

Volume 9, Issue 5(4), May 2020  
**International Journal of Multidisciplinary  
Educational Research**

**Published by  
Sucharitha Publications  
Visakhapatnam  
Andhra Pradesh - India  
Email: victorphilosophy@gmail.com  
Website: www.ijmer.in**



# Editorial Board

## Editor-in-Chief

### **Dr.K. Victor Babu**

Associate Professor, Institute of Education  
Metu University, Metu, Ethiopia

## EDITORIAL BOARD MEMBERS

### **Prof. S. Mahendra Dev**

Vice Chancellor  
Indira Gandhi Institute of Development  
Research, Mumbai

### **Prof.Y.C. Simhadri**

Vice Chancellor, Patna University  
Former Director  
Institute of Constitutional and Parliamentary  
Studies, New Delhi &  
Formerly Vice Chancellor of  
Benaras Hindu University, Andhra University  
Nagarjuna University, Patna University

### **Prof. (Dr.) Sohan Raj Tater**

Former Vice Chancellor  
Singhania University, Rajasthan

### **Prof.R.Siva Prasadh**

IASE  
Andhra University - Visakhapatnam

### **Dr.V.Venkateswarlu**

Assistant Professor  
Dept. of Sociology & Social Work  
AcharyaNagarjuna University, Guntur

### **Prof. P.D.Satya Paul**

Department of Anthropology  
Andhra University – Visakhapatnam

### **Prof. Josef HÖCHTL**

Department of Political Economy  
University of Vienna, Vienna &  
Ex. Member of the Austrian Parliament  
Austria

### **Prof. Alexander Chumakov**

Chair of Philosophy  
Russian Philosophical Society  
Moscow, Russia

### **Prof. Fidel Gutierrez Vivanco**

Founder and President  
Escuela Virtual de AsesoríaFilosófica  
Lima Peru

### **Prof. Igor Kondrashin**

The Member of The Russian Philosophical  
Society  
The Russian Humanist Society and Expert of  
The UNESCO, Moscow, Russia

### **Dr. Zoran Vujisiæ**

Rector  
St. Gregory Nazianzen Orthodox Institute  
Universidad Rural de Guatemala, GT, U.S.A

### **Prof.U.Shameem**

Department of Zoology  
Andhra University Visakhapatnam

### **Dr. N.V.S.Suryanarayana**

Dept. of Education, A.U. Campus  
Vizianagaram

### **Dr. Kameswara Sharma YVR**

Asst. Professor  
Dept. of Zoology  
Sri.Venkateswara College, Delhi University,  
Delhi

### **I Ketut Donder**

Depasar State Institute of Hindu Dharma  
Indonesia

### **Prof. Roger Wiemers**

Professor of Education  
Lipscomb University, Nashville, USA

### **Dr.Kattagani Ravinder**

Lecturer in Political Science  
Govt. Degree College  
MuluguTelangana

### **Dr.B.S.N.Murthy**

Department of Mechanical Engineering  
GITAM University,Visakhapatnam

### **Dr. Mustapha Inul Manuha**

Institute of Indigenous Medicine  
University of Colombo, SL.

**Dr.S.V Lakshmana Rao**

Coordinator  
A.P State Resource Center  
Visakhapatnam

**Dr.S.Kannan**

Department of History  
Annamalai University  
Annamalai Nagar, Chidambaram

**Dr. B. Venkataswamy**

H.O.D.,& Associate Professor  
Dept. of Telugu, P.A.S. College  
Pedanandipadu, Guntur, India

**Dr.E. Ashok Kumar**

Department of Education  
North- Eastern Hill University, Shillong

**Dr.K.Chaitanya**

Department of Chemistry  
Nanjing University of Science and  
Technology  
People's Republic of China

**Dr.Sandeep Narula**

Dept. of Management Sciences  
IIHMR University, Jaipur

**Dr. BipashaSinha**

S. S. Jalan Girls' College  
University of Calcutta,Calcutta

**Prof. N Kanakaratanm**

Dept. of History, Archaeology & Culture  
Dravidian University, Kuppam  
Andhra Pradesh

**Dr. K. John Babu**

Department of Journalism & Mass Comm  
Central University of Kashmir, Kashmir

**Dr.T.V.Ramana**

Department of Economics, Andhra University  
Campus, Kakinada

**Dr.Ton Quang Cuong**

Dean of Faculty of Teacher Education  
University of Education, VNU, Hanoi

**Prof. Chanakya Kumar**

Department of Computer Science  
University of Pune,Pune

**Prof. Djordje Branko Vukelic**

Department for Production Engineering  
University of Novi Sad, Serbia

**Prof.Shobha V Huilgol**

Department of Pharmacology  
Off- Al- Ameen Medical College, Bijapur

**Prof.Joseph R. Jayakar**

Department of English  
GITAM University  
Hyderabad

**Prof. Francesco Massoni**

Department of Public Health Sciences  
University ofSapienza, Rome

**Prof. Mehsin Jabel Atteya**

Al-Mustansiriyah University  
College of Education  
Department of Mathematics, Iraq

**Prof. Ronato Sabalza Ballado**

Department of Mathematics  
University of Eastern Philippines,Philippines

**Satheesha H**

Mettu University  
Mettu, Ethiopia

**Dr.J.B.Chakravarthi**

Assistant Professor  
Department of Sahitya  
Rasthriya Sanskrit Vidyapeetha, Tirupati

**Dr.NiLuh Putu Agustini Karta**

Department of Tourism  
TriatmaMulya Institute of Economy  
Bali, Indonesia

© Editor-in-Chief, IJMER®  
Typeset and Printed in India  
www.ijmer.in

IJMER, Journal of Multidisciplinary Educational Research, concentrates on critical and creative research in multidisciplinary traditions. This journal seeks to promote original research and cultivate a fruitful dialogue between old and new thought.

## C O N T E N T S

**Volume 9**

**Issue 5(4)**

**May 2020**

S.No		Pg.No
1.	Controlling of Traffic Using Movable Road Divider <b>V.Harika and G.Madhavi</b>	1
2.	Lij t i j ds l UnHkz eafo 'ks'k fi NMh tutkfr i .Mks dh l kelft d l jpkuk dk v/; ; u <b>MMdefyuh Jholro and dq Fkusojh frokjh</b>	8
3.	Liquidation as A Going Concern: IVRCL Ltd - A Case Study Analysis <b>Binoy J. Kattadiyil and CS Nitika Manchanda</b>	12
4.	Ypnotherapy as An Intervention in Mental Health Distress: A Review <b>Padmakali Banerjee, Arati Sharma and Amita Puri</b>	19
5.	Experimental Analysis on Steel Fiber Concrete <b>Supriya Tripathi, Shreyans Kumar Jain and Vasudev Rodwal</b>	25
6.	A Comparative Study of Stress Level among Male Athlete's and Non-Athletes Students <b>Nikita Mathur</b>	33
7.	Hkkj rch; vFKD; oLFkk ea l dy ?kjywmRi kn <b>Jlerh ie ifjglj</b>	41
8.	Teachers' Engagement: Comparative Study on Private and Government Schools <b>Nandita Sharma and Raj Kamal</b>	45
9.	Scientific Analysis of Services and User's Behaviour of South Campus Library, University of Delhi <b>Deepa Singhal and Praveen Babel</b>	56
10.	An Overview on Indian Trade Fairs <b>Shrihari R. Vadavi</b>	67
11.	Turnaround of NPAS Story - Punjab National Bank <b>Anilkumar Nirmal and Purvi Derashri</b>	74
12.	Online Learning Vs Classroom Learning- A Literature Study <b>Sreeja K</b>	91
13.	A Study of Occupational Stress among Traffic Police in Bengaluru City <b>Suma Singh and Spoorthi.M.S</b>	96
14.	Emotional Intelligence and Spiritual Intelligence of The Secondary School Teachers in Relation to Teacher Effectiveness <b>Shri Kant Dwivedi</b>	102
15.	Utilization of Healthcare Services in Kerala <b>Rejimon P M and Anumol P S</b>	115

16.	ifjorL"lhy l ekt vlg efgyk i ty l 'mykjkLk.M dsfo"lsk l nHkz eá	<b>128</b>
	<b>MMW jfo dKUr dękj</b>	
17.	Application of Block Chain Technology to Business	<b>135</b>
	<b>B. Prathima</b>	
18.	Right to Development of Women in India with Special Reference to Tripura	<b>139</b>
	<b>Aparna De</b>	
19.	Electronic Voting Machine with Finger Print using Arduino	<b>149</b>
	<b>Chukka Samsonu, K.Kranthi Kumar and Bhanu Prakash.K</b>	
20.	The Inter-Relationship of Teaching and Research through Reflective Practice as Means of Professional Development in The Era of Globalization	<b>158</b>
	<b>Binoy Biswas</b>	
21.	Crime, International Crime and International Criminal Law	<b>165</b>
	<b>Anmol Jain</b>	
22.	Lkek; kst u ds l UnHkz eaf'k{kk dh Hkiedk	<b>174</b>
	<b>MMW l h , l - 'lęyk and vt ; dękj 'leł</b>	
23.	Analytical Study of Elements of Art in Chandra's Work	<b>177</b>
	<b>Abdul Salam Khan</b>	
24.	Customers' Perception and Satisfaction of Retail Banking Services Offered by New Generation Private Sector Banks – An Analytical Study	<b>187</b>
	<b>S. Gowri and C. Karthikeyan</b>	
25.	Vehicle Speeden System Using GSM and GPS	<b>196</b>
	<b>Anumeha Garg,Arshita Jain,Ashutosh Singh,Neelakshi Aatray and Ajay Kumar</b>	

## Dr. K. VICTOR BABU

M.A.,M.A.,M.Phil.,Ph.D.,PDF, (D.Lit)

Associate Professor, Institute of Education  
& Editor-in-Chief  
International Journal of Multidisciplinary  
Educational Research (IJMER) &  
Sucharitha: A Journal of Philosophy and  
Religion  
Mettu University, Metu, Ethiopia.



