071*	supported
Reliable related to the usage of net banking	Convenience	0.19*	supported
does not need much training related to the usage of net banking	Accessibility	0.58*	supported
not require a mental effort related to the usage of net banking	Accessibility	0.47*	supported
Learning IS easy related to the usage of net banking	Accessibility	0.26*	supported
Simpler/clearer service related to the usage of net banking	Accessibility	0.31*	supported
Free of unsafe personal information related to the usage of net banking	Risk	2.53*	supported
Worried about security IN transaction related to the usage of net banking	Risk	0.063*	supported
Mobile banking inquiries receive responses within the stipulated turnaround time related to the usage of net banking	Receptive	0.58*	supported
Employees are knowledgeable to queries related to the usage of net banking	Receptive	0.66*	supported
customer concerns v related to the usage of net banking	Receptive	0.52*	supported
flexible to customers' need related to the usage of net banking	Receptive	0.067*	supported
a high number of software's related to the usage of net banking	Receptive	0.45*	supported
wide range of anytime, anywhere access to financial services related to the usage of net banking	Available	0.44*	supported
Bank providing information /data related to the usage of net banking	Available	0.47*	supported
Banks provides material associated with its services related to the usage of net banking	Available	0.21*	supported
Address security concerns by outlining security measures related to the usage of net banking	Available	0.23*	supported
Front-line staff in promotion of mobile banking. related to the usage of net banking	Available	0.31*	supported
Websites that allow an easy visualization related to the usage of net banking	Available	0.29*	supported

*Significant at 0.01 level

All hypotheses are accepted. Consumer intention to use internet banking is influenced by Convenience factor which contains 24h Accessibility ($\beta=0.32$), Time saving ($\beta=0.29$), prompt service ($\beta= 0.20$), speedy retrieval of account information services ($\beta=0.31$),;easy and quick ($\beta=0.071$) and reliable ($\beta=0.19$). In according to accessibility is influenced by not much training ($\beta=0.58$), not require a mental effort ($\beta=0.47$), easy learning ($\beta=0.26$), and Simpler/clearer service ($\beta=0.31$). Under risk factors safe personel information ($\beta= 2.53$),security in transaction ($\beta=0.063$). Under Receptive factor Mobile banking inquiries receive responses within the stipulated turnaround time ($\beta= 0.58$), Employees are knowledgeable to queries ($\beta=0.66$), customer concerns ($\beta=0.52$) and flexible to customers' need ($\beta=0.067$). In respective to availability factor, a high number of software's ($\beta=0.45$), wide range of anytime, anywhere access to financial services ($\beta=0.44$), Bank providing information /data ($\beta=0.47$), Banks provides material associated with its services ($\beta=0.21$), Address security concerns by

outlining security measures ($\beta= 0.23$), Front-line staff in promotion of mobile banking. ($\beta= 0.31$) and Websites that allow an easy visualization ($\beta=.29$).

To sum up, the research were carried to have better understanding on the movitational factor that influence the usage of net banking. Here we classified the factors under five factors say

convenience, accessibility, risk, receptive and availablility which helps to judge the intensity to adopt net banking were emprically validated with model fit for internet banking acceptance was successfully verified.

CONCLUSION

The empirical results of the current study show that there is a direct relationship between internet banking service quality, customer perception and satisfaction of the customers in a semi-urban area (Gobichettipalayam, Erode District) dimensions and customer satisfaction in the banking industry. An understanding of the factors, revealed in the study, though there were security concerns, the advantages were more prominent than the drawbacks. This has led to the popularity of usage of net banking among the customers of banks in Gobichettipalayam.

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Artificial Intelligence: An Enormous Opportunity for Better India

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ABSTRACT

From the tag of being a third world country for decades to the becoming one of the fastest growing economy in the world, the credit goes to the government for changing the future of the nation with its various policies and keeping pace with ever improving technology around the world. Technology is turning the people's lives and also giving them an opportunity to match every stride with the world. Digitalization has been the driving force for any technology available around us. From the mobile phones to satellites and Mars missions digitalization has been at the core. We are entering in the era of Artificial Intelligence (AI) where in our lives are going to undergo a sea change in terms of our perception towards day to day chores. This paper is trying to understand the sustainability and the effects of AI and its impact on social, economic aspect in India.

Keyword: Digitalization, Artificial Intelligence.

INTRODUCTION

According to Britannica, Artificial Intelligence (AI) is defined 'as the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings'. The journey of AI began in 1940's with the invention of computers and gathered prominence in 1950's. One of the first demonstrations of AI was based on the feedback theory by Norbert Wiener (1948) who demonstrated a thermostat which would change the temperature of the room according to the temperature of the surrounding on its own. It was then that the analogy between human and the computers were observed by various scientists. The term was coined by John Carthy, who is also known as the father of AI at Dartmouth conference (1956), New Hampshire. The first AI program was developed by Newell and Simpson (1955) (1). Since then AI has come a long way opening new avenue in various fields.

OBJECTIVE OF THE STUDY

1. To understand the global overview in the field of AI.
2. To understand importance of AI in the era of digitalization.
3. To know the possible advantages and hindrances of AI.
4. To know the future prospects of AI.
5. To understand the applicability of AI.

RESEARCH METHODOLOGY

Considering the objective of the research article, this paper is descriptive in nature and requires secondary data which is collected from various internet, research articles, journals, and government websites.

SCOPE OF THE STUDY

In the era of free economy every country has chance to become superpower by superseding the overall scarcity of geographical, social, economic constraints. Digitalisation is the one of the major route ahead. This is possible by nurturing scientific and technical attitude among the people. This paper is trying to see the overall positive, negative as well as future prospects of digitalisation particularly through Artificial intelligence (AI). Though the research article considering AI environment in India, one can generalise the notion to any country involved in the progressive digitalisation.

APPLICATIONS OF AI

1. **Medical Healthcare:** AI is effectively being used in managing database, treatment design, digital consultation, medication management, drug creation and many more (2).
2. **Education:** AI is used in preparing smart content, simplifying administrative task, personalized and global learning (3).
3. **Agriculture:** AI is applied to analyze farm data, improve harvest quality and accuracy, and tackle labour challenge giving a new dimension for traditional farming (4).
4. **Banking:** AI tools are used to create chat box personal assistants, effective mobile apps, enhancing customer services, and handling risk managements, prevent frauds and many more (5).
5. **Defence and Security:** In recent years AI is being used in a big way in defence in Warfare Platforms, Cyber security, logistics and transportation, target recognition, battlefield healthcare and simulations (6). Airports are using face recognition technologies and high-tech scanners embedded with AI at security checks to enhance security and smooth functioning during peak hours.
6. **Traffic Management:** AI is used in traffic control, maintaining air traffic, rail traffic, thus reducing the traffic congestion, enhancing security, improve efficiency and save precious life of commuters (7).
7. AI intelligence is used in manufacturing, civil engineering, weather forecast, and supply chain management, autonomous vehicles, games, Robotics, auto industry, data mining and many more.

ADVANTAGES OF AI:

1. Use of AI assures almost error free, precise and accurate results.
2. More efficient and reliable as the machines can serve for longer durations without breaks and unnecessary leaves.
3. Better Simulations and remote controlled warfare reducing loss of lives.
4. Unmatched digital assistance.
5. High-risk explorations and experiments can be undertaken without risking human lives. Robots are being sent to moon, Mars equipped with AI for research.

RISKS INVOLVED:

1. Some experts have apprehensions of AI could outsmart humans someday as reflected in Hollywood movie I-Robot. This could lead to annihilation of mankind.
2. It may replace humans in almost all jobs leading to huge employment crisis.
3. Humans are a wonderful creation of God possessing the ability to be multitasking. With AI involving in all walks of life, humans may lose its capacity to be creative. As we already see around with the advancement of smart phones children are glued to it and rather spend more screen time than playing. This has negative implications on their mind and health.
4. AI does not have human touch and feelings. It can only follow our commands.
5. The power of AI can be misused if it falls in wrong hands. Like nuclear bombs AI can be misused to cause harm to humans. So there is always a high level of risk involved.

Almost every industry is now venturing into AI and more and more application are being generated and efficiently applied. AI is already contributing immensely to GDP's to many of the world's largest economies. It has a great potential to spawn employment in the near future and could be a probable solution to the ever increasing problem of population.

AI: GLOBAL OVERVIEW

Governments of many developed countries like USA, Japan and United Kingdom have already laid out strategic plans and policies to gear up with the advancement in AI and delve the role of AI in social,

economic, security and fairness issues. European Union is catching up fast with launch of programs like ‘SPARC’. Countries like South Korea, UAE, Singapore and Canada are evolving in the field of AI (8).

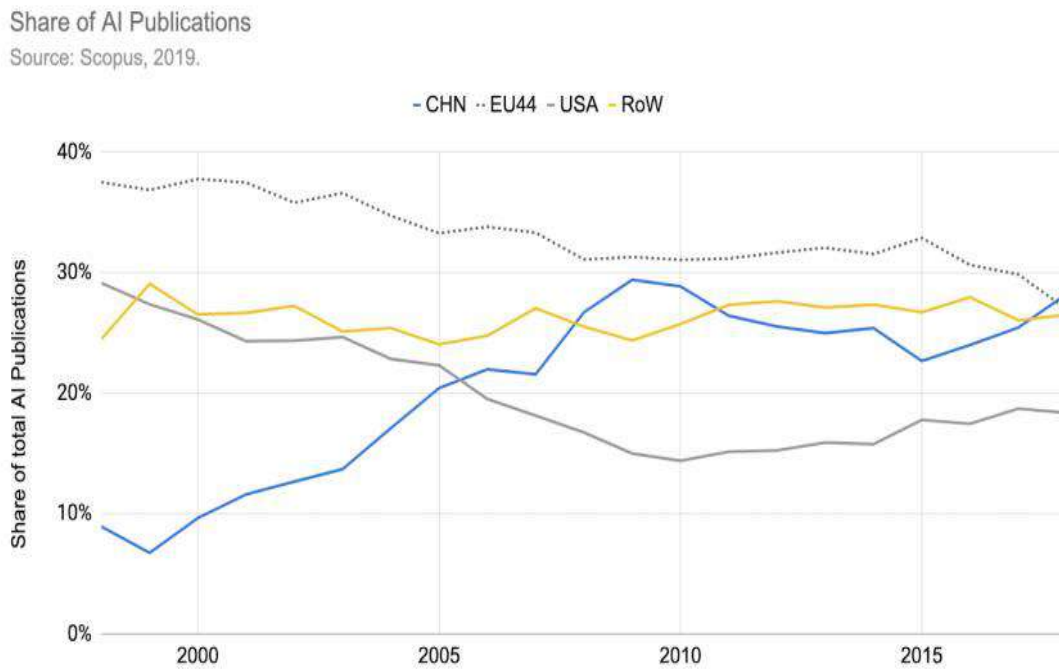


Figure 1: https://hai.stanford.edu/sites/g/files/sbiybj10986/f/ai_index_2019_report.pdf

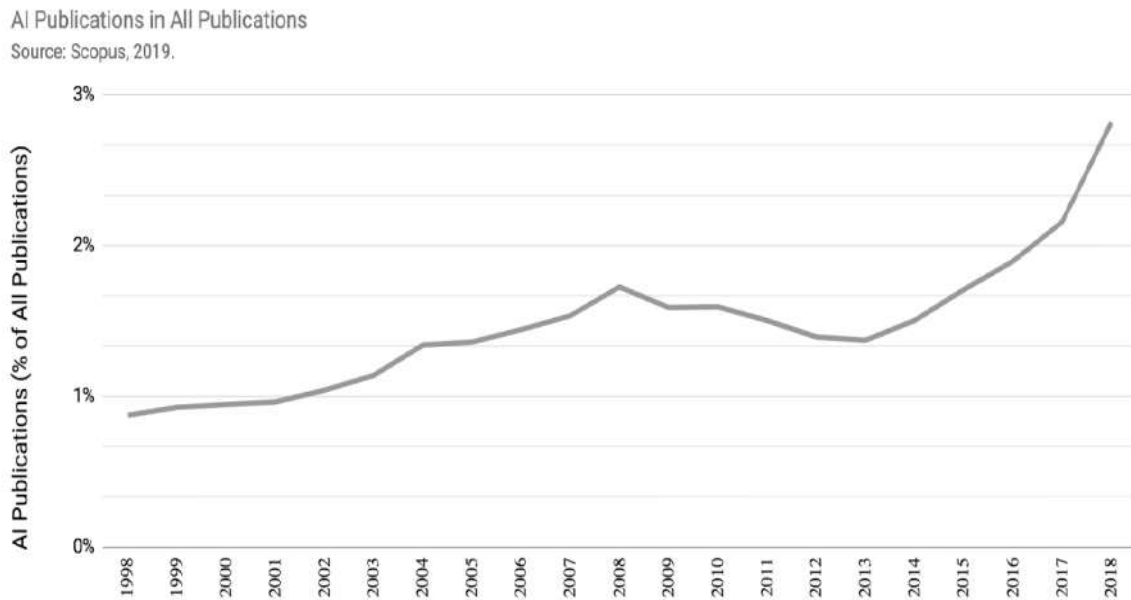


Figure 2 https://hai.stanford.edu/sites/g/files/sbiybj10986/f/ai_index_2019_report.pdf

As per the reports of AI index report of 2019, China publishes as many journals and research papers as the whole of Europe, whereas the field-weighted citation impact of US is 50% higher than that of China (9). According to Forbes, number of patents from 2013 to 2017 has grown over 5 times with most of applicants from USA, China and South Korea (10).

Between 1998 and 2018 there has been a 300% rise in papers published on AI. In 2018 Chinese government published nearly three times more paper than its corporations (9).

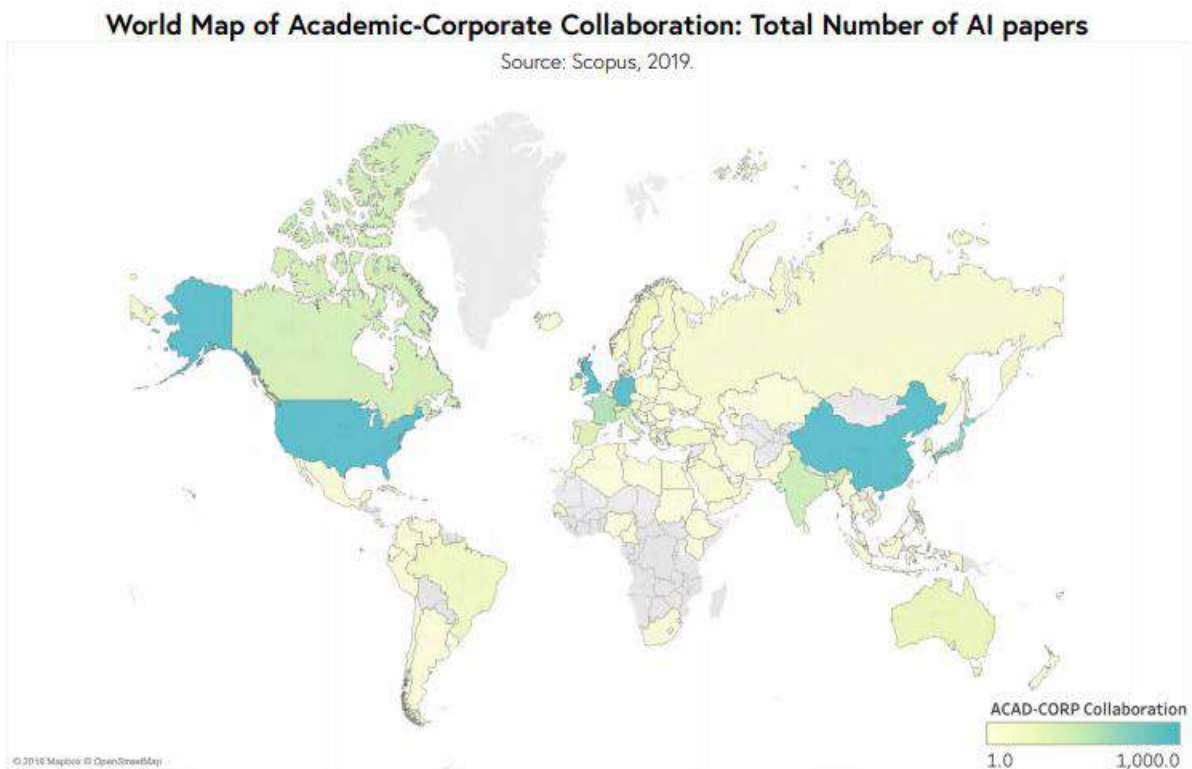


Figure 3 https://hai.stanford.edu/sites/g/files/sbiybj10986/f/ai_index_2019_report.pdf

Academic corporate collaboration trend is on steady rise around the world. Such type of collaborations is popular in countries like USA, China, Japan, UK, France and Germany.

Total Private Investment in AI (in billions of nominal USD)

Source: CAPIQ, Crunchbase, Quid, 2019.

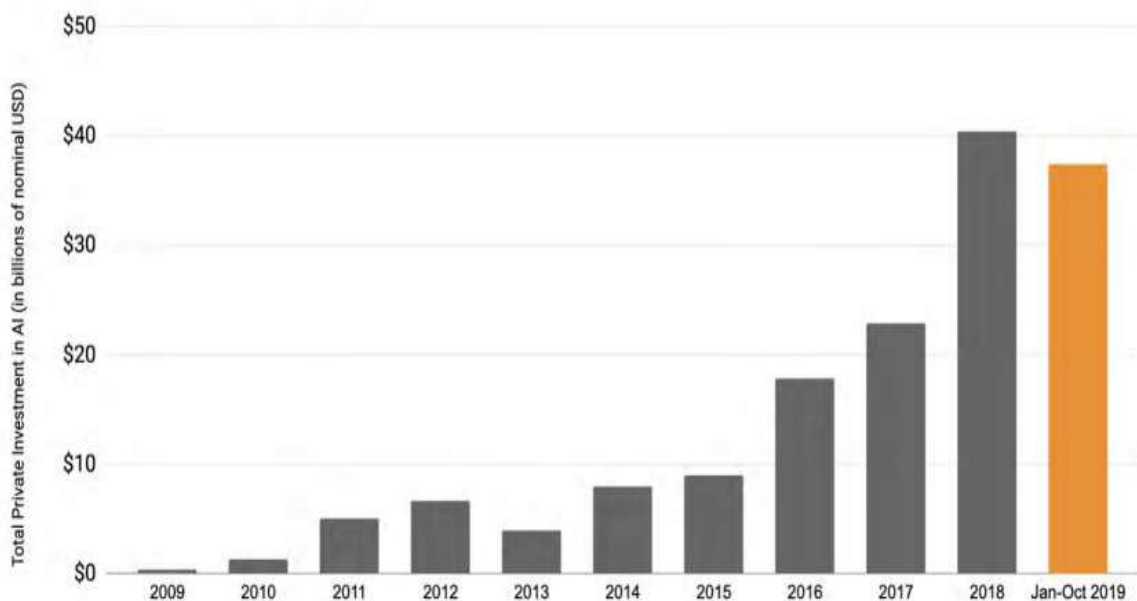


Figure 4 https://hai.stanford.edu/sites/g/files/sbiybj10986/f/ai_index_2019_report.pdf

Economy is the most important aspect of any country in the age of globalisation. AI has the capacity to improve production, reduce wastage of resources thus generating wealth for a nation. More and more money is being pumped in the area of Research and development of AI in various fields.

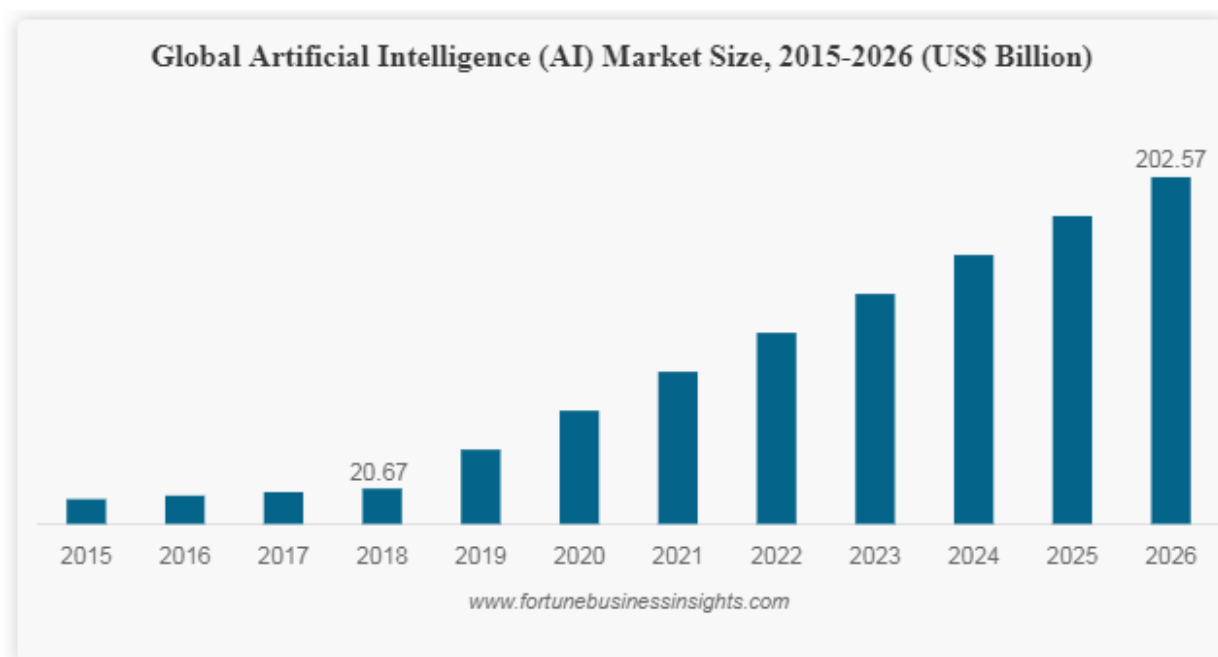


Figure 5 <https://www.fortunebusinessinsights.com/industry-reports/artificial-intelligence-market-100114>

According to Reports of PwC AI could contribute \$15.9 trillion by end of 2030 (11) making it the most lucrative commercial opportunity.

NEED AI IN INDIA

India being the second most populous country in the world has no real significance presence in the field of AI at the global stage. In 2019, the present government has set a goal of \$5 trillion GDP target as against \$2.97 trillion (12) by 2025. This affirmative goal has been hampered by the recent economic slowdown due to decreasing demand and rising oil prices. Artificial intelligence could solve this problem partially through its potential and various applications. Though Indians contribute a lot to AI at the international stage but it is mostly from those who are settled abroad. This is actually a brain drain situation for us where our country is losing talented researchers and scientists for various reasons.

ROLE OF AI IN CREATING A NEW INDIA

1. **Employment:** According to recent report of World Economic Forum, AI itself has the potential to create 58 million jobs by 2022 worldwide (13). This is a very positive indicator and speaks a lot about the job generating potential of AI.
2. **Healthcare:** Medical facilities in rural areas are relatively poor as compared to urban areas. Using AI and other related medical technologies it would be possible for doctors sitting hundreds of kilometres away to treat the patients effectively and accurately. This would revolutionize the healthcare system in India where a doctor can perform operations without being present through robots. This would save life and time of thousands of poor and tribal.
3. **Education:** India has a massive shortage of good and trained teacher especially in the rural areas (14). Integrating AI with courses like MOOC's and SWAYAM portal would give a whole new dimension to teaching and learning process and will have a deep penetration to every corner of the country giving the students of rural areas an equal opportunity. Student will not only be educated but also ready to compete with the students from the urban areas.
4. **Agriculture:** in the year 2019-20 Agriculture GDP dipped by 68.386 crores in just two quarters (15). Due global warming, irregular weather patterns farmers and the Indian economy face crisis. AI can be essential tool in predicting weather changes, soil quality, seed selection and many more thus reducing the probability of failed crops.
5. **Banking:** Banking frauds enervate the nation's economy. RBI's reports states that there has been 70% rise in fraud amount in the 2018-19 (16). Using AI enabled systems and predictive analytics

one can detect fraud more efficiently and prevent it thus protecting the hard earned money of the common man.

6. **Defence:** Modern defence systems integrated with AI are used to make smart bombs, precision guided missile which can minimize the loss of lives of innocents in war and also ensure optimal use of arms saving precious dollars for the nations. Drones and remote controlled security system will ensure minimal loss of lives in the border areas.
7. **Traffic Management:** Traffic jam has incurred losses from four metro cities at a staggering \$22 billion last year (17). AI can permanently solve this issue smart signalling system and automated traffic controls, automated diversions. This will be boon in case of emergencies like fire, building collapse, accidents.
8. India wasted around 16% of its agricultural produce due to lack of efficient cold chain infrastructure (18). Smart supply chain management can efficiently minimize these losses benefitting the farmers and nations economy.

India has taken a giant stride in the field of AI. Indian Government in 2018 has entrusted the NITI Aayog to take up a National Program on Artificial Intelligence including its research and development. Under the umbrella of Digital India which was launched by our Hon'ble Prime Minister Narendra Modi in the year 2015, the government has allocated a substantial amount to the project. NITI Aayog has already tie ups with several leading research institutes and companies to explore and develop various technologies involving AI.

HINDRANCES

1. With a large population and being the one of youngest nation of the world employability for all will pose a challenge
2. Almost 75% of jobs will be skill based. (19).
3. According to the OECD report India has employability rate of about 46.3 which is very low as compared to the size of the population (20).
4. Ensuring sufficient funding from government for further research and development during times of recession.
5. Lack of proper infrastructure for training and research purpose.
6. Lack of awareness among the youth in the field of AI.
7. As per the NITI Aayog report the current Intellectual Property Regime is very displeasing and very ambiguous (21).
8. Lack of space for Data Storage.
9. Dearth of expertise in educational institutes and research centres
10. Lack of security and privacy of the data in terms of regulations

Initiatives taken by the government:

1. To study examine the effect of AI on economic front, Commerce and Industry Department has formed the Task Force.
2. Statement of intent between the NITI Aayog and ABB India has signed to integrate the contemporary developments in AI and the possibility of upgrading the existing technology.
3. Invest India and UAE minister of (AI) has signed MOU for mutual cooperation in the field of AI.
4. For the development and research of AI, Government of India has launched a national programme in 2019 (22).

Initiatives should be taken by the government:

1. Frame policies encouraging AI based industries to foster growth in the digital ecosystem.
2. Start-ups should be encouraged to take up AI based technologies by giving them subsidies.
3. Framing unambiguous Intellectual property policies.
4. Maintaining equilibrium between demand and supply of AI based jobs.
5. Re-skilling employees at various sectoral levels in service sectors.
6. Set-up collaborative institution of global standards for R&D in the field of AI.
7. Encourage young researcher in AI by incentivising their research.
8. Providing basic infrastructure like common cloud facility, High speed internet even the rural level.
9. Improve AI based education at Engineering and other IT related courses.
10. Introduction of AI at a very basic level in school curriculums.

CONCLUSION

In 1990's India was blessed to have the IT revolution where Indian software companies like Infosys, Wipro, Satyam, Rolta and many are more paved the way for new India. These companies proved its mettle at the global stage. These industries solve the problem of employment to a great extent and at the same time contributed immensely to the economic development. Our country has yet another opportunity to repeat history in the field of AI, Deep Learning. Our young generation always has the hunger for learning and this is makes a perfect aura for our country to take giant leap in AI. Progress in AI would ensure a holistic and stupendous growth of the nation and will set the tone for further development of the country. As quoted b J.K. Ensley '*Every blessing has a curse*' Artificial Intelligence too has some apprehensions attached to it. It is up to us as humans to draw a boundary for the betterment of human race.

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Challenges and Privacy concerns of the citizens in Digital and Social media era

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ABSTRACT

In the epoch of technical progression, where everything spins around the “e” ecosphere, digitalization has spread its annexes over all the compasses of life. The gigantic use of digital devices and our mounting reliance on them undoubtedly states that digitalization is the necessity of the hour and has inordinate latent to revolutionize the socio-economic growth restrictions thus, establishing a symbiotic association with all inclusive evolution and sustainable expansion. It has turn out to be that significant instrument which has abridged the operational and procedures in various areas like administration, regulation, planning and operations of the socio-economic sphere by ultimately elevating the superiority of life. This very feature of the digital age grades in sustainable development as when the civilizations are digitally empowered, they are more Cognizant, Coupled, Compliant, Concerted and Contented towards their own evolution and in reappearance they work in a pushbike as responsible capitals for nation’s future projections. This paper therefore intends at showcasing the scope of Digitalization in the existing set-up and its role in serving nations globally accomplish the ideal aim of Wide-ranging Growth by following the path of sustainability. This study is naive by nature and holds pilot studies at present. The Digital India programme is a flagship programme of the Government of India with a apparition to transmute India into a digitally empowered society and acquaintance economy. Digital India is a reverie to certify that government amenities are made available for all citizens electronically by refining online infrastructure and by growing the effectiveness of Internet connectivity with one mission and one target that is to yield nation frontward digitally and economically. Information concealment mentions to the craving of individuals to rheostat or have some influence over data about themselves. Advances in information technology have elevated worries about information privacy and its influences and have inspired Information Systems researchers to explore information privacy issues, including technical solutions to talk these concerns. In this paper, we notify researchers about the existing state of information privacy and research in IS through a perilous analysis of the IS literature that deliberates information privacy as a key construct. The review of the literature divulges that information privacy is a multilevel concept, but rarely studied as such. Privacy resonances to be a foremost global concern and must be taken seriously.

Keywords: Digital India, Digitalization, Comprehensive growth, Socio-economic, Sustainability, Privacy, Social media, laws.

INTRODUCTION

Digital India was tossed by the Prime Minister of India on 2nd July 2015 with well-defined objective of connecting rural extents with high-speed Internet networks and cultivating digital literacy. The vision of Digital India is comprehensive growth in many extents such as electronic services, products, manufacturing and job opportunities etc. Digital India aims to afford the much desired focus on the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Facilities, Information for All, Electronics Engineering, IT for Careers and Early Harvest Programmes. Each of these parts is a intricate program in itself and cuts crosswise multiple Ministries and Departments. Digital India is to be executed by the whole Government with total coordination being thru by the Department of Electronics and Information Technology.

On presence transformative, the idea is to comprehend IT (Indian Talent) + IT (Information Technology) = IT (India Tomorrow). The program naps composed a large number of opinions and philosophies into a sole, widespread vision, and assembly the mission transformative in totality. The

Digital India Program will tug together numerous current schemes which would be re-focused, reorganized and applied in a harmonized manner for their chief transformative impact.

As per the World Bank report, a 10% surge in mobile and broadband diffusion upsurges the per capita GDP by 0.81% and 1.38% in the emergent countries. India is the 2nd major telecom market in the world with 1.16 billion wireless subscribers and world's 3rd largest Internet market with almost 259 million broadband users. There is still a huge economic prospect in India as the tele-density in rural India is only 45% where more than 65% of the population lives. Future growth of telecommunication industry in terms of number of subscribers is expected to come from rural areas as urban parts are saturated with a tele-density of more than 160%.

The Central and State governments in India have been progressively taking ladders to accomplish the goal of a 'Digital India' by undertaking e-governance schemes. Abundant schemes have been announced to digitize segments such as agriculture, health, insurance, education, banking, police enforcement, etc. With the starter of the e-Kranti program beneath the National e-Governance Plan, we have perceived the primer of forty four Mission Mode Project.

The digitization progression is intended at tumbling the human supervision of personal data and ornamenting the decision creation functions of the government. These systems are hypothesized to make digital infrastructure available to every citizen, provide on demand governance and services and digital enablement.

In every system, personal information of inhabitants are composed in order to gain their welfare benefits. While the efforts of the government are praiseworthy, the usefulness of these programs in the absence of sufficient infrastructure for security raises various concerns. Increased consciousness among residents and stronger security measures by the governments are necessary to combat the cogent coercions to data concealment arising out of the snowballing rate of cyberattacks.

LITERATURE REVIEW

'Digital India' inventiveness has been an area of interest of abundant explorations from countless chastisements because of its great consequence and influence on the economy as a whole and predominantly the technological sector.

Sundar Pichai, Satya Nadella, Elon Musk researched about Digital India and its readiness to create jobs occasions in the information sector. He clinched that creating new jobs should be continued with instable more workers into high proficiency jobs in order to afford long term push to the technological section in India.

Microsoft CEO, Satya Nadella intends to become India's companion in Digital India program. He said that his corporation will set up low cost broadband technology amenities to 5 lakhs villages transversely the country.

Rani (2016) concluded that the digital India venture provides a huge occasion to use the state-of-the-art technology to redefine India the paradigms of amenity industry. It also pointy out that many projects may require some transformational progression, reengineering, refinements to appreciate the looked-for amenity level objectives. Midha (2016) concluded that digital India is a great plan to develop India for knowledge future but its improper implementation due to inaccessibility and intransigence to requisite can prime to its failure. Nonetheless digital India programme is facing quantity of happenstances yet if properly implemented it can make the best forthcoming of every citizen. So we Indians ought work collected to outline the knowledge economy.

Shrikant A. et al. (2010) This paper agreements with the privacy matter in Indian outlook with respect to trials in three different dimensions like Legal, Technical and Political sphere. Authors converse about projected framework to pact with these challenges. In India there is no such legal agenda to deal with privacy problem. To handle major challenges we refer ITA 2003 that was built with the inspiration to enable e commerce and hence the privacy was not the prior apprehension in IT act. This paper affords a solution as per contemporary and forthcoming prerequisite of privacy in Indian Set-up.

OBJECTIVES

1. To understand privacy concerns at digital era.
2. To explore the challenges on privacy faced on digital and social media.

THE RIGHT TO PRIVACY AND CONTEMPORARY LAWS

Privacy is a essential human right, protected in numerous worldwide human rights gadgets. It is fundamental to the fortification of human self-esteem and forms the basis of any democratic civilization. It also cares and reinforces other rights, such as freedom of countenance, information and connotation.

Activities that restrict the right to privacy, such as surveillance and censorship, can only be justified when they are prescribed by law, essential to achieve a genuine aim, and proportionate to the aim followed.

As modernizations in information technology have permitted beforehand unimagined forms of collecting, storing and sharing personal data, the right to privacy has evolved to encapsulate State responsibilities related to the fortification of personal data. A number of international instruments enshrine data protection principles and many internal legislatures have incorporated such philosophies into countrywide law.

Privacy also has inference for the liberty of opinion and appearance. The Statement of the Special Rapporteur on the elevation and shield of the right to freedom of interpretation and mien accentuates that the “right to privacy is often tacit as an essential prerequisite for the comprehension of the right to liberty of expression. Undue intrusion with individual’s privacy can both straight and tortuously perimeter the free development and conversation of ideas.”

The Constitution of India does not exactly guarantee a right to privacy, however through various verdicts over the years the Courts of the country have interpreted the other rights in the Constitution to be giving rise to a (limited) right to privacy – principally through Article 21 – the right to life and liberty. In 2015, this construal was challenged and referred to a larger Bench of the Supreme Court (the highest Court in the country) in the writ appeal Justice K.S Puttaswamy & Another vs. Union of India and Others, the case is currently pending in the Supreme Court. The statutory right to privacy in India is subject to a numeral of restrictions.

These margins have been culled out through the construal of various provisions and judgements of the Supreme Court of India:

- The right to privacy can be limited by procedure recognized by law which practice would have to be just, fair and reasonable (*Maneka Gandhi v. Union of India*);
- Reasonable restrictions can be levied on the right to privacy in the interests of the sovereignty and veracity of India, the security of the State, friendly kindreds with foreign States, public order, decency or morality, or in kin to contempt of court, slander or incitement to an offence; (Article 19(2) of the Constitution of India, 1950)
- The right to privacy can be restricted if there is an imperative countervailing notice which is superior (*Gobind v. State of M.P.*);

The right to privacy can be restricted if there is a compelling state interest to be served (*Gobind v. State of M.P.*);

- The protection available under the right to privacy may not be available to a person who voluntarily thrusts her/himself into controversy (*R. Rajagopal v. Union of India*).
- Like most fundamental rights in the Indian Constitution, the right to privacy has been mostly interpreted as a vertical right applicable only against the State, as defined under Article 12 of the Constitution, and not against private citizens. (*Zoroastrian Cooperative Housing Society v District Registrar*).

PRIVACY CONCERNS – DOMESTIC TO GLOBAL PERSPECTIVES

India does not have a inclusive privacy lawgiving and limited data protection canons can be found under section 43A and associated Rules in the Information Technology Act 2000.

India has ratified the International Covenant on Civil and Political Rights ('ICCPR'). Article 17 of the ICCPR provides that “no one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful bouts on his honour and status”. The Human Rights Committee has distinguished that situations party to the ICCPR have a constructive obligation to “adopt legislative and other actions to give effect to the embargo against such interferences and outbreaks as well as to the shield of this right [privacy].” Zones of concern I. Communications surveillance Broad and fragmented standards for shadowing.

Communication shadowing in India is chiefly regulated by two dissimilar edicts, the Telegraph Act, 1885 (“Telegraph Act”) (which deals with interception of calls) and the Information Technology Act, 2000 (“IT Act”) (which deals with interception of electronic data).

Before 1996, the state establishments relied upon the provisions of the Telegraph Act to carry out interception of phone calls. The Act agrees any lawful public authorized to intercept communications on the manifestation of any public emergency or in the curiosity of public safety. Communications can be interrupted under the Telegraph Act during “public emergencies” or in the curiosity of “public safety” provided that such interruption is in the safeties of convinced other grounds, namely, the dominion and truthfulness of India, the security of the State, sociable relations with foreign States, public command and for foiling the incitement of wrongdoings. Such broad and imprecise explanations for scrutiny have become a feature of many authorities. The concept of national veracity or security are habitually defined very sketchily and are susceptible to misuse as a means to target convinced kinds of thespians and propagate pointless secrecy around law prosecution measures, thus, having an hostile impact on transparency and answerability.

However, in 1996 the Supreme Court observed the lack of bureaucratic precautions in the necessities of the Telegraph Act and laid down certain guidelines for interruptions. These guidelines formed the basis of the Rules defining the actions of seizure that were collated by announcing Rule 419A in the Telegraph Rules in 2007. These rules were, in part also reflected in the Rules prearranged under the IT Act in 2009.

Section 69 of the IT Act allows for the seizure, nursing and decryption of digital evidence in the curiosity of the dominion and integrity of India, of the defence of India, security of the State, friendly relations with foreign lands, public order, preventing the incitement to the commission of any cognizable felony relating to the above, and for the enquiry of an offense. While this facility is similar to interruption provision underneath the Telegraph Act mentioned above, it is striking that it bestows with the sine qua non of “the manifestation of public emergency of the curiosity of public safety”, thus dramatically enlargement the ambit of powers. The rules framed under Section 69 and 69B (the “IT Interception Rules”) include safeguards stipulating who may issue directions of interruption and nursing, how such guidelines are to be accomplished, the duration they remain in maneuver, to whom data may be disclosed, concealment obligations of intermediaries, periodic oversight of intervention orders by a Review Committee under the Indian Telegraph Act, the retention of chronicles of intervention by mediators and to the obligatory destruction of information in apposite cases. Rule 3 allows the “competent authority” to issue directions for monitoring for any of a quantity of specified tenacities related to cyber security.

Admittance to stowed data is also hypothetically talked under Section 91 of the Code of Criminal Procedure, 1973 (“Cr.P.C.”) which states that a Court in India or any officer in custody of a police station may summon a person to produce any document or any other thing that is obligatory for the resolutions of any examination, inquiry, trial or other scheduled under the Cr.P.C. Thus, academically, under section 91, law concluding agencies in India can access stored data.

Conferring to the IT Interception Rules, only the capable authority can subject an order for the interception, nursing or decryption of any information produced, diffused, received or warehoused in

any mainframe resource under sub-section (2) of section 69 of the Information Technology Act. At the State and Union Territory level, the State Secretaries respectively in charge of the Home Departments are nominated as “competent authorities” to issue interception directions. In unescapable situations the Joint Secretary to the Government of India, when so authorised by the Competent Authority, may issue an order. Interception may also be passed out with the prior consent of the Head or the second senior most officer of the authorised security agency at the Central Level and at the State Level with the sanction of officers authorised in this behalf not below the rank of Inspector General of Police, in the emergent cases.

DIGITAL INDIA: MAJOR CHALLENGES

Many people in pastoral areas have no Internet fitting together, and also the gratified in regional lingoes is not sufficient to keep the readers engaged. Only 15% of the households can access the Internet, and few folks can access mobile broadband. This setup is despite the increasing affordability of ICT milieu in the country. According to World Economic Forum (WEF) 2016 report, nearly 33% of Indian inhabitants is functionally unschooled, one-third of youth do not attend tributary education. There are vast alterations in urban centers such as urbanite metropolises and isolated rural areas, where an even rudimentary facility for example electricity is unattainable to run the Digital India program. India’s budding economy and digital shove have caught the attention of hackers and an increasing wave of cyber attacks could soon badly impact the country. India and other South Asian countries are now on the locating system of cyber attackers. The administration and business world prerequisite to acquire state-of-the-art, New Age security answers to spoil their plans. It is not only a technological interrogation but also pacts with the question of privacy and security. The major test faced by ‘Digital India’ is the sluggish and deferred infrastructure expansion.

1. Lack of comprehensive and independent oversight of state surveillance.

The Instructions underneath the Telegraph Act foresee the composition of a Review Committee which has the Cabinet Secretary as its Chairman and the Secretary to the Government in safekeeping of Legal Affairs and the Secretary to the Department of Telecom as its affiliates. This Review Committee is also dispensed to oversee the submission of the Rules established under section 69 of the IT Act. Each order of interruption nursing or decryption under the Telegraph Act as well as the IT Act shall be sent to the Review Committee within 7 days and the Review Committee is to light at least once each two months at the central/state level and must legalize the legitimacy of directive. The committee has the consultant to rescind briefings and destroy copies of the interrupted note or class of communication.

The Review Committee which entertains as a check on the mismanagement of influences by the capable authorities is a very vital cog in the complete course. However, it is wrought entirely by the supervisory and does not have any members of any other circumstantial. Whilst it is probably impractical to have civilian members in the Review Committee which has access to potentially sensitive information, it is enormously essential that the Committee has broader representation from other sectors particularly the judiciary. One or two members from the judiciary on the Review Committee would provide a superior check on the workings of the Committee as this would bring in depiction from the judicial arm of the State so that the Review Committee does not endure a body staffed purely by the policymaking branch. This could go some ways to confirm that the Committee does not just “rubber stamp” the orders of interruption dispensed by the various capable authorities. While the interference actions of the constabularies and acumen agencies in India must be carried out in harmony with the procedures contained in the Telegraph Act, 1885 and the Information Technology Act, 2000 and the Rules framed under those legislations, non-interception contact as well as passive interception surveillance by astuteness agencies is not governed by these legislatures. It is possible that these competences may be governed by internal strategies or operation manuals, etc. of individual agencies, but these are not simply available civic.

2. Lack of data protection standards for the public sector.

Section 43A and associated Rules apply only to “body corporates”, thus not extending the same requirements to the public sector. The lack of a inclusive data fortification policy that is applicable to the public sector is particularly regarding giving the numerous government led data driven initiatives

which have already been implemented and others that are emergent in India including Digital India, the Unique Identity Scheme, and the National Population Register. The committed of these schemes is to record all populaces of the country and provide them with limited identifiers, seeding of diverse databases (feeding information into the database) with unique identifiers and enable the implementation of large e-governance projects, all of which will contain collection of vast volume of personal data. The absence of any directive governing the gathering, use and allotment of such data leads to solemn privacy concerns.

3. Limited scope of data protection standards.

Section 43A and associated Rules smear to individual and sensitive personal data. Given the lively nature of data, the cohort of new forms of data and data sources, and the embryonic nature of data, the restricted scope of these Rules is vis-à-vis.

4. Limited Definition of Personal Sensitive Data.

The Rules smear to personal data and subtle personal information. Personal information is defined as ““Personal information” means any information that relates to a expected person, which, either directly or indirectly, in blend with other information available or likely to be existing with a form corporate, is capable of recognizing such person.” Rule 3 of the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011 defines “sensitive personal data or information” as (i) password; (ii) financial information such as Bank account or credit card or debit card or other payment instrument details; (iii) physical, physiological and mental health state; (iv) sexual orientation; (v) medical records and history; and (vi) Biometric information. This rule follows from the principle that “certain categories of personal information are particularly sensitive, due to the close nature of their content in relation to the right to privacy”. However, this description is derisory as it does not encompass electronic communications such as emails, cruising and chat logs within its cosmos. With increased diffusion of Information and Communication Technologies, there is a larger need for electronic communication to also be encompassed within the sphere of sensitive private data or information. Since these Rules provide for protocols only for “sensitive personal data” therefore other kinds of data which does not fit into the description such as chat logs, emails, etc. will not be granted the level of fortification that is given to “sensitive personal data”.

5. Lack of comprehensive and technically appropriate consent mechanisms.

Rule 5 of the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011 lays down the provisions for accord of the data subject to be taken in script before the assembly of delicate personal data. The creation nosedives to order that the data collectors confirm that the consent provided is informed, explicit and freely given and address technical forms of obtaining consent. Further, this Rule smears only to sensitive personal data or information and not all kinds of for self identifiable information, thus, pointedly tapering the bid of consensus before gathering of personal data.

CONCLUSIONS

We commend that the Government of India:

- Harmonize the legal outline which regulate communications scrutiny in India to guarantee that the law is handy and clear, and encounters India’s global human rights duties;
- Begin an self-governing and operative oversight mechanism with a directive to monitor all stages of interruptions of communications to ensure they are compliant with India’s domestic and international obligations to esteem and guard the right to privacy and other human rights;
- Establish independent responsibility mechanisms and clear standards for India’s security and acumen agencies to ensure they are subject to independent oversight devices and guarantee transparency of their order and maneuvers in accordance with worldwide human rights standards;
- Analysis and restructuring the principles regarding disseminate and ingress of shadowing technologies to and from India;

- Review all licensing treaties which impose obligations on the private sector to facilitate and/or conduct communication surveillance, and take the necessary dealings to warrant that the private sector – in both policy and practice – obey with worldwide human rights law and standards;
- Review the proportionality of data holding requirements located on telecommunications companies;
- Adopt and impose a inclusive data fortification legal outline that encounters worldwide standards, applies to both the private and public sector, and establish an self-governing data protection authority that is fittingly resourced and has the power to examine data protection fissures and order redress.

Privacy is a foremost concern for the users of any system or application either of social or digital media where stringent rules needs to be developed and awareness for the same must be created.

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Challenges of Digital Transformation in Small Family-Owned Businesses in India

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ABSTRACT

All most all businesses in India are owned by family, be it your neighborhood karyana store to your jeweler, pharmacists, your doctors clinic, the hotel you go to for your weekly eat out or the transporter. Corporatisation of these businesses has not happened, to a great extent. These businesses have not bothered to digitize themselves because they believed in quality and customer care and these values have seen them thru generations. The mega trend of digitization, the Government's policies and the customers preferences has forced them to adapt digitization and bring about Digital Transformation of their business.

Keywords: family-owned business, digital transformation, change, challenges

INTRODUCTION

WHAT IS A FAMILY-OWNED BUSINESS?

A Family-owned business is one that is owned and managed (that is controlled) by one or more family members. Family-owned firms are – “organizations where two or more extended family members influence the directions of the business through the exercise of kinship ties, management roles, or ownership rights.” A family – owned business is where a majority of the assets and ownership lies with the family collectively or in the name of different family members, majority of the stock holding is also vested with the family. It is also a complex, dual system consisting of the family and the business. Members involved in the business are part of a task system and also a part of a family system and these two systems may overlap.³ Family – owned businesses exist all over the world and some of the worlds oldest firms are family- owned eg. Kongo Gumi of Japan was founded in 578 AD and is currently managed by the 30th generation. Some of the largest wealth creators and businesses are family owned like Wal Mart.⁴ In India too, the highest generator and creator of wealth are family – owned businesses.

FAMILY OWNED BUSINESS IN INDIA

In India about 90% of all business activities are owned by family-owned businesses, from the simple karyana store to the biggest business house Reliance is controlled by families. Most of the big corporate business houses like Tatas, Ambanis, Birlas, Godrej etc. are all controlled by families. The small shop owners to traders, farmers to hotel and restaurant owners, the IT sector and even the hospitals are all businesses controlled and operated by families

Since most commercial activity in India is controlled by family-owned businesses it is essential that we study how digitalisation has affected them and their business activities. It is also essential to know whether they have adapted to the change.

THE CONCEPT OF DIGITISATION, DIGITALISATION & DIGITAL TRANSFORMATION

There is a tendency to use these words interchangeably but in the business world they may mean different thing at different stages of adaptation by the business.

Digitisation is the process of converting information from a physical format to digital one. It means converting something non-digital into a digital representation to be used by computer systems.

Digitalisation is the process of leveraging digitisation to improve business processes. Digitalisation means making digitised information work for you.

Digital transformation is the application of digital technology into all areas of a business, like processes, products, and assets to improve efficiency, manage risk or discover new monetization opportunities. This leads to many important changes in organizational culture, how a business operates, and how it delivers value to customers.

Thus the study is about more about the use of digital Technology by family-owned businesses which covers the use of computers – hardware and software, and use of internet and internet based applications and mobile technology in order to store, protect, process and transmit information securely.

DIGITAL TRANSFORMATION CHALLENGES

Digital transformation is seen in all aspects of life, it has been most profound in the business world. With fast changes in digital technology every sector is forced to adopt and experience digital transformation in their field. Though the family-owned businesses in India are very robust but this change has brought about new sets of challenges and issues, especially among small family-owned businesses which have survived on personal relations and good will. Their movement into the digital world has been slow and they have been facing problems viz. digitally transforming their business and reaping the benefits of digitalisation.

STATEMENT OF PROBLEM

India is a country where maximum business organizations are family-owned. Almost all the small businesses are owned and operated by families, these businesses have always been cash operated and low on technology. The Modi government has brought about several changes which has changed this and made it inevitable for these businesses to move towards adapting digitalisation.

RESEARCH OBJECTIVE

1. To explore the impact of digitalisation on small family-owned businesses like the (i) karyan shop or general store as it is also popularly known (ii) jewelers (iii) pharmacists (iv) whole sale traders (v) small poly clinics (vi) hotels (vii) transportation/ logistic/ truck owners and
2. To explore the challenges faced due to the forced digitalisation and the level of digital transformation that has taken place in these sectors .

RESEARCH METHODOLOGY

For the study the researcher contacted the respondents personally with a well– prepared sequentially arranged questionnaire. All questions were designed to cover the levels of digitalisation and their impact on revenues and return on investment. The questionnaire was divided into two parts. The first Part was designed for capturing the respondent's profile and the subsequent Part contained the main survey attributes.

RESEARCH HYPOTHESIS

H₀: Small family-owned businesses have faced no problems in Digital transformation of their businesses.

H_a: Small family-owned business have faced substantial problems in the digital transformation of their businesses

Primary Data: Primary data was collected through the administration of the structured questionnaire in Navi Mumbai. Navi Mumbai is a well developed mega city and has the largest APMC market, whole sale market for commodities and goods and a huge transportation network it is commercially a very well developed city. Thus it is possible to get a large number of samples from different family-owned businesses, using convenience based random sampling.

Sample Size The study was determined by the standard formula at 95% confidence level and 0.1 as standard deviation keeping +/- 5% as margin of error for 450 sample population numbers. This study it has been kept at 451 samples. The samples were limited to those participants who willingly accepted to respond to the instruments in its entirety.

Sample Design The researcher relied upon convenience based random sampling technique, considering the research methodology and research type as per guidelines. All members of the sample had to be part of family-owned business the criteria set for the same was

- The business should be predominantly held by the family (more than 51% stake)
- The business should be in the family for more than 2 generations or at least the 2nd generation should be operating the business in the same sector.

- There should be a likelihood that the business will pass on to the next generation.
- Major decision on employment, investment, growth and diversification rest with the family.

Precaution was taken during the study that the respondents who did not show an inclination to be a part of the study were not insisted upon.

SECONDARY DATA

The secondary information or data was collected from published sources such as journals, magazines, newspapers, Industry reports, internet and other sources.

Statistical Analysis Efficient and effective data analysis is the result of effective data preparation. This was found to be very crucial between the completion of the field work and the statistical processing of the collected data. Data preparation involved transferring the questionnaire into an electronic format which allowed and facilitated subsequent data processing. Data sheet was prepared directly at Statistical Program for Social Sciences (SPSS) 19.00 software for further analysis. Codes were assigned to each response for data entry and data record. Transcribed data sheet was prepared for data analysis. On the basis of data sheet, tables and graphs were prepared for the analysis.

LIMITATIONS OF STUDY

1. The biggest limitation is that the study is based in Navi Mumbai and may not be a representation of the whole population
2. Time and money were other constrains due to which the study could not be done with a bigger sample and at more places
3. Some types of family-owned businesses like the agriculturalist and others in the rural areas etc. were left out

Table 1: Sample Distribution

Type of Business	Frequency	Percentage
Karyana Shop	100	20.4
Jeweller	50	10.2
Pharmacists	26	5.3
Wholesaler	100	20.4
Small Poly Clinic	25	5.1
Hotels	50	10.2
Transporter	100	20.4

Source : Primary Data

Table 2: Years in Business

Years	Frequency	Percentage
20-30	18	3.7
31-40	29	5.9
41-50	92	18.8
51-60	106	21.7
61-70	75	15.3
71-80	71	14.5
>80	60	12.3

Source : Primary Data

Table 3: What according to you is Digital Transformation?

Type Of Business	E-Commerce/ Online Business	Social Media/ Facebook/ Whatsapp Groups	Use Of Computers In All Areas Of Business	Use Of Digital Technology In All Aspects Of Business	Total
Karyana	13	12	51	24	100

Jewelers	11	32	4	3	50
Pharmacists	5	10	10	1	26
Wholesaler	13	30	33	24	100
Small poly clinic	0	18	0	7	25
Hotels	17	14	12	7	50
Transporter	19	43	18	20	100

Source : Primary Data

Table 4: Do you feel there is a need for digitisation and digital transformation of your business?

Type of Business	Yes	No	Not sure	Total
Karyana	43	48	9	100
Jeweler	16	27	7	50
Pharmacists	13	0	13	26
Wholesaler	43	45	12	100
Small poly clinic	21	0	4	25
Hotels	7	36	7	50
Transporter	36	57	7	100

Source : Primary Data

Table 5: Why do you not see the need to digitalise?

Type Of Business	Not necessary for our size of business	Business is not good and we need to focus on that	Our existing process is good and does not need any change	It is too expensive to install and learn and will not benefit us enough	Total
Karyana	40	21	16	23	100
Jewelers	5	8	19	18	50
Pharmacists	0	0	15	11	26
Wholesaler	15	8	40	37	100
Small poly clinic	0	0	16	9	25
Hotels	0	0	38	12	50
Transporter	20	49	9	22	100

Source : Primary Data

Table 6: Why have you initiated Digital Transformation in your business?

Type Of Business	I want to stay in league with my competitors	I feel that it will make doing business easier	My children have convinced me that it is essential for business	Total
Karyana	20	15	65	100
Jeweler	10	7	33	50
Pharmacists	8	4	14	26
Wholesaler	20	39	41	100
Small poly clinic	18	3	4	25
Hotels	18	8	24	50
Transporter	27	12	61	100

Source : Primary Data

Table 7: Challenges faced while going in for digitalization of business

Type Of Business	Personal Lack of expertise in the area	Concerns of	Cost	Concerns on training of existing	Total
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		security		staff	
Karyana	65	21	10	4	100
Jeweler	8	23	9	10	50
Pharmacists	4	14	6	2	26
Wholesaler	34	39	14	13	100
Small poly clinic	0	15	10	0	25
Hotels	10	24	16	0	50
Transporter	23	25	33	19	100

Source : Primary Data

Table 8: How did you address the challenges faced due to initiation of digitalisation in your business?

Type Of Business	Yet to be addressed	Hired new staff	Hired consultants	Total
Karyana	60	7	33	100
Jeweler	4	10	36	50
Pharmacists	0	10	16	26
Wholesaler	25	8	67	100
Small poly clinic	0	8	17	25
Hotels	12	0	38	50
Transporter	32	6	62	100

Source : Primary Data

Table 9 : Do you feel that digitilisation of business has helped in growth of your business?

Type Of Business	No	Increased the cost of doing business	Too much of confusion	Has reduced the quantum of business	Total
Karyana	12	73	11	4	100
Jeweler	7	11	9	23	50
Pharmacists	8	18	0	0	26
Wholesaler	20	80	0	0	100
Small poly clinic	0	1	18	6	25
Hotels	0	15	13	22	50
Transporter	12	66	17	5	100

Source : Primary Data

HYPOTHESIS TESTING

Based on the primary data collected and application of on-sample chi square test the null hypothesis has been rejected because it has been seen that small family-owned businesses have faced several challenges in the Digital Transformation of business. The first problem arises with their understanding of digitalization of business and is prefunded by their ability to adopt the change to the cost that is required for the purpose of bring about the change. Most business houses have used the help of consultants in order to initiate the change and feel that the fees paid to the consultants is an additional cost to the business, which is not seen as a long term investment. A very big concern, which is not addressed by anyone, is security of data, money and information on the digital platform. Family owned businesses have functioned for very long on the concept of secrecy, they are not big believers of transparency and their biggest problem arises in digital acceptance of payment because the income then becomes ‘white’ and taxable. In most of the cases the decision to accept digitilisation has been on the insistence of youngsters, who are not very keen on transparency, but know that the laws are getting tougher and they don’t want to have a date with the law makers.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The categories of type of business occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
2	The categories of years in business occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
3	The categories of what according to you is digital transformation occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
4	The categories of need for digitisation and digital transformation occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
5	The categories of why do you not see the need to digitalise occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
6	The categories of why do you feel that digital transformation is necessary occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
7	The categories of challenges faced by those who have gone for digitalisation occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
8	The categories of how did you address the challenges occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
9	The categories of Do you feel that digitisation of business has helped in growth of your business occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

CONCLUSION

Small family-owned businesses are unable to gauge the exact need for digitalisation and are at the moment keeping their exposure to the bare minimum. This is because they are not looking at the long term goals, though family-owned businesses have always aimed at preserving the business and assets for the next generation. The digital world is something they do not clearly understand and they are unable to phantom that the business may wind up due to something that is not their core business, or the competition may digital and gives to the consumers benefits that may lead to the customer base shifting. They may also have to consider laying off employees who do not fit their digital setup, family-owned businesses do not believe in hire and fire and have always supported loyal employees that is why they have chosen to work with consultants and have not hired new staff to fit their need. It is seen that the next generation, which is highly-educated and technically-minded, has a much stronger affinity with digitalisation and will thus ensure the movement to Digital Transformation of the business

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Emerging Trends in Education Sector Using Information Technology

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ABSTRACT

Technology, dynamically changing the way we live and collaborate. Education is lagging in terms of technology adoption. Education is something that develops the world in different way. As they say, change is the only constant; there's nothing in this world that can be exempted from undergoing a change. And as we talk about the Indian education system, it has come a long way from the erstwhile Guru-Kula System to the modern system of education, and has way more scope of improvement to evolve into a better system for providing more knowledge. The way of Indian education system has been purely altered due to the new emerging trends that it witnesses every now and then. In its new avatar, the education sector offers various new golden opportunities for the young generation so that they bring the desired change in the economy as a whole.

INTRODUCTION

The ancient times of 21st century are often the time of antiquity of technology. In today's generation technology play considerable act in our daily life. It is seen as a fundamental growth of an economy. An economy which is awful in technology can't be able to grow in today's position .As a result of, technology allow us to complete our entire task in fewer of time .The technology can use in all fields ,one analogous field is education

MODERN USE OF TECHNOLOGY

The internet, allows us a greater flexibility in our daily routine along with location, especially with the high speed of internet connection. The internet can now access anywhere at any time in data connection, data card, mobile internet device, Wi-Fi connection. An office employee which is away from their desk, perhaps on the other side a person on a leave, can handle the entire situation or complete his task through remote desktop into his normal office PC using virtual private network connection via the internet. This facility provides access to all his/her important data including electronic mail& other documents while far away from the office .The internet facility can also bolster into academics, where he/she can record there lecture.

