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A STUDY ON PERCEPTION AND SATISFACTION OF TOURISTS TOWARDS ECO-HOTELS IN TAMIL NADU

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ABSTRACT

Currently, green or environment friendly operations are significant aspects of eco-hotels that make them competitive and attract more number of tourists. Tourists are also increasingly interested in environment friendly products and services of hotels in tourism places. More than two fifth of tourists have moderate level of perception towards eco-hotels. Significant difference is there in perception of tourists towards eco-hotels among their profile. Perception of tourists towards eco-hotels has positive, significant and moderate relation with their satisfaction. To enhance perception of tourists towards eco-hotels, eco-hotels should get environment friendly certification from competent agency and they must use non conventional energy resources. Additionally, eco-hotels should follow environment friendly production practices. Besides, to increase satisfaction of tourists towards eco-hotels, eco-hotels must improve their quality of products and services and they should follow rational pricing policies for their products and services.

Keywords: Eco-Hotels, Perception, Satisfaction, Tourists

1. INTRODUCTION

In recent times, people and organizations are very much concerned with environmental pollution and degradation of natural and environmental resources (Kim and Jiang, 2015) and they are highly interested in environment friendly services and products. Since, operations of hotels are largely depending on environmental resources; consumption of hotels is most likely to put heavy pressure on sustainability of environment (Suki and Suki, 2015). Many hotels in India adopt environment friendly or green practices to provide chances for tourists to decrease their harms on environment at tourism places (Gao and Mattlia, 2014).

Currently, green or environment friendly operations are significant aspects of eco-hotels that make them competitive and attract more number of tourists. Tourists are also increasingly interested in environment friendly products and services of hotels in tourism places and they are also ready to pay extra prices for consumption of those services and products (Chan, 2013). Furthermore, environment friendly hotels are integral components of development of eco and sustainable tourism and tourist destinations. At the same time, environment friendly hotels are facing challenges to meet up expectations of tourists and make them satisfied (Robinot and Giannelloni, 2010). Therefore, it is important to study perception and satisfaction of tourists towards eco-hotels in tail Nadu.

2. REVIEW OF LITERATURE

Millar and Baloglu (2011) found that tourists were having positive perception towards green certification and lighting, meanwhile, they were having negative perception on disposal of shampoo containers and soap covers. Maghzi et al (2011) concluded that products and services, price, past experience, trust and personal requirements were positively affecting satisfaction customers towards hotels.

Kang et al (2012) revealed that guests had positive perception on eco-friendly practices of hotels and they were willing to give premium prices for them and guests with higher level of education were interested on eco-friendly practices of hotels. Ogbeide (2012) showed that consumers were having positive perception on green hotels and green practices of hotels were influencing perception of consumers.

Han and Chan (2013) indicated that tourists had positive perception on green hotels and their practices, but, they had negative perception on price, comfort level and convenience. Chong and Verma (2013) stated that green practices of hotels were significantly and positively affecting satisfaction of consumers.

Rukuiziene (2014) found that efficient utilization of socio-cultural, environmental and economic scarce resources were affecting eco-friendly tourism and it gave unique experiences and happiness to tourists through services and products of eco-hotels. Syaqirah and Faizurrahman (2014) concluded that perception of customers on physical features, image, products and services and trust were positively and significantly influencing satisfaction of customers.

Sudhagar (2015) revealed that consumers realized that eco-friendly practices were positively impacting environment and they were interested to pay extra prices for eco friendly products of hotels. Tang (2015) showed that convenience, price, package and vicinity of green hotels were affecting satisfaction of consumers.

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Verma and Chandra (2016) indicated that green certification, recyclable dust bins, energy saving lights and eco-friendly practices of hotels were affecting perception of guests on eco-hotels. Yusnita et al (2016) stated that quality of products, performance of employees, atmosphere, image and design of hotels were affecting satisfaction of customers towards green hotels.

Agarwal and Kasliwal (2017) found that consumers were possessing positive perception towards products and services of green hotels, but, they were having negative perception on ready to pay extra prices for them. Yu et al (2017) concluded that green practices of hotels were positively and significantly influencing satisfaction of guests.

Arun et al (2018) revealed that guests had positive perception on green hotels and their perception were affecting by use of eco-friendly equipments, recycling of waste, water and energy conservations and knowledge of employees on eco-friendly practices. Zainuddin et al (2018) showed that consumers had positive perception on green hotels and products and services, eco-friendly practices, clean atmosphere and connivance were influencing their perception towards eco-hotels.

3. METHODOLOGY

The present study is carried out in Tamil Nadu. Tourists are selected by using random sampling method and structured questionnaire is used to gather data from 320 tourists. Percentages are worked out to understand profile of tourists and mean and standard deviation are calculated to know perception and satisfaction of tourists towards eco-hotels. t-test and F-test are done to scrutinize difference among profile of tourists and their perception towards eco-hotels. Simple correlation analysis is carried out to study relation amongst perception of tourists towards eco-hotels and their satisfaction.

4. RESULTS AND DISCUSSION

4.1 PROFILE OF TOURISTS

The profile of tourists is given in Table-1. The results explain that 62.81 per cent of them are domestic tourists, whereas, 37.19 per cent of them are foreign tourists and 62.19 per cent of them are males, whereas, 37.81 per cent of them are females.

The results disclose that 31.56 per cent of tourists fall under age category of 31– 40 years, whereas, 11.88 per cent of them fall under age category of above 50 years and 39.06 per cent of them have graduation, whereas, 16.25 per cent of them have secondary.

The results clarify that 35.94 per cent of tourists have monthly income of Rs.35,001 – Rs.45,000, whereas, 7.19 per cent of them have monthly income of more than Rs.55,000 and 79.06 per cent of them are married, whereas, 20.94 per cent of them are unmarried.

Table-1: Profile of Tourists

Profile	Number of Tourists	Percentage
Type of Tourist		
Domestic	201	62.81
Foreign	119	37.19
Gender		
Male	199	62.19
Female	121	37.81
Age Category		
Below 20 Years	45	14.06
21 – 30 Years	89	27.81
31 – 40 Years	101	31.56
41 – 50 Years	47	14.69
Above 50 Years	38	11.88
Education		
Higher Secondary	52	16.25
Diploma	69	21.56
Graduation	125	39.06
Post Graduation	74	23.13

Monthly Income		
Less than Rs.25,000	49	15.31
Rs.25,001 – Rs.35,000	96	30.00
Rs.35,001 – Rs.45,000	115	35.94
Rs.45,001 – Rs.55,000	37	11.56
More than Rs.55,000	23	7.19
Marital Status		
Married	253	79.06
Unmarried	67	20.94

4.2. PERCEPTION OF TOURISTS TOWARDS ECO-HOTELS

The perception of tourists towards eco-hotels is given in Table-2.

Table-2: Perception of Tourists towards Eco-Hotels

Perception	Mean	Standard Deviation
Eco-hotels have green surroundings	3.94	0.88
Eco-hotels posses environment friendly certification	3.36	1.12
Eco-hotels use environment friendly substances	3.96	0.85
Eco-hotels provide organic beverages and food items	3.90	0.96
Eco-hotels use non conventional energy resources	3.38	1.08
Eco-hotels have synchronization with environment	3.86	1.10
Eco-hotels follow environment friendly production practices	3.34	1.13
Eco-hotels practice environment friendly waste management	3.88	1.07
Eco-hotels give pollution free atmosphere	3.92	0.93
Eco-hotels have environment friendly adornments	3.83	1.11

The tourists are agreed with eco-hotels have green surroundings, eco-hotels use environment friendly substances, eco-hotels provide organic beverages and food items, eco-hotels have synchronization with environment, eco-hotels practice environment friendly waste management, eco-hotels give pollution free atmosphere and eco-hotels have environment friendly adornments, while, they are neutral with eco-hotels posses environment friendly certification, eco-hotels use non conventional energy resources and eco-hotels follow environment friendly production practices.

4.3. PROFILE OF TOURISTS AND THEIR PERCEPTION TOWARDS ECO-HOTELS

The distribution of tourists based on perception towards eco-hotels is given in Table-3. The perception of tourists towards eco-hotels is segmented into low, moderate and high levels based on Mean ± SD. Mean is 37.39 and SD is 4.04.

Table-3: Distribution of Tourists Based on Perception towards Eco-Hotels

Level of Perception towards Eco-Hotels	Number of Tourists	Percentage
Low	78	24.38
Moderate	138	43.12
High	104	32.50
Total	320	100.00

Out of 320 tourists, 32.50 per cent of them posses high level of perception towards eco-hotels, while, 24.38 per cent of them possess low level of it.

4.3.1. TYPE OF TOURISTS AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst type of tourists and perception towards eco-hotels is given in Table-4.

Table-4: Type of Tourists and Perception towards Eco-Hotels

Type of Tourist	Level of Perception towards Eco-Hotels			Total	t-Value	Sig.
	Low	Moderate	High			
Domestic	59 (29.35)	82 (40.80)	60 (29.85)	201 (62.81)	5.748	.000

Foreign	19 (15.97)	56 (47.06)	44 (36.97)	119 (37.19)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.027					

(The figures in the parentheses are per cent to total)

Amongst 201 domestic tourists, 29.85 per cent of them posses high level of perception towards eco-hotels, while, 29.35 per cent of them possess low level of it. Amongst 119 foreign tourists, 36.97 per cent of them posses high level of perception towards eco-hotels, while, 15.97 per cent of them possess low level of it.

The t-value is 5.748 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among type of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.027 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.3.2. GENDER AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst gender of tourists and perception towards eco-hotels is given in Table-5.

Table-5: Gender and Perception towards Eco-Hotels

Gender	Level of Perception towards Eco-Hotels			Total	t-Value	Sig.
	Low	Moderate	High			
Male	57 (28.64)	82 (41.21)	60 (30.15)	199 (62.19)	5.120	.000
Female	21 (17.36)	56 (46.28)	44 (36.36)	121 (37.81)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.020					

(The figures in the parentheses are per cent to total)

Amongst 199 tourists who are males, 30.15 per cent of them posses high level of perception towards eco-hotels, while, 28.64 per cent of them possess low level of it. Amongst 121 tourists who are females, 36.36 per cent of them posses high level of perception towards eco-hotels, while, 17.36 per cent of them possess low level of it.

The t-value is 5.120 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among gender of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.020 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.3.3. AGE CATEGORY AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst age category of tourists and perception towards eco-hotels is given in Table-6.

Table-6: Age Category and Perception towards Eco-Hotels

Age Category	Level of Perception towards Eco-Hotels			Total	F-Value	Sig.
	Low	Moderate	High			
Below 20 Years	11 (24.44)	18 (40.00)	16 (35.56)	45 (14.06)	7.770	.000
21 – 30 Years	16 (17.98)	48 (53.93)	25 (28.09)	89 (27.81)		
31 – 40 Years	27 (26.73)	40 (39.61)	34 (33.66)	101 (31.56)		
41 – 50 Years	13 (27.66)	20 (42.55)	14 (29.79)	47 (14.69)		
Above 50 Years	11 (28.95)	12 (31.58)	15 (39.47)	38 (11.88)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.053					

(The figures in the parentheses are per cent to total)

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Amongst 45 tourists who fall under age category of below 20 years, 35.56 per cent of them posses high level of perception towards eco-hotels, while, 24.44 per cent of them possess low level of it. Amongst 89 tourists who fall under age category of 21 – 30 years, 28.09 per cent of them posses high level of perception towards eco-hotels, while, 17.98 per cent of them possess low level of it. Amongst 101 tourists who fall under age category of 31 – 40 years, 33.66 per cent of them posses high level of perception towards eco-hotels, while, 26.73 per cent of them possess low level of it.

Amongst 47 tourists who fall under age category of 41 – 50 years, 29.79 per cent of them posses high level of perception towards eco-hotels, while, 27.66 per cent of them possess low level of it. Amongst 38 tourists who fall under age category of above 50 years, 39.47 per cent of them posses high level of perception towards eco-hotels, while, 28.95 per cent of them possess low level of it.

The F-value is 7.770 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among age category of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.053 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.3.4. EDUCATION AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst education of tourists and perception towards eco-hotels is given in Table-7.

Table-7: Education and Perception towards Eco-Hotels

Education	Level of Perception towards Eco-Hotels			Total	F-Value	Sig.
	Low	Moderate	High			
Higher Secondary	11 (21.15)	29 (55.77)	12 (23.08)	52 (16.25)	6.446	.000
Diploma	16 (23.19)	34 (49.27)	19 (27.54)	69 (21.56)		
Graduation	34 (27.20)	58 (46.40)	33 (26.40)	125 (39.06)		
Post Graduation	17 (22.97)	17 (22.97)	40 (54.06)	74 (23.13)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.047					

(The figures in the parentheses are per cent to total)

Amongst 52 tourists who have higher secondary, 23.08 per cent of them posses high level of perception towards eco-hotels, while, 21.15 per cent of them possess low level of it. Amongst 69 tourists who have diploma, 27.54 per cent of them posses high level of perception towards eco-hotels, while, 23.19 per cent of them possess low level of it.

Amongst 125 tourists who have graduation, 26.40 per cent of them posses high level of perception towards eco-hotels, while, 27.20 per cent of them possess low level of it. Amongst 74 tourists who have post graduation, 54.06 per cent of them posses high level of perception towards eco-hotels, while, 22.97 per cent of them possess low level of it.

The F-value is 6.446 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among education of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.047 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.3.5. MONTHLY INCOME AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst monthly income of tourists and perception towards eco-hotels is given in Table-8.

Table-8: Monthly Income and Perception towards Eco-Hotels

Monthly Income	Level of Perception towards Eco-Hotels			Total	F-Value	Sig.
	Low	Moderate	High			
Less than Rs.25,000	15 (30.61)	23 (46.94)	11 (22.45)	49 (15.31)	5.235	.000

Rs.25,001 – Rs.35,000	27 (28.13)	43 (44.79)	26 (27.08)	96 (30.00)		
Rs.35,001 – Rs.45,000	17 (14.78)	56 (48.70)	42 (36.52)	115 (35.94)		
Rs.45,001 – Rs.55,000	13 (35.14)	11 (29.72)	13 (35.14)	37 (11.56)		
More than Rs.55,000	6 (26.09)	5 (21.74)	12 (52.17)	23 (7.19)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.036					

(The figures in the parentheses are per cent to total)

Amongst 49 tourists who have monthly income of less than Rs.25,000, 22.45 per cent of them posses high level of perception towards eco-hotels, while, 30.61 per cent of them possess low level of it. Amongst 96 tourists who have monthly income of Rs.25,001 – Rs.35,000, 27.08 per cent of them posses high level of perception towards eco-hotels, while, 28.13 per cent of them possess low level of it. Amongst 115 tourists who have monthly income of Rs.35,001 – Rs.45,000, 36.52 per cent of them posses high level of perception towards eco-hotels, while, 14.78 per cent of them possess low level of it.

Amongst 37 tourists who have monthly income of Rs.45,001 – Rs.55,000, 35.14 per cent of them posses high level of perception towards eco-hotels, while, 35.14 per cent of them possess low level of it. Amongst 23 tourists who have monthly income of more than Rs.55,000, 52.17 per cent of them posses high level of perception towards eco-hotels, while, 26.09 per cent of them possess low level of it.

The F-value is 5.235 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among monthly income of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.036 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.3.6. MARITAL STATUS AND PERCEPTION TOWARDS ECO-HOTELS

The relation amongst marital status of tourists and perception towards eco-hotels is given in Table-9.

Table-9: Marital Status and Perception towards Eco-Hotels

Marital Status	Level of Perception towards Eco-Hotels			Total	t-Value	Sig.
	Low	Moderate	High			
Married	58 (22.93)	115 (45.45)	80 (31.62)	253 (79.06)	4.974	.000
Unmarried	20 (29.85)	23 (34.33)	24 (35.82)	67 (20.94)		
Total	78 (24.38)	138 (43.12)	104 (32.50)	320 (100.00)	-	-
Eta Squared	.018					

(The figures in the parentheses are per cent to total)

Amongst 253 tourists who are married, 31.62 per cent of them posses high level of perception towards eco-hotels, while, 22.93 per cent of them possess low level of it. Amongst 67 tourists who are unmarried, 35.82 per cent of them posses high level of perception towards eco-hotels, while, 29.85 per cent of them possess low level of it.

The t-value is 4.974 and it is significant at one per cent level elucidating that significant difference is prevailing in perception of tourists towards eco-hotels among marital status of tourists. Consequently, null hypothesis is not accepted. The eta squared value is 0.018 displaying that the effect size is small and it implies that the real difference in mean values between groups is small.

4.4. SATISFACTION OF TOURISTS TOWARDS ECO-HOTELS

The satisfaction of tourists towards eco-hotels is given in Table-10.

Table-10: Satisfaction of Tourists towards Eco-Hotels

Satisfaction	Mean	Standard Deviation
Location	3.95	0.92
Room rent	3.93	0.95
Price of products	3.37	1.07
Services	3.85	1.05
Quality of products	3.32	1.09
Behaviour of employees of hotels	3.89	1.01

The tourists are agreed with they are satisfied with location, room rent, services and behaviour of employees of hotels, while, they are neutral with price of products and quality of products.

4.5. RELATION AMONGST PERCEPTION OF TOURISTS TOWARDS ECO-HOTELS AND THEIR SATISFACTION

The relation amongst perception of tourists towards eco-hotels and their satisfaction was studied by using correlation analysis and the results are given in Table 11.

Table-11: Relation amongst Perception of Tourists towards Eco-Hotels and Their Satisfaction

Particulars	Correlation Co-efficient
Perception of Tourists towards Eco-Hotels and Their Satisfaction	0.54**

** Significance at 1% level

The correlation coefficient amongst perception of tourists towards eco-hotels and their satisfaction is 0.54 and it is significant at one per cent level as it makes clear that both are positively and moderately interrelated.

5. CONCLUSION

The above analysis demonstrate that more than two fifth of tourists have moderate level of perception towards eco-hotels. Significant difference is there in perception of tourists towards eco-hotels among their profile. Perception of tourists towards eco-hotels has positive, significant and moderate relation with their satisfaction. To enhance perception of tourists towards eco-hotels, eco-hotels should get environment friendly certification from competent agency and they must use non conventional energy resources. Additionally, eco-hotels should follow environment friendly production practices. Besides, to increase satisfaction of tourists towards eco-hotels, eco-hotels must improve their quality of products and services and they should follow rational pricing policies for their products and services.

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A COMPARATIVE STUDY OF THE PREFERRED LEADERSHIP STYLE OF PARAMEDICAL PERSONNEL, WHO ARE WORKING IN THE PRIVATE CLINICS/CORPORATE HOSPITALS AND GOVERNMENT HOSPITALS IN KOLKATA

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ABSTRACT
The paramedical personnel are important service provider in health care industry. They work hand on hand with the doctors in patient care in hospitals and private clinics as well. However these paramedical individuals need special type of leadership behaviors for managing patients. There are different style of leadership behavior like authoritarian, democratic, business like, benevolent and laissez-faire style. In this study we have found that the paramedics prefer a special type of leadership behavior among these styles. The clinicians usually prefer the democratic style but the paramedics practicing in hospitals usually prefer the authoritarian behavior. The main cause of this difference may be due to the pressure for the large number of patients in the hospital and less educated or no education at all but a very nominal remuneration for the paramedics in exchange. On the other hand the paramedics practicing in the clinics have less pressure of patients as a result they get more time for checkup of individual patient and lastly the remuneration for that checkup is much higher than in a hospital setup. In this study we were intended to find out the difference of behavior among the paramedics practicing in the clinics and hospitals.

Keywords: paramedical personnel, leadership style, democratic style, laissez-faire style, authoritarian style.

INTRODUCTION
The concept of leadership style comes from the concept of the leadership style on athletes by the coach in track and field. A coach can become successful by helping the athlete to improve their skill and by sequentially improving their psychological, physical and technical parameters. According to Chelladurai (1978), the appropriate coaching behavior depends upon the characteristics of an athlete and upon the situation. The particular type of leadership behavior which will lead to the improvement of the athlete's performance depends upon the athlete's receptive behavior. The previous study on sports leadership (Fiedler, 2002), Chelladurai (1988) has demonstrated three different types of coaching behavior, first of which is actual leader behavior, second is required leader behavior and the last one is the preferred leadership behavior. Smith, Kendall and Hulin (1969), has demonstrated that the coaches' behavior should be such that the experience of the athlete can become enjoyable and satisfactory. However, this type of leadership concept in athletics has changed after few years and revealed a new research area of leadership among business organizations and health care industries.

Paramedical individuals are the pillar of this health care industry. They are nothing but they play the most pivotal role in this industry. They are the individuals who help in health care under the supervision of doctors and other health care professionals. It is an important aspect that these personal need a good leadership quality in order to manage patients.

REVIEW OF LITERATURE
'Let whoever is in charge keep this simple question in her head (not how can I always do this right thing myself, but) how can I provide for this right thing to always be done.' Florence Nightingale (1969)

Florence had identified the importance of leadership by delegation and empowerment. Donnelly (2003) has recognized leadership not as a destination but a journey to achieve success. Although he was unsuccessful to provide an appropriate definition of leadership. Different literatures have discussed about leadership as an in born quality or specific personality traits that can be trained to develop appropriate leadership quality (Hawkins and Thornton, 2002; Austin et al., 2003).

It is no longer avoidable the importance of leadership within the clinicians and in current health care environment (Ewens, 2002). The clinicians should have a good leadership quality for patient management and for taking good clinical decisions (Cooper, 2003). This necessity is reflected in several empowerment programs conducted for nurses in different parts of the world (Cooper, 2003; King, 2002). High quality leadership not only increases the job satisfaction but also helps in employee retention, stress removal and career advancement (Beech, 2002; Department of Health, 2005).

A study conducted on the transformational leadership mediated empowerment in the hospital setup showed high employee satisfaction (Jia-ni, 2012). The paramedical individuals are the building blocks of the health care

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industry, among them nurses are most important pillars of this industry. The quality of patient care is highly dependent upon the workload, nursing intensity and other organizational factors (Whitman, 2002). The patient mortality rate however depends upon the nursing workload and intensity (Fagerström, 2007). A study was conducted on the direct relationship of the leadership of nurses and its relation with the mortality of the patients (Fagerström, 2011). However the transformational leadership is found to increase patient satisfaction and it positively influences the nurse retention rate (ENA 2005; Clure, 1983). There are many areas of conflict which nurse managers usually deal with (McElhaney 1996). A study was conducted by Swansburg (1993) and he identified some specific areas of conflict within nurses, these are stress, lack of managerial support, space, doctor authority, rapid change of technology etc. the head nurses perceive themselves as transformational leaders which actually doesn't reduce conflict (Hendel, 2005). Nurse Managers have specific responsibilities of ward and services (Rosengren et al. 2007). They are responsible for several works like stuffing, nursing, budgeting and other organizational developments (Persson & Thylefors 1999). Over the years the responsibilities of nurse managers have changed due to over burden of work and complexity (Rosengren et al. 2007). However the nursing literature have supported the fact that proper managing skill of nurses can lead the organization to achieve their goals and positive outcome of the patient care (Brady Germain & Cummings 2010, Cummings et al. 2010). A study conducted on 34 managers however indicated that nurse managers are more task oriented than people oriented and they considered as the most effective leaders who have strong control over the situation (Hern-Underwood & Kenner 1991). A study conducted by Zampieron (2012) demonstrated that the leadership style preferred by nurse managers is different that the leadership style preferred by the subordinates, however this publication will help the trainers of nurse managers to keep this thing in their mind while training them. Leadership among nurse are found to effect the job satisfaction, job retention, quality care and hospital cost (Kleinman 2004; Trofino 2000; Lobo 2010). There are evidences which reveal that western type of leadership style is not appropriate for Chinese hospitals (Chang 2008). The hospital in Taiwan recommended the use of Chinese leadership styles (Cheng et al. 2002). Lu et al. (2002) have demonstrated that cultural differences should be considered in the use of leadership style among nurses. Evidences have revealed that doctors have leadership over nurses (Hojat et al. 2000; Sieloff 2004). A work of Su et al. (2009) showed that doctors have great power over nurses, whereas the nurse managers are not given sufficient power. Several studies reveal that nurses are oppressed by doctors and administrative bodies (Farrell 2001, Trossman 2003, Sieloff 2004, Su et al. 2009). A study conducted at UK by Kennedy (2008), showed the nurse managers leadership is not as it is expected and so empowering the nurse managers are important which will help the nurses to work more efficiently (Ganann et al., 2010). However a study have also revealed that blindly following the hospital policy by the nurse managers cannot provide enough support to the nurses (Su et al, 2011). A study also demonstrated that transformational leadership style however have a positive effect on the stress level of the hospital employees (Baysak et al., 2015).

Not only the leadership style of the nurse managers but also the leadership ability of the doctors is in question in today's literature. Leadership in operating room is getting the limelight of the researchers (Parker et al., 2011; Parker et al, 2014; Haverson et al., 2012/05; Haverson et al., 2012/06). Leadership within the operation room is the key of success, safety and performance (Haverson et al., 2012/05; Haverson et al., 2012/06). In nonsurgical literature different types of leadership behaviors are been stated (Goleman et al, 2002; Helmreich et al, 1999; Murray et al, 2013; Flin et al, 2004; Bass et al, 1994; Bass et al., 2008). Kissane-Lee (2015) stated that the junior residents preferred leadership style in the operating room differs from the leadership style he/she may encounter; as a result it produces unwanted tension and reduces the team performance. In another study it was stated that transformational leadership by the surgeon can improve the team performance and safety of the operating room (Hu et al, 2015).

However in our work we will emphasize on a different types of paramedical personnel and their leadership style in general. In our study we are concentrating in the five different leadership styles- Authoritarian, Democratic, Laissez-faire, Business like and Benevolent (Yavirach, 2012).

Each leadership style has advantages and disadvantages. Not all leaders will fall exclusively into any one style, nor do all leaders fall into only five styles mentioned above, these are only the most predominant leadership styles. The effective leadership depends upon the situation and maturity of the subordinates. There is neither ideal leader nor one who is completely effective. Success depends on the number of elements such as talent technique, circumstances and the make-up of the team (Liu, 2003, Kantharia, 2012, Melero, 2004).

In our study we are intended to find out the preferred leadership style among the paramedical personnel working in a clinic and hospital setup. The comparative study will deliver the difference between their leadership style and attitude.

So our research question is what kind of leadership style is preferred by the clinicians and paramedics working in hospitals of Kolkata.

METHODOLOGY

1. Sampling

The study was conducted on 200 paramedical personnel residing in Kolkata. Among them 100 individuals are working in hospitals and 100 from clinical setups.

2. Data Collection & proposed tools for interpretation.

The instrument used for this study is a modified version of the Leadership behavior Description questionnaire based on Kirby's and Neil's questionnaire. A total of 15 items has been used. Item selection will be done through a subjective analysis based on the average score obtained by Kirby's and Neil's research results. This questionnaire assessed the subordinate's preference for specific behaviors from their leader on a five point scale. Each question starts with the phrase, "The paramedics should….." and the response will be always, often, occasionally, Seldom and never. The reliability of the question was already assessed in the pilot study.

3. Data Analysis & Techniques to be applied:

An item analysis will be performed on each of the 14 items on the questionnaire. This will be done for the entire sample. The item analysis will provide with an indication of the percentage of people within the sample who selected each response for every item on the questionnaire. Each response will be given a value; always-5 points, often-4 points, occasionally-3 points, seldom-2 points and never-1 point. Then the responses from all the subjects for each item will be added so that a total number of points can be assigned to each item. Based on these results, a hierarchy of items (specific behaviors from the paramedics) will be tabulated. This will be done for all the subjects as well in case of clinicians and paramedics practicing in the hospitals. Having identified 3 leadership styles and their representative items, the scores on all the items under a given style were summed to indicate the preferences, for that particular style. This was done for all subjects only then for clinicians and for subjects working in hospitals.

RESULTS

The table 1 has listed all the questions of leadership style. The questions include authoritarian, democratic, business like, benevolent and laissez-faire style. The column of all subjects includes the ranking of the questionnaire's items and the relevant marks which it achieved within the total subjects including the paramedical individuals working in clinics and hospitals. Similarly the column of clinician subjects includes the ranking of the questions and relevant marks. The column of subjects working in hospital also follows the same.

The data in the clinician subjects demonstrated maximum point in the question "The paramedics should express appreciation…..", however in the subjects working in the hospital showed only 270 points and 5th position in the same question. The 1st rank was found in the question ". The paramedics should insist that….", among the subjects working in the hospital. On the other hand the only 122 points was obtained in the question "The paramedics should figure ahead…….", which is an authoritarian style question and ranked last in the clinician subjects. Whereas, 135 points was obtained and ranked last by the subjects working in the hospital in the question "The paramedics should look for special advantages……" this is a laissez-faire question. From these results it can be demonstrated that clinicians prefer democratic style more than authoritarian style of questions on the other hand which is preferred by the subjects working in the hospitals.

Table 1: hierarchy of the specific behavior of the paramedical individuals as expressed when they practice in clinical settings or in a hospital setup

Questions	All subjects (1000 max)		Clinician subjects (500 max)		Subjects working in hospitals (500 max)	
	Rank	Points	Rank	Points	Rank	Points
1. The paramedics should express appreciation when a patients does well. (democratic style)	1	743	1	473	5	270
2. The paramedics should find time to listen to the patients.(business like style)	9	435	7	215	9	220
3. The paramedics should rule with an iron hand. (authoritarian style)	5	601	14	126	2	475
4. The paramedics should make new patients make adjustments. (democratic style).	2	741	2	465	4	276

5. The paramedics should insist that everything is done his way. (authoritarian style)	4	607	13	128	1	479
6. The paramedics should look for special advantages for the patients. (laissez-faire style)	14	280	11	145	15	135
7. The paramedics should encourage the patients to express their ideas and opinions. (benevolent style)	11	419	8	209	11	210
8. The paramedics should ask for the opinion of the patients on decision making.(business like style)	8	455	5	225	8	230
9. The paramedics should follow the guidance of the patients. .(democratic style)	3	720	3	455	6	265
10.The paramedics should make the patients fell at ease when talking to them.(laissez-faire style)	15	275	12	135	13	140
11 The paramedics should see to it that every patient is working to his capacity. .(business like style)	7	482	4	237	7	245
12. The paramedics should figure ahead what should be done. (authoritarian style)	6	587	15	122	3	465
13. The paramedics should explain his actions. (benevolent style)	12	415	9	195	10	220
14. The paramedics should make sure his part in the team is understood by all members. (benevolent style)	10	425	6	223	12	202
15. The paramedics should encourage close and informal relationship with the patient. (laissez-faire style)	13	287	10	150	14	137

Table 2 contains the item analysis for preferred leadership style. All subjects in total expressed maximum 41% of “always” in the question “The paramedics should insist….”, which is an authoritarian style question. The data in the table 2 shows that total paramedical individuals feel that insist that everything is done his way, they should rule in iron hand and they should figure ahead what should be done.

Table 2: the percentage of the paramedical individuals (clinician and who practice in hospitals) who have the similar responses

Questions	always	often	occasionally	seldom	never
1. The paramedics should express appreciation when a patients does well. (democratic style)	40%	6.5%	43.5%	5%	5%
2. The paramedics should find time to listen to the patients.(business like style)	0%	0%	47.5%	22.5%	30%
3. The paramedics should rule with an iron hand. (authoritarian style)	40%	7.5%	6.5%	5%	41%
4. The paramedics should make new patients make adjustments. (democratic style).	37.5%	7.5%	46%	6%	3%
5. The paramedics should insist that everything is done his way. (authoritarian style)	41%	7.5%	5.5%	6%	40%
6. The paramedics should look for special advantages for the patients. (laissez-faire style)	0%	0%	12.5%	15%	72.5%
7. The paramedics should encourage the patients to express their ideas and opinions. (benevolent style)	0%	0%	18.5%	72.5%	9%
8. The paramedics should ask for the opinion of the patients on decision making.(business like	0%	0%	52.5%	22.5%	25%

style)					
9. The paramedics should follow the guidance of the patients. .(democratic style)	37.5%	5%	42.5%	10%	5%
10.The paramedics should make the patients fell at ease when talking to them.(laissez-faire style)	0%	0%	12.5%	12.5%	75%
11. The paramedics should see to it that every patient is working to his capacity. .(business like style)	0%	0%	57.5%	26%	16.5%
12. The paramedics should figure ahead what should be done. (authoritarian style)	37.5%	7.5%	8.5%	4%	42.5%
13. The paramedics should explain his actions. (benevolent style)	0%	0%	15%	77.5%	7.5%
14. The paramedics should make sure his part in the team is understood by all members. (benevolent style)	0%	0%	16.5%	79.5%	4%
15. The paramedics should encourage close and informal relationship with the patient. (laissez-faire style)	0%	0%	13.5%	16.5%	70%

The table 3 demonstrates the percentage of the answer given by the paramedical individuals working in the hospital. The maximum 82% individuals have answered always in the question “The paramedics should insist that everything…..”, which is an authoritarian style question. From the table 3 it is clear that subjects working in the hospital insist to do work in his/her way.

Table 3: the percentage of paramedical individuals practicing in the hospitals who indicate the same response.

Questions	always	often	occasionally	seldom	never
1. The paramedics should express appreciation when a patients does well. (democratic style)	0%	0%	80%	10%	10%
2. The paramedics should find time to listen to the patients.(business like style)	0%	0%	50%	20%	30%
3. The paramedics should rule with an iron hand. (authoritarian style)	80%	15%	5%	0%	0%
4. The paramedics should make new patients make adjustments. (democratic style).	0%	0%	82%	12%	6%
5. The paramedics should insist that everything is done his way. (authoritarian style)	82%	15%	3%	0%	0%
6. The paramedics should look for special advantages for the patients. (laissez-faire style)	0%	0%	10%	15%	75%
7. The paramedics should encourage the patients to express their ideas and opinions. (benevolent style)	0%	0%	20%	70%	10%
8.The paramedics should ask for the opinion of the patients on decision making.(business like style)	0%	0%	55%	20%	25%
9. The paramedics should follow the guidance of the patients. .(democratic style)	0%	0%	75%	15%	10%
10.The paramedics should make the patients fell at ease when talking to them.(laissez-faire style)	0%	0%	15%	10%	75%
11. The paramedics should see to it that every patient is working to his capacity. .(business like style)	0%	0%	60%	25%	15%
12. The paramedics should figure ahead what should be done. (authoritarian style)	75%	15%	10%	0%	0%
13. The paramedics should explain his actions. (benevolent style)	0%	0%	20%	80%	0%
14. The paramedics should make sure his part in the	0%	0%	10%	82%	8%

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team is understood by all members. (benevolent style)					
15. The paramedics should encourage close and informal relationship with the patient. (laissez-faire style)	0%	0%	7%	23%	70%

This table 4 shows the percentage of individuals practicing in the clinic answered always/ often/occasionally/seldom or never in each question. The total 100 individuals were tested and the answers are tabulated. The maximum 80% of individuals answered always in the question "The paramedics should express appreciation….", which is a democratic style question. As can be seen the paramedics working in the clinics show appreciations to the patients who responds well.