ISSN : 2277 – 7881  
Impact Factor :6.514(2020)  
Index Copernicus Value: 5.16



---

### Editorial.....

It is heartening to note that our journal is able to sustain the enthusiasm and covering various facets of knowledge. It is our hope that IJMER would continue to live up to its fullest expectations savoring the thoughts of the intellectuals associated with its functioning .Our progress is steady and we are in a position now to receive evaluate and publish as many articles as we can. The response from the academicians and scholars is excellent and we are proud to acknowledge this stimulating aspect.

The writers with their rich research experience in the academic fields are contributing excellently and making IJMER march to progress as envisaged. The interdisciplinary topics bring in a spirit of immense participation enabling us to understand the relations in the growing competitive world. Our endeavour will be to keep IJMER as a perfect tool in making all its participants to work to unity with their thoughts and action.

The Editor thanks one and all for their input towards the growth of the **Knowledge Based Society**. All of us together are making continues efforts to make our predictions true in making IJMER, a Journal of Repute

**Dr.K.Victor Babu**  
**Editor-in-Chief**

---

SOCIAL SCIENCES, HUMANITIES, COMMERCE & MANAGEMENT, ENGINEERING &  
TECHNOLOGY, MEDICINE, SCIENCES, ART & DEVELOPMENT STUDIES, LAW

[www.ijmer.in](http://www.ijmer.in)





## CONTROLLING OF TRAFFIC USING MOVABLE ROAD DIVIDER

V.Harika and G.Madhavi

P V P Siddhartha Institute Of Technology, Vijayawada, India

### ABSTRACT

Now-a-days, number of vehicles using the roads has increased; the static road infrastructure is almost the same and is unable to cope with changes like congestion, unpredictable travel time delays and road-accidents that are taking a serious shape. Traffic congestion is the major concern faced by the metropolitan cities. During 90's, the machine called zipper machine is used to shift the divider from one lane to another lane. The machine encloses an s-shaped inverted conveyor channel which lifts the barrier segment weighing almost 450kgs. The minimum length is 100feet. In this proposed model, we are not using a machine but operating it automatically by using 2 dividers namely normal and extended dividers are used. By placing ultrasonic sensor it will detect traffic congestion and raises extended divider and push ground divider to ground level. This Model is based on microcontroller, ultrasonic sensor, and signal indicator. When the signal turns red, the traffic density is measured and action should takes place before the signals turns into green.

**Key words:** Aurdino Uno, Driver mechanism, Divider, Sensor, Buzzer, DC Motor and LCD Display.

### INTRODUCTION

Countries around the world are day by day facing problem of traffic congestion due to increase in number of vehicles in society. Although the number of vehicles using the roads has increased, the static road infrastructure is almost the same and is unable to cope up with changes like congestion, unpredictable travel-time delays and road-accidents that are taking a serious shape in spite of actions being taken. Measuring reasons of congestion is foremost thing in deciding the solution to it. The designing of the roads is done considering the adverse conditions and the clear distance amidst the vehicles vary depending on the actual conditions suggesting the difference between theoretical and practical conditions. Regulations & legislations study help us in determining the actual onsite and the government determined flow of traffic. Traffic congestion can be determined with respect to travel time delay, speed change, volume occupied and level of service.

Traffic congestion also depends on the pattern of city, weather it is centric, grid or organic pattern. Depending on different congestion scenarios every country has adopted its own measures like high density traffic toll way in US, vehicle exclusion zones in UK and flexible working hours in UAE. Many other countries are in progress of adopting different measures for lowering down the effects of congestion. India with its growing economy is also experiencing growth in vehicular population although great variations in vehicle are seen but traffic free road is still in ideas.

Now a day the conventional method of building more roads is no longer a solution. Traffic intelligent system is the step taken in providing good transport system to human community. In view, our paper deals with study of traffic in Mumbai and suggesting a movable traffic divider technique for the same which can be used irrespective of the topographical, climatic, geographical obstructions and in combination which can help us to solve the traffic congestion problem in an optimal manner. In developing countries, like India, traffic is inherently chaotic and noisy. Identification of magnitude of traffic congestion is an essential requirement for defining the congestion and finding appropriate measures.

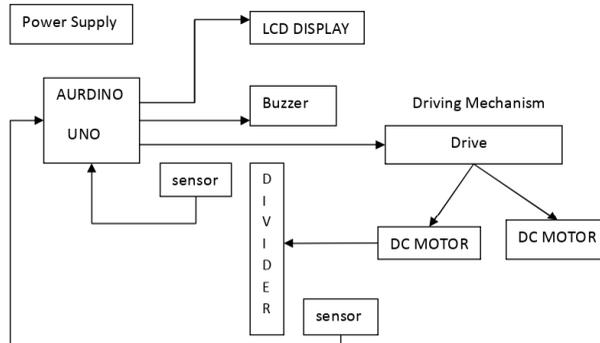
The main focus of this paper is aimed at understanding the recurring urban congestion, its measurement, precautionary measure and suggests a remedial measure for the same. The implication of widening existing roads or building new ones will only results in additional traffic that continues to rise until peak congestion returns to the previous level. The total available space within the city for the construction of roads, railways and other transportation is restricted. The paper confers implementation of movable traffic dividers as congestion release strategy for metropolitan areas instead of traditional solution of widening the roads. The movable traffic divider helps in there configuration of road capacity, so as to attain optimum benefit from roadway usage on the existing road.

In this paper, we are using automatic movable divider instead of manually operated machine. Here we place the ultrasonic IR sensor on either side of the road to detect vehicle count. We set the range as 10. If difference between left side and right side of road is greater than 10 then the divider will automatically move to the other side.

### EXISTING SYSTEM

Barrier transfer machines, conjointly called zipper machines or road zipper, are unit significant vehicles accustomed transfer concrete lane dividers, like jersey barriers, that area unit accustomed relieve hold up throughout rush hours. Several alternative cities use them briefly throughout construction work. The lanes created by the machine are unit generally cited as zipper lanes. One advantage of barrier systems over alternative lane management treatments (i.e.: cones, overhead directional lights) is that a solid, positive barrier prevents vehicle collisions because of motorists crossover into opposing traffic flow. The drawback is that a lane width is slightly reduced.

### III Proposed System





sensors for sense the traffic on either side of the road and controls the driving mechanism to move the divider in the less dense side and also gives the signal to the buzzer to give alarm signal for indicating the divider movement. The Arduino Uno is a microcontroller board based on the ATmega328. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Instead, it features the Atmega16U2 (Atmega8U2 up to version R2) programmed as a USB-to-serial converter. The Uno board has a resistor pulling the 8U2 HWB line to ground, making it easier to put into DFU mode.

### BUZZER

Here Buzzer is used to give the alarm signal to indicate the divider movement by receiving the signal from Arduino Uno for clear the vehicles beside the divider to avoid the damages occur in less dense side of the divider during divider movement and this alarm is used as the signal to clear the road for movement of the divider.

### FUNCTIONALITY OF PROPOSED SYSTEM

When the traffic is normal on both sides of the road the divider will be at the middle of the road. When the more vehicle movement is observed in the left side of the road as shown in the figure-a Then the divider is moved to the right side of the road as it contains less traffic with the help of driving mechanism which is controlled by Arduino Uno by sensing the number of vehicles on each side of the road. The movement of divider to the right side is as shown in the figure -b

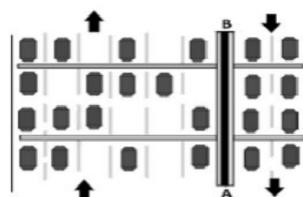
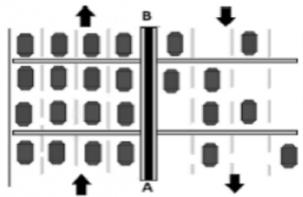


Fig-a: when traffic on the left side of the road is more Fig-b when divider is moved to the right side

When the more vehicle movement is observed in the right side of the road as shown in the figure-c. Then the divider is moved to the left side of the road as it contains less traffic with the help of driving mechanism which is controlled by Arduino Uno by sensing the number of vehicles on each side of the road. The movement of divider to the left side is as shown in the figure -d. Buzzer gives an alarm sound to the vehicle riders and pedestrians to alert them that there is a movement of divider.