INTERNET CONNECTION AND ROUND THE CLOCK CONNECTIVITY

The internet has developed in importance by many folds, over the process of decades. Its consequences in the learning world can never be undermined. Despite, the chances of scam & deficiencies, the use of the internet is like a grace for students. Today, the internet is present almost everywhere on the earth .Not only on television, laptops, desktops, mobile phones to gaming consoles, but the internet is available on each and every electrical and electronically operated gazettes all around the globe, the internet is literally everywhere .By using the internet, the students can able to find various kinds lessons, tutorials& assisting materials which could improve and enhance their learning of students in there academics

USE OF PROJECTORS AND VISUALS DEVICE

The learning method becomes very easy when it comes from technology. Technology like use of projectors and visuals device is used in almost every institute in order to present the power point presentation and to present the proposal of their project. Not only the Top educational institutes but all the industries in world around the world also depend on the use of projectors and visuals device for the purpose of power point. Using projector and visual images technology becomes easier to understand the learner to learn the new concepts. Technological use such as projectors within a school and college can boost the student and also increase the strength. The learning part also becomes easy when it comes from technology.

DIGITALIZATION IN EDUCATION FORUM

If we think about digitalization in education then the digitalization within the education sector has grown more. This is result in connectivity with student on internet and different forum that are available for different kind of work to be done or help. As the requirement of digital increases, there is more application which are helping student to develop and learn new things

ONLINE COURSES WITH THE USE OF TECHNOLOGY

Online courses with the use of technology, on-line shopping have more popular phenomenon. People wish to get enroll in online courses for certification and learning. Most popular institute offer many short term and long term online program for learner with the help of various applications available on the internet. This is a concept that will rise and more support the student for development. The online shopping gives the different choices and also help to choose the product and buy one of them.

ELEMENTS AFFECTING TECHNOLOGY IN EDUCATION

When you talk about technology there are 'n' numbers of challenges teacher have to face in society due to fast growth of knowledge. The new technology helps those teachers to learn how to use new concept and technology in education so that the teacher will able to develop new method and can make enhancement in their skill. Gressard and Loyd in 1985 say that teacher behavior towards the technology is affecting the successful implementation of ICT in education. They concluded that teachers are not having always positive attitude but some have negative attitude that causes the failure of the technology. Some of the most important errors are as follows,

- 1) Shortage of time.
- 2) Inadequate resources.
- 3) Lack of ability.
- 4) Lack of support

Other obstacles are arising in schools and colleges are system failure, less number of PC's and less software resources available in schools, no periodically service and maintenance of pcs laptop, incompatible hardware and software support. Slow internet speed, less Wi-Fi range and out dated software. This above several reasons affects the technology in education field while student are have up to date software at home.

EFFECT OF ICT ON EDUCATION

ICT in education enhance the mode of information technology. The mobile

ICT helps teachers to access with organization and academics. It helps the effective use of ICT software and hardware for learner.

POSITIVE EFFECT OF

1. **Communication:** Communication is very agile and the abrupt response is done by ICT, a lot of money can be saved by means of ICT because it is fast to move around. The technology development like digital camera, video conferencing, computer, video games, and 3D projection all these things help the students to learn fast and frequently.
2. **Globalization:** when colleges are at different places, student can meet through video conferencing without leaving the classroom. Sites like www.glovico.com use to help the student to learn foreign language online by group of students with faculty from another country.
3. **Cost effectiveness:** Now days many organization and university have started online degree courses for students and also promoting to learn other language through online tools. Universities has started distance open learning for learn different courses online.

Due to maximum people are using online tools today for chatting and shortcut, the writing skill of today generation have been declined they all are dependent on digital communication. They don't know how to write letter and where we have use comma and grammatically mistakes.

Technological developments like digital watches, scientific calculator, and mini cameras are similar machine are great source to cheat in exams. It is easier for student to make the notes scientific calculator with little chance to being caught.

Lack of Focus: Students are dependent on computer, cell phones. Students are seen playing games on phone and not communicating to anyone. The internet technology has resulted in lack of focus on academics and some extent even sports and extracurricular activities.

MERITS

1. Students are more excited to learn new things
2. Help student to free from busy schedule.
3. Enhance new technology for student and Faculty.
4. Provide training to student and faculty to learn new skill for their work place.
5. Decreases photocopy and paper cost and promoting green revolution.

DEMERITS

1. Many people think that, due to technology students thinking and grasping power has been abated.
2. It is time consuming.
3. Some software is costly to install.
4. There will be health diseases after some age.
5. Few students can't afford new technology

CONCLUSION

Technology has positive effects on academics as well as the negative effects. Faculty and learner should take the advantage of technology and enhance the new concept in digitalization. Technology enlightens the many students to achieve their goal. Every country has the responsibility to introduce new technological concepts in education sector in the future for the carrier of the students.

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Estimation of default risk through Springate's S – Score with reference to Tata Motors Ltd

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ABSTRACT

Financial stability is one of the most important factors for a company's growth and sustainability. An organization, which is financially sound and strong, has the capacity to meet its payment obligations as and when they are due. However at times due to certain situations arising out of internal or external circumstances, the organization may repeatedly fail to meet its obligations and as a result, if corrective actions are not taken may hurtle towards insolvency. This research paper attempts to evaluate the likelihood of default or insolvency of "Tata Motors", an automotive manufacturing company through application of Springate score model. The research is based on secondary data collected from the Annual reports of the last five years. The result shows that "Tata Motors" has incurred significant losses and is "financially distressed"

Keywords: - Automotive, Springate Score, Insolvency, Financial Distress, Business Failure

INTRODUCTION

An organisation's sustainability and growth to a substantial extent depends on its sound financial state of affairs. Financial stability ensures that an organization is able to meet its financial obligations within specified deadlines and this assures continuous circulation of money and enhancement of business. However financial tribulations in an organization may adversely impact not only its own foundations, but also economy at large. If the issues are not effectively dealt with, companies may be compelled to undergo financial reconstruction or file for bankruptcy. The collapse of a company is bound to negatively impact investors and other stake holders in terms of money as well as confidence. Therefore it becomes imperative that investors, share holders, analysts and other stake holders devise a mechanism to preempt any kind of potential risks and employ corrective measures to mitigate them. This is where quantitative models which can estimate the level of risk come into play. Springate S Score model is one such model which estimates the risk associated with the likelihood of default of a firm. This research paper attempts to estimate the risk of likelihood of default of "Tata Motors", which is an automotive manufacturing company.

REVIEW OF LITERATURE

A number of research studies have been conducted over the past few scores with the intent and objective to forecast likelihood of bankruptcy and default of companies. (Beaver, 1966) was one of the pioneers to have predicted the risk of business failures.

(Altman, 1968) devised a model that is known as Altman's Z – score model. He employed multiple discriminant analysis to predict the risk of a firm going bankrupt.

(Rajasekar T, 2014) carried out a research to evaluate the level of financial distress in Navratna companies of India for the period of 1995 – 2012. They employed three quantitative risk estimation models namely Fulmer, CA – Score and Springate. The findings revealed that out of 14 Navratna companies that were researched upon, 6 were financially stable for the entire time period of evaluation i.e. 1995 – 2012. The other 8 companies were on the weaker side of financial stability during some of the years.

(Shirata, 1998) undertook a research of Japanese companies and attempted to predict the likelihood of their bankruptcy with the application of financial ratios.

(Lifschutz, 2010) evaluated certain publicly listed companies in Israel that had experienced business failure using Altman's Z Score model. The time period of study was 2000 to 2007.

(Dalvadi, April 2018) employed Springate S – Score model to evaluate and quantify the degree of financial distress of selected public sector enterprises of India during the 2011 – 17 period. It was found that out of the eight public sector enterprises that were analysed, four were financially stable while the other four were financially distressed.

(Moghadam, Fard, & Zadeh, 2009) studied organisations listed at Tehran Stock exchange and applied Ohlson Score and Altman Z Score models to predict the degree of bankruptcy. It was inferred through the findings that Ohlson “O” score is more effective.

(Pranova, Noer, Manurung, & Nunug, 2010) through the application of Altman Z – Score found that key financial metrics such as leverage, efficiency, current ratio and equity were very crucial factors in success or failure of companies.

(Imanzadeh, Jouri, & Sepehri, 2011) quantitatively compared Zmijewski J Score and Springate S Score models and concluded in his research Springate S Score model was more accurate of the two.

(Gunathilaka, 2014) conducted a research study to test the precision of quantitative models of Altman’s Z Score model, Springate S Score model and Solvency test model in prediction of financial distress and failure of companies during the period 2008 – 2012 in Sri Lanka. He found that Altman’s Z Score model and Springates S Score model yield results that possess similar predictive accuracy.

RESEARCH GAP

From a comprehensive review of literature, it is observed that little research has been done in the context of application of Springate S score model to any Indian private sector company to estimate its likelihood of default.

RESEARCH OBJECTIVE

The key objective of this research is to estimate the likelihood of default of “Tata Motors”: -A Private sector Indian Automotive Manufacturing Company through application of Springate S score model.

RESEARCH METHODOLOGY

Scope and Time frame of research

➤ “Tata Motors: - An Automotive Manufacturing Company has been selected for the research. The company is listed on National Stock Exchange (NSE) and Bombay Stock Exchange (BSE). The time frame for the research is F.Y 2014 – 15 to F.Y 2018 – 19 i.e. from 01st April 2014 to 31st March 2019.

Collection of Data

The nature of data gathered for this research is secondary. Financial data has been collected for “Tata Motors” from 01st April 2014 to 31st March 2019. The data has been extracted from financial statements and Annual reports.

Statistical Model Employed

This research has applied Springate S Score to quantify the default risk of “Tata Motors”. The details are as elaborated below.

Springate S Score model was conceptualized and promulgated by Prof Gordon L.V Springate at Simon Fraser University in 1978. The model was built through step – wise multiple discriminant analysis to figure the most crucial and significant financial metric ratios out of the 19 most widely used ones. These ratios were selected in such a way that they were collectively able to classify stable companies and unstable companies separately in the best possible way.

The Springate Score model can be expressed in the form of an algebraic linear expression as given below:

$$S = 1.03A + 3.07B + 0.66C + 0.4D$$

Where

A = Working Capital/Total Assets

B = Earnings Before Interest and Taxes (EBIT)/Total Assets

C = Earnings Before Taxes (EBT)/Current Liabilities

D = Sales/Total Assets

$S < 0.862$; then the firm is classified as "failed"

Springate himself tested the model on 40 firms and it was 92.5% accurate. The model was also tested by (Sands, 1980) on 24 firms (Mean Asset Worth of \$63.4 million). The accuracy rate in this research stood at 83.3%. (Brothers, 1979) used the data of 50 firms (Mean Asset worth of \$2.5 million) to test the effectiveness of Springate model. The model was found to be 88% accurate.

LIMITATIONS OF THE STUDY

The findings and results of this research pertain to evaluation of "Tata Motors" and therefore may not be applied to firms belonging to other industries.

The time frame of research is only five years.

DATA ANALYSIS AND INTERPRETATION

The data collected to calculate five financial ratios and subsequently estimate the S score for Tata Motors is as shown below:

Particulars	2015	2016	2017	2018	2019
Current Assets	101758.40	115315.13	116119.75	135972.84	123431.16
Current Liabilities	100272.00	110820.46	115629.52	143219.47	145457.43
Working Capital	1486.40	4494.67	490.23	-7246.63	-22026.27
Total Assets	238657.99	269297.60	273754.36	331350.51	307194.53
A	0.006	0.017	0.002	-0.022	-0.072
EBIT	26564.05	18604.22	13552.80	15836.82	-25612.55
Interest	4861.49	4623.35	4238.01	4681.79	5758.60
Total Assets	238657.99	269297.60	273754.36	331350.51	307194.53
B	0.111	0.069	0.050	0.048	-0.083
EBT	21702.56	13980.87	9314.79	11155.03	-31371.15
Current Liabilities	100272.00	110820.46	115629.52	143219.47	145457.43
C	0.216	0.126	0.081	0.078	-0.216
Sales	266707.90	280096.72	274492.12	289386.25	299190.59
Total Assets	238657.99	269297.60	273754.36	331350.51	307194.53
D	1.118	1.040	1.003	0.873	0.974

Table No – 01: - Tata Motors Ltd Financial Ratios and Independent Variables

Coefficients	1.03	3.07	0.66	0.4	S	Safe Zone
Particulars	A	B	C	D	S Score	S>0.862
2015	0.006	0.111	0.216	1.118	0.938	Safe
2016	0.017	0.069	0.126	1.040	0.729	Gray
2017	0.002	0.050	0.081	1.003	0.608	Distress
2018	-0.022	0.048	0.078	0.873	0.525	Distress
2019	-0.072	-0.083	-0.216	0.974	-0.083	Distress

Table No – 02: - Tata Motors Ltd S Score and Zone of Classification

It is evident that the S – Score of Tata Motors Ltd for the year 2015 is greater than the threshold value of 0.862. Therefore it was classified as “Safe” in the year 2015. However the S Score value declined to 0.729 in the year 2016 and thus the company was classified into “Gray” zone for the year 2016. The S score value for the next three years has been consistently going downhill and has plummeted to a deplorable value of -0.083. Hence the company has been classified into “Distress” Zone for the years 2017, 2018 and 2019.

It can be stated with reasonable conviction that the financial performance of “Tata Motors” has been declining at a rapid rate. The company needs to take certain strong and drastic measures to pull itself out of this grim situation.

CONCLUSION

It can be observed and concluded with reasonable emphasis that according to Springate’s S Score Model, the financial health of Tata Motors Ltd is precarious. It has been classified under the distress zone for the last three years and unless some drastic turnaround measures are not implemented, the company faces a grave risk of financial failure and bankruptcy.

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Increasing Effectiveness of Payment of Labor and Pension Support of Employees of Customs Bodies

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Abstract

This article presents an analysis on the pension provision of customs officers, based on the specifics of their remuneration, using the example of basic salaries for employees of the customs institute and other higher educational institutions. Also, theoretical and practical proposals and recommendations on improving and improving the effectiveness of existing regulatory documents in the field of remuneration and pension provision are given.

Keywords: Budget organization, cash support, labor remuneration, sources of financing, pedagogical activity, scientific potential.

At present, the targeted and effective use of state budget funds in our country is gaining importance. In the Address of the President of the Republic of Uzbekistan to the Chambers of the Oliy Majlis of December 28, 2018, the following was emphasized: “To emphasize the need to further improve the system of efficient use of budget funds. Each program or project for which funds are allocated from the budget should have indicators aimed at the result, consisting of qualitative and quantitative indicators.” [1] This, in turn, reflects how urgent the task of the efficient use of budget funds and the proper conduct of budget accounting in the budget system is.

In this regard, it must be emphasized that in order to solve the problems of the efficient use of budgetary funds, as well as to study and control the completeness of funds to the budgets of the budget system, and to other funds created in the established manner, to improve tax and customs and budget legislation, The Law of the Republic of Uzbekistan No. 546 “On the Accounting Chamber” of July 1, 2019 was adopted. [3]

Article 17 of this law states that the Accounting Chamber, in order to fulfill its tasks, collaborates with state bodies and other organizations, and also exchanges information, including information in electronic form, and also exchanges information on data on persons involved to administrative responsibility for violation of budget and estimated staff discipline in the prescribed manner.

The effective implementation of the tasks of liberalizing foreign economic activity in our republic, increasing its investment attractiveness, and strengthening the country's export potential depends on the effective organization of the customs authorities, in particular, not using enough opportunities for material incentives for customs officers has a negative impact on prevention cases of corruption and the effectiveness of the system in general. In order to prevent these problems, taking into account the conscientious performance by customs officers of their official duties, their high level of professional training, moral and moral qualities, several decrees and resolutions were adopted by the Government of the Republic of Uzbekistan.

Based on these decrees and resolutions, the activities and structure of the customs authorities were reconstructed. In particular, a financial and business audit department was created. The main objective of this audit as a form of financial control is an internal audit, it consists in conducting a complete economic analysis of the financial and economic activities of customs authorities.

But in the Decree of the President of the Republic of Uzbekistan dated November 24, 2018 No. UP-5582, it is stated that from March 1, 2019 a “green corridor” is introduced, while for goods that have an average hazard level or are identified on the basis of random sampling, customs control forms carried out after their passage (export). Thus, it becomes clear that in order to ensure the fulfillment of the above regulatory requirements after completing customs clearance for imported goods and putting them into free circulation, it is imperative to establish a “customs audit department” as part of the SCC’s central office, and as part of territorial administrations “Customs audit departments.” Also, in article 188 of the current Customs Code, there are still no organizational and legal mechanisms for the

effective and targeted use of customs control after passing goods - the 12-form of customs control, as well as in article 201 of the Customs Code - subsequent customs control after the introduction of goods, and this gives the possibility of their execution. Their introduction is of great importance for replenishing the revenue part of the State budget with the State Customs Committee, namely for even more optimal fulfillment of the long-term plan assigned to it, as well as for implementing preventive measures aimed at preventing possible actions to violate the customs legislation by participants in foreign economic activity. [4]

In our opinion, based on the foregoing, a proposal was made to introduce the organization of customs audit into the adopted regulatory documents, taking into account the fact that the main task of official activities of customs officials is the correct collection of customs payments and timely transfer of them to the state budget. Also, the expediency of organizing an internal audit of financial and economic activities as a component (component) of the customs audit was noted. The main goal pursued by this proposal, as well as their results show that the activity of customs officers in collecting customs payments is to ensure that employees comply with customs legislation by subjects of foreign economic activity and to promote honest businessmen, as well as to ensure transparency in the collection of customs payments. The internal audit as part of the customs audit will implement such tasks as the complete and correct conduct of settlement operations carried out on financial and economic activities in all territorial customs departments, targeted use of the republican budget, minimizing costs and finding internal opportunities.

Another radical reform carried out on the basis of this Decree on accounting for labor of customs officers and the system of material incentives and remuneration is the use of tariff coefficients in the amount of 1.7 when determining the official salaries of employees of the bodies of the State Customs Service of the Republic of Uzbekistan, according to the approved categories of remuneration on a single tariff schedule starting in November 2018. Salary increases for customs officers for special working conditions are set at 50%, and for faculty members of the Customs Institute at 70%, with funding from special funds.

Sources of financing:

From the account of the Republican budget

At the expense of special funds.

Article 25 of the Law of the Republic of Uzbekistan No. 502 "On the State Customs Service" of October 18, 2018 established the types of social protection of customs officers. [2]

From the above scheme, we can conclude that if the basic cash security of customs officers is 60% of the total accrued cash security, and additions and allowances are 40%. The source of financing the basic salary of customs officials is the republican budget, and the main source of accrual of their pension are official salaries, salaries for ranks, allowances for long service and monetary compensation for food. But according to official salaries of employees on the basis of the Decree of the President of the Republic of Uzbekistan dated November 24, 2018 No. UP-5582 "On additional measures to improve customs administration and improve the efficiency of the State Customs Service of the Republic of Uzbekistan", the application of tariff coefficients in the amount of 1.7 at determination of official salaries of employees of the bodies of the State Customs Service of the Republic of Uzbekistan, according to the approved categories of remuneration for labor under a single tariff scale e. [4]

According to this adopted decree, sources of financing basic salaries of customs officers for salaries according to their positions in the coefficient of 1.0 from the republican budget and in the coefficient of 0.7 from the special fund of the State Customs Committee, at a uniform tariff rate were established. At the stage of calculating the pension, only official salaries of employees at the expense of the republican budget are taken into account. For example, we can compare the base salaries of faculty members working in other higher educational institutions of the Republic of Uzbekistan and the base salaries of faculty members who perform official activities at the Customs Institute, according to the following reconciliation table.

Based on the above schemes and the information in the tables below, we can conclude that, taking into account the results of the work of customs officers, based on their legal social protection, when calculating their pensions for pensions, regardless of the sources of financing basic salaries, it is advisable to use tariff coefficients in the amount of 1.7 when determining the full last official salary of employees according to the last position held, and amendments to regulatory legal acts on pensions for customs officers.

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Indian Women in the Digital World

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INDIAN WOMEN IN THE DIGITAL WORLD

The most popular word in today's era is "Digitalization." Without digitization, development is not possible. We can not achieve our development goals, which we aspire to as long as we do not digitize. People all over the world are using the Internet. Internet is also fully used in India. But in India, the number of men in the area of internet usage is much higher than women. The 'Digital India program' was approved on 20 August 2014 under the chairmanship of Prime Minister Narendra Modi. Most of the Indian women still have not got the facility of digital literacy. It may not prove beneficial for women until they have access to digital literacy. This means that women do not get the benefit of joining the online world. In a developing country like India, men have a monopoly on digital facility. If we look at the data, we find that more than half of the women in the country do not have mobile. For the dream of Digital India, India is moving fast in terms of using internet or mobile, but in this revolution, women are far behind men. As a result, despite the encouragement of digital literacy, a large population of women has not become literate.

The main objective of the study is to focus on women's trends in digital content. This paper analyzes what is the status of Indian women in digital literacy and what is the impact of "Digital India Program" on women empowerment. In this paper, 50 women have been selected to analyze the status of women's digital literacy.

Keywords: Digital India Program, Gender discrimination, Opportunity, Challenges.

WHAT IS THE DIGITAL INDIA PROGRAM?

Digital India is a visionary plan of the Indian Government, under which citizens from Kashmir to Kanyakumari will have access to the home through government services online facility. Digital India is actually a platform built by the coordination of the Internet, networking, hardware, mobile, computer, software, which connects the citizens directly to the government, simplifies the use of facilities and gives information about government services. With this facility no part of the country will be missed, the rural areas of the country will be connected to the fast Internet network. Digital India has three main components to make this plan a success.

1. Establishment of an effective digital infrastructure in the country
2. Digital services of services and facilities
3. Digital Literacy

Digital India is changing the nature of the program in which it is arranged to make all government services available to the public in digital form that is people can be directly involved in availing government services. Under the Digital India program, all government services are ordered to be made available to citizens in digital form. While ensuring the compulsory availability of government services in the digital form, where this program will accelerate public accountability, it will also provide the benefits of the latest information and communication technology to the citizens by providing easy access to government services. For the first time, the Government of India is running an ambitious campaign to bring basic services like education, health, banking and social welfare through door to door through the Digital India program.

The report by McKenzie Global Institute, 'Digital India: Technology to Transform a Connected Nation', reveals the fact that India is moving rapidly towards digitization. The number of Internet subscribers in India has reached 56 million and in this context, it is now ranked second in the world after China. The contribution of core digital sectors like information technology-business process management (IT-

BPM), digital communications, and electronics manufacturing to India's gross domestic product (GDP) may increase from seven per cent in 2017-18 to eight to 10 per cent in 2025, says a new report from McKinsey Global Institute. This is a proof that in the future of India, the digital sector has become more powerful.

REVIEW OF LITERATURE

Gupta and Arora (2015) “**Studied the impact of Digital India Program on rural area of India**”, The study found, in rural areas Several schemes have been launched in Digital India to boost agriculture sector and entrepreneurship. The Digital India program has also set the stage for the empowerment of rural Indian women.

Biswas, Suprio (2016) ' **Digital India : A Unique Step towards E-learning in India**', This research paper covers e-learning, e-Governance, mobile connectivity, information and communication technology for change in education. Analysis of this paper concluded that digital India programs help in using modern technology in education and also save time and money.

Shafiullah, Shaik (2016) “**Digital India : the Future of India**”, This research paper analyzes the role of the Digital India program in India's future creation. In this research, it was found that around 40% of the people living below poverty line are living in rural areas who do not have basic facilities, so the Digital India program will not be successful unless it is focused on these facilities.

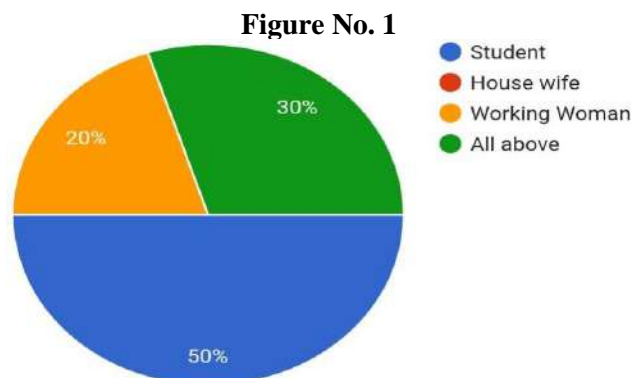
Khan, Saima (2015) "**Digitization and its impact on Economy**”, in the research paper, has highlighted the impact of digitization on the economy, under which information and communication technology is considered to be the basis of the economy. Through the digitization, social economic change can be done. Increase in employment and improving lifestyle and increasing knowledge can be included.

OBJECTIVES

- To study the concept of Digital India program.
- To study the impact of Digital India program on the development of Indian women.
- In this paper it is attempted to study whether there is gender discrimination in the use of digital content ?
- To know the challenges and Opportunities of digital world for women.

RESEARCH METHODOLOGY

This research paper is based on Primary and secondary data. The secondary data has been collect by various website, articles, journals and reports of various ministries. In this paper 50 women have been taken for the study, who are between 15 and 60 years of age. This research group consists of students, working women and housewives (As in figure No. 1. Is shown). What do you think about these women in terms of digital content? Data has been collected by primary sources to find out. The questionnaire method has been used to collect data. These women belong to diverse social, economic and culture groups.



Source: Data collected by researcher

In this paper, we have tried to find out in which activities women use digital resources the most and their answers are given in **Table No. 1**. It is clear from Table No. 1 that the maximum use of digital resources is done by women for Study and Professional, which makes their allegiance to development clear. Women use equal amounts of digital content for entertainment and shopping. The least digital content is used for other purposes.

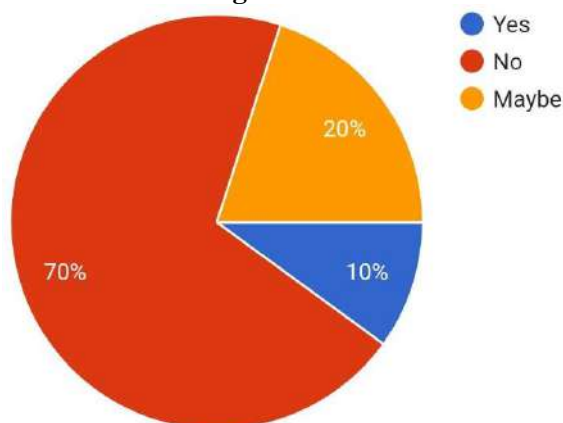
Table No. 1

Purpose of using digital resources	In %
Study	80
Shopping	50
Entertainment	50
Professional	60
Other	10

Source: Data collected by researcher

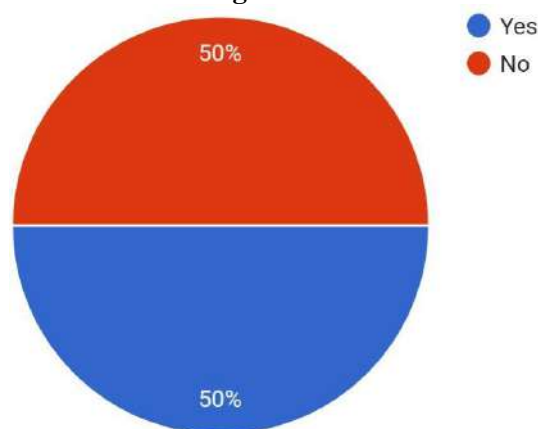
Do you believe that there is gender discrimination in the use of digital content, this question was asked from the women involved in the research, the answers received by them are shown in **Figure No. 2**. 40% of the women involved in the research believe that there is no discrimination of any kind against women. It is a reflection of the developed thinking towards women in the society. 10% of women believe they are discriminated against in using digital content, this research includes people of diverse socio-economic status, so women are still discriminated against using digital content Is confronted, which explains the narrow path towards women. There is a group of 20% women who do not express any definite opinion about this type of gender discrimination.

Figure No. 2



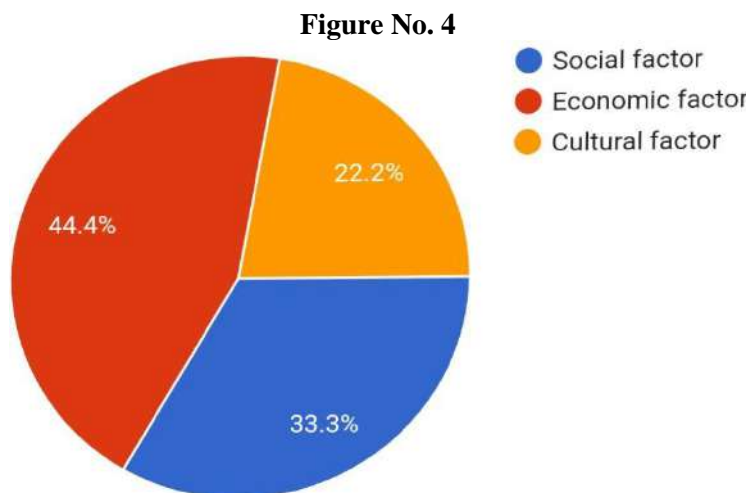
Source: Data collected by researcher

Figure No. 3



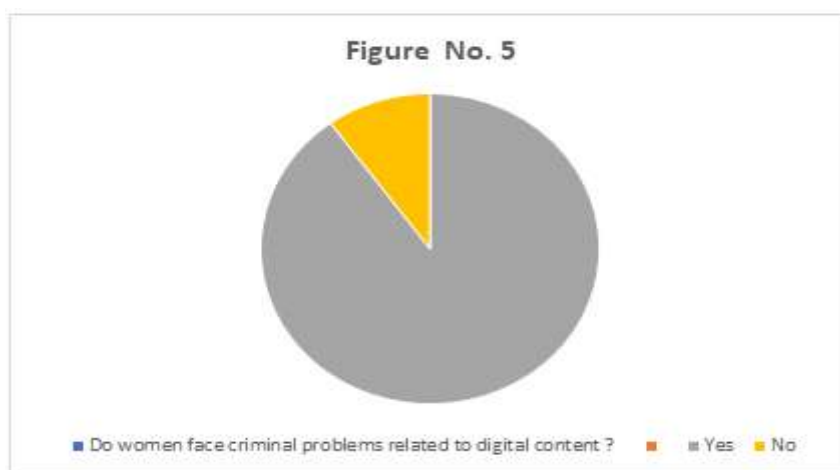
Source: Data collected by researcher

You are aware of the steps taken by the government to create digital literacy among women, in response to what 50 women have said, shown in Figure No. 3. 50% of women are aware of programs designed by the government to increase digital literacy. The same 50% women are also unaware of this type of program.



Source: Data collected by researcher

Which of the following components do you find responsible for the lack of digital literacy in women?, The answer given by the women included in the research group is shown in Figure No. 4. About 44% of women responsible the economic component to lack of digital literacy. On the other hand, 33% of the women are those who consider the social component responsible in the absence of digital literacy. There is also a group of about 22% women who consider the culture component to be the reason for the lack of digital literacy. In short, we can say that the women involved in the research group considered social, economic and culture all three factors as the reason for the lack of digital literacy.

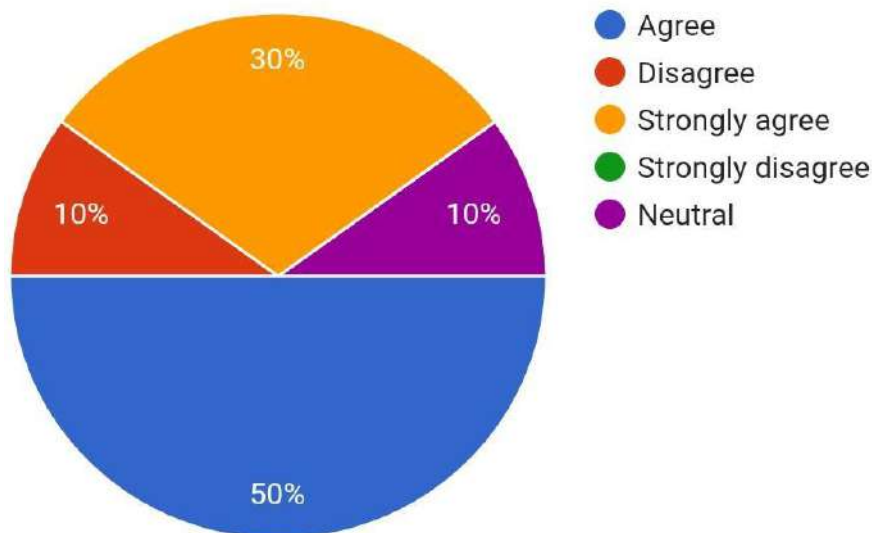


Source: Data collected by researcher

Do women face criminal problems related to digital content? In this context, 90% women believe that as a woman, they have to face this type of problem. This means that while using digital resources by women, there is a need to be alert to this type of problem. There are 10% women who believe that they do not have to face any kind of criminal problems.

As we are growing in the field of technology, we are also becoming active in the field of crime. Earlier violence took place in homes, on the streets, which could be controlled in one way or another. But it is impossible to control the Internet world. Online violence and harassment against women becomes a major problem. Cyber crime can not only break a woman mentally, but can also harm her physically and financially.

Figure No. 6



Source: Data collected by researcher

Should women use digital content for full development? 50% of women believe that the use of digital resources will lead to full development of women. 30% of women strongly agree that women should be development through digital resources. 10% women neutral and 10% women respectively disagree that women will develop only through digital resources.

Opportunities for Women in Digital World

Digitalization has revolutionized technology and communication, which has never happened before. With worldwide broadcasting capacity, it has changed the lives of billions of people, especially women. It is an important link of ideas, opportunities and resources. It paves the way for women around the world to imagine new possibilities and make the possible 'We Think Digital' is Facebook's global digital literacy program, launched in 2019 by Facebook, aimed at reducing gender inequality on the Internet. Recently Facebook has launched 'We Think Digital' campaign in Uttar Pradesh in association with National Commission for Women and Cyber Peace Foundation. Under this program digital literacy will be provided to about one lakh women in 7 states of India. This will bring positive changes in the coming days of the progress of Indian women.

Reliance Jio by Mukesh Ambani, the country's largest mobile data network, has joined hands with GSMA to increase digital literacy among women and improve sex ratio. The initiative, called Jio's 'Connected Women Initiative', aims to bridge the digital gap between women in the country and the gender gap of digital literacy and connect more and more women to the digital world. Under this initiative, Jio and GSMA will try to make women use digital services more and more.

The company has said that the use of mobile and internet technology has changed the lives of people in recent times, but the gender gap in the adoption of mobile phones in the country is very much visible. Jio has taken steps towards providing equal opportunities to all with its commitment to reduce this gap from the time of entering the telecom sector.

Launched in partnership with Tata Trust, "Internet Saathi" was launched in 2015 to enable women in rural Indian villages with internet skills. With equal access to information from an effort like "Internet Saathi", women are not only exposed to the knowledge of the world but also have increased possibilities to start new businesses.

Like the real world, digitization can also be an ugly place for women. But it also gives them a powerful tool. The #Me Too campaign showed how women can access their voices and concerns using digitization.

CHALLENGES OF DIGITAL INDIA PROGRAM FOR WOMEN :

- Over the years, many government services have been digitized and some of these are only available online, leading to inequality to women who are digitally illiterate.
- The digital divide created by the lack of reliable information, infrastructure and digital literacy can lead to social and economic backwardness of women.
- The most prominent problem in the digital revolution will be power. Therefore, we should also consider alternative use of electricity (like Solar energy).
- The biggest challenge faced by Digital India Programme is slow and delayed infrastructure development.

FINDINGS

- With a view to making women strong, independent and self-reliant, the schemes announced by the government should be widely publicized.
- Digital India program has made women aware of their rights due to easy access to information.
- Education in the women category, especially technical education training should be included.
- The Digital India program has also opened up the option of better education for women living in remote areas who do not yet have this type of facility.

CONCLUSION

The digital revolution in India is important because it has transformed massively in almost all sectors of society. To get the full benefit of this, it is necessary that the barriers facing them like digital literacy and lack of digital infrastructure etc. are removed in time.

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Mumbai Shopping Mall 24x7: Challenges and Sustainable Issues in Digital World

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ABSTRACT

The concept of mall segment in India has seen a colossal transformation in the last few decades. The changing lifestyles, living standard and new generations are transforming malls into retail destinations. Many FDI and other investors also looking a enormous profits in mal culture. Today in dynamic and digital world, the mall concept is not only restricted to Metro or cosmopolitan cities, but it is moving to a normal city and town depending on the business opportunities and living standard of the people of such cities.

Mumbai is a vibrant city where culture thrives. It always has a life of its own at night. It is one of the largest commercial capital cities of India where life of people runs 24 hours without any break. In such scenario, the concept of Shopping mall is very beneficial and profitable in Mumbai. The people of Mumbai want to shop and dine all night within a certain limit. The mall are not only the place for shopping but it become a destination for ample of activities and entertainment which include gathering, get together etc. Now the world is transforming towards digitalization and in such scenario, the sustainability of mall is really a tough challenge. The Maharashtra government is has permitted the shops and eateries of malls in Mumbai to be open on a 24-hour, seven-days-a-week basis from 27th January 2020, but no compulsion. Business owners have the flexibility to decide whether they want to do so or not. It has been permitted assuming to get enhancement in jobs and revenues, but whether it's a beneficial and effective decision, it required to check.

The study is based on this concept to find the sustainability issues of the shopping mall in towards digital transforming business model. The study has been done on malls of Mumbai and Navi Mumbai and tried to find the challenges in operating the malls for 24x7.

Keywords: Commercial Cities, Digitalization, Retail Destination, Shopping Mall, Sustainability

1. INTRODUCTION

Mumbai is city where people work for 24x7. Even today in competitive, vibrant and dynamic world, Mumbai gives a good platform to people to grow and perform. The culture and fast lifestyle of Mumbai feel difficult to differentiate between day and night time. In such scenario, the decision of Maharashtra Government to open the shops and Mall for 24x7 is really appreciable, considering the enhancement of revenue and economy. But there has been many questions arises whether these malls are getting profits and able to sustain in the era of online shopping. People prefer to shop online because of lots of cost benefits. In mall, normally the shops like eatables and entertainment games have flourishing business, but it is not thorough out the week. People are so busy that they are not able to visit to the malls on week day. Now a day, a Mall become a place for meeting of sales team, friends, and entertainment place and time pass for youngsters and college going students.



In such scenario, the decision to open the mall for 24x7 is really very challenging. Businesses and consumers will have some adjusting to do if the initiative is to succeed. And India as a rule of thumb takes time when it comes to making such adjustments. Even Mumbai, with its bustling night-life, won't find it easy.

Restaurants in and around commercial hotspots could be the biggest winner in the open-all-night move. But if the Mumbai move clicks, then a lot of good could emerge from it. For one, the city's brick-and-mortar retailers can expect some boost over the long term. The state government, obviously, will be another beneficiary.

PROBLEM WITH 24X7 MALL

Operational Cost; the maintenance cost of the mall will definitely increase which ultimately borne from the retailers and shops of the mall. The e-commerce market badly affected the business of these malls. In such scenario, hike in maintenance cost will be extra burden on the sops owners.



SAFETY ISSUE

A 24x7 retail cycle will have far greater implications than just about whether there will be enough shoppers and diners coming through. There is the matter of safety, for the woman shopper as well as staff working at such all-night establishments. The safety concern during the night will be very high. Accordingly the security authorities like Police, BMC, NMMC will have to more alert to avoid any inconvenience.

3. PROBLEM DEFINITIONS

- Many malls are not getting good business
- Many malls of Mumbai and Navi Mumbai have been closed down in last few years.
- The operational and maintenance cost of malls are getting high.

4. OBJECTIVES

- To study on various malls of Mumbai and types of business flourishing inside them.
- To study the reason for the down fall of the business of shopping mall.
- To study the criteria and preference of people while shopping in a mall.
- To study on the impact of revenue because of 24x7 operations of a mall.

5. RESEARCH QUESTIONS

- How many people prefer to shop from a mall?
- Did the shops owners inside the mall were getting substantial profit in business?
- What are the various reasons for people to visit a mall?

6. HYPOTHESIS

H₀₁ There is no significant difference in revenue by keeping shops open for 24x7.

H_{0A} There is significant difference in revenue by keeping shops open for 24x7.

H₀₂ There is no significant difference in operational cost by keeping shops open for 24x7.

H₀A There is significant difference in operational cost by keeping shops open for 24x7.

7. RESEARCH METHODOLOGY

Method The study was descriptive and analytical, so a Survey method was used. A well-structured questionnaire was prepared and was administered to the respondents through a personal interview and other methods to collect the primary data. The questionnaire was divided into two parts. Part one is respondent’s profile and Part two was the main survey.

The sample to which the questionnaire was administered was based on random sampling techniques.

PRIMARY DATA

Primary data was collected randomly through the structured questionnaire in Mumbai and Navi Mumbai.

SAMPLE SIZE

The study was limited to those participants who willingly elected to complete the instruments in their entirety. The samples were the shop owners of the mall and the people visiting the malls. There were a total of 250 respondents targeted for the study, but only data of 241 respondents were found correct and selected for the study. It includes 61 shop owners and 180 people visiting the malls.

Case Processing Summary						
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Age_years	61	100.0%	0	0.0%	61	100.0%
Mall_Name * Age_years	61	100.0%	0	0.0%	61	100.0%

Table 1, Source: Primary Data

Gender * Age_years Crosstabulation								
Count								
		Age_years						Total
		Less than 20	20-30	30-40	40-50	50-60	Above 60	
Gender	Male	1	2	15	19	4	6	47
	Female	1	1	5	4	3	0	14
Total		2	3	20	23	7	6	61

Table 2, Source: Primary Data

Mall_Name * Age_years Crosstabulation								
Count								
Mall Name of the Mall		Age_years						Total
		Less than 20	20-30	30-40	40-50	50-60	Above 60	
Seawood Grand Central, Navi Mumbai		0	0	8	7	1	0	16
Inrobit, vashi, Navi Mumbai		0	0	4	4	2	3	13
Raghuleela, Vashi, Navi Mumbai		0	0	2	6	0	1	9
Little World, Kharghar, Navi Mumbai		1	0	4	4	0	0	9
R City, Ghatkoper, Mumbai		1	3	2	2	4	2	14
Total		2	3	20	23	7	6	61

Table 3, Source: Primary Data

Gender * BussType Crosstabulation									
Count									
		BussType							Total
		Apparel	Books	Electronics	eatable	Games	Jewels	Grocery	
Gender	Male	12	5	9	10	4	3	4	47

	Female	1	0	1	8	0	4	0	14
Total		13	5	10	18	4	7	4	61

Table 4, Source: Primary Data

SAMPLE DESIGN

The researcher relied upon simple random sampling technique, considering the research methodology and research type as per guidelines. A caution was exercised during the study that the respondents who did not show inclination to be a part of the study were not covered.

AREA OF RESEARCH

The study was taken in Malls of 2 Malls in Mumbai and 2 Malls of Navi Mumbai.

SECONDARY DATA

The secondary information or data was collected from newspapers, previous research articles and relevant websites.

RESEARCH INSTRUMENTS

A summated closed end questionnaire was used with different viewpoints of people. In this questionnaire, all the questions were positively framed to study the impact of independent variables like age, gender and profession on the dependent variable.

STATISTICAL ANALYSIS

Efficient and effective data analysis is the result of effective data preparation. This was found to be very crucial between the completion of the field work and the statistical processing of the collected data. Data preparation involved transferring the questionnaire into an electronic format which allowed and facilitated subsequent data processing. Data sheet was prepared directly at Statistical Program for Social Sciences (SPSS) software for further analysis.

On the basis of the datasheet tables were prepared for the analysis.

8. ANALYSIS & FINDINGS

8.1. HYPOTHESIS ANALYSIS

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Weekend increase in Business	61	4.07	.854	.109
Business increase_night	61	2.44	1.009	.129
Operational Cost increase	61	3.51	1.105	.141

Table 5, Source; Primary Data

One-Sample Test (t-Test)						
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Weekend_Bussiness	37.191	60	.000**	4.066	3.85	4.28
Bussiness increase_night (H ₀₁)	18.913	60	.000**	2.443	2.18	2.70
Operational Cost_increase (H ₀₂)	24.799	60	.000**	3.508	3.23	3.79

Table 6, Source; Primary Data

8.1.1: HYPOTHESIS H₀₁

Reference to Table 5 & 6, the calculated t-value of sample (0.00) is less than critical value 0.05 in all the three cases. So, Null Hypothesis is no accepted. This reflects that there has been difference in revenue generation by keeping the Mall opens for 24x7. As per the shop’s owner or Manager on duty, it

has been found that most the revenue generation will definitely increase by keeping the open 24x7. But it will vary from product to product.

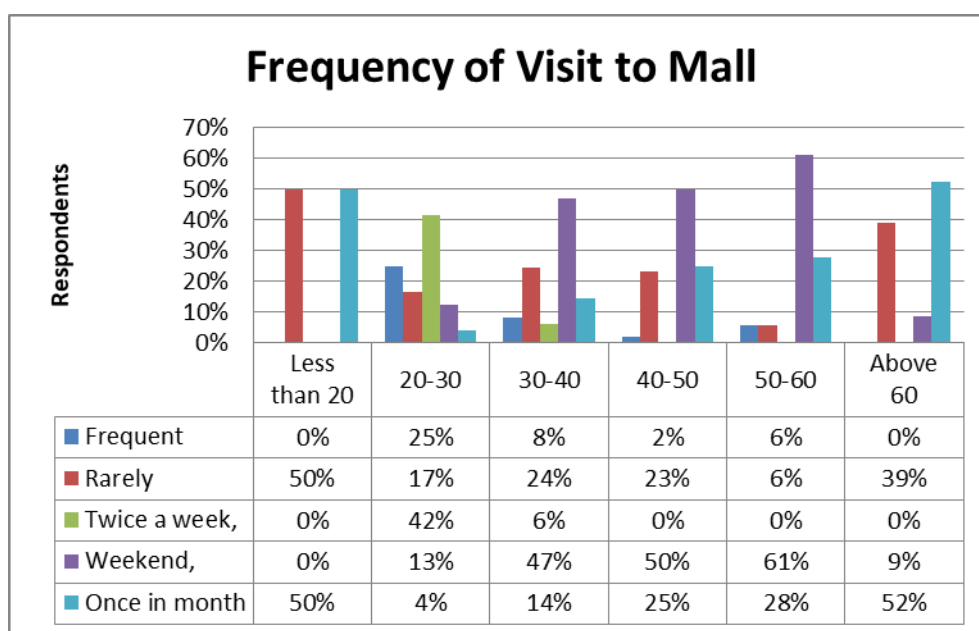
During study, many shop’s owner of eatable told that they will get benefited by keeping the mall open for 24x7, whereas few shop’s owners of Apparel and Electronics Sector told that there will be no much effects on their business by keeping shops open on 24x7, in fact it will create more expense in terms of security and electricity charges.

8.1.2: HYPOTHESIS H₀2

With reference to table 6, the calculated t-value of sample (0.00) is less than the critical value of 0.05, which shows highly significance. Many shop’s owners of eatables told that they may have increase in revenue by keeping shops open at night, but on the other hand it will increase their operational cost which includes the manpower, security, electricity charges etc. They also told that they were not sure whether it will help in enhancing the overall profit. Few of the eatable shops owners told that maximum profits are on weekends, so instead of all days, they can open the shops on weekends and hire the manpower as per the requirement on weekends only.

The owner of other shops like Apparel, Electronics and Games told they will not get maximum footfalls during night. Few of the owners of Apparel told that the todays customers prefers to buy Online, so it can be 24x7, then why they will prefer to visit. And coming to buy at night, it’s difficult for them too because of the difficulties in getting transportation facilities.

8.2. FREQUENT VISIT TO MALL



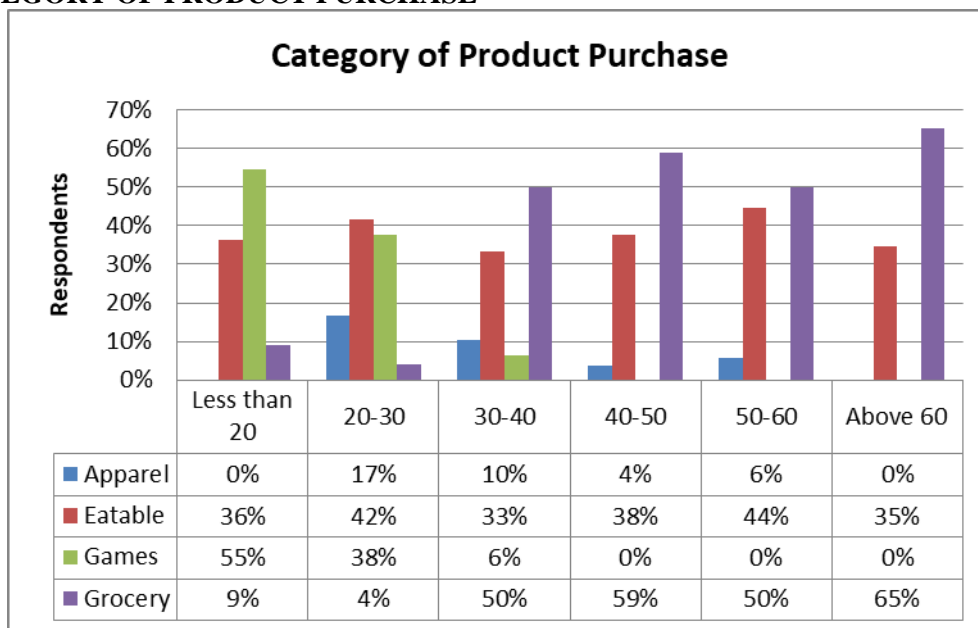
Graph 1, Source: Primary Data

Graph 1, reflects the frequency of the visit of people in Mall. The result reflects that maximum footfalls were on Weekends and it includes the people of age group between 30-50 years. The study shows that 47% of people having age bracket of 30-40 years prefer to visit on weekend, whereas 50% of the people of age group 40-50 and 61% of age group 50-60 years also prefer on weekends. During it has been found it because of their busy schedule in their job. Few if the people e told that they prefer to visit on weekend with their family to have fun and refreshment.

The result also indicates that 52% of the people of age bracket more than 60 years also prefer to visit on weekend basis. Few of them told that they accompany to their ward or grandson or granddaughter for refreshment, shopping or gathering.

The study also indicate that the people of agree bracket less than 20 years were rarely visit the mall as most of them were students and they occasionally visited. Few of them told they accompany with their parents or may be gather for birthday celebration of their friend.

8.3. CATEGORY OF PRODUCT PURCHASE



Graph 2, Source: Primary data

With reference to graph 2, maximum footfalls were for eatable in almost all the age bracket. The footfalls were found Maximum for eatable for the age bracket of 50-60 years. During it has found that many people of age group above 60years prefer to purchase Grocery more than other product category. Few of the people told that they prefer to purchase grocery from Big Bazar or hyper city because of the easily accessible and availability if the product at one roof.

9. CONCLUSION & SUGGESTIONS

The study concludes that the maximum footfalls in Mall are for Eatables and Apparel Purchase. Because of the increase in Online Shopping with lots of financial benefits like discount, cash back etc, many people prefer to buy online specially Apparel and household items. Many people prefer to buy Electronics items from shop. The visit of youngster was maximum in Mall, but most of them were for Games or eatables.

The study concludes that keeping a mall open for 24x7 has lots of challenges in terms of safety and security. The business will not be effective and profitable all the days during night, but can be increase on weekends. It also conclude that the incremental growth in business will vary from product to product in night. The business of Eatables will definitely increase, but to some extents and it may be more on weekends.

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Reviewing existential threats involved in Fintech

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ABSTRACT

Financial sector of the country has witnessed continuous disruption from the past few years. Disruption is everywhere and to address, the innovative approaches are adopted continuously. Despite gaining absolute power financial sector in any economy as always faced the destruction and challenges coming from the technological advancement. The retail banks around the World are struggling to transform due to technological advancement to stay relevant or otherwise risk of obsolesce or being confined to a limited utility role. The overall progress of banking service innovations is derived by its adoption across all age groups, but the demand from millennial for the financial services and its innovations has been catalyst in disruptive change. The fast pace of technological disruption can dramatically change the market conditions in the short time. Initially the regulatory environment restricted the entry of firms but slowly gradually these are relaxed. In digital world retaining customers hinges on creating value for them and on enhancing the quality of their lives from mere financial transactions. This is where the role of fintech is crucial in transformation of global financial sector and also needs proper measures to address the existential threats along the way. This article is a brief finding of the primary interaction with financial technology adopters with references to their preferences and concerns with the fintech. The study finds important concerns of data protection and fraudulent transactions which needs to the crucial attention of fintech companies as the technological innovation will be on rise continuously with increasing disruption.

Keywords: Fintech, Disruption, Cyber crime, cyber security, data protection

INTRODUCTION

Promoting digitalization has been the main focus of Indian government by way of providing most services on the web portals or electronically with the main motive of making transaction smooth and transparent. The Indian government launched the revolutionary reform known as digital India in 2015 under which it envisioned increased internet connectivity and making India a digitally empowered nation. This was also seen as being an engine propelling the growth of businesses employment opportunities and more transparency in major business sectors of economy as a result there was increased internet penetration, improved digital services, availability of skilled IT workers, start-ups promoting ICT services. Government supported through various schemes and services thereby fostering economic performance. However in spite the government efforts towards increasing ICT goods and services in the economy there is a clear digital divide in the nation which gives insight into economic and social concerns. Apart from the internet connectivity the government has also made efforts towards increasing mobile connectivity in mobile phones especially in rural areas where internet use is not widespread. However a gap in the provisions and use of ICT goods and services is still prevalent in terms of mobile phones.

The impact of ICT on welfare is much beyond its effects on economic growth and income inequalities. It can help in various ways in dealing with corruption and other issues first moving certain public services online can save citizens time and diminished the effort previously allocated to monotonous and stressful task secondly through increased access to information individuals can have better information about this society increasing their sense of belonging to the community as well as their safety for example in India citizens can register wherever they have been asked to bribe government officials and the reports are send to government officials and the media. To increase transparency and the quality of life among citizens this can decrease the spread of bribery and corruption increasing trust and well-being. The digital communication tool also enable more rapid and transparent interactions between citizens and public authorities through online portals for government services for improving civil engagement among citizens. Though the ongoing digitalization of the customer interface with their financial service providers offers great improved services but at the same time it brings far greater risks

to the providers and also its customers. There are no precise estimates for a global financial sector fraud that runs into losses of involves the billions of dollars. Financial sector frauds through internet are massive and ever growing problem.

Digital payments are increasing rapidly according to the Global fintech adoption index 2019, India is becoming a four runner in global financial technology. Fintech adoption at 87% along with China and the data from RBI highlights that the total volume of digital payments increased 9 times over the past 5 years this has been given extensively by innovations in fintech and integrated pain and platforms this growth This rise in digital payments has not only opened multicolour venues for the businesses to explore new online payment services but also encourage customers to prepare for this mode in almost all aspects of the daily lives from small value transaction to a very large purchases the convergence of technology E-Commerce social media and the payment platforms being simplified increase the transactions and provide more and more convenience to the users. However there are roadblocks to this adoption of digital payment that the biggest one being the frauds, data protection issues security concerns, infrastructure requirement and the lack of awareness about the risk link to the digital ecosystem

REVIEW OF LITERATURE

Lee and Shin (2018), introducing a historical view of fintech and discussed the ecosystem of the contract sector. Many studies have identified the impact of fintech in the financial service industry worldwide. (Guild, 2017) The business of fintech in the financial services industry needs to instantly focus on development of financial innovation and technology market provide assessment of existing practices applied and identify the main risk related to the development of fintech and financial innovation the banks are exposed to. (Romanova & Kudinska, 2016). it is found that customer test data security and design interface affect the adoption of fintech in the industry(Stewart & Jürjens, 2018). Assessment of regulatory risk is fundamental. Uncertainty business planning is very difficult and the financial and the compliances cost of regulation has been sufficient to see some new (Skan, Dickerson, & Masood, 2015).companies exist in market. (Allen & Overy, 2017).

The financial losses due to use of fintech has brought about breakdown of the budgetary exchange framework, monetary misinterpretation, moral danger, extra exchange expenses connected. (Zavolokina, Dolata, & Schwabe, 2016), there is a positive relationship in perceived risk of fintech security system to the potential misfortune in the light of extortion or hacking that begins the security system of financial deal of fintech . (Lwin, Wirtz, & Williams, 2007). The utilisation of fintech is joined with the challenges of trust and secrecy, loss of individual information and personal data are the perceived risk of use of financial technology. (Schierz, Schilke, & Wirtz, 2010).

There needs to be done lot more so far as cyber legislation is concerned. The several countries like Morocco, Bahrain, Oman, Saudi Arabia and UAE have taken active steps to enact the cyber crime laws and introduced dpecial systems. Some of the laws in some countries expressly aims at protecting the electronic transactions and prosecuting the cyber crime. (Aboul- Enein, 2017)

RESEARCH METHODOLOGY

The research uses the primary data collected from 50 respondents using the questionnaire to understand their preferences and concerns relating to the financial technology usage, Mumbai being the business capital of India was selected as the research area where personal interaction was carried out using the structured questionnaire. Descriptive analysis is used to analyze and interpret the information collected. The data was collected from people using fintech frequently for their transactions.

DISCUSSIONS AND FINDINGS

60% of the respondents are millennial using fintech for financial services 78% of the respondents prefer branchless financial provider having a strong digital presence. So use of fintech is on rise and fintech firms need to better articulate more benefits of technology for banks to increase their customer base.

Usage of fintech for various reasons has actually helped people and businesses. 24 % of respondents use fintech for raising funds from various sources through digital sales and innovations which has help them to gain funds from the investors. Convenience lifestyle many benefits time and place undertaking

transactions volume time resulted into degree of transparency in the transactions. 66% of the people use fintech strong innovations and 20% for attractive and innovative product and services

On reading terms and conditions of application-55% of people using financial technology applications don't go through the terms and conditions thoroughly only 45% of the people agreed terms and conditions this shows the greater degree of risk customizer exposed to while using the technological innovations in financial services.

Convenience for sure, is one of the most concerned benefits after people using Fintech. In terms of convenience, people can think of time and difficulty of using Fintech. However, what convenience can give to the people is the flexibility and efficiency of doing any banking services. Therefore, as long as Fintech gives convenience to the people who used it, then they basically will continue to use it in future.

75% of people use fintech for money transfer and payment services 50% of consumers use insurance fintech services. More than 90 percent of respondents are aware of majority of fintech services. 89 percent of consumers are aware of existence of in-store mobile phone payment platforms.

90% of people receive at least one fake message every day. 60% of people have come across fraudulent transaction in which their own friend or relative of somebody in the network have lost great amount of money. Out of majority of which agree that once fraudulent transaction happened there is no way out the victim has not yet received any kind of claim or have been able to get resolution of the matter.

The use of fintech is highest among the milenials and this seems to grow. It is obvious that with the growing disruption the innovations will increase and further these innovations leading to increasing threats. There is still greater degree of information asymmetry and also financial and cyber crime literacy and cyber security guidance needs to follow in the larger ways.

CONCLUSIONS

Majority of people prefer fintech due to its range or functionality and features and its 24/7 availability. Disruption is everywhere and innovation is at the forefront. Recent advances in technology have led to expansion and development of new and innovative financial services often called as financial technology. Fintech has attracted great public attention and also growing investments. Fintech brings new opportunities for the businesses by increasing the transparency reducing the cost and cutting the middleman making information more accessible. Fintech companies are currently expanding their businesses beyond the online into the mobile commerce such as mobile payments and remittances and unlike the usual traditional banking; there are various benefits of fintech. But at the same time it poses heavy threats and risk issues leading to loss of financial outcome, extra fees, legal uncertainty, and vulnerability of the security technologies. Inadequate processes of the systems of fintech companies and due to great security concern, fintech companies are challenged particularly to increase the potential benefit and reduce the potential risk associated with the financial technology adopted to provide utmost customer satisfaction. The perceived benefits of fintech includes economic benefit convenience and the transaction process that is ease of doing out of these economic benefit is most common and consistent the transaction cost loss the capital cost compared with that in traditional financial services has benefited customers. Convenience refers to flexibility in timing of use.

Fintech has changed the way people think about their financial services and raised the bar of expectations via true digital products digital Customer services and transparency. Fintech follows a customer centric approach which makes it the biggest differentiator. By providing the high standard of customer service and take a customer centric approach when it comes to designing and delivery of the product and services, fintech has successfully faced the demands of the global However however many people fear the risk of fintech and believe that they can not do anything to protect the privacy of data. But there are simple steps to dramatically reduce the online tracking and the to protect the data which requires more and more awareness of the risk management in the cyber-crime and financial literacy in terms of the financial impact. Fintevh companies had a minimal impact on the banking sector up until this.

From fintech companies perspective some of the important advantages of fintech are keeping in pace with the speed of change and innovation and also approaching to the new risk that are constantly

emerging cross border transactions at a fast transactional speed but all these requires fintech to adopt to stronger risk measurement that will match with the same speed and the proper management of the risk of fraud and regulatory risk, anti money laundering and granting terrorist financing, consumer risk cyber security and data privacy, credit risk and operational risk and outsourcing risk. Importance of risk management is crucial and needs first attention along with the process of dealing with the risk and compliance matters.