Table 4: the percentage of paramedical individuals practicing in the clinic who indicate the same response.

Questions	always	often	occasionally	seldom	never
1. The paramedics should express appreciation when a patients does well. (democratic style)	80%	13%	7%	0%	0%
2.The paramedics should find time to listen to the patients.(business like style)	0%	0%	45%	25%	30%
3. The paramedics should rule with an iron hand. (authoritarian style)	0%	0%	8%	10%	82%
4. The paramedics should make new patients make adjustments. (democratic style).	75%	15%	10%	0%	0%
5. The paramedics should insist that everything is done his way. (authoritarian style)	0%	0%	8%	12%	80%
6. The paramedics should look for special advantages for the patients. (laissez-faire style)	0%	0%	15%	15%	70%
7. The paramedics should encourage the patients to express their ideas and opinions. (benevolent style)	0%	0%	17%	75%	8%
8. The paramedics should ask for the opinion of the patients on decision making.(business like style)	0%	0%	50%	25%	25%
9. The paramedics should follow the guidance of the patients. .(democratic style)	75%	10%	10%	5%	0%
10.The paramedics should make the patients fell at ease when talking to them.(laissez-faire style)	0%	0%	10%	15%	75%
11. The paramedics should see to it that every patient is working to his capacity. .(business like style)	0%	0%	55%	27%	18%
12. The paramedics should figure ahead what should be done. (authoritarian style)	0%	0%	7%	8%	85%
13. The paramedics should explain his actions. (benevolent style)	0%	0%	10%	75%	15%
14. The paramedics should make sure his part in the team is understood by all members. (benevolent style)	0%	0%	23%	77%	0%
15. The paramedics should encourage close and informal relationship with the patient. (laissez-faire style)	0%	0%	20%	10%	70%

The hierarchy of the leadership style which was preferred by the total, clinicians and subjects working in hospitals is tabulated in the table 5. The number of points for each style was calculated by adding the scores of the three different questions for each style. The democratic style has obtained the maximum point in the total of all subjects which shows the most preferred leadership style in paramedical personnel. The authoritarian style has obtained the second maximum point which shows that few paramedics also prefer this style as well.

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The subjects working in the hospital setup demonstrated maximum point in the authoritarian style of leadership. This means they are rigid and dominating in their work when these individuals work in a hospital. However, the subjects who works in clinics they demonstrated maximum point in the democratic style of leadership, that indicates that these paramedics when work in clinic they are more considerate and less dominating in nature.

Laissez-faire is however the least preferred style among the paramedics and subjects working in the hospitals. Whereas authoritarian style is found to be least preferred by the clinicians.

Table 5: hierarchy of leadership styles of total, clinicians and paramedics practicing in hospitals based on a summation of the scores of 3 test items for each factor

Leadership style	All subjects (3000max)	Subjects working in hospitals (1500 max)	Clinician subjects (1500 max)
1) Authoritarian style	1,795	1,419	376
2) Democratic style	2,204	811	1,393
3) Business like style	1,372	695	677
4) Benevolent style	1,259	632	627
5) Laissez-faire style	842	412	430

CONCLUSION

In conclusion it can be said that paramedical personnel in total prefer the democratic style of leadership. In this style however they appreciate the patients when they respond well, they help the new patient to adjust and hear the patient’s response and are guided accordingly. On the other hand paramedical individuals working in the hospitals demonstrate authoritarian leadership style. They rule in iron hand, they insist the patient to do everything on their way and always figure ahead what should be done. However the paramedics practicing in the clinic shows democratic style more than the others. The laissez-faire behavior is list preferred by the total and individuals working in the hospitals, whereas authoritarian behavior is least preferred among the clinicians. The main cause of this difference may be due to the pressure for the large number of patients with huge number of unrelated questions posed by the patients in the hospital but a very nominal remuneration for the paramedics in exchange. On the other hand the paramedics practicing in the clinics have less pressure of patients as a result they get more time for checkup of individual patient and lastly the remuneration for that checkup is much higher than in a hospital setup.

Suggestion to paramedics

From this conclusion the paramedics can be suggested to use democratic style of leadership where ever they may practice.

Limitation of study

The limitation of this work is that this work is conducted on the paramedical personnel residing only in Kolkata. However the leadership style among the clinicians and paramedics working in the hospital outside Kolkata is still remains to be revealed.

Future scope of study

In near future this study can be conducted on the paramedical personnel residing outside Kolkata and according to the data we will deliver the suggestions to the paramedics.

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CONSERVATION AND SUSTAINABLE USE OF BIOLOGICAL DIVERSITY BY THE INSTRUMENTALITY OF BIOLOGICAL DIVERSITY ACT, 2002 – NORTH EAST INDIA CHAPTER

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ABSTRACT
Biological diversity is the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and ecosystems. Conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources are the upmost important goals for survival of present and future generations. Law is an effective instrument to bring these goals. The Biological Diversity Act, 2002 is enacted to achieve these goals. In this aspect, the paper will peruse the effectiveness and modulus operandi of this legislation in conserving, sustainability and equitable sharing of biological diversity in this fragile region of North East India in the light of judicial pronouncement, international standard and law of the land.

Keywords: Biological diversity, conservation of biological diversity, sustainable use, equitable sharing, and biological resources

1. INTRODUCTION

“Biological diversity” means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and ecosystems. It comprises diversity at three levels: genetic diversity (within species), species diversity (between species) and ecosystem diversity. It is important for life on Earth and is one of the pillars of sustainable development. In recent decades, degradation of habitats, pollution and unsustainable use of biological diversity have led to loss of species, thus jeopardizing present and future livelihoods.

India is one of the 17 mega-biodiversity countries with 2.4 per cent of the global land area and 4 per cent of water. It accounts for 7 to 8 per cent of the recorded species of the world. India is also rich in cultural diversity and in traditional knowledge available with tribal communities.

The Government of India on recognizing the potential threats and consequences to biodiversity and as a signatory to the Convention on Biological Diversity (CBD) enacted “the Biological Diversity Act” in 2002. India is a party to the CBD and accordingly India is one of first few countries to have enacted legislation like Biological Diversity Act, 2002.

The primary aim of the Act is to provide for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters, connected therewith or incidental thereto. The Act is implemented at national, State and local levels through a decentralized three tier system. At the National level, the National Biodiversity Authority (NBA) was established by Government of India under Section 8 of the Act. At the State level, State Biodiversity Boards (SBBs) are established by the State Governments as per Section 22 of the Act, while at local level the Biodiversity Management Committees (BMCs) are constituted by the Local Bodies as per Section 41 of the Act.

So far, 28 States (including Union Territories) have established the Biodiversity Boards and 15 States have notified the Rules as of March 2014 (NBA, 2013-2014:17), 34,135 BMCs (as on 31st March, 2014) have been constituted across India. National guidelines for BMC are being finalized to facilitate effective functioning of the BMCs. So far, only two states have notified BMC Guidelines and Rules (NBA, 2013-2014:18). NBA issued People’s Biodiversity Registers (PBR) Guidelines in 2009 and revised Guidelines in 2013. All aspect of PBR must be in compliance with the revised Guidelines. To implement the BD Act, 2002, Rules have been notified in 2004.

2. NORTH EAST INDIA CHAPTER ON IMPLEMENTATION OF BIOLOGICAL DIVERSITY ACT, 2002

Northeast India is composed of eight states viz. Assam, Arunachal Pradesh, Nagaland, Meghalaya, Manipur, Mizoram, Tripura and Sikkim. The region holds great significance from ecological and evolutionary point of view.

This region is rich in biodiversity and harbours largest number of endemics and Schedule I species as compared to any other part of India (MacKinnon & MacKinnon, 1986). This region represents a confluence of the Indo-

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Malayan and Indo-Chinese bio-geographical realms. Also, it exhibits intermixing of the Himalayan and Peninsular Indian elements. The region was considered a cradle of flowering plants and highly evolutionary activities (Indiaenvironmentalportal.org). According to recent studies by Roy (2012) the NE India, despite various anthropogenic pressures, has still stands one of the highest biodiversity ranking areas in the country. Biodiversity conservation initiatives in NE India may be summed up as:

2.1 Protected area (PA) network

Government of India has launched different programmes from time to time for the *in situ* conservation of biodiversity through protected area networks. Through protected area network, the country has 96 national parks, 603 wildlife sanctuaries including 18 biosphere reserves which cover about 4.8% of the geographical area of the country (Tripath, 2016:7). Following Table shows a list of protected area networks in different states of NE India.

Table No. 2: Protected areas in Northeast region of India

Sl. No.	State	Total Protected Area (Km^2)	No of Biospheres	No of National Parks	No. of Wildlife Sanctuary	No. of Tiger Reserves
1.	Arunachal Pradesh	5000	1	2	11	2
2.	Assam	3010	1	5	18	3
3.	Manipur	2500	-	1	1	-
4.	Meghalaya	3500	2	2	3	-
5.	Mizoram	2200	-	2	8	1
6.	Nagaland	2250	-	1	3	-
7.	Sikkim	4500	1	1	7	-
8.	Tripura	1600	-	2	4	-
9.	Total	24560	5	16	55	6

(Source: India State of Forest Report (2011), Forest Survey of India)

It is found that the PA coverage in the NEI (7.6%) is higher than the national average (4.75%). The existing figures of PAs are apparently indicative of the satisfactory state of network system for conservation of representative ecosystems in the region. It is also found that most of the protected areas are having small size and are under the pressure because of the use and abuse of resources by the neighbouring human settlements.

2.2 Biosphere Reserves (BRs)

Besides the legally designated PAs, the NE region of India is well represented under coverage of BRs. A total of five BRs to conserve the representative habitats, biota and to support the harmonious co-existence of man and nature have been established in the NE region. The BRs in NEI are highlighted in the following table:

Table No. 3: Biosphere Reserves in NE India

Sl. No.	Name of the Biosphere Reserve	Area (in Km^2)	Location
1.	Dehang-Dibang	5111.50 (Core 4094.80 & Buffer 1016.70)	Part of Siang and Dibang Valley in Arunachal Pradesh
2.	Dibru-Saikhowa	765 (Core 340 & Buffer 425)	Part of Dibrugarh and Tinsukia Districts (Assam)
3.	Khangchendzonga	2619.92 (Core 1819.34 & Buffer 835.92)	Parts of Khangchendzonga hills and Sikkim
4.	Manas	2837 (Core 391 & Buffer 2,446)	Part of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamprup and Dabang districts (Assam)
5.	Nokrek	820 (Core 47.48 & Buffer 227.92, Transition Zone 544.60)	Part of Garo hills (Meghalaya)

(Source: indiaenvironmentalportal.org)

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2.3 Ramsar sites

Among others, three wetlands (i.e. Deepor Beel – Assam, 4000 ha; Rudrasagar Lake – Tripura, 240 ha; Loktak Lake – Manipur, 2600 ha) with global significance in NE region have been listed as Ramsar sites (ramsar.org).

2.4 People's Biodiversity Register (PBR)

The following table shows status of model PBR under the provision of the Act in the different states of India.

Table No. 4: Model People's Biodiversity Register

Sl. No.	State	No of People's Biodiversity Register
1.	Andhra Pradesh	28
2.	Arunachal Pradesh	-
3.	Assam	6
4.	Bihar	-
5.	Chattisgarh	7
6.	Goa	-
7.	Gujarat	133
8.	Himachal Pradesh	-
9.	Haryana	-
10.	Jharkhand	11
11.	Jammu & Kashmir	-
12.	Karnataka	468
13.	Kerala	758
14.	Madhya Pradesh	704
15.	Maharashtra	37
16.	Manipur	10
17.	Meghalaya	-
18.	Mizoram	3
19.	Nagaland	-
20.	Odisha	76
21.	Rajasthan	-
22.	Punjab	-
23.	Sikkim	-
24.	Tamil Nadu	-
25.	Telangana	9
26.	Tripura	126
27.	Uttar Pradesh	11
28.	Uttarkhand	22
29.	West Bengal	76
	Total	2,485

Last updated on 02/09/2015 (Source: NBA: 2015)

From the table, it is found that Arunachal Pradesh, Meghalaya, Nagaland and Sikkim has nil Register and other States of NE region India also have comparatively very less in numbers except Tripura.

2.5 Agro-biodiversity Hotspots (ABHs) of India

There are 22 such hotspots in India, out of which four are concerned of NE India. The following table listed Hotspots in NE India.

Table No.5: Agro-biodiversity Hotspots of NE India

Sl. No.	Hotspot Region	Areas Covered
3.	Eastern Himalayan	All the districts of Arunachal Pradesh, Sikkim and Darjeeling district of West Bengal
4.	Brahmaputra Valley	Dhubri, Kokrajhar, Bongagaon, Barpeta, Nalbari, Goalpara, Kamrup, Golaghat, Darrang, Morigaon, Nagaon, Sonitpur, Jorhat, Lakhimpur, Sibsagar, Dibrugarh, Dhemaji and Tinsukia
5.	Khasi-Jaintia-Garo	All the seven districts of Meghalaya, i.e. Eastern Garo Hills, Western Garo

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	Hills	Hills, South Garo Hills, East Khasi Hills, West Khasi Hills, Jaintia Hills and Ri-Bhoi
6.	North-Eastern Hills	All the districts of Manipur, Mizoram, Nagaland, Tripura and the adjoining Cachar and North Cachar districts of Asom

(Source: PPVFRA, New Delhi)

The table shows that most of region of NE India are under ABHs of India.

2.6 State Biological Diversity Rules

In exercise of powers conferred under Section 63 of the Act, any State Government may make rules prescribing provisions for implementation of the Act in the concerned State. It is a commendable that all the States of NE India framed the Rules concerning Biological Diversity in their respective areas.

2.7 Species of plants and animals which are on the verge of extinction

In exercise of the powers conferred by Section 38 of the Act, the Central Government, in consultation with the State Govt. notifies the species of plants and animals which are on the verge of extinction for the concerned State. Moreover, the collection of the species of plants and animals listed in the notification are prohibited, except with the approval of the concerned State Biodiversity Board (SBB) only for the purposes viz. (a) scientific research, (b) herbarium and museum of scientific and academic institutions, (c) propagation, and (d) any other scientific investigation. In addition to this, the concerned SBB are also undertaken–

(i) studies on all aspects of the notified species for holistic understanding;

(ii) propagation of the notified species for the purpose of *in situ* and *ex situ* conservation and rehabilitation; and

(iii) awareness programmes and provide educational materials on notified species for forest department personnel, Biodiversity Management Committees, ecotourism programmes, and forest dwellers and tribals.

Table No. 6: Notification concerning species of plants and animals which are on the verge of extinction in NE India

State	Date of Notification	No. of Plants	No. of Animals
Meghalaya	30th September, 2009	6	5
Mizoram	30th September, 2009	8	8
Tripura	3rd February, 2011	1	2
Manipur	26th October, 2012	5	6

(Compiled from Ministry of Environment, Forest & Climate Change Notifications)

It is found that concerning Assam, Arunachal Pradesh, Nagaland and Sikkim there is no notification under the Act concerning species of plants and animals which are on the verge of extinction. It does not mean that there is no species of such in the above mention States. This much be seriously taken into account.

3. CONCLUSION

In the final analysis, the very survival of the human race is dependent on conservation of biodiversity. It is evident that this invaluable heritage is being destroyed at an alarming rate due to several reasons. Measures including enactment of proper legislation are being taken up at national and international levels to address this issue. In case of India, the BD Act, 2002 is an important instrument to conserve and sustainable use of biodiversity in India.

The need of the hour is conservation and sustainable use of biodiversity as an integral component of economic development. It is being recognized that no legal provisions can be effective unless local communities are involved in planning, management and monitoring conservation programmes.

In this regard several critical needs which need to be addressed immediately to secure better progress in implementation of Biological Diversity Act in NE India prominent among which are:

- The Act supposedly empowers the BMCs to take decisions on conservation and control. However the Rules severely dilute this and state that the main role and function of the BMC is to merely maintain Peoples Biodiversity Register (PBR). As on date, there is no legal protection available for the knowledge recorded in the PBR.
- An effective legal safeguard against bio-piracy assumes enormous importance for a country like India.
- Considering the general lack of biodiversity and climate datasets for the region there is a need to have in place a systematic and robust data/information generation mechanism, which also takes care of collection, collation and consolidation of available information.

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- The PA coverage in NE bio-geographic zone, particularly in NE hill province is poor. It would require immediate attention for bringing in adequate and representative areas under PA network to ensure *in situ* protection of important bio-resources of the region.
- Realizing the uniqueness and richness of genetic resources, there is a need to place special attention to maintain the evolutionary significance of Traditional Ecological Knowledge (TEK) of the region. This calls for proper integration of cultural values and TEK system with modern approaches of management.
- Unplanned activities of development infrastructure are resulting into a great pressure on fragile ecosystem of NE region. The adequate facilities for monitoring, baseline data, impact assessment and threat or risk assessment still need to be developed in the NE states. Lack of coordination between developmental departments and proper planning may be taken as major factors. Mining and big dams have been a cause of great concern in most part of NE region particularly in Meghalaya and Manipur.
- The region is experiencing high degree of anthropogenic pressure mainly because of age old shifting agricultural practice for livelihood of growing population. The practice is detrimental for the health of forest and the environment of the region. In this regard, Govt. of Mizoram has launched a New Land Use Policy (NLUP) for farmers to replace the age old shifting cultivation. Such policy needs to be framed by other States of NE India so as to effective implementation of the Act.
- Implementation of the Act and Rules are very poor in some States of NE India. It is evident from Model PBR. Regarding notification of species of plants and animals which are on the verge of extinction, surprisingly in some States, there is no notification as such.
- Enhancing technical and legal expertise and need for enhanced financial support for the region
- Need for the state governments to understand the nature and responsibility of SBBs and BMCs that are statutory bodies for better provision of funding and facilities for optimal performance of the Boards
- Increasing social awareness on biodiversity and traditional related issues and developing linkages with other activities, programmes, initiatives of Government Agencies being implemented in the region and at state level.

Last but not the least, the progress in implementation of the Biological Diversity Act can be better achieved by networking among the SBBs of Northeast and sharing of expertise among the SBBs. It needs the pooling together the cooperation of all the stakeholders in biodiversity conservation.

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EXCLUSIONARY TRENDS OF WOMEN'S POLITICAL PARTICIPATION IN TAMIL NADU WITH REFERENCE TO ELECTORAL POLITICS FROM 1989 TO 2016

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ABSTRACT

The participation of women and their engagement in electoral process is an important marker of the maturity and efficacy of democracy in any country. Despite the constitutional promulgation of equality of status and of opportunity, women in the Indian subcontinent continue to be grossly under-represented in the legislatures, both at the national and the state levels. Female representation in the lower house (Lok Sabha) of the Indian Parliament is still much less than the world average of 20 per cent lower than the "critical mass" required to introduce gender parity in political decision-making and legislation. Similarly, the number of female representatives in legislative bodies in most of the states in India is also below the 20 per cent mark reflecting a pan-Indian gender exclusion from electoral participation and quality representation. Therefore an attempt has been made in this paper to analyze the exclusionary trends in providing space to women to participate as candidates in the Tamil Nadu Legislative Assembly elections with reference to electoral politics from 1989 to 2016.

INTRODUCTION

The participation of women and their engagement in electoral process is an important marker of the maturity and efficacy of democracy in any country. It can be defined not only in terms of the equality and freedom with which they share political power with men, but also in terms of the liberty and space provided for women in the democratic framework of electoral politics. Despite the constitutional promulgation of equality of status and of opportunity, women in the Indian subcontinent continue to be grossly under-represented in the legislatures, both at the national and the state levels. Female representation in the lower house (Lok Sabha) of the Indian Parliament is still much less than the world average of 20 per cent lower than the "critical mass" required to introduce gender parity in political decision-making and legislation. Similarly, the number of female representatives in legislative bodies in most of the states in India is also below the 20 per cent mark reflecting a pan-Indian gender exclusion from electoral participation and quality representation. Therefore an attempt has been made in this paper to analyze the exclusionary trends in providing space to women to participate as candidates in the Tamil Nadu Legislative Assembly elections with reference to electoral politics from 1989 to 2016.

POLITICAL PARTIES AND WOMEN'S PARTICIPATION IN TAMIL NADU POLITICS

Tamil Nadu is a unicameral legislature with one house of the State Legislative Assembly. The Tamil Nadu State Legislative Assembly is also known as the Vidhan Sabha. The strength of the state assembly is 234 directly elected members and one member nominated from the Anglo Indian community. Out of 234 state assembly constituencies, 44 are reserved for candidates belonging to Scheduled Castes and 2 are reserved for candidates belonging to Scheduled Tribes. The tenure of the house is five years unless it is dissolved. The State has 39 directly elected members in the Lok Sabha and 18 indirectly elected in the Rajya Sabha in the Indian Parliament. Out of 39 parliamentary constituencies, 7 are reserved for candidates belonging to the Scheduled Castes. Regular elections are held for the state assembly and Lok Sabha seats. The main national parties in the state are: The Indian National Congress, the Bharatiya Janata Party, the Communist Party of India (Marxist) and the Communist Party of India. The major regional parties are: All India Anna Dravida Munnetra Kazhagam (AIADMK), the Dravida Munnetra Kazhagam (DMK), the Desiya Murpokku Dravida Kazhagam (DMDK), Pattali Makkal Katchi (PMK), Manithaneya Makkal Katchi, Puthiya Tamizhagam, All India Forward Bloc and Viduthalai Chiruthaigal Katchi.

Tamil Nadu has a unique place in the politico-constitutional history of the nation. Constitutional guarantees – or, the lack of them – political accommodation and electoral realities, acknowledgement of existing socio-economic realities that the rest of the nation was slow in catching up, all contributed to an avowed 'separatist' entity mainstreaming itself without effort and emerging as the elected ruling party, as far back as 1967. The State has since been ruled by either the Dravida Munnetra Kazhagam (DMK) or the breakaway Anna Dravida Munnetra Kazhagam. Since then, the presence and strength of 'national' and 'nationalist' parties have only dwindled in Tamil Nadu, with no hopes of either the Congress, the Communists (who held sway until the electoral emergence of the DMK), or the BJP ever aspiring to be in elected power in the foreseeable future.

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It is a million dollar question: “how is it that the ethnic political parties, the Dravida Munnetra Kazhagam and the All India Anna Dravida Munnetra Kazhagam are able to keep the state government in Tamil Nadu alternatively under their fold without giving any opportunity to the Indian National Congress to come back to power even after 52 years?” Are the people of Tamil Nadu not tired of the Dravidian political parties? How do these political parties, despite belonging to the same ideological tradition, fight against each other and keep power with them? Are they keeping the people in good honour by their performance? Even the Left fort of West Bengal is shaken by the Trinamool Congress and the Indian National Congress combine but the Dravidian fort is not shaken. This may due to the fact that globalization has ousted many from power in the past. But the same globalization has helped the party in power in the State Government to achieve the electoral victory by turning globalization to the advantage of the poor. The welfare measures for the poor have changed the ethnic sentiments of the people of Tamil Nadu. This new trend will have its own implications for Tamil Nadu politics in the years to come. The ethnic political parties, which stood for ethnic values, over a period of time, have taken a nationalistic perspective which has prevented the national parties from coming to power.

The participation of women in various processes of electoral competition is multifarious but the levels of participation and inclusiveness are quite varied, uneven and distorted. Electoral interaction and political participation of women can be systematically analysed using a pyramidical electoral participation model stratified at four levels on a quantitative basis: (i) in the top strata is female representation in the lower house of Parliament and in Legislative Assemblies – which is the narrowest and most constricted numerically; (ii) in the second strata are women as candidates in electoral competition participating as members and functionaries of political parties where their representation in quantitative terms is more than at the top layer; (iii) in the third strata as active campaigners for political parties where female participation is much larger in numbers than that in the second strata; and (iv) in the bottom strata with the widest base of women in numerical terms as single-time voters. This can also be correlated to the class structure existing in the society. So it may be stated that the upper or elite class women occupy the first level; the upper middle class women are the candidates in electoral competition; the lower middle class women act as active campaigners in the elections and the lower class women just act as single-time voters.

The levels of female participation at the top tiers/levels of electoral competition are fairly low as compared to men and the only levels of electoral participation where they have achieved some degree of parity are as votes in elections. Thus women’s participation in electoral competition has been restricted to being periodic electors, something that is not only promoted and encouraged by the political parties and society but also by the state organs in India. The electoral participation of women is grossly skewed and lopsided vis-à-vis men when it comes to contesting elections as candidates and representation in legislative assembly. Therefore electoral politics reveals exclusionary trends in providing space to women to participate as candidates in national and state levels that causally stem from their marginalization within the party hierarchy and structure.

ANALYSIS OF POLITICAL PARTICIPATION OF WOMEN IN TAMIL NADU FROM 1989 TO 2016

One of the political issues raised by the Dravidian movement was the status of women and culture in Tamil society. The DMK, as an extension of the Dravida Kazhagam (DK), had emphasized the need to enhance the dignity and self-respect of women. There were, however, obstacles to carrying out this radical agenda. The traditional view of men, women and their relationship in Tamil society accorded respect to women only within the bounds of the family. This in itself was a major obstacle. On top of this, the DMK, almost an all-male party, consists of cadres who consider themselves warriors fighting political battles. It has been difficult for them to reconcile themselves to the emergence of Selvi. J. Jayalalithaa as a new woman cast and more particularly as a political successor to the mantle of the charismatic leader like MGR.

Before 1989, the women leaders of Tamil Nadu such as Dr. Muthulakshmi Reddi, Rukmani Lakshmipathy, Jothi Venkatachalam, Lourdammal Simon, Sathyavani Muthu, P.T. Saraswathi, Subbulakshmi Jagedeesan, Gomati Srinivasan, D. Vijayalakshmi and Ponnammal did their work effectively and successfully. All these helped women to go a long way in bringing about drastic changes in their position and attitudes. For the first time, in 1991 the proportion of women elected to the Legislative Assembly of Tamil Nadu was high with 13.68 per cent which shows that the trend towards women’s political participation is in an upward direction. The reason behind this was the entry of a woman, Selvi. J. Jayalalithaa as the leader of the major regional party, All India Anna Dravida Munnetra Kazhagam in Tamil Nadu.

Almost all the important political parties in the State have their women’s wing in their organization but what may be more significant in terms of political power than the proportion of women fighting the general elections is the importance of women in inner party structures. Only in the All India Anna Dravida Munnetra Kazhagam (AIADMK) has there been a conscious move to bring many more women into decision-making levels and posts within the party. In most other parties, the women members are by and large thin on the ground if not invisible in the actual decision-making bodies and rarely influence the more significant party policies. Most often, indeed, they are relegated to the "women's wing" of the party, and made to concentrate on what are seen as specifically "women's issues". Therefore, the active participation of women in governance processes has remained restricted to a smaller number of elite women and not to the common womenfolk. With this background and based on the table given below let us analyze the political participation of women in Tamil Nadu from 1989 to 2016.

In the ninth Legislative Assembly (1989 – 1991) out of 234 seats, women members won 10 seats making a 4.27 per cent of the total. Out of these 10 members, 5 were represented from Dravida Munnetra Kazhagam (DMK), 2 from Anna Dravida Munnetra Kazhagam – Jayalalithaa (ADK – JL), 2 from the Indian National Congress (INC) and 1 from Communist Party of India – Marxist (CPM). Out of these 10, two were appointed as Ministers by the DMK government under the leadership of M. Karunanidhi. During the tenth Legislative Assembly (1991 – 1996) out of 234 seats 32 women candidates were elected. The percentage of women members increased to 13.68 per cent. And, it is to be noted here that this was the first time since 1967 that highest number of women were elected to the Tamil Nadu State Legislative Assembly. Among the 32 elected women candidates, 27 were represented from AIADMK which is around 85 per cent and the remaining 5 members were represented from the Indian National Congress.

The 1991 election was a remarkable victory for the women's participation and representation in the Assembly. This may be due to the fact that a woman being the party chief of AIADMK made this possible and it could be considered as a stepping stone in the political empowerment of women in Tamil Nadu. The positive trend in the political participation of women in 1991 election was that all the elected women candidates gained their victory against the male candidates. Thus, it acted as an eye-opener for other women who had hesitation towards the entry into politics in the traditional land of Tamil Nadu where women opted to give prime importance to their domestic duties and responsibilities.

The number of women candidates dropped sharply to only 10 members in the eleventh legislative assembly (1996 – 2001) out of a total number of 234 seats making to a mere 4.27 per cent similar to that of the ninth legislative assembly. Out of the total 10 members, 7 women were represented from DMK and out of 7 members, two women candidates have got the Minister post. During the twelfth legislative assembly (2001 – 2006), there were 24 women members in the House constituting 10.26 per cent of the total membership of 234. When compared to the last assembly, it was a 6 per cent increase in the total membership of the House. And the by-elections of 2002 and 2005 gave 2 women members extra which come to the total of 26 women members. Out of the 26 members, 21 were from AIADMK party. Among the total women members of the House, 21 belonged to the AIADMK front, 2 women were elected from PMK and INC each and one seat was won by Communist Party of India (Marxist).

WOMEN's PARTICIPATION AND REPRESENTATION TO TAMIL NADU LEGISLATIVE ASSEMBLY THROUGH GENERAL ELECTIONS (1989 – 2016)

Election Year	Candidates Contested			Candidates Elected		
	Women	Total	% of Women to Total Contestants	Women	Total Seats	% of Women to Total Seats
1989	71	3046	2.33	10	234	4.27
1991	102	2834	3.59	32	234	13.68
1996	157	5017	3.12	10	234	4.27
2001	111	1860	5.96	24	234	10.26
2006	156	2586	6.03	22	234	9.40
2011	143	2748	5.20	17	234	7.26
2016	323	3787	8.52	21	234	8.97

Source: Election Commission Report 1989- 2016, Government of Tamil Nadu.

For the first time in 2001 around 5 women members under the banner of AIADMK party were elected from the reserved constituencies of Scheduled Castes (SCs) and 1 women member from the Scheduled Tribes

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constituency. The representation of the downtrodden class of women in the Assembly is a landmark in the history of Tamil Nadu Legislature and it proves the fact that the state of Tamil Nadu provides equal opportunity to women in the field of politics too. During the thirteenth legislative assembly (2006 – 2011) there were 22 women members in the House constituting 9.40 per cent of the total membership of 234 and there was a decrease of one percent in women membership compared to the previous election. Out of the total 22 women members, 7 were elected under the banner of DMK party. And among the 7 women, 2 were from the reserved SC constituencies of Acharapakkam and Dharapuram. During the by-election held in 2009, one more women got elected under the banner of the ruling DMK party and it was Smt. Latha Athiyaman of Thirumangalam constituency. Though the number of elected women from DMK is 8 during this election, it is almost similar to that of its opposition party of AIADMK.

When compared between the parties of AIADMK and DMK regarding the seats allotment to women, it is the former which gives much opportunity than the latter. It may be due to the reason that the Dravida Munnetra Kazhagam has been altogether a male dominated party structure and does not provide good opportunities towards the political empowerment of women.

During the elections of 2011, out of the 234 MLAs, only 17 women were elected when compared to the previous assembly of 2006, where 22 women members were elected. Despite the importance created over the women's reservation bill for reserving 33 per cent of the seats in the state legislature and parliament, only 136 women candidates were fielded in 2011 across all parties in Tamil Nadu.

In the subsequent election held during 2016, 21 women were elected when compared to the previous assembly of 2011, where 17 women members were elected. Out of 21 women, 16 were from AIADMK, 4 from DMK and 1 from Congress. In an analysis done by Prajna Trust, a gender-based NGO, it was the MDMK that had allocated the highest percentage of seats to women at 13.8, but that party came a cropper. The AIADMK followed it up at 13.7 per cent, allocating 31 seats out of 227 to women candidates, and over 50 per cent of them tasted victory. The DMK gave 19 seats to women in the 174 constituencies the party contested, and secured a lower conversion rate – from fielding candidate to victory. Out of a total of 3787 candidates fielded by top political parties, there were 323 women candidates, less than 10 per cent.

Tamil Nadu women in general, had been greatly inspired by the late AIADMK supremo, Selvi. J.Jayalalithaa popularly called as ***"Amma"*** and ***"Puratchi Thalaivi"*** (revolutionary leader). The global press and the electronic media considered her as the most powerful politician in the contemporary world which was a ***'jewel on her crown'***. When we look into the representation of women in the Cabinet under the AIADMK Ministry, the number of women is more. The number of women decision-makers to the State Legislature has vast political experiences and they help greatly in the functioning of administration very effectively. Women's representation in the Tamil Nadu Legislative Assembly during the AIADMK regime is comparatively more than the other parties. Thus the AIADMK party, both in the general and by-elections to the State Legislature paved the red carpet welcome towards more participation and representation of women in Tamil Nadu politics is valid as per the results of the analysis.

In addition, women as voters are playing a very important and decisive role in the formation of governments in the State during the recent years. The electoral trends in Tamil Nadu point out that there is a greater participation of women in politics in the more recent times since the number of women contestants are increasing at present. The turnout of women voters in Tamil Nadu is widely fluctuating and there is considerable gap between the number of male voters and women voters in different elections before 1990. However, there is a gradual increase in the turnout of women voters in the subsequent elections. The percentage of women electorate in relation to women population is going on increasing in every general election. When urban and women voters are compared the rural women voters have exercised their franchise more than urban women voters. On the whole there is a gradual increase in the turnout of women voters when compared to men voters, which can be considered as a positive trend in the pattern of women's participation in Tamil Nadu politics. Though the voting percentage of women showed fluctuation during 1991 and 1996, their voting percentage increased in the assembly elections of 2001 and 2006 with 28.41 per cent and 34.37 per cent respectively. For the first time in the history of Tamil Nadu franchise, during the year 2011, women's participation as voters is the highest (39.25 per cent) and they are ahead of men voters.

It can be highlighted here that Selvi.J. Jayalalithaa was considered as the ***trend-setter*** for the inclusion of women in the state politics because as the leader of the AIADMK party, she provided opportunities for more women to contest elections. Besides, many women candidates represented themselves as independent candidates to contest in the General Assembly elections. Therefore, it can be stated here that the political participation of women in Tamil Nadu has new emerging patterns due to the situational changes in the recent years and the increase in the number of women voters and women contestants appears to be positive. On the whole it can be inferred that the number of women contestants are increasing due to the rise of political awareness, women's representation in the panchayat bodies, increase in the women literacy rate, proficiency skill improvement among women and the influence of media. Though all the women contestants are not succeeding in their attempts, their participation in the elections is of great importance because this will lead to absolute political empowerment of women in the coming years.