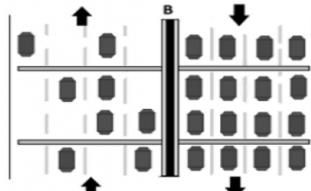


Fig-c: when traffic on the right side of the road is high

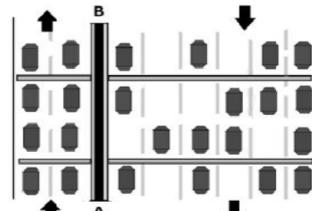
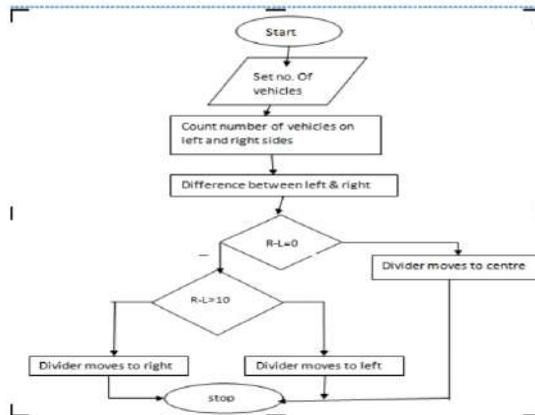


Fig-d: When divider is moved to the left side

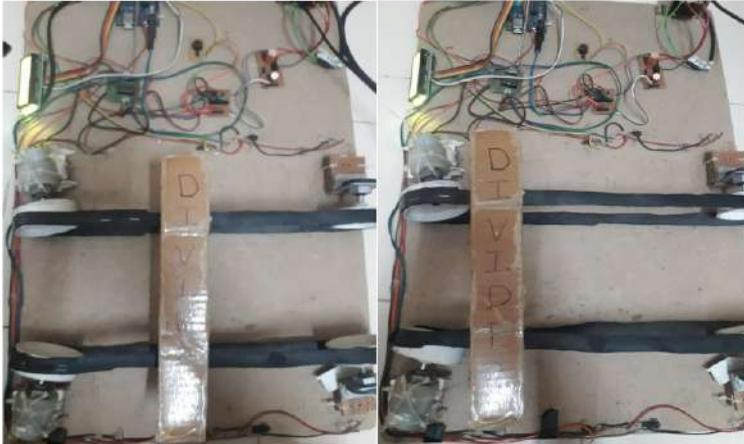
**ALGORITHM**

1. Start and Set the number of vehicles
2. Count number of vehicles on left and right side of the road
3. Calculate the count difference between the left (L) and right(R) side of the road
4. if  $L-R = 0$
5. Divider is at the center
6. else  $L-R > 10$
7. Divider moves to right
8. else  $R-L > 10$
9. Divider moves to left
10. Stop

**FLOW CHART:**



**HARDWARE ARRANGEMENT**



When divider is at the middle

When divider is move to the left side of the road



When divider is move to the right side of the road



## CONCLUSION

The problem with static road divider is overcome by movable road dividers by shifting the lanes according to traffic flow on the roads. We can reduce the manual intervention and manual traffic coordination so that we can have smarter control of traffic over the city. Our model can be operated automatically. More controlled traffic flow can be achieved, reducing traffic jams. Based on the traffic density the time allotted for the passing of traffic is decided automatically. High traffic density will be detected by the sensor and gives a buzzer signal to the people so finally our movable road divider provides the best solution for controlling traffic.

## REFERENCES

- [1] Movable Traffic Divider: A Congestion Release Strategy (2017), vol-5,issue 1.
- [2] Chaudry, A. G. (2012). Evolution Of Transportation System In Dubai. National Industries Quarterly Vol-14.
- [3] Indian Road Congress "Manual For Specifications And Standards For Lanes On Highways", Irc: Sp: 84: 2014.
- [4] Mcgm Mumbai city Development Plan 2005.
- [5] Electronic Circuit guide book – Sensors – By JOSEPH J.CARR. K.Vidhya, A.Bazila Banu, Density Based Traffic Signal System", Volume 3, Special Issue 3, March 2014
- [6] Priyanka Khanke, Prof. P. S. Kulkarni , "A Technique on Road Tranc Analysis using Image Processing", Vol. 3 Issue 2, February 2014.
- [7] Rajeshwari Sundar, Santhoshes Hebbar, and Varaprasad Golla, Implementing intelligent Traffic Control System for Congestion Control, Ambulance Clearance, and Stolen Vehicle Detection" IEEE Sensors Journal, Vol. 15, No. 2, February 2015.
- [8] Ms.Pallavi Choudekar, Ms.Sayanti Banerjee , Prof.M.K.Muju, Real Time Traffic Light Control Using Image Processing" Vol. 2, No. March.
- [9] Shabbir Bhusari, "Traffic control system using Raspberry-pi", Global Journal of Advanced Engineering Technologies ISSN (Online), Volume 4, Issue 4- 2015, pp 413-415,MARCH 2015.
- [10] S.Lokesh, "An Adaptive Traffic Control System Using Raspberry PI", International journal of engineering sciences & research Technology, IEEE conference June 2014, pp 831-835.
- [11] Soufiene Djahel, "Reducing Emergency Services Response Time in Smart Cities: An Advanced Adaptive and Fuzzy Approach", IEEE 2015, pp 978- 986



Ljrtij dsl lnhz eafokk fi nml tutkr i. Msdh l kftd l jpk dk v/; ; u

Mk-defyuh Jholro

'kksk funf'kdk  
i k/; ki d] Hlaksy foHkx  
'kkl dh; egkfo |ky;] cjyk  
Tkyij] e/; insk

d- Fkusojh frokjh

i h- , p-Mh-'kkskkFkhz  
Hlaksy foHkx  
'kkl dh; egkfo |ky;] cjyk  
Tkyij] e/; insk

Ljrtij & i. Msd tutkr] NRhl x<+ ds ljrtij ftye ea ,d fo'ok fi nml tutkr gA i. Msd tutkr l enk; dh viuh vyx l kftd l jpk gS ,oa vius fo'okl ] ijeijk ,oa eW; rk; a gA ; syks idfr dh iutk ds l kfk&l kfk noh norokva dh iutk djrs gS rFkk dN gn rd vU/kfo'okl h Hkh glrs gA cnyrh ijfl.Fkr; la ea bl tutkr }jkk viuh l adfr dks cuk; sj [kuk dFBu gsrk tk jgk gS ftl ds l j'k.k ds fy, l jdkj }jkk fo'ok 0; oLFkk djsdmeaf'kk dk id kj fd; k tkuk pkfg, A

'kk dth & i. Msd tutkr] l kftd l jpk ; kstuk fdz kko; A

ilrouk & ljrtij] NRhl x< jkt; dk ,d ftyk gA ljrtij ea 45-58 vuq npr tutkr fuokl djrh gA lu 2012 ea NRhl x< jkt; l jdkj }jkk lkr fo'ok fi nml vuq npr tutkr ds : i csk] delj] Hkft; k] cfjg] vug-kekfm; k] igkml djkok ,oa i. Msd dks fuf'pr fd; k x; ka i. Msd l enk; ds yks fo'ok : i lsljrtij] cyjkeij rFkk l jxqk ea fuokl djrh gA i. Msd tutkr dh viuh vyx ,oa fo'ok l kftd l jpk gA 'kkskkFkhz }jkk bl i. Msd tutkr dh l kftd l jpk dks tkus ds fy, l o'k.k 'kksk fo'ok 0; fDrxr l EId] i krdky; v/; ; u dk iz kx fd; k gS rFkk ljrtij eafokk fi nml tutkr i. Msd ds cjs ea tkudkj ihl dh gA i. Msd tktkr ds vius vyx fo'okl ,oa eW; rk; a gA

iMsd tutkr dk mxk & i. Msd tutkr l enk; ds 0; fDr Lo dks ik. Mo jktkva dk oakt dgrs gA ; s yks vkfkd n'v l stacyk ij vkfJr jgrs gS rFkk budh viuh vyx mi Hk'kk gS ftl si. Msd Hk'kk ds uke l stuk tkrk gA bl tutkr dk fo'okl gS fd ik. Mo jktk tacyk ea jgrs Fk ogk os dln&eny] [kcdj viuk thou 0; rhr djrs Fks ,oa ckl dk crz cukrs Fk ml h l s cus vL=& kL=la dks mi ; kx djrs Fks rks i. Msd tutkr Hk ik. Mo jktkva dk vuq j.k djrh gS ,oa thodk ktu ds fy, tacyh l k'kula ij fuHk jgrh gA budh ykd dFkva o ykd xhra ea ik. Mo jktkva dk ckj&ckj ftØ Hk feyrk gS ftl l s fl ) gsrk gS fd bl tutkr iuk : i l sik. Mo jktkva dk oakt gA