Managing risk and improving secured access to the customers includes secured data sharing change of the data ownership. There are greater challenges involved in managing customer access to the solutions and services due to data protection and security concerns. Hence it becomes increasingly important to address the issues of cyber crime. The concept of live data labelling, selected data sharing and identity aware data sharing hold possible solutions to the problem. Managing the digital identities of individual enterprise is a major concern for the fintech companies. The use of mobile phone as authentication devices, use of bio metrics one time password and code generating application that is the Google authenticator has reduced the reliance on conventional digital identities. With the increasing evolution and leverages fintech and the innovative services available to the customers through smart phones and laptop, Cyber security specialist need to revisit the conventional security models to redesign taking into consideration the trends and the existential threats from the customer's point of view. Security being the integral part of the fintech and its solution lies with the service provider. There is also need for restricted data sharing and in a regulated way. Numerous measures are taken to reduce the cyber crime and increase the security but still lot needs to be done more importantly from the service providers at the base level. Lastly with the financial literacy, there is need for information spread and awareness drives in numerous ways regularly to make more and more people awake, aware and reminded of cyber-crime.

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Sustainability and GIS: A Case Study

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ABSTRACT

*Geographic Information System or Geospatial Information System could be a set of tools that captures, stores, examines, manages and presents knowledge that may be coupled to locations. GIS is a combination of cartography, applied mathematics analysis and information technology. GIS is a very dominant system that uses location to integrate and show information. It is well suited for addressing complex concerns which require an integrative approach with the help of technical tools. It acts as a major decision support system for spatial concerns. The **objectives** of the research paper are to establish importance of GIS in the digital world, to explain the importance with the help of case studies using a GIS tool and to illustrate the usefulness of the GIS tool in bringing sustainability. The paper is based on secondary data. Ecological fragility is one of the major challenges while considering development or sustainable development for an area. This is because, ecological fragility is a natural phenomenon which cannot be changed by mankind, rather it may aggravate due to disturbances caused by man. Hence, areas which are prone to desertification, river shifting, flooding, drought, famine, etc. are the most challenging areas while planning and policy implementation. However, if GIS tools are appropriately used, it will help to understand the reasons behind the fragility in a better way. It will further help understand the trend of changes and resultant disasters. This can further help in devising better policies. GIS should be a part of the basic technical education so that one can advance on its knowledge with proceeding years of education. It must be introduced in all the information technology companies and training must be given to the concerned personnel.*

Keywords: GIS, Sustainability, Ecological Fragility, Technical Education, Training

INTRODUCTION

Artificial Intelligence and other digital technology have great potentials to help solve world's major issues in a better way. It can help predict future problems and find solutions in the present itself. It can therefore direct us towards a sustainable world. Out of the many available options, Geographical Information System (GIS) is one such option. Geographic Information System or Geospatial Information System could be a set of tools that captures, stores, examines, manages and presents knowledge that may be coupled to locations. GIS is a combination of cartography, applied mathematics analysis and information technology. GIS is a very dominant system that uses location to integrate and show information. GIS has an immense opportunity in today's dynamic world. In the recent years, the reach of GIS has grown hugely. It is being applied for helping businesses identify new customers to making natural disasters response more effective. GIS now has been accepted as an essential computing infrastructure for every organization. Even in Sustainable Development Goals from United Nations, GIS is used for reporting and tracking progress of each goal. The public use of GIS has increased over the years resulting to more people accessing GIS using web and portable devices.

REVIEW OF LITERATURE

(Rao, 2000) The combination of spatial and aspatial data in GIS enables one to work with geospatial environment in collaboration with other aspects at the same time. This helps in predicting the possible loss and create a list of sustainable measures to bring in sustainability. Though many applications and tools are available, GIS is by far one of the best tools for a sustainable approach in the present era where everybody and everything is going digital. **(Campagna, 2006)** GIS may be considered as the one of the most powerful tools available for dealing with complex problems which are spatial in nature. GIS can help to solve spatial problems with economic and social perspectives. It may offer support to spatial planning and decision making. Since most of the problems coming in the way of sustainability are spatial, GIS can serve as the best tool for finding solutions. **(Nyerges and Jankowski, 2010)** GIS technology is an integrative technology which has the potential to lead towards a sustainable approach by understanding the past and present trends and predict the future. It is well suited for addressing

complex concerns which require an integrative approach with the help of technical tools. It acts as a major decision support system for spatial concerns.

RESEARCH OBJECTIVES

- To establish importance of GIS in the digital world
- To explain the importance with the help of a case study using a GIS tool
- To illustrate the usefulness of the GIS tool in bringing sustainability

RESEARCH METHODOLOGY

The present paper is based on secondary data collection from various online sources. The literature review has been completed using several online sources. The satellite data has been collected from relevant and reliable sources to illustrate the use of GIS in the digital era. The detailed methodology is as follows:

- **Coverage**

The study area (Fig: 01) is extended between 26° 15' 50" and 27° 17' 00" North Latitudes and 88° 13' 40" and 88° 52' 58" East Longitudes. It is bounded in the north by Bhutan and Sikkim, in the east by Assam, and the south by Bangladesh and Koch Bihar district of West Bengal and in the west by part of Bangladesh and parts of districts of Darjeeling and Jalpaiguri districts.

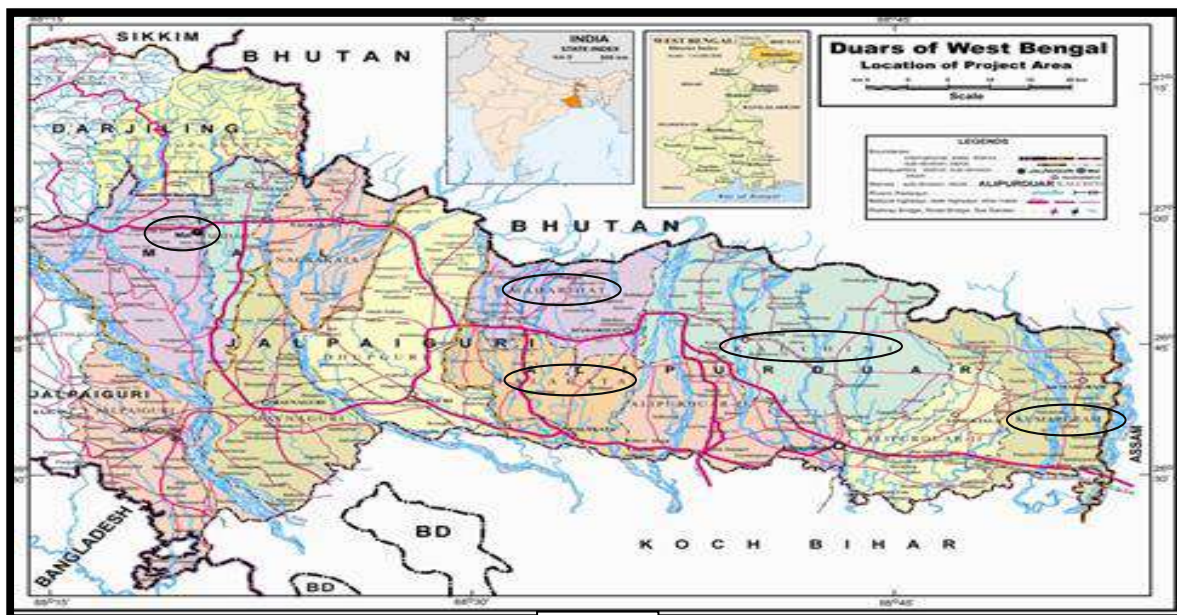


Fig: 01

- **Data Collection**

The satellite data for performing NDVI and identification of shifting of rivers has been downloaded from the official website of ISRO's BHUVAN.

- **Data Analysis**

NDVI calculation was done in ERDAS Imagine by running the indices option. River shifting has been identified by using digitization tool in ArcGIS software.

RESULTS, ANALYSIS AND DISCUSSION

The paper illustrates the use of NDVI tool in GIS. NDVI for the present area was carried on for assessing the forest cover. The Normalized Difference Vegetation Index (NDVI) is an index of plant "greenness" or photosynthetic activity and is one of the most used vegetation indices. It is a ratio that defines "greenness". This is a ratio indices for vegetation.

NDVI provides a simple estimation of vegetation health and a means of monitoring changes in vegetation over time. It varies between -1 and 1.

Case Study 01

Originally, the Duars was covered with forests. The swampy wet land helped to grow natural forest. In the initial years, forests were damaged to establish tea gardens. As population increased, the requirement of cultivable land also caused clearing of vast forest area. At present, forest degradation has become a serious problem in the study area. Here, the dense forest has increased marginally, and the degraded vegetation has increased substantially. In the present study, we use a vegetation change detection analysis based on the NDVI differencing technique to find out forest cover changes related for the study area block wise. According to the purpose of the study, only negative variations of NDVI are considered, with the exclusion of positive changes that were considered negligible. Negative changes of NDVI, in terms of loss of forest cover, are mainly represented by NDVI. In the study area the problem of deforestation or degradation of forest is quite acute.

Table 01: Amount of Degraded Vegetation and its Percentage in the Study Area

	Degraded Vegetation (2013) in sq. km	% of Degradation to the Total Degradation
Mal	1.14	0.65
Madarihat	7.44	4.26
Kumargram	35.17	20.17
Kalchini	13.32	7.64
Falakata	4.28	2.45
Total	61.35	35.17

If we analyze the block wise forest cover change using NDVI Model we find that in the blocks under study there is a change in the amount of dense forest and degraded vegetation in the time frame of 23 years.

Table 02: Block wise Forest Cover Changes in Duars Using NDVI Model

Blocks	Land use	1990 Area (in Sq.km)	2013 Area (in Sq.km)	Change in land use from 1990 to 2013
Mal	Degraded Vegetation	1.817	1.14	-0.677
	Dense Vegetation	64.267	60.89	-3.377
Madarihat	Degraded Vegetation	0.44	7.44	7
	Dense Vegetation	73.55	73.35	-0.2
Kumargram	Degraded Vegetation	17.95	35.17	17.22
	Dense Vegetation	121.95	110.27	-11.68
Kalchini	Degraded Vegetation	9.31	13.32	4.01
	Dense Vegetation	408.46	461.31	52.85
Falakata	Degraded Vegetation	0.45	4.28	3.83
	Dense Vegetation	22.81	26.85	4.04

In Mal block degraded forests have decreased marginally and the amount of dense forest has also become less. In Madarihat block there is a negative growth of dense forest as it shows about 0.2 sq. kms decrease and again in case of degraded forest 7 sq. kms has been added within a time window of 23 years. So, in Madarihat block a large amount of degradation is noticed which is a matter of concern and concrete steps are to be taken to stop degradation in this block. In Kumargram block there is a negative growth of dense forest as it shows about 11.68 sq. kms decrease and again in case of degraded forest there is a rise of 17.22 sq. kms within a time window of 23 years. Here much of the dense forest has been converted to degraded vegetation. In Kalchini block there is an increase in dense forest cover as well as degraded vegetation within a time window of 23 years. In Falakata block there is an increase in dense forest cover as it shows an increase of about 4.04 sq. kms and again in case of degraded forest there is a rise of 3.83 sq. kms within a time window of 23 years.

In all the blocks there is an increase in degraded vegetation. Increase in degraded vegetation increase the rate of erosion and other hazards which may cause the damage of livelihood. Shifting of river is a major reason for such increase in degraded vegetation in the study area.

Case Study 02

In the present study, satellite imageries (LANDSAT-TM) are considered for the delineation of the bank line of the study area. After digitization of riverbanks of the year 1990 (Fig: 02) and 2013 (Fig: 03) images and overlay of the two layers, it appears that there is a major shift in the river channels. When the field data was correlated with the drainage maps it showed that this is happening because of manmade bunds and several new subdivisions coming up as built up areas. This is one of the major causes of floods as this obstructs the natural flow of water.

Ecological fragility is one of the major challenges while considering development or sustainable development for an area. This is because, ecological fragility is a natural phenomenon which cannot be changed by mankind, rather it may aggravate due to disturbances caused by man. Hence, areas which are prone to desertification, river shifting, flooding, drought, famine, etc. are the most challenging areas while planning and policy implementation.

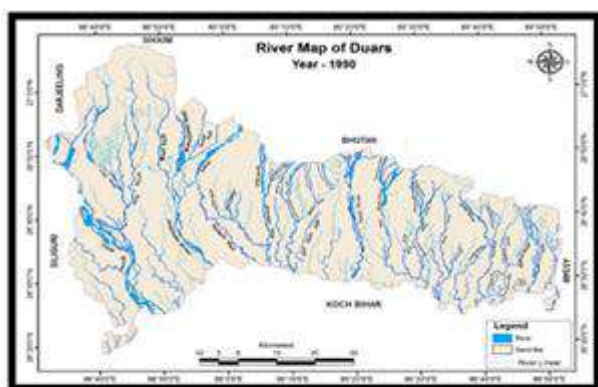


Fig: 02

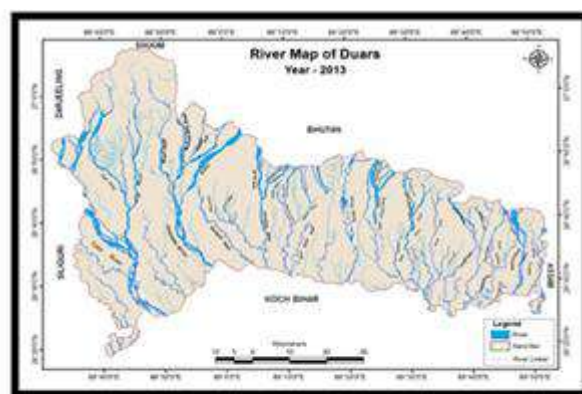


Fig: 03

However, if GIS tools are appropriately used, it will help to understand the reasons behind the fragility in a better way. It will further help understand the trend of changes and resultant disasters. This can further help in devising better policies.

In the first case study, desertification has been predicted. The trend and direction can help predict the areas that may be affected in near future making it clear which areas need to be taken care of immediately and how.

In the second case study, flooding due to shifting of the course of the river is taken into consideration. Once this is known, prediction of future shifts can be made as the shifts are due to manmade obstacles like bunds, dams and construction activities. Therefore, it can be understood that man is a major hindrance in the area and his hindrance is causing damage to himself and the surroundings in a great way.

The above would not have been possible to understand and predict easily and at the time without the help of GIS technology. It would have taken a long time to collect data in the field and undertaken spatio-temporal analysis. Moreover, it is difficult to reach the fragile areas without risking life. GIS makes it easier and faster. With the help of satellite imageries using remote sensing technology and further processing using GIS technology, the process became faster, easier and more reliable.

Thus, it can be said that GIS is a powerful tool to bring in sustainability as it helps to understand the future dangers and plan for them in the present. It therefore helps to save the spaces for future generations without compromising the needs of the present by providing present and future trends and solutions.

CONCLUSION

Sustainable development or sustainability refers to understanding the needs of the future and acting upon their fulfillment from present itself. Earlier the concept was limited to physical resources alone, however, researchers have brought to light that taking care of each aspect whether physical or manmade is of utmost importance. Further research in the same direction led to invention of newer methods through which sustainability can be brought in and future implications can be removed. The present case study shows that Geographic Information System (GIS) can work as a powerful tool in determining the present rate of deforestation with the help of past data. This helps us understand the rate of deforestation and its direction. Once this is known, apt policies and schemes can be formulated to minimize the ongoing deforestation in the area and sustainability can be brought in.

RECOMMENDATION

- GIS should be a part of the basic technical education so that one can advance on its knowledge with proceeding years of education
- It must be introduced in all the information technology companies and training must be given to the concerned personnel
- GIS can be integrated with all sectors of the economy and society to give quick solutions to the problems
- GIS must be explored further to develop newer tools for bringing in sustainability in the world with the digital wing alone

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The Challenges of Leadership Styles in Digital World with reference to educational institutes from Mumbai

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ABSTRACT

In the view of multinational environment at all the organization and functioning parallel with other countries our challenges and opportunities increasing at every level. Leadership styles changes or modified at every wind flow of demands and expectations. Operational leaders Inspiration and direct the performance of their associates or group towards the achievement of goals. Leadership inspire, support, instruct and guide their teams through challenges and create more opportunities. Transformational leadership method that sources change in individuals and social systems in organization to followers. Leadership networking is about developing and using your networks in a way that builds relationships and strengthens associations in provision of the organization's work and goals. Management leadership is about finding ways to meet the needs of your employees and of your organization. Effective leaders are often flexible and are able to change their style of leadership to suit changing circumstances.

Keywords: Leadership challenges, leadership development, transformational leadership, network building, management styles.

1.0 INTRODUCTION

The greatest business opportunities and also the greatest challenges are global – and demand leadership who can move the company forward in the face of these challenges and find new opportunities. Leadership style in an organization is one of the factors that play significant role in enhancing or retarding the interest and commitment of the individuals in the organization.

“The Roots Of Our Problems Are: Wealth Without Work, Pleasure Without Conscience, Knowledge Without Character, Commerce Without Morality, Science Without Humanity, Worship Without Sacrifice, Politics Without Principles.” - Mohandas K. Gandhi

Running a successful global company requires solid in-the-box thinking and planning, as well. Analyzing and correctly interpreting facts on which to make decisions (a tendency among leaders thought of as “conservators”) is clearly a critical part of business execution. Transactional or operational excellence may, but often does not, reside in the same leader as transformational excellence. In this case, it is important to have both visionaries and conservators on the leadership team.

Leadership styles of leader are known to affect performances of the organization, it is also established that business direction also has a positive impact on the business performance of the organization.

2.0 OBJECTIVE OF THE STUDY

- To study the concept of Leadership style in global business w.r.t Academic & Educational Institutes / Department.
- To understand the Leadership networking to create good atmosphere and culture at education and academic sections.
- To implement Leadership Style is implementation in education sections.
- To develop capabilities of Leadership styles in all individuals working in an education / academic administration association in relation to their present role.

3.0 LEADERSHIP STYLES

- **Directive Leadership: A Culture of Consistency**

Directive leadership utilizes a pyramid structure, with power flowing from the top down. Those at the top give those at the bottom specific instructions and tasks. This style doesn't encourage an organizational culture of collaboration in which leadership is characterized by dialogue, openness, or collaboration. Instead, directive leadership creates class distinctions based on each person's position in the organizational hierarchy. Rewards and punishments are used to control workers—and the overall organizational culture. That's why this leadership style is sometimes called "coercive management."

Culture of consistency. Directive leadership is known for consistency. Leaders establish specific values and behavioral patterns, and others are expected to follow. The result is predictable, consistent employee performance and overall organizational culture. However, that organizational consistency comes at the expense of organizational agility. Research shows that team members need flexibility and dynamism to meet changing market forces or circumstances with innovation and creativity. Additionally, team members are more likely to "buy in" to whole-system change when their voices have been heard in the planning process. Unfortunately, this is not a characteristic of directive leadership, which emphasizes top-down organizational change.

- **Transformational Leadership: A Culture of Inspiration**

Transformational leadership is all about exploring what defines your organization's culture—and making changes to improve it. Transformational leaders begin by bringing team members together to provide honest feedback. Employees identify challenges and opportunities, as well as personal goals and aspirations. Then, leaders align the organization's goals and values with those of its team members while also charting a course for positive organizational change. Why? Aligning organizational and individual values improves morale, which has been shown to improve productivity. The overall goal is to inspire transformational tendencies in employees by reflecting their personal goals and values.

Culture of inspiration. Everyone is motivated to collect a paycheck. But great employees are *inspired* by something more. In *Why Motivating People Doesn't Work...and What Does*, Susan Fowler writes, "Motivation generated from values, purpose, love, joy, or compassion is different from motivation generated from ego, power, status, or a desire for external rewards." Things like status and money are short-term motivators. Transformational leadership motivates team members by ensuring them that they are working for a purpose bigger than themselves.

- **Servant Leadership: Culture of Inclusion**

Servant leadership flips the organizational pyramid, creating an atmosphere where everyone serves as a leader. The leader's task is to establish an organization's visionary goals and strategic direction. Then, the manager serves in a support role as employees work to achieve these objectives. Servant leaders focus on serving organizational stakeholders—and the larger community. This service component is what distinguishes servant leadership from other leadership styles. Participative leadership, for example, empowers employees by including them in the decision-making process. Servant leaders, meanwhile, empower employees by assuming a support role that helps employees accomplish organizational goals.

Culture of inclusion. Michael Bush, author of *A Great Place To Work for All*, writes in his contribution to the essay collection *Servant Leadership in Action* that there are three common pillars of great organizational cultures: trust, pride, and enjoyment. Bush adds, "These emerging organizations develop and support leaders toward a servant mindset and approach—that is, they cultivate servant leaders who create cultures where all people feel trusted, empowered, supported, and treated fairly." The overall goal, Bush adds, is for leaders to relinquish their "autocratic, command-and-control" ways and leverage every ounce of employee potential to achieve whole-system change.

- **Participative Leadership: Culture of Innovation**

Relying on a democratic approach, participative leadership works to build consensus among team members. As with transformational leadership and servant leadership, participative leadership earns trust and commitment to achieve whole-system change. Leaders make the final decision, but they do so through a process of compromise, collaboration, and consensus building that engages all team

members. As with any democracy, participative leadership requires a culture of information sharing and egalitarian structures that give a voice to all team members. Unlike the concept of “perspective taking,” where you make an effort to understand another’s point of view, MIT researchers have found that the process of “perspective giving”—sharing one’s own story with others—has been found to better promote trust and empathy among groups with differing views.

Culture of innovation. The Yale School of Management’s *Yale Insights* reports that an innovative organizational culture requires shared values, engagement, and enthusiasm. Most importantly, it requires an environment in which team members feel safe to take risks and engage in independent thinking. Through open dialogue and communication and shared values, participative leadership fosters a culture of empathy that’s required for innovation to flourish. As University of Michigan Ross School of Business Professor Jeffrey Sanchez-Burks explains, “Empathy means taking in the perspectives of others and paying attention to what they say and don’t say. When you learn how to do this in a systematic way, you become much more effective at knowing how to develop the ideas you have.”

- **Authoritative Leadership: Culture of Compliance**

Authoritative leaders set the visionary direction of organizations and clearly explain the roles that individual employees will play in that long-term vision. Authoritative leaders lead by example and inspire employees to follow—but they can also create a rank-and-file culture that stifles collaboration, innovation, and professional development. Employees know their place in the organizational hierarchy and aren’t encouraged to deviate. This reflects traditional command-and-control virtues like top-down leadership and the traditional pyramid-shaped hierarchical structure.

Authoritative leadership and directive leadership share a number of traits. The biggest difference, however, is that power can be more distributed under directive leadership. A handful of leaders might set goals and deliver specific instructions and tasks to subordinates under directive leadership, for example. But power is even more centralized under authoritarian leadership. One individual establishes policies, goals, and direction without input from anyone else in the organization.

Culture of compliance. Authoritative leaders can struggle to foster an organizational culture of empowerment or professional development. Employees might not feel valued as individuals, and they might not see a clear connection between their individual success and overall organizational success. Ultimately, this type of organizational culture signals to millennials that they’ll need to look for a job elsewhere to gain professional advancement. Millennials now hold the largest share of the U.S. labor market—and they prefer working in a holacracy rather than a hierarchy. They believe that good ideas should be heard, regardless of where they come from. This idea is at odds with the rank-and-file culture that authoritative leadership fosters. Additionally, research indicates that baby boomers are—surprisingly—slightly less likely than millennials to view workplace hierarchies as effective. Baby boomers were also found to value leaders who are “team oriented” and “participative” slightly more than millennials. So, a culture of compliance could face resistance from workers of all ages.

4.0 LEADERSHIP NETWORKING

“A robust leadership network helps provide access to people, information and resources,” says Curt Grayson, author of *Leadership Networking: Connect, Collaborate, Create*. “It goes beyond knowing or linking to lots of different people. It is about being able to use those connections wisely to solve problems and create opportunities.”

Grayson offers six rules for effective leadership networking:

- 1) **Be sincere.** Networking is not a ploy for getting your way. If you earn a reputation as someone who takes but doesn’t give, who uses information inappropriately or who breaks confidences, your networks will shut down.
- 2) **Share resources.** Having resources such as information, services and access will build your leadership network through give and take. Reciprocity is important. Become skilled at resource bartering, know your assets and share them appropriately.

3) Use power thoughtfully. Power is the ability to get things done. You'll need three sources of power to build your network: your reputation, your alliances and your position. Be the leader who gets results, can be held accountable, and has connections with key influencers or decision-makers. Use your power wisely.

4) Communicate skillfully. Communicate in a way that builds awareness of your needs and your assets. If you cannot make others aware of what you can offer and what you need in order to accomplish goals, your networking strategies will be ineffective.

5) Be a savvy negotiator. Effective negotiators know when to push hard and when to back off, when to share information and when to hold back, when to swap resources and when to trade short-term outcomes for a long-term goal. Avoid playing hardball and avoid being viewed as a pushover.

6) Learn to manage conflict. Learn skills for resolving conflict. When conflict occurs within your network, work to appreciate the opposing view. Look for points of mutual agreement. Express your position in a way that is helpful to resolving the conflict.

5.0 TRANSFORMATIONAL LEADERSHIP

"Nothing so needs reforming as other people's habits" – Mark Twain

Transformational leadership is defined as a leadership approach that causes change in individuals and social systems. In its ideal form, it creates valuable and positive change in the followers with the end goal of developing followers into leaders. Enacted in its authentic form, transformational leadership enhances the motivation, confidence and performance of followers through a variety of mechanisms. These include connecting the follower's sense of identity and self to the mission and the collective identity of the organization; being a role model for followers that inspires them; challenging followers to take greater ownership for their work, and understanding the strengths and weaknesses of followers, so the leader can align followers with tasks that optimize their performance.

Researcher Bernard M. Bass expanded upon Burns' original ideas to develop what is today referred to as Bass' Transformational Leadership Theory. According to Bass, transformational leadership can be defined based on the impact that it has on followers. Transformational leaders, Bass suggested, garner trust, respect, and admiration from their followers.

In their classic text, Transformational Leadership, authors Bass and Riggio explained:

"Transformational leaders...are those who stimulate and inspire followers to both achieve extraordinary outcomes and, in the process, develop their own leadership capacity. Transformational leaders help followers grow and develop into leaders by responding to individual followers' needs by empowering them and by aligning the objectives and goals of the individual followers, the leader, the group, and the larger organization."

6.0 RESEARCH METHODOLOGY

The Study was conducted to understand if there is any gap between theory and practice as far leadership challenges and opportunities is concerned. The study benefit for Academic & Administration leaders determining the extent of usage of new leadership styles their organization/education sector process and practice with others in the organization as well as across.

Type of Data

- Primary Data : Collected from researcher's observations and interactions with the three different university (Mumbai University, ICAI and NMIMS) of academic & administration.
- Secondary Data : was collected from source viz. books on Leadership, websites and online data sources.

7.0 CHALLENGES FOR LEADERSHIP IN DIGITAL WORLD

- **Developing Managerial Effectiveness** - The challenge of developing the relevant skills—such as time management, prioritization, strategic thinking, decision- making, and getting up to speed with the job—to be more effective at work.

- **Inspiring Others** - The challenge of inspiring or motivating others to ensure they are satisfied with their jobs; how to motivate a workforce to work smarter.
- **Developing Employees** - The challenge of developing others, including topics around mentoring and coaching.
- **Leading a Team** - The challenge of team-building, team development, and team management; how to instill pride in a team or support the team, how to lead a big team, and what to do when taking over a new team.
- **Guiding Change** - The challenge of managing, mobilizing, understanding, and leading change. How to mitigate change consequences, overcome resistance to change, and deal with employees' reaction to change.
- **Managing Internal Stakeholders and Politics** - The challenge of managing relationships, politics, and image. Gaining managerial support and managing up; getting buy-in from other departments, groups, or individuals.

This are following leadership observed in organizations / education sectors:

Academic leadership

Wisdom leadership

Transformational leadership

Integrative leadership

Autocratic leadership

Paternalistic leadership

Military style leadership

Compassionate leadership

Visionary leadership

Value-based leadership

Strategic leadership

Revolution leadership

Knowledge driven leadership

Participative leadership

Charismatic leadership

8.0 CONCLUSION

Learning the leadership styles in Global Business theories with the help historical researchers. Leadership styles are one of the major causes of conflict in leadership situation. Every leader needs to know and recognize theory in practice. Organization / education sector need to give more liberty to leaders to accept new leadership styles to deal with new challenges and opportunities.

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The Concept and Need of Smart Homes in India

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ABSTRACT

Smart homes are those dwelling where people can connect a lot of time- saving and time-using devices on a main frame to ensure that their lives are easy. All the devices can be controlled through a computer or a hand held device like a smart phone or a tab. A lot of activities can be performed through remote control in the house from anywhere in the world. Smart homes also make surveillance within and outside the house possible thus ensuring safety of members within the house and also safety outside. Smart homes may be built with backup service from service providers when the need arises, like calling up the local police, hospital or doctor when a member of the family requires. With long working hours, long commuting and no joint family system and some time old parents living alone 'smart homes' are the only solution for people

Keywords: smart homes; connected devices; time-saving; time using

INTRODUCTION

A "smart home" is a place which is connected through computer and information technology to several equipment and sensors of your house which helps to anticipate the needs of the occupants and accordingly respond to the needs. The aim is to facilitate comfort, entertainment, functioning of several gadgets in remote, security, monitoring of kids and elders and even enabling pre-programmed cooking and cleaning. This is possible through well connected and managed technology from within the home and also through remote access connections from a distance.

Popularly Smart Homes, also called as automated homes or intelligent buildings or integrated home systems or domotics or domus. In India they are a recent development which are seen in urban areas and that too mostly only in large high end building complexes. Smart homes initially were only status symbols and gave simple solutions like lighting where the light of the house could be controlled like change of colors, hues, switching on or off, earlier sensors were used to detect the presence of anybody to switch on or off the lights and air-conditioning to conserve energy. This can be done now from anywhere in the world with the help of a hand held device like the mobile phone or tab. This has now changed to cover a lot more activities like

- Security where one can protect their home from intruders, keep a tab on visitors, lock and unlock the doors from anywhere, get instant notifications on the smart phone and trigger a loud alarm, if someone tries to break into your home.
- Interactive Smart Home Control – where the most common device is amazon's 'alexa' which does more than just give you an applause or play your favorite music but also controls most of the Smart Home appliances either individually or in pre-set themes just with a voice commands. Speaking the trigger word gets things done.
- Home automation takes comfort to the next level, enabling the control of devices like television, music system, X-Box, air-conditioner or shades wirelessly from a single universal remote. It helps create programs that help in the routine tasks like cleaning the house, starting the washing machine, starting certain cooking devices or setting up screen time for kids after which the gadgets automatically switch off or even setting the time they can see certain programs or play certain games and totally blocking off certain programs and games. It helps in setting up the air conditioners in time of arrival or even switching on the hot water greaser or setup your bath at the temperature mostly used by the occupant.
- Security- enable you to keep a watch on or be notified about your kids and elders in case of any irregularity from normal routine.

- Disaster Management - Get instant alerts on your smart phone when your home is hit by fire, flood or any other disaster and configure the central automation system to take corrective action instantly.
- Surveillance- Keep a tab on your home, even while you're away in the office or a vacation. With intelligent CCTV cameras that provide round-the-clock monitoring, staying connected with what matters is easy. Instantly stream live videos right to your smart phone to know what is happening within and outside your house. Get instant alerts and notifications for any unwanted movement in and around your home premises. Turn on the camera and see it for yourself.

Beyond this too smart technology has advanced to a level where any electrical component within a circuit can be attached to the system. Smart home are no more about just switching on or off of devices, a major role of smart homes is about monitor the internal spaces of a home and viewing or being alerted about the activities that happen within the house when there are people in it like kids and elders. It helps the parents to know that the kids are safe and also to know what they are doing. In case of elders there can be direct contact with the closest health care centre or doctor in case of any emergency.

HISTORY OF SMART HOMES

The invent of electricity was the beginning of smartifying of homes. Electricity brought with it a number of devices that the human race could use. There were many devices that became very popular and were divided into two categories the 'time saving' and the 'time-using' which marketers defined as 'white goods' and 'brown goods'. "Time-saving" products are those which reduce the time taken to do a job, for example washing machines ,vacuum cleaner, refrigerator, micro wave cooker or electric cookers. "Time using" products are those which improve the quality of life, for example television, video players, internet, smart phones.

The "time-saving" products took a long time to be accepted in household and that too was related to household income. In contrast, "time-using" products achieved acceptance much faster and showed much less relationship to household income. People spend more time of "time-using" devices than on "time-saving" devices.

The "time-saving" products got quicker acceptance after women joined the workforce and it became imperative for them to have devices that would ease their load of work. Today it is seen that "time-saving" and "time-using" products are competing for time of the users as the stress levels are very high and it has become essential for people to also seek cooling down. The increasing time people are spent watching television is found by reducing time spent on housework.

The second major invention was that of information technology which gave rise to exchange of information, and getting a lot of jobs done with few commands and controlling a number of jobs just with a few commands. This controlling commands go by several names, including smart home, home automation and integrated home systems. These systems control home electronics and appliances including audio/video, home office, telecommunications, intercom, security, lighting, HVAC, and lawn sprinklers. Control systems can also provide information – residents can find out how much electricity they've used on specific appliances or systems, and utilities can read meters remotely. The systems can be accessed from remote locations by phone or computer.

In way of "Smart House" the industries that have taken a lot of interest are builders who want to build these smart homes , electronic companies who have researched and come up with products like the surveillance cameras and sensor enabled electronic systems, architects who have designed homes that can optimize the use of digital products for the occupants, energy saving device manufacturers, telecommunication companies that developed smart devices and smart control devices, computer application builders who build apps to get all types of external services at the touch of a button and developing digital systems and components suitable for use in domestic buildings.

The most important developments in the century are the replacement of electro-mechanical switching with digital switching, and of traditional twisted pair and coaxial cables by optical fibers, development of new communication networks (e.g. ISDN, Internet) which allow two-way communication, and new end devices (e.g. web TV, video phones)

LITERATURE REVIEW

Although the concept of the smart home is now well established and a number of research projects are underway, as a field of academic research the smart home is still in its infancy. This is perhaps not surprising because, domestic technology in general has been neglected by academics, despite the enormous changes seen over the last century. Reasons for this neglect have been examined by an established body of feminist research (Wajcman, 1991). Chief among

the reasons identified are

- lack of financial motivation to increase productivity in domestic work;
- little involvement of the technology users in the design process;
- product designers' view of domestic technology as unexciting; and
- continued focus on stand-alone appliances, often for marketing reasons.

In what will hopefully become a landmark paper, "The Importance of Homes in Technology Research", Hindus (1999) calls for more academic interest in domestic technology on the grounds that it is too economically important to ignore and that research has the potential to improve everyday life for millions of users. She points out that although information technology may have migrated from the workplace to the home, research specific to the home is still needed because workplace findings cannot easily be generalised to the home context.

A few papers on smart homes are now beginning to emerge, however, generally in association with one of the experimental projects outlined earlier. However, these usually approach smart homes from the technical point of view (e.g. Mozer, 1998). A paper which is unusual in approaching smart homes from the perspective of social science is that by Berg (1994). In her paper she argues that the smart home is a "gendered socio technical construction" developed in line with the interests of its male designers. She focuses on housework which she describes as "mainly women's unpaid work, compris[ing] the most repetitious and time consuming tasks in the household – cooking, washing, cleaning, tidying, mending". She observed that the men producing prototypes of the intelligent house of the future and designing its key technologies have failed to visualise in any detail the user/consumer of their innovation. In so far as they have one in mind, it is someone in their own image. They have ignored the fact that the home is a place of work (women's housework) and overlook women, whose domain they are in effect transforming, as a target consumer group (p. 176).

Publications of relevance to smart homes, and to domestic technology generally, are currently dispersed across a wide range of academic disciplines. Those looking to the literature for guidance must pick their way across a fragmented area, gleaning what they can where they can. This is an unsatisfactory situation as the potential offered by smart home technology can only be realised through a proper understanding of the complex social context in which it will be used. Like Hindus (1999) and others.

The obvious usability issues in the design of appliances, interfaces and systems for the smart home invite the involvement of human factor researchers. However, the context of use which the home provides is complex, social and cultural, suggesting the need for sociologists, anthropologists, ethnographers and social psychologists to contribute too. A number of people have pointed to multi disciplinarily as the way forward for the design of information technologies in general. For example, Norman (1998) identified the following sets of skills as important within the ideal research and design team: anthropology, sociology, cognitive science, experimental psychology, human-computer interaction, architecture, industrial design and art.

For the time being we can expect to see publications of some relevance to the smart home scattered across the literature of a number of academic disciplines. However, there are signs of growing interest in the home as a context of use of interactive technology (e.g., O'Brien et al., 1996; Scholtz et al., 1996; Tollmar and Junestrand, 1998; and this volume) and it is realistic to hope that a dedicated journal may emerge as a focus for this interest within the next decade.

SMART HOMES IN INDIA

As per Colliers International India, the concept of “Smart Homes” is still evolving in India. It was considered ‘life-style’ with bollywood superstars advertising about them. The concept started gaining acceptance among young couples, who were both working and could not dedicate time to household chores. As per Anarock Property Consultants, in India, these smart homes were common in IT-centric areas like Pune’s Kharadi and Navi Mumbai in Mumbai and Bangalore and Hyderabad. Most of these houses were built in suburban areas the residents needed smart devices to handle their chores and also to keep a watch on their kids and parents at home.

The increase in demand is mainly due to the rise in internet penetration and affordability of smart devices. For most of the urban young families where both member have to work, smart homes are no longer a concept or differentiated product offering, but essential components of their dwelling specifications. The demands of Indian “Smart Homes” are very different from other countries like a smoke alarm has to be modified as per the cooking habits of Indians as well as to take into account the ‘havans’ ‘poojas’ and ‘aggarbattis’. Since the dust factor is very high the ‘bot’ for cleaning the floor and furniture is a must. Automation for changing of curtains, switching on and off of air conditioners, sensors for detecting movement within and outside the property is a must. Recording of cricket matches, football matches, tennis matches are added advantages. The developers need to understand the consumer preference and incorporate these into their products. The ‘must-haves’ need to be customized as per the need of the customer.

Security is the topmost feature Indians look for in a smart home. Video door monitoring, motion sensing cameras integrated with night vision technology, digital locks, smart alarms, windows and alarms are amongst the range of electronic gadgets aimed to improve the security of a house. Smart homes also come with intrusion sensors, fire and gas-leakage detection systems.

Convenience; Cleaning houses, dusting and mopping. smart washing machines and dishwashers, auto bathroom cleaners has added to the relief of Indian customers who hardly get time off their hectic jobs.

Entertainment : smart TVs and smart speakers to AV controls and gaming consoles, technology has brought in massive changes in the way entertainment is consumed. Smart entertainment systems have become a common reality, allowing users to schedule TV programmes and change channels through voice commands. Especially, when it comes to millennials and young couples, a lack of entertainment-based features can be deal-breaker in a smart home.

BARRIERS TO “SMART HOMES” IN INDIA

- Cost is one of the biggest barrier to setting up or buying a smart home. With the cost per square feet ranging from 300- 30,000/- it can be very expensive. The difference in price of smart Vs non-smart homes is so high that people tend to give a smart home a slip and decide to do it themselves on device at a time.
- The process of connecting all of the devices via one centralized hub remains cumbersome with multiple devices from different vendors, working on multiple platforms.
- Electricity is also a big problem as all the devices will operate on power connectivity and if power supply is not good the system becomes useless.
- Internet speed and connectivity is also a problem because there is no control on internet service providers many of them easily have down service which could result in any kind of loss at a ‘smart home’ without the owner knowing.

CONCLUSION

There is a very high need for smart homes in India especially in the urban areas where both the parents have to work. In urban areas people work long hours and also have to travel long hours to work. Due to this they have to stay out of home for more than 12 hours in a day. Due to this they are unable to give time for house hold chores and to their children and parents. Smart homes can take care of their house hold chores so they can give more time to their children and parents. They can also keep a remote watch on their children and parents and can contact for help if they realise that there is a need. It will

also reduce the stress of young couples who will not have to come home and look into things like ordering grocery, cleaning house, clothes, utensils etc. They can also be secure in their office because they do not have to constantly think about the safety of their children and parents.

The only problem is the high cost which can come down when service providers get together and standardize the devices required and the systems input required to run these homes. This is possible and a good example of this is the smart phones technology which got huge acceptance after all service providers got together and ensured cheap devices and services.

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To study relation between Consumer attitude & perception on consumer buying behavior for organic food products among selected residents of Greater Mumbai & Thane

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ABSTRACT

Organic food products usage is on the upwards trend all cross the world including India. India has the largest number of organic food producers in the world & nowadays we keep reading the news that well educated & high earning individuals are slowly moving to the organic farming. Keeping that the mind the researcher thoughts of studying the relation between consumer perception & their attitude on its buying behavior for organic food products. The study was done taking the sample from the population of the said municipal corporations of Mumbai Metropolitan Region.

Keywords: Organic farming, Awareness /Usage, consumer buying behavior for organic food products, Purchase intention of organic food.

INTRODUCTION

In our country's economy, Agriculture plays a big role as it is evident from the fact that 67% of the population is involved & dependent upon agriculture & its related work. We also have to give importance to the fact that if India has to have GDP growth in a double-digit then it is required to have a 4% rate of growth in agriculture sector (National Standards Board of the US Department of Agriculture USDA). The differentiating factor when we talk about any industrial product Vs Organically produced Agri-products is that in an industrial product while producing & marketing, the main emphasis is on product's final quality whereas in the case of organically produced Agri-products it's in the process, the way it is being produced. Organic farm products are generally sold in the market at a price which is 25-30% higher than the traditional ones. But for all these to be sold or exported as 'Organic' there has to be proper certification. State wise Sikkim, Uttaranchal & Madhya Pradesh are the states which have declared them as Organic agri-products states. Maharashtra also has about 0.5 million hectares of land in which Organic farming is being done. The word "Organic" is defined as: that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on the minimum use of non-farm inputs and on management practices that restore, maintain and increase the "ecological harmony"

Organic farming: Agriculture today depends upon what is required by the market rather than like earlier when the climate of that area determined what can be grown there. There are pesticides & other chemical residues in the food today which leads to various diseases and decreased immunity of a person. Fertilizers which are used in today's traditional agriculture definitely enhance the productivity for the short term but they also leave pesticides & chemical residue in the soil, environment, air & ultimately in our bodies. We have started all this in the name of the green revolution to increase the productivity of food in order to feed the people but what has resulted is that besides the entire problem mentioned above; in the name of growing more to feed the earth, we have taken the wrong road of unsustainability. The effects are being seen already as our farmers are committing suicide in growing numbers with every passing year.

Another negative effect of this trend has been on the fortunes of the farming communities World-wide. Even the so-called increased productivity, practically farmers around the world have seen a decline in their incomes. The only beneficiaries of this new outlook towards food and agriculture seem to be the agrochemical companies, seed companies and though not related to the chemicalisation of agriculture, equally part of the "big money syndrome" responsible for the farmers' troubles-the large, multi-national companies that trade in food especially food grains. Besides the obvious immediate and positive effects Organic or natural farming has on the environment and quality of food, it also greatly helps a farmer to

become self-sufficient in his requirements for agro-inputs and reduces his costs.

REVIEW OF LITERATURE

As per **National Standards Board of the US Department of Agriculture, USDA (1997)** the word "Organic" is defined as: that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on the minimum use of non-farm inputs and on management practices that restore, maintain and increase the "ecological harmony"

As stated by USDA, food has 4 categories:

1. 100 % organic: should have 100% organically produced ingredients.
2. Organic: Must have 95% organic contents.
3. Made of organic ingredients: At least 70% organic ingredients.
4. Have some organic ingredients: May contain less than 70% organic ingredients.

The study was conducted by **Irantio Heru (2015)** on consumer attitudes & attention towards organic food purchase to know the variables that affect consumer attitude which in turn affect purchase intention. This was conducted at Surakarta city, Indonesia with a sample size of 200 respondents who are intending to purchase Organic food. The findings were as following: Health consciousness & environment consciousness are the determinants of an individual's positive attitude to have purchase intention. Its message to the marketers is clear that next time if you want people should have positive purchase intention for your Organic products then you must stress on health betterment & environmental consciousness for sure.

As stated by **Basha, Mason, Shamsudin (2015)** on the study related to consumer acceptance towards organic food it was found that consumers are more aware & thoughtful / worried about food safety. This leads to policymaker also becoming more concerned about food safety along with changing behaviour of the consumer. Demand for Organic food is increasing in all parts of the world (Willer & Yussefi, 2004). Countries like Switzerland, Austria & Denmark which are known to be mature Organic food markets; have a market share of just more than 5% (Willer & Kilcher). Evidence from earlier studies have shown that consumer attitude towards OFP is proportional to influencing their choice (Magistris & Gracia 2007).

As per **Anupam singh & Verma (2017)** reports on factors influencing Indian consumers' actual buying behaviour towards organic food products says that these products are perceived as nutritious, healthy, and nature-friendly than non-organic food products. Consumers, therefore, are switching over to organic food products and are comfortable to pay extra cost for these. For this study an administered questionnaire from 611 Indian consumers was conducted. Results had shown that these four elements i.e. health inclination, information/ knowing value of organic food, subjective norms, and cost of the product/s impacts the customer mindset in the direction of organic meals products..

OBJECTIVE

1. To study the Awareness /Usage level of Organic Food products among consumers in Greater Mumbai & Thane municipal corporations of Mumbai Metropolitan Region.
2. To study the impact of consumer attitude & perceptions on consumer buying behavior for organic Food Products among people of Greater Mumbai & Thane Municipal Corporation of Mumbai Metropolitan Region (MMR).

HYPOTHESIS

- **H01:** Organic food which is perceived as good for health will positively affect its purchase behavior.
- **Ha1:** Organic food which is perceived as good for health will not affect its purchase behavior.
- **(H02):** Organic food which is perceived as free from chemicals, fertilizers & pesticides will positively affect its purchase behavior.

- **(Ha2):** Organic food which is perceived as free from chemicals, fertilizers & pesticides will not affect its purchase behaviour.

Hypothesis 1

People of Greater Mumbai & Thane municipal corporations of MMR who purchase organic food products, perceived it as good for health. For the same; below mentioned hypothesis was proposed; one as null hypotheses & the other as Alternate hypotheses; so that either of the hypotheses gets proved and give meaning to us out of it. The hypotheses are as:

Null Hypothesis (Ho1): Organic food which is perceived as good for health will positively affect its purchase behaviour.

Alternative Hypothesis (Ha1): Organic food which is perceived as good for health will not affect its purchase behaviour.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Buyer * Good Health	92	99.6%	2	0.4%	94	100.0%

Buyer * Organic Cross tabulation				
Count				
		Good Health		Total
		Yes	No	
Buyer	Regular	45	25	70
	Not Regular	16	6	22
Total		61	31	92

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.021 ^a	1	.883		
Continuity Correction ^b	.002	1	.962		
Likelihood Ratio	.021	1	.883		
Fisher's Exact Test				.921	.82
Linear-by-Linear Association	.021	1	.884		
N of Valid Cases	92				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is **61.26**.

The above test is carried out by calculating the χ^2 value & comparing it with the critical value for the given level of confidence i.e. 95 % level of confidence & degree of freedom equal to $(n-1) = 1$ as mentioned above where n is the number of paired values.

The results of the tests are as follows:

1. Pearson Chi-square value: .021 from above table (SPSS) for our administered sample.
2. Chi- square distribution critical value at 95% confidence level & at 1 degrees of freedom = 3.841 (from statistics table)

- Calculated value of: $\chi^2 = (0.021) < 3.841$ {critical value}, therefore null hypothesis is accepted.

As the administered sample calculated value of $\chi^2=0.021$ is more than critical value from statistics table; leading to conclusion of **null hypothesis being accepted** & alternate hypothesis being rejected which is: Organic food which is perceived as good for health will positively affect its purchase behaviour, is true.

Hypothesis 2

People of Greater Mumbai & Thane Municipal Corporation of MMR who purchase organic food products perceived as it to be free from harmful chemicals, fertilizers & pesticides. For the same; below mentioned hypothesis was proposed; one as null hypotheses & the other as Alternate hypotheses; so that either of the hypotheses gets proved and give meaning to us out of it. The hypotheses are as:

Null Hypothesis (Ho2): Organic food which is perceived as free from chemicals, fertilizers & pesticides will positively affect its purchase behaviour

Alternative Hypothesis (Ha2): Organic food which is perceived as free from chemicals, fertilizers & pesticides will not affect its purchase behaviour.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Buyer * Fertilizer	92	99.6%	2	0.4%	94	100.0%

Buyer * Fertilizer Cross tabulation				
Count				
		Fertilizer		Total
		Yes	No	
Buyer	Regular	45	25	70
	Not Regular	16	06	22
Total		61	31	92

Chi-Square Tests					
	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.002 ^a	1	.961		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.002	1	.961		
Fisher's Exact Test				1.000	.533
Linear-by-Linear Association	.002	1	.961		
N of Valid Cases	92				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.83.					

The above test is carried out by calculating the χ^2 value & comparing it with the critical value for the given level of confidence i.e. 95 % level of confidence & degree of freedom equal to $(n-1) = 1$ as mentioned above where n is the number of paired values. The results of the tests are as follows:

1. Pearson Chi-square value: .002 from above table (SPSS) for our administered sample.
 2. Chi- square distribution critical value at 95% confidence level & at 1 degrees of freedom = 3.841 (from statistics table)
- Calculated value of: $\chi^2 = (0.002) < 3.841$ {critical value}, therefore null hypothesis **is accepted**.

Organic food which is perceived as free from chemicals, fertilizers & pesticides will positively affect its purchase behavior, is true.

CONCLUSION

The consumer attitude & perceptions towards the organic food products which are perceived as “Good for Health” & also when these products are perceived as free from harmful chemicals, fertilizers & pesticides results in positively affecting its purchase behavior as per the chi square test conducted above. It clearly summarizes the fact that the perception of organic food is being “Good for Health” & since they being free from chemical fertilizers & pesticides do create a positive attitude among consumers to purchase the said products.

LIMITATIONS & SCOPE FOR FURTHER RESEARCH

Every research has its own limitations and it is important to incorporate this in research studies. The study of consumer buying behavior for organic food products has been carried out in Greater Mumbai & Thane which are part of Mumbai Metropolitan Region (MMR). Whereas the further scope of this study lies to figure out whether similar level of acceptance or rejection of consumer buying behavior can be carried out in other part of the Mumbai City & also other cities particularly Tier-II & Tier III cities where there is rapid growth in terms of sale for organic food products. Every city & place in India has its own culture and in similar way consumer buying behavior of people in different parts of the country also differs. This research can be taken as base to further research anywhere in India.

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To study relation of demographic variables on consumer buying behavior for organic food products among selected residents of Greater Mumbai & Thane

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ABSTRACT

Organic food products usage is on the upwards trend all across the world including India. India has the largest number of organic food producers in the world & nowadays we keep reading the news that well educated & high earning individual from corporate & from other businesses are slowly moving to the organic farming seeing its potential way forward. Keeping that in the mind the researcher thoughts of studying the relation between demographic variables such as Gender, income level and the Age on the consumer buying behavior for organic food products in Municipal corporations of Greater Mumbai & Thane of MMR (Mumbai Metropolitan Region).

Keywords: Organic farming, Awareness /Usage, consumer buying behavior for organic food products, Purchase intention of organic food.

INTRODUCTION

Organic food refers to products that are grown without the use of artificial fertilizers & pesticides. As per Indian Competence Centre for Organic Agriculture, the market for organically produced foods is estimated to increase to \$102 billion by the year 2020. Organic farming differs from conventional farming in the methods used to grow crops. Traditionally the farmers apply chemical fertilizers to the soil to grow their crops, while an organic farmer feeds and builds soil with natural fertilizers. Generally farmers use insecticides to get rid of insects, diseases & control weed growth by applying synthetic herbicides. However organic farmers use natural methods such as insect predators & barriers to control insects, diseases & the weed growth is controlled by crop rotation, tillage, hand weeding and mulches. As per **Lampkin (1990)** Organic farming is "A Production system that avoids or excludes largely pesticides, growth regulators, and the use of synthetically compounded fertilizers & livestock feed additives".

PRESENT SCENARIO OF ORGANIC FARMING IN INDIA

India still has approximately 70% arable land which is rain-fed & where mostly no fertilizers are being used. Farmers here follow the traditional process of farming with the usage of internal inputs & the remaining area of 30% is fed with Green revolution technologies. Out of 70% land area of our country mentioned above about 18 million hector is found in the North Eastern hills which can be explored into organic farming without much hassle straightway as in other cases of 30% land where even if we want to get into organic farming; we need to give a gestation period of 3 to 4 years for the land to come into organic farming stage & for that the farmer needs to have capacity & willingness to wait & take it forward. India exports its organic products mainly to the European Union. Organic farming is being promoted by Govt. or through various NGO & private agencies like: Eco farms, Research Centers & Universities. Certification bodies like ECOCERT, INDOCERT, and SKAL etc.

Mumbai-based International Recourses for fairer trade (IRFT) buys organic agri products & cotton from small farmers & sell them to Indian consumers or exporters. Organic maize & wheat is produced in the state of Himachal Pradesh which brings in income 2 to 3 times more than conventional per hector due to higher production in quantity as well as quality. Same is the case in Haryana state wherein basmati rice, wheat, arhar, soya bean is produced organically which is sold at 30% premium in market & thereby net income is again 2 to 3 times than conventional as there are fewer inputs costs (no dependence on moneylenders for buying chemical fertilizers & paying heavy interest on it which diminishes their return per hector) due to farming being organic & it sells at premium. Same is the case

in Gujarat wherein it sells chikoo, coconut, banana at a higher price. Karnataka is doing the same in farming organically with produce such as jowar, cotton, groundnut, and banana.

REVIEW OF LITERATURE

As per **National Standards Board of the US Department of Agriculture, USDA (1997)** the word "Organic" is defined as: that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on the minimum use of non-farm inputs and on management practices that restore, maintain and increase the "ecological harmony"

The differentiating factor when we talk about any industrial product Vs Organically produced Agri-products is that in an industrial product while producing & marketing, the main emphasis is on product's final quality whereas in the case of Organically produced Agri-products it's in the process, the way it is being produced.

As stated by USDA, food has 4 categories

1. 100 % organic: should have 100% organically produced ingredients.
2. Organic: Must have 95% organic contents.
3. Made of organic ingredients: At least 70% organic ingredients.
4. Have some organic ingredients: May contain less than 70% organic ingredients.

Myths about Organic Farming: As per **Satvik (1999)** a company in organic food puts the following myths on organic farming as:

1. Yields less than conventional /chemical forming: In long run yields are better in organic farming than in conventional farming method but during conversion phase from conventional to organic farming it goes down.
2. Not economical: The total cost in organic farming is lower than in conventional farming. However organic farming is labour intensive and the farmer should have self-sufficiency in terms of compost and pest control.
3. Organic farming brings Premium: This is true for limited number of farmers who can supply their products directly to supermarkets or at farmer's market in city and also farmers who are engaged in exports provided their produce is certified one.

As stated by **Basha, Mason, Shamsudin (2015)** on the study related to consumer acceptance towards organic food it was found that consumers are more aware & thoughtful / worried about food safety. Evidence from earlier studies have shown that consumer attitude towards organic food products is proportional to influencing their choice (Magistris & Gracia 2007). For sustainable development; sustainable consumption should be given due weight age = buyer behaviour for greener products (Narayanaswamy & stone, 2007). Organic market till now depends upon its frequent buyer who is committed to these products (Lyons 2001).

Little is known about the beliefs, motivations & how they take their decisions (what goes in the minds) of Organic food consumers when they go ahead for purchase (Essossi & Zahaf 2009). That is why the researcher is trying to address this gap by knowing the mind of Organic food consumer as well as those who are knowing about these but still do not eat (what thought process people have for this behavior, is also being captured through the primary studies). Marketers need to understand buying behaviour & psychographic factors. Consumer have some knowledge / receives some knowledge which changes their perception (either favourable /Not favourable) which in turn changes Attitude towards it(either favourable / Not favourable) as we know organic food products are good for environment & health ; if people come to know about it; perception & attitude will get in favourable mode to purchase these.

Knowledge about organic food products & its production methods is central to the positive attitude (Siegrist 2008).Environment care & health care are the major factors for the Organic food products (T sarkiridou et al (2008).Study at Chennai in 2013 by Raghavan & Megeh found that perception about Organic food products is the key to having the purchase intention or not. Study at Coimbatore in 2012

by Shakthirama & Venkatram revealed that the attitude & knowledge about the OFP is the key. As per Chakrabarty (2010); consumer attitude towards Organic food are one of the important factors.

Barroso (2019) report on organic food & its impact on human health says that organic food products seems to be more healthy compared to non-organic/ conventional one because of excess content of bioactive compounds such as Polyphenols, Vitamin C, carotenoids and n-3 PUFA . It also has less of Cadmium content and different unhealthy materials which include pesticides which can be related to immune-associated disorders and toxicity in people.

OBJECTIVE

1. To study the Awareness / Usage level of Organic Food Products among consumers in Greater Mumbai & Thane municipal corporation of Mumbai Metropolitan Region (MMR)
2. To study the relation between different demographics such as Gender, Income & Age on consumer buying behavior for Organic Food Products in Greater Mumbai & Thane municipal corporation of Mumbai Metropolitan Region (MMR).

HYPOTHESIS

- **(H01):** There is a significant difference in awareness level towards Organic food products among different Gender.
- **(Ha1):** There is no significant difference in awareness level towards Organic food products among different Gender.
- **(H02):** There is a significant difference in awareness level towards Organic food products among different income level.
- **(Ha2):** There is no significant difference in awareness level towards Organic food products among different income level.
- **(H03):** There is a significant difference in awareness level towards Organic food products among different Age groups.
- **(Ha3):** There is no significant difference in awareness level towards Organic food products among different Age groups.

HYPOTHESIS TESTING

Hypothesis 1

Null Hypothesis (H01): There is a significant difference in awareness level towards Organic food products among different Gender.

Alternative Hypothesis (Ha1): There is no significant difference in awareness level towards Organic food products among different Gender.

The researcher was interested to know the awareness level of organic food products among the Gender in Greater Mumbai & Thane municipal corporation of MMR.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Awareness	200	99.8%	2	0.2%	200	100.0%

Count				
				Total
		Non Aware	Aware	
Gender	Male	65	50	115
	Female	43	42	85
Total		108	92	200

Table. Gender*Aware Cross tabulation

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.835 ^a	1	.000
Likelihood Ratio	18.878	1	.000
Linear-by-Linear Association	18.816	1	.000
N of Valid Cases	200		

a. 0 cells (0.0%) which have an expected count of less than 5. The minimum expected count is **198.24**.

The above test is carried out by calculating the χ^2 value & comparing it with the critical value for the given level of confidence i.e. 95 % level of confidence & degree of freedom equal to $(n-1) = 1$ as mentioned above where n is the number of paired values.

The results of the tests are as follows

1. Pearson Chi-square value: **18.835** from above table (SPSS) for our administered sample.
 2. Chi- square distribution critical value at 95% confidence level & at 1 degrees of freedom = **3.841**(From statistics table).
- Calculated value of: χ^2 (**18.835**) > **3.841**{critical value}, therefore null hypothesis is rejected.

There is a significant difference in awareness level towards Organic food products among different Gender is **rejected**.

Hypothesis 2

Are some income groups more aware than other income group/s or not. For the same; below mentioned hypothesis was proposed; one as null hypotheses & the other as Alternate hypotheses; so that either of the hypotheses gets accepted and give meaning to us out of it

Null Hypothesis (H02): There is a significant difference in awareness level towards Organic food products among different income levels.

Alternative Hypothesis (Ha2): There is no significant difference in awareness level towards Organic food products among different income levels.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Monthly Family Income * Aware	200	99.8%	2	0.2%	202	100.0%

Count				
		Awareness		Total
		Non Aware	Aware	
Monthly Family Income	Less than 40000	44	9	53
	40001 to 80000	35	32	67
	80001 to 1,20,000	20	27	47
	1,20,001 to 2,00,000	7	14	21
	More than 2 Lakhs	2	10	12
Total		108	92	200

Table. Monthly Family Income * Awareness Cross tabulation

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	107.116 ^a	4	.000
Likelihood Ratio	111.482	4	.000
Linear-by-Linear Association	101.937	1	.000
N of Valid Cases	200		
a. 0 cells (0.0%) which have an expected count of less than 5. The minimum expected count is 27.36 .			