CONCLUSION

To conclude, Tamil Nadu political system cannot be said to be non-receptive to the emergence and dominance of women politicians. While on the one hand most women politicians have found it difficult to rise within male dominated party hierarchies, on the other hand some women have managed to become leaders. Political leadership by women is not dramatically different from that of men. Women leaders are no better or worse than men. Nor have women leaders been typically anxious to give greater representation to other women within their own organizations or in the political process generally. And, it may be stated here that women's equal participation in politics as voters, candidates, representatives and decision-makers is essential not only for the success of a democratic political system but it can also play a vital role in their advancement as well as in the growth of genuine and sustainable democracy. This will not only uplift their personality but will open the way for their social and economic empowerment.

The young women in Tamil Nadu need to shake off negative perceptions associated with politics such as money power, muscle power and violence. Many changes have been implemented in the PRIs with the entry of women leaders, therefore an urge has to be enhanced among women to contest in elections for local bodies, universities, college unions so as to emerge as leaders. The present climate is favourable for the entry of women in political processes since educated and daring women were increasingly sought after by political parties. Stressing the role of women in nation-building, Abdul Kalam said, "Enlightened women are very important for nation-building since their thoughts, the way of working and value system will lead to faster development of good family, society and good nation". He also said that women should take up politics along with other professions and try to become good leaders. Women should cease remaining political consumers and submissive participants in the democratic process. Since Tamil Nadu has a tradition of women leaders as testified in history, the young women instead of preferring the private and corporate corridors must switch over to the public, government and bureaucratic spheres. This suggests that the political empowerment cannot be achieved without active political awareness, participation and representation.

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IMPACT OF 'COLOR' ON BRAIN - OUR 'THINK TANKS'

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ABSTRACT
Various colors we see and feel around us have a great impact on our minds. However, we rarely do recognize it and we give very less importance to this. The mix of colors, primary, secondary and tertiary, helps our minds to work in that particular environment and the study of how different colors have varied effects on our minds forms the foundation stone of Color Psychology. Let us hope that this study would be a useful tool in assessing the response of human mind on various colors and also would be a preliminary study to be developed further for the understanding of Color Psychology.

Keywords: Colors, Environment, mind, psychology, physiology

INTRODUCTION

Why are people more relaxed in green rooms? Why do weightlifters do their best in blue gyms? Take a minute and imagine the world around you without colors, how boring and unexciting life would be! Color is a powerful communication tool and can be used to signal action, influence mood & cause physiological reactions [8]. Colors play a vital role in our daily lives and it has been proven that our activities and responses are influenced by them. A research by the University of Columbia has proven that Blue color enhances creativity whereas color red helps to be focused and has a positive effect on memory [8]. This concept of color psychology has become a hot topic in marketing, art, design and why, even Medicine!

The primary aim is to study the impact of various colors on the human brain. The objectives of this preliminary study on color psychology are as follows: Firstly, to understand the effects of various colors on people's minds. Secondly, to establish a definite link between color and mind Control & Concentration. Thirdly, to understand the great difference between color psychology and color symbolism. And lastly, the entire study is attempting to overcome the general lack of research in this area.

MATERIALS AND METHODS

The present study is an open-label, randomized, cross-sectional, single-centered study of one week duration conducted from 03rd April 2019 to 10th April 2019. The Study was conducted at MGM Medical College, Aurangabad after obtaining permission from the Institutional Ethics Committee. Briefly, 50 people of random age group were included in the study. They were categorized in their particular age groups, as follows: 10 people from age group 10-15yrs, 10 people from age group 16-30yrs, 10 people from age group 31-40yrs, 10 people from age group 41-50yrs and remaining 10 people from above 50yrs age. It was ensured that the candidates selected were not suffering from color blindness by conducting the Ishihara Test for Color Blindness. Each candidate provided written informed consent for study participation, to comply with the requirements of the study protocol and the use of their data for research purposes.

To study the effect of color on human mind, four basic experiments were designed. The first experiment aimed at the ability of each candidate to match a set of adjectives to its corresponding color wheel. The second experiment was designed to judge the color preference of people given the kind of environment. The third experiment was to rank the given colors in order of the preference of the candidate with justification. And the final experiment involved the candidate to name the first thing which strikes to his/her mind when he/she sees a particular color. The response of each candidate was recorded and assessed on the basis of different age groups. All statistical analysis were performed using SPSS (Statistical Package for Social Sciences) for Windows, Version 7.0. Bar graph, pie charts and other methods of graphical representations are used to portray the results of the experiments.

For experiment 1, Chi square value has also been taken into consideration and a p value <0.05 was considered to be statistically significant.

RESULTS

Total 50 patients were analyzed in the entire study.

Age of subjects ranged from 10-60yrs (Mean 35 yrs). 20 (40%) were females and 30 (60%) were males. However, results are not categorized on the basis of gender. Each candidate was evaluated separately and all the four experiments were performed together for every candidate.

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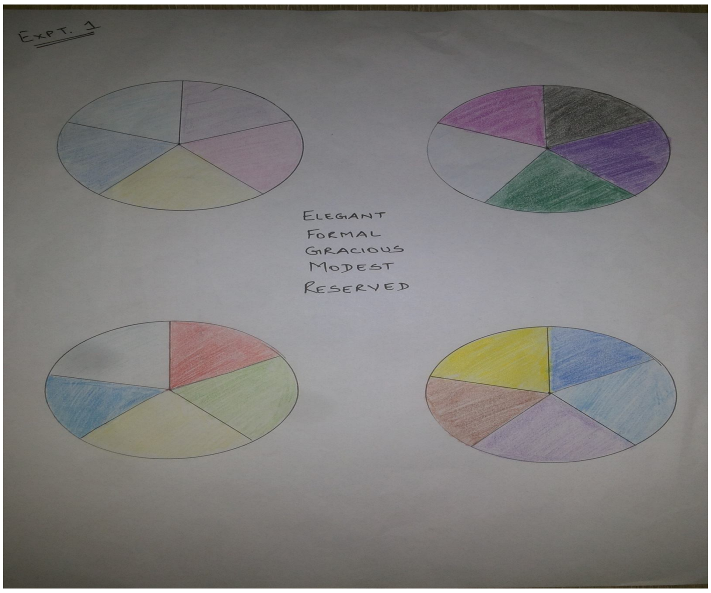
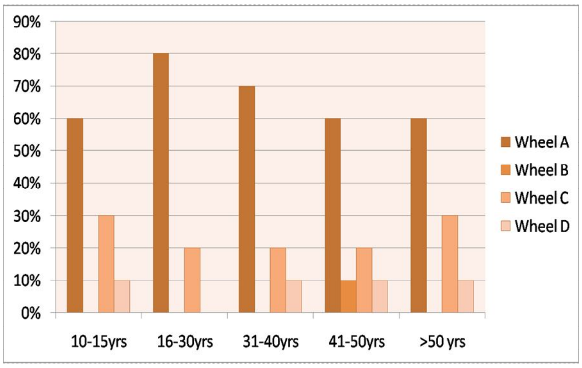
Each experiment was evaluated separately. Considering the first experiment, it was observed that 60% candidates from the age group of 10-15yrs were able to match the set of adjectives with the correct wheel and so was 80% candidates from 16-30yrs, 70% candidates from 31-40yrs, 60% candidates from 41-50yrs and 60% candidates from age beyond 50yrs. To evaluate the collected data further, a statistical hypothesis was made using the Chi Square test. The expected frequency (E) and observed frequency(O) were found out for each age group, candidates choosing the correct wheel and the other wheels. Furthermore, the Chi square rule was applied. A p value <0.05 was considered to be statistically significant.

Figure 1 – Match the adjective with the corresponding Color wheel (Experiment 1)

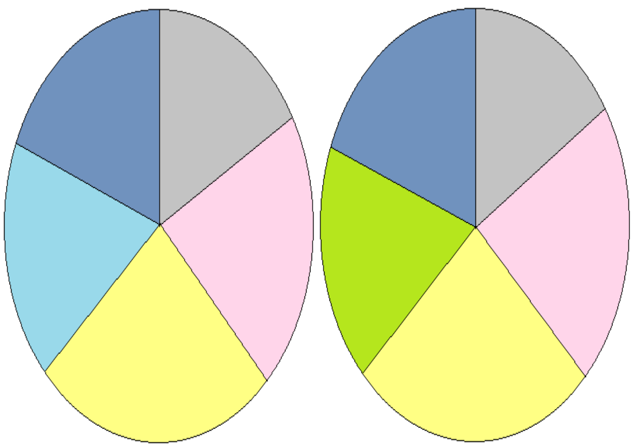


Graph 1: Results of experiment 1



On assessing the second experiment, it was found that 95% candidates were able to choose the correct wheel given the kind of environment. The statistical observation is demonstrated on the pie chart as shown below.

Figure 2 – Choose the color wheel that brings a calm and soothing effect to your mind (Experiment 2)



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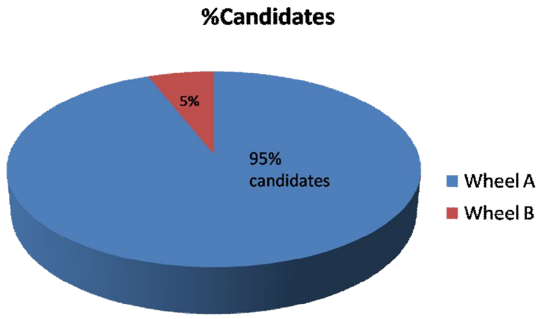
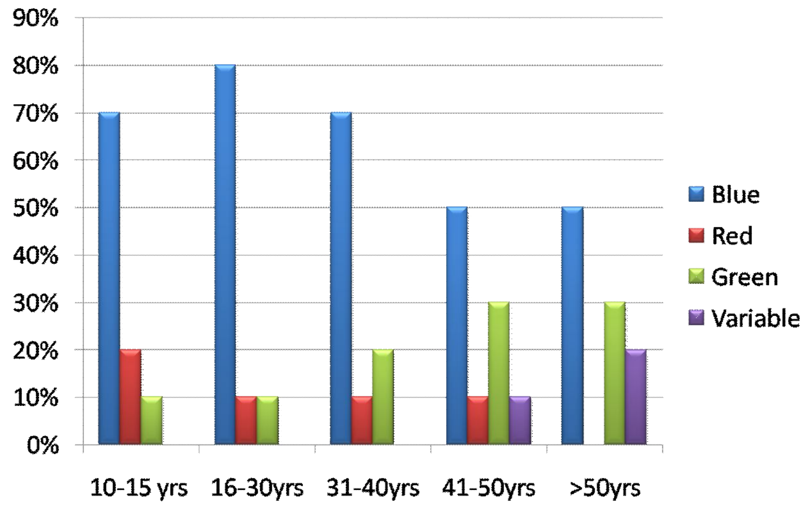
Graph 2 : Results of experiment 2



On evaluating the third experiment, it was found that 70% candidates from 10-15yrs, 80% candidates from 16-30yrs, 70% candidates from 31-40yrs, and 50% candidates from 41-50 yrs and beyond 50yrs, chose Blue color as their favorite and for rest of the colors, the responses were variable, as shown in the bar graph below. Furthermore, Myers-Briggs Personality test was conducted [7] and on personal interaction with the candidates, it was found that the color chosen by each of the candidate correlated with the traits of that individual.

Figure 3 : Results of experiment 3



Experiment 4 was basically conducted to observe whether the candidates were able to symbolize the colors with the environment, to judge color symbolism. And it was found that 80% candidates were able to symbolize Red with Rose and 90% candidates were able to symbolize Blue color with the sea or sky. For remaining colors, variable results were obtained.

There were no significant association found between the color wheel chosen by different candidates and their respective age groups.

DISCUSSION

From this study, we found that selection of a particular color given a set of adjectives or the kind of environment does not depend on the age group of the person, instead, depends on the psychological condition of the person.

Kaya Naz et al demonstrated the relationship between color and emotion [3]. It was a study conducted by college students. This study correlates the color preferences of individuals with the traits they possess and with their lifestyle.

Very few studies have previously demonstrated the color psychology. However, this is the first Indian study carried out to understand the Influence of color on Human minds.

The obvious limitation of this study is categorization on the basis of gender of the candidates. The mood of the candidates at that point of time when the test was conducted could have created a hindrance to this study. The sensitivity of the test could be affected due to psychological factors of the candidate. The experiments conducted do not assess the effect of color on the body and soul or the physiological mechanism behind the color preferences. The study can be improved by considering more number of candidates and overcoming the above limitations. Furthermore, it can be a preliminary study enabling people to conduct a broad-spectrum research on color psychology.

The varied effects of color affect our day-to-day lives on a wide range. Starting from the color of one's toothbrush to the color of one's night dress determines the color preferences of the individual. And from those color preferences, the trait of the individual, his likes and dislikes, can be found.

Another significant area is interior designing of one's room. On the basis of color preferences, one can choose his/her favorite color and correlate it with the thing that strikes his mind first. For example, if a person's preferred color is blue, he correlates it with sea or sky, and hence, he could put a wallpaper on one wall portraying the sea, thus bringing a calm and serene effect to his mind.

The colors a person is surrounded with also plays a role in the mood of that person. To maintain the liveliness and enthusiasm within a person, a preferred way could be to create an environment with his/her favorite colors around him/her, thus enabling him/her to overcome the mood swings, he/she goes through...

CONCLUSION

Color is Nature's own powerful signaling system - the Universal, non-verbal language [2]. Hence, this topic is of great importance.

Hope that this research article asserts every individual and growth spurts, both physically and emotionally among teenagers and young adults and also brings about a VISION is every individual of how to control one's mind and live peacefully in an environment of livelihood and enthusiasm!

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INNOVATIVE METHODS OF TEACHING GEOGRAPHY- A PERSPECTIVE FROM SCHOOL TEACHERS OF VIJAYAPURA CITY

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ABSTRACT
Teaching is a very dynamic process of transferring of information, ideas, concept, and knowledge. The teachers must understand of pupil's maturity, learning interest, and level of perception. Teachers every class adapted to various techniques and appropriative methods of teaching dimensions of the classroom. Geography subject is broad and wide elaborate of science of earth. This paper will be examined of innovative methods of teaching geography of higher primary government and private school teachers of Vijayapura city. The investigator has formulated of innovative methods of teaching geography questioner. The questioner has consist of 25 items namely strongly agree, agree and disagree. The study has focused on population of 50 it is consist of higher primary government and private school social science teachers. This study will be investigated how much of teachers involvement of teaching and classroom learning activities conducted of themselves.

INTRODUCTION
Education is a most powerful agency for change of society and development of any nation, so effective teaching is very essential. Teaching learning process is very complexity, unique, and dynamic. Hence teacher has added multidisciplinary teaching methods, because learners learning interest, attention and involvement are unique, every class room teachings are based on helping pupil's intellectual development from one level to another in a more sustainable changes of behaviours. Traditional teaching method is an only chalk and talk, one way method of teaching and teacher cantered oriented. This teaching has provided one way sharing of ideas, information and directions for the pupil's achievement.

Teaching is a very dynamic process of transferring information, ideas, concepts and knowledge. The teachers must understand of pupil's maturity, learning interest and level of perception. Teachers every class adapted to various techniques and appropriative methods of teaching dimensions of the classroom. Geography subject is a broad and wide elaborate of science of earth. This paper will be examined of innovative methods of teaching geography of government and private primary school teachers of Vijayapura city. The investigator has formulated of innovative methods of teaching geography questionnaire tool. The questionnaire has consist of 25 items namely strongly agree, agree and disagree. The study has focused on population of 50 it is consist of government and private primary school teachers. This study will be investigated how much of teachers involvement of teaching and classroom innovative learning activities conducted of teachers. Innovative teaching is necessary for the present and future of education to help students to reach their full potential. Higher primary education should serve the long term intellectual needs of the student, for example, whether providing new material by teachers helped the student to gain new insights or opened up new channels of intellectual stimulation or enhanced student's essential and creative thinking power?. Innovative teaching is a necessity for all teachers in order to meet the educational needs of the new generations. However, teachers' competency for innovative teaching is a key factor influencing innovative teaching performance. Some research points out that many teachers lack competencies for innovative teaching.

Geography as a subject, should give the knowledge explaining the functional-spatial relations and the physiognomic characteristics of the earth surface on the basis of interactions between nature and population. In many educational systems this subject has found its place as the base of general culture, it represents the path of students entrance into the world around us, but it has big educational value because it gives knowledge to the world - today, and it also anticipates the possible situations and problems of the global world in which they will find themselves in few years from now. Quality changes in daily teaching are very possible on the assumption of a new role of the teacher among the students - that teacher is not only the lecturer, transmitter of information, or sometimes questioner of facts learned in a passive way. On the contrary, the effective way of learning is based on the activity of the students, on their work on specific theme or problem, on group work, on the work under the guidance of the teacher, on the work using new technologies.

Today we are living in an information society. Information has become the lifeblood of complex industrial societies and is growing in importance day-by-day. Rapid changes in technology and communication have

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raised the need for acquiring new skills and knowledge in present day work environment. Therefore, we are experiencing now what may be termed as the push of technology and its impact on information handling. When we look back on the notable achievement of this century, we can identify certain landmarks, which become the passwords of respective periods.

WHAT IS INFORMATION TECHNOLOGY?

The term information communication is a recent and comprehensive term. The terms Information Technology in English, 'Informatique' in French and Informative in Russian encompass the nation of information handling in its strictest sense. "Information technology is a new science of collecting, storing, processing and transmitting information."

The word Information Technology is a combination of two words. One is 'Information' and the other is 'Technology.' Information means knowledge, it can be a bit or a para or a page. In addition, dictionary definition of technology is the systematic application of scientific and other organized knowledge and skills to practical tasks by the use of computers and communication.

MEANING OF INNOVATIVE TEACHING

Innovation is defined as "the process of making changes to something established by introducing something new." It applies to "…radical or incremental changes to products, processes or services." Over the years there have been many changes in the way education is designed and delivered in parts of the world.

A learning environment includes the physical, social, and pedagogical context in which learning occurs. An innovative environment supports strengths-based teaching and learning. It offers students and teachers flexibility, agency, ubiquity, and connectedness.

METHODS OF TEACHING GEOGRAPHY

Teaching methods are very useful to impart the geographical knowledge to the students. The teacher of geography should understand the psychological requirements of the student and the method of teaching has to be modified accordingly. Various methods are employed in geography teaching. The geography teacher has to establish an association of the known things with the unknown and help the student to acquire further knowledge. Therefore geography teacher has to know the previous knowledge of the student. Before using the particular method the geography teacher has to think over objectives of geography curriculum of the subject unit planning annual planning and dynamic change in the subject. The geography teacher should select the proper methods of teaching. Methods of teaching should be adopted according to the 'nature of units to be taught otherwise the teaching will not be effective. It is quite likely that the teacher will be required to use more than one method while teaching some units.

OBJECTIVES OF THE STUDY

1. To identify the innovative methods of teaching geography of primary school teachers.
2. To study the innovative methods of teaching geography of Government primary school teachers.
3. To find out the innovative methods of teaching geography of private primary school teachers.
4. To find out the innovative methods of teaching geography of male and female primary school teachers.

HYPOTHESES OF THE STUDY

1. There is no significant difference in innovative methods of teaching geography among government and private primary school teachers.
2. There is no significant difference in innovative methods of teaching geography among male and female primary school teachers.

STATEMENT OF THE PROBLEM

"Innovative Methods of Teaching Geography- A Perspective from School Teachers of Vijayapura City"

SCOPE OF THE STUDY

The scope of the study was covered to government and private school teachers in Vijayapura city. The scope further restricted to only the areas like innovative methods of teaching geography. However, teachers working in government, private, male and female of the purview of the present study.

TOOLS USED IN THE STUDY

To test the hypotheses formulated for the study, investigator has formulated of questionnaire and consist of 25 items three point scale to be used.

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THE SAMPLE

In the selection of the sample due representation was given to gender and type of the schools. The random sampling technique was used in the selection of the sample from the around Vijayapura city. A total 50 governments and private school teachers were selected the school wise break-up of the sample is given below:

SCHOOL TEACHERS (N=50)

Government School Teachers
25

Male **(13)** **Female** **(12)**

Private School Teachers
25

Male **(12)** **Female** **(13)**

COLLECTION OF DATA

The principal investigator has visited various government and private primary schools of Vijayapura city. The directions were clearly given to the teachers before distributing the tool. The investigator administered a tool i.e., innovative methods of teaching geography subject for primary school teachers. They have to responded on three point scale i.e., Strongly Agree, Agree Disagree. Hence, teachers are freely read and understanding the each statement of the tool and put the mark of answer in the appropriate place of the tool. Some teachers have immediately completed and given to the investigator. The principal investigator is visited next day of the specified schools and completing the questionnaire was collected back from the teachers.

RESEARCH DESIGN

The present study is the descriptive study where a survey was undertaken to measure the scores on innovative methods of teaching geography of government and private primary schools teachers of Vijayapura city. Score relating to innovative methods of teaching geography (high and low) of 50 teachers in Vijayapura city constituted the data for the present study. The data were subjected to statistical treatment in pursuance of objectives of the study null hypotheses.

STATISTICAL TECHNIQUES EMPLOYED

For the present study following statistical technique were employed. Descriptive statistics were used and ‘t’ values were calculated. ‘t’ test was used to find the signification of difference in government and private primary school teachers towards innovate methods of teaching geography.

ANALYSIS OF DATA AND RESULT

The data generated for the present study were analyzed using appropriate statistical techniques. Then the data were interpreted and relevant and important conclusions were drawn. The results thus obtained were tabulated and conclusions were drawn in the following way.

1. **There is no significant difference in innovative methods of teaching geography among government and private primary school teachers.**

Table No.1

Type of School	N	M	SD	T- Value	Significant
Government School Teachers	25	91.14	15.99	11.4432	S
Private School Teachers	25	116.95	20.78		

‘t’ value is significant at significance level 0.01

The results as shown in table No.1 shows the responses of government and private primary school teachers regarding the innovative methods of teaching of geography, that there was significant difference in innovate methods of teaching geography between the government and private primary school teachers, at significance level 0.01. So, the obtained value becomes significant and hence we reject the original hypothesis and accept the alternate hypothesis. But it is observed that a mean value of 25.81 is in the favour of private primary school teachers, that the innovate methods of teaching geography, private primary school teachers have high using towards innovative methods of teaching geography when compared with the government primary school teachers.

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2. There is no significant difference in innovative methods of teaching geography among male and female primary school teachers.

Table No.2

Type of Gender	N	M	SD	T- Value	Significant
Male	25	82.22	16.43	9.3512	S
Female	25	90.51	19.36		

't' value is significant at significance level 0.01

The results as shown in table No.2 shows the responses of male and female primary school teachers regarding the innovative methods of teaching of geography, that there was significant difference in innovate methods of teaching geography between the male and female primary school teachers, at significance level 0.01. So, the obtained value becomes significant and hence we reject the original hypothesis and accept the alternate hypothesis. But it is observed that a mean value of 8.29 is in the favour of female primary school teachers, that the innovate methods of teaching geography, female primary school teachers have high using towards innovative methods of teaching geography when compared with the male primary school teachers.

FINDINGS

1. The using of innovative methods of teaching geography of private primary school teachers have high, when compared with the innovative methods of teaching geography of government primary school teachers.
2. The using of innovative methods of teaching geography of female primary school teachers have high, when compared with the innovative methods of teaching geography of male primary school teachers.

CONCLUSION

The present study to examine the government and private primary school teachers using of the innovative methods of teaching geography, hence that the innovative approaches to teaching and learning are needed to embrace study environments from local to global scales, for various reasons: empowerment in learning to excite and fascinate, technology providing potent tools and solutions to explain complex problems of the present world, enhancing learning processes, good classroom practice and building suitable training approaches. It is important to be aware that the media is not the crucial factor for learning achievement, but the pedagogic approaches employed. The use of digital-earth tools can substantially enhance learning strategies and achievements when applied according to suitable, relevant and meaningful learning and teaching methods, such as active, student centered learning. In the case of geo-media, the development of spatial thinking and spatial citizenship as educational concepts leads those concerned to holistic learning experiences.

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STUDENTS' PERCEPTION TOWARDS ONLINE COMPETITIVE EXAM: A STUDY WITH REFERENCE TO UDUPI TALUK

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ABSTRACT
Today, technological development has given a new lease of life in language and teaching field particularly in terms of evaluation, some colleges in India conduct online examination using computer based test. Traditionally, testing in a class involves paper based test which is familiar to students. Researcher made this paper with an intension to exhibit the student's perception towards online examination, to know the satisfaction level on current online examination and identify the difference of online and offline examination. A substantial number of students have been conducted to compare both of the tests. The researcher investigated what activities were performed by the students throughout the tests, what kind of multiple choice tests the students prefer to do, and what the positive and negative side of those tests. The data was collected by questionnaires', interview, observation and quiz. The total samples collected 100 covering area in Udupi Taluk.

Keywords: Online exam, Satisfaction, Perception, Internet Based exam

INTRODUCTION
The examination plays an important role in social life, which is an important mean of evaluating the ability of people. The traditional way of examination with paper has occupied faculty much time and energy. Especially in the remote network teaching, this way did more and more not adopt to the demand of education information and modernization. Online examination from the original examination computer aided to online examination is based on computer system, unit current online examination based on web, its technology and practical application are also constantly developing. And the remote education will play a significant role in the field of education in the future, which also promotes the further development of the online examination system technology with broad prospects**.**

RESEARCH OBJECTIVES
- To exhibit the students' perception towards online examination
- To know the satisfaction level on current online examination
- To identify the difference of online and offline examination**.**

RESEARCH METHODOLOGY
Sampling
For the purpose of the study the researchers used stratified random sampling technique. The researcher personally contacted 100 respondents in and around Udupi Taluk.

Tools used for the study
Present study is based on primary and secondary data. Secondary data was collected from books, journals, magazines and internet. Primary data was collected by the researchers through a structured questionnaire method. Likert's 5-point scale was used for few questions. Simple statistical tools were used for interpreting data & were presented by using tables and diagrams.

HYPOTHESIS
H_0: There is no significant relationship between residential status of students and their satisfaction level towards online examination

H_1: There is a significant relationship between residential status of students and their satisfaction level towards online examination.

SIGNIFICANCE OF THE STUDY
The study is basically conducted to know how students perceive the online examination. The perception of students may vary under different circumstances. From this study, we have a better understanding of the students' perception towards online examination. The researchers made an attempt to understand the students' perception regarding online examination in and around Udupi Taluk and get to know the variables affecting their perception.

LITERATURE REVIEW

According to case study by Ralph, Buskirk, and Schmidt (2007) regarding the use of online projects students in favor of online projects indicated that the accessibility to the professor for fast and easy feedback was a great asset. Furthermore, the study revealed that when implementing Technology students were concerned with the expense of the technology, the necessity for internet access, and the reliability of the technology.

Steinman (2007) also found that "many students choose to enroll in online courses and the demand for online courses is high. Taking an online course can provide educational experience that would otherwise be unavailable, especially for students who live in rural areas and do not have convenient access to schools." Rowh (2007) indicated that "online courses offer convenient learning and those students who take online courses are working hard. They're just doing it at their own pace, on a schedule and in a setting that works for them.

Walker (2007) indicates that the "widespread availability of computer and the Internet provide considerable enrichment in terms of variety of material and format for presentation over what was possible with the old correspondence courses". The Chronicle for Higher education (2007) reported that a university stated that they "use education to add on to their curriculum, not as the main basis." This lends to the implementation of an online exam into a traditional classroom where students still get the face-to-face interaction with the instructor and classmates but the control of time and location take their exams.

FINDINGS OF THE STUDY

The study describes the personal characteristics of the respondent students i.e., education of the students, gender, etc. Here, the female students are more than male students. The objective was to exhibit the students' perception towards online examination, to know the current level of satisfaction towards online examination and identify the difference between online and offline examinations. It is also observed that some of the factors causing dissatisfaction are regarding network connectivity, and comfort level of online examination.

Table1: Sample size

Sex	No. of respondents
Female	59
Male	41
Total	100

Source: Primary data

Inference: In the survey conducted, out of 100 respondents, 59 respondents were female and the rest 41 were male.

Table 2: Perception towards infrastructure facility in online exam centers

Infrastructure	No. of respondents In percentage(%)
Excellent	27
Good	41
Average	24
Poor	5
Very poor	3
Total	100

Source: Primary data

Inference: The respondents were asked to rate the infrastructure facilities provided in the online examinations. Out of the 100 respondents, majority of 41% respondents rated the facilities as good, while only 3%of respondents regarded the facility as very poor.

Table 3: Network connectivity in online exam centers

Network	Percentage of respondents (%)
Best speed with connectivity	23
Arising problems once or twice	17
Good connectivity	34
No problem	19
Often arising problem	7
Total	100

Source: Primary data

Inference: As per the table, 57% of respondents felt that the network connectivity is good whereas 7% felt that the network connectivity often had problems.

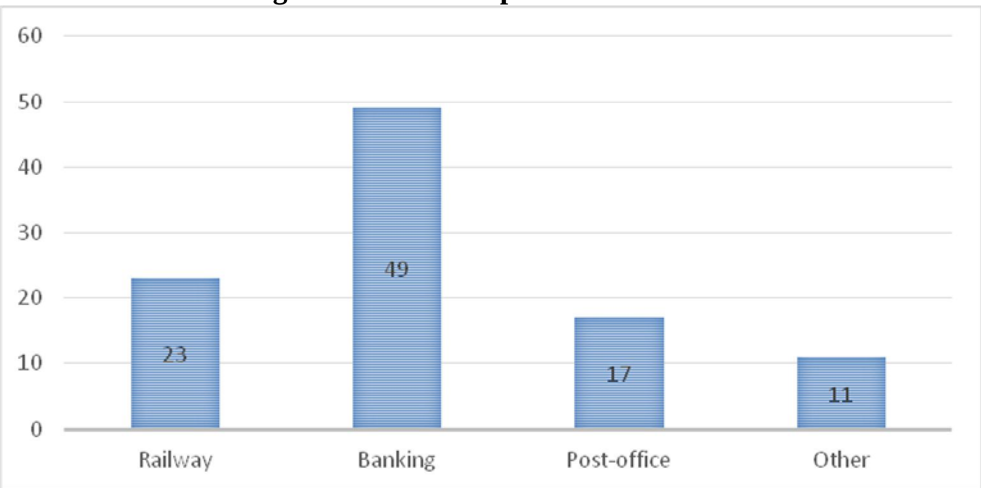
Table 4: comfort level of answering online examination

Comfort level	No .of respondents
Excellent	27
Good	41
Average	23
Poor	6
Bad	3
Total	100

Source: Primary data

Inference: The above table indicates that 27% excellent, 41% are good, 23% are an average, 6% are poor and remaining 3% are bad.

Table 5: Programme wise acceptance of online examination



Source: Primary data

Inference: The 49% of respondents prefer banking exam through online. However, respondents not preferred railway and post office online exams.

Table7: Comparison of Satisfaction level between online& offline examinations

Satisfaction	Satisfaction level of respondents in online examinations	Satisfaction level of respondents in offline examinations
Satisfied	60	56
Neutral	22	20
Dissatisfied	18	24
Total	100	100

Source: primary data

TESTING OF HYPOTHESIS

H_0: There is no significant relationship between residential status of students and their satisfaction level towards online examination.

H_1: There is a significant relationship between residential status of students and their satisfaction level towards online examination.

Table 9: Relationship between Residential status and satisfaction level of online examination

Residential status/level of satisfaction	satisfied	Neutral	dissatisfied	Total
Urban	39	13	11	63
Rural	21	9	7	37
Total	60	22	18	100

Source: Primary data

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Table10: Chi square analysis

Chi square value	Table value	Total
0.275	5.99	No Significant

Source: primary data

Chi-square analysis shows that the alternative hypothesis**, '**There is a significant relationship between residential status of students and their satisfaction level towards online examination' is rejected. Hence the alternative hypothesis is rejected and null hypothesis is accepted. Thus, we conclude that there is no significant relationship between residential status of students and their satisfaction level towards online examination.

Table11: Administration of the online examination

Administration	Percentage
Excellent	19%
Good	39%
Average	27%
Poor	11%
Bad	4%
Total	100%

Source: Primary data

Inference: Out of the 100 respondents, 39% respondents have rated the online exam administration as good.

CONCLUSION

Online examination systems seek to efficiently evaluate the exam partakers thoroughly through a fully automated system that not only saves time but also give fast results. The online examination system helps to completely automate the old manual procedure of conducting exams. Major highlight of using a web based exam software or an online examination system is that it gives a high level of transparency as opposed to be traditional method. Hence, online examination is beneficial to both the participant and the conductor of examination.

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A STUDY ON APPLICABILITY OF BALANCED SCORECARD AND PERFORMANCE OF IT COMPANIES IN BENGALURU CITY

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ABSTRACT
Balanced Scorecard (BSC) is the technique which allows organizations to overpass the space amongst strategies and operations and it is used extensively for aligning business operations with strategies and vision of companies to improve standards of business and monitor performance of companies against their stated objectives. More than two fifth of employees viewed that the level of applicability of balanced scorecard in IT companies is moderate. Significant is prevailing in applicability of balanced scorecard in IT companies and profile of employees. Applicability of balanced scorecard has positive, significant and moderate relation with performance of IT companies. Therefore, IT companies should utilize balanced scorecard for planning and they must group all perspectives of balanced scorecard for ensuring balance. Further, they should employ balanced scorecard for framing strategy and execution.

Keywords: Balance Scorecard, IT Companies, Performance

1. INTRODUCTION
Conventionally, most of companies use return on capital, profit margin and earning per share as their performance assessment measures. Because of dynamics of business, these measures are considered as one-dimensional, focused narrowly, incomplete and backward viewing of companies (Hoque et al 2001). To address, these problems, Kaplan and Norton (1992) introduce the skeleton of Balanced Scorecard (BSC) that evaluates performance of company comprehensively and accurately. Balanced Scorecard (BSC) is the technique which allows organizations to overpass the space amongst strategies and operations (Anand, 2014). It includes non financial and financial components from different perspectives in to a one unique structure (Pineno and Cristini, 2003) which is used widely in private sector companies, NGOs and government sector across the world for aligning business operations with strategies and vision of companies to improve standards of business and monitor performance of companies against their stated objectives (Singh and Kumar, 2007).