i. Msd tutkr ds Hkx & i. Msd tutkr e[; r% nls Hkx ea foHkDr g& l jxq; k i. Msd rFkk mRjkgk i. Msd l jxq; k i. Msd tutkr ipfyr noh&norokva ds ifr iutk&iKB] vLFkk] fo'okl ,oa jTLoyk o idrk L=h lsl Ecd/kr NqkNq ,oa fu; e ikyu vk/kj ij vius dks mRjkgk i. Msd l s mPp dks/h dk le>rs gA l jxq; k i. Msd tutkr ds yks txy rFkk xpo ea >ki Mh cukrs gS rks os nls njokt cukrs gS ftl dk ,d njokt vxys Hkx dh vlg vlg ml jk njokt fi Nys Hkx dh vlg [hyrk gA ft/kj budk vxyk Hkx dk njokt [hyrk gS ml ds ck; h vlg budk j l kbZkj vlg j l kbZkj ea gh i. Msd tutkr ds yks ds firRj no] xls= no vlg nfo; k; glrs gA i. Msd tutkr ea HkRrj?k] ea jTLoyk vlg id fir L=h dk idsk ofr- gsrk gA v'k'rk dh voLFkk ea fl=; k; Lo; a ds vku&tkus ds fy, fi Nys njokt ds gh mi ; kx dj l drh gS bl hfy, l jxq; k i. Msd nls njokt cukrs gS rFkk ftl ds dkj.k gh l jxq; k ik. Msd dks nk&nqfj; k i. Msd dh l k'k fn; k tkrk gA mRjkgk i. Msd v/kdrj viuh >ki Mh ea ,d njokt gh cukrs gS tks vxys Hkx dh vlg [hyrk gA l jxq; k i. Msd ds l eku budk HkRrj?k] vxz njokt ds ck; h vlg cuk gsrk gS ; syks Hk j l kbZkj ea gh vius noh&norok o firRj no dks LFkfir djrs gA mRjkgk i. Msd ea efgyk; a v'k'rk dh voLFkk ea dkbZ Hk fu; eka dk ikyu ugh djrh blgh vkpkj & 0; ogkj es fHkDrk ds dkj.k blgs fuEu Jsh dk ntiz fn; k tkrk gS vlg buds ?kj ea ,d gh njokt gkus ds dkj.k budk ,d nqfj; k i. Msd Hk dgk tkrk gA ikphu dky ea l jxq; k i. Msd vlg mRjkgk i. Msd ds e/;



'knh&fookg djuk fu'k Fk] yfdu 45&50 o'kz i mZ buea le>k-k gq/k ftl ea ; g fu.kz fy; k x; k fd nkuka , d gh uok oxZ ds l nL; gA vr-% 'knh&fookg gkuk pkfg,] ftl ds vk/kj ij nkuks oxkai ds chip 'knh&fookg ds l aak LFkfrir gkus 'kq gq A

**I adfr &** i.Mks tutkfr ds thoupØ ea muds vkl &ikl ds okrkj.k rFkk vylkdd 'kfr; ka dk Li"V i Hko fn[kkbz nrk gA i.Mks tutkfr ea tS s gh irk pyr k gS fd xlp dh dkbz L=h xHkZrh gS ml s dbz fu'kka dk ikyu djuk iMfk gA ml L=h dks vdsys taxy ea vkuk&tkuk fu'k gsk gS ftl l s ml s HUr&ir] pMf; ; k eMf[kj vkfn dh cjh utj u yxs vlg dN vfu"V u gA i.Mks tutkfr dh ; g eku; rk gSfd buds ifjokj ea tks ejrs gS mlgha dh vRk fQj l s ml h ifjokj ea tle yrh gA

**tIe l EcZn fo'okl &** i.Mks tutkfr dk fo'okl gSfd cPps dk tIe muds gh i mZ la ds i p% vkxeu dk l adfr gA tIe ds nksu ik.Mks tutkfr ds ykx l pZ ; k viuh gh tutkfr ds fd l h fui qz vlg r dks l gk; rk ds fy, cykrs gA yfdu xHkZrh dh voLFk vl k/k.k gS gS rks csk] xju; k] nokj ; k vkyok dks cykrs gS rFk ml h voLFk eai.Mks tutkfr ds ykx ; g tkuus dk iz kl d jrs gSfd ml ifjokj dk dks l s i mZ ogk i p% tIe yj gS gA

**cPps dh vRk igpku &** i.Mks tutkfr }kjk cPpa dh vRk dh igpku ikp o'kz dh vk; q ds vlnj dh tkrh gS ftl ds fy, ifjokj dk cqtqZ0; fDr dN [kkl fof/k }kjk vRk dh igpku djrk gA ftl ds fy, , d tyrk gq nhi d rFk eV/Bh pky yrk gS vlg ml ds ckn ifjokj ds , d i mZ dk uke ydj ml tyrs gq nhi d dks pky ds pkja vlg ?kcdj ogha ij j [k fn; k tkrk gS vlg pky ds dN nkuks dks mBkdj ea=kpkj.k ds l kF ogha tehu ij fxjk nrs gS vc fxjs gq pky ds nkuka dks nk&nks d jds purk gA ; fn l gh <x l s nk&nks ea cjkj fohDr gS x; s rks blgs rhu ckj i p% ngjk; k tkrk gA i.Mks tutkfr ds ykx vRk igpku dh n jh fof/k 'l i k&?kl uk' dk Hh iz kx d jrs gA

**pkjg NvkbZ &** tIe ds , d eghuk ds ckn jk'kh %pYgk% NvkbZ euk; k tkrk gA tks bl ckr dk l pd gS fd cPps dh ek vc 'kq gS xbz gS bl ds igys mlgs Hkrj ?kj o intk ?kj ea i mZ oftr jgrk gA vluikl u & i.Mks tutkfr ea ml uikl u dh vlg pkfd ij Eijk fufgr gA vluikl u ds vol j ij cPps dks igyh ckj [kkuk f[kyk; k tkrk gS ftl dks egg tBh djuk dgk tkrk gS tks vf/kdrj c[kokj] cglifrokj ; k 'kPokj dsfnu gkrk gA

**fd'kjoLFk ,oa; kbudy &** fd'kjoLFk ds l e; i.Mks tutkfr ea fyax Hkn dh Hkkouk l tx gS tkrh gA i.Mks ykx bl mez ea yMfd; ka ds ikyu i ksk.k rFk vkpkj & fopkj , oa0; ogkj ij fo'k /; ku fn; k tkrk gA yMfd; k; cMla l s fur; ifr ds vkpkj & fopkj , oa0; ogkj l s l h'k yrh gA i.Mka tutkfr ea yMfd; k; viuh l gfy; k; k i eh ppus ds fy, iqkz-% Lor- jgrh gS ftl ds fy, muds ek&cki dHh Hh n[kyankth ugh d jrs gS vlg fd'kjoLFk ikj d jds; kbudy ea i mZ d jrs gA, oa os ifrdy fyax ds l kF vius l s gh [kist yrs gA

**fookg &** i.Mks tutkfr ea fookg gq yMels dh mez 15&25 o'kz , oa yMeh dh mez 12&20 o'kz mi ; p r ekurs gA i.Mks l epk; ea fookg dj vFZ; kA l aak ds fy, l k ftd eku; rk inku d jds mlga 0; ofLFk <x l s l ju; kstr djuk gS ftl l s os ifr&ifr dh rjg jg l ds vlg l arku mRi lu dj l da bl tutkfr ea 'knh&C; kg dk l Ecak dN [kkl vius utndh f'rnkj] Hkb&Hkb] cgu&cgu dh l arkula ds chip i mZ-% oftr gS rFk , d gh xls- ds chip 'knh&C; kg Hh oftr ekuk tkrk gA i.Mks tutkfr ea du; k eW; nus dk Hh jfr&fjokt gS ftl d s i.Mks ykx "l [knk" dgrs gA i.Mks l ekt ea thou l kFh ppus dh vucl fof/k; k; gA tS & mBfy; k; cjk'k] pMh igukdj yuk 'cU/kok' <pk&<pl] r y&gYnh p<kdj C; kg djukA ; fn dkbz yMeh xlo ds ieh ds l kF Hkx tk; s tks Hh blga dkbz i jskuh dk l euk ugha djuk iMfk gA i j s xlp okys feydj i eh&i fedk dks <rus ea 0; Lr gS tkrk gS vlg tS s gh ; g tkudkj gh tkrk gS rks yMeh ds fir xlp okya dks ydj du; k eW; rFk ip Hkr ds fy, ml xlp ea tkrk gS du; k eW; vlg ip Hkr nkuka ckr eatj gS t kus ds ckn Hkxs gq yMeh&yMels dks nEi fr thou dh l k ftd eku; rk fey tkrh gA i.Mks l ekt voSk ; kA l Ecak ds vupknu ugha djrk yfdu bl tutkfr ea voSk ; kA l Ecak fcuk glr{k ds fo] eku gA i.Mks l ekt ea voSk l Ecak 'knh ds i'pkr-Hh feyrk gA dHh&dHh , d s dk; ka ds dNk Hkjk; k tkrk gA