The above test is carried out by calculating the χ^2 value & comparing it with the critical value for the given level of confidence i.e. 95 % level of confidence & degree of freedom equal to $(n-1) = 4$ as mentioned above where n is the number of paired values.

The results of the tests are as follows

1. Pearson Chi-square value: **107.116** from above table (SPSS) for our administered sample.
 2. Chi- square distribution critical value at 95% confidence level & at 4 degrees of freedom = **9.488** (from statistics table)
- Calculated value of: $\chi^2 = (107.116) > 9.488$ {critical value}, therefore null hypothesis is rejected.

As the administered sample calculated value of $\chi^2=107.116$ is more than critical value from statistics table; leading to conclusion of **null hypothesis being rejected** & alternate hypothesis being accepted which is: There is no significant difference among different income levels & awareness level towards Organic food products, is true.

Hypothesis 3

Null Hypothesis (H03): There is a significant difference in awareness level towards Organic food products among different Age groups.

Alternative Hypothesis (Ha3): There is no significant difference in awareness level towards Organic food products among different Age groups.

To understand the relationship between different age groups & awareness level of organic food products among the residents of Greater Mumbai & Thane municipal corporations of MMR as a part of the objective No 1 for the study. Keeping that in mind, questionnaire was designed to know that weather awareness level changes with age group changes; means: “Are some age groups more aware than other age group/s or not. Here we have taken the help of SPSS; the calculations out of it are as:

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Aware	200	99.8%	2	0.2%	202	100.0%

		Count		
		Non Aware	Aware	Total
Age	18 – 25	32	32	64
	26 – 35	31	33	64
	36 – 45	31	15	46
	45 – 55	10	07	17
	More than 55	4	5	09
Total		108	92	200

Table: Age*Aware Cross tabulation

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.773 ^a	4	.217
Likelihood Ratio	5.795	4	.215
Linear-by-Linear Association	.091	1	.762
N of Valid Cases	200		

a. 0 cells (0.0%) which have an expected count of less than 5. The minimum expected count is **24.00**

The above test is carried out by calculating the χ^2 value & comparing it with the critical value for the given level of confidence i.e. 95 % level of confidence & degree of freedom equal to $(n-1) = 4$ as mentioned above where n is the number of paired values.

The results of the tests are as follows

1. Pearson Chi-square value: **5.773** from above table (SPSS) for our administered sample.
 2. Chi- square distribution critical value at 95% confidence level & at 4 degrees of freedom = **9.488**. (From statistics table critical value)
- Calculated value of: $\chi^2(5.773) < 9.488$ {critical value}, therefore null hypothesis is accepted.

As the administered sample calculated value of $\chi^2 = 5.773$ is less than critical value from statistics table; leading to the conclusion of the null hypothesis being **accepted** which is: There is significance difference among different Age groups & awareness level towards Organic food products is true.

CONCLUSIONS

The study on the level of awareness/Usage among different gender as well as on different income group & their relation to the awareness/Usage level about organic food products among selected population of Greater Mumbai & Thane concluded that there is no significant difference among different gender as well as different income groups versus the level of awareness/Usage about organic food products in the selected municipal corporations of Greater Mumbai & Thane as per the Chi square test conducted above , however the third hypothesis did prove that there is significant difference among different Age group versus the level of awareness/Usage about organic food products in the selected municipal corporations of Greater Mumbai & Thane as per the Chi square test conducted above. This gives the indications to the Marketers that while communicating to the target audience young audience should be kept in mind.

LIMITATIONS & SCOPE FOR FURTHER RESEARCH

Every research has its own limitations and it is important to incorporate this in research studies. The study of consumer buying behavior for organic food products has been carried out in Greater Mumbai & Thane which are part of Mumbai Metropolitan Region (MMR). Whereas the further scope of this study lies to figure out whether similar level of acceptance or rejection of consumer buying behavior can be carried out in other part of the Mumbai City & also other cities particularly Tier-II & Tier III cities like Pune, Nashik , Aurngabad etc where there is rapid growth in terms of sale for organic food

products & hardly any supplier to supply. Every city & place in India has its own culture and in similar way consumer buying behavior of people in different parts of the country also differs. This research can be taken as base to further research anywhere in India.

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Evaluation of Semi-strong form of Market Efficiency Theory based on Event Studies

Study to find out Semi-strong form of Market Efficiency for selected two events (i.e. Stock Split and Bonus Issue) in selected four companies in Period of 2004-16

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ABSTRACT

This paper will focus on testing Semi-Strong Form Market Efficiency which can be done using Event study, Portfolio study or Time Series Analysis. Event study within which Stock Split and Bonus Issue between the periods of 2004-16 will be considered. The study would cover 10 cases of Bonus issues made by four companies' viz. Infosys Limited, Larsen & Toubro Limited, Mahindra and Mahindra Limited and Sun Pharmaceutical Industries Limited. It will also cover 2 stock split cases (one each made by Mahindra and Mahindra Limited and Sun Pharmaceutical Industries Limited). The main objective of the study would be to calculate abnormal returns in all these 12 cases. Abnormal return would be calculated based on the difference between actual and expected return. Expected return would be calculated based on Capital Asset Pricing Model. Announcement date, Ex-Bonus date and Ex-split date will be used as key input dates.

Keywords: Semi-Strong Form Market Efficiency, Event study, Stock Split, Bonus Issue, Capital Asset Pricing Model (CAPM)

INTRODUCTION

Efficient Market Hypothesis (EMH) is an investment theory that states it is impossible to "beat the market" because stock market efficiency causes existing shareprices to always incorporate and reflect all relevant information. (I.e. Ideally Market Price = Intrinsic Value, $MP=IV$). If MP is not equal to IV then difference should be unbiased. According to the EMH, stocks should always trade at their fair value on stock exchanges or should adjust to their fair value as per the new information quickly. Making it impossible for investors to either purchase undervalued stocks or sell stocks for inflated prices. As such, it should be impossible to outperform the overall market through expert stock selection or market timing, and that the only way an investor can possibly obtain higher returns is by purchasing riskier investments. It is divided in three forms viz. Weak Form Efficiency, Semi-Strong Form Efficiency and Strong Form Efficiency. Weak Form Efficiency claims that all past prices of a stock are reflected in today's stock price therefore, technical analysis cannot be used to predict and beat a market. Theoretical in nature, weak form efficiency advocates assert that fundamental analysis can be used to identify stocks that are undervalued and overvalued. Semi-Strong Form Efficiency implies all public information is calculated into a stock's current share price meaning that neither fundamental nor technical analysis can be used to achieve superior gains. This class of EMH suggests that only information that is not publicly available can benefit investors seeking to earn abnormal returns on investments. The strongest version of market efficiency. It states all information in a market, whether public or private, is accounted for in a stock price.

REVIEW OF LITERATURE

The relevant review of literature on the topic was done Fama, Fisher, Jensen and Roll reviewed the impact of stock splits on 940 companies between 1927-1959 based on the data from New York stock exchange. They found stocks earned higher returns prior to the split as compared to the once predicted by market model. After the split however they were more or less in line with the once predicted by market model.

Katati (2001) studied stock price returns around bonus announcement date and ex-bonus date of 115 bonus issues made between January 1995 and March 1999. The study found that stock prices rise before the announcement and fall after the announcement. Study suggested that it could be profitable strategy to buy shares cum-bonus and sell them ex-bonus.

Lukose and Rao (2005) studied the operating performance around bonus issues for 464 companies listed on the BSE. Their study documents a cumulative abnormal return of 12.73% for an 11 day period surrounding bonus announcements. They also found that the abnormal returns are positively related to bonus ratio and negatively related to the size of the firm.

Charles Lasrado and T.V. Narasimha Rao (2009) studied about 134 bonus issues of NSE listed companies in India and concluded semi-strong form of market efficiency for Indian stock markets. Their analysis showed that market tended to predict the announcement of bonus issue and returns before and after the announcement were not significantly different.

RESEARCH GAPS

The reviewed research did not consider same four companies during the timeframe of 1st April 2004 to 31st March 2016 with daily data as the data frequency.

The actual versus expected returns based on CAPM model were compared. CAPM model was based regression analysis of the returns from daily data between 1st April 2004 to 31st March 2016. Risk free return calculations based on intercept value of the regression output. Beta was the slope of the regression output.

NEED FOR STUDY

Stock splits and Bonus issues have always enticed short term investors to look at the script favorably. However short term investors would come to know about these opportunities only after the announcement day or on the announcement day itself. Considering this there is a need to study if there are actually any above normal returns (i.e. as expected by CAPM model) between the announcement date and the ex-date for the split or the bonus issue. So, if the actual returns are significantly higher than the expected returns then it could offer a short term investment opportunity to retail investors.

OBJECTIVES OF THE STUDY

1. Calculate the actual returns in the prior and post period between the announcement date and the ex-date. (prior period days would be same as number of days between the announcement date and the ex-date)
2. Calculate the expected return between the announcement date and the ex-date.
3. Based on the difference the actual and the expected return identify if there are any investment opportunities for the short term investors.

RESEARCH METHODOLOGY

- Secondary data is used for the research. Daily data of share price close and the Nifty close is used. Daily data is taken between 1st April 2004 to 31st March 2016. It was collected from Capitaline database. There were 2984 daily observations and 2983 return observations for the timeframe under consideration.
- Based on these 2983 return observations Risk Free Rate (Rfr) and Beta (β) values were calculated. Rfr and β are critical inputs for the CAPM model which was used to calculate expected returns.
- Expected Return $E(R) = Rfr + \beta *(Rm - Rfr)$
- Market return (Rm) was calculated based on actual data.
- In all there will be 12 case studies in which returns pre and post event will be calculated.

- Pre and Post event returns will be calculated based on actual data. These actual returns would be compared with expected returns. Expected returns would be calculated based on capital asset pricing model.
- Announcement date will be considered as a critical date for the analysis. Returns on the day both actual and expected would be considered for analysis.
- Ex-Bonus or split date will be considered as the other critical date. Actual and expected returns between announcement date and ex-date will be calculated.
- 1 day preceding the announcement and announcement day returns would be considered.

DATA COLLECTION AND ANALYSIS

Based on regression analysis output of the daily data for four companies Rfr and β and R square (coefficient of determination) values were as indicated in the table 1.

Table 1

Company Name	Rfr (Daily)	Beta (β)	R square
Infosys Limited(Infy)	0.04%	0.74	32%
Larsen & Toubro Limited(L&T)	0.05%	1.11	48%
Mahindra and Mahindra Limited(M&M)	0.05%	0.97	40%
Sun Pharmaceutical Industries Limited(Sunpharma)	0.10%	0.50	14%

Key events and the date of the event is shown in the Table 2

Table 2

Sr. No.	Company Name	Event	Announcement Date (A)	Ex-Bonus Date/Ex-Split Date (B)	No. of Days between the (B) and (A)= (C) Days
1	Infy	Bonus Issue	24-Apr-15	15-Jun-15	52
2	Infy	Bonus Issue	10-Oct-14	2-Dec-14	53
3	Infy	Bonus Issue	17-Apr-06	13-Jul-06	87
4	Infy	Bonus Issue	13-Apr-04	1-Jul-04	79
5	M&M	Bonus Issue	14-Jun-05	2-Sep-05	80
6	Sunpharma	Bonus Issue	28-May-13	29-Jul-13	62
7	Sunpharma	Bonus Issue	21-Apr-04	27-May-04	36
8	L&T	Bonus Issue	22-May-13	11-Jul-13	50
9	L&T	Bonus Issue	29-May-08	1-Oct-08	125
10	L&T	Bonus Issue	7-Jun-06	28-Sep-06	113
11	M&M	Stock Split	25-Jan-10	29-Mar-10	63
12	Sunpharma	Stock Split	24-Sep-10	25-Nov-10	62

On the announcement day expected returns as per CAPM model and actual returns are as shown in the Table 3.

Table 3

Sr.No.	Company Name	Event	Announcement Date (A)	1 Day Actual Return (R_A)	1 Day Expected Return (R_E)
1	Infy	Bonus Issue	24-Apr-15	-6.0%	-0.8%
2	Infy	Bonus Issue	10-Oct-14	6.6%	-0.9%
3	Infy	Bonus Issue	17-Apr-06	7.0%	1.8%
4	Infy	Bonus Issue	13-Apr-04	6.8%	0.0%
5	M&M	Bonus Issue	14-Jun-05	0.73%	0.4%

6	Sunpharma	Bonus Issue	28-May-13	-1.72%	0.3%
7	Sunpharma	Bonus Issue	21-Apr-04	0.82%	0.8%
8	L&T	Bonus Issue	22-May-13	-5.7%	-0.4%
9	L&T	Bonus Issue	29-May-08	6.4%	-1.9%
10	L&T	Bonus Issue	7-Jun-06	-6.5%	-2.9%
11	M&M	Stock Split	25-Jan-10	-5.46%	-0.5%
12	Sunpharma	Stock Split	24-Sep-10	1.74%	0.5%
Abnormal Return On the event day based on Mean Value = 0.7%			Mean	0.4%	-0.3%

Prior Period based actual and expected return on number of days as shown in Table 4

Table 4

Sr.No.	Company Name	Event	Announcement Date (A)	Prior Period Actual Return (R _A) i.e.in (C) days as indicated in Table 2	Prior Period Expected Return (R _E) i.e.in (C) days as indicated in Table 2
1	Infy	Bonus Issue	24-Apr-15	-13.2%	-5.1%
2	Infy	Bonus Issue	10-Oct-14	9.2%	0.5%
3	Infy	Bonus Issue	17-Apr-06	14.5%	15.2%
4	Infy	Bonus Issue	13-Apr-04	0.6%	0.9%
5	M&M	Bonus Issue	14-Jun-05	12.6%	4.8%
6	Sunpharma	Bonus Issue	28-May-13	20.9%	7.2%
7	Sunpharma	Bonus Issue	21-Apr-04	14.4%	5.3%
8	L&T	Bonus Issue	22-May-13	6.2%	6.4%
9	L&T	Bonus Issue	29-May-08	-26.0%	-11.9%
10	L&T	Bonus Issue	7-Jun-06	-17.1%	-6.4%
11	M&M	Stock Split	25-Jan-10	2.7%	-1.8%
12	Sunpharma	Stock Split	24-Sep-10	10.4%	8.3%
Abnormal Return Pre-Announcement based on Mean Value = 1%			Mean	3.0%	2.0%

Post Period based actual and expected return on number of days as shown in Table 5 (i.e. period between the announcement day and the ex-date.

Table 5

Sr.No.	Company Name	Event	Announcement Date (A)	Post Announcement Actual Return (RA) i.e.in (C) days as indicated in Table 2	Post Announcement Expected Return (RE) i.e.in (C) days as indicated in Table 2
1	Infy	Bonus Issue	24-Apr-15	-0.7%	-2.0%
2	Infy	Bonus Issue	10-Oct-14	9.4%	6.8%
3	Infy	Bonus Issue	17-Apr-06	4.1%	-4.5%
4	Infy	Bonus Issue	13-Apr-04	2.6%	-11.4%

5	M&M	Bonus Issue	14-Jun-05	31.4%	14.1%
6	Sunpharma	Bonus Issue	28-May-13	14.3%	0.7%
7	Sunpharma	Bonus Issue	21-Apr-04	11.9%	-6.0%
8	L&T	Bonus Issue	22-May-13	-4.4%	-3.16%
9	L&T	Bonus Issue	29-May-08	-15.6%	-20.95%
10	L&T	Bonus Issue	7-Jun-06	26.8%	27.00%
11	M&M	Stock Split	25-Jan-10	3.4%	5.8%
12	Sunpharma	Stock Split	24-Sep-10	18.2%	1.2%
Abnormal Return Pre-Announcement based on Mean Value = 7.8%			Mean	8.4%	0.6%

DATA ANALYSIS

1. Mean value of actual return was more than expected returns prior to the event, on the event day and post event. ($R_A > R_E$)
2. Maximum difference between actual return and expected return was in post announcement returns. (As indicated by Table 5) Highest abnormal return of 7.8% is generated between announcement date and ex-date.
3. Even after Bonus Issue or stock split announcement stocks could generate negative returns based on overall market sentiment.
4. There was significant time lags between the announcement day and the ex-date. (36 to 125 days as indicated by Table 2)

LIMITATIONS OF THE STUDY

1. Only 12 cases comprising of 4 companies between April 2004 to March 2016 were considered.
2. As indicted by Table 1 coefficient of determination (R^2) value, the predictability of CAPM model is limited.
3. Risk free rate (R_{fr}) was considered based on linear regression output.
4. No transaction cost or short term capital gain tax was considered.
5. Other statistical test such as The Kolmogorov – Smirnov test were not considered.
6. Factors such as Bonus Ratio and Firm Size were not considered in the study.

SCOPE OF THE STUDY

1. Study could be extended to more companies across the timeframe.
2. Models other than CAPM could be used to calculate the expected returns.
3. Study could be extended to post ex-date returns.

CONCLUSION

Based on the 12 event studies it could be concluded that markets did not exhibit Semi-strong form of efficiency in events such as stock split and bonus issue. There were short term investment opportunities for traders (short term investors) to generate returns above expected returns as calculated by CAPM model. These opportunities were having maximum return possibility post the announcement of the event till the ex-date.

RECOMMENDATION

Short term investors could invest in blue chip companies to generate above normal returns after the announcement such as stock split and bonus issue.

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A Study of Customer Experience with the Relation to Online Shopping

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ABSTRACT

This focus on customer experience with related to online shopping .The world has seen constant growth in the e-commerce industry. There has been constant effort to create online shopping experience for the customers aligned with consumer preferences .Online retail is bound to see n upward run in coming years with the help of technology. The use of technology helps in collection of data about customers, their purchases, buying frequency. This information can help the retailer identify the customer who shop at this store frequently and reward them.

Once customer awareness and trial are achieved, familiarity is established and the customer and the firm become acquaintances, creating the basis for an exchange relationship. With the repetitive interactions, the customer gains experiences and become more familiar with the firms.

This research paper is focused on customers experiences and satisfaction The main purpose of this paper is to provides customer convenient and level of satisfaction.

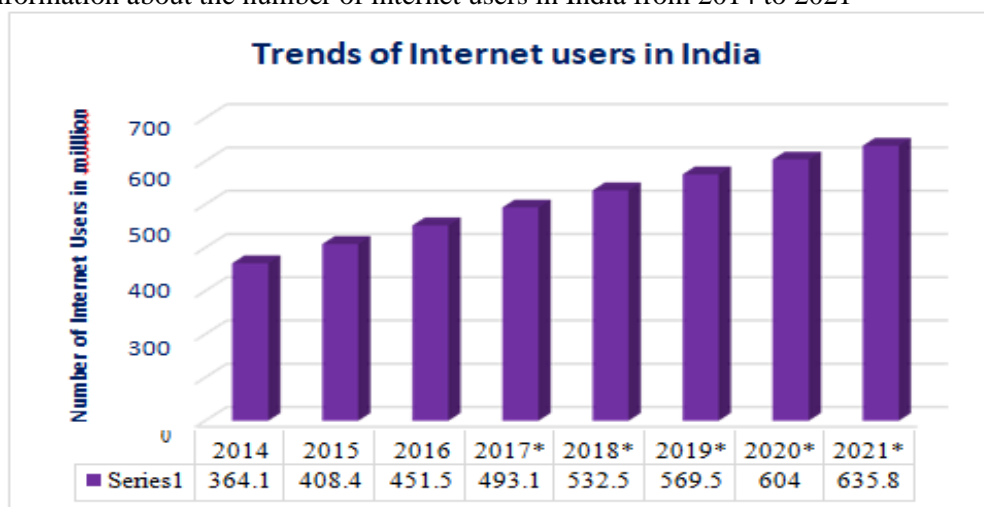
Keywords: Online shopping, conventional shopping, e-customers

INTRODUCTION

Though world is changing shopping tradition rapidly but in India online shopping is still not that much popular. Number of customers who are opting online shopping store is increasing but slowly. Traditional or conventional methods of shopping are more popular in India. People are aware of conventional methods of shopping hence here are glancing at online means of shopping. Online shopping trends in India have continued to evolve over the last few years only, providing residents with the means to shop from the comfort of their own home for goods, apparel, electronics and so much more. The possibilities are endless when opting to do your shopping online.

In 2015, India had 408.4 million internet users. This figure is projected to grow to 635.8 million internet users in 2021. Despite the untapped potential, India already is the second-largest online market worldwide

Graph: Information about the number of internet users in India from 2014 to 2021

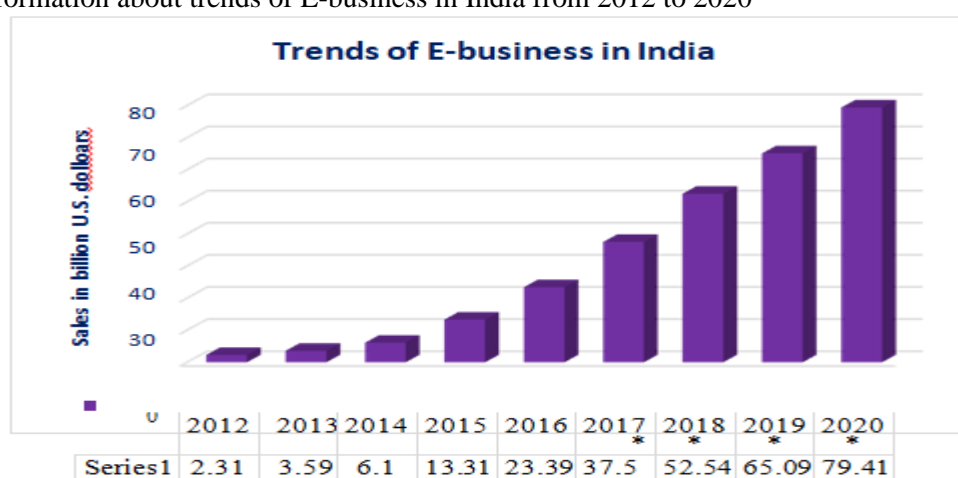


Source: www.statista.com, * indicates projected use

India is one of the fastest-growing e-commerce markets worldwide, with millions of new internet users taking advantage of cheap mobile connections to send mobile messages, watch online videos, use mobile services, and of course, to shop. As of 2016, 26 percent of the local population was using the internet; almost ten times the audience size from a decade prior. According to recent market research, mobile phone internet user penetration in India is projected to reach 37.36 percent of the population in 2021, representing a huge potential in terms of digital and mobile buyer audience. Total internet audiences in India are estimated to surpass 635 million online users in 2021.

As of 2015, the majority of online users in India were male, and the same held true for online shoppers. In India, men accounted for almost two thirds of online shopping audiences. Despite this imbalance in online presence and digital spending, female online shoppers are estimated to account for 42 percent of all Indian e-retail spending in 2020, up from only 20 percent of total retail e-commerce expenditure in 2015. Average annual e-commerce sales per digital buyer in India were 247 U.S. dollars in 2014 and are projected to reach 424 U.S. dollars in 2020.

Graph: Information about trends of E-business in India from 2012 to 2020



Source: www.statista.com , * indicates projected use

Overall, the Internet has the highest penetration among people ages 18 to 24 (48 per cent) and the lowest among those older than 54 (6 per cent). The Internet is projected to reach small towns and the low rungs of the economic ladder more quickly than retail chains will, bridging geographic barriers and feeding the growing appetite for consumer goods, the report said.

Current trends in online shopping in India show that the majority of buyers choose to shop at websites that allow them to purchase a wide variety of items from a range of different stores rather than one, select retailer. When purchasing electronics and other goods, many Indian shoppers rely on opinions and online reviews from other users from around the world. In a recent study, it has been determined that within the next year alone, eight out of every ten Indian consumers will make at least one purchase on the internet.

In India, 68% of online shoppers are purchasing from a marketplace, as opposed to a shopping with an online brand.

The e-commerce sector has seen a boom in the Asian region in the recent years. India, the south Asian country, had the fastest growing online retail market in 2019. The number of digital buyers across the country was estimated to be approximately 330 billion in 2020.

LITERATURE REVIEW

1. Prof. Ashish Bhatt (2014) in article entitled “Consumer Attitude towards Online Shopping in Selected Regions of Gujarat” published in Journal of Marketing Management stated that online shopping is gaining popularity among people specially the younger generation but in today scenario to become equally popular among all age groups e-marketing will have to cover a longer distance. As per study mode of payment is depended upon income of the respondents.

2. Prashant Singh(2014) in his article “Consumer’s Buying Behaviour towards Online Shopping A case study of Flipkart.Com user’s in Lucknow City” published in Abhinav stated that future of e-retailers in India looking very bright. E-retailers give consumers the best way to save money and time through purchasing online within the range of budget.
3. Upasana Kanchan , Naveen Kumar and Abhishek Gupta(2015) in their article “A Study of Online purchase behaviour of Customers in India” Published in ICTACT Journal on Management Studies stated that online shopping is gaining popularity among people of young generation. Higher income groups and educated people are purchasing more via e-retailing websites. People have hesitations in doing online shopping due to security concerns.
4. Bauer et al., (2006) have compared the services of online retail service vs. traditional retail services. They have identified that the online retail services are broken into two rather distinct phases: the client interaction phase taking place online and the fulfilment phase taking place offline. They also have suggested that web-site quality is a matter of delivering both hedonic and utilitarian elements.

OBJECTIVES OF STUDY

1. To study present status of online shopping in India
2. To analyze the factors those affects customers attitude towards online shopping in India
3. To study potential for development of online shopping in India

RESEARCH METHODOLOGY

This research is based on primary data. The method of data collection for this research is questionnaire. This method is easy to replicate as both fixed set of closed and open-ended questions are used, which are easy to quantify, this means it is easy to test for reliability.

HYPOTHESIS OF STUDY

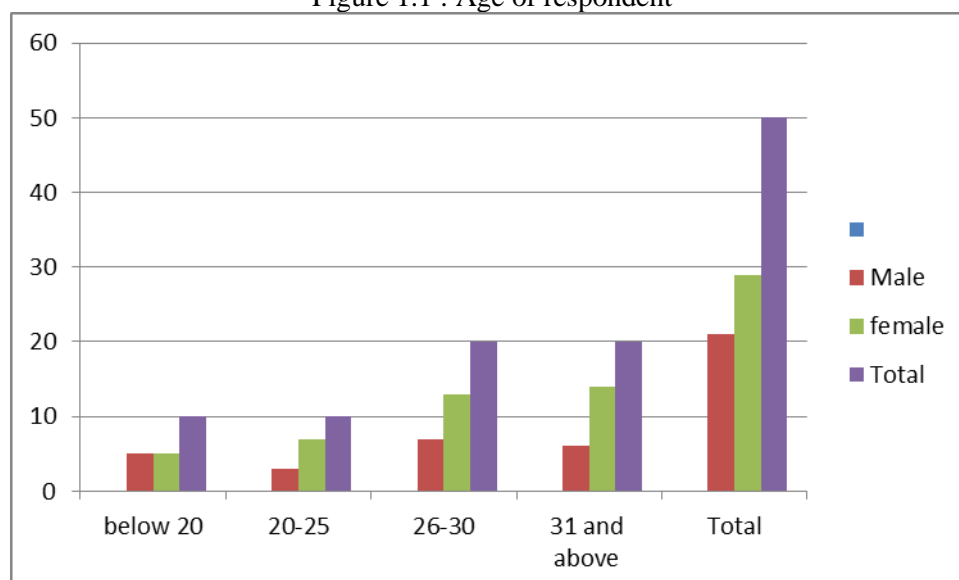
H0: Products purchased by consumer are independent of their factors influences in online shopping

H1: Products purchased by consumer are dependent of their factors influences in online shopping

DATA ANALYSIS & INTERPRETATION

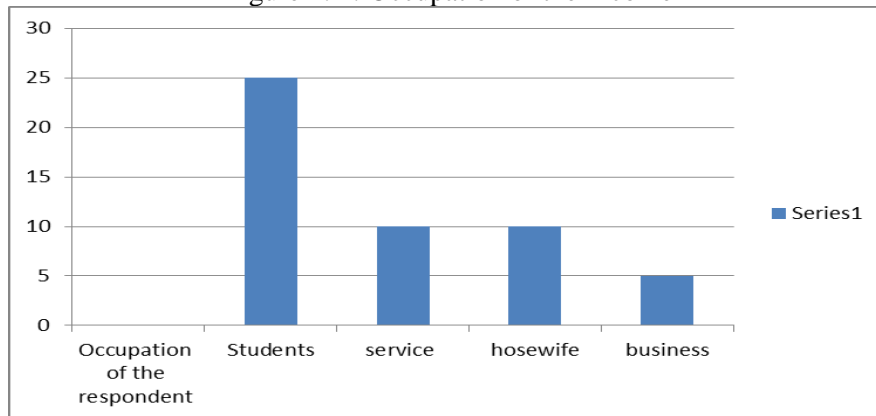
The respondents were category into several factors.Amongst the data , the 50 sample size has been taken for data analysis. Among them , the male respondents is 42% and females respondents is 58% .

Figure 1.1 : Age of respondent



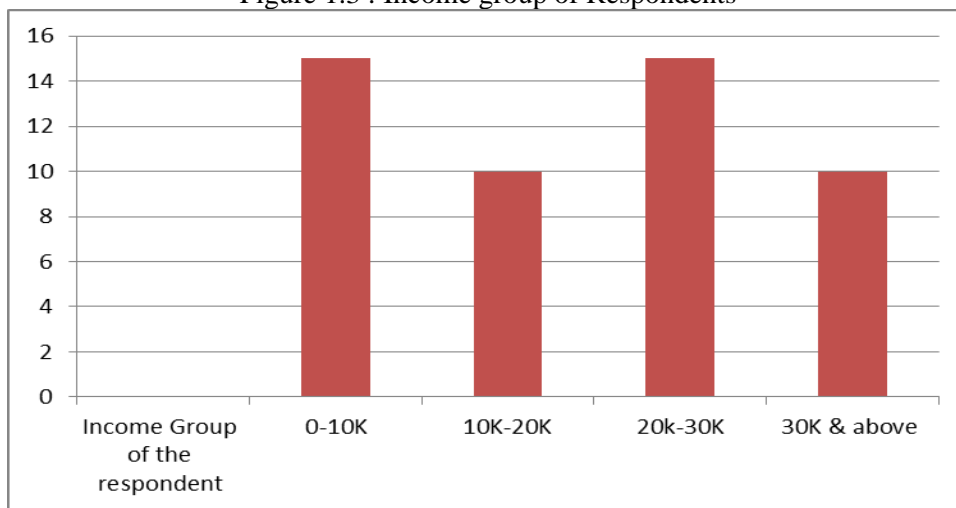
From the above figure , we can interpret that majority of the respondents is belonging to age between 26 to 30 and above .Out of which ,the female respondent is more than male respondent . The online shopping is mostly like between age group 20-25 years of target population for research .

Figure 1.2 : Occupation of the Income



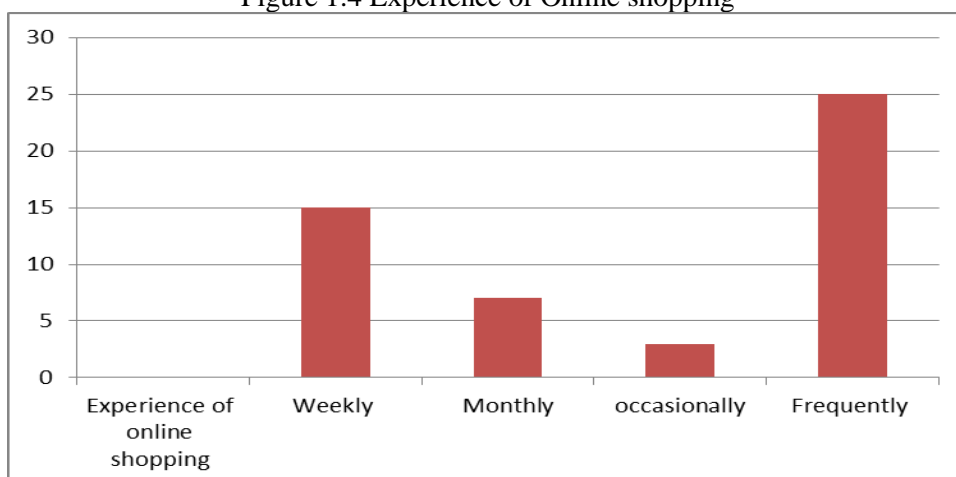
In the case of the occupation ,50% of the respondents belong to students , 20% of the respondents belong to service sector and housewife and the rest belong business sector .

Figure 1.3 : Income group of Respondents



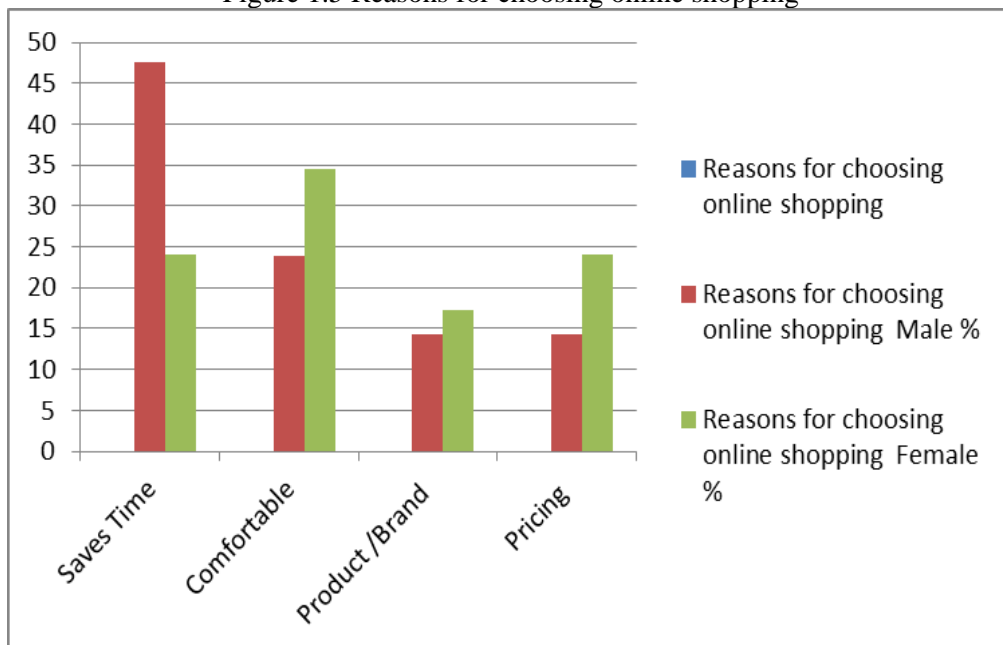
It was analysis that more 30% of the income group between 10K-20K and 30K & above prefer more online shopping .And the income group belong to rest of the 20% is 20K-30K.

Figure 1.4 Experience of Online shopping



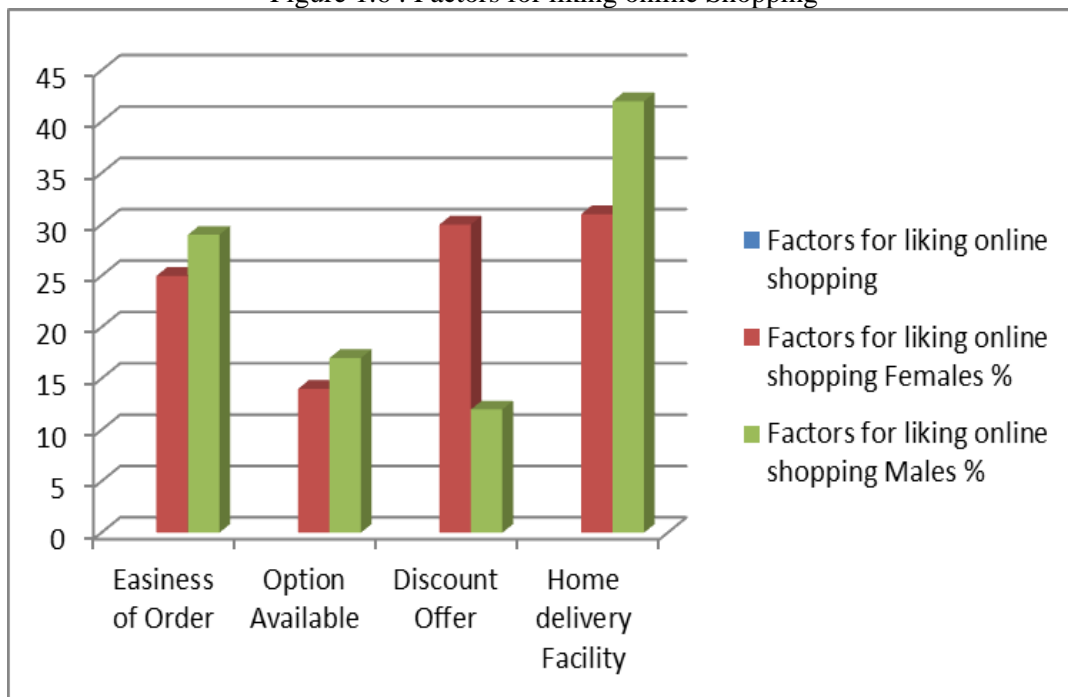
Above table show , online experience ,how frequently the consumers is shopping ,50% of the respondents do frequently shopping from online ,30% of the respondent do weekly shopping . It was analysis that ,Customers are mostly attracted towards online shopping .

Figure 1.5 Reasons for choosing online shopping



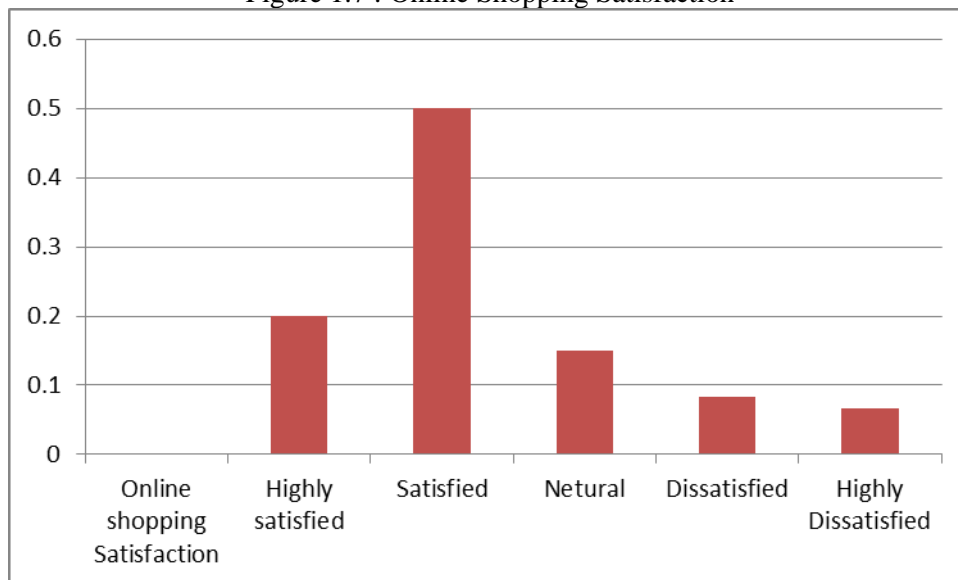
Both males & females respondent ,assured there are specific reasons for choosing online shopping. Time saving and comfortable main objective are for doing online shopping .Nearly , other group of the people says, its depends on pricing factors . One of major factors is also based on different brands of the product which easily available in online shopping . One of the major factors is that ,people prefer online is that time saving .

Figure 1.6 : Factors for liking online Shopping



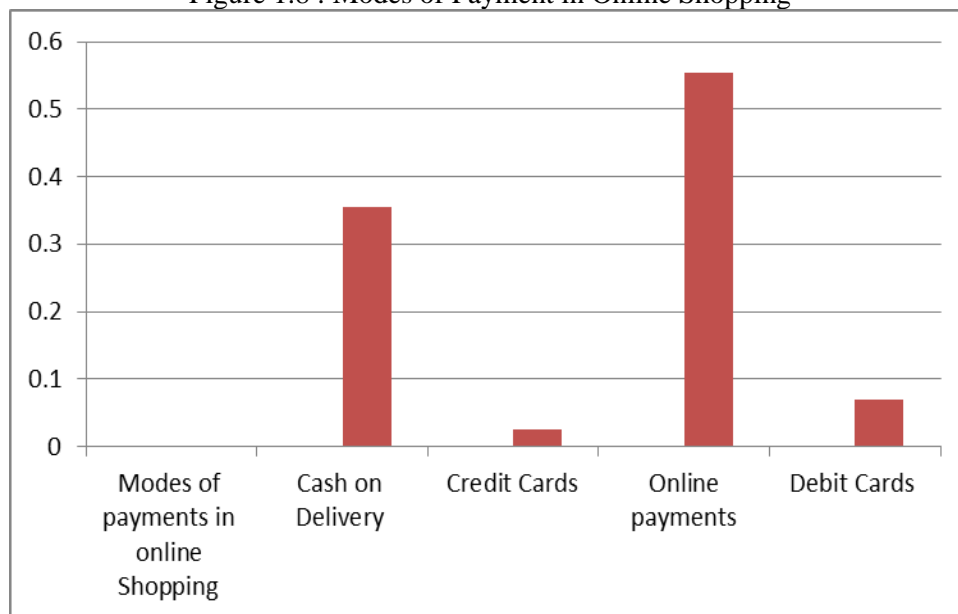
From the respondents , the one of the major factors is that ,27% respondents say , easiness of order and 36.50% respondents agree that the home delivery facility provided by online business , is one of the major factors which influences for online shopping . However to the females respondent says;more discount offers are given in online shopping .Where the online shoppers also preferred the online shopping for ease use & option brand available.

Figure 1.7 : Online Shopping Satisfaction



50% of the respondents are satisfied with online shopping .Satisfaction plays an important roles in online shopping . Satisfied consumers tend to shop more frequently online. After analyzing data, we found that of half of respondent are satisfied with over all service provided by online business.8.33% of respondents are dissatisfied by online service. And 6.65 % of the respondents are highly dissatisfied.

Figure 1.8 : Modes of Payment in Online Shopping



There are the different modes of payments ,option given to the consumers .On the basis current scenario, 55.50% of the respondents pay on online payments system , which is very easy and convenient for the payments. From the survey ,we found that , the respondents ;mostly likely to pay on cash on delivery .Due to digitized in India, The survey found that most customer prefer to pay on online method ,which is most convenient for the customer .

CONCLUSION

From the above research , We found that online shopping is more and more effective due to the IT infrastructure and online payments system. Now a days, India become more and more Digitized .The people prefer more online shopping due to convenient .

This system give business the ability to personalize and customize relationships with their customers regardless to deal directly with them at any given time. As a result ,the retailer better informed about each customers specific needs.It help the retailer easily and quickly modify its level of services in order to match the customer profile.

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A Study on Growth and Prospect of Digital India Program

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ABSTRACT

This Research paper provide an program launched by the government of India to digitalize nation .To digitally grow the country and the IT institution of the country,digital india is one of the biggest steps ever taken. The main objective of this paper is to review and summarize various studies which were made by different researcher of different location across India.The future opportunities for sustainable growth is vast and ever growing.The digital technology for sustainable growth is likely to reach 15 billion USD by 2021.

The use of IT based technologies for solving different issues in the different sectors in Indian economies.

These technologies are to be embedded into day to day life of human . Technology is a systematic application of scientific knowledge to practical task .Government of India , in its endeavor to promote socio-economic ,has taken up initiatives such as digital India. India is the second largest country in world wide by using internet users.In 2018,There are 483 million internet users.As per statistic data provided ,it was estimated that 492.68 million of India population is a internet users by 2020.As majority of India population rely on technology.

The paper highlights , the benefits of digital enablement to the last mile of the country

Keywords: Digital India, Challenges, Opportunities.

INTRODUCTION

India is on the progressive path of development and its rural population is an integral part of growth.Technology has demonstrated changes in our lives by new technology development and innovations in present modern era. The IT and systems have become the essentials part for the success of current world.

Today ,India has \$120 billion organized sector contributes \$70 billion to reach technology by 2020.The pace of change in technology in a country , influences the firms working and technology development.After the industrial revolution , the information revolution has been the most significant development in this country.The changing technology has also help to expand the business and to contributes to economy of country.Digital India is a programme to transform India into digital empowered society and knowledge economy. Technology makes more technology possible because it acts as a multiplier and encourages its own faster development .It acts with other parts of society in such a way that its invention in one place leads to a sequences of invention in others places.The government of India has understood the importance of technology and has given it topmost importances.The government has taken initiative steps towards progress of the country .The different program has been launched by government to make the things easy and convenient for citizens of India.It also enhances and increase the connectivity among the public. The digital India program launched on 1st July 2015 by Narendra Modi, prime Minister of India.The main objective of the program ,Connecting to rural area with high speed internet networks and digital literacy.

As per the statistical data , The usage of electronic form is 1.3 billion of india population ,1.23 billion are registered) Aadhaar digital biometric identity cards,1.21 billion usage of mobile phones, 446 million users of smartphones,560 million internet users. The country has tremendous growth of 51% in e-commerce.

The main aim of the initiative is to have a participative, transparent and responsive system. It's a project to remodel the nation into a knowledgeable economy, a digital empowered society. It encompasses a vision of connecting and networking around 130 crores of Indian citizens across the nation, it bringing in a transparency and accountability in governance and leveraging the technology benefits for an overall improvement and development of the rural India citizens.

Today, over 35% of Indians have access to the internet due to increased availability of mobile internet and smartphones. However, there is a sharp divide between urban and rural internet penetration with 66% and 24% respectively. The gap is anticipated to reduce by 2020.

Today the scenario has changed. The paper highlights the major challenges and opportunity that has been facing and may face in coming decades. The paper is based on analysis of relevant secondary data. The role of digital technology and its application as a support system for meeting the different challenges faced by different sectors.

REVIEW OF LITERATURE

- Digital India: A Study of New-Age e-Entrepreneurship in India** (Arjuna Kumar Sahu, 2015) Arjuna Kumar explores Digital India and other initiatives like National Digital Literacy Mission (NDLM). Penetration of mobile phone and broadband has raised in significant number and pattern of users has changed.
- New Urban Utopias of Postcolonial India: 'Entrepreneurial urbanization' in Dholera smart city, Gujarat** (Datta, 2015) : Datta has explored in depth critical analysis on Dholera smart city to suggest how state attempt to attract global capital and enhance economic growth through construction of new townships.
- Developing Smart Cities using Internet of Things: An Empirical Study** (Sarin, 2016) Sarin explained Digital India program, which aims at setting up e- infrastructure in the nation will enable faster establishment of the IoT industry.
- E-Governance-Reforming Government through Technology:** (Raghavendra Kulkarni, 2016) Raghavendra Kulkarni explains and analysis the characteristics, advantages and challenges in the implementation of E-Governance. The two main advantages of E Governance are increased transparency and fast public service delivery.

OBJECTIVE OF THE STUDY

- To identify trends in Digital India services in make in India.
- To analysis challenges posed in transforming India in to digital.
- To study the impact of Digital India by 2019.
- To study the opportunity of the programme implement by Government
- To study the Projects and Initiatives taken by government under Digital India Initiative.

RESEARCH METHODOLOGY

This study is descriptive in nature; based on secondary data for the purpose of this research paper. The main sources of secondary data are annual general reports, journals, magazines, newspapers and websites.

COMPARATIVE ANALYSIS OF PILLARS OF DIGITAL INDIA

Sr.No	Pillars	Area Coverage
1.	Broadband Highways	Nationwide optical fiber network (NOFN) in all 2.5 lakh gram panchayats in the nation will occur in a phased way. The point of contention here is to provide broadband for all.i.e.Rural,Urban and National wide.
2.	Universal Access to Mobile Connectivity	Guaranteeing mobile phone access in around 44,000 discovered towns in the nation and government is taking action to ensure that all towns are covered through mobile phone connection by

		2018.
3.	Public Internet Access Programme	To develop the protection of typical solutions middle (CSC) from 1.35 lakhs to 1.5 lakhs, i.e. one in every panchayat. It will act as a points for delivery of various government and business services.
4.	E-Governance Reforming government through Technology	Business procedure re-engineering will be performed to enhance procedures and service distribution. It transform the manual work into fully automatic system.
5.	e-Kranti (Electronic delivery of Services)	e-Kranti focus on electronic delivery of services whether it is education, health, farming, rights and financial addition. All services related to central, state government will be available at the hand touch.
6.	Information for All	The programme is to be implemented by the government with over all co-ordination with others department. The connectivity network will enable swift flows and avoid and delay arising due to queues.
7.	Electronics Manufacturing (Target NET Zero imports)	Concentrate is on set top boxes, VSAT, mobile, consumer electronics, technology, medical electronic devices, intelligent energy metres, Smart cards and micro ATMs.
8.	IT for Jobs	The government major focus is to providing training to youth in skill required for getting employment in IT sectors. The target is to train 1 crore students from rural and urban area for IT job over 5 years.
9.	Early Harvest Programmes	The government is planning to set up Aadhaar Allowed Fingerprint Presence Program in all central government workplaces situated at Delhi. It is comprising of those projects which need to be implemented within short frame of time.

IMPACTS OF DIGITAL INDIA

1. Technology and Society

- a) Technology reaches to people through business.
- b) Technology has a resulted in complexity.
- c) Increased the consumer's expectation.
- d) Technology helps to iron out social differences but it has created status differences.
- e) It creates a creation of social system

2. Technology and economy

- a) It has contributed to increased productivity in terms of more production at lower cost.
- b) It also has a tremendous effect on allocation of resources to research and development.
- c) Techno structure has created the problem of employee's retention. Retaining such employees for long is difficult task.
- d) Technology advancement has made the business more complex and its management more demanding.
- e) Technology demands huge investment of capital. It necessitates massive investment in all sectors of economy.

3. Technology and Market

- a) Due to E-commerce, entire world has become one market, the way companies manage to attract customers online to place order and efficiency with help of technology.

- b) The integration operates through internet and build new relationships between business and customers.
- c) It is peculiar trait of human beings to have resistance to change. Changes in technology may bring new sets of problems and skill development among employees.
- d) E-business provides convenience in conducting business worldwide, efficiency in distribution, advertising and sales promotion.
- e) The products which may be in vogue today may become obsolete tomorrow due to pace of technology changes.

DIGITAL INDIA-GOVERNMENT OF INDIA INITIATIVES AND SOME APPLICATION

E-governance initiatives in India have been confronted with the dual challenges of automating government departments and taking services to the people. 'Digital India' initiative, the government has launched a host of mobile apps for Android and Apple iOS users to avail government services digitally.

1. DIGILocker: It provides an account in the cloud to every Indian citizen to access authentic documents/certificates such as vehicle registration, driving license, academic mark list in digital format from the original issuers of these certificates.

2. Bharat Net :This is a high-speed digital highways to connect all 2.5 lakh *Gram Panchayats* of country . This would be the world's largest rural broadband connectivity project using optical fiber.

3. MyGov app : This a mobile version of the MyGov.in website. This platform encourages citizen engagement in governance. The app allows you to comment on government policy, submit suggestions and provide feedback to other users over their ideas.

4. eSign : The eSign framework would allow citizens to digitally sign a document online using Aadhaar card.

5. National Scholarships Portal :This new service is said to be a one-stop-solution for end-to-end scholarship process right from submission of student application, verification, sanction and disbursal to end beneficiary for all the scholarships provided by the Government of India.

6. Swachh Bharat Mission (SBM) app : Under, the *Swachh Bharat* mission, the government has launched to connect with people as well as government.

7. E-education : The program looks to provide high-tech education using technology like smartphones, apps and Internet services.The education can be imparted through virtual means as part of the program.

8. E-health : This initiative aims at providing timely, effective and economical healthcare services to all, especially to the ones that have little access to healthcare services. This service too will be linked to Aadhaar numbers, and will make getting lab reports and OPD appointments easier. The Online Registration System (ORS) under the eHospital application has also been introduced.

9. Next Generation Network (NGN) : This is a BSNL initiative which looks to replace 30 year old exchanges, with this new IP-based technology to manage all types of services like voice, data, multimedia/ video and other types of communication services.

10. Wi-Fi hotspots : BSNL has undertaken large scale deployment of Wi-Fi hotspots throughout the country for Internet access on smatphones while on-the-go. The initiative has already kicked off with the government offering free Wi-Fi at tourist places like Taj Mahal, and spots at Shimla too.

11. UMANG : (Unified Mobile Application for New-age Governance) is to drive Mobile Governance in India. The app provides a unified platform for all Indian citizens to access pan India e-Gov services ranging from Central to local government bodies and other citizen-centric services.

12.mPassport Seva : Passport Seva Portal such as New User Registration, Apply for Passport Services, existing User Login, Schedule appointment, Pay online, Know Location of Passport Centers, Application Status, Fee Details, Contact Information and other general information.

OPPORTUNITIES

1. Changes in consumer refinements and function lie at the centre of the movement.
2. India now makes up the biggest youtube audience by country globally.
3. There is an expectation that in 2020, e-commerce market will increase from at yearly rate of 51 % . Also, offers the jobs inked to different sectors of economy.
4. By Digital revolution, industries like stocks, mutual funds and other securities will develop more open to the crowds.
5. The country is experiencing a digital revolution that is triggering transformative developments in areas like e-payments, digital literacy, financial inclusion, geographic mapping, rural development, much more.

CHALLENGES

1. **Compatibility and Complexity:** Every state has different internet protocols because every state is diversified. Therefore software compatibility with the center is a critical subject. Information shall be saved cautiously.
2. **Confidentiality and privacy:** The security measures adopted may not be up to the standards required in the industry. Hence it may lack confidentiality and privacy.
3. **Risk of Cyber Crime:** There is cyber risk all over the world and digital India will not be any exemption. Hence we have to a strong anti cyber crime team which the database and protect it around the clock.
4. **Finance:** Though there are resources with India but there is an enormous capital cost which is to be invested and the fruits of the investment will be expected after few years.
5. **Net neutrality:** The problem is still on the table and we are blindly following the digital India. Net neutrality is having to and we should make confident that digital India exclusive of net neutrality would be a great blow to entrepreneurs and citizens of India.

CONCLUSION

The society as we know it is going through a radical makeover, the constant connectivity everywhere. The Technological changes have drastically changed the way, Technology is a high-risk, costly and uncertain activity. The world has reached a stage in which many of the inventions and discoveries in various areas have already taken place. With the adoption of Digital India programme, it is no doubt that the Indian Nation will have a solid digital infrastructure. Government of India has already initiated different policy in different sectors of development program. The rapid development of technology requires quick reaction in order to survive in an emerging competitive environment and keep up with new trends in the major area. Technology does not affect life style of human but also its affect business environment. Technology allows to reach new economic.

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The Age of Social Media & Its Influence on Consumer Behavior

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ABSTRACT

This research paper is the study and evaluation of different aspects of social media and its impact on the buying decisions of the consumers. An Engel-Blackwell Miniard (EBM) Model of Consumer Behavior has been referred to include in the methodology along with the information search and alternative evaluation. The research is based on the analysis of secondary data on consumers online buying behaviors and the study of online purchases made by the internet savvy users, wherein the abandoned searches were not included. It aims at studying the degree of influence of social media on the consumers.

1. INTRODUCTION

Social Media has become an important part of our lives. This paper is a study of the use of social media and how it influences the decision-making process wherein complex buying decisions are considered. Complex buying here refers to the purchases that are demonstrated by considerable brand differences, higher consumer participation and risks and that are expensive and infrequent.

Social Media came to be known only in the early 2000s. The advent of the age of internet opened multifarious channels of communication. Since the early days, it has undergone a significant transformation. From facilitating basic exchange of messages to fully integrated user-driven web technologies like social media, blogs and other media sharing platforms, it has aided the growth of technology in many ways. The term social media accounts for security-based web-interfaces / platforms that allow users to publish their own content. Such platforms have enabled the growth of user-generated content, global community and publishing of consumer opinions (*Smith, 2009*). Such a movement has eventually come to define how a user or a consumer in general uses the web. It has also led to the rise in popular social media platforms like Facebook, Twitter, Instagram, Pin Interest, LinkedIn, etc. where people from across the globe can connect, produce and share content. This phenomenon has gradually evolved and has resulted into people looking for and acquiring information on various products and services in the market through social media. The platforms are enabling consumers to connect with each other and discuss different brands easily. They also enable them to connect with the brands and have an engagement with them. The channels have opened up for consumer opinions on products and services and are progressively governed by the users on the social media. Their opinions percolate to the offline space too and influence the buying decisions of overall consumers. Social media are user-controlled accounts and hence, the brands and marketers do not have power over the online conversations on the platform including their content, timing or frequency. And hence, digital marketing endeavors, focusing on improving online brand equity and engaging consumers online positively becomes an important part of the marketing strategies for the companies.

Advertising and promotional strategies are often focus on the psychological, emotional and social factors that influence consumer behaviors and these must be factored in for the technology-based or digital marketing as well. (*Quelch&Jocz, 2008*). Marketers anxiously follow the consumers' social media usage and analyze their online behaviors to categorize the influences on their decision-making process. There are various studies on consumer behaviours in an online shopping environment which does not consider the different phases of decision making of the consumers. (*Darley et al, 2010*). This paper explores the process for complex buying decisions and factors that act as influencers. Study shows that the use of social media has greater impact on the consumers' satisfaction at various levels. The influence affect through information search and alternative evaluation and as the consumer progresses towards final purchase decision, it amplifies the consumer's satisfaction level too.

2. LITERATURE REVIEW

2.1. History of Social Media

Social media and social networking are parallel phrases and the former cannot be studied without encountering the latter one. Social media is defined by the Merriam-Webster *dictionary* as ‘forms of electronic communication (as websites for social networking and blogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos)’. The source also defines networking as ‘the exchange of information or services among individuals, groups, or institutions; specifically, the cultivation of productive relationships for employment or business’.

Social media and social networks have evolved over the decades from basic telephone-based communication systems to early email to fully digitized avenues today. It was post the accessibility of internet in 1991 that many social media sites were created and made their way into our lives. These sites made it possible for people to connect and interact with each other online. Additionally, blogging services were also added to this and eventually sites for products and services reviews were created that allowed users to post their comments on the products and services based on their experience. However, it was in the year 2000 that social media grew exponentially. Many social networking websites sprung up which transformed how individuals and companies with common interests interacted on these sites. The early years of 2000s saw the launch of Friendster, MySpace, LinkedIn, etc. And in 2004, the launch of popular sites like Facebook, Dogster, etc. changed the social media communication. These social networking sites made the term ‘social media’ quite popular. It was around this time that the term ‘Web 2.0’ was used to refer to the use of internet as a platform where the users continually modify the content in a participatory and collaborative manner. (*Kalpan and Haenlein, 2010*). As a result of Web 2.0, Wikis, collaborative projects and interactive blogs became popular which facilitated creation of user groups and flow of information amongst the users (*Constatinides, 2014*). UGC refers to user generated content or the media content that is created by the end users and is available online publicly (*Kaplan and Haenlein, 2010*). According to OECD (2007), UGC should have been created without commercial market context and outside professional routines.

Social media can be categorized into content communities viz. YouTube, collaborative projects, viz. Wikipedia & blogs, social networking, viz. Facebook, virtual game worlds, viz. World of Warcraft and virtual social worlds, viz. Second Life (*Kaplan and Haenlein, 2010*). Today, even professional review sites and ecommerce websites like Amazon and dpreview come under UGC.

2.2. Social Media – a WOM

WOM or Word of mouth concept is an age-old one and which has fueled marketing campaigns online to a great extent. According to Arndt (1967), WOM is a ‘person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial regarding a brand, product or service’. WOM has played a crucial role in building perceptions and attitudes about brands, products and services (*Kimmel and Kitchen, 2014*) and has influenced consumers buying decisions at the phases, right from product awareness to choosing to post-purchase evaluation.

An organic WOM is when one person shares his or her views on a product or a company with the others. On the other hand, when a marketer runs a campaign to encourage others to speak about a product or a company, an amplified WOM occurs (*WOMMA, 2011*). Organic and amplified WOM are delineated by social media. Today, WOM has gained great significance. This is due to wide inter-connectedness of people on social media. Online WOM, also called as eWOM is where internet users write reviews and ratings for all kinds of products and services on review sites. These are defined as positive or negative comments made by the prospective, actual or former buyers / customers about the products or the company. These are accessible to a large number of people through internet. Such content generated by internet users who are also consumers, is usually believed to be independent of commercial influences. Consumers often refer to forums, blogs and other unbiased social media sources to make their buying decisions.

2.3. Buying & Decision Behaviors

Consumer buying behavior was classified by Kotler and Armstrong (2014) along two axes, i.e. high or low consumer involvement and significant or few brand differences. The buying behaviors they discerned are summarized in the Table A.