Indian Information Technology (IT) sector is playing a significant role in putting India in the global IT map and it has highest reputation across the word and it creates most valuable brand image over the period of years (Vijayasri, 2013). IT sector is a very significant contributor to Indian economy in terms of domestic income generation, employment and export earnings and it has amazing potential to accelerate economic growth of India further (Singh and Kaur, 2017). To be competitive in domestic and international IT markets, IT companies have to perform outstandingly since their brand value and profitability are highly depending on their performance. Measurement of performance of IT companies periodically is highly essential to improve their strategies, performance and compositeness. Hence, it is essential to study applicability of balanced scorecard and performance of IT companies in Bengaluru city.

2. REVIEW OF LITERAURE
Farooq and Hussain (2011) found that public sector companies used balanced scorecard to appraise their performance and applicability of balanced scorecard was positively associated with performance of companies. Bentes et al (2012) concluded that balanced scorecard was a tool used to evaluate performance of organization and employees and effectiveness of business strategies of organizations.

Asa et al (2013) revealed that balanced scorecard was utilized to measure existing business strategy and business performance of firms in both short and long runs and it was also used to improve performance of employees. Khatoon and Farooq (2014) showed that positive and significant relation exit amongst balanced scorecard and performance of companies and performance was depending upon four perspectives of balanced scorecard.

Umasankar and Shani (2015) showed that IT firms used balanced scorecard to evaluate their organizational and employees' performance through financial, community, internal business process, learning and innovation, environment and customer perspectives. Sahiti et al (2016) found that balanced scorecard had positive and significant impact on performance and profitability of companies.

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Ondieki (2017) concluded that four components of balanced scorecard had positive and significant impact on performance of organization and employees. Al-Adwan (2018) revealed that balanced scorecard was used to assess non financial and financial performance of manufacturing companies.

3. METHODOLOGY

The present study is done in Bengaluru city. Employees of IT companies are chosen by using simple random sampling method. Data are collected from 325 employees of IT companies through questionnaire method. Percentages are worked out to know profile of employees of IT companies. Mean and standard deviation are computed to understand applicability of balanced scorecard in IT companies. t-test and ANOVA test are done to scrutinize difference amongst applicability of balanced scorecard in IT companies and profile of employees. Correlation analysis is carried out to examine relation amongst applicability of balanced scorecard and performance of IT companies.

4. RESULTS AND DISCUSSION

4.1. PROFILE OF EMPLOYEES OF IT COMPANIES

The profile of employees of IT companies is given in Table-1. The results explain that 58.15 per cent of employees of IT companies are males, while, 41.85 per cent of them are females and 30.77 per cent of employees of IT companies are belonging to age category of 31 – 35 years, while, 9.54 per cent of them are belonging to age category of 41 – 45 years. The results disclose that 29.54 per cent of employees of IT companies are possessing B.E. while, 10.77 per cent of them are possessing M.Tech. and 32.62 per cent of employees of IT companies are software programmers, while, 18.15 per cent of them are software testers. And 36.31 per cent of employees of IT companies are bearing 4 – 6 years of work experience, while, 13.84 per cent of them are bearing 10 – 12 years of work experience.

Table-1: Profile of Employees of IT Companies

Profile	Number of Employees	Percentage
Gender		
Male	189	58.15
Female	136	41.85
Age Category		
21 – 25 years	51	15.69
26 – 30 years	74	22.77
31 – 35 years	100	30.77
36 – 40 years	69	21.23
41 – 45 years	31	9.54
Education		
B.E.	96	29.54
M.E.	52	16.00
B.Tech.	77	23.69
M.Tech.	35	10.77
M.C.A.	65	20.00
Designation		
Software Developer	84	25.85
Software Designer	76	23.38
Software Programmer	106	32.62
Software Tester	59	18.15
Work Experience		
1– 3 years	92	28.31
4 – 6 years	118	36.31
7 – 9 years	70	21.54
10 – 12 years	45	13.84

4.2. APPLICABILITY OF BALANCED SCORECARD IN IT COMPANIES

The view of employees on applicability of balanced scorecard in IT companies is given in Table-2.

Table-2: View of Employees on Applicability of Balanced Scorecard in IT Companies

Applicability of Balanced Scorecard	Mean	Standard Deviation
My company adopts balanced scorecard effectively	3.93	1.04
My company utilizes balanced scorecard for planning	3.33	1.17
My company uses four perspectives of balanced scorecard for performance measurement	3.96	1.02
My company groups all perspectives of balanced scorecard for ensuring balance	3.25	1.14
My company has reporting system for balanced scorecard to check progress of strategy	3.88	1.08
My company monitors the measures of balanced scorecard and takes proper actions	3.91	1.05
My company uses balanced scorecard for employees to make them to realize their responsibilities	3.86	1.12
My company applies balanced scorecard to connect tactical operations with strategic objectives	3.82	1.11
My company employs balanced scorecard for framing strategy and execution	3.37	1.16
My company uses balanced scorecard for long run success	3.98	1.01

The employees are agreed with their companies adopt balanced scorecard effectively, their companies use four perspectives of balanced scorecard for performance measurement, their companies have reporting system for balanced scorecard to check progress of strategy, their companies monitor the measures of balanced scorecard and takes proper actions, their companies use balanced scorecard for employees to make them to realize their responsibilities, their companies apply balanced scorecard to connect tactical operations with strategic objectives and their companies use balanced scorecard for long run success, while, they are neutral with their companies utilize balanced scorecard for planning, their companies group all perspectives of balanced scorecard for ensuring balance and their companies employ balanced scorecard for framing strategy and execution.

4.3. PROFILE OF EMPLOYEES AND THEIR VIEW ON APPLICABILITY OF BALANCED SCORECARD IN IT COMPANIES

The distribution of employees based on their view on applicability of balanced scorecard in IT companies is given in Table-3. Mean ± SD is used to divide the level of applicability of balanced scorecard in IT companies into low, moderate and high. Mean value is 37.29 and SD value is 5.73.

Table-3: Distribution of Employees Based on their View on Applicability of Balanced Scorecard in IT Companies

Level of Applicability of Balanced Scorecard	Number of Employees	Percentage
Low	73	22.46
Moderate	140	43.08
High	112	34.46
Total	**325**	**100.00**

Amongst 325 employees, 34.46 per cent of them viewed that the level of applicability of balanced scorecard is high, while, 22.46 per cent of them viewed that it is low.

4.3.1. GENDER and Applicability of Balanced Scorecard

The relation amongst gender of employees and applicability of balanced scorecard is given in Table-4.

Table-4: Gender and Applicability of Balanced Scorecard

Gender	Level of Applicability of Balanced Scorecard			Total	t-Value	Sig.
	Low	Moderate	High			
Male	38 (20.10)	79 (41.80)	72 (38.10)	189 (58.15)	4.870	.000
Female	35 (25.74)	61 (44.85)	40 (29.41)	136 (41.85)		
Total	73 (22.46)	140 (43.08)	112 (34.46)	325 (100.00)	-	-

(The figures in the parentheses are per cent to total)

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Amongst 189 employees who are male, 38.10 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 20.10 per cent of them viewed that it is low. Amongst 136 employees who are female, 29.41 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 25.74 per cent of them viewed that it is low.

The t-value is 4.870 and it is significant at one per cent level elucidating significant difference prevails in applicability of balanced scorecard amongst gender of employees.

4.3.2. Age CATEGORY and Applicability of Balanced Scorecard

The relation amongst age category of employees and applicability of balanced scorecard is given in Table-5.

Table-5: Age Category and Applicability of Balanced Scorecard

Age Category	Level of Applicability of Balanced Scorecard			Total	F-Value	Sig.
	Low	Moderate	High			
21 – 25 years	12 (23.53)	21 (41.18)	18 (35.29)	51 (15.69)	6.445	.000
26 – 30 years	12 (16.22)	31 (41.89)	31 (41.89)	74 (22.77)		
31 – 35 years	29 (29.00)	46 (46.00)	25 (25.00)	100 (30.77)		
36 – 40 years	20 (28.99)	27 (39.13)	22 (31.88)	69 (21.23)		
41 – 45 years	0 (0.00)	15 (48.39)	16 (51.61)	31 (9.54)		
Total	73 (22.46)	140 (43.08)	112 (34.46)	325 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 51 employees who are belonging to age category of 21 – 25 years, 35.29 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 23.53 per cent of them viewed that it is low. Amongst 74 employees who are belonging to age category of 26 – 30 years, 41.89 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 16.22 per cent of them viewed that it is low. Amongst 100 employees who are belonging to age category of 31 – 35 years, 25.00 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 29.00 per cent of them viewed that it is low.

Amongst 69 employees who are belonging to age category of 36 – 40 years, 31.88 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 28.99 per cent of them viewed that it is low. Amongst 31 employees who are belonging to age category of 41 – 45 years, 51.61 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, none of them viewed that it is low.

The F-value is 6.445 and it is significant at one per cent level elucidating significant difference prevails in applicability of balanced scorecard amongst age category of employees.

4.3.3. EDUCATION AND APPLICABILITY OF BALANCED SCORECARD

The relation amongst education of employees and applicability of balanced scorecard is given in Table-6.

Table-6: Education and Applicability of Balanced Scorecard

Education	Level of Applicability of Balanced Scorecard			Total	F-Value	Sig.
	Low	Moderate	High			
B.E.	35 (36.46)	37 (38.54)	24 (25.00)	96 (29.54)	10.232	.000
M.E.	16 (30.77)	25 (48.08)	11 (21.15)	52 (16.00)		
B.Tech.	7 (9.09)	42 (54.55)	28 (36.36)	77 (23.69)		
M.Tech.	3 (8.57)	14 (40.00)	18 (51.43)	35 (10.77)		
M.C.A.	12 (18.46)	22 (33.85)	31 (47.69)	65 (20.00)		
Total	73 (22.46)	140 (43.08)	112 (34.46)	325 (100.00)	-	-

(The figures in the parentheses are per cent to total)

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Amongst 96 employees who are possessing B.E., 25.00 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 36.46 per cent of them viewed that it is low. Amongst 52 employees who are possessing M.E., 21.15 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 30.77 per cent of them viewed that it is low. Amongst 77 employees who are possessing B.Tech, 36.36 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 9.09 per cent of them viewed that it is low.

Amongst 35 employees who are possessing M.Tech, 51.43 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 8.57 per cent of them viewed that it is low. Amongst 65 employees who are possessing M.C.A., 47.69 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 18.46 per cent of them viewed that it is low.

The F-value of 10.232 and it is significant at one per cent level elucidating significant difference prevails in applicability of balanced scorecard amongst education of employees.

4.3.4. DESIGNATION AND APPLICABILITY OF BALANCED SCORECARD

The relation amongst designation of employees and applicability of balanced scorecard is given in Table-7.

Table-7: Designation and Applicability of Balanced Scorecard

Designation	Level of Applicability of Balanced Scorecard			Total	F-Value	Sig.
	Low	Moderate	High			
Software Developer	18 (21.43)	34 (40.48)	32 (38.09)	84 (25.85)	8.031	.000
Software Designer	18 (23.69)	30 (39.47)	28 (36.84)	76 (23.38)		
Software Programmer	23 (21.70)	52 (49.06)	31 (29.24)	106 (32.62)		
Software Tester	14 (23.73)	24 (40.68)	21 (35.59)	59 (18.15)		
Total	73 (22.46)	140 (43.08)	112 (34.46)	325 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 84 employees who are software developers, 38.09 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 21.43 per cent of them viewed that it is low. Amongst 76 employees who are software designers, 36.84 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 23.69 per cent of them viewed that it is low.

Amongst 106 employees who are software programmers, 29.24 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 21.70 per cent of them viewed that it is low. Amongst 59 employees who are software testers, 35.59 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 23.73 per cent of them viewed that it is low.

The F-value of 8.031 and it is significant at one per cent level elucidating significant difference prevails in applicability of balanced scorecard amongst designation of employees.

4.3.5. WORK EXPERIENCE AND APPLICABILITY OF BALANCED SCORECARD

The relation amongst work experience of employees and applicability of balanced scorecard is given in Table-8.

Table-8: Work Experience and Applicability of Balanced Scorecard

Work Experience	Level of Applicability of Balanced Scorecard			Total	F-Value	Sig.
	Low	Moderate	High			
1 – 3 years	27 (29.35)	36 (39.13)	29 (31.52)	92 (28.31)	7.909	.000
4 – 6 years	28 (23.73)	47 (39.83)	43 (36.44)	118 (36.31)		
7 – 9 years	10 (14.29)	36 (51.43)	24 (34.28)	70 (21.54)		
10 – 12 years	8 (17.78)	21 (46.67)	16 (35.55)	45 (13.84)		

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Total	73 (22.46)	140 (43.08)	112 (34.46)	325 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 92 employees who are bearing 1– 3 years of work experience, 31.52 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 29.35 per cent of employees viewed that it is low. Amongst 118 employees who are bearing 4– 6 years of work experience, 36.44 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 23.73 per cent of them viewed that it is low.

Amongst 70 employees who are bearing 7– 9 years of work experience, 34.28 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 14.29 per cent of them viewed that it is low. Amongst 45 employees who are bearing 10– 12 years of work experience, 35.55 per cent of employees viewed that the level of applicability of balanced scorecard is high, while, 17.78 per cent of them viewed that it is low.

The F-value is 7.909 and it is significant at one per cent level elucidating significant difference prevails in applicability of balanced scorecard amongst work experience of employees.

4.4. RELATION AMONGST APPLICABILITY OF BALANCED SCORECARD AND PERFORMANCE OF IT COMPANIES

The relation amongst applicability of balanced scorecard and performance of IT companies was examined through correlation analysis and the results are given in Table 9.

Table-9: Relation amongst Applicability of Balanced Scorecard and Performance of IT Companies

Particulars	Correlation Coefficient
Applicability of Balanced Scorecard and Performance of IT Companies	0.63**

** Significance at 1% level

The value of correlation coefficient amongst applicability of balanced scorecard and performance of IT companies is 0.63, it is moderately and positively associated with each other and it is significant at one per cent level.

5. CONCLUSION

The foregoing analysis demonstrate that more than two fifth of employees viewed that the level of applicability of balanced scorecard in IT companies is moderate. Significant is prevailing in applicability of balanced scorecard in IT companies and profile of employees. Applicability of balanced scorecard has positive, significant and moderate relation with performance of IT companies. Therefore, IT companies should utilize balanced scorecard for planning and they must group all perspectives of balanced scorecard for ensuring balance. Further, they should employ balanced scorecard for framing strategy and execution.

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A STUDY ON CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES AND LOYALTY OF CUSTOMERS IN STAR HOTELS IN MADURAI CITY

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ABSTRACT
Presently, the hotel industry in India exhibits a considerable rise in competition, needing hotels looking for maintaining their significance and drawing customers to consider models namely customer relationship management to make sure quality of service and satisfaction of customers. Customer relationship management is also attempted to create strong long term relations that make customers loyal towards hotels. More than two fifth of customers opine star hotels have moderate level of customer relationship management practices. Significant difference is there between customer relationship management practices in star hotels and profile of customers. Customer relationship management practices in star hotels have significant, positive and moderate relationship with loyalty of customers towards star hotels. To improve customer relationship management practices and loyalty of customers, star hotels should frequently inform customers about new products and services and they must take minimal time to solve grievances of customers.

Keywords: Customer, Customer Relationship Management, Loyalty, Star Hotels

1. INTRODUCTION
Customer relationship management is one of the efficient business strategies to get and manage precious relationship of customers (Adenbajo, 2003) and it is useful to find profitable customers, allots time and concentration to expand relation with customers through personalized management, flexible decision making and efficient services through different channels to them (Milovic, 2012). Customer relationship management requires customer oriented business principles, values and traditions along with competent marketing strategies (Tim et al 2011). Customer relationship management is a set of attributes that creates interaction between organization and customers for providing exceptional services to customers and quality management (Brotherton, 2003).

Presently, the hotel industry in India exhibits a considerable rise in competition, needing hotels looking for maintaining their significance and drawing customers to consider models namely customer relationship management to make sure quality of service and satisfaction of customers (Ramaj, 2015). Customer relationship management is also attempted to create strong long term relations that make customers loyal towards hotels (Mohammed et al 2014). The effective execution of customer relationship management practices will benefit hotels through increase of sales, segmentation of market, product and services customization, information access and retention and loyalty of customers (Verma and Chandhuri, 2009). Among various types of hotels, star hotels provide superior quality of products and services, customized services, attracting amenities and entertainment facilities and they are highly concentrating on creating and managing best relations with their customers through effective customer relationship management practices in order to attract and keep customers intact with them. Therefore, it is important to study customer relationship management practices and loyalty of customers in star hotels.

2. REVIEW ON EARLIER STUDIES
Dominici and Guzzo (2010) found that customer relationship management practices assisted hotels to understand requirements and manage good relation with customers and these practices affected satisfaction and future intention of customers to stay in the same hotels. Wu and Li (2011) concluded that customer relationship management practices were one of efficient means to develop and expand customer base and it increased satisfaction and loyalty of guests and profit of hotel.

Ahmad et al (2012) revealed that effective adoption of customer relationship management practices by hotel were increasing trust, needs, satisfaction, loyalty and retention of customers and no significant difference were there among customer relationship management practices and demographics of customers. Ejaz et al (2013) indicated that practices of customer relationship management were influencing hotel preference, satisfaction and retention of customers.

Singh (2014) showed that practices of customer relationship management were affecting choice of hotel, satisfaction about hotel services and revisiting behaviour of customers to a particular hotel. Chadha (2015)

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found that customer relationship management practices of Taj hotel had moderate and positive impact on satisfaction of guest and in turn on re stay of them and repurchase of products and services.

Malonza and Lucy (2016) concluded that efficient customer relationship management practices were enhancing purchase intention, satisfaction and retention of customers. Orantes-Jimenez et al (2017) revealed that effective and right customer relationship management practices had positive and significant relation with loyalty, retention and profit of customers.

Srivastava et al (2018) indicated that systems and practices of customer relationship management provided superior quality of products and services at low prices that increased satisfaction and loyalty of customers towards hotels.

3. METHODOLOGY

Madurai city is chosen for the present study. Customers of star hotels are selected by using convenience sampling method and structured questionnaire is used to gather data from 320 customers. Percentages are calculated to know profile of customers and mean and standard deviation are worked out for customer relationship management practices in star hotels. t-test and ANOVA test are done to scrutinize difference among profile of customers and customer relationship management practices in star hotels. The correlation analysis is used to study relation among customer relationship management practices and loyalty of customers in star hotels.

4. RESULTS

4.1. PROFILE OF CUSTOMERS

The profile of customers is given in Table-1. The findings explicate that 64.06 per cent of customers are males, whilst, 35.94 per cent of them are females and 30.94 per cent of customers are coming under age category of 36– 45 years, whilst, 10.94 per cent of them are coming under age category of above 55 years.

Table-1: Profile of Customers

Profile	Number of Customers	Percentage
Gender		
Male	205	64.06
Female	115	35.94
Age Category		
Below 25 Years	43	13.44
26 – 35 Years	86	26.87
36 – 45 Years	99	30.94
46 – 55 Years	57	17.81
Above 55 Years	35	10.94
Education		
Informal	71	22.19
School	118	36.87
College	131	40.94
Monthly Income		
Below Rs.30,000	51	15.94
Rs.30,001 – Rs.50,000	120	37.50
Rs.50,001 – Rs.70,000	105	32.81
Above Rs.70,000	44	13.75
Marital Status		
Married	256	80.00
Unmarried	64	20.00

The findings elucidate that 40.94 per cent of customers are possessing college education, whilst, 22.19 per cent of them are possessing informal education and 37.50 per cent of customers are earning monthly income of Rs.30,001 – Rs.50,000, whilst, 13.75 per cent of them are earning monthly income of above Rs.70,000 and 80.00 per cent of customers are married, whilst, 20.00 per cent of them are unmarried.

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4.2. CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The customer relationship management practices in star hotels from customers' point of view are given in Table-2.

Table-2: Customer Relationship Management Practices in Star Hotels

Customer Relationship Management Practices	Mean	Standard Deviation
Star hotels maintain data base of customers	3.94	0.94
Star hotels inform customers about new products and services frequently	3.35	1.04
Star hotels provide personalized services	3.92	0.92
Star hotels response immediately to queries of customers	3.88	1.02
Star hotels give information on offers and discounts to customers	3.90	1.05
Star hotels take very less time to solve grievances of customers	3.33	1.03
Star hotels send greetings on special occasions	3.86	1.08
Star hotels give due respect to customers	3.82	0.99
Star hotels always deliver prompt services to customers	3.38	1.10
Star hotels get feedback from customers regularly	3.84	1.05

The customers are agreed with star hotels maintain data base of customers, star hotels provide personalized services, star hotels response immediately to queries of customers, star hotels give information on offers and discounts to customers, star hotels send greetings on special occasions, star hotels give due respect to customers and star hotels get feedback from customers regularly, while, they are neutral with star hotels inform customers about new products and services frequently, star hotels take very less time to solve grievances of customers and star hotels always deliver prompt services to customers.

4.3. PROFILE OF CUSTOMERS AND CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The distribution of customers based on their views on customer relationship management practices in star hotels is given in Table-3. The customer relationship management practices in star hotels is segregated into low, moderate and high levels on the basis of Mean ± SD. Mean and SD are 33.39 and 3.55 respectively.

Table-3: Distribution of Customers Based on their Views on Customer Relationship Management Practices in Star Hotels

Level of Customer Relationship Management Practices	Number of Customers	Percentage
Low	78	24.38
Moderate	141	44.06
High	101	31.56
Total	320	100.00

The findings clarify that 44.06 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (31.56 per cent) and low (24.38 per cent).

4.3.1. GENDER AND CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The relation among gender of customers and customer relationship management practices in star hotels is given in Table-4.

Table-4: Gender and Customer Relationship Management Practices in Star Hotels

Gender	Level of Customer Relationship Management Practices			Total	t-Value	Sig.
	Low	Moderate	High			
Male	58 (28.29)	83 (40.49)	64 (31.22)	205 (64.06)	6.132	.000
Female	20 (17.39)	58 (50.44)	37 (32.17)	115 (35.94)		
Total	78 (24.38)	141 (44.06)	101 (31.56)	320 (100.00)	-	-

(The figures in the parentheses are per cent to total)

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Amongst 205 male customers, 40.49 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (31.22 per cent) and low (28.29 per cent). Amongst 115 female customers, 50.44 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (32.17 per cent) and low (17.39 per cent).

The t-value of 6.132 is making clear significant difference exits in customer relationship management practices in star hotels among gender of customers at one per cent level.

4.3.2. AGE CATEGORY AND CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The relation among age category of customers and customer relationship management practices in star hotels is given in Table-5.

Table-5: Age Category and Customer relationship management practices in star hotels

Age Category	Level of Customer Relationship Management Practices			Total	F-Value	Sig.
	Low	Moderate	High			
Below 25 Years	7 (16.28)	20 (46.51)	16 (37.21)	43 (13.44)	5.280	.000
26 – 35 Years	22 (25.58)	28 (32.56)	36 (41.86)	86 (26.87)		
36 – 45 Years	22 (22.22)	47 (47.48)	30 (30.30)	99 (30.94)		
46 – 55 Years	17 (29.82)	24 (42.11)	16 (28.07)	57 (17.81)		
Above 55 Years	10 (28.57)	22 (62.86)	3 (8.57)	35 (10.94)		
Total	78 (24.38)	141 (44.06)	101 (31.56)	320 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 43 customers coming under age category of below 25 years, 46.51 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (37.21 per cent) and low (16.28 per cent). Amongst 86 customers coming under age category of 26 – 35 years, 41.86 per cent of customers view star hotels have high level of customer relationship management practices following by moderate (32.56 per cent) and low (25.58 per cent).

Amongst 99 customers coming under age category of 36 – 45 years, 47.48 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (30.30 per cent) and low (22.22 per cent). Amongst 57 customers coming under age category of 46 – 55 years, 42.11 per cent of customers view star hotels have moderate level of customer relationship management practices following by low (29.82 per cent) and high (28.07 per cent). Amongst 35 customers coming under age category of above 55 years, 62.86 per cent of customers view star hotels have moderate level of customer relationship management practices following by low (28.57 per cent) and high (8.57 per cent).

The F-value of 5.280 is making clear significant difference exits in customer relationship management practices in star hotels among age category of customers at one per cent level.

4.3.3. EDUCATION AND CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The relation among education of customers and customer relationship management practices in star hotels is given in Table-6.

Table-6. Education and Customer Relationship Management Practices in Star Hotels

Education	Level of Customer Relationship Management Practices			Total	F-Value	Sig.
	Low	Moderate	High			
Informal	15 (21.13)	23 (32.39)	33 (46.48)	71 (22.19)	6.087	.000

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School	21 (17.80)	59 (50.00)	38 (32.20)	118 (36.87)		
College	42 (32.06)	59 (45.04)	30 (22.90)	131 (40.94)		
Total	78 (24.38)	141 (44.06)	101 (31.56)	320 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 71 customers possessing informal education, 46.48 per cent of customers view star hotels have high level of customer relationship management practices following by moderate (32.39 per cent) and low (21.13 per cent). Amongst 118 customers possessing school education, 50.00 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (32.20 per cent) and low (17.80 per cent). Amongst 131 customers possessing college education, 45.04 per cent of customers view star hotels have moderate level of customer relationship management practices following by low (32.06 per cent) and high (22.90 per cent).

The F-value of 6.087 is making clear significant difference exits in customer relationship management practices in star hotels among education of customers at one per cent level.

4.3.4. MONTHLY INCOME AND CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN STAR HOTELS

The relation among monthly income of customers and customer relationship management practices in star hotels is given in Table-7.

Table-7: Monthly Income and Customer Relationship Management Practices in Star Hotels

Monthly Income	Level of Customer Relationship Management Practices			Total	F-Value	Sig.
	Low	Moderate	High			
Below Rs.30,000	14 (27.45)	23 (45.10)	14 (27.45)	**51 (15.94)**	5.276	.000
Rs.30,001 – Rs.50,000	32 (26.67)	61 (50.83)	27 (22.50)	**120 (37.50)**		
Rs.50,001 – Rs.70,000	16 (15.24)	40 (38.09)	49 (46.67)	**105 (32.81)**		
Above Rs.70,000	16 (36.36)	17 (38.64)	11 (25.00)	**44 (13.75)**		
Total	**78 (24.38)**	**141 (44.06)**	**101 (31.56)**	**320 (100.00)**	-	-

(The figures in the parentheses are per cent to total)

Amongst 51 customers earning monthly income of below Rs.30,000, 45.10 per cent of customers view star hotels have moderate level of customer relationship management practices following by low and high (27.45 per cent). Amongst 120 customers earning monthly income of Rs.30,001 – Rs.50,000, 50.83 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (22.50 per cent) and low (26.67 per cent).

Amongst 105 customers earning monthly income of Rs.50,001 – Rs.70,000, 46.67 per cent of customers view star hotels have high level of customer relationship management practices following by moderate (38.09 per cent) and low (15.24 per cent). Amongst 44 customers earning monthly income of above Rs.70,000, 38.64 per cent of customers view star hotels have moderate level of customer relationship management practices following by low (36.36 per cent) and high (25.00 per cent).

The F-value of 5.276 is making clear significant difference exits in customer relationship management practices in star hotels among monthly income of customers at one per cent level.

4.3.5. Marital Status and Customer Relationship Management Practices in Star Hotels

The relation among marital status of customers and customer relationship management practices in star hotels is given in Table-8.

Table-8. Marital Status and Customer Relationship Management Practices in Star Hotels

Marital Status	Level of Customer Relationship Management Practices			Total	t-Value	Sig.
	Low	Moderate	High			
Married	64 (25.00)	116 (45.31)	76 (29.69)	256 (80.00)	4.460	.000
Unmarried	14 (21.88)	25 (39.06)	25 (39.06)	64 (20.00)		
Total	78 (24.38)	141 (44.06)	101 (31.56)	320 (100.00)	-	-

(The figures in the parentheses are per cent to total)

Amongst 256 married customers, 45.31 per cent of customers view star hotels have moderate level of customer relationship management practices following by high (29.69 per cent) and low (25.00 per cent). Amongst 64 unmarried customers, 39.06 per cent of customers view star hotels have high and moderate levels of customer relationship management practices following by low (21.88 per cent).

The t-value of 4.460 is making clear significant difference exits in customer relationship management practices in star hotels among marital status of customers at one per cent level.

4.4. RELATION AMONG CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES AND LOYALTY OF CUSTOMERS IN STAR HOTELS

The relation among customer relationship management practices and loyalty of customers in star hotels was studied by using correlation analysis and the results are given in Table-9.

Table-9. Relation among Customer Relationship Management Practices and Loyalty of Customers in Star Hotels

Particulars	Correlation Co-efficient
Customer Relationship Management Practices and Loyalty of Customers in Star Hotels	0.52**

** Significance at 1% level

The correlation coefficient among customer relationship management practices and loyalty of customers in star hotels is 0.52, which is positively, significantly and moderately correlated at one per cent level.

5. CONCLUSION

The findings of this research reveal that more than two fifth of customers opine star hotels have moderate level of customer relationship management practices. Significant difference is there between customer relationship management practices in star hotels and profile of customers. Customer relationship management practices in star hotels have significant, positive and moderate relationship with loyalty of customers towards star hotels. To improve customer relationship management practices and loyalty of customers, star hotels should frequently inform customers about new products and services and they must take minimal time to solve grievances of customers. Additionally, star hotels should always deliver prompt services to customers timely.

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INTERNATIONAL FRAMEWORK REGULATING CLIMATE CHANGE AND INDIA'S COMMITMENT

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ABSTRACT
Both the terms Climate Change and Sustainable Development and are interconnected to each other. Climate Change is a natural phenomenon before the human origin. But the climate change due to global warming is attributed due to anthropogenic activities. This has a massive impact on attaining sustainable development. As an initiative of attaining sustainable development, the United Nations Framework Convention on Climate Change was adopted at Rio Summit in 1992. This international treaty laid down the foundation of international legal regime to combat the climate change due to anthropogenic activities releasing greenhouse gases. The UNFCCC was founded on the principle of Common But Differentiated Responsibilities, since historically they contributed significantly to the global warming. To attain this commitment by the Developed Countries, the Kyoto Protocol was adopted in 1997 which laid the first commitment period from 2007-2012 through Carbon Trading, Clean Development Mechanism and Joint Implementation. Kyoto Protocol was followed by Paris Agreement in 2015. The Paris Agreement has up to some extent diluted the principle of Common But Differentiated Responsibilities and imposed towards parallelism. This paper will discuss the international legal regime regulating climate change and India's future responsibility in detail.

INTRODUCTION
In India, in the ancient time, our saints and sages were used to live in the forests or on the mountain as they were very close to the nature as they strongly believe that if we will disturb the Prakriti (the nature) then certainly she won't protect us. They protect and worship and give education to the students regarding the same including the politics and war tactics and techniques. One beautiful quote is there in our Hindu Shastras - " PRAKRITI RAKSHATI RAKSHITAHA". As per the Hindu Shastras, the oldest one in the world, there are five god and goddesses, they are:- Jal (holy water), Vayu (pure air), Prithvi (mother earth), Agni (fire) and Aakash (sky) - we were being taught to protect our environment and nature by worshiping it. We used to protect trees and forests, by considering that each tree is replica of the God ex:- Peepal tree = Lord Vishnu, Banyan tree = trimurti (i.e., Lord Brahma, Vishnu and Mahesh), Bael tree = Lord Shiva, Lotus flower = Goddess Laxmi, etc. Cutting down of these holy tree was the sin and a very big offence hence the person who cut down these tree was being punished or hanged to death. By the lapse of time we have forgotten these virtues because of our greed of making money. In the name of industrialisation and development we have exploited our environment. As we all know that climate change is due to the anthropogenic (manmade) activities because of increased GHGs (Green House Gases) mainly carbon dioxide, methane and nitrous oxides. So finally we have proved that we are solely responsible for the destruction behind the current climate change. We have spoilt our nature to that extent that now the nature is showing its epic mood by extreme weather pattern.

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The climate change as a very serious and herculean problem can be seen and understood as a scientific, a technological, an economic, an ethical or a religious problem. For each and every subject, the definition varies but the perspective will be the one and the same that is " Do Good and will get Good." In fact, climate change is to see it as an environmental problem. The goal of the international climate policy is to prevent dangerous anthropogenic climate change by reducing net GHGs (Greenhouse Gases i.e., Water vapour-H2O, Carbon Diocxide-CO2, Methane-CH4, Ozon-O3, Nitrous Oxides-N2O, Particulate Materials, etc.) emissions, esp. CO2 (carbon) level in the atmosphere of preventing dangerous climate change by complete elimination of net emissions as the Paris Agreement, 2015[1]. But how much we need to reduce emissions at a particular point in time is a function of three factors: 1) the level of increased temperature ; 2) the concentration level necessary to prevent warming from exceeding that temperature limit and 3) choosing the way to achieve concentration level.

CLIMATE CHANGE - A WAR
As we know that there are two types of war for any country. They are internal war and external war. But climate change is an undercover war whose action is devastating and life taking - "A MASSACRES". Any country has got good Act, Pact, Rules, Clause, etc. to combat the internal as well as the external aggression but hardly any country has made concrete rules to combat the climate change or at least to curb climate change. Recently, on

[1] Paris Agreement, 2015 - Art. 4.1.

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May 1st, United Kingdom and followed later by Ireland, declared climate emergency[1]. The term climate change all of a sudden came to us by 'depletion of the ozone layer' i.e. after due policy taken under the Vienna Convention in the year 1980. Much of the law has been treaty based, adopted under the United Nations Framework Convention on Climate Change (UNFCCC) 1992. Including the Kyoto Protocol 1997[2] the Paris Agreement 2015 and many decisions of the parties to these instruments through vast and complex web of principles, rules, regulations and institutions as the UN Climate Regime.

International climate change law focuses on four basic issues: 1) mitigation of climate change, 2) adaptation to climate change, 3) financial and other means of support for mitigation and adaptation and 4) international surveillance to promote implementation, compliance and effectiveness.

The negotiation and elaboration of the Kyoto Protocol from 1991-2001, thereafter only the climate change regime began seriously considering ways to enhance adaptation action, co-operation and support. Meanwhile, till the time of climate regime, developing countries, in particular, have been focused on financial assistance and other means of implementation, including technological transfer and capacity building. The United Nations climate regime has been to develop a powerful system of reporting and review to promote transparency and strong procedures to determine and impose consequences for non-compliance.

The United Nations Climate Regime is divided into four phases:- 1) Agenda setting phase, 2) Constitutional Phase (entry of the UNFCCC-1992), 3) Regulatory phase (the Kyoto Protocol) & 4) Compulsory Commitment phase i.e. the Paris Agreement 2015 (after the Kyoto Protocol first commitment period got expired in 2005, the Bali Action Plan 2007, the Copenhagen Accord 2009, the Durban Platform 2011, then the current the Paris Agreement 2015 came into force which addresses the period from 2020 onwards).