i.Mkstutkr dk /MeZ fo'okl & i.Mks tutkr ds ylx vlykdd 'kDr; ka dks ekurs gA ; s vlykdd 'kDr; ka i Hkkoiwkz < x lsbuds thou dks fu; fer : i iHkfor djrh gsvkz thou ds fu/vkj .k ea egroiwkz Hkiedk fuHkkrh gA bu tutkr dk ekuuk gsf d buds thou ea tks Hkh jksx] chekj] nqk/uk; ; vkrn gsrh gS muds i hNs , d s gh vlykdd 'kDr; ka dk iHko gA vxj fdl h dks xHkZ/kj .k ugh glrk gS ; k fdl h dk xHkZ kr gls tkrk gS]tc blgs taxy l s Qy&Qy] dn eny ; k f'kdj dk vHko egl w glrk gS rks ; s ylx vlykdd 'kDr; ka dks ftEenjk ekurs gS rFk ; s ylx bu 'kDr; ka dh intk&iB djds [kjk djus dk iz Ru djrs gA i .Mks tutkr : kjk ikuh dh fu; fer : i lsmiyf/k dsfy, ; s ylx dkysoj iB djrs gA bl tutkr ds }kjk vpkj&fopkj] vdkj&idkj vj Lohko ea foHkZurk ds vl/vkj ij vlykdd 'kDr; ka dks nls oxk ea ckvk x; k g& fgrdkjh vlykdd 'kDr; k rFk vfgrdkjh vlykdd 'kDr; ka fgrdkjh vlykdd 'kDr; ka dks i .Mks ylx bu 'kDr; ka dks no] noh] ekb] ckck rFk i kB uke l s i p k j r s g A vfgrdkjh vlykdd 'kDr; k j s x ] chekj] nqk/uk , oa er; q dk dkj .k Hkh ekuh tkrh gA i .Mks tutkr dh fgrdkjh vlykdd 'kDr; k ejk&ey/k ; i noz ks dh vRkZ xlrh noh&noRk] xlp fo'okl ds noh&noRk] egkeb] cfjg; k no] fngkj ekb] cksoj no] Njh i kV] udok i kV] jDrh i kV] el ku] < l s < h i kV vkrn gA i .Mks tutkr dks gfudkj d vlykdd 'kDr; k eMf k j h] eS h eMf k j h] i k h ekb] pM s y vkrn gA

iokl & i.Mks tutkr ds ylx taxy ea , oalery xkela ea fuokl djrs gA tgl; os taxy okroj .k l s ckg jgrs gsvkz vius thou fuokz dsfy, etnjh ij fuHkZ jgrs gA ; s ylx [kr] edku] l Mel vkrn ds dke djds viuh thfodk pykr gA i jUr d n i .Mks d f k dk; Z djds viuh thfodk vfr djrs gA ; gk ijEijkr i .Mks ds vkfkdz thou ea taxy dk egro , oafuHkZrk l okz/kd gS D; k d os taxy dks NkM edj ckg jguk l kp Hkh ugh l drs gA vius thou fuokz dsfy, taxy l smgls l okz/kd phtsmi yk/ gls tkrh gA t s Qy] Qy] dn eny] tM&c v h] i R ; l x b r; k n A i .Mks l d f r i d f r dh xln ea taxy os i g M s ds chp iyri] Qyrh&Qyrh gA vr% taxy , o a i g M h okroj .k buds eu e f r " d ea c M k gh v f e v N k i cuk; s g s g s t s buds vkfkdz] l k f t d thou l s l E c h / k r v k L F k , o a f o ' o k l d s i f r f c f e c r d j r h g A ; s y l x x l p s ea n l l s i P p h l dh l ; k ea > k i f M ; ka cukdj jgrs gA budh > k i M h f u e l z k d j u s dk < x H k h d n g v d j g l r k g A i g y s ; s y l x c k l v j y d M h dh l g k ; r k l s n h o k y dk < l p k c u k r s g s r F k m l i j f e v v h F k i d j n h o k y c u k r s g s r F k m i j l s y d M h ; k c k l d s i R r s ; k ? k l l s N k n r s g s , o a y d M h ; k c k l dh l g k ; r k l s n j o k t s o f d o k M + H k h r s k j d j y r s g A b l r j g i . M k s y l x k a d k x l p d k Q h c M s - ( k s - e a Q s y j g r k g A i . M k s y l x k s d k x l p , d e h y d s ( k s - e a f o L r r j g r k g A i k ; % x l p c l k r s l e ; ; s y l x i h u s d s i k u h d k f o ' o k l / ; k u j [ k r s g A ; ; ; s y l x < l g h [ k n d j i k u h f u d k y r s g y f d u v k t d y b u y l x k a d k s g S M i E i dh l f o / k k l j d k j b l g s i n k u g l s j g h g A

[M&iku & i.Mks tutkr l epk; ] [kkr; inkFkz dks taxy l s b d V B k djrs gS tks budk i .Mks tutkr dk e[; vkfkdz dk; Z gA bl tutkr ds ylx egg/k] rbn]q HkZ/vh] el ku] xB; k] fl vj udok] c<eh] cg/k] l w/ k] fiBk: vkrn Qyla dk iz ks djrs gA i .Mks tutkr l epk; ds ylx taxy phtla ds l k f k & l k f k p l o y ] n k y ] x g h ] T o k j ] c k t j k ] e D d k v k r n d k H k h [ k k r ; i n k f k z d s f y , d j r s g A b l t u t k r d s y l x e k l ] e V u ] e N y h c M s p k o l s [ k k r s g A i . M k s t u t k r d s y l x k a d h i j E i j k g s e g e k u a d k L o k x r e k l ] e V u ] o n k : f [ k y f i y k d j d j u k p l f g , A i o z , o a R ; k s j & i . M k s t u t k r d s y l x l e f k : i l s e g y k R ; k s j ] [ k j c k t i n t k ] g j s y h R ; k s j ] u o k [ k b z R ; k s j ] d j e k R ; k s j ] n ' k b z M k < } N j r [ k k b ] g l s y h R ; k s j ] T ; k r ; k M k < + v k r n R ; k s j ] k a o i o k d k s c M s g h g " k z , o a m Y y k l d s l k f e u k r s g A

LokLF; & i .Mks tutkr ds ylx taxy o i g M s i j g h j g r s g b l f y , o s v i u h j k s & f c e k j h d s n i j g r q t a x y t M & c v h ; k a o d l n e y d k g h m i ; l x f d ; k d j r s F k A ; s y l x V k u & V k d V s v k r n e a f o ' o k l d j r s g A v k t d y t x g & t x g i j v L i r k y o m i L o k L F ; d l n z [ k y x ; s g f t l l s b u d k e q r e a b y k t d h v u d l l f o / k k ; a i n k u d h t k j g h g v k j i . M k s t u t k r d s y l x k a d k L o k L F ; i g y l s d k Q h c g r j g y k g A

**i.Mkstutkr dsl kelftd fodkl grqmik; &**

- i .Mks tutkr ds no ?kj la dks Bhd&Bkd djkus dh 0; oLFk djuk ftl l s bl tutkr ds ylxka ea J) k , oa / e z i j k ; . k r k c < + r F k budh l d f r l j f ( k r g l s l d A



- i .Mks tutkfr l epnk; ds l kelftd fodkl grq muds xteli egYykh vkokl {ks= vkfn dks l jf{kr fd; k tkuk pkfg, A
- i .Mks tutkfr ds ykxka eaf'k{kk dk i l kj fd; k tkuk pkfg, A
- i .Mks tutkfr ds ykxka }jkk d'ctk dh x; h Hkfe dks blgha ykxka dks nsdj vf/kdkj i = inku fd; k tkuk pkfg, A
- i .Mks tutkfr l epnk; ds ykxka ds ijEijlxr vkfFkZl dk; la , oa jkst xkj dks c<kok fn; k tkuk pkfg, A
- i zkk l u }jkk i .Mks tutkfr ds l kelftd /kfeZl dk; la eagLr{ki ugha fd; k tkuk pkfg, A
- i .Mks tutkfr l epnk; ds fuokZl r {ks=ka ea vf/kdrj i .Mks tutkfr ds ykxka dks gh ukedjh ij j[kk tkuk pkfg, A

### I UnHxZkFk l ph &

- pkdkjh] c) 1965 Vkbcy MoyieSV bu bf.M; kA
- frokj] jkdsd dekj 1990 vkfnokl h l ekt ea vkfFkZl thou] uknu c) l BVj] ubz fnYyH
- xlrk] ,e ,y- 1987 l kelftd l j'puk ifdz; k , oa i f'jorZ] l kfgR; Hkou] vkxj kA
- NRrh l x< ds vuq f'pr {ks=ka ds i zkk l u ij jkT; i ky dk ifronuA
- ftykf/kdkjh] l j'itij dk i .Mks tutkfr grq; kstuvka ds cksj ea nLrkostA



## LIQUIDATION AS A GOING CONCERN: IVRCL LTD - A CASE STUDY ANALYSIS

Dr. Binoy J. Kattadiyil and CS Nitika Manchanda

ICSI IIP, IPA of IBBI, New Delhi

### Introduction

The basic objective of Insolvency and Bankruptcy Code, 2016 is maximisation of value of assets, to promote entrepreneurship, availability of credit and balance the interests of all the stakeholders. When an organisation makes default in paying to its creditors, the possibilities are either (1) reorganisation where creditors accept reduction of their outstanding amount as full and final settlement through a resolution plan i.e. through Corporate Insolvency Resolution process, or (2) Liquidation of the organisation and distribute the proceeding between creditors, or (3) *liquidation of organisation as going concern and distribute the proceedings between the creditors*. The phase *going concern* means all such assets and the liabilities, which constitute an integral business that must be transferred together, and the consideration must be for the business. The buyer of the assets and liabilities should be able to run business without any disruption. The business must be a running one, and it must be transferred along with its employees.