Table A **Types of Purchase Behaviors**

Purchase Behavior	Characteristics	Examples
Complex Buying	High Consumer Involvement Significant Brand Differences Expensive Infrequent High Risk	Car Laptop
Dissonance-Reducing	High Consumer Involvement Few Brand Differences Expensive Infrequent High Risk	Carpet Furniture
Habitual Buying	Low Customer Involvement Little Brand Difference Frequent or Repeat Purchases	Household Goods Groceries
Variety-Seeking Buying	Low Customer Involvement Significant Brand Differences Brand Switching for Variety	Cookies Restaurant

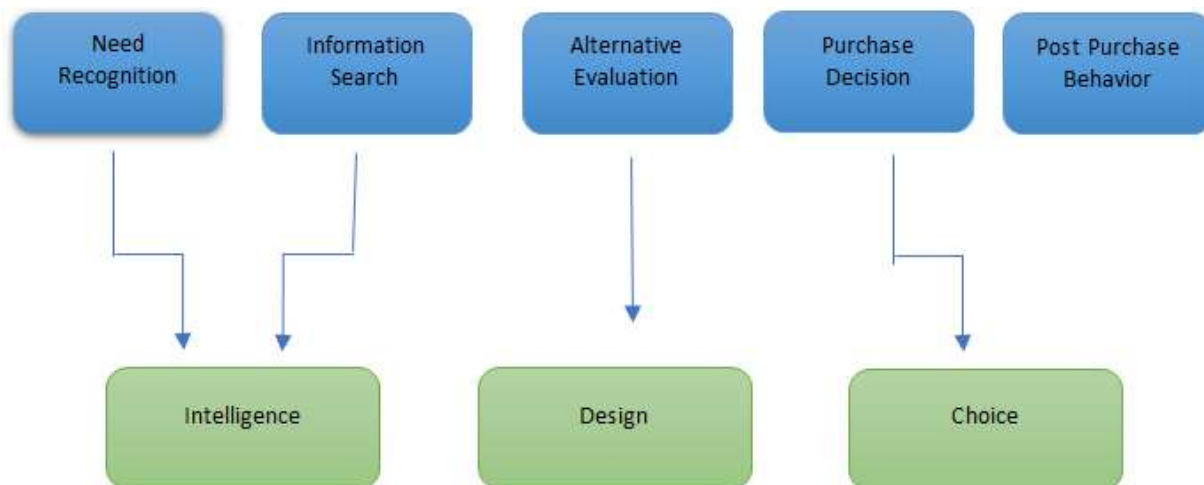
Source: Kotler and Armstrong (2014)

Table A denotes that complex buying behaviors involves high risks. This means substantial importance must be given to product evaluation and information gathering. As opposed to dissonance-reducing behavior, here the brand differences are significant, and consumer would have to go through all the phases of decision-making process. Hence, the research focusses on the complex buying situations, where it is considered to have higher social media influence.

Consumer decision-making could be defined as the “behaviour patterns of consumers, that precede, determine and follow on the decision process for the acquisition of need satisfying products, ideas or services” (Du Plessis et al., 1991). Various consumer models have been used to understand and determine consumer buying behaviors, Over the years, consumer models have evolved from the simple economic model based on principle of maximum utility, minimum spend and maximum gain, the psychological model based on Maslow’s hierarchy of needs, the Pavlovian model based on behavior bought by practice, learning and experience to sociological model based on buying influenced by social norms.

The Nicosia model of 1966 determines four fields of actions in the consumers’ decision process, i.e. the consumers’ attitude formation, information search & evaluation, the act of purchase and post-consumption feedback. The EKB model, renamed as EBM model later (*Engel et al, 1990*) has four aspects: information input, information processing, decision stages and decision process variables. The decision process includes five phases: need recognition, search for information, alternative evaluation, purchase (choice) and outcome (post-purchase). These phases are influenced by the individual characteristics, environment and psychological processes.

Figure A Stages of EBM Model



2.4 Impact of Internet & Social Media on Consumers' Decisions

Internet has made a significant impact on the information gathering behaviors of the users. The fact that there's humungous data of vast variety available online has simply added to consumers' ability to make better choices. Additionally, these inculcate quite a low cost. Another significant fact to be noted that the information from the search engines are mostly dominated by UGC, i.e. user content and opinions. Internet was believed to contribute the information phase in the decision-making process initially. However, with growing trend of social networking and social media, the use of internet has gone up and has now greater impact on all the stages of decision process. According to the Sprout Social 2019 Index, over 83% of surveyed consumers used Facebook and 66% liked or followed a brand on the platform; and from over 1 billion monthly active users on Instagram, 90% follow a business on the platform to hear from and about the brands; Twitter had 330 million active users worldwide as of 2019 Q1, of which 79% users like to discover what's new on the platform. Such massive increase in the user engagement and content is increasingly impacting the phases of decision process of the consumers.

Social media is popular amongst users for various reasons. One for instance, it's inter-connectedness and second for ease of access to information. It has encouraged a participatory culture and enabled users to connect with people of like-mind and interests. Such engagement facilitates information sharing, monitoring updates and requesting views and ratings on various things including products, services, places, activities, etc. These of course are characterized by the perceived persuasion and informativeness. These along with perceived quantity of reviews are seen to be of great influence on consumers' purchase purposes. There's an inherent feeling of mistrust towards mainstream media. Social media is driven by UGC and hence perceived as more trustworthy source of information on brands, companies and products. And yet, another important aspect of this is information overload which shall remain as a key issue in decision process. With loads of information being published every second on social media, it is next to impossible to factor in every information in the decision process.

CONCLUSION

Social media undoubtedly is playing a pivotal role in influencing consumer's decision process, particularly the complex buying behaviors. Online reviews and rating economy have transformed commerce industry drastically and drive people to online consumer opinions due to ease of access, low cost and wide availability of information. Reviews and recommendations on social media are considered as trustworthy source of information for making purchases as compared to advertisements and promotional information.

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- The History of Social Media and Its Impact on Business: https://www.researchgate.net/publication/303216233_The_history_of_social_media_and_its_impact_on_business

A Study on Leadership in This Digital Age

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ABSTRACT

We are living in a global world where technology is changing rapidly. Digitalization and computerization has a significant impact on every organisation. It brings about challenges in every level of organisation and in every industry. Organisations are required to transform their businesses to stay alive in this competitive world. Managers, as leaders, play a crucial role in bringing about transformation through their leadership skills and styles. Through this paper efforts are made to understand the challenges faced by leaders while transforming digitally and suggests measures to overcome these challenges. The main focus of this paper is to understand digitalization, leadership skills in the digital age and also to understand the leadership style best suited in this digital age.

Keywords: Digital age, transformation, leadership skills, leadership style

INTRODUCTION

“Digital sustainability isn’t a destination; it’s a new state of being. Leaders are the secret to inspiring the change, but they must first transform themselves.” Leaders for the Digital Age 2018.

We are living in a global world where technology is changing rapidly. Digital technology is transforming politics, businesses, economies and society on a day-to-day basis. Thus, digitalization and computerization has a significant impact on every organisation. The acceleration of the digital age demands that organizations should adapt to the ever changing technology. In fact 88 % of organisations are working towards a digital transformation which is a necessity today. 85 % of organisations feel that if they do not adapt to the digital change, there will be significant setbacks in growth and profits. So, one of the most important factors for organisations now is to create systems that will promote their digital growth. The world is now online, and it is necessary for the businesses to exist not only offline but also online. Organisations are now rethinking on their old business strategies, and are trying to incorporate the new technological changes in their businesses.

LITERATURE REVIEW

Companies from many industries are experimenting with digital transformation and benefiting from it (Bonnet et al., 2014). Businesses now need to take interest and understand the effect digital transformation will have on them. Some characteristics of digitalization in a business setting lead to changes in the way people work (Khan, 2016). In order for organisations to respond quickly to these changes and to capture the new business opportunities, there are some set of skills and mindsets that are important for competent leaders and empowered employees to have in the digital age (Li et al., 2016).

An article published in Forbes magazine on 17 Jan 2016, discussed that companies resistance towards readiness to change behaviour is one of the most important reason for companies’ failure at digital transformation for 84% of companies surveyed. The article concluded saying that one of the reasons for failure of a number of corporate initiatives and strategies was, how its leaders falter in taking initiatives in helping people change.

Researchers have tried to give a definition to digitalization and its effects through numerous perspectives, but have failed to arrive at a common outcome (Korhonen, 2015; Nachira et al., 2007; Tapscott, 1996; Van der Voet, 2014). This has made research in this field difficult without having proper understanding of the complete phenomenon (Collin et al., 2015). However, what several scholar of digitalization such as Westerman et al. (2014), Rogers (2016) and Sheninger (2014) feel that it is a

prime challenge for leaders and top management of current modern organisations (Collin et al., 2015; Kakabadse et al., 2011; Westerman et al., 2014).

Demirkan, Spohrer, and Welser (2016) addressed the importance of this digital era and how organizations have progressed to put up to the demands of their customers and stakeholders. Digital transformation is noted as the thoughtful and fast-tracking transformation of business activities, progressions, proficiencies, and simulations to fully leverage the changes and prospects brought by digital technologies and their impact across society. (Demirkan et al., 2016, p. 14).

OBJECTIVE OF THE STUDY

The purpose of the study is:

- To know the challenges faced by leaders in this digital age.
- To study digital transformation and its effect on leadership.
- To understand the skills required by leaders in this digital age.
- To suggest leadership style best suited in this digital age.

RESEARCH METHODOLOGY

The research is based on secondary data collected through publications in books, journals and internet. The research methodology uses emphasizes on the importance of digital age, its transformation, leadership skills and leadership styles to determine its effectiveness in modern organizations. A successful research discussion utilizes a qualitative approach to determine the extent to which digital transformation has been impacted by leadership styles.

DIGITALIZATION AND THE DIGITAL AGE

Digitization is the procedure of moving a business into the digital age – embracing the technologies that are relevant to improving the organization and enabling it to become more competitive in the marketplace.

Digital age is the period of introduction of the personal computer with subsequent technology in providing the ability to transfer information freely and quickly in human history characterized by the shift from traditional industry.

Digital transformation is defined as changes in ways of working, roles, and business offering caused by adoption of digital technologies in an organization, or in the operation environment of the organization.

LEADERSHIP

Leadership is considered an activity rather than a role belonging to one person. It is identified as “the art of influencing others to their maximum performance to accomplish any task, objective or project”. There is also a wide range of literature describing different types of leadership, making an all-encompassing definition difficult. Leadership deals with change. It is a clear and complete system of expectations, in order to identify, evoke, and use the strengths of all resources in the organization, especially people. Leadership is the result of having direction, alignment and commitment within a group of people. Leadership is an abstract concept, dealing with attitudes, relationships, and values rather than concrete tasks, these are the domain of managers. Leaders ‘set the tone’ for the work of the organisation, ensuring that everyone moves in the same direction. Successful leaders help their team to achieve its goals and also the goals of the organisation.

CHALLENGES FACED BY LEADERS

Being a leader in the ever-evolving business world today comes with many challenges. Leaders are change agents, they inspire their team to accomplish the goals and objectives while guiding them and directing them through the process. While leading his team to achieve individual and collective goals is often rewarding, the challenges faced by a leader may keep him up at night and cause him to lose sleep. The constant need to ensure that his team is up to date on the latest trends, knowledge and skills is a big challenge facing leaders today. Employees resist change because of fear, skepticism and even sabotage are obstacles that they may encounter. High staff turnover and to retain top talent is another challenge

faced by leaders. Each time a subordinate leaves the organisation, their ideas, company knowledge, expertise, or simple awesomeness also goes with them. Organization's success and survival depends on innovation at work and in challenging times it's tempting to put great ideas on the back burner. However, if organisations don't encourage innovation in employees, those great ideas will soon dry up. Employee engagement is another challenge faced by leaders. Engaged employees are more productive, creative and less likely to leave. Studies have shown employees who are encouraged to grow their skills are twice as likely to say they'll spend their career with the organisation. Staff turnover can be reduced by offering meaningful development opportunities and training that's tailored to their personal goals. Leaders should offer training on technology which would help their team. Research has shown 65% of employees say development and training opportunities would increase their loyalty towards organisation.

DIGITAL TRANSFORMATION & LEADERSHIP

Digital transformation is fundamentally about change which requires leadership because leadership is all about changes rather than being stable. Digitalization transforms the ways in which any organization operates, but it has never transformed an organization on its own. Organizations have to achieve such a transformation or change through, its leaders' vision and decision making. It is this that links digitalization to an emerging organizational need. Organisational leaders play an important role to bring and implement all changes in the organisation. Even the stakeholders of the organisation expect the same from leaders. Leaders are the ones who take responsibility for organisational transformation. The successful transformation of any organization in this digital age largely depends on how the leaders of the organization accept and infuse the culture of digitalization.

Different ages require different kinds of leadership. Organizations which employ leaders with different types of leadership skills generally experience mixed results. The most effective type of leadership skills should be examined to determine how they impact decision-making during the process of digital transformation. Leaders should have some degree of influence and demonstrate their ability to adopt a strategy which will positively impact the digital transformation process rather than to limit its success over the long term. However, when the leadership skills does not align with the digital transformation or when the strategy is ineffective, problems may emerge which could impact the organization in negative ways for many years to come.

SKILLS OF A LEADER IN DIGITAL AGE

The skills of a true digital leader can be broken down to the word "Leader". The constituent elements that synthesize and segregate the parts give a clear and insightful understanding of the skills of a leader.

Learner (L): A digital leader is always learning. This is a critical attitude which a leader strives for in this digital age. Leaders require an open mind that can accommodate constructive views for the betterment of the organisation. Leaders have the courage to embrace failure while experimenting with innovations.

Earned (E) — Digital leader should have the ability to add value to the organization. It means gaining of trust and confidence of team to a level where they feel confident without the fear that the element of trust will not be violated in making difficult decisions. Leaders also have to fulfill the performance expectations from investors and shareholders, especially, in terms of continued profitability and steady growth while being justifiably rewarded for success.

Appealing (A) — Digital leaders should harness personal qualities that create a good rapport with the subordinates. It means using persuasion — "convincing power" — in a way that is more felt than expressed, to create consensus to resolve contentious issues. It includes the optimum combination of nonverbal and verbal communication that strengthens organizational integration, promotes approachability and cements core values by serving as a role model.

Decisive (D) — Digital leaders should make intelligent consumption of available information. They should make acute decisions while being mindful and keeping in mind of the inherent risks. This indicates the presence of a calm disposition even under pressure and abounds with creativity and

imagination in coming up with novel solutions. It reflects a level of maturity and conscientiousness that accepts the trials and tribulations of leadership.

Effective (E) — Digital leaders are calm, comfortable and have a positive impact in all the initiatives undertaken by them. It includes the prudent understanding that being a visionary is not enough anymore as crucial developments are made within the digital age. They need to be futurist in order to secure the organization's journey of excellence in the environment. For this a leader should be a person who has reliability, sound professional knowledge, sharp decision-making skills and persistent guarantee and commitment to pleasing and satisfying key stakeholders while attaining the organization's goal and also being a responsible corporate citizen.

Reformer (R) — Digital leaders have an innovative outlook that is driven to disruption by a profound sense of perseverance. It reflects a personal potential of being transformative in reforming sick or inadequate business practices. Leaders are someone who have intent on leaving an enduring positive legacy and are comfortable with establishing a strong line of capable successors.

Along with these skills a leader needs to be a commander, who can set goals and tell others how to accomplish them. Leaders also should be good talkers, who set vision and plans, and communicates it in order to inspire their subordinates and followers. Leaders collaborate with employees and customers to achieve the goals of the organisation. Leaders are co-creators; they allow stakeholders to pursue their individual goals which are parallel to the goals of the organisation. These skills reflect an enterprising and stimulating leader, who is ready to meet the vigorous challenges of the Digital age.

LEADERSHIP STYLES IN DIGITAL AGE

Leadership styles are vital to an organization and can drive positive outcomes. Organizations should employ the appropriate leadership style which is best suitable to their business and would allow the organisation to achieve its goals. When there is an organizational change, the appropriate leadership style can make the transition easier. A transformational and transactional leadership styles helps to improve managerial engagement and enthusiasm regarding the change. Transformational leaders provide an example for others to follow, inspire others to be successful, develop a shared vision, and empower creativity. Transformational leaders work towards motivating others. Transactional leaders are largely focused on setting the tone for others to follow without room for innovation. Participative leadership style can provide employees with decision-making capabilities and influence positive outcomes as needed for a successful change in the digital world. Participative leaders are a part of the change process and provide inspiration to employees to embrace new forms of knowledge and promote greater creativity to implement strategic change. Some organizations may have leaders who are skeptical of any large-scale changes. They operate with a largely traditional and bureaucratic style, where change is not desirable. Therefore, training and education regarding the benefits of digitalization must be provided to leaders and allow organizations to take the next steps forward to overcome their limitations. Using the appropriate leadership styles effectively depends on the industry and the situations prevailing in the environment. So, there is no one specific leadership style that has an optimum affirmative impact on the organisation and its goals.

CONCLUSION

Today, just 5% of organisations consider that they have strong digital leaders with them. The world today has witnessed a major shift towards the digital age. And organisations have emphasized more on the digital transformation to keep pace with the changes around. Digital transformation is one of the most perplexing changes for any business in today's age. It is the way of things to come in the future or else organizations will vanish. Numerous organizations drive the change without entirely understanding its impact; it's the leaders who help in revamping and making the organisation competitive. The leaders have an essential job in aiding the organizations to sail through the change to the digital age. They are flexible enough to manage their subordinates through their enhanced and improved skills. Fostering digital leaders is important for any business. Today's organisations needs new breed of leaders and to remain competitive, organisations need to change their internal leadership programmes to build new leaders.

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A Study to Find a Relationship between Employee Engagement and Organizational Storytelling

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ABSTRACT

"Without air, our cells die. Without stories, our selves die." - Neil Postman

Often the canonical wisdom and history of the organization, which is fused with formal strategies, is inadequate to address the issues that develop at work. In such conditions, the tacit knowledge, data gathered through experience comes to the fore in the form of Organizational Storytelling.

The Institute for Knowledge Management (1999) describes a story as "a tiny fuse that detonates tacit understanding in the mind of the listener." Research recommends that sharing experiences through narratives constructs trust, develops norms, transfers tacit knowledge, encourages unlearning, and produces emotional connections. India is a country, rich in cultural diversity and possesses huge potential for organizational storytelling. A healthy organizational culture is one that evolves, and organizational story telling provides a means to fulfil the purpose.

Research over the years has proved significant relationship between story-telling and building a strong employer brand. Through this research paper the researcher aims to find out a relationship between employee engagement and organizational story telling culture. A structured questionnaire has been used for collecting data from 100 respondents belonging to various industries.

Keywords: Employee Engagement, Organizational Storytelling, Organizational Culture.

INTRODUCTION

For an organization to use brand storytelling strategy to achieve its aims, a clear and consistent internal narrative that inspires excellence in customer service is critical. Unless the employees understand the value of their role in the customer experience, it will be difficult for them to immerse into the organization's brand storytelling strategy. The right message must be communicated to the right people, helping to build a passionate commitment to create a vision and credibility of the organizations' brand storytelling both internally and externally.

The key characteristics of good organizational stories that have a powerful impact and are remembered are covered in detail by Wilkins (1984) and summarized by Zemke (1990), they are as follows:

- Organization's stories must have a solid foundation, as they reflect the culture of the company. It should talk about real incidences that involve real people, with no exaggeration, so that listeners can bond with it.
- Organizational storytelling can only be effective if people use it as a basis for identifying their culture, or what their company stands for. Furthermore, all employees should have access to it.
- An organizational story should be grounded to reality so that listeners believe in it. It should not be made to sound as a fairy tale.
- Powerful organizational stories have the capability to illustrate what is expected and what is not from the employees. It should serve as a basis for new employees to understand the organizational culture regarding norms, rewards and punishments.

LITERATURE REVIEW

A brief review of the existing sources highlights the role of storytelling in individual and group change initiatives, training and development in fields such as nursing, business, education, and psychology. Storytelling has been used in these areas to transfer embedded knowledge, resolve conflicts, simulate problem solving, transfer existing culture and also how the culture developed. These aspects will help employers build a strong brand with a strong culture and value-system. Furthermore, it will help in the

process of socialization of the new employees, organizational development, developing a learning culture, strong interpersonal bond at work.

According to researchers, Martin, Feldman, Hutch and Sitkin (1983), for a story to be credible, it must be unique and the institution should display the credibility. As an organization, stories help us make sense of our past and understand possible futures. Before scriptures were developed stories were communicated orally and passed on over generations. Stories were the basis for the transfer of culture and heritage across civilizations. This renewed interest in an ancient genre of communication is perhaps a result of the realization of the importance of knowledge in organizations and the recognition that knowledge cannot be completely abstracted into categorical and analytical forms and is inadequately conveyed in such forms. Instead, organizations seek communicative forms that synthesize rather than analyse. Stories are such a communicative form.

Organizational Storytelling has been gaining momentum lately. In the boardroom, a CEO shares his dream of scaling new heights with the organization; in the elevator, a manager tells a funny anecdote of how challenging his job is dealing with clients from around the world. Each of these instances signify the predominance of stories in our lives. We all continuously create and share stories of what happened, why, and what might happen next; replete with a cast of characters, manifold intrigues and drama (Bruner, 1992; Weick, 1979). Organizations are now recognizing the significance of ingenious methods and strategies to reign in investments and reap good profits. Therefore, moving towards the 'New Creative Economy'; and acknowledging it basically as a 'storytelling economy' (Baker & Boyle, 2009) is recognizing and accepting it.

The essence of a knowledge-sharing story is two-fold. First, it offers a **streamlined experience**. Good knowledge-sharing stories are simple and concise. They are designed to make specific points by avoiding minor information that divert from the crucial idea. Like fables and anecdotes, they are devoid of excessive details. In their uncomplicatedness, they can be verbally mediated. They are "tell-able", convenient, and highly "tuck-in-able" into everyday functions and activities. For example, when addressing a meeting, a manager may tuck in an anecdote about teamwork.

Second, a knowledge-sharing story offers a **surrogate experience**. Employees may have not faced the situations themselves, yet their colleagues and superiors can recount and narrate the whole experience and their response to it. It can act as a learning tool to help employees to brainstorm possible solutions to the problem or similar incidents that may occur in the future.

When an organization is using storytelling to create a brand, it invariably keeps the customer at the heart of the business strategy. Any business depends upon its relationships with its customers, and these relationships are most acutely in focus at the employee-customer interface. Therefore, it becomes pertinent that the employees are engaged with the vision of the organization and passionate about the positive impact of the products and/or services on the lives of the consumers. The depth of employee engagement is dependent upon company culture. The company culture is reflected invariably in brand storytelling.

When the internal narrative empowers employee engagement, the employees become proactive. Thus it helps them feel like an integral part of something bigger, inspiring greater loyalty, improving productivity, lowering staff turnover, and increasing positive impact on customers through alignment with brand storytelling.

RESEARCH GAP

There is enormous potential research in storytelling in India. There is no substantial research conducted on the role of storytelling in Indian organizations. India has abundant opportunity for organizational storytelling, considering the cultural diversity of the country. Through this research the researchers have tried to establish a relationship between employee engagement and storytelling in organizations.

OPERATIONAL DEFINITION OF VARIABLES

Organizational Storytelling

Organizational storytelling is a theory in management and organization studies. It identifies the distinctive place of narration in human communication, making it "the foundation of expansive thought". According to Wilkins et. al. Organizational storytelling is the process of developing a message that creates a new perspective or reinforces an opinion or behaviour about people, the organisation, the past, visions for the future, social bonding and work itself. Organisations are reliant upon effective communication as the pillar of success. (Madlock, 2009; Marques, 2010).

Employee Engagement

Employee Engagement is an individual’s involvement and satisfaction with, as well as enthusiasm for, their work (Harter, Schimdt and Hayes, 2002). According to Shuck and Wollard (2009) employee engagement is related with creating an interactive and communicative culture between the employees and the employers. Consequently, the employees would be more willing to engage in discretionary efforts as a result of healthy relations with management.

Hypothesis

H₀ :There is no significant relationship between Employee Engagement and Organizational Storytelling.

H₁ :There is a significant relationship between Employee Engagement and Organizational Storytelling.

RESEARCH METHODOLOGY

Sampling

The sample was randomly selected (simple random sampling) from population working in Nashik, Mumbai and Navi Mumbai.

Sample Size: 250

Questionnaire was circulated to 250 respondents, out of which 112 reverted with duly filled responses.

Data Collection Tool

Data was collected with the help of a structured questionnaire.

Data Analysis and Interpretation

Data analysis was done using IBM SPSS tool.

Reliability test was conducted and Cronbach’s Alpha was found out to be 0.904 (table 1), i.e. reliability is high.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.904	.893	20

Table 1: Cronbach’s Alpha (Published with written permission from SPSS Statistics, IBM Corporation)

	Total pf 4 ST Questions - Total of each respondents
Z	-9.188 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Table 2: Test Statistics (Wilcoxon Ranks, Published with written permission from SPSS Statistics, IBM Corporation)

Wilcoxon Rank test was carried out for testing the hypothesis. As per table 2, Since $p = 0.00$ (less than 0.05; 95% level of significance); the null hypothesis is rejected. There is significant relationship between Employee Engagement and Organizational storytelling.

LIMITATIONS OF THE STUDY

The study was limited to Nashik, Mumbai and Navi Mumbai area. Due to shortage of time the sample size was limited.

MANAGERIAL IMPLICATIONS OF THE RESEARCH

An imperative managerial implication of this research is its focus on storytelling as a Management tool. From this perspective, the various Management theories can also be shared in the form of stories; about how experiments were conducted and principles were formulated. The stories told in organizations offer researchers and organizational development practitioners an accepted entry point to understand the prevailing culture in the organization. Employees can be told of success stories of change implementation and motivate them into accepting change. Storytelling is primarily an art; a contribution to mankind made by storytellers and dramatic folklorist around the world. However, the recent use of storytelling in organizations has once again highlighted the need and significance of viewing this art under a scientific lens.

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Barrier Detection Guidance System through Sensors

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ABSTRACT

Traditionally, visually challenged individuals employ the white cane to aid their mobility outdoors, which provides very limited utility. In order to improve the safety of visually challenged users and enhance their awareness of their surroundings while navigating in outdoor environments, smart device is needed. In this paper, a smart walking cane for the visually challenged has been presented. The proposed device can detect obstacles as well as terrain changes in the user's path. A conventional walking cane forms the mainframe of the device, upon which ultrasonic sensors are mounted at appropriate locations to detect obstacles, steps and pits in the path of the user. It can also detect fire in the surrounding environment using fire sensors. Additionally, a provision to indicate the presence of puddles and slippery surfaces in the user's path has also been included in the device. The presence of these obstacles is notified to the user by the means of voice recordings played via earphones or through haptic feedback, provided using vibration motors placed on the hand support of the stick. The device is lightweight and is powered by a rechargeable battery. The overall design of the device ensures accuracy, energy efficiency and easy portability.

Keywords: Obstacle detection; Terrain detection; Ultrasonic sensor; Fire Sensor; visually challenged; Walking Cane

I. INTRODUCTION

Falls are particularly serious among the elderly and disabled where the number of individuals with fall-induced injury has been steadily increasing at a rate greater than accounted for in terms of demographic changes. According to the World Health Organization, as of 2010, over 285 million people in the world are visually challenged, of whom 39 million are blind and 246 million have moderate to severe visual impairment. India accounts for 21.5% of the total number of visually impaired, with 53 million citizens suffering from some form of vision loss. Visually challenged individuals largely use white canes to aid their mobility. The white cane is a very rudimentary device which provides information about ground-level obstacles to the user. However, it is ineffective at detecting obstacles that are above waist height but do not touch the Ground, such as tree branches or fences sticking out in the path. In addition, the white cane can typically detect obstacles within a distance of 1m, making it less effective in outdoor areas where fast-moving vehicles and other obstacles may be present. With increasing rates of road accidents and pedestrian casualties, it is necessary to help increase the spatial awareness of the visually challenged. One of the simplest ways to do this is to replace the conventionally used White canes with smart walking canes.

In this paper, an accurate, energy efficient and portable smart walking cane has been proposed for visually challenged individuals to aid with their navigation in outdoor environments. The proposed device addresses the limitations of the existing prototypes and aims to provide a better walking aid to the user. The obstacle detection module covers a wide field of vision by employing three ultrasonic sensors, thus making navigation easier. When an obstacle is detected, the information is conveyed to the user through tactile feedback by means of vibration motors. The smart cane can also detect changes in terrain, such as steps or elevations in front of the user, presence of water, and potholes and other depressions in the ground

II. PROPOSED BARRIER DETECTOR.

A. CONSTRUCTION:

The basic frame of the device has been formed by a PVC Pipe. A rigid annular structure was made using aluminum wire at a height of 45 cm from the ground level to accommodate the three ultrasonic sensors for obstacle detection, facing left, center and right respectively. The sensors were placed thus to

ensure obstacle detection above the knee level. The step sensor was placed at a height of 10 cm from the ground, and depth sensor at a height of 5 cm from the ground at an angle of 25° with respect to the walking cane to ensure an optimum range of detection. The water sensor was placed at the bottom of the walking cane. The vibration motors have been placed on the handle of the cane to provide tactile feedback to the users from the obstacle detectors. The microcontroller module has been placed above the obstacle detection sensors. The system has been wired internally in the PVC Pipe. The rechargeable battery is been accommodated in a separate box which can be carried in a pouch or a bag. This ensures that the portability of the conventional walking cane is retained.

B. MODULE DESCRIPTION AND WORKING

The electronic system of the device consists of two major units: The obstacle detection unit with terrain detection, The microcontrollers used in this device is ATmega 328 for the obstacle and terrain detection unit They have been chosen for their fast access and availability of varied types of input and output pins. The microcontrollers are programmed using Arduino software, which enables the use of several code libraries. The device has been programmed to notify the user of the presence of multiple obstacles simultaneously. However, the possible obstacles and terrain variations are assigned priorities contingent upon their danger level, with the depth sensor assigned the highest priority.



Fig.1.Arduino Uno

Arduino refers to an open-source electronics platform or board and the software used to program it. **Arduino** is designed to make electronics more accessible to artists, designers, hobbyists and anyone interested in creating interactive objects or environments. **Arduino** is an open-source electronics platform based on easy-to-use hardware and software. **Arduino** boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online.

1) Obstacle Detection Unit:

The three sensors used for obstacle detection, the step sensor and the depth sensor are ultrasonic sensors. Ultrasonic sensors have been used due to their high precision within a shorter distance and resistance to external disturbances such as vibration and electromagnetic interference



Fig.2. Ultrasonic Sensor

2) Water Detection:

A water level sensor has been used to detect puddles in the user's path. The sensor occupies a compact surface area of 60mm×20mm and has a detection area of 40mm×16mm. The device has been programmed to trigger a response when the water level reaches 1cm, so that false triggers are not given in the case of water droplets falling on it due to light rain.



Fig.3. Water sensor

3) Vibration Motors

Three vibration motors have been attached to the hand rest of the walking cane to provide tactile feedback to the user when an obstacle is detected by the three ultrasonic sensors. When an obstacle is detected by any one of the sensors, the corresponding vibration motor is activated. Thus, the device not only indicates the presence of obstacles, but also the relative location, i.e. to the left, in front, or to the right of the user. When obstacles are present at multiple locations, the corresponding motors vibrate simultaneously. The vibration motors used in this device are Servo Motors



Fig.4. Servo Motor

4) Fire Detection :

Fire sensor module has photodiode to detect the light and op-amp to control the sensitivity. It is used to detect fire and provide HIGH signal upon the detection. Arduino reads the signal and provides alert by turning on buzzer and LED



Fig.5. Fire Sensor

5) LED:

An LED is a small light (it stands for "light emitting diode") that works with relatively little power. The Arduino board has one built-in on digital pin 13.

6) Buzzers:

A "piezo buzzer" is basically a tiny speaker that you can connect directly to an Arduino.



Fig.6. Buzzer

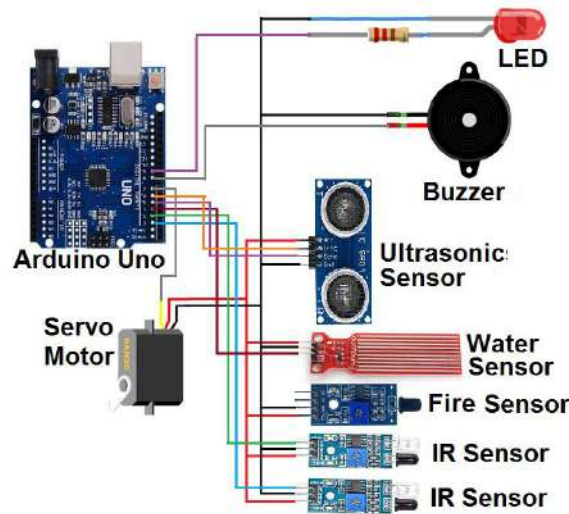


Fig.7.Circuit Diagram

III. FEATURES

The various features of barrier detector are:

1. It can sense obstacles like pebbles, pits, rocks etc.
2. It can sense water in the path to avoid slipping or drenching.
3. It can detect small, medium and large Height obstacle.
4. It can detect fire near by.
- 7) It is cheap hence easy to afford by all potential beneficiaries.
- 8) Barrier detector can detect potholes.
- 9) It gives gives audio, visual and Sense indication

IV. WORKING

Barrier Detector detect small size barrier like staircase, small stones with the help of step sensor. It can detect potholes with the help of pothole sensor both pothole and staircase are detected with the help of IR sensor.

Barrier detector detect water logging with the help of water sensor and fire if there in nearby with the help of fire sensor.

In all cases when stair case, pot hole, fire sensor, water sensor and ultrasonic sensor are active then data is read by Arduino and processed.

After processing it give detection or no detection condition in three type of alerts like visual alert with the help of blinking of LED, Audio alert with buzzing the piezo buzzer and sensing alert by fast movement of servo motor clockwise and anticlockwise.

V. INNOVATION IN THE PROPOSED APPROACH

This device of ours utilizes the latest available sensors to aid the people with visual disability. The main innovative aspect of our project is the stair case detector and fire detection. The stick vibrates in relation to the closeness of the incoming vehicle hence allowing the user to determine the location of the traffic around him. Some important aspects of our project are:

1. Size: It is a decently sized stick as it has so many features, but still is practical to use and would not limit the user's movement.
2. Power: It utilizes a rechargeable Li-ion battery which has the ability to last for at least 12 hrs.
3. Cost: It is a very cost-effective product and provides all these features at a reasonable price.

We have made it considering the poor income of typical Indian families and hence it will be affordable.

VI.IMPACT

We are hoping to greatly impact the lives of blind people and console the general differently-abled population that even if we cannot medically heal them, we still can vastly improve their daily lives by utilizing advanced technology. This shows a new start in developing devices which can aid not only people with disabilities but even normal people in their day to day lives. Allowing humans to become much more efficient in their work

VII.ENHANCEMENT

Following are the enhancement which can be done in our project make it better

1. GSM/GPS modem can be include so that call and SMS alert can be sent to family person in case of emergency.
2. UVsensor can be connected to detect the UV radiation and proper protective measure can be taken
3. Panic button can be included to alert in case of emergency to nearby people by buzzing buzzer.

VI. CONCLUSION

A Barrier Detection Guidance System through Sensors walking cane for visually challenged individuals that can detect obstacles as well as changes in terrain in the user's path was presented. Multiple ultrasonic sensors were used for obstacle detection in the path of the user, providing a wide field of vision. A depth sensor, step sensor and a water sensor fitted at the base of the walking cane indicate changes in terrain. Feedback for obstacle detection is haptic in nature, given through servo motors, however, there is considerable scope for improvement and addition of features to this device. The ability to distinguish between moving and stationary objects can be added. Barrier Detection Guidance System through Sensors cane can also be interfaced with the user's smartphone to integrate the distress signal feature and to introduce navigation from one location to another, which can be enhanced using online resources.

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Impact of Digital Technology on Innovation in Retail Business Models

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ABSTRACT

Retail companies today face new challenges with more intensified competition due to the accelerated pace of technological change, more sophisticated management practices, and industry consolidation. Hence, retail companies have shifted their focus from not only boosting sales but also to ways of attracting and retaining customers. Due to the current advances in technology and innovation, consumers' increasing interest in entertaining and interactive retail environments, the sector of retailing is forced to pursue innovation to maintain existing consumers and attract new ones. Especially the use of virtual techniques offers tools for supporting the design of innovative systems capable of enhancing this process.

In order to meet evolving and shifting customer expectations and demands, retailers need to get to grips with multi-channel shopping behavior of today's shoppers. Shoppers the world over, armed with smartphones, tablets and virtually "unrestrained" access to the Internet from the comfort of their homes, at work, in stores or on the move, now have the upper hand over retailers and demand shopping experiences anywhere, anytime, and through any sales channel. Innovation in technology, both inside the retail stores and in the hands of customers, is one of those external forces that impact the retail industry and is also the primary focus of this study.

Keywords: Technology, innovation, virtual merchandise, visual merchandise

INTRODUCTION

With the increasing globalization of retailing, both in terms of their points-of-sale and their points-of-supply; the information technology (IT) spend in the retail sector has increased significantly. IT plays an increasingly important role in the management of complex retail operations.

Electronic retailing is the sale of goods and services through the internet. Electronic retailing, or e-tailing, can include business-to-business (B2B) and business-to-consumer (B2C) sales of products and services, through subscriptions to website content, or through advertising. E-tailing requires businesses to tailor traditional business models to the internet and its users. Example of e tailing are Amazon, ebay, flipkart, myntra etc.

Multichannel retailing is a way to build a brand and reach a lot of consumers. Single channel retailers are evolving onto multi-channel retailers to attract and satisfy more customers. By using a combination of channels, retailers can exploit the unique benefits provided by each channel.

STUDY OBJECTIVE

The objective of this study is to identify how Digital world has brought a revolution change in Retail sector. The other objectives are;

1. To understand the role of technology and its impact on buying habits of customers.
2. To study customer's expectation from retail sector resulting into changing attitude of customers towards their shopping.
3. To find out various new and innovative digital strategies resulting into enhancing customer experience and increases shopping experience to buyers.

LITERATURE SURVEY

Focusing on consumers as the starting point for various strategies in marketing and service management also impacts the retailing process, pushing retailers to reconsider their role as service integrators. Retailers need to develop ad-hoc capabilities for integrating their own skills and knowledge with the ones emerging by interactions with consumers in the development of new customised services (Chathoth *et al.*, 2013; Gustafsson *et al.*, 2012; Lusch *et al.*, 2006). These new services better satisfy consumers' needs due to the level of customisation provided by the clients' involvement in the service co-creation (Ngo and O'Cass, 2013; Pantano and Viassone, 2015; Zwass, 2010).

Retail organizations offer a mix of products and services, for which various activities (e.g. the shopping process itself, interactions with store personnel, claims, and devolutions) directly influence the customer's perceptions and experiences [Nadiri, 2011]. Retailers devote significant effort to understanding and satisfying their markets' more sophisticated and challenging expectations [Gerritsen *et al.*, 2014]. They are conscious that an effective design strategy in services that requires a new user-centred approach focused on improving points of interaction in the store [Clatworthy, 2011].

From a managerial point of view, this scenario for future retailing foresees a large usage of self-service technologies that will result in reducing operating costs, service delivery, and consumer customisation. Introducing advanced technologies in retailing implies the development of specific innovation management strategies, which, according to the smart retailing concept, should include the reconfiguration of new technologies and resources for making processes "smarter" (Kim *et al.*, 2017; Pantano and Timmermans, 2014; Priporas *et al.*, 2017; Roy *et al.*, 2017; Vrontis *et al.*, 2017)

RESEARCH METHODOLOGY

The research paper deals with only secondary data from various journals, magazines, blogs etc. An attempt is made to identify how retail industry has been modified over the given period of time that itself has led to mould shoppers to the new way of shopping habits, resulting into connecting an excellent customer service by retailers for their long term survival models of business which they have planned and executing.

LIMITATIONS

1. The analysis only deals with experience of customer behaviour towards shopping and not considers other factors of retailing.
2. The study doesn't specify one model, its deals with a general model for business retailing.

FINDINGS AND DISCUSSIONS

For traditional stores to compete, they need to use technology to improve aspects of the in-store shopping experience that consumers care about, like: Quality of customer service, what the store looks and feels like, how products are displayed, the experience of trying and buying a product. Seemingly, online retailers have an unfair advantage when it comes to using technology to improve their businesses. They are powered by sophisticated analytics and tracking tools that provide deep and useful insights into online behaviors and patterns. This physical experience cannot be duplicated on the web (no matter how social it gets) and is only possible through visiting the store.

These innovations spanned sectors such as Food & Grocery, Apparel, Department Stores ...

Food & Grocery		Apparel & Departmental Stores	
1	BIG BAZAAR Developed 'bazaar' centric format to attract mid-market consumers, created mega promotion days to drive consumption occasions	8	fabindia Developed market for mainly ethnic / handloom / rural products via a co-ownership business model with artisans / suppliers and social capitalism
2	De.Mart Business model in F&G around wide assortment, high fill rate and discount pricing through strong buying capabilities and lean cost structure	9	COFFEE STORE Pioneered a very successful retail loyalty program; developed in-house training (Baby Kangaroo program) to provide career growth to staff across levels
3	Millie's Business model focused on PL (dairy, bakery, packaged food, etc.), franchisee retail outlets and direct-to-store cost efficient supply chain	10	SPRINT Established large format departmental stores with 90% plus Private Label sales
4	Spencers Curated categories of beauty, gourmet food and liquor in a hyper-market format to capture higher market share	11	MOM & ME Introduced a one-stop-shop for maternity and child care at competitive prices in India
5	STAR Created shopping occasions to drive consumption and revenue (e.g. "Health Week" in food category)	12	BOYMOND Product innovation with features suitable to India (fresh feet socks, dry guard shirts, light and soft thermals, etc.)
6	Walmart Created 'Mera Kirana' model shop at cash & carry stores to educate kirana owners in best practices and drive customer stickiness	13	BOYMOND Pioneered the branded apparel retail space; launched "made-to-measure" and successfully challenged the paradigm that customization is expensive
7	Pashamudra Business model in a challenging space (fruit & veg) scaled up through product sourcing, product/pricing architecture and store staffing model	14	SHREYAS Differentiated product offering and retail stores for men, women and kids in India as opposed to global focus on womenswear
		15	SEPMATI Commercial model in apparel retail, built on extensive product mix (driven by fashion trends) and complemented by at-home in-store customer service
		16	SEPMATI Commercial model in apparel retail built on extensive product mix and value pricing through strong sourcing and low business costs

Source: Retailer Interviews; Secondary Research; Booz & Company Analysis

Building drawing in encounters across channels is inconceivably significant. Numerous retailers have spent their whole lives pondering how to assemble a connecting with involvement with one channel, which is the store. In any case, presently, seeing how to interface with your center clients over each way they need to associate—not the manner in which you need them to interface but rather the manner in which they need to associate with you—is an alternate ability.

... Footwear, Jewellery & Watches, Wellness, Entertainment, Consumer Durables ...

Apparel & Departmental Stores 17 PG Creative Leveraging Shop-In-Shop Concept to create a "Brand" for private label and leverage it in MBO market		Pharmacy & Wellness 23 PHARMACY Strong private label in OTC products and nutraceuticals in a segment dominated by prescription drugs	
Footwear 18 RETIRO Enabled stock visibility at store level for suppliers so as to optimize shipment planning		24 LAWRENCE & MOYO Standardized customer service in retail showrooms pan India selling multi-brand eyewear	
Jewellery & Watches 19 TITAN Developed organized retail in watches and upgraded the retail experience through 'World of Titan'; pioneered exchange programs in India		25 THYLAST General pharmacy providing in-house medical counseling	
20 TANISHQ Developed organized retail in jewellery through gold purity checking machines in retail stores, to educate customers and build trust around branded jewellery		Books, Music & Entertainment 26 Reliance News&Ent Strong cash back campaign, targeted at increasing sales during off-season	
21 Reliance Jewellery Hedging for customers – protect gold rate so that customers enjoy benefit of lowest gold rate prevailing on date of booking or on date of purchase		Consumer Durables & Electronics 27 Reliance Digital Product service and repair by Reliance ResQ; cash back campaign targeted at driving sales during slow periods	
22 KANSH JEWELLERIES Acquires customers via direct and micro marketing through churches and marriage halls; offers them a personalized and differentiated shopping experience		28 GreenDust Refurbish factory seconds from major OEMs and retailers to make large ticket products affordable for the mass market	
		29 UniverCell Multi-brand mobile store extending after sales services beyond that promised by mobile-brands to increase loyalty to the store	

Source: Retailer Interviews; Secondary Research; Booz & Company Analysis

In the event that we engage physical retailers with apparatuses to better to comprehend their clients. By actualizing a basic innovation to screen shopping conduct by means of wifi, cell phone signals, physical retailers can effectively overcome any issues between the on the web and disconnected world. By using this cell phone innovation, retailers can see mysterious, amassed customer traffic information that will assist them with settling on information driven business choices to all the more likely serve their clients.

... Food Services, Rural, Home and Online Retail

Food Services		Rural Retail	
30		36	
	Ownership of entire supply chain (coffee, coffee machines, furniture, etc.) to drive economies of scale		Rural shopping mall where farmers can sell their produce and buy almost everything (cosmetics, garments, electronics, appliances and even tractors)
31			
	Developed localized food offerings at attractive price points, communicated through innovative campaigns		
32		37	
	Product innovation, 30-minute delivery guarantee and employee engagement and empowerment		Pioneered Philips Light Lounges - an experience zone which gives customers a 'see, touch and feel' experience of lighting concepts and caters to evolving lifestyles
33			
	Streamlined in-store consumer experience through technology in a typical chaotic 'mithai' shop		
34		38	
	Leverages social media for orders; delivery points include bus stops and train stations		Amongst the retailers to introduce Cash on Delivery, propelling online product sales in India
35		39	
	Pioneered large format, multi-cuisine, 24x7 food outlets at railway stations; offers on-seat delivery in trains		Introduced the Virtual Mirror concept in eyewear to assist decision making online
		40	
			Led development of home shopping channel in India and now cover 3,000 cities and towns; amongst the retailers to introduce Cash on Delivery

SUGGESTIONS & CONCLUSION

The proposed Shopping Experience Configuration model blueprints a plan movement with a more extensive viewpoint by thinking about two principal systems: structure thinking and Advertising Insight. Components from the two procedures are incorporated into a synergic and patterned model in which client experience is focal. The impacts of online relocation in the retail business are clear in each classification. Be that as it may, it isn't the main issue, customary retailers are defied with: floor space. Aside from this we are discussing a solid and ground-breaking serious condition from online business champions like Amazon, absence of customer experience, absence of multi-channel joining and so forth. The customary retail is enduring particularly by the large online business players like Amazon making pressure on costs and edges.

Moving from a store-centered way to deal with a multichannel mentality expects retailers to change their conventional casings of reference and methods for working. The physical store isn't dead; it just assumes an alternate job now. Actually, in a multichannel world, physical stores can give an upper hand. Some multichannel retailers have seen development in their online deals and entrance among shoppers who live close to their stores. Considering quickly advancing innovation and shopper conduct, McKinsey accepts retailers that take a forward-looking perspective and notice the accompanying five goals can situate themselves for multichannel achievement. As clients are quicker about the innovation and development, retailers should concentrate on innovation and advancement to build the piece of the overall industry of their own association. To hold the purchaser the retailers need to refresh as indicated by the need contingent upon the progressions that are anticipating from the clients. The main inquiry that retailers should pose to themselves toward the start of their store-arrange change venture is, "The thing that job my physical stores play in a multichannel world?" To address the inquiry, retailers must discover what their clients genuinely care about.

Key Lessons that India's Retail Innovations Offer

- 1** *A simple, well executed idea can lead to successful innovation; large investments are not always necessary*
- 2** *Successful innovations need not only be 'new and path breaking ideas' but can be an adopted model tailored to meet specific market needs*
- 3** *Supply-side innovation can lead to as high a consumer impact as Demand-side innovations*
- 4** *Innovations need to evolve and keep themselves relevant to continuously deliver value; it is not a 'one-time' effort*

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Digitization Techniques for Sustainability of Plant Equipments: Case Study

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ABSTRACT

Today's world is highly competitive than ever before. New technologies, machines, human beings are getting increasingly productive to sustain and survive in the world. In today's globalized world India's position as manufacturing force is getting noticed. Hence the scale of efficiency has become global benchmark.

Every manufacturing facility wants production system and equipment and operated in reliably. Everyone wants production system or process to work without breakdown and produce consistent quality of products or to operate efficiently and perfectly. There is no ideal world, no physical asset has operated flawlessly forever.

Maintenance of engineering equipments in the field has been a challenge due to size, cost, complexity, technology and competition. Although progress has been made in maintaining equipments in reasonable manner. The professionals are developed specializing as per market driven areas such as manufacturing or process industry or service suppliers etc. Thus, there is a definite need for effective asset maintenance techniques that will positively influence critical success factors such as safety, product quality, speed of innovation, price, profitability, technical obsolescence, and reliable delivery.

The huge opportunity to reduce the manufacturing cost especially in a plant where there is a capacity crunch is not appreciated by all." Zero breakdown "is not just a buzz word but reality today and this is zero breakdown concept can bring about huge savings in manufacturing costs. In industrial world the awareness of important function is rapidly increasing. The science of maintenance is ever developing, and it is important to know the latest developments in the field of maintenance in order to sustain the results.

DIGITIZATION TECHNIQUE AND SUSTAINABILITY

If we look into the science of maintenance techniques it is essentially based on certain tools, technology gadgets which will help us to understand the condition of machine and future issues likely to emerge as major breakdowns. If we can act on these areas we attain "zero breakdown" as it avoids breakdown. If we could do this obvious reasons the sustainability of plant equipments enhances.

This is called as Condition Monitoring techniques and useful for enhancement of life of equipments. These are analytic tools and integrated with IoT techniques for further analysis and to take proactive actions

Digitization has helped to access conditions of vital equipments in Laptop or Mobile devices to take corrective actions.

The commonly used Techniques are to check conditions of machines equipments are ,

1. Vibration Monitoring

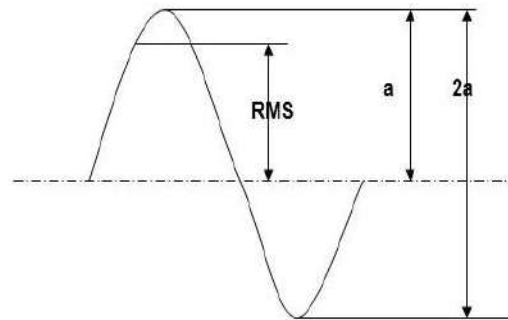
Vibration Basics

Vibration Parameters

Displacement	pk-pk	microns/mils
Velocity	peak/RMS	mm/sec or inch/sec
Acceleration	peak	m/sec² or g

Vibration Amplitude

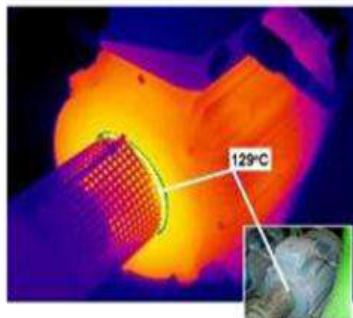
Peak	a
Peak-Peak	2a
RMS	0.707a



The vibrations coming out of machine elements are measured by smart devices basically measures the Displacement , Velocity ,Acceleration to know the condition .Based on the accumulated information and standards available the action is taken

2. Electrical Condition Monitoring The electrical current is monitored as devices shown below

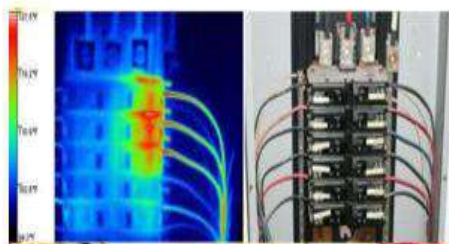
Electrical Motor



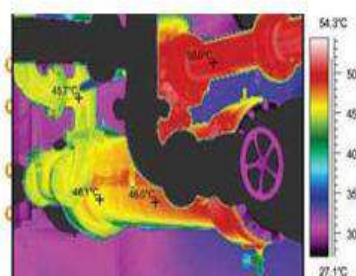
Electrical Contactor



Electrical Panel Wiring



Mechanical Piping



The current is monitored as per the specification with IR sensors connected to computer and trend is monitored to detect anomaly.

3. Lubrication and wear particle analysis

Hydraulic Filtration System

Micro Filtration Unit



Used Filters of micron size up to 5 micron

Magnetic Filtration Unit



Used magnetic field for filtration

The above are machines have ability to filter the Magnetic particle which come out of metal cutting machine applications. The other is filter which can filter the Oil for contaminations and viscosity and quality of Oil .These are given output signals to take proactive actions .

4. Ultrasonic Technique

This is technique to connect the sensors which are able to detect the crack in the metal or joints and have more outdoor application and used in few cases and hence it was found not connected to IoT devices .

OBJECTIVES OF STUDY

To study the available condition monitoring techniques and case study of corrective action reference to case study of plant.

LITERATURE REVIEW

World Class Maintenance Management (2015) N.K. Shivananda. The objectives of world class maintenance management are described as Improving availability of asset. Engaging the asset in planned downtime when there is no demand for production. This can be during the annual shutdown, holidays, lunchtime or tea time. This increased the availability.

The text also discussed the techno commercial work to be done before capital appropriation request to company hierarchy. The front-end engineering to be done including 1. Comparison of technology,2. Operability requirements 3.Standardization requirements 4.Maintainability requirements 5.Reliability requirements.6.Maintenance requirements and 6. Visual control requirements, this is identifying the daily inspection points that makes inspection easy. Buyer to ensure that such extensive use of visual controls is available at marketplace.

The book has set objectives of maintenance department soon after handed over by project department ,starts with efforts to 1.Elimination of forced deterioration,2Cleaning ,Inspection and ,Lubrication, Tightening and good operating practices .Then to undertake the program to eliminate natural deterioration as Preventive Maintenance ,Condition Monitoring ,Enhancing life of equipment and the ultimately the last stage is replacement of old equipment or Reconditioning or refurbishing

Workshop on Predictive & Preventive Maintenance Basics and Practices- CII Presentation. The proceedings of Seminar conducted by **CII on Predictive and Preventive Maintenance in Sept 2015** has described the approach for the topics. The emphasis is on condition monitoring and various tools. The topics are Vibration Analysis, Vibration Signature analysis, Vibration monitoring system in large machines. Ultrasound techniques for the leak detection of flow of liquids and gases. It is mentioned the

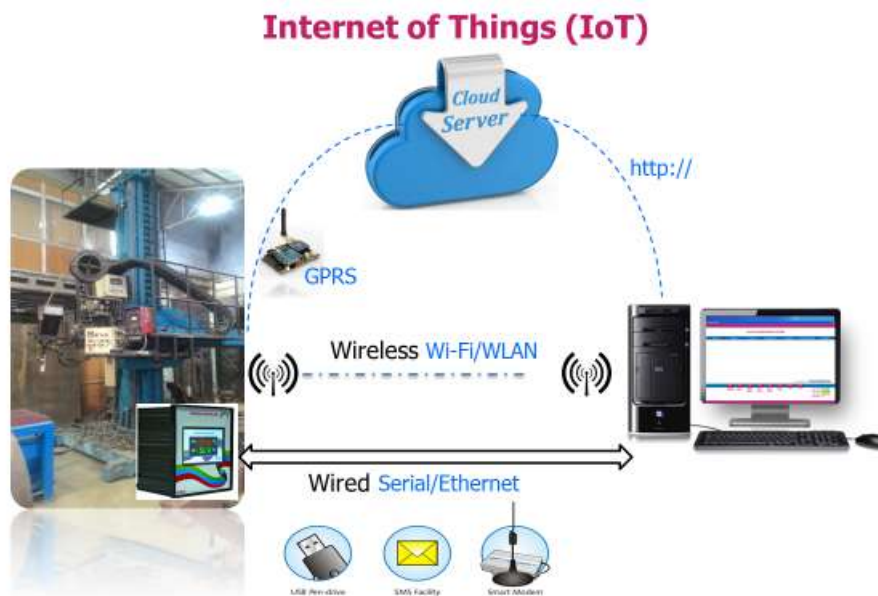
Oil and Wear Particle analysis. The means of analysis for Viscosity, Contamination, Solids contents, Oxidation, Nitration, Total Acid Number (TAN) Total base number (TBN), Particle count tests, Spectrographic analysis, Oil and Wear particle analysis. These are techniques used to identify the various types of wear as Rubbing wear, Cutting wear, Rolling Fatigue, Severe sliding wear in the mechanical system. The technique as thermography to monitor condition of structures and systems. The areas as hotter or colder can locate and define incipient problems. The special instrumentation is used with infrared technology. Predictive maintenance for motors, Lubrication systems, & Pneumatic systems are discussed, and checkpoints suggested the literature discussed the practical methods about these techniques.

Precision Principles, Practices and Solutions for the Internet of Things -By Timothy Chou

This book discusses the various applications of IoT on enterprise IoT. The many organisations are making significant investments in enterprise IoT applications and to connect, collect and learn from their machines. The book discusses the principle and practice gives the framework and key principles gives the framework and key principles of enterprise IOT. The solutions give the viewpoints of manufacturer of precision machines and services that use those machines to provide precision services

METHODOLOGY

The methodology is as describe in the diagram. The sensing devices for the Vibration, Current, Heat, Oil Quality, Contaminations, Flow, Pressure and installed in the appropriate location with electrical circuits. This ensuring the consistency and integrity of connections. This data is locally connected to devices called “Data Logger”. This is for temporary storage and avoiding the delay or loss of data during transmission. This ensure the data can be read for number of times is case of requirements. This data is updated over a period of time by new data. The information is transmitted over wi-fi network by GPRS technologies and stored either on Cloud Server or PC with LAN network. This data is analysed processed for further corrective action.



The above picture describes the method to collect information from the manufacturing machines.

LIMITATIONS

The result is analysed for statistical packages as Trend, Correlation. For example, if there is higher temperature than permissible then the alert is generated in PC, Mobile devices to take actions.

The limitation is Integrity of IoT network with Enterprises secured network is allowed with lots of restrictions and hence implementation takes time. This feature is retrofitted in the existing machines and hence in factory premises.

RESULT

Machine Name	Machine Number	Motor Description (Hyd, Lub, etc.)	FLC (A)	MPCB/OLR Rating (A) Lower	MPCB/OLR Rating (A) Higher	MPCB/OLR Setting (A)	Power (Kw)	Remarks	Data Status
Electrical Upsetter	V6807	Hydraulic RHS	3.5	4	6.3	4	1.5	Required MPCB 2.5-4 A	Pending
CG1	V5332	Control Wheel	4.6	VFD	VFD	4.3	2.2	changed from 9.4	Completed
Washing Machine	E1203	Chain conveyor	0.74	VFD	VFD		0.18	VFD current need to check	Pending
ETA FW OLD		Chiller comp		5.5	8	8	1.7	current not available on comp	Completed
Valve straightning	V6804	Lubrication motor	0.5	0.63	1	0.63	0.09	changed from 1A	Completed
New ETA FW		Deflash SPN motor	4.4	7	10	7	2.2	Drive connected	Completed

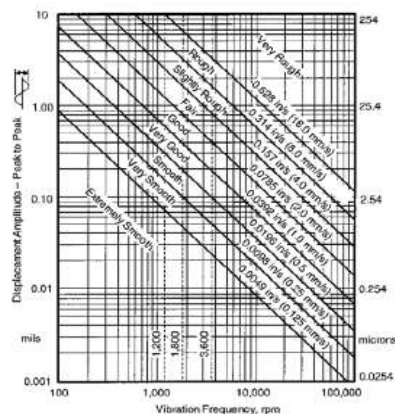
The above table describes the action taken by availability of information of current and proactive action avoids the major breakdown and loss.

The below mentioned is required action for the standards to take action in hydraulic system

Type of Hydraulic System	Minimum Recommended Cleanliness Level			Minimum Recommended Filtration Level in Microns ($\beta_x \geq 100$)
	ISO 4406	NAS 1638*	SAE 749D	
Silt sensitive	13/10	4	1	2
Servo	14/11	5	2	3 to 5
High pressure (250 to 400 bar)	15/12	6	3	5 to 10
Normal pressure (150 to 250 bar)	16/13	7	4	10 to 12
Medium pressure (50 to 150 bar)	18/15	9	6	12 to 15
Low pressure (< 50 bar)	19/16	10	-	20
Large clearance	21/18	12	-	25

The similar actions are taken for the Vibration of machines and it is compared with standard permissible and corrective action as bearing replacements etc. is taken. The standards prescribe the permissible limit and to check and take corrections can be seen from the graph for the particular RPM of motor.