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC), 1992

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty adopted on 9 May 1992 and opened for signature at the Earth Summit in Rio de Janeiro from 3 to 14 June 1992. It then entered into force on 21 March 1994, after a sufficient number of countries had ratified it. The UNFCCC 'ultimate' objective is to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system"[3] by 1) allowing ecosystems to adapt naturally to climate change, 2) ensuring that food production is not threatened & 3) enables economic development to proceed in sustainable manner. The UNFCCC is divided into four parts :- 1) Introductory provisions, elaborating basic definitions, principles and objectives of the regime (Art. - 1-3); 2) Commitments relating to mitigation & adaptation to climate change including commitments to finance and technology transfer (Art. 4-6); 3) Institutional and procedural mechanisms to implement the convention(Art. 7-14) & 4) Clauses like protocols, annexes, amendments, ratification and entry into force (Art. 15-26).

UNFCCC scope includes broad aspects of climate change issues including, mitigation, adaptation, finance, technology transfer, transparency and compliance. Preamble to the UNFCCC refers to emerging concepts of international environmental law, including 'common concern of mankind', Principle 21 of the Stockholm Declaration(Conference on Human Environment),1972 in the slightly modified form of the Rio Declaration (Earth Summit),1992 on Environment and Development, and the principle of inter-generational equity. Preamble recital-3, addresses concerns particularly for the developing countries : "that the largest share of historical and current global emissions of GHG has originated in the developed countries, that per capita emissions of the developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social, economic and developmental needs'. Developed countries had sought to include principle of 'main responsibility' which indicates that the climate change problem results primarily from the over-consumption and extravagant lifestyle of the developed countries therefore should bear main responsibility to combat climate change.

Principles of UNFCCC are some climate specific, but most reflect more general principles of international law, such as :- 1) Principle of Common But Differentiated Responsibilities and Respective Capabilities (CBDRRC)(this principle is enumerated under Art. - 3.1 and in preamble), 2) Intra and Inter General Equity, & 3) Sustainable Development(Art. - 3.4).

[1] https://weather.com/en-IN/india/news/news/2019-05-13-climate-change-emergency-ireland-global-warming, visited on 15/5/2019 at 22:44

[2] Kyoto Protocol to the UNFCCC (adopted on 11th Dec, 97, entered into force on 16th Feb. 2005).

[3] UNFCCC - United Nations Framework Conventions on Climate Change - Art-2.

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As a framework convention, UNFCCC aims to create a flexible system of governance for the climate change problem which is not legally binding. It authorises the COP to establish new institutions or change the mandate of existing ones. It allows amendments, annexes and amendment to annexes to be approved by two-third majority votes also reviews of its specific commitments on sources and sinks.

KYOTO PROTOCOL, 1997

Kyoto Protocol supplements the UNFCCC by establishing internationally-negotiated, by more specific emission limitation target, legally binding, quantitative emissions targets for Annex-I parties only. The first Conference of Parties (COP1) held in Berlin,1995, adopted the 'Berlin Mandate', which established the Ad Hoc Group on Berlin Mandate (AGBM) which ends to adopt the Kyoto Protocol, 1997.

The Kyoto Protocol has four main features : (1) top-down regulatory approach (internationally negotiated emissions targets and accounting rules); (2) Difference between Annex-I (developed countries) & Annex-II (developing countries); (3) legal bindingness, including a strong compliance system; & (4) market mechanism which allow cost-effective implementation. Kyoto Protocol left two issues : (1) stringent targets & (2) flexibility in implementing them. Kyoto Protocol represents trade-off between European Union preference for stringency and emissions targets while United States and other non-European Union developed countries (all the Umbrella Group members) prefer flexibility. But United States pressed inclusion of a mechanism to allow developing countries to 'voluntarily' assume emission limitation objectives. Most developing countries strongly opposed such an approach, arguing that any new commitments for developing countries, even if voluntarily assumed, were expressly excluded by the Berlin Mandate.

Kyoto Protocol incorporated

(1) Development of an international emission trading system (Art.-17);

(2) Established Clean Development Mechanism (CDM), which allows industrialised countries to receive credit for emission reduction projects in developing countries (Art.-12);

(3) Allowed states to receive credits for certain sink activities (Art. 3.3 &3.4).

Kyoto Protocol deferred to future negotiations regarding its work, opening for states to renegotiate the protocol under the disguise of elaborating its rules. The Kyoto Protocol has some limitations like it set targets for only five-year commitment period from 2008-2012 but not after 2013 and onwards and the other is, its emissions targets surround less than 24% of global GHG emissions, both because of United States non-compliance and participation and because of the protocol's failure to establish any emissions limitation commitments for China (which was the greatest emitter in 2005 than United States also) and other developing countries. Thus there was an emergence of long term cooperative action which successfully ended in 2007 by the Bali Plan of Action 2007and then, Copenhagen Accord 2009, Cancun Agreement 2010(COP16) and then, in turn by the 2012 Durban Platform for Enhanced Action. The European Union has consistently pushed for the strong, legally binding emissions targets. The United States has consistently argued for domestic flexibility. And China and India have consistently resisted the imposition of binding emissions targets on themselves.

PARIS AGREEMENT, 2015

The Paris Agreement, 2015 adopted after years of deep controversial debate, multilateral negotiations, as a 'monumental triumph[1]'. The negotiation, driven by unequal and unmatched political will, were expected to reach an agreement. However, the fact that they reached a long-term, balanced and virtually universally accepted agreement, despite many crisscrossing red lines of parties, was not a foregone conclusion. The Paris Agreement set common core obligations for all countries, including legally binding obligations of conduct in relation to parties' nationally determined mitigation contributions and an expectation of progression over time. It also established common transparency, accountability framework and interactive process, in which data of all the parties regarding their contribution of reduction of emissions for every five years and next five years were maintained online.

Scope of the Paris Agreement addresses all of the elements listed in the Durban Platform in a comprehensive manner: 'mitigation, adaptation, finance, technology transfer & development, transparency of action and support and capacity-building. Also, it addresses loss and damage, an issue of importance to small island states and least

[1] https://www.un.org/sustainabledevelopment/cop21/- The UN Chief hails new climate change agreement as 'monumental triumph', seen on 9/1/2019 at 14:32

developed countries (LDCs), as well as compliance of interest to a broader coalition of developed and developing countries.

Preamble of the Paris Agreement include the CBDRRC principle, best avail scientific knowledge, special circumstances of particularly vulnerable countries, special needs & situations of the LDCs, equitable access to sustainable development and eradication of poverty, food security, just transition of the work force, human rights, conservation & enhancement of sinks, ecosystem integrity, climate justice, environmental education, awareness, training & participation, multi-level governance and sustainable patterns of consumption and production.

climate change has threatened human rights in the whole world including right to life, right to health, right to food, right to property, right to clean and drinking water, etc. The measures taken to mitigate and adapt to climate change can rise human rights concern as well. Only explicit reference to human rights in the Paris Agreement is carefully restricted, its addition is novel, and may signal enhanced receptivity to rights concerns and discussion.

Art. 2-4 of the Paris Agreement signifies its 'purpose' to strengthen the global response to the threat of the Climate Change. Long-term mitigation goals[1] can be formulated in terms of limiting temperature increase (2˚C or 1.5˚C above pre industrial levels); as a GHG emissions reduction goal (ex. 50% by 2050); or as a time frame for peaking of emissions. In the end, it proved possible to reach agreement only on goals that lacked specific time lines.

The Paris Agreement is a landmark in the United Nations Climate negotiation with long term legally binding instrument. The Paris Agreement contains ambitious goals(which are aspirational), extensive obligations(largely procedural) and comparatively rigorous oversight(yet to achieve). Though Paris Agreement did not resolve the issue of burden sharing among parties, but actions may be taken by the parties in the coming years. Many developing countries like, Brazil, China and India were among those that helped bring the Paris Agreement into force. Though theses developing countries, rapidly growing, continue to face serious developmental challenges and have other compelling priories (social, economic and developmental needs). India's declaration highlights its development agenda, in particular poverty eradication and basic needs provisions, shows India's need to be independent, unencumbered, access to cleaner sources of energy, technologies and financial sources.

COMPARISION BETWEEN KYOTO PROTOCOL AND PARIS AGREEMENT

International Climate Change Law has noticed many hurdles in its path ways. Since acknowledgement of the climate change in the early 1980s, there were many laws formed and discarded. But in its journey till the date, Kyoto Protocol and Paris Agreement were two most important international climate laws which needs to be addressed. The Kyoto Protocol was legally binding, top-down architecture, consisting of quantitative targets and timetables to limit GHGs emissions, but with a complex system of international rules on accounting and compliance. The Paris Agreement is also legally binding instrument with some non-binding elements and is based on bottom-up approach, nationally determined contributions(NDCs) with internationally negotiated rules to promote ambition and accountability.

Kyoto Protocol brought Common But Differentiated Responsibilities and Respective Capabilities (CBDRRC) i.e. the annex-I (developed)countries should bear the main responsibility to combat climate change as historically they were responsible for the GHGs emotion then the Annex-II(developing and the least developed countries because they are developing just to meet their social and developmental needs). While in the Paris Agreement, the dilution of Common Commitments of all parties and differentiated commitments of Annex-I and Annex-II parties. The mitigation measures adopted in Kyoto Protocol to Paris Agreement have reflected politics more than science, willingness of all the parties, commitment to combat climate change, technology transfer, green mechanism, equity, development, clean development mechanism (CDM), etc.

Why Paris Agreement talks about the Common Commitment because since 1990s, IPCC report shows that developed countries (US) was higher emitter 70% than China but the scenario has changed and reversed in 2014, China emit double than the US. Now, 17 of 20 fastest growing in the world will be from India[2] and 14 of world's 154 most polluted cities in India[3]. These trends have led to an increasing focus in international climate

[1] long-term emissions goals achievement - Art. 4.1 of Paris Agreement

[2] as per the global economic search report

[3] WHO global air pollution database released in Geneva 1st May 2018, Wednesday

change law on developing as well as developed countries emissions, reflected most importantly in Paris Agreement's mitigation regime, which applies to all parties as Common Commitment.

INDIA'S COMMITMENT TOWARDS INTERNATIONAL CLIMATE LAW

In the late 18th Century, esp. after industrialisation in the European Countries, anthropogenic (human induced) activities, mainly burning of fossil fuels, have resulted in increasing the concentration of greenhouse gases (GHGs) which in turn trap extra heat and increase Earth's average temperature leading to climate change. This in turn leads to a wide ranging impact including sea level rise, melting of snow and glaciers, changes in weather patterns, increased frequency and intensity of extreme events and natural disasters etc.

The Climate Change Division is taking care of the issues related to climate change, the International negotiations and domestic policies and actions. The Division has to submit National Communications (NATCOMs) and the Biennial Update Reports (BURS) to the United Nations Framework Convention on Climate Change (UNFCCC). The Ministry of Environment, Forest and Climate Change (MoEF&CC) is the nodal Ministry for climate change negotiations under UNFCCC. To create and strengthen the scientific and analytical capacity for assessment of climate change in the country, different studies has been initiated under the Climate Change Action Programme (CCAP), including National Carbonaceous Aerosols Programme (NCAP), Long Term Ecological Observatories (LTEO) Programme, and GHG. Basic policies of climate change actions are as below:

National Action Plan on Climate Change (NAPCC): Government of India is implementing the National Action Plan on Climate Change (NAPCC) to promote understanding of climate change and establishing linkage between adaptation and mitigation consistent with the national priority for achieving sustainable development. It comprises of eight national missions representing multipronged, long term and integrated strategies for achieving key goals in the context of climate change. These missions focus on specific areas of Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Ecosystem, Green India, Sustainable Agriculture and Strategic knowledge for Climate Change anchored by various Ministries[1].

State Action Plan on Climate Change (SAPCC): The need to achieve unity between actions at national and sub-national level became necessary. Therefore, the Ministry motivated the State Governments to prepare their State Action Plans on Climate Change (SAPCC) in line with the strategies outlined in NAPCC. So far, 32 States have prepared their SAPCCs[2].

National Adaptation Fund on Climate Change (NAFCC): National Adaptation Fund on Climate Change (NAFCC) was launched in 2015 to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change. The overall aim of the fund is to support concrete adaptation activities which are not covered under on-going activities through the schemes of State and National Government that reduce the adverse effects of climate change facing community, sector and states. The Fund is meant to assist National and State level activities to meet the cost of adaptation measures in areas that are particularly vulnerable to the adverse impacts of climate Change. The Scheme has been taken as Central Sector Scheme with National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity (NIE). Besides, enhancing adaptive capacity at national and state level, national conference or workshop, awareness and information dissemination, Research and Development and establishing a coordination and monitoring unit have also been offered[3].

Climate Change Action Programme (CCAP): Climate Change Action Programme (CCAP) is a central scheme which was approved by the Cabinet in January 2014. Its objective is to create and strengthen the scientific and analytical capacity for assessment of climate change in the country, putting in place appropriate institutional framework for scientific and policy initiatives and implementation of climate change related actions in the context of sustainable development. Some of the components of the CCAP scheme include the National Carbonaceous Aerosols Programme (NCAP) (esp. to look after black carbon level), Long Term Ecological Observatories (LTEO), and Coordinated Studies on Climate Change for North East Region (CSCCNER)[4].

[1] http://moef.gov.in/environment/climate-change/ visited on 16/5/2019 at 19:28

[2] ibid

[3] ibid

[4] ibid

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India's post-2020 climate goals: For post-2020 period, in response to the decisions of the Conference to the Parties, India submitted its Nationally Determined Contribution (NDC) to the UNFCCC on 2nd October, 2015, outlining the climate actions intended to be taken under the Paris agreement. The eight goals put forth by India in its NDC are:

1. To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.
2. To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.
3. To reduce the emissions intensity of its GDP by 33 to 35% by 2030 from 2005
4. To achieve about 40 % cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).
5. To create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030.
6. To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management.
7. To mobilize domestic and new & additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
8. To build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future

For preparing the of roadmap for implementation of India's NDC (Nationally Determined Contribution)in post-2020 period, in the year 2016, the MoEF&CC constituted an NDC Implementation committee[1].

India will cut its emissions intensity by 33-35% of 2005 level by 2030 and to achieve 40% of its electricity generation from non-fossil sources by the same year to reduce GHG emissions and bring it down to the standard decided in the Paris Agreement, 2015.

SUGGESTIONS AND RECOMMENDATIONS

India is an emerging developing country and has many issues and challenges before her. At the international level, 2.4% of the world's surface India is holding and sustains 16.9% of the world's population. As we know, higher population leads more needs, poverty, illiteracy, homelessness, question to food security, etc. The solution of all these problems is just economic growth of the country. How a country can grow? - the answer is Industrialisation and development. These areas bring more pollution through urbanisation, industrialisation, transport facility, construction activity, etc.

Though in the age of globalisation and modernisation, India is using out-dated (obsolete) technology and machineries which are being discarded by the developed countries as still sharing of knowledge and technology transfer is just polished talks only. Though India is rich as Biologically Diverse country, the manipulation of its natural resources had and are being done by the developed countries but access to benefit sharing and technology transfer is not being done as prescribed to be done in the CBD (Convention on Biological Diversity).

As still the socio-economic development of India has not done till the date as against the developed countries have done development by manipulating the natural resource at the cost of environment.

India being 135 crore densely populated country, people's contribution for pollution is comparatively too high due to generation of domestic wastes, improper drainage and sewage system, use of fossil fuels, increased private transportation, mining and coring activities, construction activities, direct dump of both biodegradable and non-biodegradable components into the water bodies, etc.

As it is said that we have only one EARTH, it's not only an individual's duty to save mother earth but it's the duty of the whole world to unit and fight against the monster of the Climate Change by bringing down the

[1] http://moef.gov.in/environment/climate-change/ visited on 16/5/2019 at 19:28

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world's temperature by 1.5˚C to 2˚C by the end of 2020 and 0% emission by 2050 to make this beautiful earth liveable just like before and let it be the home full of bio-diversity once again as due to the Climate Change, increased temperature caused death of many species of wild animals and birds and many are at the extinct point. It is the threat to the low-lying areas as the sea level is increasing because of the melting of the glaciers very fast and so many problems have arose like crop failure and migration of the people, and salinity of the soli has increased and loss of agriculture.

Adaptation of the green technology, green buildings, renewable energy and improved technology which is eco-friendly should be invented and implemented in each field of work to minimise the emission level.

CONCLUSION

- After Kyoto Protocol failed in compliance of emissions of GHGs till the end of 2012, had not talked about the further commitment period at its first expiry i.e. after 2013 and onwards, Paris Agreement came into existence in 2015 at COP-21. This is the journey from Common But Differentiated Responsibilities and Respective Capabilities to binding emission targets (way to equal responsibilities).
- Paris Agreement is legally binding, bottom-up process of voluntary mitigation pledges taken by the parties for their mitigation efforts independently. It was also working as a watch dog over the activities, records, reviews and target mitigation pledges compliance. It also started to verify and reporting the implementation and fulfilment data to keep transparency and check whether the target of Paris Agreement has been achieved or not.
- But still very few members have started achieving their emission control targets. It always have become the question of leadership, encouragement, participation, willingness, power and politics. Scientific knowledge sharing and technology transfer are the other issues. To cope the threat of Climate Change, voluntary cooperation, supportive environment by providing long-term finance, directions, guidance, technology, encouragement and nurture of the developing as well as the least developed countries is more important.
- India is facing major problem of poverty and developmental needs, is in need of new efficient technologies which are with the developed countries and also is in need of finance to bring the country to the level of economically developed country. India's situation is very critical as major part of its land is surrounded by the oceans and precisely to the low-lying areas over which the direct impact of global warming can be noticed. Again India is an agricultural country, major part of her people rely on agriculture so there is the vulnerable effect of global warming can be seen by the floods and draught and due to sea level rising, salinity of the land has also increased. These leads heavy burden on its economy.

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MONTE CARLO SIMULATION TECHNIQUE FOR ANALYSING FREQUENCY TIME RESPONSE

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ABSTRACT
This paper presents a method to evaluate the frequency response based on the Monte Carlo Simulation Technique. The behavioral changes in the system frequency are being studied considering variable generator capacity. The failure rates of the generators are obtained and the probability of switching ON and switching OFF of generator to meet the load is evaluated. The imbalance between generation and load demand can be minimized considering various random cases of generator failures. This method of Monte Carlo Simulation was applied to a system having ten (10) generators initially. Obtained results are presented and discussed.

Index terms: Frequency Time Response, Monte Carlo Simulation

I. INTRODUCTION

The primary function of an electrical power system is to provide electrical energy to its customers as economical, continual and with quality. Modern society expects continuous availability of electricity on demand. This is not possible with the random failures of the equipment and the system. These failures are out of the control of the power system personnel.

Electrical power system is a very complex and highly integrated system. Failures in any part of it will cause system interruptions which affect local residents, industries etc. The economic impact of these outages not only includes loss of revenue by the utility, loss of energy utilization by the customer but also include indirect cost on society and environment due to failures or outages.

A balance between generation and load demand is always required for healthy operation of power system. When there is imbalance between generation and load demand, then frequency deviation will occur. This frequency drop is very crucial to the whole power system stability and also to the generator unit. With the low frequencies, the blades of steam turbines are heavily stressed because frequencies are very close to blade natural frequency results in reduction of turbine lifespan. Generators get overloaded and speed and cooling are below normal.

After occurrence of generation and load imbalance, frequency regulation will react such that the frequency deviation tries to keep frequency within range.

I. WHY MONTE CARLO SIMULATION ?

The objective here is to present a computational method, which is based on a Monte Carlo Simulation approach for determining the frequency response curve of a discrete system for 3 years to get the random results.

II. COMPUTATIONAL ALGORITHM FOR THE FREQUENCY TIME RESPONSE

The frequency performance of an autonomous power system consisting thermal generating units of non reheat type can be represented, by the linear model shown in Fig. 1. [1]

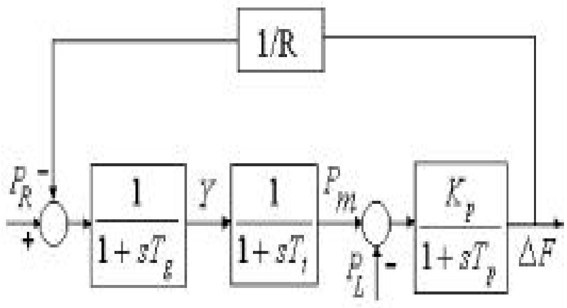

Figure1 : Frequency Time Response

This model simulates the frequency dynamic response during the first few crucial seconds after the disturbance. The rapid action of the mechanisms of every unit, which try to stabilize frequency at that first period, is called **primary regulation.**

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When the system is in equilibrium P_R, Y, Pm and P_L are all considered to be constant and ΔF is zero. When a sudden disturbance occurs causing an imbalance between load and generation, these parameters vary and the frequency diverts from its nominal value.

P_R: Setting of the governor

Y: Output of governor

P_m: Generation

P_L: Load

ΔF: Frequency Deviation from its nominal value

R: Droop

H: Inertia

T_g: Time constant of the governor

T_t: Time constant of the turbine

K_p = 1/D, Constant

T_p=2.H/D, Constant

When the system is in equilibrium, P_R, Y, P_m and P_L all are considered constant and ΔF zero.

When imbalance between load and generation is caused due to sudden disturbance, the above parameters vary and the frequency diverts from its original value.

$$(Pm - PL).\frac{Kp}{1 + sTp} = \Delta F \dots\dots\dots (1)$$

$$Y.\frac{1}{1 + sTt} = Pm \dots\dots\dots (2)$$

$$\left(PR - \Delta F.\frac{1}{R}\right).\frac{1}{1 + sTg} = Y \dots\dots\dots (3)$$

$$Tp.\frac{d}{dt}\Delta F + \Delta F = Kp.(Pm - PL) \dots\dots\dots (4)$$

$$Tt.\frac{d}{dt}Pm + Pm = Y \dots\dots\dots (5)$$

$$Tg.\frac{d}{dt}Y + Y = -\frac{1}{R}.\Delta F + PR \dots\dots\dots (6)$$

The analytical solution to these equations is complicated which needs certain assumptions. E.g. Tg and Tt are considered as about 1 sec. Hence can be neglected as compared with time constant Tp of 10 sec.

From the simplified analytical solution, the frequency time response characteristic parameters of final (residual) value and initial slope are derived.

$$\lim_{t \to \infty} \Delta F(t) = R.\frac{PSTEP}{D.R + 1} \dots\dots\dots (7)$$

$$\frac{d\Delta F(t)}{dt} | t = 0 = \frac{PSTEP}{2}.H \dots\dots\dots (8)$$

The residual frequency value depends on the system droop R and the damping factor D as shown in (7), where, P_{STEP} is the power imbalance P_m - P_L expressed in p.u. values. The initial slope of the frequency is calculated by (8) and depends only on the system inertia H.

A precise interpretation of the entire frequency transient phenomenon is required, which means that the influence of all time constants is important. Moreover, when load shedding occurs at various time instants and under specific conditions imposed by the u.f. relays settings, the analytical solution of the differential (4)-(6) becomes extremely difficult. For this reason, the respective equations (9)-(11) were derived, where ΔT is the time interval being considered for the numerical calculations. A computational algorithm was developed applying these three

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equations in order to calculate the frequency time response ΔF.

The algorithm takes into account the effect of all time constants and the operation of the u.f. relays, which may change the value of load P_L.

$$\Delta F(k) = \frac{\Delta F(k-1)\cdot(T_p - \Delta T) + K_p \Delta T \cdot (P_m(k-1) - P_L)}{T_p} \quad (9)$$

$$P_m(k) = \frac{\Delta T \cdot Y(k) + T_t \cdot P_m(k-1)}{T_t + \Delta T} \quad (10)$$

$$Y(k) = \frac{R \cdot T_g \cdot Y(k-1) + \Delta T \cdot (R \cdot P_R - \Delta F(k))}{R \cdot (\Delta T + T_g)}. \quad (11)$$

III. MONTE CARLO SIMULATION METHOD

Monte Carlo Approach is used to model the operation of Autonomous power system. A computational method was developed for simulating the operation of the power system at following three different levels:

Hour by hour operation [1]

It is controlled by the dispatching center. Aim is to supply the hourly load demand. This is achieved by considering generating units' failures and repairs.

Assumptions

a. Generators are considered either fully available or fully unavailable.

b. The transitions of the generating units into a derating state are not considered as they need longer time to derate hence do not cause frequency drops.

c. Failure events are modeled based on the known failure rates.

d. Repair events are modeled based on the repair time distributions.

e. The transmission network failure events and their possible constraints are not considered as it will lead to complexity in the developed method.

Here, in this paper hour by hour operation is studied in detail. Following steps are followed [3]:

Step 1: The generating units are committed and de-committed to supply the respective load demand.

Step 2: If operating time of generating unit is greater than respective failure time, an outage is considered to occur and new random time to repair is calculated.

Step 2: If outage time of a generating time is greater than respective repair time, unit is assumed to return to normal operational state and new random time to failure is calculated.

Step 3: When a generating unit failure event occurs, the point to point frequency response curve is determined by considering units' primary regulation.

The system generating capacity, droop, inertia and time constants are calculated for various system conditions.

The solution of equations (9) to (11) provides point-to-point frequency time response.

IV. USEFULLNESS OF THE METHOD UNDER STUDY

1. Minimum frequency, maximum frequency, residual frequency etc. can be calculated.
2. Various system reliability indices can be calculated. The calculated indices provide valuable information to the utility engineers.
3. Also the method can be used to decide various spinning reserve policies.
4. Can assess different schemes by comparing indices and power quality of the system.
5. The method can help in deciding alternative maintenance policies, which affect the failure rates of generating units. Hence the increased maintenance cost can be compared with the cost of unserved energy, better power quality and low system risk.
6. The method is converted into a computer program to determine the probability distribution histograms for

a. The under frequencies

b. The amount of load shedding

c. Load shedding time duration

d. The mean u.f. and mean load shedding per hour of a typical day

e. The mean u.f. and mean load shedding for each month of a typical year.

The histograms give information about

1. The number of interruptions
2. The time of a day where deepest under frequency observed
3. The range of more probable under frequencies etc.

V. A CASE STUDY

An autonomous power system with ten (10) generators is used for testing the developed method for analysis of loss of generation and its effect on frequency response.

When there is event of loss of generation, certain system parameters need to be defined which describe the frequency time response.

1. **Minimum Under frequency**: Undershoot value represents the magnitude of the disturbance. It is related to the system risk.
2. **Residual Frequency**: Value that frequency will stabilize after a short transient phenomenon.
3. **Maximum over frequency**: Overshoot value should not exceed the overfrequency protection levels of the generating units.

The data available are [1]:

Unit no.	Nominal Power (MW)	Failure Rate (OCC /Year)	Repair Time (Hours)	Droop (puHz /pu MW)	Governor time constant (s)	Turbine time constant (s)	Inertia (s)
1	23.5	5.1	16.8	0.22	0.0719	1.263	4.5
2	23.5	5.2	24	0.09	0.0719	1.263	4.5
3	23.5	5	21.6	0.09	0.0719	1.263	4.5
4	14.1	6.1	36	0.09	0.1092	1.422	4
5	14.1	6.2	38.4	0.1	0.1092	1.422	4
6	5.9	7	48	0.08	0.1318	1.146	4
7	11.5	5.5	50.4	0.07	0.07	1.014	5
8	11.5	5.6	48	0.1	0.07	1.014	5
9	11.5	5.4	55.2	0.07	0.07	1.014	5
10	11.5	5.7	48	0.07	0.07	1.014	5

Table 1: Generator Data

Total Generating Capacity is **150.6 MW.**

VI. output

Solution to equations (9), (10) and (11) is worked out considering the data available. Monte Carlo Simulation is used to generate random events of failure of generator where the generator unit number is also selected at random.

Based on the random selection of generator outage, the frequency response curve is calculated per hour at the interval of 24 hours.

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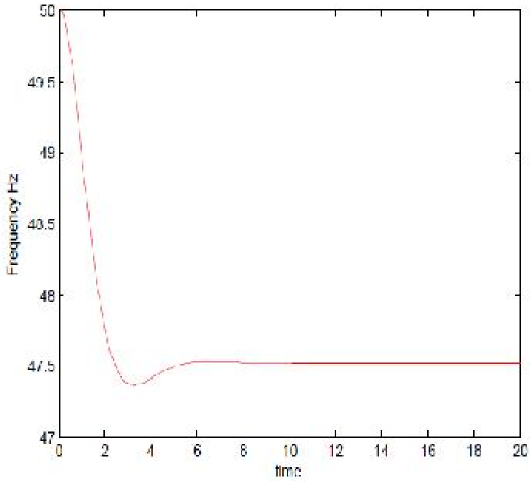
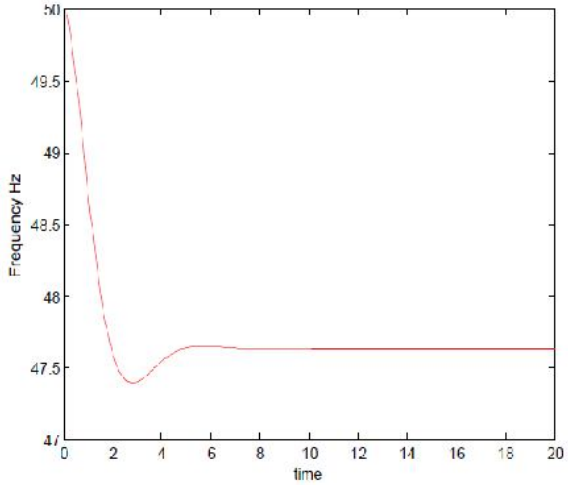


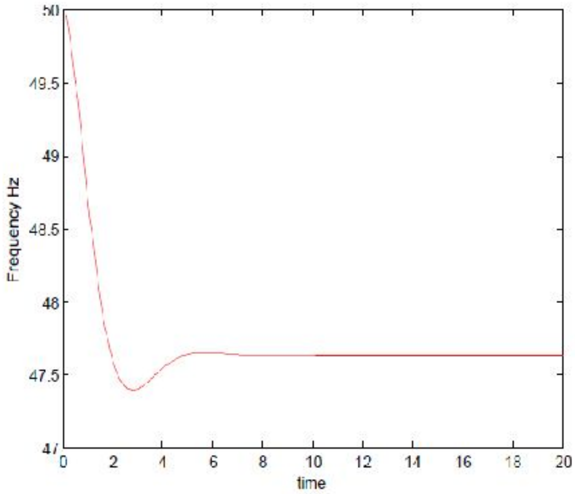
Graph 1: Frequency Time Response Curve

Generator no. 10 under failure mode. Demand: 143.29 MW. Available Generation Capacity: 139.1 MW, Min. underfrequency: 47.36 Hz, Max. Over frequency : 50 Hz, Residual Frequency: 47.65 Hz.



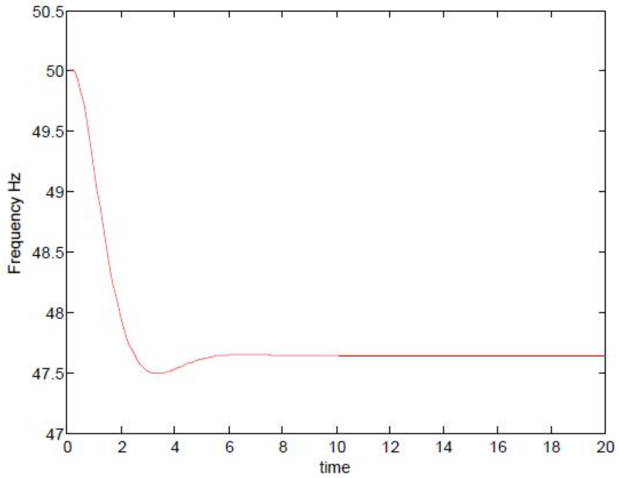
Graph 2: Frequency Time Response Curve

Generator no. 1 and 6 under failure mode. Demand: 143.95 MW, Available Generation Capacity: 121.2 MW, Min. underfrequency: 47.39 Hz, Max. Over frequency : 50 Hz, Residual Frequency: 47.72 Hz.



Graph 3: Frequency Time Response Curve

Generator no. 3 and 5 under failure mode. Demand: 129.23 MW, Available Generation Capacity: 113 MW, Min. underfrequency: 47.52 Hz, Max. Over frequency : 50 Hz, Residual Frequency 47.81 Hz.



Graph 4: Frequency Time Response Curve

No any generator under failure mode. Demand: 150.6 MW, Available Generation Capacity: 150.6 MW, Min. underfrequency: 47.56 Hz, Max. Over frequency : 50.03 Hz, Residual Frequency: 47.82 Hz.

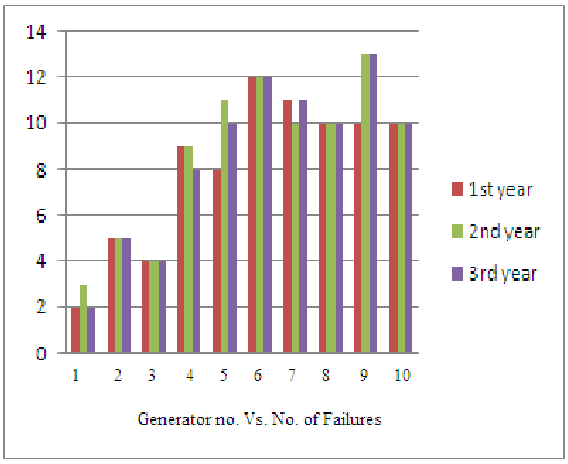
The events of generator failure are recorded for 3 years.

Generator No.	Year 1	Year 2	Year 3
1	2	3	2
2	5	5	5
3	4	4	4
4	9	9	8
5	8	11	10
6	12	12	12
7	11	10	11
8	10	10	10
9	10	13	13
10	10	10	10
Total No. Of failures	81	87	85

Table 2: Number of events of generator failure in three years

From the above table it is clear that the number of failures faced by the generators is variable. Generator number 6 and 9 had undergone more number of failures than that of others.

This will help us in deciding the load and generation pattern for future few months.



Graph 5: No. of failures of each generator for 3 years

Graph indicates that Generator number 6 and 9 are more prone to failures.