Liquidation of an organisation as going concern has its own advantages i.e. it helps in realisation of higher value, rescuing a viable business; prevent loss of employment etc which has greater economic value.

After enactment of Insolvency and Bankruptcy Code, 2016, the concept of “Liquidation as a going concern” was first discussed in the matter of peculiar case of **Gujarat NRE Coke Limited** wherein NCLT, Kolkata Bench vide its order<sup>1</sup> dated 11<sup>th</sup> January, 2018 ordered the company’s liquidation as going concern keeping in mind the life and employment of 1178 employees and workmen in accordance with Regulation 32(b)(i) of IBBI (CIRP Regulations), 2016 which provides for sale of assets in a slump sale.

Since, there was no clear concept of liquidation as going concern, Insolvency and Bankruptcy Board of India (IBBI) amended IBBI (Liquidation Regulations), 2016 on 1<sup>st</sup> April, 2018 and 22<sup>nd</sup> October, 2018 to include that *sales of assets during liquidation can be done by way of “sale of Corporate debtor as going concern” or “the business(s) of the corporate debtor as a going concern”*<sup>2</sup>.

**Sale of Corporate debtor as going concern would mean** that the corporate debtor will not be dissolved, it will form part of liquidation estate. It will be transferred along with the business, assets and liabilities, including all contracts, licenses, concessions, agreements, benefits, privileges, rights or interests to the acquirer. The consideration received from sale will be split into share capital and liabilities, based on a capital structure that the acquirer decides. There will be an issuance of shares by the CD being sold to the extent of the share capital. The existing shares of the CD will not be



transferred and shall be extinguished. The existing shareholders will become claimants from liquidation proceeds under section 53 of the Code.

**Sale of the business(s) of the corporate debtor as a going concern would mean** The business(s) along with assets and liabilities, including intangibles, will be transferred as a going concern to the acquirer, without transfer of the CD, and therefore, the CD will be dissolved. The existing shares will be extinguished. The remaining assets, other than those sold as part of business will be sold and the proceeds thereof will be used to meet the claims under section 53 of the Code.

*Since the inception of the Code, there have been many cases where the Adjudicating Authority ordered for the liquidation as a going concern keeping in mind the current scenario of the Company. Examples of such cases are Gujarat NRE Coke Limited, Edelweiss Asset Reconstruction Company Ltd. vs. Bharati Defence and Infrastructure Ltd, Reid & Taylor, Rukmani Infra Projects Private Limited, IVRCL Limited etc.*

Now, we will do overall performance analysis of the Corporate Debtor IVRCL Limited, which is under liquidation as a going concern.

## PERFORMANCE ANALYSIS

### IVRCL Limited (ordered for Liquidation as going concern)

#### A. COMPANY PROFILE

IVRCL Limited (the Company) is a public listed Company (NSE & BSE) domiciled in India at Hyderabad, Telangana and is incorporated under applicable provisions of Companies Act on 16<sup>th</sup> November, 1987. The Company is in the business of development and execution of Engineering, Procurement, Construction and Commissioning (EPCC) and Lump Sum Turn Key (LSTK) facilities in various infrastructure projects such as water supply, Roads and Bridges, Townships and Industrial Structures, Power Transmission etc. for Central/State Governments, other local bodies and private sector. The company has more than 3000 qualified engineers, managers and professional technocrats across India.

The various segments where the company operates are:

- **Water:** pipeline installation, Desalination Water Supply
- **Irrigation:** Lift irrigation projects: development of buildings, complexes, metro rail projects etc.
- **Buildings and industrial structures:** -development of buildings, complexes, metro rail projects etc.
- **Power:** Power Transmission Lines and Rural Electrification
- **Transportation:** highways, highways, roads etc.
- **Mining:** development of underground mines etc.



In 2011, IVRCL was ranked as 4th fastest growing company in India by Business world. The Company has 26 direct subsidiaries and 3 associate companies. The Company has four directors (suspended), 1 CFO and 1 CS. One of the main promoters of the Company is E. SUDHIR REDDY who is also the Chairman and Managing Director of the Company. *Permanent employees on roll of the company as on 31<sup>st</sup> March, 2019 are 913.*

As on 31<sup>st</sup> March, 2019, the Company had total authorized share capital of Rs. 330,00,00,000/- and paid up share capital of 156,57,95,384/- , distribution of majority shareholding is:

Promoter's Holding	5.37
Institutional Investors-Financial Institutions / Banks / Insurance Companies	50.16
Foreign Portfolio Investors	0.68
Corporate Bodies	8.27
Indian Public	33.55
Non Resident Indian	1.69
Others	0.28

Source: Annual report: 31<sup>st</sup> March, 2019

## B. MAJOR REASONS OF COMPANY'S FALLING INTO INSOLVENCY

The Lenders of the Company exited Corporate Debt Restructuring Scheme (CDR) (*which had certain reliefs in relation to repayment timelines of loans and accumulated unpaid interest*). Therefore, a case of failed CDR, the concessions provided in the CDR Package under the terms of the Master Restructuring Agreement (MRA) were rolled back. Accordingly, concessions provided as per CDR Package stands withdrawn, reversed and revoked as per the relevant clauses of the MRA. Hence, interest and penal interest was recalculated with considering the effect of reversed and revoked concessions provided as per CDR. Moreover, the company was unable to pay the statutory dues for quite long time and interest free unsecured loans were given to its subsidiaries, associates Companies and the terms and conditions are prejudicial to the interest of the company.

Additionally as stated by the auditors of the Company in the annual report , *the Company did not have appropriate internal financial controls over:*

- a) Assessment of recoverability of deferred tax assets
- b) Assessment of expected credit loss/loss allowance of bank guarantees encashed by customers, unbilled revenue, trade receivables and withheld amounts which are subject matters of various disputes /arbitration proceedings/ negotiations with the customers and contractors due to termination / foreclosure of contracts and other disputes.



- c) Assessment of expected cash shortfall and resultant loss allowance that may be required in respect of invocation of corporate guarantees and demand against the Company in respect of such guarantees extended / executed for its subsidiaries and other parties in favour of the lender
- d) Assessment of impairment in value of long term equity investment and assessment of impairment in value of loans and advances to various subsidiary companies and other parties.
- e) Control over reconciliation of subcontractors work bills with the work bills submitted to the clients and physical progress of works completed, which could potentially result into inaccurate estimation of percentage of work completed and consequently delay in the realization of unbilled revenue/ receivables.
- f) Controls over projects costs estimation and review of balance costs to complete in respect of work projects, which could potentially result into inaccurate estimation of foreseeable losses on works contracts.
- g) physical verification of fixed assets and inventories.

Source: Annual report: 31st March, 2019

*As a result, State Bank of India filed Section 7 application with National Capital Law Tribunal, Hyderabad Bench which was admitted on 23<sup>rd</sup> February, 2018.*

## C. CORPORATE INSOLVENCY RESOLUTION PROCESS

The State Bank of India filed application under section 7 of the Insolvency and Bankruptcy Code, 2016 with NCLT, Hyderabad Bench for the dues amounting of Rs. 604,15,36,434/- under the SBI facilities as on 22<sup>nd</sup> October, 2017 and NCLT after perusing all the pleadings admitted the application and initiated the CIRP proceedings on **23<sup>rd</sup> February, 2018**.

**Mr. Sutanu Sinha** was appointed as the Interim Resolution professional on recommendation of Financial Creditor.

Subsequently, Mr. Sutanu Sinha was confirmed as the Resolution Professional (“RP”) by the committee of creditors (“CoC”). On appointment of the IRP/RP, the powers of the Board of Directors of the Company were suspended.

NCLT vide order dated **26<sup>th</sup> July, 2019** ordered for the liquidation of the corporate debtor on account of non receipt of any viable resolution plan even after issuing expression of interest many times.

NCLAT vide its order dated **9<sup>th</sup> September, 2019** held that the order of liquidation will be subject to the decision of the appeal made by prospective resolution applicant on ground that the plan was rejected by Corporate debtor and NCLT without any ground. The liquidator was directed to ensure that IVRCL remains a going concern and that any developments would be based in accordance with the law.