Vibration Analysis based on severity chat



Vibration Permissible Limit

Motor RPM	Permissible Limit (Velocity)	Permissible Limit (Displacement)
1800	1.35 mm/s	21 micron

SUGGESTIONS:

The techniques are very effective to implement to enable to take corrective action. The one of the highlights is this method is free from error or manual errors and are available at the instant. The technique is implemented on the critical installation and machines. It is also time consuming to retrofit the Old machines with these devices and takes time and need specialized skills. Newly manufacturing machines are built in with this feature.

CONCLUSION

The technique is novel specially to undertake the old machines. The Plant case study shows the results that has avoided the breakdown or major down time of machines. The data available at various forums that this technique is going to be future of maintenance management and can reduce dependency of large workforce. This can be another case study and research paper.

Industry 4.0 & Supply Chain Sustainability: A Literature Review

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ABSTRACT

This paper explores the role of technology in supply chain management (SCM) and its impact on sustainability through an extensive literature review. Impact of 5 different technology in SCM are covered including IoT, Cloud Computing, Big Data analytics, Augmented reality, 3D manufacturing. Impact of technology then categorise in three criteria environmental, social, economic. Positive impact of technology then tried to correlate with long-term sustainability of organisation. Literature is collected by using approximately 100 papers. We find that most studies have focused on conceptualising the impact of technology on economic benefits with limited environmental and social implications. We found that mostly impact of technology is discussed with warehouse, energy efficiency through transportation routing not on all the functions of supply chain. In addition, very limited discussion is available on sustainability in supply chain process. Areas of future research is to deal with impact of supply chain on other functions for sustainable development.

Keywords: Supply Chain Sustainability, Industry 4.0, IoT, Big Data Analytics, The Cloud, Augmented Reality, 3 D Manufacturing,

1. INTRODUCTION

Sustainability is generally understood to be a combination of environmental, social and economic performance (Smith,2011). At the business level sustainability is often equated with eco-efficiency. However, such correlation undermines several important criteria that firms must satisfy if they want to become truly sustainable. Sustainable business help in generating profits by improving business practices, without any negative impact on the global or local environment (Kumar, V., & Vidhyalakshmi, 2012)

One-way business can improve their efficiency by developing relationship between technology and business sustainability (Li-Hua, R. and Lu, 2013). Introduction of technology change the business activities end to end. As supply chain management has become one of the key success factors to deal with the increasing complexity of the current business environment has mostly depend on technology. Continuous technological developments, such as Internet of thing, cloud computing, augmented reality, warehouse automation, 3D printing open new opportunities in supply chain (M. Despeisse, M. Baumers, P. Brown, 2017 & D. G. Schniederjans, 2017). These new technologies not only increasing efficiency in distribution processes, but also modifying the relationship between different members of supply chain to increase customer satisfaction. Thus, use of technologies has been important tools for firms to enhance their competitiveness (Salvatore Cannella, 2018)

According to BCG report, nine technologies, Autonomous Robots, Big Data And Analytics, Simulation, Horizontal And Vertical System Integration, The Industrial Internet Of Things, Cybersecurity, The Cloud, Additive Manufacturing, Augmented Reality are the building blocks of Industry 4.0 (BCG website)

Organisations use Information and Communication Technology (ICT) tools but the usage of technology increases the energy consumption, causing a big environmental concern. (Kumar, V., & Vidhyalakshmi, P. (2012). Overuse of technology with the increase in population creating e-waste that can become disaster for human being. These can raise questions on the sustainable development. Study tells that clever use of technology, can only navigate a sustainable path to save the world from environmental degradation. (Eren & Halit, 2002).

This paper deals with systematically reviews of research carried out to find the relationship between 5 technology of Industry 4.0 and its impact on supply chain sustainability. Based on research an empirical framework develops to show the relationship between technology, supply chain and sustainability. Research first found out the relationship between technology and its social, economic and

environmental impact. This leads further research on the relationship between technology and business supply chain sustainability.

2. REVIEW METHODOLOGY

Objective of a literature review is assessing the existing and relevant literature (Tranfield, Denyer, and Smart 2003). We have used a systematic literature which found to be more objective and suitable for studying emerging fields and their trends (e.g. see Fahimnia, Sarkis, and Davarzani 2015; Mishra et al. 2016; Strozzi et al. 2017). Key words use for collecting the most relevant literature are a combination of ‘supply chain’, ‘sustainability’, ‘technology’, ‘environment’, ‘Internet of Things’, ‘supply chain management’, ‘Industry 4.0’. We mainly used Google Scholar (www.scholar.google.com) to look for different types of papers. We also searched directly on publishers’ websites such as Elsevier (www.sciencedirect.com), Springer (www.springerlink.com), Taylor & Francis (www.tandf.co.uk) and Emerald (www.emeraldinsight.com). During studies we mostly focus on impact of latest technologies on different functions of supply chain and its impact pn supply chain sustainability. Data has been collected from various research papers and then further categorized based on their impact on three pillars of Sustainability: economical, environmental, and social.

There are many researches been done on impact of technology on supply chain but its impact on supply chain sustainability is new and not much literature is available to discuss. We have found literature only from recent past. We have studied around 80 literature to collect data. 90% of literature is generally from journals of high repute.

Theoretical background

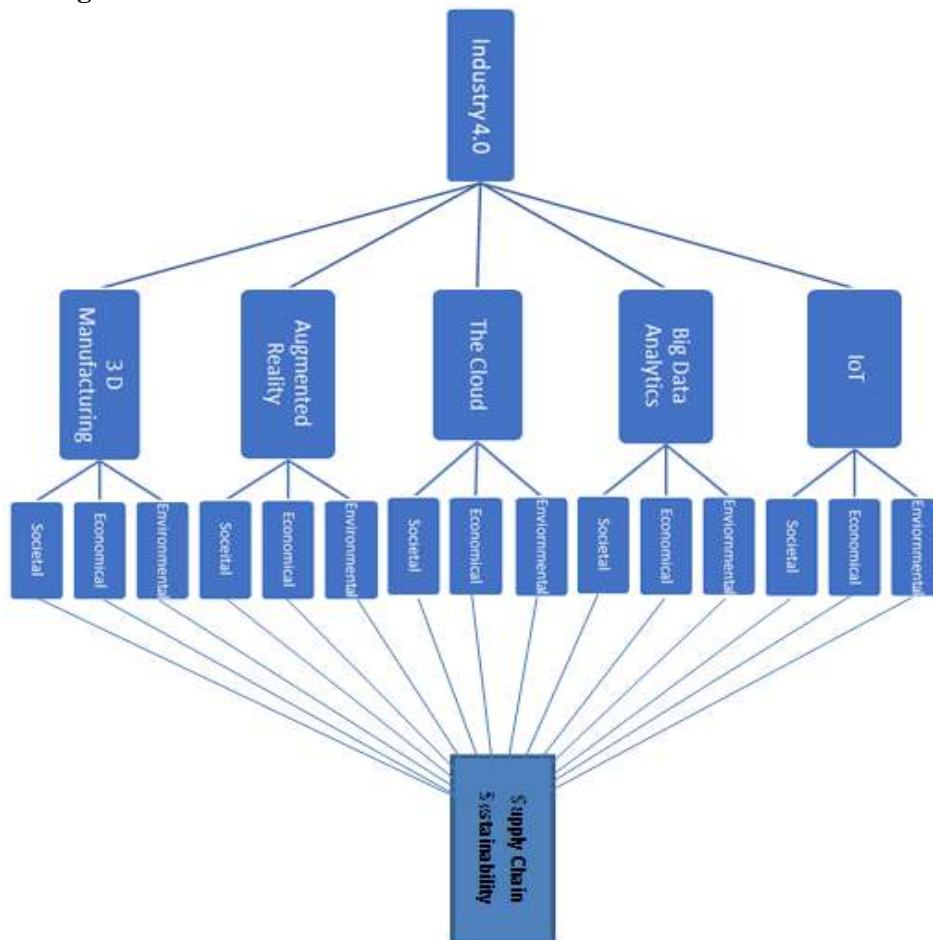


Fig: Frame work to study the impact of Industry 4.0 on Supply Chain Sustainability

3. LITERATURE REVIEW

3(a) Internet of Things (IoT)

Sustainable supply chain is most important to meet the aggressive changing customer requirements. Potential opportunities available in IoT embedded sustainable supply chain for Industry 4.0 (ManavalanE.JayakrishnaK, 2019). IoT is the inter-networking of physical devices, vehicles, buildings and other items embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data (IoTGSI,2015). It develops highly distributed network of devices for communicating with human beings as well as other devices (Feng Xia1,2012). Companies focus on usage of IoT to track the end to end product movement. Organizations want to track, detect, store the returned product process for the optimization of procurement, manufacturing, recovering and disposal decisions for the benefit of environment. (Zhong et al., 2017, Wang and Wang, 2017). IoT is applicable to all the different functions of supply chain.

IoT help in providing information in many ways. Using IoT deployment at worksite, the potential risks of shipment delay can be identified. Delay in travel due to traffic condition can be detected. Vehicles can be monitored, and alert message can be sent to the concerned department. This in turn will result in better customer service. (Leng & Zhao, 2011). Better Driving route, delivering the merchandise to the place of demand can help to increase the efficiency by reducing time and energy consumption. Driverless”, autonomous vehicles are already in use across both the public and private sector, and are set to dramatically transform the logistic industry as they hit the road in greater numbers (<https://cerasis.com/iot-tech-and-sustainable-supply-chains/>)

IoT help in linking with sub-tier vendors which will create more visibility in supply chain to improve quality (Verdouw, Beulens, and van der Vorst, 2013) and reduce lead time and costs(Wang, Zhang, and Zang , 2016).

By combining product and after sale services increase sales revenue (Rymaszewska, Helo, and Gunasekaran, 2017). Real-time data from customer about quality and services improve product design and services (Putnik et al. (2015). Due to reach up to remote consumer increase customer satisfaction (Chukwuekwe et al. (2016). Better quality product at lower cost is possible due to real-time progress and inspection data from vendor (Bowman et al., 2009)

IoT helps organizations to save cost by reducing energy wastes. IoT help in getting the real time data of energy consumption. By monitoring energy consumption of office building companies can save energy. (Lee and Lee, 2015). It can get the real time data, Invention of Smart lighting with sensors

is possible because of IoT. (Shrouf, Ordieres, and Miragliotta (2014). Walmart forces suppliers to reduce energy-related waste all along the industrial supply chain.with an example Von Drehle, a paper towel and tissue supplier in business with Walmart saved \$37,000 in one facility. Industries are trying to employ IoT to reduce energy consumption.(Tao, Wang, Zuo, Yang, and Zhang (2016))

In Food Industry supply chain IoT is supporting by providing Information about the vehicle & product throughout the supply chain (Chen (2017), IoT devices enable supervisors to track the location of components from a remote location and also food safety & security (Liu et al. ,2016) to be taken care.

Vehicle administration system can improve the road traffic help the company to reduce cost and also to solve the societal problem in metro cities (Leng & Zhao, 2011).

IoT system in GSC enhances decision-making in green inventory management. (Chen (2015).Use of remote-piloted drones help for direct, manufacturer-to-consumer deliveries, by reducing transportation of product to various warehouses and distribution centres .It will reduce the energy wastage. It also helps to provide live instructions to workers to handle special equipment and sensitive materials. Accurate visibility of stocks and speed shipment is possible due to IoT.

Inventory tracking (Bowman et al. (2009),, information sharing (Lou et al. (2011), and joint ordering , significantly save time and provide real-time visibility (Yan et al. (2014). Efficient use of space and resources with collaborative warehousing help in timely delivery, increase inventory accuracy and reduce wastage Qiu et al. (2015). Quality controlled logistics reduce wastage (Shih and Wang (2016)

Communication of data within IoT tech also applies to recording and monitoring the condition of items placed within containers after shipment of goods. Information of defective merchandise and goods expire in near future will also readily available. This will lead to fewer demands on reverse logistics systems from the end consumer. Enhances reverse logistics will reduce costs Gu and Liu (2013), Kiritsis (2011)

Real-time information of product throughout the supply chain improves product & service quality. Technology helps companies get a better understanding performance of their suppliers, track frequently and benchmark performance over time (<https://arviem.com/can-iot-help-make-supply-chains-sustainable/>) Considering workers safety, health monitoring system and predictive maintenance on machines (Jung, Zhang, & Winslett, 2017).

The IoT is a suite of technologies that enables a connection between millions of devices and sensors. Usage of these technologies mean that more resources are used and that there is more e-waste; however, it also leads to new possibilities to help the environment and society through natural disaster prevention. Each IoT technology brings benefits by reducing the negative effects of the activities for which it is used, and by using it directly in environmental protection (Laura-Diana Radu, 2018.)

3.4 THE CLOUD

Cloud computing can be applied to all aspect's **sustainability**. Cloud computing implementation will assist individuals and organisations to access the resources and services within the information technology (IT) domain. It is a combination of hardware and software which organizations or individuals can use, anywhere in the world through the internet.

Computing is an extensive distributed computing standard whereby a pool of virtualized, scalable, vastly available and manageable computing resources (e.g., networks, servers, storage, software, hardware, applications, data) Cloud computing offer the facility of third party software for supply chain partnership and communications desires in a superior mode and reduce uncertainties created by supply, demand etc. (D.W. Sun, G.R. Chang, S. Gao, L.Z. Jin and X.W. Wang). GSCM Cloud provides an on-demand services to any cloud user in a proficient, accurate, consistent and protected manner.

The Cloud reduces environmental waste by maximizing the reuse and recycling of its hardware. Three features regarding this framework. First, a transportation cloud helps at client-site for energy conservation and reliability improvement, Second, a real-time traffic condition analytic to collect data from road-side cameras to analyze and recognize traffic conditions, It resulted in fuel-efficient route navigation path algorithm for saving time and fuel consumption. Third, a sequential pattern mining model to provide advice and instruction for correction of misguided driving behavior. Fuel consumption and power consumption can be reduced simultaneously based on the proposed framework regarding cloud-based system and eco-driving. ((Development of a cloud-based service framework for energy conservation in a sustainable intelligent transportation system, International Journal of Production Economics , Volume 164, June 2015, Pages 454-461).Appropriate cloud computing business model will help organisations investing in this technology to stand firm at all times

3.3 BIG DATA ANALYTICS

Big data analytics is a field which consists of big data, analytical tools and techniques to derive actionable insights from the big data for delivering sustainable value, improving business performance and providing competitive advantage (Wamba et al., 2017) It is use in manufacturing world, where it optimizes production quality, saves energy, and improves equipment service. In an Industry 4.0 context, the collection and comprehensive evaluation of data from many different 3 sources—production equipment and systems as well as enterprise- and customer-management systems—will become standard to support real-time decision making. Big data analytics helps organizations reduce costs, make faster, better decisions, and create new products or services to meet customers' changing needs.

In Customer centric market, offering the right product, to the right customer at the right time and at right place is key of customer satisfaction and loyalty. Leveraging big data to get a full “360-degree view of your customer” from to predict customer needs to create a unique brand experience is very

essential for organisations. Improve Supply Chain efficiency by reducing cost and to spend on analytics will continue as top business priorities in supply chain management. (Conference Proceedings)

As per the forbes list Future supply chain digitization will be driven by data and analytics Carbon footprint can be achieved through programs such as “reduce, reuse and recycle.” Consumers are increasingly concerned with ethical and environmental issues that affect their purchasing decisions (Laroche et al., 2001, Trudel and Cotte, 2009). This is leading to carbon-labelling which provides product’s impact on environment (Svensson and Wagner, 2015).

Truck companies already make use of analytics to improve their operations. For example, they use fuel consumption analytics to improve driving efficiency; and they use GPS technologies to reduce waiting times by allocating warehouse bays in real time. (Mckinsey report, 2016)

Courier companies have started real-time routing of deliveries to customers based on their truck's geo-location and traffic data. UPS, for example has spent ten years developing its On-Road Integrated Optimization and Navigation system (Orion) to optimize the 55,000 routes in the network.

Big analytics will also enable logistics providers to deliver parcels with fewer delivery attempts, by allowing them to mine their data to predict when a customer is more likely to be at home. On a more strategic basis, companies can cut costs and carbon emissions by selecting the right transport modes. (Mckinsey report, 2016) Analytics also help to determine the residual value of returned materials based on existing demand and processing costs.

Big Data & Predictive Analysis have an impact on social and environmental performance. It reduces economic cost by minimizing risk and then dealing with carbon Zhao, R., Liu, Y., Zhang, N., & Huang, T. (2017). The role of Big Data for sustainability is disaster elasticity in supply chains with public private partnerships, and quality information sharing link to resilience in supply chain networks Papadopoulos, T., Gunasekaran, A., Dubey, R., Altay, N., Childe, S. J., & Fosso-Wamba, S. (2017).

Social Benefits to the companies from the Big Data Analytics is that they can predict various social problems including workforce safety, fuel consumptions monitoring, workforce health, security, physical condition of vehicles, unethical behavior, theft, speeding and traffic violations through big data analytics. Thus, information management actions can help to mitigate social risks. (Venkatesh Mani, 2018)

3.4 AUGMENTED REALITY

Augmented reality has shown some of the indirect economic benefits to organization in their warehousing during one of the research investigations in terms of reduced error rate (i.e. reduction in re-work), faster movement, improved reliability operations. (D. G. Schniederjans, 2017)

Various operational activities in logistics functions can be improved drastically with the use of augmented reality. There can be substantial reduction in picking and put away time in warehousing function. (Kumar & Vidhyalakshmi, 2012)

DHL has also discussed many case studies in its trend research where augmented reality has shown promising benefits in warehouse operations, transport optimization, Last mile delivery and value added service like in assembly and repair. (Feng Xia, Laurence T. Yang, Lizhe Wang and Alexey Vinel, 2012)

Augmented reality has shown potential benefits in transportation also in term of optimization. It could be used to help driver in delivering the consignment in less time by providing various information on the windshield of the vehicle. It could also make reverse logistics faster and customer satisfied by helping entry level tech in identifying and solving problems in products after sale, which can in turn propel the supply chain towards more economic sustainability. (Smith, P. and Sharicz, 2011)

Augmented reality is a new approach which can improve its employee’s problem-solving capabilities which can further optimizes various processes and products by connecting virtual reality with real time data. Customer satisfaction can also be one of the outcomes of implementation of this technology as it connects customers with the desired product easily. (D. G. Schniederjans,2017)

Augmented reality can be an appropriate solution to the organizations in solving the problems which they face while transiting towards sustainability. It can substantially reduce manufacturing and transportation time in organizations without compromising on cost. (Eren, Halit. 2002)

A sustainable supply chain should also consider about its employees' welfare. One of the key finding of the investigation done by Stoltz et al on Augmented reality shows that it brings safer working environment for the operators in warehouse and also brings enthusiasm to many young employees (D. G. Schniederjans , 2017)

AR can also contribute in transportation towards the safety of driver by displaying various information like current speed, weather conditions etc on the windshield of the vehicle. (Smith, P. and Sharicz. ,2011)

3.5 ADDITIVE MANUFACTURING / 3 D PRINTING

DHL has mentioned that fundamentally there is a similarity between 3D printer used in additive manufacturing and conventional inkjet printer in terms of printing information received from a digital file. But there is huge difference when it comes to output, a 3D printer injects material in layers to build a 3D solid object whereas inkjet printers injects ink to the paper. (3D printing and the future of supply chains, A DHL perspective on the state of 3D printing and implications for logistic, November 2016).

Rapidly dropping cost and simultaneously increasing speed and the precision of the work done by 3D printers are resulting in increase of deployment in various value creation processes across industries.

This helps in developing complex, light weight and stronger geometries as well as the application of 3 D manufacturing to the larger quantities and larger scale of the production. (T. Stock and G. Seliger / Procedia CIRP 40 (2016) 536 – 541].

According to DHL, Additive manufacturing helps to reduce the carbon footprint in production and distribution and produces little manufacturing waste. Which results in huge contribution towards environment sustainability and economic sustainability by reducing cost associated with disposal system. (Mark Patterson, Vice President - Innovation and Product Incubation – EMEA, DHL Supply Chain Jan 2014)

Some of the effect of additive manufacturing like reduced transportation and storage cost, exclusion of import/export costs through localization, reduction of new production tools,using the minimum amount of material and energy in production would result in higher economic and environment sustainability. (3D printing and the future of supply chains, A DHL perspective on the state of 3D printing and implications for logistic, November 2016) (Business Horizons, 2015)

According to Lukas Kubac et al, 3D manufacturing can have environmental impact on supply chain by reduced carbon footprint and waste in in tradition manufacturing system. At the same time, it also brings economical sustainability to the supply chain by reduced transportation cost, more economical packaging and reduced inventory level in the system. (Beyer, C. 2014)

3D printing can be seen as a source of portable manufacturing technology which have potential to take production closer to the consumption i.e. reduction in carbon emission by localized supply chain. It can also have some impact on widespread of circular economy and recycling system. (Petrick & Simpson, 2013)

Beyer in his work in automotive and aerospace sectors also mentioned the energy saving option by reducing product's weight by using 3D manufacturing. (International Journal of Production Economics , Volume 164, June 2015)

Holmstrom et al have deliberated over the effects of 3D printing on various functions of the supply chain It has potential to make supply chain simpler with shorter lead times, lower inventories, reduced transportation requirements, which in tern results in economically sustainable supply chain. (Rajkumar & Kumar, Raj 2016)

Impact of 3D manufacturing is not entirely limited to economic and environmental sustainability but also shows some influence on people. Customized mass production and ease of incorporating customer

feedback in production can bring the satisfied customer to the company. (Gunasekaran, A., Papadopoulos, T., Dubey, R., Wamba, S.F., Childe, S.J., Hazen, B. and Akter, 2017)

Additive manufacturing has become a potential game changing technology and the value proposition of mass customization brings the involvement of the customer into the design process ie customer cocreation. (Beyer, 2014).

There are certain studies which also speak about complex socio technical system that could increase inequality and limit its further growth. It could bring sustainable industrial transformation by changing supply chain jobs and manufacturing jobs. (Source 29)

All these studies show that disruptive technology could be upsetting for some elements of the supply chain or it can be the start of a new revolution in the field of supply chain sustainability. Organizations should cautiously adopt this disruptive technology in the field of supply chain and must continuously adapt to the advantages and disadvantages which this technology brings forth in their function.

CONCLUSION

Due to geographical growth of businesses, supply chain is more and more complex. Movement of product to the place of demand increases the negative environmental, economic and social impact. One-way organisations help to reduce these impacts of supply chain using SMART technology.

Thus, understanding benefits of technology for sustainable supply chain is very important. Following research explain the benefits of different technology on the functions of supply chain.

1.INTERNET OF THINGS

Environmental Impact	Literature
1. Recycling, refurbishing, restructuring or proper disposal of used products	· Zhong et al., 2017 , Wang and Wang, 2017
2. Reducing energy consumption in transportation	· https://cerasis.com/iot-tech-and-sustainable-supply-chains/
3. Reducing energy or logistical wastes	· Lee and Lee, 2015. Shrouf, Ordieres,& Miragliotta, 2014. Tao, Wang, Zuo, Yang, and Zhang,2016, Shih and Wang , 2016
4. Green inventory management.	· Chen, 2015
Economical Impact	
1. Better customer service	· Leng & Zhao, 2011
2. Reduced lead time and cost in procurement	· Wang, Zhang, and Zang (2016), Bowman et al., 2009
3. Improve quality of procurement	· Verdouw, Beulens, & Van Der Vorst, 2013
4. Improved inventory tracking	· Bowman et al. 2009
5. Real-time visibility	· Yan et al. ,2014
6. Reduce wastage in Warehousing	· Qiu et al. , 2015
7. Increase sales revenue	· Rymaszewska, Helo, and Gunasekaran, 2017
8. Improve product design and services	· Putnik et al., 2015
9. Increase customer satisfaction	· Chukwuekwe et al., 2016
10. Enhances reverse logistics will reduce costs	· Gu and Liu, 2013, Kiritsis , 2011
Societal Impact	
1. Food safety & security in food industry	· Liu et al. ,2016
2. Societal traffic problem in metro cities	· Leng & Zhao, 2011
3. Improve workers safety and health	· Jung, Zhang, & Winslett, 2017.

2. THE CLOUDS

Environmental	1.Reduced energy consumption in Transportation	<input type="checkbox"/> International Journal of Production Economics , Volume164, June 2015, Pages 454-461
Economical	1.Reduce uncertainties created by supply, demand	<input type="checkbox"/> D.W. Sun, G.R. Chang, S. Gao, L.Z. Jin and X.W. Wang
Societal	Not found	Not found

3. BIG DATA ANALYTICS

Environmental	1. Reducing carbon footprint	<input type="checkbox"/> Laroche et al., 2001, Trudel and Cotte, 2009 <input type="checkbox"/> Svensson and Wagner, 2015
	2. Reduced energy consumption	
	3. Reduced carbon emissions in transportation	Mckinsey report Zhao, R., Liu, Y., Zhang, N., & Huang, T. (2017).
Economical	1. Supply Chain efficiency by reducing cost	Conference Proceedings
	2. Reduced transportation cost	Mckinsey report
	3. Reduces economic cost by minimizing risk in supply chain	Zhao, R., Liu, Y., Zhang, N., & Huang, T. (2017).
	4. Resilience in supply chain networks	Papadopoulos,T., Gunasekaran, A., Dubey, R., Altay, N., Childe, S. J., & Fosso-Wamba, S. (2017).
Societal	1. Increased workforce safety, health and security. 2. Reduced unethical behavior, theft, speeding and traffic violations	Not found

4. AUGMENTED REALITY

Environmental		
Economical	Reduced warehousing cost	<input type="checkbox"/> D. G. Schniederjans, 2017 <input type="checkbox"/> Kumar & Vidhyalakshmi, 2012 <input type="checkbox"/> Feng Xia, Laurence T. Yang, Lizhe Wang and Alexey Vinel, 2012
	Reduced transportation cost	<input type="checkbox"/> Feng Xia, Laurence T. Yang, Lizhe Wang and Alexey Vinel, 2012 <input type="checkbox"/> Smith, P. and Sharicz, 2011 <input type="checkbox"/> Eren, Halit. 2002
	Faster reverse logistics	<input type="checkbox"/> Smith, P. and Sharicz, 2011
	Increased customer satisfaction	<input type="checkbox"/> Smith, P. and Sharicz, 2011 <input type="checkbox"/> D. G. Schniederjans,2017
Societal	Safer working environment in Warehouse	(D. G. Schniederjans, 2017
	Safety of driver in Transportation	Smith, P. and Sharicz. ,2011

5.ADDITIVE MANUFACTURING

Environmental	Reduced the carbon footprint in distribution	EMEA, DHL, Supply Chain Jan 2014
	Minimum usage of energy	A DHL perspective on the state of 3D printing and implications for logistic, November 2016 International Journal of Production Economics , Volume 164, June 2015
	produces little manufacturing waste	EMEA, DHL, Supply Chain Jan 2014
	Reduced carbon emission	Petrick & Simpson, 2013 Beyer, C. 2014
	Improved in circular economy and recycling system.	Petrick & Simpson, 2013
Economical	Reduced cost in disposal system	EMEA, DHL, Supply Chain Jan 2014
	Reduced transportation and storage cost	A DHL perspective on the state of 3D printing and implications for logistic, November 2016 Beyer, C. 2014
	Reduction in Import and Export cost	A DHL perspective on the state of 3D printing and implications for logistic, November 2016
	Reduced packaging and inventory cost	Beyer, C. 2014
	Reduced Transportation and inventory cost	Rajkumar & Kumar, Raj 2016
Societal	Customized mass production and ease of incorporating customer feedback	Gunasekaran, A., Papadopoulos, T., Dubey, R., Wamba, S.F., Childe, S.J., Hazen, B. and Akter, 2017

It means Industry 4.0 help in many ways for sustainable supply chain. Technology like IoT facilitates manger to monitor working condition such as vehicle routing management, Inventory management to reduce time and fuel consumption. By reducing energy consumption in transportation, inventory management resulted into reduction in carbon footprint and helps in sustainable development. Technology helps in reducing waste and speed up delivery process to enhance the product quality is incremental to sustainable supply chain. Technology of Industry 4.0 help to predict demand and supply to reduce overproduction and ensure efficient supply. Maintaining visibility and transparency due to technology of Industry 4.0 ensure the sustainability standards in supply chain by using ethical practices. To predict environmental factors like fire, flood risks which allows supply chain managers to put contingency plans in place. Thus the positive impact on economical, social and environmental factors due to right technology with predictive supply chain strategy build more sustainable , cost effective, ethical supply chain which is good for all he stakeholders.

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Resilient Water Infrastructure

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ABSTRACT

As there is fresh water scarcity and also the demand for water is increasing, it is essential to reuse the water. One of the option is to reuse waste water, which will also reduce the environment footmark. Water reuse is required for sustainability in smart cities. In this paper we have proposed how waste water generated by household chores can be used for flushing toilet. Lot of water gets wasted while performing household chores, so the idea is to utilise the same water again for performing activities where clean water is not necessary. A good amount of water can be reused by accumulating water from different sources like washing machine, cleaning vegetable, washing hands etc. can be reused for flushing as it is not necessarily requiring clean water. In this paper a model is proposed for newly constructed building which shows how water can be reused and also a cost sheet is prepared stating the requirements to execute the reusability of water.

Keywords: Reuse, Infrastructure, Flushing, Sustainability, Smart cities, Plumbing.

1. INTRODUCTION

It is becoming very important to reuse the most precious element on the earth that is water. The necessity to recycle water is becoming more and more vital due to shortage of water throughout the sphere. If water is not conserved, then it will create a negative impact on the environment like shorten the lifespan of humans and other living species.

At the same time, it is also extremely difficult to reduce the water usage due to water behaviours that people follow. The solution to the problem is to reuse the waste water that is produce daily which include water collected through washing vegetables, fruits, utensils, water used in washing machine.

There are various common ways to treat the waste water which are physical water treatment, biological water treatment, chemical water treatment.

Physical water treatment includes sedimentation. It is the process of removing solid from water where the gravity causes the flocs to settle at the bottom. Large particles settle more rapidly than small particles. So, this process takes very long time for particles to settle.

Biological water treatment process breaks down the organic matter present in waste water such as soap, human waste, oils and food. Microorganisms are used to metabolize organic matter. Different ways of biological water treatment are aerobic or anaerobic treatment depending upon oxygen is present or not. If oxygen is used, then the process is called as aerobic biological process. In aerobic process, waste water is drove in a tank that is full of oxygen. By doing so microorganism increases and decomposition of the organic matter takes places. This waste water is then transferred to a secondary tank. The waste will then start to separate and we will get clean water. However, enough oxygen is required for this process and also monitoring is required to check oxygen level in the liquid. Cost of operation also increases. If oxygen is not used, then this process is called as anaerobic biological process. In anaerobic process, waste water is treated only in one tank. The tank holds anaerobic filter which has microorganism on the surface of the filter. These microorganisms break the organic matter from the waste water. This process requires to take proper care of the filter and maintenance of the filter is required.

Different sizes of particle are found in the waste water. Depending upon the particle size, it is very necessary to determine the type of treatment to be efficiently applied. Particles which are visible to the eye can be treated using physical water treatment. chemical treatment is used for particles which are very tiny in size as they can pass through any filters easily leaving the water untreated. In such cases chemical water treatment is used. In this method chemicals like chlorine, ozone is added. Use of these

chemicals prevent reproduction of any bacteria. But this method requires manual labour and as the volume of water increases the cost of chemicals also goes up.

2. WATER COLLECTION SYSTEM

Our idea is to collect used water into tank. This water can be used again by redirecting it into houses and use for purposes where purity of water is not required like flushing, watering garden lawns etc. [1] We are doing this by implementing extra pipeline for getting water into the tank from houses and one more pipeline for redirecting water back to houses.

Here we have taken measures for the following.

[2] Only if it is pure up to threshold value, we will allow to reuse otherwise we will drain it.

Pressure Booster: in order to increase the pressure of water we so the it can reach to house we need pressure booster pump.

Grey water: We are also taking care of black water. We will use the collected water within a day only afterwards it will drain into the drainage.

3. METHODOLOGY

For Implementing this system, we must install the drainage system for a multi-storey building, the drains from the plumbing fixtures are connected to drainage system that carries the waste and sewage to the lowest floor of the building. The drainage blocks must be inserted to prevent their water from being drain off by the pressure in the draining pipe. The fixture vent pipes should extend from the roof to outdoors. They can be run individually or be combined through the roof. [3]This relieves and equalizes the pressure in the drainage stack to maintain the water seal in traps serving plumbing fixtures. Wherever possible, the drainage system from a building should discharge to the public sink by gravity force.

4. MODULE DESIGN

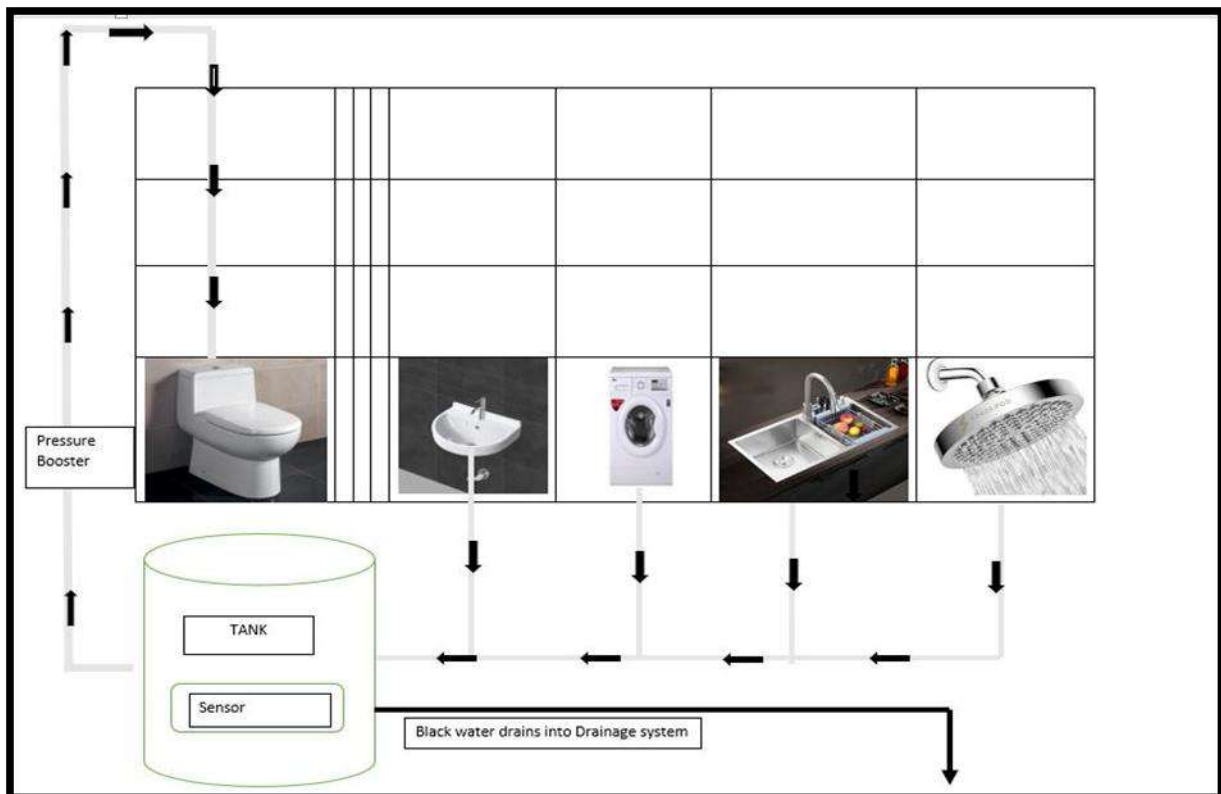


Figure 1

We have designed a module refer figure1; where a wastewater from basin, washing machine, bathroom etc would be collected in wastewater collection tank. Since the water coming out from washing machine needs to be purified, we have added micro fibre filter which filter the water before going in the water collection tank. In the tank we have implemented one water purified sensor for checking the purity level of water. If the sensor's threshold value is less than five, then we will not consider, and the [4]else we will use the water in the flush tank of the toilets for the entire building. In order to achieve this, we have added a booster system so that water can easily reach to the more than ten floored building [5]. Different sizes of particle are found in the wastewater. Depending upon the particle size, it is very necessary to determine the type of treatment to be efficiently applied. Particles which are visible to the eye can be treated using physical water treatment. chemical treatment is used for particles which are very tiny in size as they can pass through any filters easily leaving the water untreated. In such cases chemical water treatment is used. In this method chemicals like chlorine, ozone is added. [6] But this method requires manual labour and as the volume of water increases the cost of chemicals also goes up.

5. COST FOR IMPLEMENTING MODEL

Particular	Amt (₹)	Amt (₹)
Required Equipment / Materials		
MicroFibre Filter (100 Qty @ ₹5000 each)	500,000	
Two Pipelines (₹2000 *100 Qty)	200,000	
Tank 2500 gallon	5,000	
Water purity sensor	100	
Pressure booster	500	
Alum	500	706,100
Labour cost		50,000
Total Cost		756,100

Table 1

6. CONCLUSION

For the successful implementation of this module requires careful planning, economic and financial analysis, effective designs, operations, storage and distribution facilities. The feasibility of obtaining recycled water of a specified quality to full fill many of the water use objective is now become very essential.

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Smart City – A Pathway Towards Developed Nation

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ABSTRACT

India as a country has a lifelong dream to become a developed economy. To achieve this aim, many initiatives have been taken by government to transform India into more developed, Technology based & prosperous economy. In the series of initiative taken by government, Smart City Mission program launched by government on 25th June 2015 by Prime Minister Narendra Modi with a plan to transform 100 cities into smart cities. This program was initiated under ministry of urban development which focuses on sustainable development by providing descent quality of life to its citizen by concentrating on all round development of cities along with better environment.

Keywords Smart City, Smart Economy Developed Economy, Sustainable Development,

RESEARCH OBJECTIVES

- 1) To understand the concept of smart city.
- 2) To discuss the various attribute of smart city.
- 3) To study the role of smart cities in making India as developed economy.
- 4) To understand the challenges in development of smart city.
- 5) To evaluates the growth of smart cities and its role for sustainable development.

INTRODUCTION

India as a country has seen rapid urbanization in recent time. As per recent statistics by 2030, 40% of its population will be residing in urban areas and 68 cities of India will have population more than 1 million which creates big challenge for government to fulfill basic needs of people along with additional development needs. As the population is migrating into urban areas, the demand for housing, water, health, education, transportation, electricity and sanitation will also increase. Scarcity of housing will reach to 30 million by 2020, more than new 200 million water supply connection will be demanded, more than 250 million people need to be given sanitation facilities, 160GW of electricity supply need to added and the number of vehicles will see growth by 5 times in urban areas.

To face the challenge of upcoming demand and transform India into better place, Smart cities are developed which are innovative, technology based, human infrastructure with manufacturing efficiency and by providing sustainable environment with better quality of life. Smart city is an area based approach. Smart city is multidisciplinary as well as trans-disciplinary approach which includes the role of every possible people in creation of smart cities. The development of smart cities is used as one of the important technique to deal with the growth of population and to fulfill their need efficiently.

To achieve the successful completion of the project of smart cities , many government policies were implemented such as Atal Mission for Rejuvenation and Urban Transformation(AMRUT) , Swachh Bharat Mission ,Digital India , Skill Development .Smart city will have good quality health and education ,adequate water supply , electricity supply, affordable housing, sanitation, waste management , easy urban mobility with efficient transportation , creating sustainable environment , safety and security to its people and good governance which have effective participation of its citizen .

OBSTACLES IN THE CREATION OF SMART CITIES IN INDIA

Smart cities as a project though sound very attractive and provide chance to states to get funding by being as smart cities but it has its own challenges which are not easy to achieve in India.

Smart cities project will require a huge amount of fund which cannot be financed only through government but it will also require public private partnership. Maximum cities don't have an effective planning for the implementation of the policies or to provide better opportunities to its people.

Maximum cities don't have good technology based system thus implementation of the program becomes difficult. Creation of smart cities requires good coordination between central, state and local government along with municipalities which becomes difficult to achieve. It is one of the most ambitious projects which requires quality manpower, use of renewable resources, creation of green infrastructure and 24x7 hours services available to its people.

LITERATURE REVIEW

S.M.Phadatre and Indajeet Jadhav in their research paper ,”Role of Smart Cities in Sustainable development” in 2017 has focused on the point that Smart Cities have some important elements such as Smart Economy,Governance,environment,Digital infrastructure .According to them, the key parameter of smart city are Healthy, Knowledgeable , Eco-friendly and inclusive city.

Prof. S.B.Dhule , Gajanan Ambhore , Rohini Paikrao , Rajshree Ingle , Diksha Gawale and Viren Meher in their research paper 2019, “ Case study On Smart City” has concluded that smart city are the need of an era which ensures better education ,health and other facilities. It ensures green environment to achieve sustainable development.

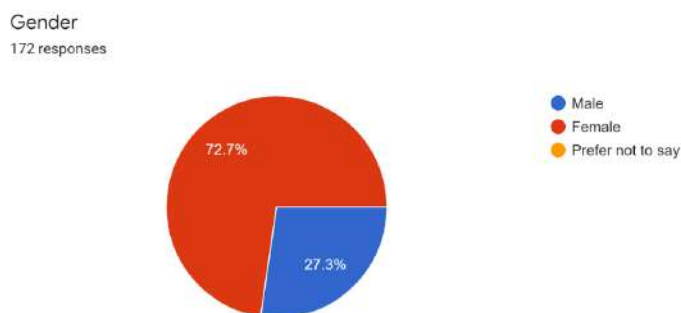
Author Rana, NP,Luthara , Mangla , SK , Islam,R,Roderick ,S and Dwivedi in their research paper 2018 ,”Barriers to the development of smart cities in Indian Context”has focused on some obstacles in implementation of smart city project. It also explains how these hurdles can be overcome and smart city can be created.

RESEARCH METHODOLOGY

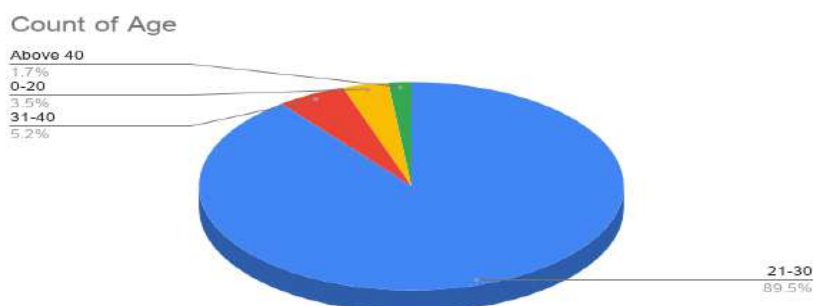
The research paper is based on primary data for which questionnaire has been made and data has been collected from 172 respondents with the help of Google Form. The other required data has been collected from other sources like research journals, government publications, newspapers articles and the authenticated websites.

DATA ANALYSIS AND INTERPRETATION

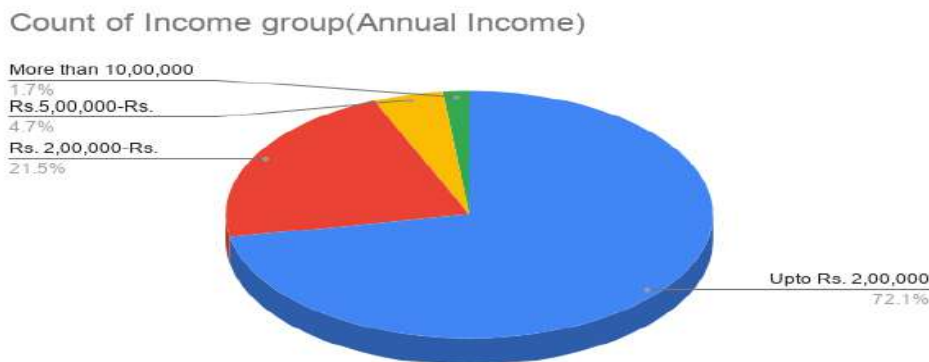
The collected data of 172 respondents has been analyzed and presented through Pie Charts and Bar Graph.



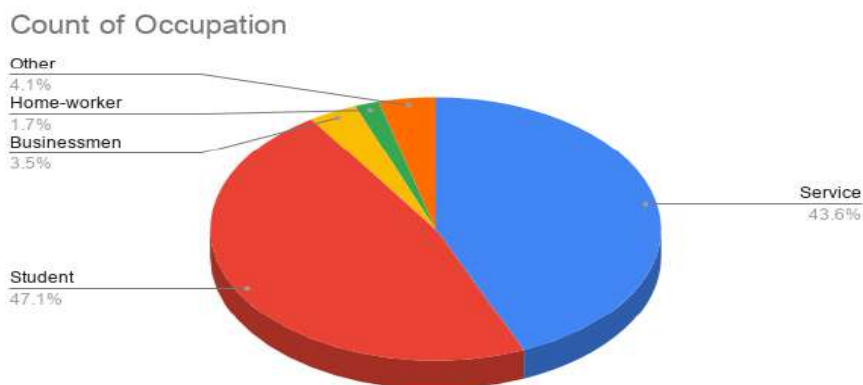
The gender shapes the knowledge, ability and choices of consumer. Thus, it has been added as important parameter. Out of 172respondents, 72.7% were the females while 27.3% were the male.



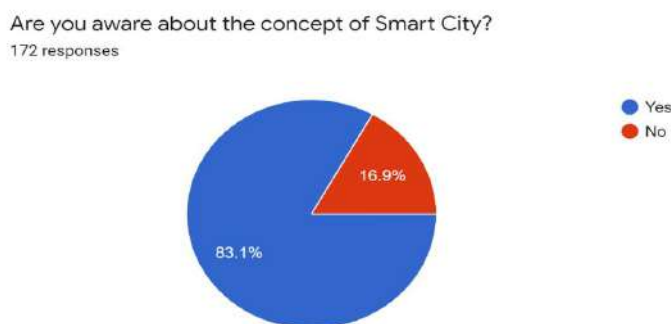
The age of consumers is also one of the important factors which show its level of exposure, working experience and preferences. Out of 172 respondents, 89.5% people belong to 21-30 age group and 3.5% people are from the age group 0-20. 5.2% and 1.7% people respectively belong to 31-40 age groups and above 40 age group.



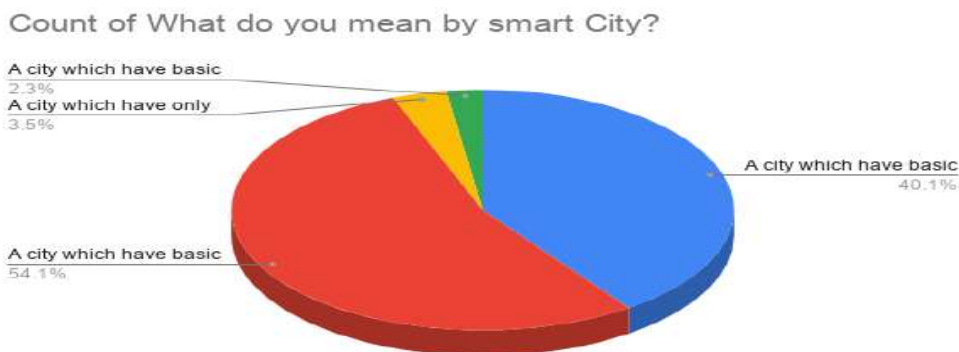
Income of the people also play very important role in terms of their cost of living and expenditure pattern in economy.72.1% people are the range of earning income up to Rs.2,00,000 lakh whereas 21.5% people earns the income in the range of Rs.2,00,000 lakh to Rs.5,00,000 lakh .4.7% and 1.7% people are respectively in income level of Rs.5,00,000 lakh-Rs.10,00,000 lakh and up to Rs.10,00,000 lakh respectively.



Occupation of the people also plays a very important role in terms of their knowledge and role in economy. Out of 172 respondents 43.6% belong to service section whereas 47.1% are students. 3.5% people are businessmen and 1.7% is homemaker.

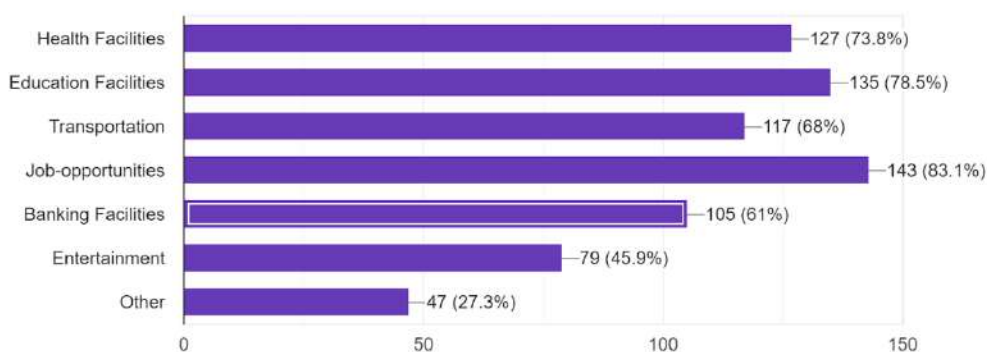


Out of all the respondents on who survey was done.83.1% people were aware about the smart city concept while 16.9% people were not aware about it.



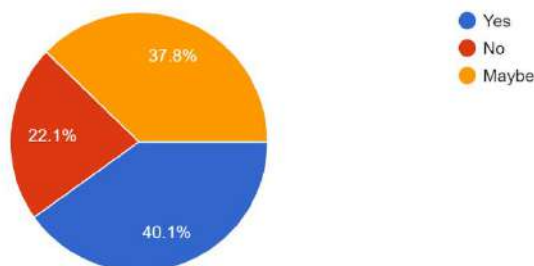
The understanding of people also plays very significant role in their level of thinking and how they believe a smart city should be. 54.1% people believed that smart city should have all the basic facilities and also contribute towards environment while 40.1% people believed that technology play an important role in the concept of making a city as a smart city. While remaining 2.3% and 3.5% feels a city which provide basic needs and some additional facilities are smart cities.

What factors are important to become a city as Smart City
 172 responses



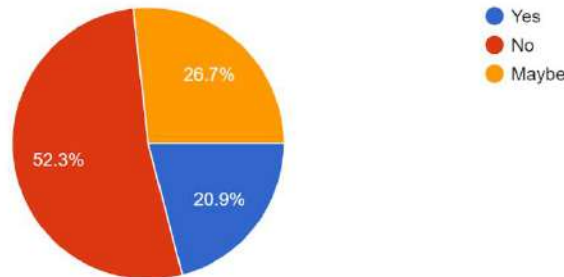
It's very important to understand the basic factors which make a city as a smart city. Out of all the respondents around 83% people gave importance to job opportunities while 73.8% and 78.5% people gave importance to education and health facilities provided by city. 68% and 61% people feels that transportation and banking facilities provided by city play a significant role in development of city and making it as a smart city. 45.9% people also felt entertainment options available for people are also important for making a smart city.

On the basis of above points, Do you think you are living in Smart city?
 172 responses



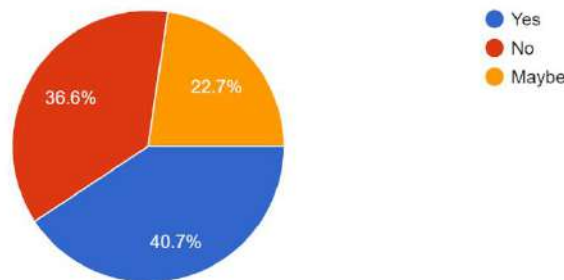
Out of all the possible respondents, On the basis of above criteria of smart city such as Education facilities, Health facilities, Job opportunities, Transportation, Banking facilities and Entertainment 40.1% people feels that they live in smart city while 22.1% people were not agree with the point that they reside in smart city. 37.8% people were not able to decide or give opinion.

Do you think cost of living is low in a Smart City?
172 responses



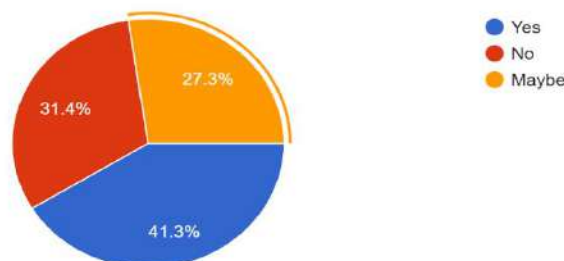
Cost of living also play very important role in growth and sustainable development of people.52.3% people feels that cost of living smart city is not very high while 20.9% people think that it is costly. 26.7% people were still not able to decide.

Do you think Smart city provides easy availability of jobs?
172 responses



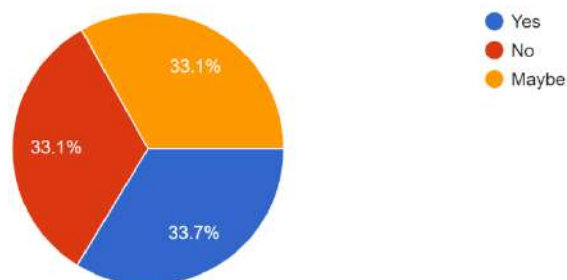
Job availability is very important factor to understand growth and development of an economy and scope which it provides to its people to earn income. Out of all the respondents 40.7% agrees with the point that it does provide while 36.6% people does not support the same view. 22.7% people were not able to provide their view.

Do you think Smart city provides equal opportunity for all?
172 responses



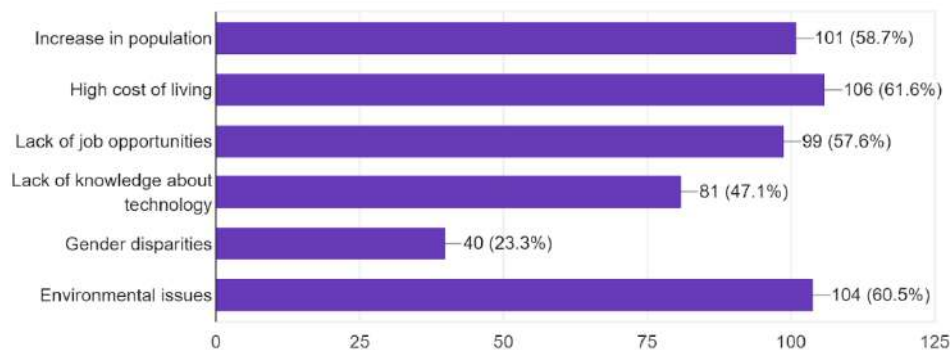
For the all-round long term and sustainable development, it is very important that all the people should have equal chance and get opportunity for their development .out of all the respondents, 41.3% accepts the fact that smart city provide equal opportunity while 31.4% people does not feel the same and 27.3% people does not able to give constructive answer for this.

Do you think smart city has harmful impact on environment?
 172 responses



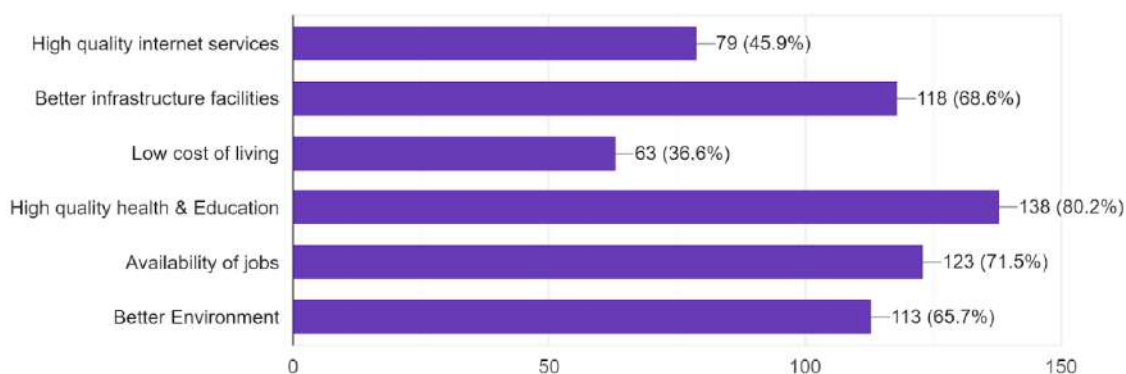
A good environment not only helps to balance the growth but also create sustainable atmosphere in which people are able to experience this growth .In creation of smart cities there are many changes which are being done to transform a city into smart city. 33.1% people feel it creates harmful impact while 33.7% don't believe the same and 33.1% people does not support any view.

What are the problems which city faces to become a smart city?
 172 responses



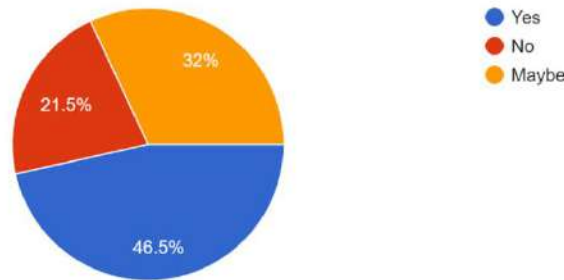
It is very important to understand the challenges which are being faced in the development of smart city as it will not only help to understand the issue but also bring timely solution and have a better action plan. 61.1% people feels high cost of living is main issue in a smart city while 60.5% people feels that environmental issues are the bigger challenge.58.7% and 57.6% people feels increase in population and lack of job opportunities are the obstacle while 47.1% and 23.3% people thinks that lack of technological knowledge and gender disparities are the main issue.

What facilities makes a City as a Smart City?
 172 responses



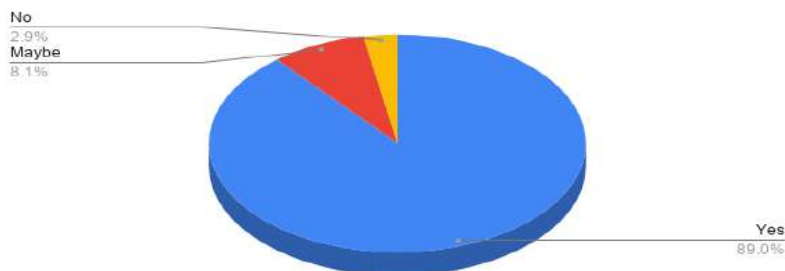
To achieve any dreams, it is very important to plan and understand what it needs to be achieved .80.2% people feels that high quality education and health is very important for people.71.5% and 65.7% people view availability of jobs and better environment as main elements. 68.6% people feels good infrastructure is very important for making a city as a smart city. While 45.9% and 36.6% people feels high quality internet facilities and low cost of living are important for development of smart city.

Do you think Mumbai is a Smart City?
 172 responses



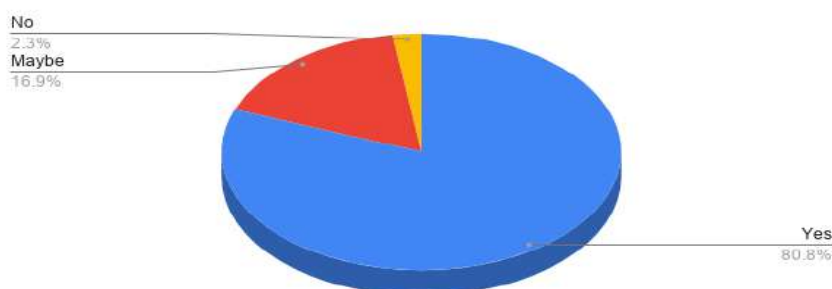
What people think about their own city, its level of development and growth prospects are very important. 46.5% people feels that Mumbai is a smart city while 21.5% people do not believe the same and 32% of people were not able to decide.

Do you think growth of smart cities will help India to become developed economy?



The concept of smart city was developed not only transform but also to make India as a developed nation. Out of all the respondents 89% people feels that smart city will help India to make it as developed economy while 2.9% people does not view the same. 8.1% people were not able to whether agree or disagree.

Do you think Smart city helps to achieve sustainable development?



Sustainable development helps to attain long run growth by fulfilling current needs and understanding future demands. Out of all the respondents 80.8% feels that smart city will help to achieve sustainable development while 2.3 % people does not believe the same and 16.9% people were not able to decide.

LIMITATION OF THE STUDY

- The study does not cover rural area.
- Maximum respondents are from age group 21-30 thus the study lacks the view of other age group.

FINDINGS

- Maximum people are aware about the concept of smart city which helps in effective realisation of their active role for the same
- Health, Education and job opportunities are the prime component of smart city
- Maximum people feel that cost of living in smart city is high.
- High population, lack of job opportunities and environmental issues are the key obstacles for smart city.
- Maximum people feel that development of smart cities will help for creating developed and sustainable economy.