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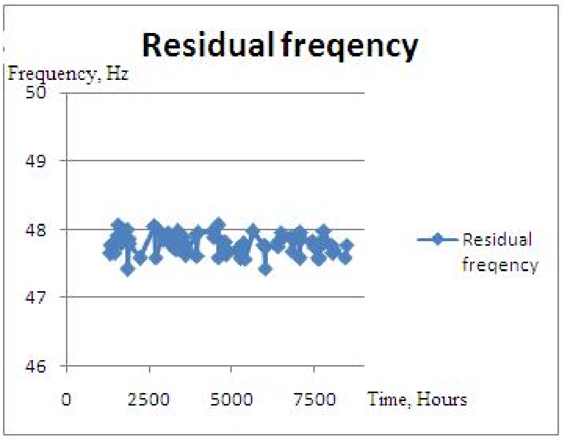
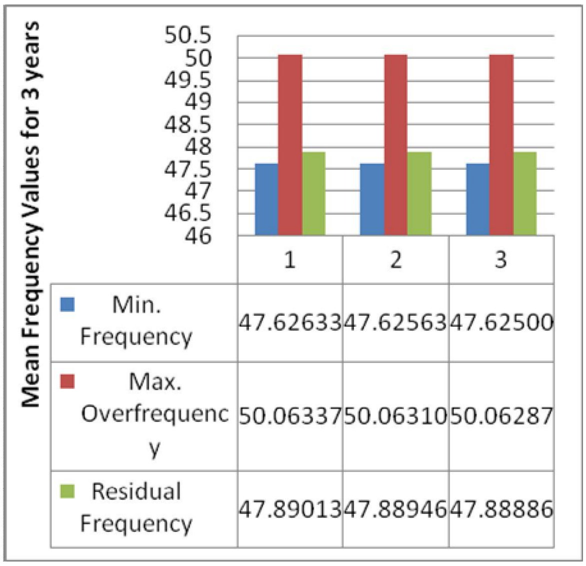


Graph 6: Residual frequency Vs time

Residual frequency is the frequency which will stabilize after the short transient phenomenon. It gives us the idea about the system stability throughout the year with consideration of generator failures at random.

The residual frequency variation w.r.t. generator failure is plotted in the above bar chart. From the graph it is very clear that the residual frequency value remains around 48 Hz irrespective of the generator failure.



	1	2	3
Min. Frequency	47.62633	47.62563	47.62500
Max. Overfrequency	50.06337	50.06310	50.06287
Residual Frequency	47.89013	47.88946	47.88886

Graph 7: Mean Frequency Values for 3 years

VII. CONCLUSION

The Monte Carlo Simulation Method is a very useful tool for

a. Analysis of operation of power system and its behavior

b. Analysis of Generator behavior

c. It is useful for utilities to plan failure of generator based on the number of occasions of failure events

d. To calculate reliability indices

e. It provides the guideline for under frequency relay setting and percentage of load shedding

f. It provides the display of frequency response curve so as to take into account Generator Load Imbalance.

g. It is useful to detect probability of loss of generation which is required by customer or user.

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AN INDIAN CULTURAL REVIVALIST

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ABSTRACT
The cultural history of post independent India - Kamaladevi Chattopadhyay - One of the makers of modern India - Progressive outlook of her family – Took part in Independent Struggle – Acceptance of the leadership of Gandhi – She courted imprisonment – Shunned public appointments – Her ardent advocate of different feminism – Her abiding interest in folk theatre – Founder of All India Handicrafts Board – Revival of Indian handicrafts – Her devotion to upliftment of poor artisans – widely traveled – A prolific writer.

Keywords: Cultural History, Feminism, Revival of Indian Handicrafts, Crafts Museum In India.

Except the cultural historians of the post-independent India the life and achievements of Kamaladevi Chattopadhyay are little known. Her long life (born 03 April 1903- Died 29 October 1988) was full of struggles and imprisonment which she would have avoided and led a life of luxury and comfort for such was her family. The struggles in which she willingly took part were not for herself but political and in which she particularly involved cultural. The first forty years of her life she took part in the independent struggle under leadership of Gandhi and courted imprisonment. And then in the rest of her life she worked intensively in the field of culture and arts for redefining the Indian theatre, revival of handicrafts heritage and restoration of female rights and equality.

The words she wrote "At this juncture I should like to reflect on my relationship with Rajaji. I had first met Rajaji – as he was popularly known- when I was just a young girl, at a marriage, rather unusual for those times, in Mangalore, of a Brahmin bride and a non- Brahmin groom. My social reformer uncle was largely responsible for the marriage. Rajaji was playing the role of the groom's father. The liberal elements in the town were full of praise for him for this unusual role, himself being a Brahmin. My mother was most eloquent. She attributed this largely to the high education which the bride had received and according to her won her the patronage of two personalities like Rajagopalachari and my uncle. Above all she had not been "led like a meek goat to the marriage haven," was her first verdict"[1] vouchsafe the greatness of achievements.

My paper deals with her outstanding works in the field of culture. As a matter of fact she was not interested, though herself a prolific writer and diarist, in telling her autobiography. Instead of writing autobiography she jotted down the important events in her life in a rambling manner and published under tittle 'Inner Recesses outer Spaces'. The tittle itself speaks about her personality, her interests, her strivings, and her endeavors – most of the events narrated were not at all personal but matters of her public involvement, meetings with men and women who made the history of modern India.

Born on 03rd April 1903 of Ananthaiaih Dhareshwar the district collector of Mangalore and Girija Bai of aristocrat family. She was very fortunate economically and socially as her parents were progressive in thought and action. Two incidents would be suffice to show the progressive outlook of the family. She was married at the young age of fourteen as it was the custom and widowed after two years of marriage. She remarried Harindhiranath Chattopadhyay – the widow remarriage wholly approved by her mother.

For her involvement in field of culture, particularly in the second of her life, she had inspiration and motivation from her family background in her younger days. She narrates much about this in

She had her collegiate education at Queen Mary's College Madras and BEDFORD in London. She was not a feminist in the aggressive sense but her feminism was not against the male domination but for equality as human beings. No concessions to be given on the ground of gender but on merits, and on basis of equality. "In the west, instead of a cohesive social current, society had broken into two rigid sex groups, the unhappy results of which time has only served to accentuate. There has continued a harsh confrontation between men and women, this trend getting more and more stratified, (with) women wanting to ape men which often ends in pathetic results leading to no solution. The women have been showing a subtle undercurrent of prejudices against womanhood as though they regretted being born women because of several natural functions that went with it …"[2]

Her feminist involvement was along two fronts-one was through legal changes for which she lobbied and the other through social change in terms of attitudes and ideas[3]. At the same time, she was also conscious that merely passing laws did not change society, though laws were necessary to facilitate social change[4].

She was also in favour of a Uniform Civil Code for personal laws governing women (in matters of maintenance, divorce, inheritance, adoption and child custody), so that all women in the country, irrespective of whether they were Hindus, Muslims or Christians (or followers of other faiths) would be governed by uniform laws[5].

Thus her feminism was woman's advancement and an integral part of Swadesi movement. Talk of freedom in the political sense without addressing social freedom would be meaningless. The unjust treatment that social customs were impairing one half the population on the basis of sex should be done away with. Women need neither fight men nor imitate them, she declared. It had to be instead, a cohesive social effort (in which both men and women worked together to remove oppression – all oppression, not merely those concerning women – rather than the separate, compartmentalized issue of women's rights. In this she saw her own interpretation of feminism differ sharply from what she saw her own interpretation of feminism differ sharply from what she saw developed in the West, with which she had no sympathy[6].

The general backwardness of women has so far been predominantly treated more as a social problem related to the question of equal status for women including equal opportunities. But the wider question focused here is equally basic and crucial and forms part of a wider area aimed at a basic reorganization of the social system, its psychological reflexes, attitudes and mental processes. All these changes will have to be brought by pressing various agencies into operation, thorough reorientation of the parental attitude towards girls from one of preparing them solely for marriage and motherhood as a career, to one of useful citizenship with fully developed faculties. Every educational, social and economic institution should be geared to open up fresh avenues to help train women to become productive and fruitful to maximize to the fullest utilization of all its human power potential[7].

Her part it regenerating arts and handicrafts was outstanding as she was instrumental in founding the Central Cottage of Emporium and Grafts of India. "We belong to a region which contains a rich heritage of values whose significance for the present and the future cannot be minimized – (value that) teach us that life is not made rich by simply cluttering it up with acquisitions but rather by self-expression, that beauty is not determined by the possession of expensive objects but rather by making everything we use in our daily life, no matter how mundane, beautiful…"[8]

She travelled to the nooks and corners of the country, to hunt for craft traditions. She studied their specialties and brought them to the notice of the urban milieu. She collected toys and carvings and a myriad varieties of artifacts, from the tiniest trinkets to massive temple icons, and carted them to set up museums. She sat with rustic artisans and tribal and master- craftsmen and brought them to the capital and arranged for them to not and sell their wares but also train young boys in the skills to keep the tradition of handicrafts alive. She instituted national awards for craftsmen for the first time in the modern history of the country ("There is so much beauty in the simple articles which are used in village homes, but we have forgotten to honor craftsperson," she pointed out)[9].

She was the first chairperson of the All India Handicrafts Board and held the post for twenty years. She wrote a number of books on handicrafts. She sought out the artisans and knew them very well. She walked, from one remote village to another to know the personal lives of the artisans, their artistic workings and the mode of their working in detail. She called craftsmen the back bone of the country. She had setup the Crafts Museum in Delhi. However, a mere enumeration of the institutions scarcely hints at the vitality with which Kamaladevi pursued her interests in Indian arts and crafts and her relentless quest to document the country's diverse traditions of craftsmanship, provide sustenance to crafts persons, provide sustenance to craftsperson, preserve the integrity of these traditions in their respective milieus, and even find ways to make crafts commercially viable without surrendering to the logic of the modern market[10].

Her interest in theater can be traced back to her school days. She confessed theatre was her first love. Because of her abiding interest in theatre, she came into contact with Harinthiranath Chattopadhyay. And both of them staged many plays in the South and eventually they become husband wife. She had seen the plays in Madras particularly Suguna Villas Saba run by Pammal Sambantha Muthaliyar the doyen of Tamil theatre. Just as she saw handicrafts as an essential dimension of aestheticism people's daily lives, she also saw theater and the arts as an essential ingredient in the nurturing of a national psyche for humanizing even humdrum lives. Folk performances also served, she pointed out, multidimensional purposes- they were a form of self-expression and release and creativity; they also involved crafts, in terms of costumes, accessories and props, as well as special adjuncts' and skills and in puppetry[11].

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She got her artistic sensibilities sharpened thought her life as revealed in her description of her meetings with Balasaraswathi and Rukmani Devi – exponent of Bharatanatyam. Her great contribution to the country's artistic life. By entering the then shadowy world called the domain of the devadasi, she tore down an ugly visage putrefying the face of one of India's greatest arts. Impurities may have crept into the profession, like corruption in politics. Nevertheless politics continued to be practiced, not merely by the Mafia but equally decent citizens. India owes a big debt of gratitude to Rukmini Devi for this"[12].

"I was equally impressed by her ardent efforts to rescue some of our traditions. By creating Kalakshetra, a center as a repository of the good traditional artistic forms, has become a beacons of faith and hope, for it unfolds our multifaceted cultural expressions, making them relevant in our everyday life"[13].

"I went to a Bharatanatyam recital in Madras in early thirties. It was by a new young star just emerging. Balasaraswathi. Though I saw the same Nritya, Adams, Varmans, this was a new experience. I had rarely seen such a liquid flow of movement as though her limbs were melting under the warmth of her emotions"[14].

To know the cultural history of post independent India apart from her voluminous writings on handicrafts, theatre, arts, feminist movement her life is a most reliable source. Kamaladevi Chattopadhyay as one of the makers of modern India she had roots in the Madras Presidency which was made of Tamilnadu, Andria Pradesh, Malabar and Mangalore District.

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ANTHROPOLOGICAL PERSPECTIVES ON SWACHH BHARAT MISSION AND ITS IMPACT ON SUSTAINABLE RURAL DEVELOPMENT

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ABSTRACT
The Swachh Bharat Mission was launched on October 2, 2014, with the goal of achieving 100 percent latrine use and accessibility by October 2, 2019. The colossal task of building 90 million latrines in rural and urban areas to achieve the sanitation goal of being completely open defecation free (ODF) by 2019 was the stated goal. The vast mobilisation of resources and man-power occurred to not only build the toilets but also spread the message of hygiene and sanitation, using important public figures to promote the building and usage of latrines. Since its inception, data has been collected on the construction and usage. However, now we also have some data on the net public health result as well economic advantages of this program. This paper examines these results which have been provided by the studies done by UNICEF and WHO.

Keywords: Swachh Bharat Mission (SBM), Sustainable Rural Development, Sanitation, Open Defecation Free (ODF).

INTRODUCTION
Indian cultural practices and beliefs have valued cleanliness and purity as important to human wellbeing across centuries. Tracing the history of India from Harappa to the great temple towns of Tamil Nadu, one can see the ubiquitous tanks and canal systems which allow citizens to access water. Access to water for bathing, sanitation as well as agriculture was a primary concern for rulers of the past and continues to be of concern to today's government. It is therefore not surprising that present dispensation also focused on sanitation and cleanliness. What is new however are the emphasis on building toilets and the focus on changing people's behaviour encouraging toilet use as a national good?

When the new government came to power in 2014, no one expected the Prime Minister to point out so openly the general slovenliness and filth of cities and villages of India. The assumption was that as a country develops, it will become cleaner. This assumption was turned on its head by the Prime Minister who spearheaded a movement for cleanliness as a necessary prerequisite to better health and greater development. Thus, environmental cleanliness is not the result of development but a necessary factor which will enhance development because it directly impacts the public health and economic well-being of the population.

HISTORY OF SANITATION PROGRAMMES IN INDIA
Open defecation and contamination of drinking water and improper disposal of liquid and solid waste has been an important challenge for India since the time of independence. Both urban and rural populations have had to deal with unsanitary surroundings and contamination of water. In 2014, India was the country with the highest number of people practicing open defecation, with around 530 million people openly defecating. Since 2014 this number has come down to 150 in 2018 in large part due to the Swachh Bharat Mission.

PRE-2014 GOVERNMENT PROGRAMMES
In April 2000, the Government of India launched the Total Sanitation Campaign which was later renamed Nirmal Bharat Abhiyan under the then PM Manmohan Singh. A small randomized study of 80 villages in rural MP showed that while there were a small increase number of household latrines, it did not reduce open defecation. Thus, a restructured rural sanitation programme was launched with Cabinet approval and called Swachh Bharat Abhiyan in September 2014.

SWACHH BHARAT MISSION-GRAMIN
On October 2, 2014, Prime Minister Narendra Modi launched the Government's Swachh Bharat Abhiyan SBA (Clean India Mission) as a fitting tribute to Mahatma Gandhi, who was a fierce advocate of cleanliness and sanitation. This mission, also called SBM (Swachh Bharat Mission) has been launched as a national movement to ensure a clean and safe India, both in the rural and urban areas. Swachh Bharat Abhiyan-Gramin refers to programmes targeted at rural India and Swachh Bharat Mission (Urban) refers to projects in the urban areas. The mission has two branches: Swachh Bharat Mission('Gramin' or 'rural'), which operates under the Ministry of Drinking Water and Sanitation; and Swachh Bharat Mission ('urban'), which operates under the Ministry of Housing and Urban Affairs.

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The primary thrust of the SBM-Gramin is the building of toilets in rural areas such that India becomes completely Open defecation free (ODF) by October 2, 2019. To this end, the National government aims to build 90 million latrines and estimates that it will cost 1.96 lakhs crores ($30 billion).

This will also help India achieve the Sustainable Development Goal 6 the U.N. established in 2015 which is the goal to ensure clean water and sanitation to all.

PURPOSE OF SWACHH BHARAT MISSION

The purpose of the mission is to achieve universal sanitation coverage. The mission was divided into Swachh Bharat Mission (Gramin) for rural India and Swachh Bharat Mission (Urban) for urban centres. In rural India, the focus was on improving levels of cleanliness through solid and liquid waste management and making the villages Open Defecation Free (ODF) by 2nd October 2019.

The key objectives of the Mission were:

1. To bring about an improvement in the general quality of rural life by improving sanitation and cleanliness.
2. To accelerate the sanitation coverage to meet the goals of Swachh Bharat by 2019.
3. To motivate communities to adopt sanitation practices through awareness creation and health education.
4. To develop cost effective and appropriate technologies for safe and sustainable sanitation.
5. To create community managed sanitation systems which adapt scientific solid and liquid waste management practices for rural areas.
6. To create gender equality and social inclusion by improving sanitation in marginalized communities.

METHOD OF IMPLEMENTATION

The Central government strategy was to complement the efforts of the state governments in spreading information about the program, providing infrastructure for the programme and reinforcing behaviour change through its public messages and grassroots out- reach programmes.

Since sanitation is a state subject, the role of the Central government is to strengthen and support State effort. These include

1. Supporting the district institutions for undertaking intense behaviour change activities at the grassroots level.
2. Facilitate states agencies to roll out programmes in a time bound manner and measure outcomes.
3. Providing incentives for behavioural change.

SANITATION TECHNOLOGIES

As a part of its effort to encourage latrine usage as well as creating sanitation systems which are self sustaining and not requiring the complicated sewage infrastructure that is necessary in urban areas, the government has come up with technologies and suggestions which will enable each rural toilet to be self sustainable. Incorporated in the mission are the suggested technologies which are both self sustaining and relatively cost effective.

A key feature of the Mission is that communities and individuals who participate in the programmes contribute to some of the financial outlay to promote a sense of ownership. While some of the funding will come from the government, a part of it has to come from the individual or communities so it promotes ownership and sustained use. The menu of options in toilet construction allows families and communities who are financially disadvantaged to build facilities which can be later upgraded. The primary purpose of the latrines is to promote the safe confinement and disposal of faeces. While the government provides a list of flexible options, the optimal solution to the correct disposal and treatment of solid and liquid waste which incorporates both disposal and waste treatment is the Twin Pit technology displayed below.

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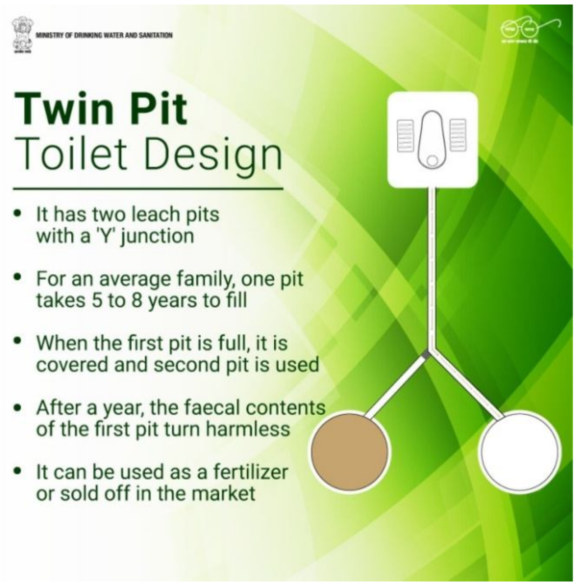
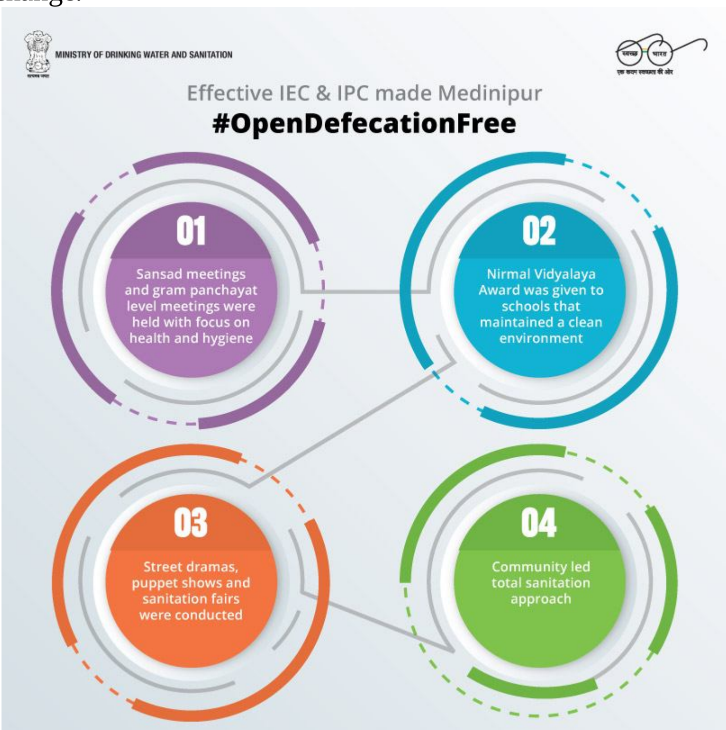


PUBLIC AWARENESS AND EDUCATION

An important part of the SBM is to change human behaviour and reinforce the change through the dissemination of correct information about sanitation practice and general cleanliness. While previous governments have focused on sanitation infrastructure, the current government focused equally on behaviour change to ensure the success of the Mission. The key differentiator is the Behaviour Change Communication (BCC) which is not a stand-alone activity but an integral part of the SBM-G.

Great emphasis has been placed on generating awareness, in order to change the present mindset so that both individual and community behaviour is changed. This awareness is to create a domino effect where the awareness leads to greater demand for sanitary facilities in schools, Anganwadis, and places of community congregation. Open Defecation Free environment can only be achieved if all parties conform to the desired behaviour of toilet use every day and every time. Community awareness and peer pressure are important facilitators of behaviour change.



FINANCIAL OUTLAY FOR SWACHH BHARAT MISSION-GRAMIN

The SBM-G was funded by both the government and the individuals who required toilets. Depending on the income and wealth of the families, they received more or less funding. The poorest got the most funding while those who had higher incomes may have received some financial incentive but had to also invest their own funds. Those with the highest incomes had to invest their own money and time in building the toilets.

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In a study done by UNICEF which sampled approximately 10,000 households in twelve states of which two-thirds were below the poverty line, the financial outlay by the government and individuals is detailed. According to this survey, the costs of implementing SBM (G) at household level are as follows:

1. Financial costs paid by household from own funds. On an average: INR 9,942 was the out-of-pocket contribution of those receiving government support, and INR 29,900 by those not receiving any government support. This averages to INR 16,262 across all households. Spending on operations and maintenance (O&M) costs averaged INR 2,359 per household.
2. Financial investment from the government, received by households. 70 per cent of sampled households received support for capital investment. The financial incentive to these households averaged INR 11,800 per household, or an average of INR 8,199 per household across all households obtaining toilets.
3. Non-financial costs covered by household include time in building, cleaning and maintaining the toilet. Time is valued at the rural wage rate of INR 250 per day.

MONITORING MECHANISMS

The implementation and success of the mission has to be evaluated at regular intervals to ensure that the community and national targets are met to declare various villages as ODF (open defecation free). To reach this goal, the SBM-G has employed a number of foot soldiers in the form of community workers and vigilance committees which have been set up to monitor the progress of the programme.

RESULTS OF THE MISSION FROM 2014-2018

According to the Swachh Bharat Mission Gramin government documents, the present government has helped build 9, 23, 94,112 toilets since October 2, 2014. More than 5 lakhs villages have been declared ODF. There are 615 ODF districts and 30 states and union territories which are ODF. Only Orissa at 83.34% and Goa at 76.22% come in at less than 90%. Four southern states of Tamil Nadu, Andhra Pradesh, Kerala and Karnataka are all over 90% rural coverage. The number of people who defecated in the open has been reduced from 550 million to around 150 million in the four years of SBM.

EVALUATION OF THE RESULTS

Hard data about the efficacy of the SBM programme and its results are slowly being measured by various national and international organizations and NGOs. We have with us some of the results from studies done by UNICEF and WHO.

The results can be broadly classified into public health impact and socio economic impact of the mission.

IMPACT OF SBM-G

The Ministry of Drinking Water and Sanitation, which launched the Swachh Bharat Mission-Gramin (SBM-G) in 2014, with the stated aim of ending open defecation by 2019, requested World Health Organisation (WHO) to conduct a study to assess the health gains of this mission. Below is the summary of the findings of potential health impact of SBM.

The findings of the study are as follows:

- SBM-G if properly implemented and achieves 100 percent compliance will result in averting more than 300,000 deaths (due to diarrhoea and protein-energy malnutrition) between 2014 and October 2019.
- Unsafe sanitation caused an estimated 199 million cases of diarrhoea annually before the start of the SBM in 2014. These have been gradually reducing, and will almost be eliminated when universal use of safe sanitation facilities is achieved by October 2019.
- More than 14 million DALYs (Disability-Adjusted Life Years) are estimated to be avoided (diarrhoea and protein energy malnutrition) between 2014 and October 2019.

The WHO study focused on estimated public health impact and gains of this mission. The main focus was the resulting reduction in infant mortality due to diarrheal deaths and other water borne diseases. Sanitation which includes access to clean drinking water and hand washing behaviour can drastically reduce the disease burden on children and their families.

RESULTS OF SWACHH BHARAT MISSION AND ITS ECONOMIC AND SOCIAL IMPACT

Sanitation has impact on not just public health but also on the economic prosperity of families. The UNICEF study on Swachh Bharat Mission focused on the economic gains by even poor families when they built and used toilets regularly.

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In 2014, at the start of SBM there were 111 million rural and about 10 million urban households in India still without a sanitary toilet. It was estimated that 564 million were still practicing open defecation. This latter number represented 60 per cent of open defecation globally.

The Prime Minister made the Swachh Bharat Mission (SBM) one of his government's priority policy goals. Clean India was to be the very foundation of India's future development success. To realize this goal of complete ODF by 2019, all stakeholders were mobilized, from the national government, state government down to the community and Panchayat leaders. Significant funds were mobilized from the national and state governments to enable poor families to construct toilets. Verification systems have been put in place to verify if villages who declare themselves ODF are indeed so.

The economic impact of better health in terms of productivity increase due to decrease in man hours lost due to ill health is well documented by various organizations. In an effort to understand the results of SBM in economic, financial and social terms, UNICEF conducted a survey of approximately 10,000 households to see the results of this mission in the last four years.

The net benefit of the program in rural areas has been divided into various sub-categories, with results in all the categories explained.

1. Reduction in Medical Expenditure. One of the greatest financial burdens borne by rural families is medical expenses from diarrheal diseases and other gastrointestinal diseases which result from poor hygiene and faecal-oral contamination. Medical costs were estimated at INR 16, 048 prior to regular toilet use. With 100 percent toilet use and hand washing, the average medical cost per household falls to INR 8,024.

2. Avoided Deaths: Reducing mortality through improved sanitation and hygiene is an important aspect of economic growth. The average value of deaths due to WASH-related (Water Sanitation and Hygiene) diseases is INR 35,244. This reduces to INR 17,000 when there is regular latrine use and hand washing.

3. Time Use: When diseases are rampant due to poor hygiene, households spend significant productive time accessing medical care and caretaking of the sick patient. In terms of hours lost in medical care, it is estimated that a total of 67.8 hours of time of household members was lost during an average illness episode, which valued at INR 1,502.

4. Time lost finding a place to defecate and pass urine: When there are no accessible toilets, significant time was spent searching for places to defecate and pass urine. The economic value of time lost in accessing sites varied based on whether the person was the prime wage-earner and caregiver, or was a child or elderly. The primary wage earner lost INR 6, 258 in times spent accessing sites, prior to toilet building.

5. Property value: Constructing a latrine significantly increased the property value of the families. When property with toilets was evaluated, the increase to property value with the addition of a toilet is estimated as an average value increase is INR 18,991.

6. There are numerous intangible benefits perceived by the toilet owners and users. These include

a. Convenience of a nearby latrine especially during the night or during rain.

b. Convenience for elderly household members and menstruating women.

c. Privacy during defecation and safety for girls and women.

d. Enhanced status and privilege of household with latrine.

e. Cleanliness and hygiene.

The UNICEF study results can be briefly summarized as follows. The benefit accruing to households from having a toilet and using it 100 percent of the time are below:

1. Medical costs averted: financial savings from paying less medical costs based on reductions in illness episodes (average INR 8,024 (US $124) per household per year).

2. Value of time savings: reduced time lost from sickness and seeking a place for open defecation (average INR 24,646 (US $382) per household per year).

3. Value of saved lives: economic value of saved lives due to lower mortality rates (average INR 17, 622 (US $273) per household per year).

4. Property value: INR 18,991 per household was estimated as the average increase in property value from having a toilet, made by the household occupants.

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Hygiene and sanitation and its impact on GDP were also detailed in the UNICEF report. The damage to GDP from diseases caused by poor hygiene and sanitation in 2015 was estimated as 7.9 percent of GDP. This corresponds to only 34% toilet use in rural areas and 65% use in urban areas. When toilet use increases to 70%, the impact on GDP is a loss of 4.7% and when latrine use is 100% the national damage is 2.7% of GDP. Even with 100% toilet use, there will still be deaths and disease to unhygienic practices and sanitation. However, the damage is vastly reduced when there is 100 percent compliance in toilet use.

CONCLUSION

The importance of sanitation, hygiene and health is a country's development story cannot be overstated. Rather than being the result of economic development, it is indeed a necessary condition for economic development. The human cost from poor sanitation in terms of death and disease significantly impacts not only the quality of life of the individual but also exacts an economic cost on the GDP. The Swachh Bharat Mission is one of the most ambitious public health schemes launched in independent India. Continued funding for sanitation infrastructure and health education for behaviour change is imperative if the mission is to be successful. From the available data, we can conclude that toilets have indeed been built in rural areas to ensure maximum coverage. However, we will need to study compliance in usage and health behaviour over the next decade to arrive at accurate data on whether the mission was successful in averting diarrheal deaths and improving public health.

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CASHLESS ECONOMY AND INDIA: A FEASIBILITY ANALYSIS VIS-À-VIS THE STATE OF DIGITAL DIVIDE

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ABSTRACT
While the country continues to debate the move of demonetization that was announced back in November 2016 and its multiple repercussions, sanity has taken a harsh beating at the hands of irrational slogan mongering and political one-upmanship games. One rather pertinent word, however, that has lived through the day and has raised its head is cashless economy. While the noise continues to become shriller across the existing political spectrum, it has become all the more important to make an attempt to understand if the economic model put forward by the current central dispensation, based on the primacy of cashless transactions, is at all feasible in India. While it is a given that a cashless economy would give way to a reduction in spurious monetary transactions and curb the menace of black money in the country, the fact remains that a major doubt persists vis-à-vis the mammoth technological infrastructure, expertise and awareness required to pave the way for such a major transition. This paper would try to dissect the grounds behind the concerned policy decision and its relevance in view of the humongous digital divide that is still at large across many parts of the country. Further, it would also be an ingrained objective of the paper to explore ways that would make the desired transition smooth and seamless.

Keywords: Cash, Cashless Economy, Demonetization, Digital Divide, India

INTRODUCTION
Before striving to understand cashless economy, let us make an honest attempt at deciphering the move that prompted the usage of the concerned word – the demonetization of the then existing Rs. 500/- and Rs. 1,000/- notes from the midnight of November 8, 2016. The honourable Prime Minister of India Shri Narendra Modi announced his surprise shift through a speech on November 8, 2016 that the notes would cease to be legal tenders from the next day and would only constitute paper value (The Hindu News Desk, 2016).

This move, as planned, was meant to be a severe blow on the hoarders of black money across the country. It was also aimed at stopping the funding of terrorist activities by forces inimical to the country. While people were given time till December 31, 2016 to exchange their invalid currencies, they were also provided with the rejoinder of having to do so through the usage of proper identification credentials and at times details concerning their respective bank accounts (The Hindu News Desk, 2016).

The days following the announcement marked an era of absolute chaos and confusion. With people from across the social spectrum not being able to exchange their notes or draw fresh currencies subject to long lines across all the bank branches, the society practically came to a standstill (TNN, 2016). While the situation normalized to a significant degree by the middle of the month of December 2016, there was still a currency crunch as the Reserve Bank of India (RBI) was not able to fulfill the shortage in currencies (Mehta, 2016).

However, amidst all the hoopla and brouhaha, the government remains committed to its pledge to convert the country's economy into a cashless one slowly but gradually. Considering the fact that more than 95 percent of all transactions in India are cash-based, it is quite a task to make this transition (Singh, 2017). Add to that the digital divide in India. While about 56.8 percent of the total population of the world has access to the internet (INTERNET USAGE STATISTICS, 2019), the corresponding figure for India stands at a measly 40 percent (PTI, 2019). Illiteracy and the lack of awareness amongst a significant portion of the Indian population is also a major impediment in converting the Indian economy into a cashless one.

Multiple other concerns have been raised pertaining to this sudden push for a digitally enabled economy. It is important to consider these concerns before moving ahead with the topic. In excess of 90 percent of the Indian workforce earns their livelihood in the form of cash (Fears Grow for India's Cash-Based Economy as the Effects of Modi's Ban Begin to Ripple, 2016). The ripple effect of this move might have a disastrous impact on the Gross Domestic Product (GDP) growth in India that has been mounting at a healthy pace over the past decade or so.

As Dr. Manmohan Singh, former Indian Prime Minister and renowned economist, rightly pointed out during his marathon speech at the Rajya Sabha after demonetization was carried out, the dip in GDP might be as high as 2 percent and that is still an underestimate (Singh, 2016). About 86 percent of the value of money in India is in

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the form of Rs. 500 and Rs. 1,000 notes (Manish, 2016). Demonetizing this whole bunch of notes practically translates to making money valueless overnight in an overwhelmingly cash-based country. The country's unorganized sector and the poorest of the poor still transact in cash. This sudden emphasis on cashless transactions constitutes a direct blow to their livelihood. While these skepticisms are valid, a balanced view needs to be adopted to understand the problem in its entirety and pointing out ways to solve the existing imbroglio.

CASHLESS ECONOMY

While there are multiple scholarly definitions of what a cashless economy is, it could be broadly defined as an economic setup where a majority of the financial transactions is accomplished through the usage of cards and other digital payment means. Under the given circumstances, the circulation of physical currency is cut down to the minimum. This system not only aids the digital tracking of spurious and corrupt transactions but also formalizes the economy to a significant degree (Anand, 2015).

Unlike traditional cash transactions, cashless payments discourage robbery and other cash related crimes (Armey, Lipow, & Lipow, 2014). In a country like India, cashless payments can go a long way in making people's money safe. When people opt for other alternative modes of payment, they tend to hold less physical cash when they shop. Thus, it eliminates the incentive for robbers to commit cash related crimes (Ong, 2016). It remains a fact that the number of crimes committed for the sake of money is much more than the corresponding number for any other crime. As for vendors, the ease of transactions through various digital payment modes will increase their revenue, improve operational efficiency and lower operating costs (Akhalumeh Paul & Friday, 2012). This would perk up the general environment of investment in the country, which in turn would translate into an enhancement of the overall GDP.