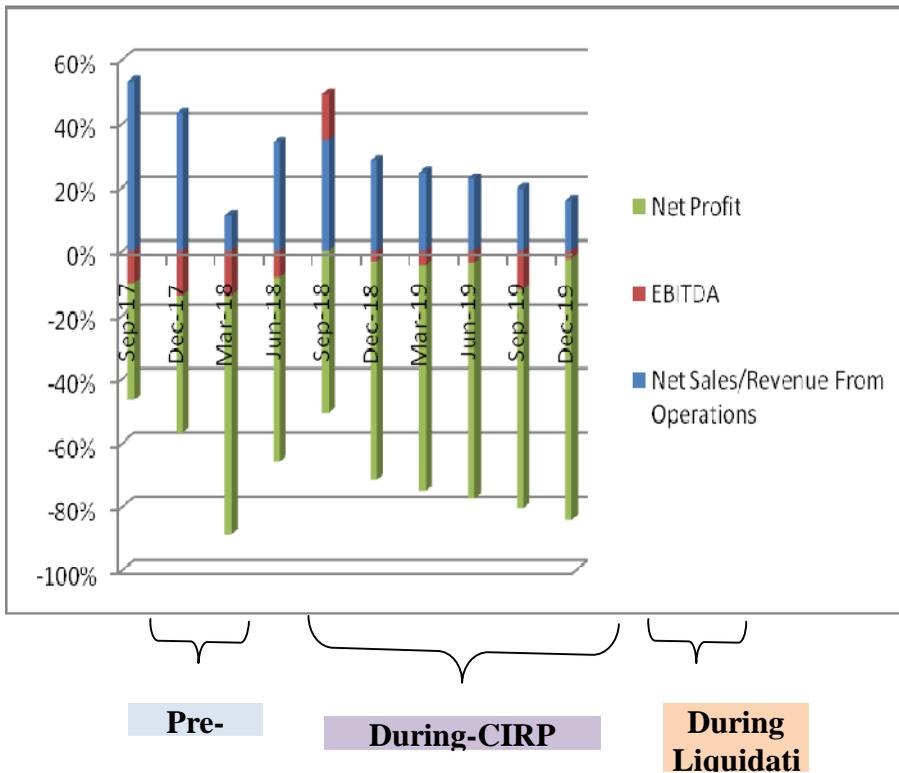


Initiation of CIRP	23 <sup>rd</sup> February, 2018
NCLT order for liquidation as going concern	26 <sup>th</sup> July, 2019
NCLAT order that liquidation order will be subject to the decision of appeal till then company remains a going concern.	9 <sup>th</sup> September, 2019
Decision of NCLAT	<i>Pending</i>

**D. PERFORMANCE OF THE COMPANY- PRE CIRP, DURING CIRP, POST LIQUIDATION**

Particulars	Pre CIRP		During CIRP						Post CIRP	
	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
Net Sales/Revenue From Operations	404.22	319.34	171.76	203.09	234.03	170.99	121.13	116.61	111.80	81.75
Other Income	7.34	3.51	71.17	2.66	113.31	3.19	5.90	1.62	3.52	2.41
Total Income	411.55	322.85	242.93	205.74	347.34	174.18	127.03	118.22	115.32	84.16
Expenditure	692.81	639.57	920.98	549.75	590.13	513.32	469.67	470.17	502.89	496.08
Total exp. (excluding finance and dep. Charges)	486.65	425.12	460.54	253.64	253.06	192.52	148.18	136.06	184.16	96.94
Expense (%)	120%	133%	268%	125%	108%	113%	122%	117%	165%	119%
Operating profit	-82.43	-105.78	-288.78	-50.55	-19.04	-21.52	-27.06	-19.45	-72.36	-15.20
EBITDA	-75.10	-102.27	-217.61	-47.89	94.27	-18.34	-21.15	-17.83	-68.84	-12.79
EBITDA margins	-0.18	-0.32	-0.90	-0.23	0.27	-0.11	-0.17	-0.15	-0.60	-0.15
Exceptional Item			-475.40		-97.90	-70.59	-4.74	-27.66	-6.50	-15.73
PBT	-281.26	-316.72	-1153.45	-344.01	-340.69	-409.74	-347.38	-379.60	-394.07	-427.65
Tax	1.02	1.02	1.02	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Net Profit	-282.28	-317.74	-1154.47	-344.38	-341.06	-410.11	-347.75	-379.98	-394.44	-428.02
EPS	-3.58	-4.03	-14.72	-4.40	-5.64	-5.24	-4.46	-4.85	-5.04	-5.47

Source: www.bseindia.com



The trend of the company in terms of EBITDA margins, revenue from operations, net profit etc. during CIRP and post CIRP (i.e. liquidation) is declining as compared to pre-CIRP period. It is generally seen that when the company is having negative EBITDA margins before CIRP, it tends to have negative margins during CIRP and afterwards till the company does not get restructuring plan, however the liquidator is doing all its efforts to keep the company as going concern.

The main operating segment of the company is construction and project activities. The liquidator of the company has enhanced its focus on risk management. Project execution overview has been significantly strengthened by adding more experienced and senior persons to the PMC (Project Monitoring Cell). Reviews are conducted regularly to understand the cost profile of the original bid and the effect of time on costs.

During CIRP and liquidation, the company booked some exceptional items which led to more decline in the net profit trend of the company. The exceptional items in the month of March, 2018 represented recast of interest/penal interest charged and benefits withdrawn by the lenders upto March 31, 2017 that were extended pursuant to CDR/SDR scheme from the cut-off date (i.e. November 30, 2013) and from September, 2018 onwards pursuant to invocation of performance bank guarantees during CIRP.



However, the management is in the process of initiating arbitration/other legal action for such invocations.

There are numerous reasons which are hindering the growth of the company:

- failed CDR which led to withdrawal of all the benefits since cut-off date:
- litigations
- Slow progress in projects which led to no billing for longer period of time which ultimately build huge unbilled revenue
- Failed financial guarantees, loans and advances given to subsidiaries which are loss making
- Collapse of under construction structure, which has somewhere hampered the reputation in market
- Invocation of performance bank guarantees
- Notices from various authorities on account of non-payment of taxes and statutory dues

### Road ahead

The liquidator of the company on 3<sup>rd</sup> March, 2020<sup>3</sup> made a disclosure on the website of NSE & BSE that as a part of liquidation process and as per the advertisements published, on 27<sup>th</sup> February, 2020 the company has received a bid under E-auction process for sale of company as going concern from M/s GABS MEGACORP Limited at a price of Rs. 1654.77 Cr. The sale would be subject to the decision of NCLAT (since appeal against liquidation order is pending). Keeping in mind, the current situation of the company, if NCLAT dismisses the appeal against liquidation order, the company would become the first company under IBC which will be liquidated as a going concern.

<sup>1</sup>[https://ibbi.gov.in/webadmin/pdf/order/2018/Jan/11th%20Jan%202018%20in%20the%20matter%20of%20Gujarat%20NRE%20Coke%20Limited%20C.P.%20\(I.B\)%20No.%20182-KB-2017%20\(Liquidation%20Order\)\\_2018-01-17%2012:32:08.pdf](https://ibbi.gov.in/webadmin/pdf/order/2018/Jan/11th%20Jan%202018%20in%20the%20matter%20of%20Gujarat%20NRE%20Coke%20Limited%20C.P.%20(I.B)%20No.%20182-KB-2017%20(Liquidation%20Order)_2018-01-17%2012:32:08.pdf)

<sup>2</sup> <https://ibbi.gov.in/Discussion%20paper%20LIQUIDATION.pdf>

<sup>3</sup> <https://www.bseindia.com/xml-data/corpfiling/AttachHis/66bccde1-9a77-4d42-9aa5-6e6c6be9706f.pdf>



**YPNOTHERAPY AS AN INTERVENTION IN MENTAL HEALTH DISTRESS:  
A REVIEW**

**Prof(Dr). Padmakali Banerjee**

Pro-vice Chancellor & Dean  
Academics Director, Amity Business School  
Amity University, Gurgaon, Haryana

**Arati Sharma**

PhD Psychology  
Amity University, Gurgaon, Haryana

**Dr. Amita Puri**

Director, Optimus Center of Well Being, Citizen Hospital, Gurgaon

**Abstract**

Haven't we all, as individuals, ever wondered about hypnotism or even had the fear to be hypnotised. Actually though, hypnosis is a very natural state of being, and isn't something magical or bizarre. Many people including ourselves, sometimes experience hypnotic trances in everyday life. As an example, when we are reading a book, we often lose ourselves in the story and are not aware of our surroundings.

Hypnosis can also be a result of performing repetitive tasks that are enjoyed by us. Runners, for example, experience a runner's high where their mind gets altered and they experience a trance like state while their body get energised and they feel healthy and alive.

**Keywords:**Hypnosis, Awareness,Hypnotherapy, Attitude Formation, Seventh Sense Hypnotherapy

Hypnosis, derived from Greek word 'Hypnos' means God of sleep, exactly means sleep. Actually, hypnosis is a state of increased concentration, awareness and alertness.