SUGGESTIONS

- The coverage of smart city mission is very narrow as out of more than 4000 thousand cities in India project focused on only 100 cities. Thus to make India as a developed nation its coverage need to be increase.
- Increased population, migration from rural to urban area and growth of slums are key problems for smart city mission. Thus Population management, rural development and better living condition should be given importance.
- Smart city mission focused on all round development of cities where stills crores of people in India still don't have access to basic needs. Thus Basic needs of people should be given primary importance.
- Smart city requires efficient use of technology. Hence it is important to transform India into Technology based country in rural as well as urban area.
- Smart city does not need to be only smart but need to be more efficient in terms of fulfilling demands of people in regards to health, education and better employment opportunities
- India being developing economy with such a growth rate still not able to provide safety and security to people. Thus smart city need to focus more on smart governance and smart laws.

CONCLUSION

Smart city mission project implemented by government creates a pathway towards creation of developed India and more sustainable environment. Smart city helps in betterment of basic amenities for people, improves services but its main disadvantage is the amount of cost which government will require to fund this projects. The project sounds very fascinating and will provide a long term growth but to achieve that dream a ground level of India in terms of its infrastructure and basic amenities need to be improving. Smart city will require step by step development of cities by increasing the use of technology and creation of sound environment. Thus it is important to understand that successful completion of the project lies on the implementation of the project and effective participation of people to achieve the goal to make India as developed nation.

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Role of Digitalization in Enhancing Tourism Industry in India

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ABSTRACT

Since our independence, India has emerged as the fastest rising country in the globe. Involvement of tourism sector to India's enlargement and progress is pretty considerable. Recently launched Digital India Campaign by the government of India is paying prosperous share to the financial system in terms of rising productivity and efficiency of the government employees. Digital India is also measured essential for evolution of economy towards cashless and finally corruption less. The endeavor of this study is to put forward a modern approach to government of India to create reforms in tourism industry by linking information technology via smart applications and branding smart tourism i.e. Digital Tourism. We also highlights the significance of tourism industry to the Indian financial system, troubles faced by the industry and signifying smart way of connecting the tourism industry with the help of domestic as well as foreign tourists using software applications. In a nutshell, we propose a mobile app for all the tourists, which will bring each and every information on the fingertips of tourists. This will give a advance boost to India's emerging tourism sector and will be in tandem with digital India campaign.

Keywords: Digital Tourism, Digital India, Smart tourism, Cashless, Tourist's management.

INTRODUCTION

Tourism industry is compulsorily less polluting sector. India being a developing country, will be receiving huge amount of revenue from Tourism sector which uses a tool of digitalization. One of the main sources of employment in India is tourism sector which has the great success rate due to digitalization. The entry of digitalization in tourism market leads to considerable cost saving and productivity gains. Digitalization is the integration of digital technologies into everyday life by the digitalization gives an apparent idea of development and technology dependent word. Digitalization provides the tools, frameworks and technologies to create and add value to tourism products and experiences but the success of digitalization depends on the capacity of the tourism sector to share, learn and collaborate. Tourism is amongst one of the sector that is widely affected by digital development. The first companies to use digital techniques and tools in their business were of hospitality and accommodation companies to provide the best possible away from home experience. Traditional definition of tourism involves the travel of people to destinations away from their usual dwelling or working places and the provision of facilities created to cater for the needs arising along this travel.

Digitalization is one of the ways to gain competitive advantages as tourism industry is always looking for the newest and greatest ways to reach their buyers personally. India's manual or paper based tourism has undergone through many challenges due to the demonetization happen in India under the leadership of Narendra Modi, with a purpose or aim of taking Indian economy one huge step forward towards being a cashless economy. All sectors experienced a major slowdown as an adverse effect of demonetization on Indian economy and one of the major sector witnessed slowdown was Travel & Tourism are over India including the Traditional or manual tourism during the last couple month of 2016. In last 5 years, the travel reservations which were carried online turns around 57% while more than 65% of people have their reservations on the same day via online. The challenges faced in the digital development by travel providers where they need to face the individually addressing stakeholders from country to country, region to region.

India is a country with various cultures and traditional heritage with a mixture of religious, caste, and races. India reflects a variety of cultural and spiritual places where domestic and foreigners visit India and it is a major source of revenue for our country. The tourists experienced that variables relating to the perception of accommodation facilities such as comfort, peace, safety and security, attitude and

behavior of staff, and sanitation and hygiene are not more satisfied. Signboard, street lights, traffic rules have to be improved. The sample size for the study is restricted to the number of 116. Accommodation at hotels, guest house and lodging should be maintained properly and the behavior of staff and their attitude should be improved. Hygienic foods and cleanness in the hotels should be improved by the tourist's management for more attractions.

STRATEGIES ADOPTED FOR DIGITAL TOURISM

1. Market Research
2. New Product Development
3. Time Effect
4. Proper Mix
5. Segmentation
6. Marketing Plan
7. Marketing tools

REVIEW OF LITERATURE

Qureshi. A. H. (2017), in their exploration of paper entitled as ' Implementation of Smart Tourism In Digital India ' having target to discover the Indian tourism sector is anticipated to boost at an yearly rate over the years, with largest foreign exchange earner and it's expected that highly contribution to GDP. With such a significant growth panorama, it's important that government give supreme priority to the Indian tourism sector and solve the troubles like transportation, accommodation, budgeting, skilled guide, safety measures and searching of places.

Shigaonker. S. A. (2018), in their exploration of paper entitled as ' Success of digitalization in tourism industry in India ' having targeted to discover the Digitization offers various fresh opportunities that can be exploited by providers in the Indian tourism industry. At the same time, competition is being intense companies have to keep pace with digitization in order to remain on the same level.

OBJECTIVES

1. To understand the concept of Manual & Digital travel & tourism in India.
2. To study the effect of lack of digitalization in Indian tourism industry.
3. To evaluate the future prospects.

HYPOTHESES

The following hypotheses have been framed for the study.

H0 - There is no association between the Gender & Convenience about Traditional and Digital Tourism

H1 - There is association between the Gender & Convenience about Traditional and Digital Tourism

RESEARCH METHODOLOGY

The research paper "**Role of Digitalization in Enhancing Tourism Industry in India**" is empirical in nature. In order to carry out the present study, the information collected from primary source. The primary data collected by well-designed questionnaires from people, residing and working in the study area with the help of convenient random method.

The secondary data has been collected from reference books, research papers, and progress reports of Ministry of Finance, Government of India; newspapers and relevant websites. The informative material found through primary and secondary data have been studied and put in systematic form to arrive at appropriate conclusions.

ANALYSIS AND INTERPRETATION

MAIN HYPOTHESIS

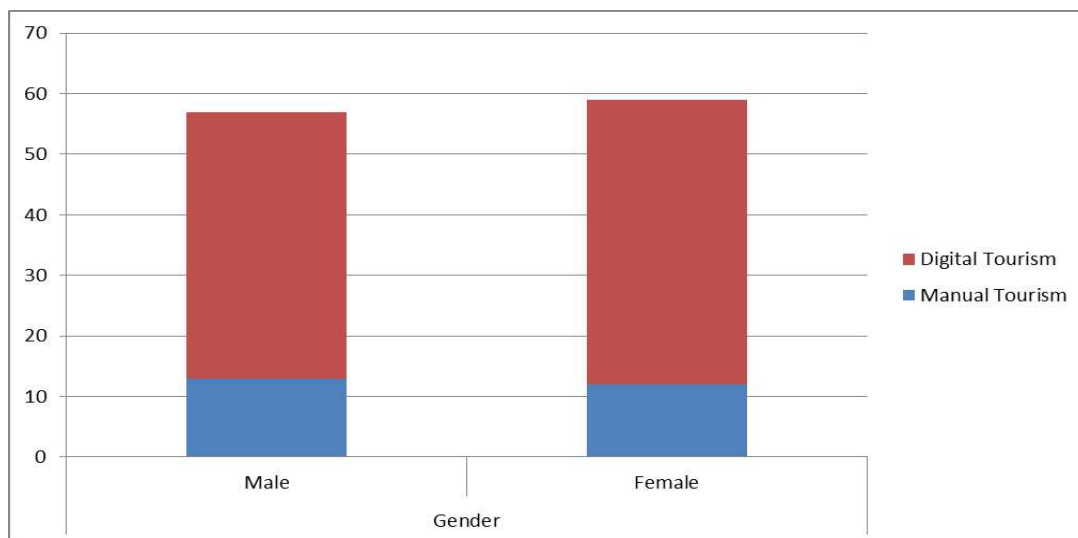
People are aware about the Digitalization in tourism and they conveniently use digital tourism then traditional tourism because it doesn't require their actual presence.

Null Hypothesis (Ho): There is no association between the Gender & Convenience about Traditional and Digital Tourism

To test the null hypothesis, collected information was classified and presented in the table format given below.

Table No-1: Actual Value

Sr. 1.	Convenience	Gender		
		Male	Female	TOTAL
1	Traditional Tourism	13	12	25
2	Digital Tourism	44	47	91
3	TOTAL	57	59	116



Out of 116 respondents who are Convenient of Manual Tourism and Digital Tourism is 25 and 91 respectively, In Manual Tourism out of 25 respondent 13 respondent are male and 12 respondents are female. In Digital Tourism out of 91 respondent 44 respondents are male and 47 respondents are female.

To test the above hypothesis Chi-square test is applied and result of the test is

Chi-square	0.746554
Degree of freedom	01
Table Value	3.841
Result of test	Test is accepted

The Chi-square calculated value is 0.746554 is much less than table value (3.841).

This indicated that the Null Hypothesis (Ho) is accepted. There is no association between the Gender & Convenience about Traditional and Digital Tourism. Alternate Hypothesis (H1) There is association between the Gender & Convenience about Traditional and Digital Tourism is rejected.

PROSPECT OF DIGITAL TOURISM IN INDIA

- The Indian tourism industry is very important to the development of the economy, with the prospective to generate millions of service opportunities and encourage entrepreneurship and modernization.
- Virtual technology has the prospective to offer tourism industry in rising destinations straight access to a worldwide market of pass through tourist for the initial time, hugely growing their prospects.
- To rejoice World Tourism Day, the World Bank Group, jointly through associates, is exploring how digital advances can be used to promote sustainable tourism for enlargement.

CONCLUSIONS

One of the major sectors which contribute to the country's GDP and empowerment significantly is tourism sector. Digitalization in this sector is rapidly increasing and offer opportunity which is rare to disrupt and goes for incremental changes. For an example of Cab services like Ola and Uber have disrupted the cab hire market. Wallets replaced the traditional payment method. The companies engaged in tourism and travel sector must identify the emerging trend and itself for near future. The Study of this research paper shows people are aware about the Digitalization in tourism and they conveniently use digital tourism then traditional tourism because it doesn't require their actual presence. Therefore, we propose prologue of digitalization and for the most part essential the smart app for digital tourism will help both domestic tourism as well as foreign tourism i.e. Indian tourism industry.

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Role of Pedagogy in Traditional and Constructivist Teaching-Learning Theory with Respect to Mathematics in Twenty First Century

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ABSTRACT

Teaching and learning in the twenty first Century is required to review in terms of Teaching practices, Methods, Pedagogy and Evaluation techniques. A new approach of teaching-learning should be analyse so that understanding of the students will be attained and retained. New perspectives of pedagogy that can be used in Traditional method is required to evaluate critically with respect to constructivist theory. In Teaching-Learning of Mathematics how Traditional Pedagogy and Constructivist Pedagogy plays a important role is studied here. Here we have tried to compare Traditional and Constructivist theory with respect to different variables involved in Teaching-Learning Pedagogy. Also a survey was conducted to know the opinion about advantages and disadvantages of pedagogy in Traditional and Constructivist theory. Limitations faced in the Traditional and Constructivist theory were also discussed here.

Keywords- Pedagogy, Teaching and Learning, Traditional method of Teaching-Learning, Constructivist theory of Teaching-Learning, Teaching-Learning Pedagogy in Mathematics.

INTRODUCTION

Traditional and Constructivist theory of Teaching-learning

Traditional method of Teaching-learning is based on

- ✧ Students learn through memorization and recitation techniques
- ✧ Reproduces whatever has taught to them (dependent on teachers)
- ✧ Does not develops problem solving, decision making and critical thinking skills

Constructivist theory is based on three stages.

When a particular information is put forward to the learner then three stages involved are

- ✧ If learner is aware of it, then he try to recollect, correlate it to prior knowledge and updates his perception
- ✧ If it is totally new information he try to store it with his perception
- ✧ If it does not match with his previous knowledge , he ignore it

Origin of the problem

Effective teachers take student competencies from starting points to their final destinations. Students Existing competencies including language, reading and listening skills, ability to cope with complexity and mathematical reasoning become resources required to build upon. Consistent decrease in learners understanding and passive approaches of learning is required to improve in twenty first century. Connecting learning to what students are thinking should be achieved. So different aspects are analyzed here were Role of teacher, Environment of teaching-learning activities, Syllabus Curriculum, Methodology of Assessment & Evaluation and Pedagogy etc. Here we are going to study pedagogy in general and with respect to Mathematics in details for Traditional and Constructivist teaching- learning theory.

Role of the Teacher -As students are actively involved , so interactive activities should be structured with specific goal which support their learning experiences.

Syllabus Curriculum-The resources available are reference books, Text books etc. Selection of these resources for the pedagogy should to be scrutinized carefully.

Environment of Teaching-Learning activities-Should be able to ignite the process of recalling, analysis, comparison, inference and evaluation which is the main requirement of effective teaching

Methodology of Assessment&Evaluation- Need to reconsider& re-modify so that students should get in-depth learning which results into better retention, understanding and implementation of knowledge.

Pedagogy-Three P's of Pedagogy required are Personalize, Participation and Productivity. This should results into knowledge construction & assimilation of ideas. Five E's are Engage, Explore, Explain, Elaborate, Evaluate are the pillars of effective teaching-learning, should be achieved in every course study.

OBJECTIVES

- We have tried to compare Traditional and Constructivist Teaching-Learning theory for different variables with respect to Pedagogy in general and with respect to mathematics
- A survey was conducted to review the need of pedagogy in Traditional and Constructivist theory in general and with respect to mathematics
- Limitations faced in the Traditional and Constructivist Teaching-Learning method in general and with respect to mathematics

HYPOTHESIS-

Combined methods of pedagogical practice are more effective than Traditional method of Teaching-Learning and Constructivist Teaching- Learning method separately in Teaching- Learning Mathematics

REVIEW OF LITERATURE

ReviewR1-Knowledge gained in Traditional teaching method is not retained once the examination is over. Whereas in constructivism method learner is an active participant, which allows an individual to develop & construct or rediscover knowledge. Lots of feasibility constraints need to resolve for the effective learning process. In content development method of the non-traditional teaching and learning (NTTL) in we need to consider the knowledge, procedures, skills, beliefs and attitudes that was expected for every student of mathematics.

This paper reviews the literature on mathematics and engineering with respect to outline approaches and its influence on the performance. (Tularam, Traditional vs Non-traditional Teaching and Learning Strategies - the case of E-learning!, 2018)

ReviewR2-Constructivism Creates Inquiry based learning which provides platform for Multiple intelligence, this can be achieved through collaborative learning techniques of teaching. Also we need to be more cautious as weight-age on collaborative learning restricts the learning of learners with poor prior- knowledge.

It is more beneficial to elite learners who had strong schooling foundations, outstanding teachers & financially committed parents. (How does a Constructivist approach differ from a traditional approach?, n.d.)

ReviewR3-Here different issues are discussed w. r. to constrictive Pedagogy. Research work was carried out with related to the students learning, Learner attitude towards its, development of Effective theory on constructivist teaching, Prior Subject related knowledge to coordinate with teachers teaching perceptions, possible plan for its implementation were discussed. The difficulty in translating a theory of learning into a theory of practice of teaching is major hurdle. (Richardson, n.d.)

ReviewR4--This paper tries to analyze, two group of grade V students who were exposed to traditional and constructivist pedagogy. Students achievement in Mathematics from three different urban school of Odisha were compared& studied. Students with constructivist pedagogy groups had shown improvement in achievement, ability of understanding and capacity of retention. (Nayak, n.d.)

ReviewR5-- Provides an overview of Constructivism and how ICT can be used to support thinking and learning from a Singapore educational perspective. Constructivist approach and the use of ICT-based cognitive tools will be quite challenging. The transition period for teacher is more crucial to overcome, as teachers have to modify their teaching skills. Parents should shift their priority from grades to actual knowledge gained. (Chan, 2011)

ReviewR6-- Constructivist learning approach have significantly enhanced mathematics understanding and application abilities for students. But lots of efforts are involved at administrative level and requires support of relevant technology. (Chowdhury, 2016)

ReviewR7-- Performance in mathematics of ninth grade students from public and government schools of Amritsar district, Punjab has improved when taught ,through constructivist approach instead of traditional. (Kaur, 2018)

ReviewR8-- Paul's conception of critical thinking, is very similar to the traditional model of Ennis. The five different steps involved in thinking are recall, analyze, compare, evaluation and inference. Further four steps involved in practicality are Application, Analysis, Synthesis and Evaluation. (Ennis, 1987)

ReviewR9-- Lack of knowledge related to Terminology , Concepts & Definition at previous grades results into misunderstanding and hence windup with a poor performance in Mathematics. (Glenn, 1977)

ReviewR10-- Being practical subject, so revision on continuous and regular basis is needed. Unable to connect with the real life situations results into the lack of inclination towards mathematics studies. (Backhouse)

ReviewR11-- Major interest and disinterest for the subject are developed during school days. So at this level the concern subject teachers plays a important role. (Sarkar, 2010)

ReviewR12-- Constructivist learning theory operates on the principle that students build knowledge based upon their prior knowledge. Traditional method is student' centric where as constructivism is lessons' centric. This learning theory is more effective for sensory challenged learners. (The Pros and Cons of Constructivist Learning Theory, n.d.)

ReviewR13-- Constructivism is based on rapprochement rather than reproducing the feed knowledge through memorization. Teachers may focus more on students favourite topics results into imbalance syllabus coverage. This results into lack of curriculum evaluation standardization. (Roberts, n.d.)

ReviewR14-- There are many possible reasons as to why students fail in mathematics. But most of the reasons are related to curriculum and methods of teaching rather than the students' lack of capacity to learn. (Carnine, 1991)

RESEARCH METHODOLOGY

This research paper is based on Primary and Secondary data.

The primary data was collected through a questionnaire administered to teachers , teaching Mathematics / Statistics / Computers at degree level from all courses. The questionnaire had in all 13 closed ended questions. The primary data survey was done by the means of Google form. The link of the form <https://forms.gle/WpnEQFpkNRy8rjN4A>

The Secondary data was collected from various websites and Research papers, Journals and Books.

COMPARATIVE STUDY

Comparative measurement of Traditional verses Constructivist pedagogy with respect to different variables in Mathematics. For example:

- Traditional teaching-learning method is more effective for slow learners where as Constructivist method is more effective for advanced learners
- Importance is given to learners' point of views and curriculum is frame on learners supposition

Variables	Traditional Pedagogy	Constructivist Pedagogy
Role of the teacher	The teacher being an EXPLAINER	the teacher being a FACILITATORS
Basic skills	Basic skills are taught	First Meaningful instruction are taught
Environment	A quiet classroom is must	Quiet environment not necessary
Control	Control over the classroom is must	Control over the classroom is not necessary
Procedure / Method	Follows clear & correct answers method	Learn from incorrect method
Learner perceptions	Learner perception is expanded and Visualized on the views of teachers' knowledge	Learner perception is not restricted to views of teachers' knowledge.
Prior Knowledge	Prior Knowledge is not necessary	Can learn simultaneously i.e. Prior Knowledge can be learned with current
Classroom movement	Restricted movement within a classroom for a set of all students	Allow Freedom of movement (Multiple classroom movement)
Subject-matter in the prescribed curriculum	Interest and effort are more important than the particular subject contents in the prescribed curriculum	Particular subject contents, as well as interest and effort are important in the prescribed curriculum
Student Participation	Participation of student is must due to assessment & evaluation criteria	Participation of student is not necessary due to flexible assessment & evaluation criteria
Learning Emphasis on	Emphasis is on memorization	Learn from incorrect attempts. Emphasis is on Knowledge construction & assimilation of ideas.
Application based on	Application based on simple procedure	Application based on Knowledge construction & assimilation of ideas
Enquiry based learning	Does not develop Enquiry based learning	Develop Enquiry based learning and also peer group act as a resources
Syllabus	High valued fixed syllabus	Valued based on the students views & Interest
Structure	Follow systematic standard structure	Lack of systematic standard structure
Collaborative learning	Not much scope	Encourage and provide a lots of scope
Authority	Directive	Interactive with negotiations
Autonomy	Does not develop Autonomy	Develops Autonomy

FOOT NOTES

Pedagogy - It is the science of teaching and learning, is based on the theories of learning.

It is the art or science of teaching, education & instructional methods. Methods and principles of teaching, strategies or styles of instructions. The learning activities that support the unit of content; the instructional approach such as active learning, constructivist model, student-to-student engagement; teaching to multiple learning styles, variety of assessments. It is a method and practice of teaching based on skillful academic subject expert.

Constructivist Teaching -learning theory- It is based on constructivist learning theory, here students build knowledge based upon their previous knowledge and experience. Students are actively engaged in the learning process, instead of receiving knowledge passively though lectures and memorization. This act of reconciliation will result in either a change in the original belief or discarding of the new information. It allow the students to explore their relative thoughts and concepts on prior -knowledge

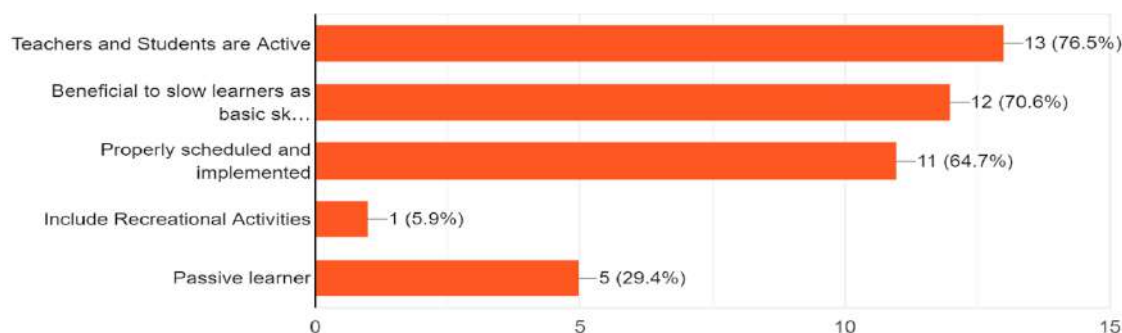
DATA INTERPRETATION AND FINDINGS

Findings of a survey- A survey was conducted for a teachers who are teaching Mathematics/ Statistics/ Computer

- 1) Teachers working at Undergraduate level were 82.4% and UG & PG were 17.6%
- 2) Teachers from B Com section were 70.6% , Self Finance Section were 47.1% ,BSc were 23.5% and Post Graduate were 11.8%
- 3) Almost all the teachers were aware about Traditional Methods of Teaching-learning And Pedagogy involved in it.
- 4) Constructivist method of Teaching-learning Mathematics preferred by 11.8 %
 Traditional method of Teaching-learning Mathematics preferred by 17.6 %
 Combination of both preferred by 70.6 %

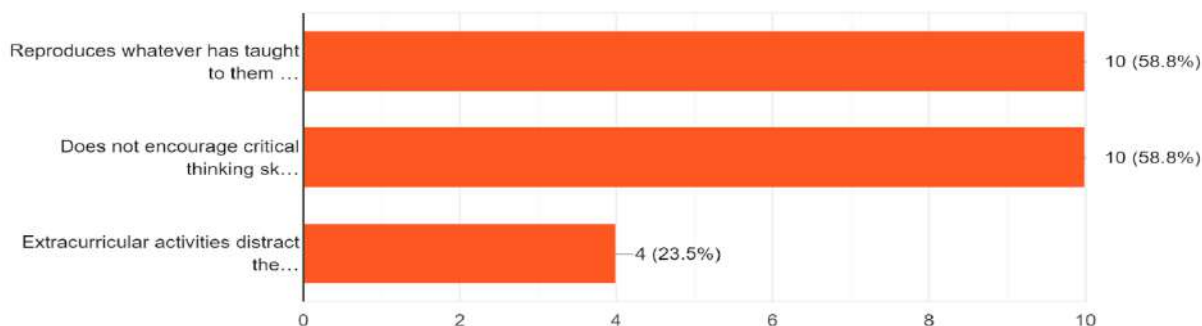
Q4: What, according to you, are the advantages of Traditional method of Teaching-learning in Mathematics?

17 responses



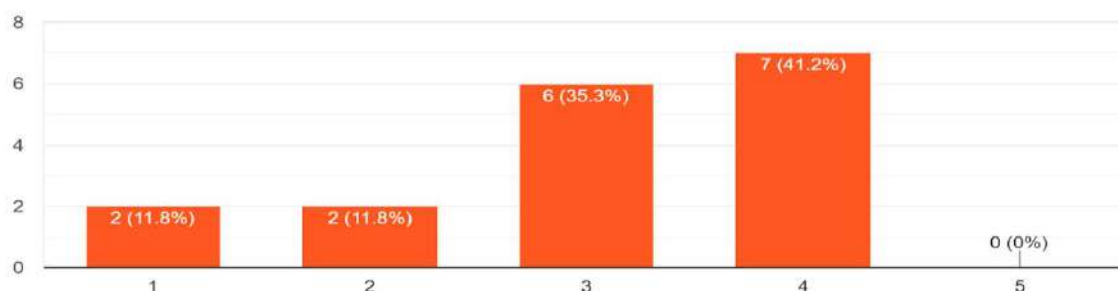
Q5: What, according to you, are the Disadvantages of Traditional method of Teaching-learning in Mathematics

17 responses

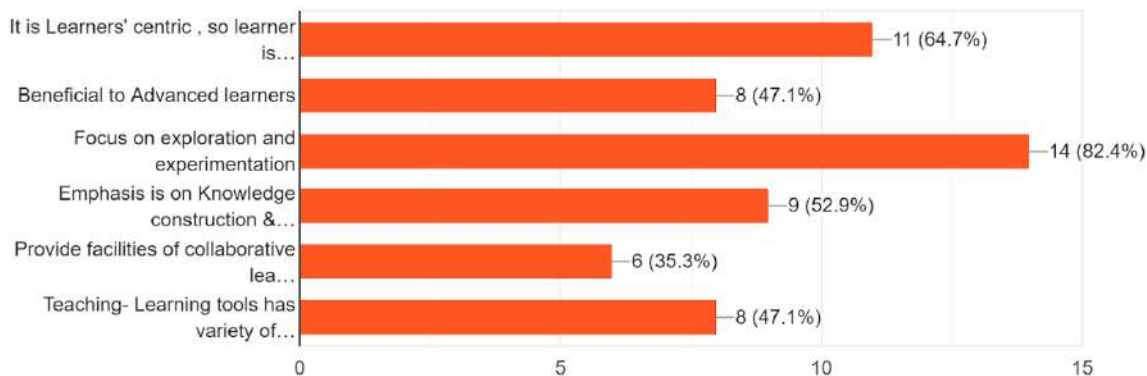


Q6 : Restructuring of Pedagogy is must (required) in Traditional Methods of Teaching-learning Mathematics

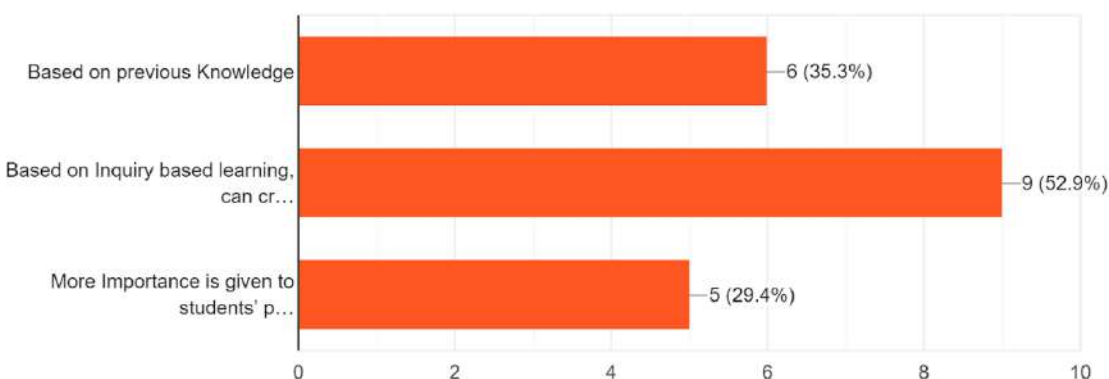
17 responses



Q8 : What, according to you, are the advantages of Constructivist method of Teaching-learning
 17 responses



Q9: What, according to you, are the Disadvantages of Constructivist Method of Teaching-learning in Mathematics
 17 responses

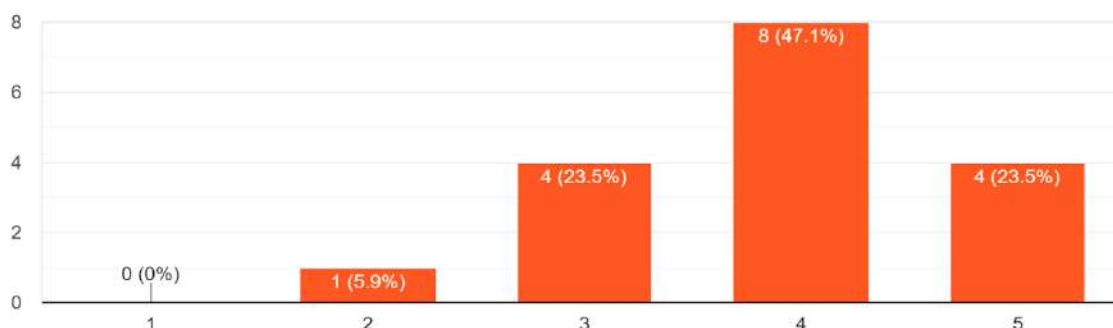


Q 12: If your answer for question 11 (Can you combine the Traditional and Constructivist method) is yes , then Specify in short 10 responses

- ✓ You can take students from simple to difficult and concrete to abstract. Learning through examples and then building an abstract idea or proof.
- ✓ Use technology and proper content explanation.
- ✓ Costructivist method can develop creative thinking
- ✓ Both the methods are useful
- ✓ Financial concepts by using online tools. Fin planning etc.
- ✓ Need to involve students more by generating thier interest in maths
- ✓ Explaining the principles briefly and solving problems with help of activities.
- ✓ Present in Tutorial format in a Student interactive way.
- ✓ Previous knowledge will be used to do practicals and new knowledge will be used for knowledge building
- ✓ We can encourage the students to experiment and explore throug small projects

Q13: Blended Pedagogy of Traditional and Constructivist theory, in mathematics, is the need of Education in twenty first century

17 responses



LIMITATIONS

- It is difficult to develop students' learning capacity in mathematics independently by the means of self regulated and personalized structure
- Social interactions ,teacher-student and peer group interactions creates hurdle in selecting mathematics course studies
- Do not follow standard structure curriculum
- Systematic evaluation method needs to be re-frame
- Subject-content will be more becomes meaningful if concentrate on context-rich activities
- There is more possibilities that the teacher may become more involved with Self-efficacious students.
- As students are discovering knowledge on their own prior knowledge, so are responsible for their own learning
- Learner's can get confused easily as their learning is based on prior knowledge

CONCLUSION

Structured pedagogy should be framed depending upon interaction between teacher and peer groups. It should be supported with experimental learning by gathering data, analyzing the situations. Positive attitudes and perception about learning play a fundamental role in the learning process, teacher should try to foster them.

Blended method of Traditional and Constructivist theory of Teaching- Learning in mathematics is the need of today's education. A big challenge in twenty first century is the construction of pedagogy which develops critical thinking, innovation, collaborative method with effective communications. Also discovering the personalized method and pedagogy is a challenge for every teacher.

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Impact of E-learning on Education

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ABSTRACT

The main objective of this study is to understand the impact of technology on education. The researcher has designed a structured questionnaire to collect primary data from the respondents. The sample size was 300 students of Mumbai. It has been found that majority of the students are moving towards paperless study material and video based learning. It also reveals that addiction to the gadgets like smartphones, palmtops was massively impacting on the social life of the students. The quality of online learning is better than traditional learning. It is suggested to the young learners to use technology and social media platforms of learning with healthcare and eyecare for a better life. It is also suggested to do further research on moocs and government online portal such as NPTEL and Swayam.

Keywords: Industry 4.0, E-learning, Government learning portals, Digital India

INTRODUCTION

E-Learning is the productive use of technology to aid and enhance learning. The evolution of E-learning traces back to the introduction of televisions and overhead projectors in classrooms to interactive computer programmes, 3D simulations, video and telephone conferencing and real time online discussion groups consisting of students all over the World.

With the rapid advancement in technology and rapidly changing thought process of the people in various strata of the society, the Indian Education system has evolved many folds. With the hybrid structure of pedagogy system of education and technology, due to various government initiatives has opened new avenues for both sides of the table i.e. students and teachers.

The education system in the traditional way is a lecture held in a classroom with relevant demonstration and discussions occasionally with relevant tests conducted at regular intervals to assess the students learning. However, every student being different in terms of learning, understanding and retaining capabilities it is difficult to give justice to impart education to all the students in a similar way. This is where newer innovative methods armed with technological support is the need of the hour. Even the Government of India has acknowledged the barriers in the pedagogy system and hence has taken various steps to incorporate technology in the education system.

Right from the late 90s academicians have been aware of the huge potential of the internet as a learning tool. In recent years Governments all over the World have realised how cost effective and easily accessible the internet is in delivering knowledge to the masses.

In the current day and age of Information technology the need for knowledge workers has drastically increased and that of manual workers has gone down. Hence, 'e-Learning' is considered by many as the only viable solution to the problem of delivering the resources required facilitating lifelong learning.

In spite of the enthusiasm and commitment being shown by the government, there is still considerable apathy, confusion and skepticism about e-learning amongst teachers, students and academicians alike.

ICT is the main driver in India emerging as a superpower. The gap between demand and supply of higher education has urged the policy makers and institutions of the country to come up with various initiatives towards integrating ICT in education.

Since the past twenty to thirty years, the Indian education system has been tormented by many issues and problems such as lack of students, poor infrastructure, lack of quality teachers, and a standard curriculum, to name a few. With the introduction of E-learning in schools, education in India is ready for a radical shift, where the education system will be on the lines of the international education system. However, there are many challenges for its successful implementation.

Integration of ICT involves various costs and resources such as internet, computer based infrastructure and also satellite support and the process of installation. At the same time the teachers need to be trained to effectively utilize ICT while imparting knowledge to the students. We are now in a digital age and all the educational institutions should cater to the modern needs of the students. The use of Information technology in education not only results in the overall development of a child, but also has a major motivational influence on his/her learning capabilities.

LITERATURE REVIEW

The education world now being dominated by Internet education, a lot of efforts are being made to improve the quality of this kind of studying by furthering the methods and making students and Professors aware about it. (MirjanaRadovic- Markovic, 2010).SangeetaKakoty, et. al. (2011) analyses the current e-learning procedure which shows that globalization of education, cross-culture aspects and culturally complex student support system in distance education as well as in e-learning environment is a prospective research area. With the integration of technology and ICT tools a step can be taken towards Improvements in these areas. Ventatesh, et.al. (2003) studied the behavioural intention to use the technology and actual usage in the Unified Theory of Acceptance and Use of Technology (UTAUT model) which helped him identify the important factors in acceptance of e-learning. A study on the perception of students of tutor's role in E-learning and student's approach towards E-learning was done by Dr Jennifer Gilbert (2007). The study revealed that the student approach to e-learning—students do not learn in the systematic way that is implicit in the careful design and structuring of a learning package. Student perceptions of the tutors role—students are not certain about the teacher's role in e-learning. Interaction and communication is definitely one of the most important components of any learning process (Eileen Webb, et. al, 2004). However, as the number of students goes up and more importance is given to online delivery of courses, opportunities for effective communication may be missed. Naser-Nick Manochehr (2007) carried out a comparative analysis of the effects of e-learning vis-à-vis those of traditional teacher-based learning, on student learning, based on student learning styles. Vic Lally& Elizabeth Barrett (1999) reports the findings of a research project, conducted within the Division of Education at the University of Sheffield, which used computer-mediated communication (CMC) to support postgraduate students in 52 distance-education contexts. Santosh Panda and Sanjaya Mishra (2007) carried out a research with the teachers and students of IGNOU. The researchers recommended that only an e-learning experience can change the faculty perceptions, therefore the faculty training program should preferably be designed and delivered on the web. Additionally, online faculty development programs must be conducted to provide training on both technology and pedagogy of e-learning, faculty must be encouraged to use the computer and correspond via email; students must be provided with internet access in order to facilitate the e-learning process.

ORIGIN OF RESEARCH PROBLEM

There has been a change in the learning processes across the educational institutions across the world with the introduction of E-learning as a medium of instructions and delivery of knowledge. This has created a learning system anytime anywhere with the help of portable gadgets and availability of cheap data. This has not only been a boon for the learners but also for the instructors with the advantage of on demand content, visuals. Graphics and a platform to share content across the World it has helped in enriching the teaching and the learning experience. Over a period of time a lot of developments have been done in the education sector since Computers, Intranet and Internet have been introduced as a part of teaching and learning systems, still a lot of research has to be done in this field to understand student motivation under the effect of e-learning.

The higher educational institutions are changing gears and moving ahead to match the needs of the time and industry demands by upgrading themselves with the new methods techniques of teaching and providing platforms to the students to go beyond classrooms connect to the world outside and learn from various sources across the world. In the recent times there has been a paradigm shift from traditional classroom courses towards online courses. Keeping in mind the current demand an increasing market of online courses, the Finance Minister announced Rupees Rs 99,300 crore for education sector in 2020-21. "A degree-level full-fledged online education programme will be offered

by institutes in top 100 in National Institutional Ranking Framework,” said Sitharaman. Also there are various online portals such as Swayam, Sakshat, E-pathshala, Shagun, National Repository of Open Educational Resources (NROER), SwayamPrabha, National Digital Library (NDL) but very few know about it. Hence it is extremely important to understand the awareness and usage of E-learning and examining the ways in which institutions can cater to the changing needs of the students.

RESEARCH METHODOLOGY

Objectives of study

1. To find out the awareness level of e-learning platforms among students
2. To study whether millennials prefer e-learning or traditional learning
3. To find out the reasons why e-learning is gaining popularity
4. To study the awareness of online learning portals provided by the Government
5. To find out if students use gadgets for productive or unproductive purposes
6. To find out the impact of addiction to gadgets on the social life of students

Hypothesis of study

1. H0: There is no Relationship between Age and Awareness of E-learning
2. H0: There is no Relationship between Age and Usage of E-learning
3. H0: Addiction to gadgets hasn't impacted the social life of students
4. H0: Respondents aren't aware of the Government E-learning platforms
5. H0: Students are mostly not aware of online learning portals provided by the Government
6. H0: Digital India movement and low data cost has increased usage of e-learning platforms.
7. H0: There is no relationship between Industry 4.0 and its impact on the eradication of traditional learning

Research Design

The study aimed to know the awareness and usage of E-learning among school and college students in the city of Mumbai and hence the research design of the study is descriptive in nature. The researcher focused on a comprehensive set of practices which indicates how Industry 4.0 is responsible for E-learning taking over traditional ways of learning

DATA COLLECTION

The first hand data are collected directly from the respondents with the help of questionnaire as an instrument for the study and face to face discussion took place when required. The secondary data were collected from sources such as various journals, research papers, newsletters, books and websites.

Population: Students, Working class and Professionals across Mumbai City

Sampling Technique: The researchers have used convenience sampling and selected 300 respondents from the Schools and Colleges in Mumbai city.

Statistical Techniques Used: The collected data had been tabulated in SPSS software for bivariate Chi Square Test analysis and Pearson's correlation to measure the association between demographic variables and usage of E-learning

SIGNIFICANCE OF THE STUDY

The research was restricted to the population of Mumbai city. This research can be further extended to the Tier II and Tier III cities which will help in understanding the impact of online learning in such areas. The study will be of great help to understand the changing needs of the students with respect to learning tools which will help the teachers, Colleges and Universities in devising innovative methods of teaching. Secondly this will also be useful to highlight the negative impact of technology on the social

life of the students. Finally, it will help the Government in framing various policies with regards to infusion of Information technology on Education.

RESULTS AND DISCUSSION

Table No. 1 Correlation between Age and awareness of E-learning

Correlations		Age:	Are you aware of e-learning platforms?
Age:	Pearson Correlation	1	.113
	Sig. (2-tailed)		.113
	N	200	200
Are you aware of e-learning platforms?	Pearson Correlation	.113	1
	Sig. (2-tailed)	.113	
	N	200	200

From the Bivariate test output table, we see that a significance level of .113 (Pearson) has been achieved which is more than 0.05 and hence the null hypothesis is accepted. This means the correlation test is showing a non significant association between the above two variables. We can conclude that people across all age groups in Mumbai City are equally aware of the E-learning platforms.

Table No. 2 Correlation between Age and Usage of E-learning

Correlations		Age:	Do you use E-learning Platforms?
Age:	Pearson Correlation	1	-.063
	Sig. (2-tailed)		.378
	N	200	200
Do you use E-learning Platforms?	Pearson Correlation	-.063	1
	Sig. (2-tailed)	.378	
	N	200	200

From the bivariate test output table, we see that a significance level of .378 (Pearson) has been achieved which is more than 0.05 and hence the null hypothesis is accepted. This means the bivariate test is showing a non significant association between the above two variables. We can conclude that there is no difference in the usage pattern of E-learning across different age groups in Mumbai City.

Table No. 3 Relationship between the stream opted for in College and Usage of E-learning

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.167 ^a	5	.006
Likelihood Ratio	23.390	5	.000
Linear-by-Linear Association	1.330	1	.249
N of Valid Cases	198		

From the Chi- Square test output table we see that a significance level of .006 which is less than 0.05(Pearson) and hence we reject the null hypothesis. This means the Chi-square test is showing a significant association between stream opted for in college by the students in Mumbai city and their usage of E-learning platforms. It has been found that the students who have opted for Science or pursuing Skill development and Vocational courses resort more to Online sources of learning than the rest.

Table Number 4: Relationship between occupation and Usage of E-learning

Occupation * Do you use E-learning Platforms? Crosstabulation			Do you use E-learning Platforms?	
			Yes	No
Occupation	Student	Count	88	62
		Expected Count	95.3	54.8
		% within Occupation	58.7%	41.3%
		% within Do you use E-learning Platforms?	69.3%	84.9%

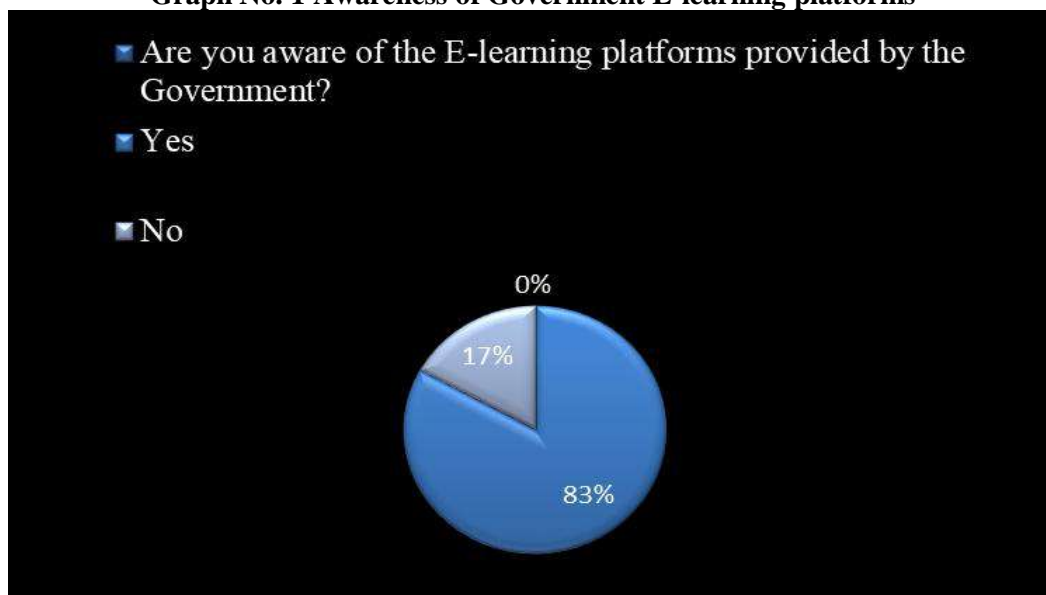
	Student and working	Count	17	7
		Expected Count	15.2	8.8
		% within Occupation	70.8%	29.2%
		% within Do you use E-learning Platforms?	13.4%	9.6%
	Professional	Count	8	1
		Expected Count	5.7	3.3
		% within Occupation	88.9%	11.1%
		% within Do you use E-learning Platforms?	6.3%	1.4%
	Research scholar	Count	2	1
		Expected Count	1.9	1.1
		% within Occupation	66.7%	33.3%
		% within Do you use E-learning Platforms?	1.6%	1.4%
	Working	Count	12	1
		Expected Count	8.3	4.7
		% within Occupation	92.3%	7.7%
		% within Do you use E-learning Platforms?	9.4%	1.4%
6	Count	0	1	

Table number 5: Chi-Square tests

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.979 ^a	5	.052
Likelihood Ratio	12.958	5	.024
Linear-by-Linear Association	5.566	1	.018
N of Valid Cases	200		

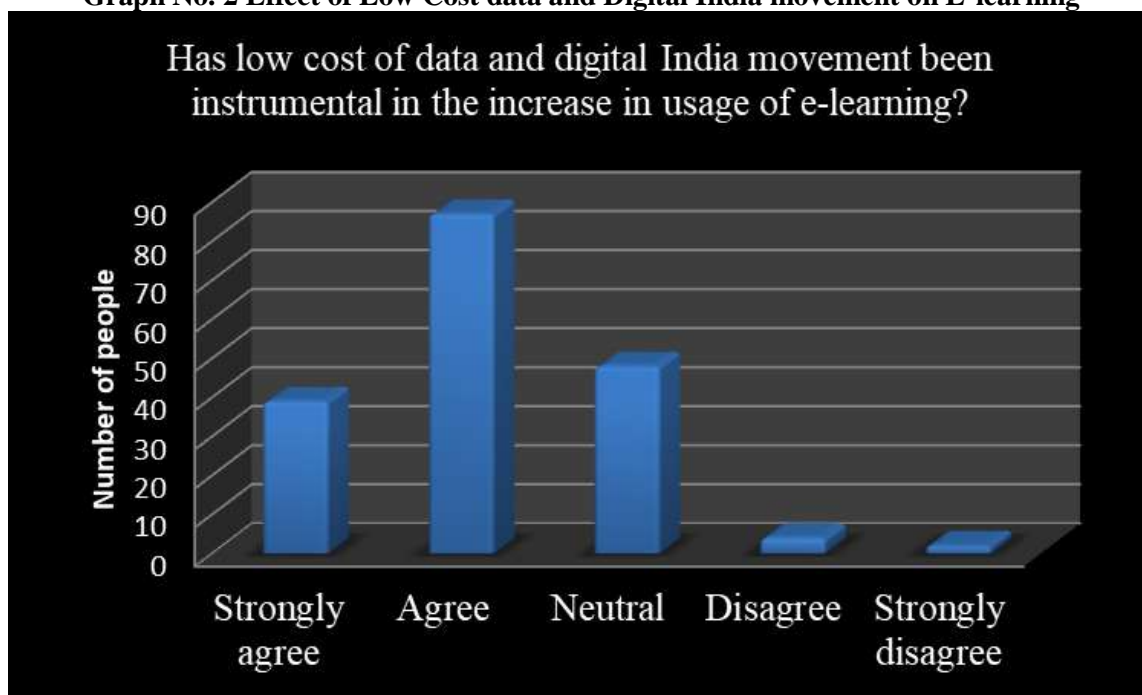
From the Chi- Square test output table we see that a significance level of .05 which is equal to 0.05(Pearson) and hence we reject the null hypothesis. This means the Chi-square test is showing a significant association between Occupation and usage of E-learning. It has been found that the ones pursuing Professional degrees and the ones working have shown a usage behavior more than the rest.

Graph No. 1 Awareness of Government E-learning platforms



From the survey we have found out that majority of our respondents weren't aware of the E-learning platforms provided by the Government such as SWAYAM and NPTEL. Hence it is necessary to take active measures for spreading awareness about the Government Online platforms available to the general public for the benefit of the learners and instructors at large.

Graph No. 2 Effect of Low Cost data and Digital India movement on E-learning



63% of our respondents agree that low cost data and digital India movement has been instrumental in increasing the usage of E-learning.

Table No. 6 Relationship between Industry 4.0 and its impact on the eradication of traditional learning

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.890 ^a	16	.000
Likelihood Ratio	45.342	16	.000
Linear-by-Linear Association	7.564	1	.006
N of Valid Cases	116		

From the Chi- Square test output table we see that a significance level of .000 which is less than 0.05(Pearson) and hence we reject the null hypothesis. This means the Chi-square test is showing a significant association between Industry 4.0 and the gradual eradication of traditional methods of learning. Thus we have concluded that Industry 4.0 has played a vital role in increasing the importance and usage of E-learning.

CONCLUSION

Majority of our respondents are students in the age group 18-20. Although 93% of our respondents are aware of E-learning platforms the awareness is limited to platforms like Byjus, Youtube, Corsera, Khan Academy, Google Classroom, Robomate etc. However only 63% of our sample uses E-learning. It has also been observed from our research that majority of the respondents using E-learning use it in addition to traditional methods of learning. This indicates that traditional learning has more cannot be completely eliminated but can supplement new forms of learning. It has also been observed that E-learning is mostly used on the recommendation of teachers. Hence the teacher's role is extremely crucial in promoting E-learning as a means of gaining knowledge. The research also highlights that inspite of a number of initiatives taken by the Government towards creating technology centric learning for the public at large not many, a large proportion of the sample is not aware of the Government online

portals. This necessitates a need to promote and highlight the advantages of such initiatives among the learning and teaching community. We have also found out that even though our respondents are addicted to gadgets their purpose of use is more inclined towards social media and entertainment followed by information gathering. This has also impacted their social life. The association between addiction to gadgets and learning and has been significantly low. The research pointed out that inspite of the developments in technology, the evolution of Internet of things, industry becoming data centric, technology disruptions there is lack of awareness of the term Industry 4.0 among the students. Among the selected few who are aware of the term, majority are of the opinion that it has or will lead to E-learning taking over traditional ways of learning but also believe that it will not completely eradicate the traditional methods of learning.

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Impact of services on customer satisfaction with special reference to G.P Parsik Sahakari Bank

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ABSTRACT

Banking sector in India is known as mature and stable sector in terms of credit market and liquidity risk. Co-operative banks play vital role in terms of fulfilling niche requirements of rural and semi-urban area. Co-operative banks are enhancing their services for better customer experiences and trying to understand areas of their improvements. This research is originated from the discussions with one of the senior members of well-known co-operative bank, Gopinath Patil Parsik Sahakari Bank, Thane. The objective of this research project was to understand the impact of the factors such as trust, bank timings, Interest rates, performance of ATM machines on customer satisfaction. These factors were selected from day to day interactions with customers and research validates impact of the same with majority of customer base.

1.1 INTRODUCTION

People who come together to jointly serve their common interest often form a co-operative society under the Co-operative Societies Act. When a co-operative society engages itself in banking business it is called a Co-operative Bank. The society has to obtain a license from the Reserve Bank of India before starting banking business.

The Gopinath Patil Janata Sahakari Bank Ltd. Was established on 21st May 1972, in near village in Kalwa (Thane, Maharashtra), Founded by a Shri. Gopinath Shivram Patil and The GP Parsik Sahakari Bank Ltd. has achieved Schedule status in the year 1998, after that bank achieved Multi State Schedule Status in March 2015. The GP Parsik Bank has 91 computerized branches in Maharashtra like Thane, Pune, Nashik, Raigad, Sangli, Goa, Karnataka, Kolhapur etc. In current scenario bank has crossed its business maximum of Rs. 5000/- crores consisting of deposit over Rs. 3,529/- crores and advance over Rs. 2,206/- crores. The bank has its vision for the year 2020 the business will be maximum of Rs.10,000/- crores through 100 branches.

The bank show commendable 46 percent CASA and also "zero" percent of Net NPA. This proportion was the result of constant and devoted attempts made by selfless managers and staff.

As its core values, the bank depicts transparency, confidence, customer service, excellence, and teamwork. The bank attained "Scheduled Status" on 30 January 1998 with the continuous and concerted attempts of all the dedicated directors, staff and well wishers. Following the achievement of Scheduled Status, the Bank's operating region was expanded to Maharashtra State as a whole.

The Bank, as defined by RBI, is "financially sound and is well-managed bank." It has been making profit since its founding and has been classified as 'A' Audit. For its excellent accomplishments in the areas of governance, restoration, management and technological safety, the bank has bagged numerous valuable accolades from both the banking and IT Sector.

In order to boost non-bank revenue, the bank has signed an arrangement with the Corporate Agency like Tata AIG General Insurance Company Limited, Bajaj Allianz General Insurance Company Limited and National Insurance Company Limited for General Insurance, Kotak Mahindra Life Insurance Company Limited and with regard to credit life insurance for insuring the amount of the loan in the incident of any debtor malfunction. As such debtors are asked in their own interest to opt for this insurance policy. **Mr. Ranjit Patil** is **chairman** of the Bank.

1.2 LITERATURE REVIEW

The research shows that the most important issue experienced by clients with regard to ATMs is that they are out of money and out of computers. The majority of participants meet their money demands through ATM service and also satisfied with the number of ATMs available in their location but the majority of participants are not satisfied with the transaction cost paid by bank for ATM service. (Shah, 2018)

Number of ATMs is not taken as variable of this study because cash can be withdrawn from any bank's ATM with limitation of number of withdrawals. However, performance of ATM machine is recommended variable from the bank and hence is taken under the consideration.

Customer satisfaction is positively impacted by the ATM services. Some functions have a very high level of customer satisfaction, while some aspects have a lower level of customer satisfaction, which is a significant area of expertise for banks, and more attention needs to be paid to banks. Factors related to the development of infrastructure require further investigation and research. (Singh, 2011)

Long-term cooperatives economic performance was found to be even weaker than their counterparts in the short term. It was also observed that, even though widespread across the country, the branch network of cooperatives continued to be concentrated in certain areas. In addition, the cooperative network was not broad in the country's north-eastern area. This suggests that efforts need to be made to improve the penetration of banking in the north-eastern part of the country as well as improve the financial health of cooperative institutions at ground level. (Soyeliya, 2013) In 2010-11, the economic performance of urban cooperative banks (UCBs) improved through some issues regarding some of the UCBs reporting adverse CRARs. Primary Societies of Agricultural Credit (PACS) continued to incur huge losses. Long-term cooperatives' financial performance was found to be even weaker than their counterparts in the short term. (Gupta, 2012).

In this research paper, it was noted that lack of awareness is deemed to be the main issue encountered by RTGS / NEFT customers. Therefore, it is suggested that banking officials should try to increase awareness of these facilities by means of media and private visits. It is also noted that convenient and rapid transactions are the main influencing factor. (Venkatesh, 2017)

"Indian Scheduled Commercial Banks' operating performance has enhanced since 2000. Aggregate deposits demonstrate a steady rise. It has been discovered that there is a beneficial correlation between demand deposits and time deposits. Improving the equity deposit ratio and the proportion of priority industry developments in full credit can further contribute to enhancing operational effectiveness. (Syed, 2011)

1.3 HYPOTHESIS

1. **Null Hypothesis (H01)** – Interest Rate does not play significant role in buying loan from GP Parsik Sahakari Bank Ltd.

Alternative Hypothesis (Ha1)– Interest Rate play significant role in buying loan from GP Parsik Sahakari Bank Ltd.

2. **Null Hypothesis (H02)**– Trust does not play significant role in buying loan from GP Parsik Sahakari Bank Ltd.

Alternative Hypothesis (Ha2) – Trust play significant role in buying loan from GP Parsik Sahakari Bank Ltd.

3. **Null Hypothesis (H03)** - There is no significant impact on performance of ATM Machine related service on customer satisfaction

Alternative Hypothesis (Ha3) – There is significance impact on performance of ATM Machine related service on customer satisfaction

4. **Null Hypothesis (H04)** – Their Bank timing does not play significant role in customer satisfaction

Alternative Hypothesis (Ha4) – Their Bank timing play significant role in customer satisfaction

1.4 RESEARCH METHODOLOGY

Research Design – Descriptive Research

Research Approach – Qualitative and Quantity Approach

Sample Area – GP Parsik Bank (Kharigaon Branch)

Sample Size – 50 size

Data collection Method

Primary Data - The primary data was collected by preparing a Unstructured Questionnaires for people to understand “Overall Operation of GP Parsik Sahakari Bank Ltd.(Kharigaon Branch)”

Secondary Data – The Secondary data was collect from Annual Report and website

Type of Questionnaires- Unstructured Questionnaires

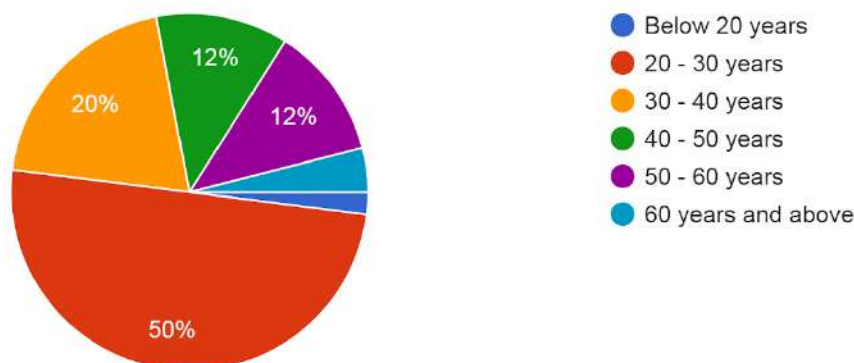
Data Analysis – Through Charts, Table and Diagrams

1.5 DATA ANALYSIS AND INTERPRETATION

Out of the 50 people surveyed, 50% are female and 50% are male

Age

50 responses



Out of the 50 people surveyed 2% are below 20 years, 50% are between 20-30 years, 20% are between 30-40 years, 12% are between 40-50 years, 12% are between 50-60 years and 4% are 60 years and above.

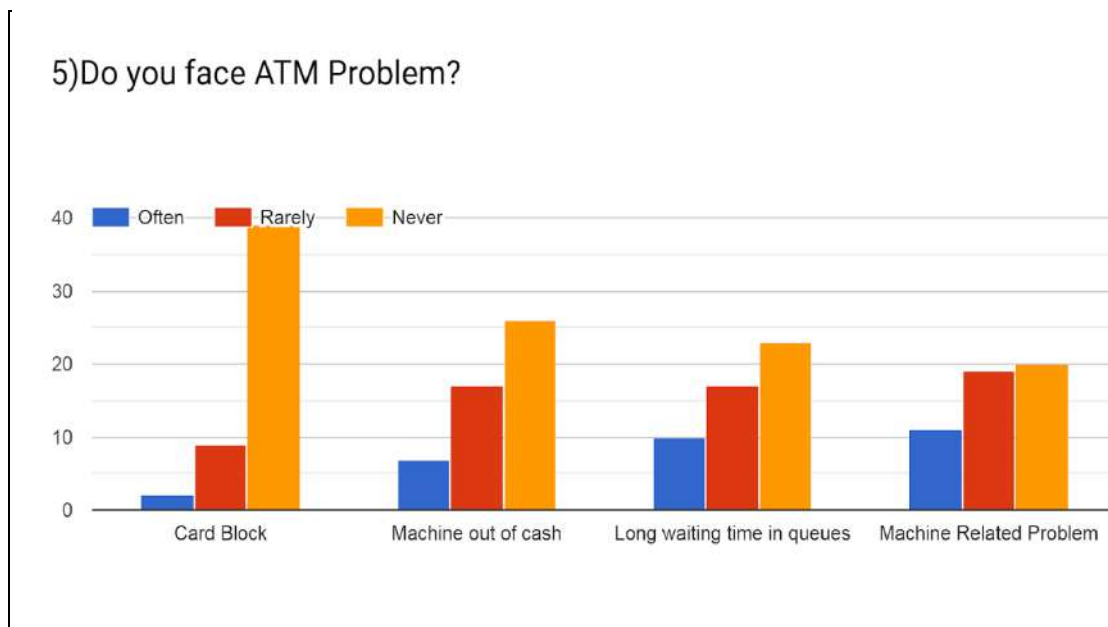
Particular	Number	Percentage
Student	6	12%
Housewife	11	22%
Employed	22	44%
Business	10	20%
Retired	1	2%

Out of the 50 people surveyed, 12% people are students, 22% people are Housewives, 44% people are employed, 20% people are Businessmen, and the rest 2% people are Retired.