Cashless payments are also regarded as hygienic for food vendors (Dragulanescu, 2002). With the inception of numerous electronic payment gateways and e-wallets, it has become all the more convenient for the vendors to sell their products. Cashless payments also directly eliminate the thriving business of fake currencies at the behest of anti-national and nefarious elements.

DIGITAL DIVIDE IN INDIA

The term 'digital divide' is said to have been coined a decade ago by a former United States Assistant Secretary for Commerce for Telecommunications and Communication, Larry Irving. Jr, to focus attention on the existing gap in access to information services between those who can afford to purchase the computer hardware and software necessary to participate in the global information network, and low income families that cannot (McCarthy, 2018).

Although in terms of absolute numbers, India ranks high in terms of internet usage, the digital penetration is not quite something that keeps us at an advantage. While the internet penetration in China is 52.2 percent as of 2016 (Security, 2016), the corresponding figure for India roughly stands at 40 percent. Now, there is also a possibility that even out of the total number of people using the internet, a significant number might be using it sporadically without much idea about what the available scopes of the digital medium are. Considering the fact that the government is emphasizing on the transition to cashless economy, this gap might be a major impediment.

While cashless economy is an extremely desirable proposition in a country like India where the rate of corruption is high, there are significant security risks that are involved and more so, for people who are not aware of digital safety precautions. Notwithstanding the fact that there is practically no foolproof measure that could be implemented to ensure a completely safe digital environment, there surely are a number of procedures that could significantly enhance the quality of the security system. Some of these measures could be put in place on an individual front that would necessitate major technological awareness. However, there are many others for which the state has to play the role of the catalyst. Some of these steps could be listed in the form of the following pointers (Tembhekar, 2016):

1. All the Automated Teller Machines (ATMs) in the country need to be provided with sophisticated anti-skimming technology along with a 24/7 surveillance system.
2. The banking system in the country needs to be compliant with reputed standard regulations. Additionally, effective measures need to be undertaken to address 'Distributed Denial of Service' (DDoS) and malware issues.
3. The various online transaction firms operating in the country should ensure compliance with the 'Payment Card Industry Data Security Standard (PCI DSS) 2.0' standard.

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In terms of India's efficiency in the digital age, there are multiple points of worry. According to a report published in 2016, the country ranks 96th when it comes to the download speed and 105th as far as average bandwidth availability goes (Livemint, 2016). It is a matter of concern that India trails even Bangladesh and Nepal in download speed. To top it all, India has had a poor record in terms of internet security and there are multiple reports that say that the same is becoming worse with each passing day. It might be alarming to note that India tops the world when 'ransomware' attacks are concerned. 'Ransomware' attacks make banks and other important establishment vulnerable to the leakage of confidential and sensitive information (Tembhekar, 2016).

Most importantly, it has been reported that there are almost zero legal convictions when it comes to cyber crimes. Consequently, people who would otherwise go for digital transactions are also unsure about making the complete shift. Many cases of identity theft and phishing have been reported from across the country and more often than not, the police have pleaded helplessness due to a severe paucity of cyber regulations.

FEASIBILITY OF CASHLESS ECONOMY IN THE INDIAN CONTEXT

To make the rather ambitious plan of cashless economy workable in India, the government needs to ensure some very basic steps. These steps, if implemented in the right earnest, could make the transition less difficult if not seamless. To begin, an estimate needs to be generated pertaining to the unbanked population in the country. Subsequently, the said population has to be brought under the banking umbrella. One of the pillars of cashless economy is universal banking coverage. The policy of Direct Benefit Transfer (DBT) has to be the implemented so that people start receiving their dues through the banking system.

On the positive front, the RBI has started issuing licences to payment banks and small finance banks. These would play a major role in ensuring banking inclusion and address the banking needs of the unbanked population. The much ambitious Unified Payments Interface (UPI), launched by the National Payments Corporation of India (NPCI), has boosted the cashless economy in the country. This makes digital transactions as easy as sending a text message (Livemint, 2016).

It needs to be remembered that any push for a cashless economy is largely dependent on the quality of the telecom network. It remains a stark reality that people, who are otherwise technologically proficient, face multiple problems in making electronic payments subject to the poor quality of telecommunication signals. Consequently, the banks and the merchant establishments need to ensure that the technology they use is of the highest quality so that people do not shy away from making digital transactions. Smooth and secure digital transactions might go a long way in positioning people's faith in a cashless economy. Most importantly, the government has to play its part in ensuring that there are enough perquisites and rewards associated with digital payments. Only when there is a concerted state support for the transition, will there be an actual change on the ground.

CONCLUSION

While the current government is in the process of imparting transparency and accountability to financial transactions, there are multiple concerns as regards the viability of a complete cashless economy in India. This stems from multiple backgrounders – the major ones being financial and digital illiteracy amongst a significant section of the population and the paucity of necessary infrastructure and technology. It needs no affirmation that the push to weed out black money and rationalize taxation has multiple advantages. At the same time, it is also an established fact that the country is ill equipped to handle this hasty push. With illiteracy still at large across many parts of the country, it is a difficult exercise to turn citizens into netizens for them to handle the demands of a cashless economy.

However, all said and done, there is no point crying hoarse over a move that has already been implemented. The best possible option is to pave the way for the transition to be easy. Thus, improving the infrastructure, bettering the telecommunications network and imparting financial and digital literacy to a vast section of the population seem to be the best possible ways to go about it. No one can deny that the changing world order demands this transition. Thus, it needs to be eventually implemented. Therefore, it is better that it has been implemented now than some other time.

The step can be successful only when the citizens of the country make it a point to withstand the inconvenience that has been caused and accept the move to be in the interests of a better future. The privileged and technologically proficient class should go out of their way in helping the digital have-nots so that a complete rehaul of the economy could be achieved. While the government should continue in its mission to provide a solid support system to the underprivileged class, the citizens should also do their bit in making India a digitally empowered state.

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NEW MEDIA AS THE FIFTH ESTATE

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The new media which is also understood as citizen journalism is considered to be the Fifth Estate of a democratic country. Unlike, other forms of estates, it emerged without having any form or a particular purpose, except to be a tool of communication on a larger scale. It would be a mistake on our part to equate the New Media with the traditional forms of media. Whenever we talk about any estate, it refers to a part of government which is independent and which has the fundamental duty of preserving the democratic spirit of the nation. The traditional media, although not directly and explicitly, is not independent of government. Unlike other forms of estates, the ethical responsibility of the traditional media is not that well-formed and it fluctuates as it is a profession as well as a business. On the other hand, the new media is independent of government and has no such defined norms or constraints applied to it. According to William Dutton (Dutton 2009) the Fifth Estate is not simply the blogging community, nor an extension of the media, but 'networked individuals' enabled by the Internet, i.e. social media, in ways that can hold the other estates accountable. It is well known that the new media has created a new awareness among people and has provided them with the tool to not only critique or praise governmental authorities and their acts, but to go against the traditional media whenever it digresses from its responsibilities. However, I have reservations against making the new media, an expansion and modification of the traditional media by saying it a new media or citizen journalism and trying to determine its principles on the basis of the traditional media. As has been argued by Stephen Ward that after the integration of traditional and citizen journalism, the integrated new media becomes layered and we need to have an ecumenical ethics for this media. He states, “The notion of a fifth estate, therefore, is not simply a technological or ideological category. It does not refer simply to journalists who use new media (e.g. blogosphere) nor does it refer only to alternate left-wing media. The fifth estate refers to those citizens and journalists interested in developing new forms of journalism and in reconstructing media ethics for an era of global and interactive media.” (Ward 2011, 235)

It could not be a fifth estate, if one is not following the ecumenical ethics and along with critiquing the mainstream media, trying to enhance its reach to the global level, as has been mentioned by Ward (Ward 2011); or if one is not being a watchdog for watchdogs, i.e., mainstream media for their irresponsible behaviour as has been argued by Stephen D. Cooper (Cooper 2006); or if one is not engaging in “extra media activities” focusing on research, monitoring, reflection, and means of accountability which is intended to “subject the media themselves to scrutiny” as has been argued by Christians *et al* (Christians e*t al* 2009). If we consider the views of all these thinkers, it implies that the fifth estate has the responsibility of (a) being the watchdog of watchdogs, (b) enhance the reach of media to global level, (c) reaching to the level of every citizen capable of handling new technologies and having access to the internet, (d) doing (a), (b) and (c) with proper research, reflection and accountability. If this is an understanding of the fifth estate, why do we need to base it on the parameters of the traditional media? The new media is primarily meant for being a platform where people can share their views and concerns with others on a larger scale and within very less time. This does not limit actions of the fifth estate to being a watchdog of watchdogs only. It can directly do the work the traditional media is supposed to perform. When we limit its scope to the level of being a form of journalism, it becomes inconsistent with the meaning of being an estate. All the four estates, have their specifically defined roles and responsibilities. However, it is another matter what challenges they face in performing them and how responsible they are towards those objectives of their roles. Likewise the fifth estate’s role and ethical norms should not be looked upon in terms of that of the traditional media. When we look at the New Media as a citizen journalism, we start comparing it with the traditional media and hence tend to set goals and ethics as per the conditions of the traditional media. If we analyze these two forms of media, we find that whereas the traditional media focuses on pre-publication verification, new media engages in post-publication interaction on social media platforms; whereas the traditional media has accountability to what they show and print, the new media, due to anonymity and airing one’s personal views, hardly incurs any accountability; whereas the primary aim of the traditional media is to be truthful and not be carried away by any emotion and reactionary feeling regarding any information and then mislead people, the new media is usually biased, based on instant findings of something without giving any serious attention to the repercussions of imparting that information. The traditional media has a proper institutional structure and works like a profession and a business. On the other hand, it is very difficult to identify the structure of the new media and hence more difficult to apply any ethical responsibility to them. There are so many points of differences between these two and still solely on the basis of sharing

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information on various platforms, the new media has become another form of journalism working as a fifth estate.

I argue that the new media, is not just the extension of the traditional media, it differs from it, and sometimes contradicts it. This new media has become the means of power in the hands of ordinary people, which unlike the old days, can be shared on a mass level and hence could have great impact on our everyday lives. Traditionally, people have been discussing about, criticising and arguing for or against a particular action of the government, the traditional media, any incident or event or any other cause. Since their views were limited to one on one, or one to a few people level, with limited means of communication, it was not considered to be a fifth estate. But now, when we have the platform where every view could be shared on a huge level and could have impact on so many people because of its extended reach, it has become the fifth estate. In this case, because it has become the voice of people and in a democracy, in principle, it is ultimately the views of people that should matter, it has gained a power and had tremendous influence on so many levels in recent years.

Journalism, without its professional attitudes of doing it and without being accountable and responsible to what they do, cannot have much weight in the society. It is inappropriate to consider the New Media as a citizen journalism and because of this tag, try to impose the rules and regulations of the traditional media on it. The importance of being a fifth estate is not dependent on doing whatever the traditional media was supposed to do. It is important because more than being a tool to criticise the activities of the traditional media, governmental organizations or authorities and people affiliated to various other organisations, it is the voice of people. It could be the power of the democracy if used in a wise manner and could reach to the level of every citizen. It is an effort to make every citizen think about their nation and be careful of what is happening around them. It is not limited to being a watchdog of watchdogs, but is extended to being the watchdog of everyone. Since its scope is so broad and so diverse, it is much more important than the traditional media, when not put in the same framework as that of the traditional media. When understood in its own context, it is not important for it to be accountable in the same manner as the traditional media is; it is not required for it to be truthful and objective and full of research and monitoring all the time, although it would be great if it could do so. It could be fake and completely biased (it actually is in so many cases), partial with all sorts of limitations related to the views of people. For example, a member of a community might understand an incident from his or her own community's point of view and hence disseminate some information which is against some other community. Still it could be accepted as a fifth estate because it has the power of being shared by various people on various platforms, being the voice of people, engaging with every incident or behaviour of people with the motivation of discussion and letting people know what is happening around them. When people discuss about anything on social platform or on blogs or websites, when they disagree and argue, when they feel it is important for them to understand why a piece of information has come and what are its implications and how could it influence their lives, then it becomes the fifth estate. It becomes a fifth estate, when it fights for a social cause or political cause, considering that they are also the part of the same world. It becomes so, not because it is another form of journalism, but because the fifth estate, which is independent of the four estates and can evaluate not only their acts but the acts of every citizen, is sometimes not limited to reactions to certain actions but also fights for creating awareness for equality, rights and liberty of various sections of the society. We cannot limit the views of people in any framework and likewise we cannot limit the impact or performance of the new media in the framework of being a watchdog of traditional media. It has its independent existence.

People used to come to the roads for a cause, whenever they needed to show their dissent against any incident. They needed to reach their voices to the level of authorities by gathering at one place for a cause. These gatherings do influence the authorities. Due to the emergence of online platforms, people could come together for a cause very easily and make a difference in the society. This fifth estate has many shortcomings, as being fake, biased, unverified and creating chaos in the society; however, we cannot deny that it has created a power in the society. It compels the authorities and officials to give proper attention to what people think about them and to what is being influenced by their policies and activities. It is not the case that you will get to know people's reaction only after 5 years and only once when we vote for our representatives. Now, almost every policy of governmental and sometimes non-governmental organisations are being watched, and because of this these people need to be more attentive to what they do or say.

It is a platform which makes people more aware and engaging with all activities. It is not the case that these things were completely absent in previous times, but people were largely unaware of the meaning, interpretation and impact of any policy or action on their lives. Since internet has provided the platform to share one's views with everyone with an internet connection and a sense of handling the technology, it has become the power.

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My contention is to challenge the understanding of the New Media as a citizen journalism and trying to identify its ethical principles on the basis of that of the traditional media. It can have only one Ethical principle and that is of self-refection, i.e. being careful about how one's opinion and sharing information is going to influence other's lives. The New Media is a fifth estate in this sense that it gives platform to people to share their views and also let others know that their actions and policies are being watched and analysed by the people. It is no longer the case that we are passive receivers of information and that we can only understand the implications of any action after its consequences are seen. We can very well analyse the terms and conditions of any policy or any statement in a few hours because the same platform is simultaneously being shared by journalists, doctors, political scientists, academicians, and almost by people of all categories who have access to and understanding of these online platforms and political leaders themselves. These interpretations might be wrong or fake or very sensationalising, but their importance cannot be undermined. The New Media is new not because it is a different and modified form of the old media, but it is the new and more powerful form of people's voice.

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SELF-REGULATED LEARNING ACTIVITIES: LEARNING TO MAKE "I" STATEMENTS

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ABSTRACT

Active independent learners are aware of and take control of their learning. Self-regulated learning involves deliberate selection and use of strategies to set direction and understand and plan process that mediate between person, context and achievement. It is a goal driven process in which the learner monitors and regulate inner abilities and responses to negotiate external environment. 'I' statements which turn rather abstract concepts into statements we can all imagine.

Keywords: Self-regulated Learning, Proximal Goals, Active Participation

1. INTRODUCTION

Self-regulation refers to the process through which learners systematically direct their thoughts, feelings, and actions toward the attainment of their goals. It is a kind of meta-cognitive strategy and related to the choice of appropriate learning strategies. Self-regulated learning refers to one's ability to understand and control one's learning environment. Self-regulation abilities include goal setting, self-monitoring, self-instruction, and self-reinforcement (Harris & Graham, 1999; Schraw, Crippen, & Hartley, 2006; Shunk, 1996). Self-regulation should not be confused with a mental ability or an academic performance skill. Instead, self-regulation is a self-directive process and set of behaviors whereby learners trans-form their mental abilities into skills (Zimmerman, Bonnor, & Kovach, 2002) and habits through a developmental process (Butler, 1995, 1998, 2002) that emerges from guided practice and feedback (Paris & Paris, 2001). Self-regulated learning strategies help to prepare learners for lifelong learning and the important capacity to transfer skills, knowledge, and abilities from one domain or setting to another. In attempting to integrate the multitude of definitions available at the time, Pintrich (2000) described self-regulated learning as: "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation and behavior, guided and constrained by their goals and the contextual features in the environment". According to Bandura, self-regulation strongly depends self efficacy beliefs. "Perceived self-efficacy influences the level of goal challenge people set for themselves, the amount of effort they mobilize, and their persistence in the face of difficulties. Perceived self-efficacy is theorized to influence performance accomplishments both directly and indirectly through its influences on self-set goals." (Zimmerman et al. 1992). Alpert Sleigh (1997) stated self-regulation includes several components: motivation to monitor and control learning, the learner's epistemic beliefs on learning, meta cognition, cognitive and learning strategies, prior knowledge and mental models to scaffold new knowledge and self-efficacy. According to Zimmerman et al. (1992), self-regulated learners direct their learning processes and attainments by setting challenging goals for themselves, applying appropriate strategies to achieve their goals, and by enlisting self-regulative influences that motivate and guide their efforts.

2. WHY IS SELF-REGULATED LEARNING IMPORTANT?

Self-regulated learning influences academic performance from an early age, it may be especially relevant for success in rigorous senior secondary or college academic contexts. Compared to high school, the content of college coursework can be more demanding and require more complex thinking. Hence, many college students are experiencing new levels of academic challenge, perhaps including the awareness that more of their peers equal or exceed their own proficiency in learning. The college context also demands a greater degree of autonomy and self-discipline. Unlike high school, a particular class may meet just twice each week, involve little direct contact with the teachers; include a large set of unfamiliar peers, and limited formal feedback. Instructional requirements that force students to adhere to more effective study techniques may be non-existent. In the midst of these dramatic shifts in the instructional context, students also are exposed to a new, exciting and abundant set of non-academic opportunities. All the while, previous constraints and external supervision of how they spend their time are greatly reduced. Of course, the need for individuals to be motivated, manage their strategic pursuit of reasonable self-set goals, and persist in the face of distractions and setbacks does not end at the completion of courses. The value of self-regulated learning extends to professional and personal contexts and fits with the view that students should be effective life-long learners who strive to develop intellectually throughout adulthood.

3. CYCLE OF SELF-REGULATED LEARNING

Self-regulated learning is a cyclical process, wherein the student plans for a task, monitors their performance, and then reflects on the outcome. The cycle then repeats as the student uses the reflection to adjust and prepare

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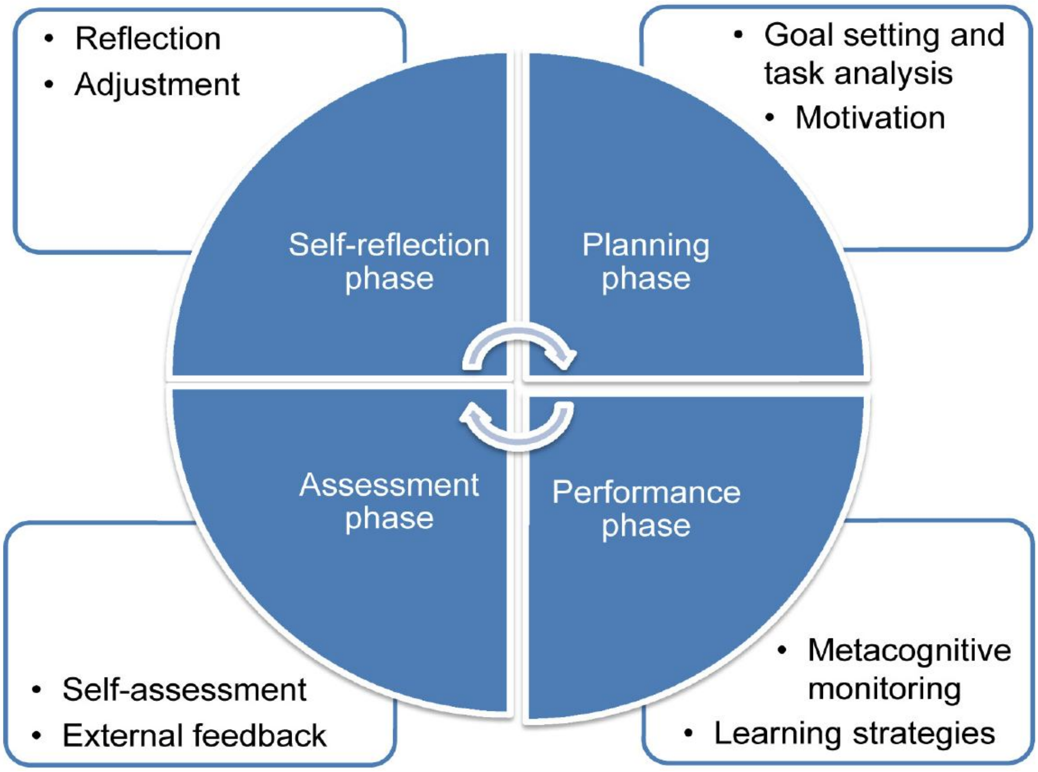
for the next task. The process is not one-size-fits-all; it should be tailored for individual students and for specific learning tasks (Zimmerman, 2002). The cycle process focuses on the following aspects:



4. ATTRIBUTES OF SELF-REGULATED LEARNERS

Santrock (2004) describes self-regulated learners as those who: set goals for widening their knowledge and maintaining their motivation, are aware of their emotions and learn how to manage their emotions, regularly monitor their progress toward a goal, modify their strategies on the basis of their progress, assess hindrances that may arise and make adjustments. To be more specific, Zimmerman (2002,) lists the following component skills of self-regulating learning as used by learners: setting specific proximal goals for oneself, adopting powerful strategies for attaining the goals, monitoring one's performance selectively for the sign of progress, restructuring one's physical and social context to make it compatible with one's goals, managing one's time use efficiently, self-evaluating one's method, attributing causation to results and adopting future methods.

5. STRATEGIES FOR BUILDING SELF-REGULATED LEARNING

Helping students develop their self-regulated learning is a worthwhile goal and, fortunately, it fits seamlessly with high quality instructional practices. For those who want more, a number of resources for how teachers can promote self-regulated learning are available (Nilson & Zimmerman, 2013).

- Motivate students by boosting confidence in their ability to learn, and when they perceive what they are learning as important, useful, or relevant. To support the former, teachers can ensure that students have access to the resources or tools they will need to learn, and have reasonable pathways that will lead to success. Teachers can impact the latter by highlighting how course requirements fit with students' personal goals, career plans, or other valued outcomes. Adaptive motivation also arises when instructors convey that strategic effort and persistence are the key to success.
- Help students be goal-oriented, and deliberate in how they go about completing the work for your course. These processes can be modeled by instructors or fellow students, and they can be integrated into the structure of a course. A stable class calendar with clear deadlines, obvious sub-steps for larger projects, and insights into the time needed to complete tasks all facilitate students' planning.
- Promote students' understanding of effective strategies for mastering the knowledge or abilities in a course. This process can include identifying strategies, explaining their connection to improved learning, modeling their use, and providing opportunities for independent and varied practice. More generally, help students actively think about and work to improve the methods they use to learn.
- Support students' awareness and understanding of their progress toward learning goals. Provide students timely, specific, and informative feedback about whether they are reaching course objectives. Instructional

support for students' reflection on the process of learning, including what strategies work or does not work for learning particular material will also promote self-regulated learning. Reflection and mindfulness allow students to develop the metacognitive knowledge that will improve their subsequent efforts at learning.

6. SELF-REGULATION TOOLS

Jermann et al. (2004), describing collaboration management tool design options, distinguish between three types of regulation tools:

- Mirroring tools: reflect information on an interaction with no evaluation.
- Metacognitive tools: propose possible courses of action with a comparison to a reference model.
- Guiding systems: comparison of the current state with the desired state is assessed by the system internally and guidance is provided accordingly.

7. ACTIVITIES THAT DEVELOP SELF-REGULATED LEARNING

7.1 THINK-PAIR-SHARE

It allows for a break during lectures so students can answer a question posed by the teacher. First the students reflect on the question independently. Then they discuss their responses with a partner. Lastly, groups of students share their thoughts with the whole class. Think-Pair-Share activities pose a question to students that they must consider alone and then discuss with a neighbor before settling on a final answer. This is a great way to motivate students and promote higher level thinking. Even though the activity is called think-"PAIR"-share, this is the term many teachers use for pairs and small groups (three or four students) alike. Groups may be formed formally or informally. Often this group discussion "sharing" is followed up with a larger classroom discussion. Some think-pair-share activities are short, "quick-response think-pair-share" and sometimes the activities may be longer and more involved, "extended think-pair-share." The teachers can use the student responses as a basis for discussion, to motivate a lecture segment, and to obtain feedback about what students know or are thinking and it is easy to incorporate more than one think-pair-share activity in a given class period.

7.2 STEPS AND TIPS FOR USING THINK-PAIR-SHARE

- Be aware that open-ended questions are more likely to generate more discussion and higher order thinking. A think-pair-share can take as little as three minutes or can be longer, depending on the question or task and the class size.
- Give students a minute to two (longer for more complicated questions) to discuss the question and work out an answer.
- Ask students to get together in pairs or at most, groups with three or four students. If need be, have some of the students move. If the instructor definitely wants to stick with pairs of students, but have an odd number of students, then allow one group of three. It's important to have small groups so that each student can talk.
- Ask for responses from some or all of the pairs or small groups. Include time to discuss as a class as well as time for student pairs to address the question

7.3 BENEFITS OF THINK-PAIR-SHARE

- Teachers find they can have a format change during lecture that only takes a small amount of class time. Preparation is generally easy and takes a short amount of time.
- The personal interaction motivates students who might not generally be interested in the discipline.
- Opportunities to ask different kinds and levels of questions.
- It engages the entire class and allows quiet students to answer questions without having to stand out from their classmates.
- Assess student understanding by listening in on several groups during the activity, and by collecting responses at the end.
- The fluid nature of group formation makes this technique very effective and popular for use by instructors of large classes.
- Full class discussion is generally more fruitful after a think-pair-share and throughout the semester as the frequent use of such activities generally improves student comfort levels and willingness to participate throughout a class period.

7.1.1 RETRIEVAL PRACTICE

Often students think they know the material when it's sitting in front of them, and are surprised to find that they can't recall the information when staring at a blank sheet of paper. Practicing retrieval aids in self-observation, and promotes meaningful, conceptual, long-term learning. Adding retrieval practice to class and promoting it following class is straightforward and is well supported by cognitive science research (Karpicke, 2012).

7.1.2 SORTING, "CHUNKING," AND ORGANIZING INFORMATION

A given textbook chapter or lecture session contains several concepts, a dozen vocabulary words, and scores of supporting details. To experts, it's intuitive to identify the overarching principles and how supporting concepts fit inside them. But for students, the hierarchy of information is subtle, and each bit of information can appear unrelated to others. Activities that help students organize concepts and terminology can illustrate how to make sense from information that may otherwise seem overwhelming. This is also an example of an activity that teachers can demonstrate so that students can observe the thought process of an expert in the discipline. *Example: A concept map is one tool for organizing information, such as:*

7.1.3 READING REFLECTIONS

Students can often "do" the reading without extracting meaning from it. A reading reflection is a strategy for active reading, wherein students are prompted to pause after each chapter or section and answer a few simple questions:

- What is the main point?
- What did you find surprising?
- What did you find confusing?

Reading reflections can help students with self-monitoring and reflective thinking.

7.1.4 EXAM WRAPPERS

Exam wrappers can help students see past their grades and reflect on their exam preparation and performance. Each student completes a confidential worksheet before and just after looking at their graded exam. The worksheet prompts them to consider the strategies they used to prepare for the test, and reflect on the effectiveness. Students are also asked to look for patterns in their mistakes. Finally, the worksheet asks students to describe how they will prepare for the next exam.

CONCLUSION

Learning and innovation skills separate students who are prepared for increasingly complex life and work environments in today's world and those who are not. These skills include: creativity and innovation, critical thinking and problem solving, communication and collaboration. These critical dispositions are turned into 'I' statements which turn rather abstract concepts into statements we can all imagine. An innovation mindset is a combination of a growth, maker and team mindset. Within the mindsets we assume that complementary critical thinking, problem solving, and communication expectations are well communicated. These are included as:

GROWTH MINDSET

- Growth mindset: I can learn!
- Self-efficacy and confidence: I can do this!
- Goal setting and managing: I can reach my goals!
- Persistence and Resilience: I can overcome setbacks!
- Metacognition: I know myself and what I need to do!

MAKER MINDSET

- Curiosity: I'm interested in learning!
- Creativity: I ask what if? Why not?
- Purpose and relevance: This is important to me!
- Contribution: I can create value!

TEAM MINDSET

- Social belonging: I belong here!

- Understanding: I appreciate that point of view!
- Social capital: I can get the help I need!

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THE NEW ERA AND ITS BLOT ON THE HERITAGE MONUMENTS OF INDIA

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ABSTRACT
Monuments are not just structures built of brick, stone or mortar but are the replica of a nation's culture. They are the treasure house of a country and a society, which supply us with ample information of the religion, society and cultural significance of the region in which it is found. Rise in Sea-level, higher temperatures, habitat shifts and more frequent extreme weather events such as storms, floods and droughts, have the potential to rapidly and permanently change or degrade the structural remains of early days. These remains are to be preserved and conserved for the future generation to understand its glorious past. Taj Mahal has been under constant threat due to the Black Carbon and Organic Carbon emission around it. The shore temple at Mahabalipuram and the three prominent Chola Temple found in Cauvery Delta Region are threatened by huge inflow of Tourist and the climate change induced by human activity. As a result of transition to the new era of industrialization, urbanization and mushrooming of unplanned settlements these historical remnants face the problem of reseeding water level, pollution, structural instability etc. The paper envisages an attempt to look in to the imminent threat posed to the Heritage Monuments of India taking into example some of the significant ones in to consideration.

Keywords: Monument, Pollution, Buffer Zone, Green House, Tourism.

INTRODUCTION
The word monument is derived from the Latin word monumentum. Monument is a structure usually a building or statue, built in memory of a person or an event. National monuments are places of historic, scientific or scenic interest set aside by a government as public property. There has been a customary practice among the monarchs of great dynasties of erecting monuments of kings or princes after their demise. India houses one of the world's great artistic traditions, a heritage of art, architecture and sculpture that is dated back to thousands of years. Most of the monuments of India are religious in nature and still enjoy a greater significance in the sense of religion, culture and historical value. India is a repository of ancient cultural and natural treasures of exceptional value; UNESCO General Conference of 1972 has adopted a resolution on 'Convention Concerning the Protection of this World Cultural and Natural Heritage'. Archaeological Survey of India (ASI) is the body responsible for the preservation and protection of about 5000 monuments of national importance in India.

NEED TO CONSERVE MONUMENTS
The monuments of our country give us good scope for study of the development of religion endowed as it is, with a large number of religious monuments, monumental sculptures helps in supplementing the indigenous literature when there is a lag. The religious monuments of India further help us to understand the growth and evolution of some religious creeds and iconography. The monuments by their nature of construction would have involved the efforts of the entire community of those days. Great Temples stand as testimony of the past till the present day with the present day structures which have perished with onslaught of time, weather and other natural agencies.

The ancient monuments means any structure, erection or monument, or any tumulus or place of interment, or any cave, rock-sculpture, inscription or monolith, which is of historical, archaeological or artistic interest and which has been in existence for not that one hundred years. Some of the ancient heritage monuments of India include The Taj Mahal, Qutub Minar, Sanchi, Ajantaa, Eloora Caves, The Red Fort, Jagannath Temple, Sea Shore Temples of Mahabalipuram, The Brihadeshwara Temple etc. Conservation and preservation of monuments helps us to look into the richness our own ancient culture and establish similarities and dissimilarities between the modern and medieval cultures, further it supports the people of different countries to learn and adopt our culture. Historical monuments tell the tale of a past era. They are important as they represent the nation's culture and history. The Monuments are the symbols of our cultural legacy which helps us to connect to our past. The conscious effort to conserve historical monuments serves the mankind to remember their posterity to enable them to achieve greater things in the future. The conservation of historical monuments from climate change, pollution and poor civic sense etc through awareness campaign to educate the community has become the need of the hour.

The important factors that are posing threat to Monuments in India are
i) Air Pollution due to Climate Change

ii) Increase in Water Level of Sea due to Climate Change

iii) Natural Disasters such Tsuami

iv) Poor Civic Sense

v) Vandalism

vi) Natural Weathering

TAJ MAHAL

Studies conducted by various environmental research agencies and educational institutions have revealed that the World Iconic Monument Taj which is a four centuries old mausoleum has been greatly damaged by the change in climate. Research conducted by Georgia University, University of Wisconsin, Indian Institute of Technology, Kanpur and Archaeological Survey of India have brought out the impact of Air Pollution on the historical heritage. Researchers have found 3% deposit of Black Carbon and 30% deposit of Organic Carbon. Black Carbon is emitted by Vehicles and on burning fossil fuels. Organic Carbon is due to burning of biomass, garbage and large scale emission from the industries in and around the monument.

Studies have revealed that the discoloration of the monument has stated in a rapid manner after 1970's. The project to clean up the air in and around the vicinity of Taj was started in 1998 after a Supreme Court direction with the American Funding. The then President of USA Bill Clinton while inaugurating the project commented that

"what 350 years of wars, invasions and natural disasters have failed to do [and] begun to mar the magnificent walls of the Taj Mahal."

SHORE TEMPLES OF MAHABALIPURAM

The 8th Century Shore Temples of Mahabalipuram which belong to the Pallava Dynasty have been declared as UNESCO World Heritage Monument. The monument has been under constant threat due to rising level of sea water, coastal erosion, salinity and sand bearing winds. Research by various organizations such as UNESCO has revealed that the sea level has been rising at a rate of 2.5 mm per year along the Indian coastline from 1950. Thus an average Sea Level Rise of between 15 and 38 cm has been projected for the mid-21st century along India's coast. The major concern however, is the receding coastline which has been threatening to eventually submerge the structure sooner or later. This has been happening since centuries and has presently under risk of being accelerated due to climate change which has resulted in rising sea levels and increased storm incidences. The increase in tourist inflow to the heritage site is also another reason for the damage caused to the structure.

CHOLA TEMPLES

The famous Chola Temples such as Brihadiswara Temple at Thanjavur, Temple Complex at Gangaikonda Cholapuram and Airavateshwara Temple at Dharasuram serve as a testimony for Cholas Dynasties economic, social, religious and architectural splendor. These temples belong to the period from 11th to the 12th Century. The above mentioned three temples have been declared as Cultural Heritage Property and have been under the control of ASI. They were brought under the ASI through the Archaeological Sites and Remains Act in 1922, 1946 and 1954 subsequently. The recent seismic hazard analysis study conducted by the Bureau of Indian Standard in Tamil Nadu has helped us to categorize the potential seismic zones. Further the research conducted in the Cultural Heritage Sites in Mahabalipuram, Madurai and Thanjavur Region has brought in new insights. The study conducted on the basis of Peak Ground Acceleration have revealed that the basements of the Chola Temples in the Thanjavur region are close to basement fault and are prone to Zone III of Moderate Sesimic Hazard.