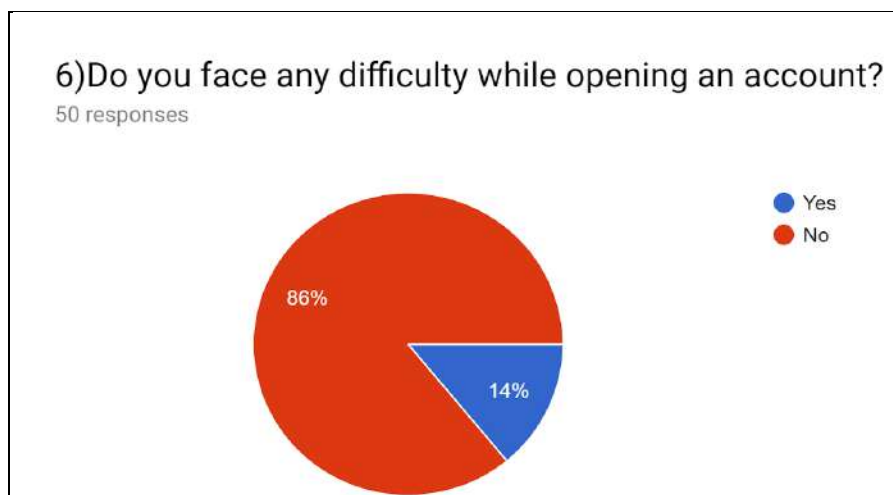
Out of the 50 people surveyed, 30% people are from the income group of Below 25000, 10% people are from income group of 25000 to 35000, 6% people are from between income group of 35000 to 45000, 4% people are from income group of 45000 to 55000, 18% are from the income group of above 55000 and 32% people are from No income group. Out of 50 people surveyed, Researcher concluded that 26% people visits bank branch weekly , 14% people are daily visitors, 48% people visits monthly, 10% people visits yearly and there are 2% people who do not visit bank branch.

Out of the 50 people surveyed, Researcher concluded that 92% people says Yes for branch timing as convenient for them and 8% people says No for branch timing as it is not convenient for them.

According to the survey, Majority of the respondent don't face any ATM related problem. But some of them rarely face problems like machine related problem, long waiting time in queues, machine out of cash and card block. So we can conclude that there are no problems related to ATM service provided by GP Parsik Sahakari Bank Limited.



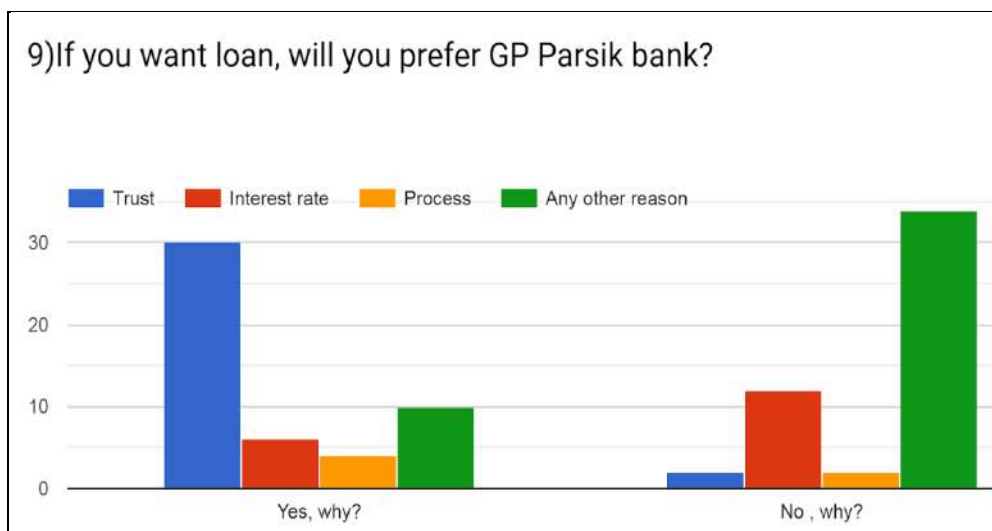
Out of 50 people surveyed, Researcher concluded that 14% people face problem while opening an account and 86% people do not face any problem while opening an account.



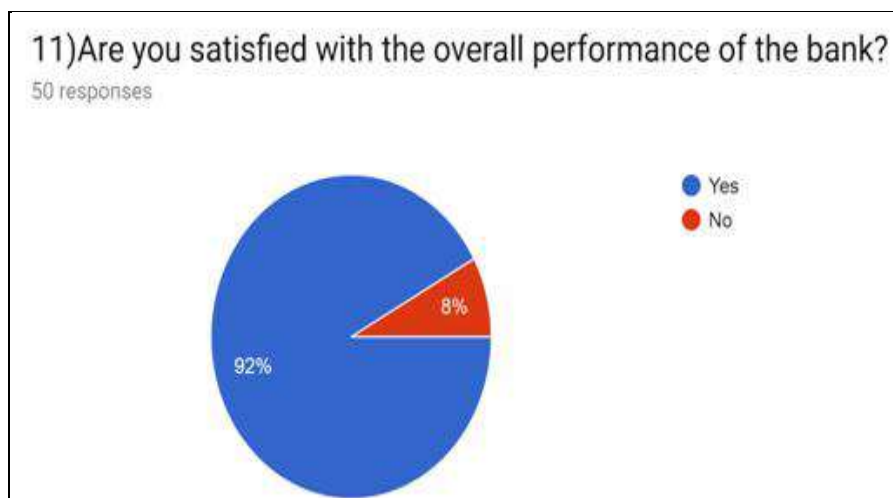
Out of the 50 people, Researcher concluded that 94% people says that the bank employees respond to their queries and solve the problem and 6% people says that the bank employees do not respond to their quires and solve the problem.

Below table represents the rating on customer satisfaction factors:

Particulars	Trust	Interest	Process	Any other Reason
Yes, Why	30	6	4	10
No, Why	2	12	2	34



Out of 50 people surveyed, 30 people will prefer taking loan from GP Parsik bank because of their Trust on bank, 6 people will choose to take loan from bank due to Rate of Interest charged by bank, 4 people will select the bank for loan as the process is quick and 10 people have other reasons like documentation, processing charges etc. According to survey concluded of 50 respondents, people will not select GP Parsik bank for following reasons like 2 people because of trust factor, 12 due to interest rates charged by bank, 2 people as they think process is slow or lengthy and 34 people have selected other reason that could be documentation, processing charges, services provided by loan department etc.



Out of 50 people surveyed, Researcher concluded that 92% people says that they are satisfied with the overall performance of the bank and 8% people says that they are not satisfied with the overall performance of the bank.

1.6 CONCLUSION

- In the data collected in surveyed, majority of people says that trust is a key factor because of which they will prefer GP Parsik Sahakari bank Ltd. For taking loan. So trust plays important role in buying loan from GP Parsik bank and hence alternative hypothesis (Ha1) is accepted
- Very few selected Interest Rate as important factor which availing loan from the bank where as some people marked it as a negative factor because of which they will not prefer GP Parsik Bank for taking loan.
- According to survey conducted, for 92% of customers bank timing are convenient which results in customer satisfaction.

- There is no problem of card block according to majority of respondents some of the customers rarely face problems like, Machine out of cash, Long waiting in queues, Machine related problems etc. which affects the level of customer satisfaction. Bank should concentrate on such problems and try to solve them in order to grow.

In the last people recommended bank some things which should be improved in the bank service.

- Major recommends were on Credit Card. People approached bank to start Credit card service because now a day's credit card are very convenient. People suggested to increase number of ATM machine in area.
- People face problem in Bank's ATM service so bank need to develop its ATM service.
- People ask bank to reduce interest rate of loan and increase interest rate of saving account.
- People also recommended bank that bank should get more products available online like Fixed Deposit or Recurring Deposit, ATM pin generation etc. It will help to reduce paper work in bank because people often get tired with too much of paper work.
- Some of the people say that bank should reduce the documents required for loan.
- Some people have appreciated Bank for its good work and good service.

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- Secondary Information:- gpparsik bank- Bank profile, interest rate, Retrired from- <https://gpparsikbank.com/>

Digitization and Sustainability – Comprehensive Literature Review on Opportunities and Challenges in Cyber Security

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ABSTRACT

Cyber Security plays an important role in the field of information technology the era of technical advancement, where everything revolves around the “e” world, digitalization has spread its wings over all the spheres of life. When ever we think about the cyber security we think about the cyber crime which is increasing day by day.

Security the first thing that comes to our mind is ‘cyber crimes’ which are increasing immensely day by day security the first thing that comes to our mind is ‘cyber crimes’ which are the immense use of digital devices and our growing dependency on them clearly states that digitalization is the need of the hour and has great potential to revolutionize the socio-economic growth parameters thus, forming a symbiotic relationship with all inclusive growth and sustainable development. The digital age results in sustainable development as when the societies are digitally empowered, they are more Conscious, Connected, Compliant, Collaborative and Content towards their own growth. This paper mainly focuses on challenges faced by cyber security on the latest technologies also the scope of Digitalization in the current scenario and its role in helping nations globally by following the path of sustainability.

Keyword: Cyber security, Collaboration, cyber crime, Digitalization, Inclusive growth, Sustainability.

INTRODUCTION

Changes have been part of this world as long for as it has existed. The Globalization of Digitalization has given a great boom to the corporate, financial and administrative sector which has exponentially widened the horizon of services being offered to the society like better technology to access everything at one click, improved facilities in the healthcare and hospitality department and good opportunities in educational sector for the less privileged. fundamental values are challenged and are changing, with consequences for legal regulations and human principles.

We examined the digitalization impact on the main sustainability components: economy, society, and environment. In the growing economies, such approach solely aims at providing a common platform to those millions of people who remain grounded within the walls of poverty, illiteracy and unemployment to reach out for any kind of assistance, register their existence and ask for their rights and development and connect with the nation. The different emerging concepts in the innovative area of sustainability and digital technology. Significant advancements in communications technology and wide availability of internet has resulted in what is dubbed as the Digital age, marked by large volumes of a variety of data created at ever increasing speeds. In this new age of technology revolution, Digital Transformation is the new way of doing business by leveraging Digital technologies such as Cloud, Big Data, Mobile computing, Social computing, and Analytics resulting in significant improvements in Operational Efficiencies and Customer Experiences. Since the way business gets done has an Environmental, Social and Economic footprint, Digital Transformation impacts the Sustainability aspects of doing business. This is important for organizations since consumers, share-holders and other stakeholders have visibility to business impacts on Brand Value, Revenues and Company Valuation. The digital platform would integrate the urban and the rural worlds together under a common sheath of Sustainable development keeping in close touch with all social aspect and along with this social upliftment, there would be tremendous economic growth leading to a prosperous nation. Digitization of business and delivery of services lead to ease of access, transparency and reduction in transaction cost of e-governance. This is creating digital imperatives for transformation, impacting an organization’s Supply and Demand, and Operations. Digital India initiative aims at reaching the unreached through broadband highway, universal access to mobile connectivity, public internet access programme.

It is widely recognized that digitalization has unleashed a new wave of innovation that will have profound implications for humanity, changing relationships between citizens, Governments and businesses, and that will alter the structure of societies and economies. Growth, productivity and human development will increasingly be determined by the level of integration into the digital economy. Indeed, digitalization and frontier technologies not only create new opportunities for doing business, they also bring about a number of challenges and risks.

Digital technologies and platforms can reduce transaction costs for businesses and facilitate access to new customers, both in domestic and foreign markets. E-commerce can facilitate the scaling-up of such enterprises by providing financing opportunities and the means to build verifiable online transaction records that may help to attract new customers and business partners. For example, suppliers that rely more on e-commerce may be able to cut delivery costs, especially for digitally provided content. Further, digitalization can enhance the productivity of enterprises and offer new opportunities for entrepreneurship, innovation and job creation. It can help businesses, in particular micro-, small and medium-sized enterprises, to overcome barriers to expansion and enable them to engage in peer-to-peer collaboration in innovation and use alternative funding mechanisms such as crowd funding. In addition, new cloud-based solutions can reduce the need for investing in information technology equipment and corresponding in-house expertise. Artificial intelligence, big data, cloud computing, machine learning and algorithmic decision-making are all powerful instruments of change. Digitalization also plays a central role in extending the reach and impact of frontier technologies, many of which show great potential to enable the achievement of the Sustainable Development Goals.

Underlying technologies and processes have far-reaching implications for the organization of work, production and trade, extending existing organizational and geographic fragmentation into knowledge-intensive business functions and job categories. Companies that engage in digitalization can make their organizations more efficient, reach and serve customers more easily, speed up product development, and invent products and services at lower cost, without the need for extensive system-level expertise or in-house information technologies skills. Productivity growth i.e Manufacturing, services, transportation and even agriculture are turning to an expanding variety of digital technologies..

It also takes time for technologies to diffuse and for benefits to become visible and measurable. There are substantive statistical gaps and other challenges in measuring the impact of digitalization on productivity. Only a limited number of enterprises have fully embraced digitalization so far, with micro-, small and medium-sized enterprises in developing countries the farthest behind.

Expanding global trade i.e Digital platforms are creating new opportunities for companies to engage in trade, including for micro-, small and medium-sized enterprises. Changing employment and skills increases digitalization and the use of frontier technologies is expected to have disruptive effects on jobs and skills. It will lead to the creation of some new jobs and occupations in various sectors, especially in relation to the production of new goods and services or the modification of existing products. At the same time, there is a risk that many tasks will become automated and/or outsourced, making other jobs obsolete and substantially changing the nature of work. Finally, digitalization may change the conditions of work. For example, online labour platforms matching tasks across the whole skills spectrum are expected to transform labour markets by favoring more flexible contracts and increasing competition among workers, possibly resulting in reduced incomes and social protection.

New skills are needed to take full advantage of the opportunities arising from new technologies – from sophisticated data analysis and algorithm development skills, computer skills required to adapt systems and develop services for local markets, through those required within businesses and other organizations, to the digital and media literacy required by individuals to find information, assess its quality and value, and use online resources.

LITERATURE REVIEW

A number of research papers and articles provide a detailed insight about the role of digital India and the implications of this project in India. Rani (2016) concluded that the digital India project provides a huge opportunity to use the latest technology to redefine India the paradigms of service industry. It also pointed out that many projects may require some transformational process, reengineering, refinements to achieve the desired service level objectives.

Midha(2016) concluded that digital India is a great plan to develop India for knowledge future but its improper implementation due to inaccessibility and inflexibility to requisite can lead to its failure. Though digital India programme is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we Indians should work together to shape the knowledge economy Gupta and Arora (2015) studied the impact of digital India project on India's rural sector. The study found that many schemes have been launched in digital India to boost agriculture sector and entrepreneurship development in rural areas. Digital India programme has also set the stage for empowerment of rural Indian women.

Ankita P. (2011) The author has discussed about the E commerce activities in India, the competitive and anti competitive factors affecting the E commerce future.the author has focused on the credit card activities which is affecting the online shopping.

Nappinai N. S. (2010) "An Empirical Study" is highlighted with some important provision of the criminal laws in India relating to data protection, privacy, encryption and other cyber crime activities and also provision to not just the present but also for future trends in Cyber Crime.

Rohas N. (2008) In this book "e commerce legal issues" author has explained about e commerce activities, legal and technical issues of digital signatures. Also in depth knowledge about e certificates, electronics contracts and step by step method to digitally sign a word document and email is provided, author has also focused on how to obtain digital signature certificates and discussed many case studies.

Rohas N. (2008) In the book "fundamentals of cyber law" author has discussed about basics terms and definition related to computers and cyber space. There is an overview of IP addresses, Blogs, Domain name spaces (DNS) and working of email system. The book provides complete insight into cyber law and its basics Satish R. and Henry D. (2012) Authors in the article "A study on implementation challenges of E commerce in India" have discussed about the Global and Indian E-Commerce sales statistics to show the reasons why E Commerce is not accepted in India. The study also shows various quality issues of the websites which are neglected and have suggested proposing Total Quality Management (TQM) implementation as the best solution to solve the problem. There is detailed explanation about the IT Act 2000, Indian Penal Code (IPL) and Indian Cyber Law.

Shanju D. (2012) In this paper titled "A study on Implementation Challenges of E-Commerce in India" author has explained in detail about the E commerce activities, Importance of M commerce and its emergence. Major area of focus is challenges faced by e commerce industry in India, Role of government in setting up ecommerce industry and triggers and barriers for ecommerce industry in Indian Market.

V. Rajaraman (2000) In this article the author has explained what is e commerce, different e commerce activities, there advantages and disadvantages. There is in detail discussion with examples about B2B, B2C and C2C transactions.

Waghmare G.T. (2012) Prof. Waghmare in his Research Paper "A Business Review of Ecommerce in India" has very good and great potential in E-commerce industry as it has having low cost and also there is an availability of internet. But the points like low security and maintenance etc are important for awareness among the people

Dr. Khandelwal A. (2011) The author discusses E commerce management practices in India it is felt that there is need to increase trust by providing additional security. In this paper author have mentioned new approach in website security, systems build using white list paradigm may create secure websites.

There should little customers fear and risk associated with sensitive and vital information. There by increasing the creditability of online shopping in market.

Cassim F. (2009) In the article “Formulating specialized legislation to address the growing spectre of cyber crime: There should be continuous research and training of IT security personnel, financial service sector personnel, police officers, prosecutors and the judiciary to keep them abreast of the evolving technology. This study reveals that the inability of national laws to address the challenges posed by cybercrime has led to the introduction of specialized cyber legislation. It is advocated that countries should introduce new cyber laws to respond to the rapid change in technology and cyber crimes..

Shrikant A. et al. (2010) This paper deals with how to handle major challenges we refer ITA 2003 that was built with the motivation to facilitate e commerce and hence the privacy was not the prior concern in IT act. the privacy issue in Indian perspective with respect to challenges in three different dimensions like Legal, Technical and Political domain. Authors discuss about proposed framework to deal with these challenges. In India there is no such legal framework to deal with privacy issue. It provides a solution as per present and future requirement of privacy in Indian Scenario.

Daniel J. (2002) Author has discussed **B2B** and e commerce trade activity in developing country. Also to promote ‘e-readiness’ for the maximise benefits for developing country. Author focuses on the positioning of firms at global value chains to deal with operational challenges.

Nisha C. and Sangeeta G. (2012) Authors have explored Indian E Commerce Industries and its Opportunities in upcoming years. It provides opportunities for retailers, wholesalers, producers and for individuals.to have a positive outlook of e commerce and its future growth.

Shilpan V. (2012) In this paper “E-banking and E-Commerce in India and USA” author discusses about the future of E- Banking in developing Countries appears bright but consumers and merchants face many barriers like reliable telecommunication infrastructure, power supplies, less access to online payment mechanism.

Talwant S. (2004) A Addl. Distt. & Sessions Judge has taken up a crucial and rare topic of discussion that is the importance of harmony between the law enforcement agencies and computer professionals. According to author both the parts are equally important for enabling strong cyber security in country and make internet a safe place for its users. Author has also made a comparative study on law definition in US and India.

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Sanjay P. (2010) Author discuss recent amendments towards combating cyber crime has also made an attempt to analyse the current trends in cyber crime then the analyses is made on the needs of legislation and current provisions of IT Act.

Rohas N.(2007) Author discusses various rules, regulations and orders that have been passed over the last 7 years. And also 7 interesting case laws that author feels highlight the development of cyber legal jurisprudence in India over the last 7 years.

Meghna B.(2010) Author discusses Growth of E- Commerce Industry and Factors required its development, then the discussion moves to the technical part like protocols used for E commerce activity, Ecommerce Providers and Software Packages.

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Premkumar B. and Kalpana K. (2012) According to authors use of E business tools for data analysis, prediction and decision making has become the latest trend also evaluate the various E commerce platforms.

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Mani A. (2012) A lecturer discusses about the cyber crime activities and there causes, major focus of author is to cover the topic how cyber criminal activities are affecting the growth and development of e commerce industry. Building trust among all the parties in online market is very crucial. Author in his paper also talks about the various tools that are used to deal the cyber crime activity and he concludes the paper by saying that cyber security play important role for both consumers and business.

Cezar V. (2012) This paper explores the notion of cyber attack as a concept for understanding modern conflicts. Author elaborates a conceptual theoretical framework, observing that when it comes to cyber

attacks, cyber war and cyber defence there are no internationally accepted definitions on the subject. Author suggests that particular attention should be given to the development of a procedure for clearly discriminating between events(cyber attacks, cyber war and cyber crime or cyber terrorism) and to maintain a procedure for the conduct of nation's legitimate military/ civil cyber response operations.

OBJECTIVE OF STUDY

1. To explore the various areas of Digitization.
2. To identify the opportunities and challenges of cyber security in Digital era
3. To identify the challenges and issues which act as a barrier to cyber security in Digitalization.

RESEARCH METHODOLOGY

This research study utilizes secondary data. The secondary data utilizes already available information both published as well as unpublished. The secondary data will be collected from journals and magazines, newspapers, articles, internet websites and archives.

AIM OF DIGITALIZATION

- 1. Broadband Highway:** It include Broadband for all Rural and for Urban areas.
- 2. Mobile Connectivity :** It focus on network penetration and filling the gaps in the connectivity for the rural areas.
- 3.Public Internet Access programme:** The two sub components includes for delivery of Government and business services.
- 4. E-Governance:** Reforming Government through technology.
- 5. Electronic Delivery of services:** It include
 - 5.1. Integrated services and not individual services.
 - 5.2. ICT infrastructure on Demand
 - 5.3. Mobile first
 - 5.4. Fast tracking approvals.
 - 5.5. Language localization
- 6. Information for all:** Information and documents can easy to access to the people.
- 7. Electronics Manufacturing:** The coordination is required at different levels,
 - 7.1. Taxation, incentives.
 - 7.2. Focus on Mobiles, Smart Cards and setup boxes.
 - 7.3. Incubators, Clusters, CCTV.
 - 7.4. Skill development
- 8. IT for Jobs:** It focus on providing training to the youth in skills required for availing employment opportunities in the It sector.
- 9. Early Harvest program:**
 - 9.1. It platform for messages.
 - 9.2. Biometric attendance
 - 9.3. Wi-Fi in All Universities
 - 9.4. Secure Email within Government.
 - 9.5. Public Wi-Fi hotspots.
 - 9.6. SMS based weathering information, disaster alerts, Speedometer, Frequency measurement

It has not just made an impact on reducing paperwork and overall documentation; the system has become a lot more transparent and plain-sailing. Well, one of the most significant advantages of this project is that it has created a lot of business and job opportunities across all the sectors in the country.

Training & Education – A lot of projects are launched by the government to empower people, as the programme is aimed at ameliorating urban-rural connect. As per the sources, the government is looking for qualified trainers to train approximately 3 lakh service delivery agents. These agents can further run a business related to IT services. In rural areas, training programmes are required for millennials to become job-fit e for IT and telecom industries. And the figures are going up to one crore.

Healthcare – eHealth is an essential project of the Digital India initiative to tackle the deficit of more than 1.5 million doctors (according to the Digital India Foundation Head, Arvind Gupta). Under this project, people can avail online services like getting diagnostic reports, checking the status of blood banks, making payments for health care and much more. Many digital platforms are launched for creating online access to doctors, pharmacies, information on health problems, knowledge about insurance, etc.

Agriculture

In Agriculture digital platforms are connecting buyer and seller directly, eliminating the middleman. We hope this would encourage more people, especially in developing countries, to work in agriculture and thereby contribute to economic progress.

New contact channels with customers

It helps to communicate with customers. Via Email, apps, social networks etc with the help of digital presence.

Digitalization of banking services

It open up avenues for other sectors to leverage digital solutions. Banking has always led from the front in terms of providing new services using technology. Integrating banking and telecom can be extended to this fields.

It improves working conditions

There is an improvement in working conditions such as flexible working hours or teleworking, need the support of digitalization in order to be able to carry them out.

The end of crime, benefits of digitization

In coming era, digitalization will bring significant reduction in many crimes. On top of the traditional digitalization benefits, there will be significant savings from the reduction in crime, e.g. fewer cases at the courts, fewer expenses to lawyers, reduced insurance cost, more efficient public administration without corruption. And the police will be less occupied with traditional crimes. Digitalization will be a most powerful tool for crime-torn countries that aspire to build a more pleasant, peaceful and prosperous society free of many of the types of crime prevalent today.

Digitalization determines the future of the economy and society

What impact will digitalization have for the future? Digital change is a radical change in the economy and society that has occurs over a period of almost 50 years. It began in the early 1990s with the spread of the Internet and the emergence of services such as AOL and Compuserve. Digitalization was promoted by the increase in Internet connections at the end of the 1990s and the first hype around the turn of the millennium. It was further sparked by the high-speed Internet and mobile data access. In the future, an even faster mobile Internet (5G) combined with technologies of the Internet of Things and artificial intelligence will make applications such as the increased use of robotics possible. Digitalization will drastically change the future of the economy. Examples of the impact of digitalization on the future of different industries:

Digitalization changes economy and society

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- Digitalization will drastically change the future of the automotive industry through new mobility concepts. From autonomous driving to existing sharing models and completely new concepts such as the rental of electric scooters, digitalization will allow new models of usage in the future.
- Digitalization influences the future of the financial industry. Technologies such as the blockchain enable new forms of corporate financing and participation in addition to the applications frequently discussed in the press such as the virtual currency Bitcoin. Today, for example, company investments are made possible via so-called ICOs (Initial Coin Offerings) or STOs (Security Token Offerings). These forms are only possible through digital technologies, which will continue to spread in the future.
- Digitalization is changing the future of traditional professions. In the future, physicians will be supported more and more by applications of e-health, especially in diagnostics. Services in the legal sector (today primarily provided by lawyers) will be supplemented or replaced by digital services from the Legal Tech sector.

In the future, digitalization will create new challenges for schools and education, training and further education, public administration and associations. It is the responsibility of industry, associations and politics to prepare society for the changes that can be expected in the future from digitalization.

Challenges of the digital age

Number of challenges for the investigating cyber crimes has to be faced these include:

1. The priorities of the investigation and the cost
2. Having the powers.
3. Retaining and preserving evidence.
4. Proving the identity.
5. Improving training at all the levels.
6. Developing the expert staff.
7. Encryption.
8. To know where to look for the evidence.
9. Coordination between the investigative activities.
10. Traceability between the communication of source and the destination on computers networks.
11. Finding out the information or the evidence in the ocean of the information.

SUGGESTIONS

Digital India campaign can't be successful on its own. Few of the suggestions are –

1. People should know how to secure their online data.
2. A massive awareness programme has to be conducted to educate and inform the citizens, especially in rural and remote areas, about the benefits and growth of internet services.
3. PPP models must be explored for sustainable development of digital infrastructure.
4. Private sector should be encouraged for development of last mile infrastructure in rural and remote areas with the favorable taxation policies ,quicker clearance of projects.
5. Maximum connectivity with minimum cyber security risks is the success of Digitilization. For this we need a strong anti cyber crime team which maintains the database and protects it every time.
6. Cyber security course at graduate level should be introduced to improve the skills in cyber security.

7. Various departments need to participate effectively with commitment and efforts. Various policies in different areas should support this goal.

CONCLUSION

The vision of digital India is grand. It is a huge step towards building a truly empowered nation. If successful, it transforms citizen access to multimedia information, content and services. However, the goal is still far away since most of the nine pillars of digital India mission are facing serious challenges in implementation. It is imperative that focused persistent attention must be given to each and every pillar so that this programme does not end up in failure. In fact, we all should be mentally prepared for the change and be ready to face the challenges in implementing this policy, only then it would be possible to make this vision a reality.

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Impact of Digital Transformation on Learning and Development

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1. INTRODUCTION: DIGITAL TRANSFORMATION

India's formal education sector has witnessed paradigm shift towards e-learning. Earlier for 80's and 90's generations learning was through formal education only and that too was not accessible for everyone. However, for Millennials with the smart phone in hand learning is not restricted. It has expanded with various dimensions of vocational courses. Internet data availability has made learning easy not only for city people but also for the people from remote parts of our country. Global companies like Udemy.com, coursera, Lynda.com, Khan academy even Indian companies like Byju's, toppr's, Simplylearn, Upgrad and many others are growing in India at a pace. Rapid change in digital technology is transforming the way that the knowledge is imparted and absorbed today. The internet and Big data are now playing a crucial role in the digital learning and development ecosystem. Massive Open Online Courses or MOOCs are courses available online that integrate learning materials of different mediums like videos, texts, infographics and so on into a package. Even corporates are switching to MOOCs as convenient and more flexible way of internal training and hiring.

DIGITAL TRANSFORMATION – DEFINITION

Digital transformation is the process of using digital technologies to create new — or modify existing — business processes, culture, and customer experiences to meet changing business and market requirements. This reimagining of business in the digital age is digital transformation.

Digital transformation is not just about disruption or technology. It's about value, people, optimization and adaptation through an intelligent and people-oriented use of technologies.

2. LITERATURE REVIEW

In the Year 2011 Manoj Kumar studied the impact of smart phone evolution in education technology and its application in technical and professional studies. They concluded that growing demand of smart phone and availability of high-speed internet connectivity is going to change the higher education delivery system in India. As number of mobile subscribers in India are increasing at a great pace use of smart phones would be an upcoming step to engage and motivate students in learning.

Suprabha, K. and Subramonian G. studied on blended learning approach and its impact on student's learning experiences in the year 2015. Study was based on secondary data and content analysis. Researcher's concluded that blended learning is the most natural and logical solution to the traditional learning and development. Blended learning approach can maximize total impact on student's overall learning experiences.

In the Year 2016, Nivedita Jha and Veena Shenoy studied nature of the modern education process in India. According to the researcher's diversity in purchasing power and affordability of the Indians had a big and direct impact on the Indian education system. Researcher's concluded that in India if we want to make online education successful, we need to transform the entire education sector and the mind-set of the employers.

Shilpa J. Boricha and Trushna A. Gohil studied on e-learning initiatives in India in the year 2019. Researcher's studied on various e-learning projects like Massive Open Online Course (MOOC), NPTEL, mooKIT, Spoken Tutorial, Virtual Laboratory, IITBX, and SWAYAM and their impact on learning. They both concluded that though platforms like MOCC are beneficial but still we cannot claim it as a replacement to traditional education system. India still needs more platforms like MOCC to widespread digital transformation of learning.

V. B. Hans and S. J. Crasta studied in the year 2019 on impact of digitalization on learning and doing in the 21st century. Study is descriptive in nature and data collected from various journals, magazines and internet. Researcher's concluded that digitalization in education making students lazier. They further

suggested that it is important to bring blend approach i.e. technological and human touch approach in order to make e-learning a life-long learning.

In the year 2019 Prasanna Kumar Muduli, Manu, Viral Asjola, Panna Chaudhary & Shashikumara studied on various e-learning platforms and how they are transforming higher education through distance learning. They observed that e-learning platforms are motivating the learners for distance learning. Further they concluded that e-learning platforms are helping higher educational institutes to improve their teaching and learning activities. It also improves teacher-student relationship.

3. OBJECTIVES OF THE STUDY

1. To understand the process of digital transformation.
2. To examine the Impact of digital transformation on learning and development
3. To understand the future challenges of digital transformation in learning and development

4. RESEARCH METHODOLOGY

To achieve the objectives of the study, the research has been structured in systematic approach i.e. quantitative and qualitative methodology approach. Since the nature of the topic is theoretical and descriptive the type of research suitable is descriptive research only. Descriptive research is the exploration of the existing certain data means analysis of past data.

DATA COLLECTION

It involves collection of secondary data information through different books, research journals and articles. Researcher will also refer internet for more secondary data collection purpose. These may be available in written, typed or in electronic forms. A variety of secondary information sources is available to the researcher gathering data on an industry, potential product applications and the market place.

5. FINDINGS AND OBSERVATIONS

PROCESS OF DIGITAL TRANSFORMATION IN INDIA

Technology is considered as a booster of economic growth. It has impacted lot of positive change in almost every business. The same is about to happen in education sector too. We are going to witness the beginning of the Fourth Industrial Revolution which is digitally transforming the way we work, live and learn. Demonetization is another reason of bringing digital transformation in India at a pace. Digital transformation is bringing Inclusion like Financial Inclusion which gives rise to paperless banking and cashless transactions, it can be like Social/Cultural Inclusion which gives rise to use of various social networking sites like Facebook, WhatsApp and Instagram etc. It can also be Knowledge Inclusion through e-learning as people are getting more knowledge from online than traditional classrooms.

IMPACT OF DIGITAL TRANSFORMATION ON LEARNING AND DEVELOPMENT -

- Re-invention of L & D -
Digital transformation has reinvented learning and development completely. It has made the learning more efficient.
- Learner Centric-
Digital transformation will be a key driver to make education more learner centric. It will bring new change in Learning and development function through more focus on learner and it also helpful in increasing learner engagement.
- High Learning Retention-
Since it gives blended learning approach result into higher level of knowledge and learning retention. Learners can interact which encourage them in participative learning.
- Talent Specific-
Due to Digital transformation learning has become more talent specific. Online modules are completely specific for every talent group. It will reinvent learning and development process.

- Time Saving-

As it is available 24 x 7 it saves learners time to travel to attend lectures or sessions. Learner can arrange time for learning as per the wish.

- Money Saving -

As compared to traditional learning courses e-learning courses are cheaper. Some courses are even available free of cost.

- Flexible Learning-

Digital transformation can give freedom to learn at own convenience at any time and any place for students or employees.

- Real-time Tracking –

With the advent of Learning Management System (LMS) Real-time tracking of learner progress becomes easy. Learners can also get their performance report at ease.

- Reduction of Carbon Footprint-

By digital transformation assessment and test can be taken online which results into no need of paper-based assessment. With eLearning, there is no need to cut trees for obtaining paper. Thus, eLearning is a highly eco-friendly way of learning.

CHALLENGES OF DIGITAL TRANSFORMATION IN LEARNING AND DEVELOPMENT-

- Less Motivation-

Learners don't feel motivated enough on e-learning as compared to traditional learning. Teachers act as a mentor for students.

- Unable to Dedicate Time-

Many learners being working professionals not able to dedicate enough time to online courses. Due to lack of time many learners refrain from completing the course which they have enrolled.

- Emotional Disconnect-

For many people it is very difficult to learn alone. In e-learning there are high chances a learner might end up feeling lonely and emotional disconnect.

- Lack of Trust-

In the absence of human figure learners fail to develop a connect with the e-learning course. They might also end up doubting the authenticity of course content.

- Difficulty in Transforming Dull and Dry Subject Interesting-

It becomes very challenging to convert dull and dry subject content into interesting and engaging for subject matter experts.

- High -Need of Up-To-Date Knowledge-

Every year new technology, new tool or system comes which make you to keep up-to-date about all the happenings about e-learning world.

- Different Content for Different Generation-

Learning content is not a common fit-for-all generations. It becomes challenging to create a common e-learning content for all since each generation has unique learning needs.

FUTURE OF DIGITAL TRANSFORMATION IN LEARNING AND DEVELOPMENT WITHIN INDIA-

India is witnessing progressive but constructive digital transformation. Digital transformation acts as a great facilitator for teachers and students. Country's Digital India initiative is playing a vital role in transforming country's educational landscape. The Government of India (GoI) is a strong supporter of e-learning and the Department of Electronics and Information Technology (DeitY) has been actively developing tools and technologies to promote digital transformation in learning and development. Digital transformation of learning provides easy access to both teachers and students at very low costs. Various Innovations like artificial intelligence (AI), Big Data analytics, Data Science and Machine

Learning are creating new ways of enhancing the learning process. Another big change in learning is various android and iOS app for learners.

The rapid increase in Internet connectivity and availability in the last few years is main reason for the growth of e-learning in India. Digital transformation has increased use of mobile devices for learning and it is removing the limitation of time and place for learning. India is also the world's third largest smartphone market with a number of users The number of internet users is expected to reach 730 million by 2020. According to a latest report, the Indian e-learning market size was USD247 million and It is expected to reach USD1.96 billion and the current user base will grow at 44 percent CAGR to 9.6 million users by 2021.As per the statistics India's e-learning market is the second largest in the world after the US and it is forecasted to grow by 15.64 percent and exceed \$48 billion by 2020.

FOLLOWING ARE THE FUTURE TRENDS OF E-LEARNING IN INDIA-

- Hybrid Model-

There will be need of online and offline education model. Virtual classrooms and offline pedagogy will be aided by digital transformation.

- Offbeat Subjects-

Many unexpected subjects such as culinary management, forensic science, cyber law, etc. will come in e-learning curriculum.

- Gamification-

In order to make learning more engaging and interesting digital courses will introduce many new features like badges, leaderboards

- Peer-to-Peer Learning-

e-learning will develop peer-to-peer model to bring collaborative learning amongst students.

- Increase in Investor Interest-

Since e-learning sector is growing day by day it will continue to increase more interest among the investors for funding.

CONCLUSION

In underdeveloped and Developing countries like India where technical education is expensive, opportunities are few and disparity in economy digital transformation of learning and development is much needed. The impact of digital transformation in education is opening new gateways of learning for students. Educational providers must play vital role to bring new possibilities of this digital transformation. For the Millennials of the country today, with the smart phone in hand, things have changed and learning now is not restricted to formal education but has changed into various dimensions of vocational courses.

In future e-learning will surely a threat to traditional learning but it will never replace it completely because schools or colleges offer much more than only academic knowledge at their campuses. However private coaching classes or tuitions need to adopt digital transformation in their teaching offerings. We can conclude that e-learning has a promising future and it will become the next sunrise industry. Many people are making predictions that e-learning will replace traditional learning, but it won't. It will be a great to blend both e-learning and traditional learning together to take learning and development to the next level with the help of digital transformation.

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A Study of Techniques for Sales Promotions that Stimulate Up – Selling in Retail Market

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ABSTRACT

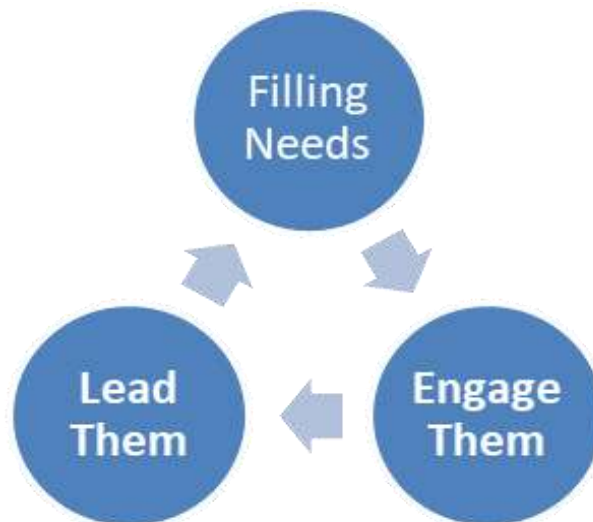
Up-selling can be one of the best and fastest ways to boost retailer's profits, no matter what industry are in. It's particularly effective in retail, considering there's always a good chance of getting maximum customers to spend more money than they initially planned on spending. There are two main ways to up-sell in retail: one is getting customers to buy more products and the other getting them to buy more expensive products. It's fine art in and of itself, really. The results indicate that sales promotional programmes have become the principal tool of retailing in order to acquire new customers and retain loyal customers. We also found during the study that loyal customers are attracted to the store during the promotional offers while new shoppers are price sensitive and are attracted by the volume discounts.

Keywords: Up-selling, Techniques, Retailers, Sales Promotions

INTRODUCTION

Retail strategy is a holistic marketing plan for a product or a service to reach the targeted consumers. This retailing is everything from what channels a product or service will be available in to what should be the price or sales incentive to be given and how to display the product in the shelf. The sales promotion mix is a calculation that determines the proportion of each product and relative to total sales. The sales mix is significant because some products or services may be more profitable than others, and if a company's sales mix changes, its profits also change. Managing sales mix is a tool to maximize company's profit

PROCESS ADOPTED BY RETAILERS FOR UP –SELLING IN STORES:



Filling Needs: One of the best tools is to use when up-selling trying to determine what the needs of our customer are and then going above and beyond to meet them. The most important aspect is establishing good rapport as soon as customers enter your retail store. **Engage Them:** Make the customers feel comfortable and allow them to really open up for sell and explain to exactly what it is they are looking to purchase. **Lead Them:** Continue the conversation, but start asking questions and making suggestions that will start leading the customer in the direction retailers would like them to head in. The more we know, the better we will be able to lead the customers.

RETAIL INDUSTRY DIVIDED BY TYPES OF PRODUCTS OR SERVICES



Discounted Stores: They are tending to offer a wide array of products and services, but they compete mainly on price offers extensive variety of merchandise at affordable and cut-rate prices. Normally retailers sell less fashion-oriented brands. **Departmental Stores:** A large store stocking many varieties of goods in different department's. **Mom And pop:** It is a retail outlet that is owned and operated by individuals. The range of products is very selective and few in numbers. These stores are seen in local community often are family-run businesses. They are popularly known as kirayna Stores in India. **Specialty Stores** A typical speciality store gives attention and provides high level of service to the customers. However, branded stores come under this format. **General Sores:** It is a rural store that supplies the main needs for the local community. It is essentially found in residential areas. They provide limited amount of merchandise at more than average prices. **Super markets:** it is a self service store consisting mainly of grocery and limited products non food items. **Malls:** It has a range of retail shops at a single outlet. They endow with products, food and entertainment under a roof. Example: R city mall and Garuda mall in Bangalore, Express Avenue in Chennai.

BEST TECHNIQUES TO GENERATE SALES LEADS IN RETAIL BUSINESS

1. Identify Target Audience.
2. Pick Up Promotional Methods Wisely.
3. Create a Sales Funnel.
4. Use an Email Newsletter to Build Relationships.
5. Leverage Social Media to Connect and Engage Customers.

Analysts and retailers use a company's sales mix to determine the company's prospects for overall growth and profitability. If profits are flat or declining, the retailers can de-emphasize or even stop selling a low-profit product and focus on increasing sales of a high-profit products or services.

LITERATURE REVIEW

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M Laroche, F Pons, N Zgolli (2003): This model is based on two different promotional tools. Coupons and next tool is to trigger different promotional responses. Moreover, the probable influences on this pattern of consumers' traits are included. Variables such variety seeking, market situation, brand loyalty and store loyalty that were previously introduced in research on coupon promotions are posited to have specific influences on the components of the pattern for targeted customers.

Shu-Ling, Yung-Cheng Shen, Chia -Hsien Chu (2009):

Study examines how sales promotion strategy might affect reminder impulse buying, with product appeal and consumer character as moderating factors. Both sales promotion strategy and its interaction effects with product appeal are found to have significant influences on reminder impulse buying. Specifically, furthermore, both a utilitarian product appeal with a price discount promotion and product appeal with a premium promotion can support greater reminder impulse buying.

OBJECTIVES

- To study the perception of retailer's towards sales promotion techniques.
- To analyses the different schemes and offers to inform customers.
- To evaluate the current marketing trends adopted by retailers.

RESEARCH METHODOLOGY

The study is based on primary and secondary data collection.

Primary Data: The primary data used in this research is questionnaire.

Secondary data: the secondary data has been collected from various journals, brochures, books, media, websites and articles.

Research type: The exploratory and Analytical type of research is used.

Determines Sample design :

Type of universe: retailers

Sampling unit: Retailers of Thane district.

Sampling techniques: Simple random sampling.

Sample size: 100 Retailers

Statistical tool: SPSS

DATA INTERPRETATION AND ANALYSIS

Analysts and retailers use a company's sales mix to determine the company's prospects for overall growth and profitability of stores at a particular period. If profits are flat or declining, the retailers can de-emphasize or even stop selling a low-profit product and focus on increasing sales of a high-profit products or services to create satisfied customers.

EFFECTIVE WAYS TO INFORM CUSTOMERS ABOUT A NEW OFFERING

- **Print media:** It can transmit information via physical objects, such as books, comics, magazines, newspapers, or pamphlets. Event organizing and public speaking can also be considered forms of mass media. Modern media comes in many different formats, including television, movies, video games, music, cell phones, various kinds of software, and the Internet
- **Outdoor Advertising:** Billboard **advertising.** Of all the forms of outdoor advertising, billboards are the most popular. This type of out-of-home advertising is used around the world. Outdoor advertising is also displayed on mass transit. Ads that are placed on or inside of public buses, taxis and trains are all examples of out-of-home advertising displayed on mass transit.
- **Social media:** Whether retailers are interested in using social media platforms or want to use printed marketing material to inform customers about a new offering by using the important tools. **Mouth publicity:** It is an oral recommendation by a delighted customer to the prospective customers of a good or service. Considered to be the most effective form of promotion, it is also called word of mouth advertising. Mouth to mouth is a free form of advertisement or promotion data collected by the CRM software.
- **Internet:** The easiest and most effective way to inform our customers about a new offering is to use various social media channels. Start a new teaser campaign about new offering on Face book or other powerful social media platforms way before the actual launch of product or service.

- **Distribution of pamphlets:** A pamphlet is a small unbound that is used advertising or provide information on a single subject. It is used for informing rather than direct selling.

Table No 1: How to inform customers about different schemes in shops:

		Responses		Percent of Cases
		N	Percent	
Inform customers	Print media	14%	14%	14%
	Outdoor advertising	22%	22%	22%
	Social media	26%	26%	26%
	Mouth to mouth publicity	12%	12%	12%
	Internet	19%	19%	19%
	Distribution of pamphlets	7%	7%	7%
Source :field survey		100	100.0%	100%

From studies it is observed that most of the retailers are choosing social media now days to inform customers and then outdoor advertising tool used. Whether we are in the business of selling goods or we offer exclusive services to our customers, we have to spread the word about our products or services in order to get people to buy them. The client’s base is the lifeblood of our company and we have to keep our existing clients coming back to us for more.

EXCLUSIVE PROMOTIONAL OFFERS

- **Free samples:** A free sample is a portion of food or other product given to consumers in shopping malls, supermarkets, retail stores, or through other channels. Sometimes samples of non-perishable items are included in direct marketing.
- **Gift vouchers:** It enables to reach consumers that typically would not reach, representing a means of stimulating additional purchases. Gift vouchers are highly targeted and the receiver is certainly motivated to use them,
- **Buy One Get One:** Sales Events: One of the biggest marketing ideas in recent years has been the concept of Buy One Get One free. And since BOGO is a common offer for customers now, the psychology of the deal is often times the same, meaning BOGO free and BOGO 50% off still make a customer feel like they are getting a great deal.
- **Cents-off coupon:** Coupon that entitles the bearer to a discount on an item at the time of purchase. The coupon is given by the buyer to the retailer, who submits it to the manufacturer, wholesaler, or clearinghouse for reimbursement.
- **Lucky draw:** Using a prize in a giveaway, contest or sweepstakes motivates people to participate. This drives many social media marketing efforts, including crowd funding. In which those who contribute receive something in return besides the product to which they’ve contributed.
- **Exchange offers:** An exchange process is simply when an individual or an organisation decides to satisfy a need or want by offering some money or goods or services in exchange. It's that simple; enter into exchange relationships all the time.
- **Home delivery:** Home Delivery is the latest trend in mega online retailers to improve their reach to Customers. Often seen as a drawback for online retailers, delivery times are a critical marketing area of opportunity.
- **Credit Facility:** Retail credit facilities will loan to the consumer, who will then pay it back with interest in monthly instalments over several years. Both types of cards offer numerous rewards that can help to attract customers, build their patronage and loyalty, and also be used for marketing retail promotions.

Table No 2: Services and schemes provided by the shops:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
gifts	15	1	2	1.14	.353
samples	17	1	2	1.23	.430
Buy 1 get 1 free	08	1	2	1.14	.354
%offer	12	1	2	1.31	.467
Lucky draw	09	1	2	1.05	.216
warranty	07	1	2	1.02	.156
Credit facility	32	1	5	3.68	.971

Source: field surveys

The best way to spread the word about our new offering is to arrange a promotional event in the local community. At Forbes, they suggest that offering freebies, handsome discounts, and free coupons to the participants can help to engage better with our customers about the new offers. People are usually afraid of trying new products especially if they have to spend money out of their pocket. However, they won't miss a chance if it is offered for free. Offering free promotional products is an effective way to gain the attention of our customers that might not otherwise be interested in purchasing it and profit margins. From above survey it is found that credit facility plays more important followed by free samplings.

CONCLUSION

The discussions in the study reveal that point-of-sales promotions significantly stimulate the buying behaviour among customers towards compulsive buying that is driven by the factors credit facility. It is found that delighted customers are attracted to the store brands during the promotional offers, while new shoppers are price sensitive. It has also been observed in the study that customers develop a higher preference for store brands, enhanced use value and repeat-buying behaviour through a hands-on experience of the product in particular season. Up-selling is all about turning an already good situation into an even better. Up-selling is about establish a relationship, being patient, providing customers with useful and meaningful information, and value added services trying to make a deal that is going to be beneficial for the both .However, with outdoor advertising, there is no way to gauge whether or not an ad is working for targeting audience. That's because metrics can't be connected to these forms of marketing to measure their reach.

SUGGESTIONS

Arrange Retention-focused strategy mostly online retailers in India are investing a lot on customer acquisition. As retailers think more traffic equals more sales. They invest a lot on social media marketing to grab more eyeballs and spend huge bucks on PPC ads to establish their brand in search results. But when it comes to retention, they forget to pay any attention. As an e-commerce marketer, if it is not focusing on retention, it is only doing half our job and can expect only half the results.

The existing customers are the real assets of the business. They are the ones, who have used our products and services and trust our business. It is much easier for retailers to sell new product or service to existing clients. The only thing need to do is to make them aware that have now added a new product line and the best way to go about it is to offer them an exclusive offer. So use Push Marketing techniques for some time.

On outdoor advertising, however, it may be difficult for people to recall contact information, as they may only view an ad once. Success isn't a guarantee. While out-of-home advertising offers the advantage of reaching a broader audience those retailers may not have targeted with other types of marketing, direct contact with customers maintained with suggestion by buyers.

Use updated technological tools to analysis graph of customers in particular offering seasons for particular product use of pull strategy .

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Consumer Behaviour Towards Organic Products Amongst College Going Students

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ABSTRACT

The study indicates that the behavior of consumer while buying Organic product in market based on the sample survey for college going students. Organic Product is a healthier product for health better than other product while the most of consumer not ready to buy because of high cost of product. Organic refer to the way agriculture product are grown and processed. Organic crops must be grown in safe soil. Farmers are not allowed to use synthetic pesticide. Organic food product promotes the balance of human, other living organism and Nature. Consumer nowadays is more concerned about food safety. This study is about consumer attitude towards the organic food product consumption. Organic food product is one of the biggest intimidations to growing number of global brands. Organic agriculture not only sustains the environment but also has less harmful substance and improves health, bringing benefit. Thus, it has become obligatory to study comprehensive, attitude behavior of the consumer towards the Organic food product will be main agenda of the study.

Keywords: Organic Product, Health Conscious, Consumer Satisfaction, Price.

INTRODUCTION

India is the second largest country in the world on the basis of population and the major part of the population is dependent on Agriculture. Nowadays there is a trend is seen towards the Organic food product and agriculture. Organic agriculture is not a new concept In India. At the beginning of the 19th century, Sir Albert Howard, one of the important pioneers of organic farming work in India for many years studying soil, plant, interaction and developing composting method. As it states that organic food product is good for health, better than other product which provides nutrition and protein for body which is chemical less. Organic food product includes diverse food categories ranging from fruits and vegetables, dairy product, processed food, pulse and food grain and to other product such as beverages, etc. Implementation of various standards to improve the quality of Organic product in the country is expected to propel growth in India. Organic food product market over the next five years. Organic food prevents occurring of most diseases caused by chemical fertilizers.

According to me, organic food is the healthiest thing that could ever happen to us. Consumption of organic food can ensure a healthy and long life which is very much important than any of our wants/desires.

With amazing health benefits to offer, organic food has now become the choice of many. Health benefits of organic food includes:-

1. Health Immune System
2. Healthy heart
3. Energetic Body
4. Organic food has more anti-oxidant.
5. Offers more nutrients

Possessing these benefits can certainly be an amazingly healthy journey of life.

OBJECTIVE OF THE STUDY

PRIMARY OBJECTIVE

1. To collect 100 response through sample survey.

SECONDARY OBJECTIVE

1. To understand the demand of organic food product amongst college going students.
2. To understand the consumer knowledge, perception and attitude towards the organic food product.
3. To analyze the factor influencing the consumer behavior towards the Organic food product.
4. To examine the 'consumer' willingness to pay for Organic food product.

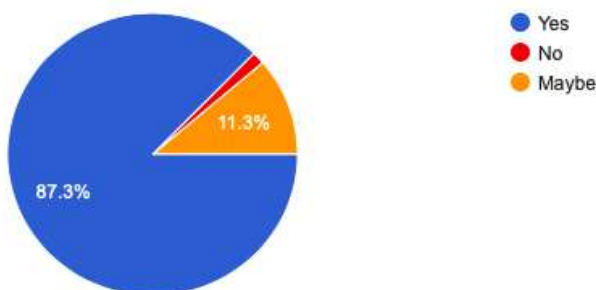
RESEARCH AND METHODOLOGY

The study based on primary data sample survey. Random sampling method was used for the study. The sample size is 100 consumers.

Questionnaire	Yes%	No%	May be%
1) Do you believe that organic product is healthier?	87.3%	11.3%	1.4%
2) Is organic product is affordable?	70.4%	29.6%	0.0%
3) If the price of organic product rise continued would you like to purchase?	70%	30%	0.0%
4)According to you, is organic product better than other product available in market?	76.8%	23.2%	0.0%
5)If the shopkeeper open a new shop of organic product near your locality, would you like to purchase it?	72.9%	27.1%	0.0%

Do you believe that organic product are healthier?

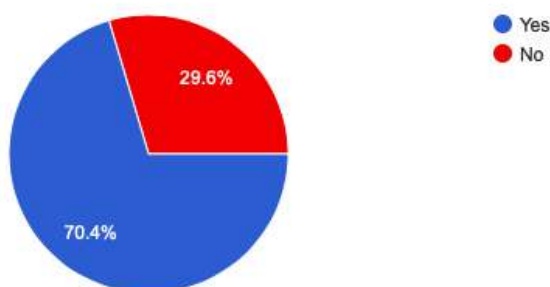
71 responses



After interpretation the pie chart 87.3% consumer believe that organic food product are healthier & 11.3% maybe, 1.4% say no

Is organic product is affordable?

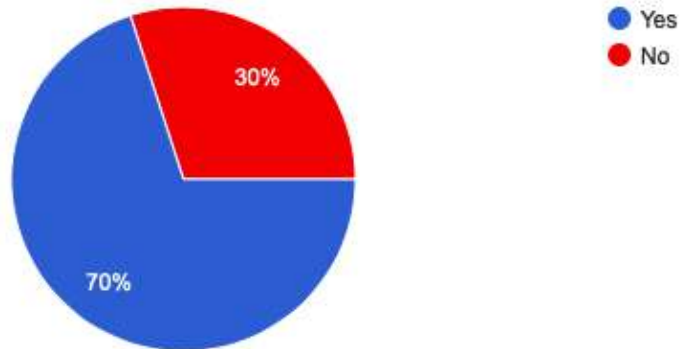
71 responses



After interpretation the pie chart 70.4% says organic food product is affordable & 29.6% says no.

If the price of organic product rise continued would you like to purchase?

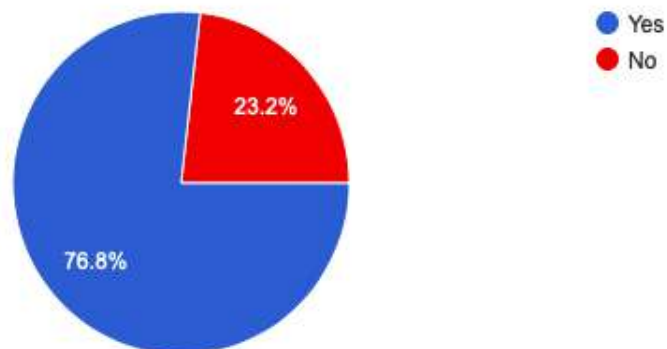
70 responses



After interpretation the pie chart 70% says yes if the price of organic food product rise they prefer to buy & 30% says no.

According to you, is organic product better than other product available in market?

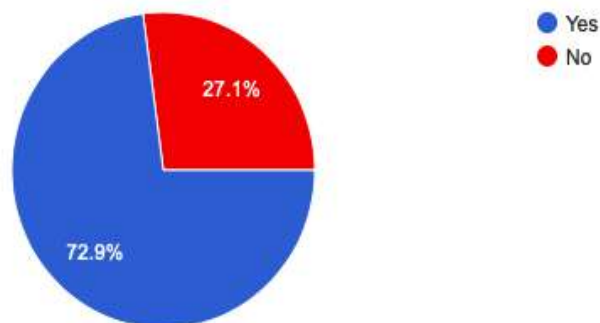
69 responses



After interpretation the pie chart 76.8% says yes organic product is better than other product & 23.2% says no.

If the shopkeeper open a new shop of organic product near your locality, would you like to purchase it?

70 responses



After interpretation the pie chart 72.9% says yes a new shop of organic product near locality they like to purchase & 27.1% says no.

CONCLUSION

1. Today people are more health conscious for the food products.
2. The study has revealed that consumer behavior plays a major role in Organic food product segment.
3. The Marketer need to be more innovative and dynamic to meet the changing purchase behavior for the Organic product.

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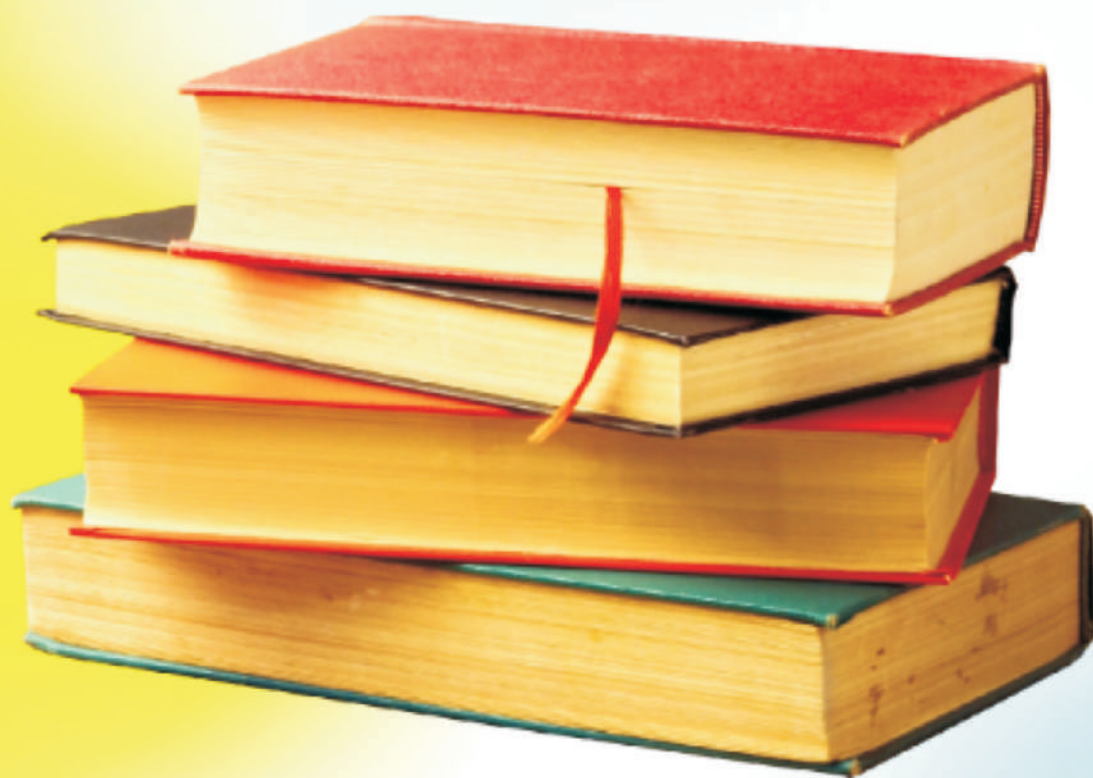
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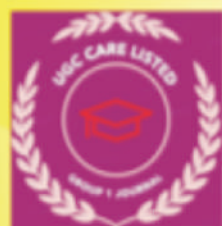


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