UNESCO after undertaking an extensive study has declared the Group of Monuments in Hampi, Karnataka as World Heritage in Danger as a result of huge vehicular traffic which the affect the integrity of the World Heritage Site. The Jagannath Temple at Puri has been affected by its proximity to the sea shore. The erosion and corrosion that has occurred in this religious site due to climate change has resulted in the routine renovation.

The religious structures like the temples are affected due to the climate change and also due to the booming economic activities in and around them. The mammoth stone structures build get decayed as a result of migration and crystallization of salts. Numerous pollutants interact with surfaces of buildings and structures and causes undesirable alterations which are irreversible in nature. As the historic buildings are more porous than the new ones, they absorb water and evaporate; thereby there occurs salt mobilization, crystallization which creates greater damage to the structure.

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The vehicular traffic, mining activity and poor management of the drainage in these sites have dented on their structural stability. ASI has joined hands with UNESCO to maintain these structures by creating a buffer zone of 100 to 200 meters around these temples. Buffer Zones are intended to curtail vehicular traffic, denying permission for setting up of new industrial establishment, prevent mining and other activities that would adversely affect the monuments.

CONCLUSION

The Civil Society along with the Government Agencies such as the UNESCO, Archaeological Survey of India and State Archaeological Department should form policy document to preserve the monuments from the Climate Change. The awareness on the necessity to preserve monuments should be imparted to the younger generation by stressing on the cultural and historical value of each and every monument which is located in around their vicinity. The Government in its reply to the Parliament has stated that it has enumerated a number of steps to conserve the monument like Taj from the impact of Climate change. The Government through the Clean India Mission (Swatch Bharat Abhiyan), National Air Quality Index, Implementation of Bharat Stage IV norms, taxing polluting vehicles, bringing in comprehensive waste management rules, revision of existing pollution norms, levying environment compensation etc has proposed to protect and conserve the historical heritage monuments of the country.

Creating an emission free zone in and around the historical monuments, initiating stringent measures to setup sewage treatment plants by industries near the monuments, regulating the emission level of the large industries, regulating to Tourist inflow in to the monuments, setting up of a consistent monitoring agency to check the level of air and water pollution, setting up of groups to monitor with the participation of NGO’s and Government Officials would help curtail the threats of climate change on the monuments of our country.

In December 2015, about 195 countries acknowledged the need for reducing emission of greenhouse gases within the permissible range to keep the global average temperature below 2°C since pre-industrial times. Achieving this goal is urgent and clear for the future of World Heritage. Countries irrespective of whether developed or underdeveloped should reduce greenhouse gas emissions as per the Paris Agreement, while providing the financial resources, support and expertise necessary to ensure the resilience of World Heritage properties over the long term. We have to protect the monuments from getting damaged due to climate change because it has to be passed on to the future generation to protect the pride of our nation.

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WHY SHOULD OUR SCHOOL CHILDREN NEED TO KNOW ABOUT "COMMON AYURVEDIC PLANTS" USED IN DIFFERENT DIETARY PREPARATIONS AT HOME

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INTRODUCTION

History gives evidence that thousands years ago when a few civilisation were exists in this human society, 'Indus civilisation' is one of them .We had a bulk form of well described literature not only on Geography ,Education ,Astronomy ,Astrology, Mathematics ,but also on Human Physiology ,Public health ,Hospitality and Nursing, Baby caring and the most important was Medicine .We have forgotten this branch of medicine which used to endeavour the preventive measure first which is highly conscious to the correctness any disorder from its root. That was Ayurveda. This Ayurveda has described well about the matter and material available in our nature and tries to make us familiar and having a great harmony with it. Ayurveda highlights the material quality of food and most of the time occupies greater importance on the selection of food, its processing and way of cooking, and rules for healthy eating. Thus the Ayurvedic approach to way of cooking food and intake dietetics is much different from the traditional rest of world. The foundational textbook of Ayurveda universally known as Carakasamhita postulates the eight principles of *Ahara vidhi* i.e,

1. **Prakriti** (nature of food articles),
2. **Karana** (preparation),
3. **Samyoga**(combinations),
4. **Rashi** (quantity),
5. **Desha** (habitat and climate),
6. **Kala** (time factor),
7. **Upayogasamstha** (rules of use), and
8. **Upayokta** (the user)

Ayurveda talks about balancing or antidoting capacity of spices and cooking methods. There is not even a single literature focusing upon the concept like this in biochemical nutrition. Food combining is another big perception in Ayurveda. By using these spices we may avoid hard digesting combinations and can take support optimal digestion and elimination according to Ayurveda. This Ayurveda preserves many methods of using these herbs which are now a regular part of our day to day life. The credit goes to this Ayurveda enriching this Indus civilisation to Indian tradition .Our ancestors had everything including a long and peaceful life. They knew how to meditate and concentrate .They told which herbs can be useful in a particular type of Physiological need .This is such a real backbone of our rich Indian culture of not only health but also flavour and taste .How we forgot the year 1498when a Portuguese Wasco-D- Gama came to India .This was a real attraction to an European for India .The attraction of recipe which is well described in Science of Herbs and plants useful to prevent any type of disorder .Ayurveda elaborates the most practical way to use these such kind of herbs and on that behalf we have given those herbs spices utmost 2/3 space of our kitchen. Although this shows a very kind regard of us but these are not satisfactory. This is well known to everyone that due to information technology and scientific revolution we have cross cultural variation. Now a person is accessible to have breakfast in USA and being with lunch in any Asian country and can take dinner in Australia .This variation easily can be seen in our consumption basket also. Researches shows in recent past years this cross cultural variation occur in our dietary pattern, food ingredients, nutritional components food intake in all of us general and with our adolescent particular .Now our adolescent prefer fast food compare to take lunch or dinner .These fast food are not enough enriched with nutritional component but much flavoured with tasteful ingredients .These globalisation frames liberalisation and this leads to welcome as many multinational corporations MNCs as we want taste in our fast food .Therefore we see on one side we ,our country , our land ,our soil, all these are enriched with a huge amount of natural herbs on another side we are not in a position to describe about all these herbs that how they are beneficial for human physiological requirements .Keeping this point in our mind we should turn to Ayurveda this is a unique classical available literature in this regard described most of the herbs in a very useful way. **Table 1** contains the list of these Ayurvedic herbs used in Indian cuisine and there benefits for human body and there need of digestive system. This article describes the basic component of using these spices in our food.

Table 1: Common Ayurvedic herbs used in different dietary preparation at home

SI. No.	Name in Hindi	Botanical name	Name in English	Why we Use it
1	Hing	Ferula assafoetida	Asafoetida	Hing or Asafoetida is an amazing spice to treat various kinds of stomach problems.It has antispasmodic, anti-inflammatory, antioxidant and ant flatulent properties that help to alleviate problems like indigestion, upset stomach, intestinal gas, intestinal worms
2	Haldi	Curcuma longa	Turmeric	Turmeric is used in Ayurveda to balance vata, pitta, and kapha, though in excess, it can aggravate pitta and vata. It has a particular beneficial effect for *rasa* and *rakta dhatu* (circulatory system). It also kindles *Agni*, helping reduce kapha and *ama*.
3	Sarson	Brassica	Musterd seed	Mustard seeds have been valued for their therapeutic effects in curing cold and sinus problems. Generally brown, mustard seeds are used quite a bit in Indian cooking. Brown mustard seeds are warming, and impart the pungent taste. In Ayurveda, brown mustard seeds are considered a digestive and good for alleviating stomach discomfort such as gas or cramps.
4	Laung	Syzygium Aromaticum	Clove	Cloves have been tested for their antibacterial properties against a number of human pathogens. In Ayurveda, cloves are considered to enhance circulation, digestion and metabolism. The clove contributes the pungent and astringent tastes.
5	Dal chini	Momum Verum	Dalchini/Cinnamon	Cinnamon is packed with a variety of protective antioxidants that reduce free radical damage and slow the aging process. Cinnamon is often used in Ayurvedic herbal preparations to enhance the bioavailability of other herbs. It is a warming spice, and contributes the sweet, pungent and bitter tastes.
6	Jeera	Cuminum cyminum	Cumin	Cumin is a good source of energy, vitamin A, C, E & B6, thiamine, riboflavin, niacin and vitamin, and minerals like iron, manganese, copper, calcium, magnesium, phosphorous, and potassium. According to Ayurveda, it is balancing for all three doshas. It is supposed to aid digestion and help flush toxins out of the body.
7	Methi	Trigonela foenum graecum	Fenu greek seeds	As fenugreek (Methi) is rich in fibre and antioxidants, it helps in flushing out harmful toxins from the body and thus, aids digestion. In Ayurveda it is used to enhance digestion and prevent stomach disorders. It is also good for the skin and hair.
8	Mirch	Capsicum annuum	Chilli pepper Green	Green chilli peppers have a lot of vitamin C content which is a powerful antioxidant for the body. Green chilli peppers can stimulate collagen and protein in our body. Collagen is needed for blood vessel, tissue, skin and bone.
9	Lal mirch	Capsicum	Chilli pepper	Chillies carry a good amount of minerals like

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		annuum	Red	potassium, manganese, iron, and magnesium. Potassium is an important component of cell and body fluids that helps controlling heart rate and blood pressure. The human body use manganese as a co-factor for the antioxidant enzyme, superoxide dismutase.
10	Kali mirch	Piper nigrum	Black pepper	Black pepper is antibacterial in nature, and therefore helps to cure cold and cough. Black pepper is considered an important healing spice in Ayurveda. Black pepper is a warming spice and contributes the pungent taste. It is excellent for pacifying *Kapha*, helps pacify *Vata* and increases *Pitta*.
11	Lehsun	Allium sativum	Garlic	The allicin in garlic exhibits strong antioxidant activity – the ability to fight harmful free radicals in the body . Anti Kapha, Anti Vata, Aggravates Pitta However, if used by rasayanavidhi, it strengthens pachakapitta and causes fire stimulation.
12	Pyaaj	Alliium cepa	onion/Shallot	Onions' many antioxidants, including allicin is considered anti-hypertensive.Because of its oiliness, sweet and hotness, it balances Vata, Has neutral effect on Pitta, Slightly increases KaphaDosha.
13	Dhaniya	Coriandrum sativum	Coriander/ Cilantro	Consuming coriander has been shown to positively reduce blood pressure. Ayurvedic texts suggest that it is good for digestion, whets the appetite, supports a healthy response to allergens and also helps purify the blood. It can be combined with other Ayurvedic herbs such as ground turmeric, cumin, paprika, cayenne and fennel.
14	Kabab Chini	Piper Cubeba	Java pepper	Java pepper (Kababchini) has a natural anti-inflammatory function, which is a health function that can relieve inflammation in our body and reduce the pain caused by the inflammation.Pippali is administered along with honey to treat obesity, Kapha imbalance disorders like cold, cough, asthma, fever.
15	Kadi Patta/Sweet neam	Murraya Koenigii	Curry Leaf	The main nutrients found in curry leaves are carbohydrates, energy, fibre, calcium, phosphorous, iron, magnesium, copper, and minerals. Curry leaf oil has the power to pacify aggravated kapha and vatadoshas and increase pitta dosha**.** Ayurveda prescribes Curry leaf oil as an aid to assist every human being with healthy hair, bright eyesight, strong teeth and gums, glowing skin, actively functioning liver, smooth digestive system, cholesterol and diabetes-free system.
16	Tej patta	Bay leaf	Tes patta	The medicinal property in bay leaves helps to cure digestive problems such as heat burns and flatulence.

17	Elaichi	Elettaria cardamomum	Green Cardamom	Green cardamom helps the body eliminate waste through the kidneys. According to Ayurveda, cardamom is tridoshic (good for balancing all three doshas), but people trying to keep *Pitta* in balance should eat it in smaller amounts. Cardamom is considered an excellent digestive, especially beneficial in reducing bloating and intestinal gas. It is excellent for balancing *Kapha*, particularly in the stomach and the lungs. It is also useful for pacifying *Vata*. The seeds are often chewed to refresh the breath.
18	Kali /Badi Elaiachi	Black cardamom	Kali Elaiachi	Kali elaichi is an exceptionally heart healthy herb. It can help protect the heart from several diseases. Taken regularly, it can maintain the heart rhythm. Black cardamom can keep the blood pressure under check.Black cardamom pacifies kapha and vata. It increases pitta. When we use this spice the rate of metabolism increases (because it normalises Kapha and increases Pitta).This helps in quick burning of body fat which leads to weight loss.
19	Adrak	Zingiber officinale	Ginger	Ginger has been used to help digestion, reduce nausea and help fight the flu and common cold.Fresh ginger is great for Kapha types because it is a pungent spice, it stimulates the system and helps decrease Kapha. It is also Vata-pacifying and aids with digestion.
20	Saunf	Foeniculum vulgare	Fennel seed	Fennel (Saunf) is highly beneficial in relieving digestive problemsAccording to Ayurveda; fennel is extremely good for digestion. It acts as a general toner for the digestive system, and is particularly good for enhancing *agni*, the digestive fire, without aggravating *Pitta*. In India, eating a few toasted fennel seeds after a meal is a common practice, both to aid digestion and to freshen the breath.
21	Javitri	Myristica	Mace	Mace (Javitri) has its capability to enhance the circulation of blood. Mace essential oil has the potent to augment pitta (responsible for metabolism, body temperature, and decision-making and leadership traits) energy and pacify kapha (responsible for sustenance, physical set up, love and trust) and vatadoshas (responsible for nervous functions, respiratory functions, circulatory functions, creativity and sociability).
22	Jaiphal	Myristica	Nutmeg	Nutmeg pacifies Vata and Kapha and increases Pitta. It contributes the pungent, bitter and astringent tastes. It is a warming spice.InAyurveda, it is used as a natural sleep aid, normally taken in warm milk before bed. It stimulates appetite and digestion. Nutmeg is used in desserts and in baking. In Ayurvedic cooking a pinch of nutmeg is added, with spices such as

23	Anasphal	Illicium verum	Star Anise	Anise is an excellent source of antioxidants. The anti-spasmodic properties help relieve the stomach upset. Ayurveda believes that Star Aniseed helps in tackling the mucus accumulation, owing to presence of kaphadosha in the intestines.
24	Ratin jot	Alkanet Root	Ratin jot	Alkanet (Raton jot) used in medical field as well like antiseptic for cut & damage, control fever & pain killer and infections.
25	Sahi Jeera/Kalonji	Black cumin	Shah Jeera	Black cumin (Shah jeera) The seeds soothe the digestive tract and relieve colic, cramps, bloating and flatulence by directly acting on the intestinal muscles. Kalonji seeds are reported to be beneficial for the respiratory system. They have also been shown to have anti-bacterial and anti-inflammatory properties.
26	Dhaniya powder	Coriander powder	Coriander powder	Coriander seeds are known to prevent hair fall and invigorate the roots for the development of new hair. Coriander is a tridoshic spice highly appreciated in Ayurveda. It is a cooling spice and contributes the sweet and astringent tastes. Ayurvedic texts suggest that it is good for digestion, whets the appetite, supports a healthy response to allergens and also helps purify the blood.
27	Sonth	Ginger dried	Dried ginger	Dried ginger (Sonth) has been used in traditional medicine to give relief from gastrointestinal distress. It is found to be effective in eliminating gas from the intestines and helpsin the relaxation of the tract.Being hot & pungent by nature Sonth is used to combat excess of Vatta In the gastrointestinal tract & regulate digestive functions.
28	Amla		Indian gooseberry	Amlaimproves digestion but does not heat the body, Organic Premium Amla Berry is ideal for calming mild-to-moderate hyperacidity and other Pitta-related digestive problems. It should always be taken with food in this case. Although Amla Berry is good for all doshas and seasons, it is especially effective in the hot season to cool Pittadosha. The tridoshic nature of Amalaki also makes it a good tonic for the eyes.
29	Pudina		Mint	Mint aids digestion and helps to remove stomach pains. Mint is a great appetizer, and due to its soft aroma, it soothes the stomach. The aroma triggers the mouth to produce more saliva and more digestive enzymes. Mint is a cooling herb, with a sweet taste and a pungent aftertaste.

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30	Kaala Namak	Sanchal	Rock/Black salt	Indian black salt (Sanchal) pacifies *Vata* and increases *Pitta* and *Kapha*. It contributes the salty taste and has a heating quality.InAyurveda; black salt is considered an aid to digestion. Ground with ajwain and lemon juice and eaten, black salt helps balance the digestion. A couple of pinches of black salt and ⅛ tsp. dry-roasted ground cumin can be used to make digestive lassi. Black salt, with lemon and cilantro, is used to make a dressing for spicy fruit salsa or chickpea salads.
31	Sendha Namak	Rock salt	Halite	Sendhanamak(Halite) increases the metabolism in the human body. Adequate metabolism is vital for the normal functioning of the human body.It is used in Ayurvedic medicine. It is said to be good for the heart, beneficial for people with diabetes and to prevent osteoporosis. According to Ayurveda, this salt reduces depression and stress, prevents and treats muscle cramps, regulates blood pressure, aids digestion, and relieves skin problems and arthritis.
32	Tulsi		Basil	Basil contains antioxidant-rich volatile essential oils, which are considered hydrophobic. This means they don’t dissolve in water and are light and small enough to travel through the air and the pores within our skin. Basil’s volatile essential oils are what give the herb its distinct smell and taste,butthey’re also responsible for the healing benefits of basil. Basil is used in both its fresh and dried forms. Sweet basil is the type most commonly used in cooking; it is balancing for *Vata* and *Kapha*, as well as for *Pitta* when used in lesser quantities. It is a warming herb, and contributes the sweet, bitter and pungent tastes.
33	Khus khus	Poppy Seed	Posta dana	Poppy seed (Posta Dana)Poppy seeds come loaded with dietary fibre, a type of carbohydrate found in plant-based foods. They boast 3.4 grams of dietary fibre per 2-tablespoon serving -- 14 percent of the recommended daily intake for women and 9 percent for men, according to the Institute of Medicine. Fibre not only adds bulk to our food and stool -- which helps keep you feeling full and prevents constipation -- but it also lowers our blood cholesterol levels.
34	Kesar Saffron		Saffron	Saffron(Kesar) contains many bio-chemical compounds as antioxidants, which are good in contending of various diseases by controlling free radicals thus promotes overall well-being of the body.Saffron is a royal spice. In ayurveda, saffron is considered tridoshic — balancing for all doshas. It helps in assimilation of nutrients, in *dhatu* (tissue) formation, and in flushing toxins out of the tissues of the body.

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35	Til	Sesame seed		Sesame seed (Til) The components of sesame seeds, like magnesium, have been connected to reducing the chances of diabetes and managing the symptoms in patients having already developed the condition. Furthermore, it has been shown that sesame seed oil can positively affect the impact of various medications like glibenclamide in patients suffering from type 2 diabetes.
36	Ajwaiyan	Apium graveolens	Celery	Celery (ajwaiyn) is used in weight-loss diets, where it provides low-calorie dietary fibre bulk. Celery is often incorrectly thought to be a "negative-calorie food," the digestion of which burns more calories than the body can obtain. In fact, eating celery provides positive net calories, with digestion consuming only a small proportion of the calories taken in.

DISCUSSION

This is a remarkable question to us that how far our students of school education system knows about common Ayurvedic herbs used in different dietary preparation at home .It is a well-known fact that now a days our students are sufferings from so many types of disorders and among those life style related disorder is one of them such as dietary intake micro nutrient (vitamin & minerals)they play great role towards making metabolism and obesity .There is no surprise on this fact that in Ayurveda there are many description on a healthy life and a vivid expression that how can we preserve it till to a long . The importance of Ayurveda is clearly expressed and widely accepted by WHO also. This can be easily understood on this fact that the concept of health defined thousand years ago by Ayurveda now completely adopted by WHO as complementary and alternative medicine system, so in this way traditional system of medicine is in the agenda of WHO. Later it was known as the concept of **holistic health** .Now the whole world has recognized the contribution of Ayurveda in achieving long life and healthy society .A lot of exercise is being done for keeping away these life style related disorder .Since Ayurveda is not the branch of medicine rather it deals with the more over the preventive aspect of life style related disorder and ultimately solve it also.

Nowadays in this techno oriented age we are highly influenced from social networking cites. Our Youngers are also always being touch with these unauthentic social cites. Youngers watch it, they follow it, they adopt it in their life .Sometimes they benefitted but more often they have harmful effect from these practices.

Our youngers don’t know the authenticity of these information about diet and nutrition provided by these such social cites .sometimes these information are scattered as promotional videos of some type of commercial product and may not have direct association to health so in this regard in my point of view we should introduce some basic of preserving good health, life style, to our youngers.

CONCLUSION

Today our kitchen have been enriched with much of fast food (Hamburgers, French fries, and soft drinks) Junk food (pizza and fried chicken) and so many types of juices, beverages ,soups and a number of cookies and bakes .These all eatable and drinkable items either contains much of ingredients or we add them with a variety of spices. These spices generally taken from most of part of trees, leaves, root, stem and so on. But These commonly used Ayurvedic herbs which gives us these spices are unknown to us .We use them, we add them, we flavour them but actually we do not know why they are being used .This article aims at highlighting the benefit of these commonly used Ayurvedic herbs described in Ayurveda.

We uses those herbs because we know about the Ayurvedic benefit of these spices and ingredients but our generation our Youngers our students mostly they are unknown about the micronutrient formation of these herbs. So it is recommended enthusiastically the commonly used herbs and the Ayurvedic benefits must be must be treated as an integral part of school education curricula.

National Curriculum framework also suggests that there must be a strong association between day to day life of our adolescence and the academic life expressed in books. But unfortunately our adolescence knows the use of these Ayurvedic herbs (spices) into their day to day life. Our adolescence also knows that these Ayurvedic herbs

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are not only useful but also healthy ingredients to our food basket .These Ayurvedic herbs not only make our food tasty but also flavor them positively.

This piece of writing aims at providing proper knowledge in this regard so far and includes the real use of these Ayurvedic herbs with their commonly uses and their most common name known in Hindi.

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WOMEN ENTREPRENEURS' PERCEPTION TOWARDS WORK SATISFACTION

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ABSTRACT
Entrepreneurs play key role in any economy. In the new era women are stepping out and are seen everywhere. Women are nowadays participated in each and every sort of activities as equal to men. Women entrepreneurship is one of the significant means to eradicate poverty and unemployment. The paper focuses on work satisfaction among the women entrepreneurs with the sample size was 80 out of which 54 respondents were satisfied with their work.

Keywords: Women entrepreneurs, Self-employment, Small business, Local Entrepreneurs.

INTRODUCTION
'Entrepreneurs are sometimes born but more often, they are made.'

"When women moves forward, the family moves, the village moves, and the nation moves" is rightly said by Pandit Jawaharlal Nehru.

Among the Indian population 50% of them are women. The role of women is bounded inside the four walls of household activities. In the beginning of the 20th century, feminism finally began to make real changes in the female working climate. Spread of education, change in the field of information and technology bring a significant changes of the status of women. Women enter entrepreneurship due to economic factors which pushed them to be on their own and wish them to do something independently.

RESEARCH OBJECTIVES
- To highlight the problems faced by the women entrepreneurs.
- To know the economic condition and success of women entrepreneurs.
- To project the respondents perception towards work satisfaction.

RESEARCH METHODOLOGY
SAMPLING
For this study, the researchers used simple random sampling method to distribute the questionnaire among respondents with sample size of 80.

TOOLS USED FOR THE STUDY
This study is descriptive in nature. The study is based on primary data and the secondary data. Primary data was collected through the questionnaire and the secondary data was collected from internet, books, and articles. Tabular form and the diagrams (various charts) are used for presenting the data and for testing the hypothesis chi - square test has been used.

HYPOTHESIS
H_0: There is greater work satisfaction among the women entrepreneurs.

H_1: There is no work satisfaction among the women entrepreneurs.

NEED OF THE STUDY
Women entrepreneurship has recognized as an important source of economic growth. Women entrepreneurs are creating new jobs for themselves and help for others while dealing with different solutions to management and organization problems. Women are known for juggling many tasks at the same time and it help to succeed in their life. Hence researcher made an effort to study the women entrepreneurs' perception towards work satisfaction.

LITERATURE REVIEW
Bowen & Hisrich ,(1986), compared and evaluated various research studies done on entrepreneurship including women entrepreneurship. It summaries various studies in this way that female entrepreneurs are relatively well educated in general but perhaps not n management skill, high in internal locus of control, more masculine, or instrumental than other women in their values likely to have had entrepreneurial fathers, relatively likely to have

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first born or only children, unlikely to start business in traditionally male dominated industries and experiencing a need of additional managerial training.

Shabana A. Menon (2012) explained, entrepreneurship is a key element of growth and development. It develops the country in all means by the innovativeness and by different ideas.

Luisa De Vita (2014) defined entrepreneurship has a leading role in economic development. The role of gender factor emerged the entrepreneurship. Role of female entrepreneurship in emerging economies and relevance of immigrant female entrepreneurs in developed.

Hina Shah and Punitsaurabh (2015) in their study on women entrepreneurship in developing countries conclude that even though there have been some successful strategies towards the development of women entrepreneurship, there needs to be done more towards this so that such ventures can help in poverty alleviation of South Asian region.

FINDINGS OF THE STUDY

Problems faced by the women entrepreneurs:

- **Problem of finance: -**Finance is regarded as "Life –blood" for any enterprise, be it big or small. Women do not have property on their names to use as funds from external source and bank also consider women less credit worthy. Thus, women enterprise fails due to the shortage of finance.
- **Family ties: -** In India, it is women's duty to take care of children and other members of the family. If the educational level and family background of the husband and support from family members positively influence women's entry into the business activities.
- **Lack of education:-**Illiteracy is the root cause of any socio-economic problem. Due to the lack of qualitative education, women are not aware of anything. So it is difficult to setting up and running of the enterprise.
- **Gender discrimination:-**Women are not treated equal to men. This serves as a barrier to women entry into business.
- **Self-doubt:-** An entrepreneur's life is not admirable. It is easy to get discouraged when something goes wrong.

Economic contribution by women entrepreneurs:

In the last few decades, the attitudes of people have changed and women entrepreneurs are considered significant in economic development and wealth creation. Women entrepreneurship establishes positive relationship with the economic success. With stable increase in the number of working women, they have secured financial independence, which has given them confidence to lead their own lives and build their own identity. They earn for themselves and the family, therefore the family is able to fulfill their needs.

Women's economic activities contribute directly to growth and efficiency in dealing with casual business complications and poverty reduction.

- ✓ **Capital formation: -**Investment of public savings in fabrication results in productive utilization of national resources. It is essential for economic growth.
- ✓ **Generation of employment: -** Women entrepreneurship are playing an significant role in generating employment both directly and indirectly.
- ✓ **Improvement in per capita income:-** Women convert the inactive and idle resources like land, labour and capital in to national income and wealth in the form of goods and services.

Entrepreneurship helps women to use their abilities and skills in a maximum capacity, which provides them self-satisfaction. Entrepreneurship is global concept which contributes in social and economic development.

Table 1: Respondents sample size

Daily working Hours	Frequency
Less than 8 hours	51
8 hours	14
More than 8 hours	15

Total	80

Source: Primary data

Table 1 indicates that out of total 80 respondents 51 respondents works less than 8 hours, 14 respondents work 8 hours and 15 respondents work more than 8 hours.

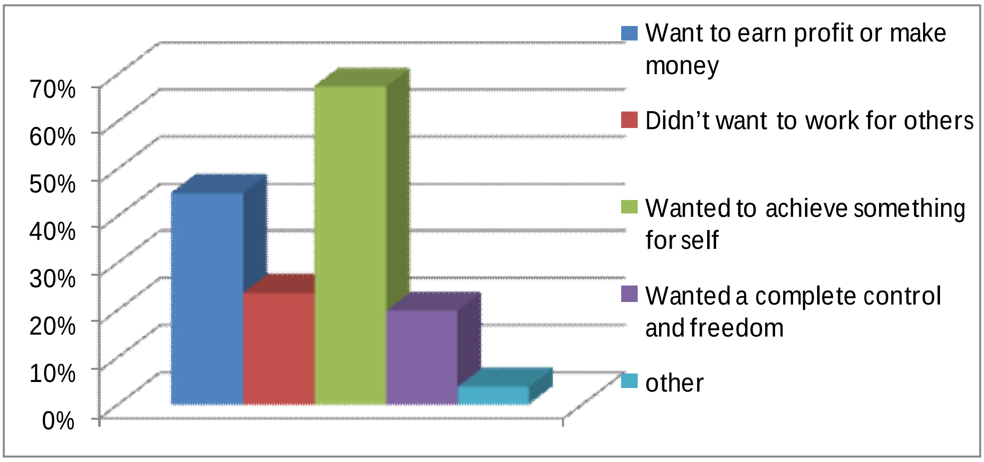
Table 2: Respondents satisfaction with the monthly or annual earnings

Daily working Hours	Dissatisfied	Satisfied	Total
Less than 8 hours	13	38	51
8 hours	0	14	14
More than 8 hours	2	13	15
Total	15	65	80

Source: Primary data

Table 2 indicates the respondents 'satisfaction with their monthly or annual earnings. Out of 80 respondents 15 are dissatisfied and 65 are satisfied with their monthly or annual income.

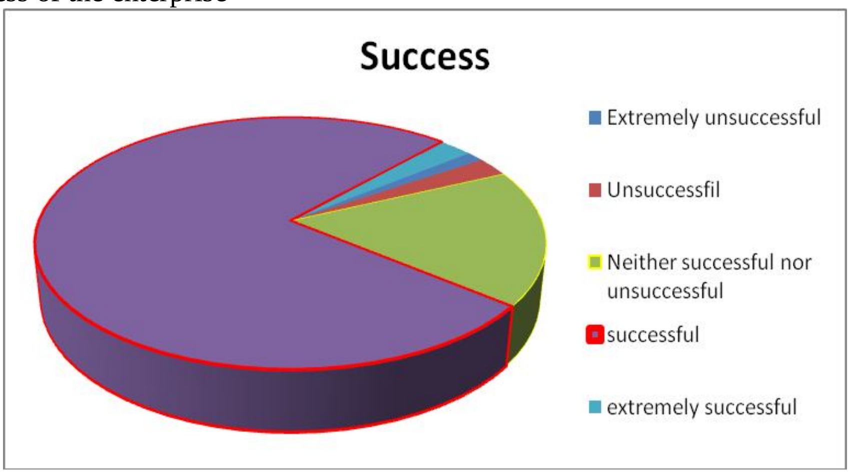
Fig 1: Main reasons of respondents for starting entrepreneurship



Source: Primary data

Fig 1 indicates the reasons for starting the entrepreneurship. Out of 80 respondents, 45% of women are started their business for earn the profit or make money, 23.8% of women are didn't wanted to work for others, 67.5% of women wanted to achieve something for themselves, 20% are wanted to be independent, and 3.9% are started for other reasons.

Fig 2: Overall Success of the enterprise



Source: Primary data

Fig 2 indicates that overall success of the enterprise. Out of 80 entrepreneurs 2.5% are extremely successful, 76.3% are successful, 17.5% are neither successful nor unsuccessful, 2.5% are unsuccessful and only 1.3% are extremely unsuccessful.

TESTING OF HYPOTHESIS

H_0: There is greater work satisfaction among the women entrepreneurs.

H_1: There is no work satisfaction among the women entrepreneurs.

Table 3: Level of Work satisfaction among the women entrepreneurs

Daily working hours	Dissatisfied	Satisfied	Total
Less than 8 hours	15	36	51
8 hours	5	9	14
More than 8 hours	6	9	15
Total	26	54	80

Degrees of freedom is **2**

Level of significance is **5%**

Calculated value	Critical value
0.67	5.99

Chi - square value = **0.67** is less than **5.99,** H_0 is accepted.

Interpretation: The chi square analysis shows that null hypothesis; "greater work satisfaction among the women entrepreneurs" was accepted. Hence, the alternative hypothesis was rejected.

CONCLUSION

In modern days due to modernization, urbanization, globalization & development of education, with increasing awareness, women are participating in every field. The role of women in economic development of India is predestined. Women are important part of human resource and country. A person who accepts challenging role to meet her personal needs and to become economically independent is known as women entrepreneurs. Encouraging women entrepreneurship is most important task to control the difficulties of unemployment. "**Success doesn't come from what you do occasionally. It comes from what you do consistently."**

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WEB RESOURCES

- www.blogsikka.com/blog/top-10indian-women-entrepreneur-follow-international-womens-day/
- www.rroij.com/open-acess/women-entrepreners-problems-of-womenentrepreneurs-php?aid=48589
- www.deluxe.com/sbrc/financial/top-10-challenges-faced-entrepreneurs-today-solved
- www.studymoose.com/women-entrepreneurs-essay.
- www.yourarticlelibrary.com/entrepreneurship/8-problems-faced-by-women-entrepreneurs-in-india-explained/41097

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Fox, S. (1984). Empowerment as a catalyst for change: an example for the food industry. *Supply Chain Management*, *2*(3), 29–33.

Bateson, C. D.,(2006), 'Doing Business after the Fall: The Virtue of Moral Hypocrisy', Journal of Business Ethics, 66: 321 – 335

- **Multiple author journal article:**

Khan, M. R., Islam, A. F. M. M., & Das, D. (1886). A Factor Analytic Study on the Validity of a Union Commitment Scale. *Journal of Applied Psychology*, *12*(1), 129-136.

Liu, W.B, Wongcha A, & Peng, K.C. (2012), "Adopting Super-Efficiency And Tobit Model On Analyzing the Efficiency of Teacher's Colleges In Thailand", International Journal on New Trends In Education and Their Implications, Vol.3.3, 108 – 114.

- **Text Book:**

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2007). *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies* (3rd ed.). New York: McGraw-Hill.

S. Neelamegham," Marketing in India, Cases and Reading, Vikas Publishing House Pvt. Ltd, III Edition, 2000.

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Raine, A. (Ed.). (2006). *Crime and schizophrenia: Causes and cures.* New York: Nova Science.

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Uddin, K. (2000). A Study of Corporate Governance in a Developing Country: A Case of Bangladesh (Unpublished Dissertation). Lingnan University, Hong Kong.

- **Article in newspaper:**

Yunus, M. (2005, March 23). Micro Credit and Poverty Alleviation in Bangladesh. *The Bangladesh Observer*, p. 9.

- **Article in magazine:**

Holloway, M. (2005, August 6). When extinct isn't. *Scientific American, 293*, 22-23.

- **Website of any institution:**

Central Bank of India (2005). *Income Recognition Norms Definition of NPA.* Retrieved August 10, 2005, from http://www.centralbankofindia.co.in/ home/index1.htm, viewed on

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