According to the American Psychological Association Division of Psychological Hypnosis well-defined hypnosis as a process at the time of which an individual experiences variation in thoughts, perceptions, emotions, sensations or behaviour.

This wide-ranging meaning recognizes the role of the therapist doing hypnosis, the context in which it is done, and the role of the individual experiencing hypnosis. Hypnosis can also be said as a way of communication of ideas from the patient to the therapist or vice versa. It is a healing tool for methodically magnifying dimensions of experience, and then relating those experiences to situation in the form which will be beneficial to the patient. It allows a wide range of selections regarding the correct way and place to intervene in the individual's problems. A good hypnotic session, involving appropriate suggestions for contextualisation, is believed to yield productive outcomes that last a lifetime.



Hypnotherapy, also called guided hypnosis, is a form of psychotherapy that uses extreme concentration, relaxation, and intense attention to attain a heightened state of consciousness, mindfulness or awareness. Said differently, hypnotherapy places the individual into a “trance” or altered state of awareness. It gives a wide range of alternative choices regarding where and how to intervene in the individual’s problems.

Seventh Sense hypnotherapy also calls upon the power of the unconscious and involves scientific steps which culminate in the appropriate attitude formation resulting in amelioration of distress and stamping in of the desired attitude enhancing the self efficacy of the individual. ( Banerjee and Puri 2017, 2018, 2019)

### **Application of hypnotherapy in different mental disorders**

There are studies in which usage of hypnotherapy helped the individual to come out of the undesirable, unwanted and uncontrollable state to the wanted state. It is used to treat a wide range of psychological disorders like phobia, depression, anxiety, addictions, body image dissatisfaction, PTSD, relationship issues, etc. Studies related the contribution of hypnotherapy in the treatment of some of these disorders will be discussed in the following paragraphs.

#### **Hypnotherapy and smoking cessation**

One of the widely promoted as a technique for assisting smoking cessation is Hypnotherapy. In this field, it is usually applied to affect the impulse to smoke to decline the desire to smoke and to fortify the will to halt (Carmody 2008). Not all methods of doing hypnotherapy are the same. Some of the methods are subsequently beneficial. It helps individual to weaken their desire to smoke or strengthen their will to quit. They might also help them focus on a ‘quit programme’.

Continuous efforts have been used in various types and quantities of hypnotherapy and compared them with distinct control conditions, including no treatment, brief assistance, or smoking cessation counselling. (Barkley 1977; Hyman 1986; Lambe 1986; Rabkin 1984; Williams 1988). It has also been viewed that it is not always that hypnotherapy will affect the person’s will or definitely aid in smoking cessation. (Barnes J, Dong CY, McRobbie H, Walker N, Mehta M, Stead LF 2010, Banerjee and Puri 2018).

#### **Hypnotherapy in psychosomatic pains**

Many a times in books, movies or shows, the word “psychosomatic” has been used. But just to be brush up, the term ‘psychosomatic disorder’ is generally used to describe a physical uneasiness that is thought to be caused by mental and psychological factors. These discomforts and uneasiness are caused by the individual’s anxiety, stored traumas and negative emotions and thoughts in their mind and can be experienced in many parts of their body. Usually, anxieties, stressors, negative experiences and resentments carrying out the psychology are



stored in our body if we are not consciously making an effort to release them or dispose them off out of our body.

The mind and body are connected, and they are one. 'The feelings we can't deal with, we transfer them our mind. And when the mind can't deal, it transfers it to the body' said the hypnotist and therapist Dr.Kappas related to mind and body connection.

At the time of hypnosis, the physical body and mind are totally comfortable and relaxed, and the aim is usually to aid the client to release and dispose all the adverse and negative emotions in the body. The client gets an opportunity to release all the negative feelings related to traumas/stressors and simultaneously accept and make peace with them and/or maybe even learn a permanent way to overpower/ suppress those feelings. This positive thinking is followed by disposing off all the anxieties and stress associated to the negative thoughts and imagination.

By creating essential comfort & calmness and imagery techniques, hypnotherapy can help the client to dismiss and relieve anything negative in their mind and body. Our mind is generally trying to signal to us something that we need to pay attention to in psychosomatic disorders. After the reason is known and addressed, the subconscious mind will not need to hold on to the discomfort to exhibit a point. ( Banerjee and Puri ( 2019)

### **Hypnotherapy and sleep disorders**

Hypnotherapist Hammond specifies that the individuals, who suffer from insomnia, have disturbed sleep patterns due to:

- 1) Continuous cognitive activity and state routine patterns mismatched with sleep
- 2) The excitation of central nervous system and unconscious conflicts, struggles or worries that disturb sleep.

Such patients are expected to get significant benefits and assistances from hypnotherapeutic interventions. Usually, benefits from hypnotherapy and relaxation, along with sleep hygiene instructions for acute and chronic insomnia can be seen after a couple of sessions. Becker carried that 50% of patients who have improved from chronic insomnia also enhance their sleep pattern. Which last over 16 months after a simple 2-session treatment course. One might think that it's a bit contradictory to use hypnosis to help people fall asleep knowing that hypnosis is not sleep but a form of concentration. However, hypnosis can be useful for bringing a state of physical relaxation that is in fact compatible and well-suited with sleep. ( Banerjee and Puri 2018) It diminishes the sympathetic arousal usually related to preoccupation, uneasiness or worries. The individual might also be provided with a structured way of managing preoccupation with anxiety-producing problems from the hypnotic trance, thus facilitating entrance into a calm and restful sleep. Last but not the least, hypnosis can be utilised to help an individual perceive proper sleep hygiene and are able to set time to go



to bed. For the matter, any hypnotic approach should be accompanied by sound sleep hygiene practices. (Banerjee and Puri 2019)

These include adopting a pre-sleep routine, having adequate time to calm down prior to bedtime, keeping the bedroom as a place where work and other anxiety-arousing activities do not happen, having large meals or workout just prior to bedtime, avoiding doing work or reading in bed and avoiding frequently looking at the clock when awakened. (Ann Acad Med Singapore 2008)

### **Hypnotherapy and Enuresis**

In the treatment of nocturnal enuresis different kinds of hypnotherapy has been used for several years (Wolberg, 1948; Ambrose and Newbold, 1968). Even though there has been no sufficiently controlled experimental research in the area, enough evidence for its usefulness, efficacy and utility exists (Lazorovici, 1970; Hartland, 1971). Hypnotherapy is described in this experimental and clinical study and was found to be an effective technique of treating enuresis. (Banerjee and Puri 2019)

It was also seen that treatment was most useful and effective when task-motivational directions given in the waking state were administered before a standard programme of suggestions which had a goal to decrease enuresis were given. Evidence has been provided by comparison with other methods of treatment that hypnotherapy was an effective substitute or additional form of treatment for enuresis.

### **Conclusion**

From the above review, we can easily conclude that hypnotherapy is firstly a tool to change the behaviour, thoughts and emotions of a person which have the negative effect on their life. If it performs with efficiency, hypnotherapy will create a desirable change in person's cognitions and thinking patterns. The increasing advancement and usage of hypnotherapy is helping many individuals to overcome various psychological illnesses.

Hypnotherapy is widely used abroad as well as in Indian context. We as psychologists can use this therapeutic style to modify the cognitive distortion of the individual. Since hypnotherapy is regularly suggested as a possible aid to deal with mental health issues, there is a need for large trials to establish its efficacy.

There is a significant amount of experimental data to support the idea that hypnosis might have the capability to positively affect some of the psychological along with having useful psychological effects. This, coupled with our evidence of the conceivable clinical benefits, proposes that the probable use of hypnotherapy in this field deserves more research.

Seventh sense hypnotherapy developed by Banerjee (2019) also is a visual treat and results in developing self competency of the individual leading him onto more appropriate meaningful engagement and achievement. More work is being done in this



regard by professionals the world over so that even during COVID 19 times self efficacy may be achieved through self hypnosis too.

*“ Everytime you are happy, you win”*

*Padmakali Banerjee*

## References

H.LAZOROVICI, (1970)Observatiiasupratratamentuluiprinhipnoza in enurezisni nocturn sialteafectinnivevrotice la copii (Observations on the treatment of nocturnal enuresis and other neuroticdiseases of childhood by hypnosis). NeurologiaPsihiat. Neurochir. 15, 505-512

L. R WOLBERG. (1998)Medual Hypnosis, Vols. I and IL Crune and Stratton, New York.

J.HARTLAND(1971) Medical and Dental Hypnosis and its Clinical Applications (2nd Edn.). BailliereTindall, London

G. A.AMBROSE, G. and NEWBOLD(1968) A Handbook of Medical Hypnosis. Tindall and Cassell, London

Banerjee and Puri, A. “Healthy Aging in the Geriatric Population: AnExploration with OAM”. EC Psychology and Psychiatry 1.6 (2017): 210-216.

Banerjee,P and Puri, A.. “Healthy Aging in the Geriatric Population: AnExploration withOAM”. EC Psychology and Psychiatry 1.6 (2017): 210-216.

Banerjee, P and Puri A. “Construction of a test on Optimism Index: PEROMAperspective”. Journal of Psychology and Clinical Psychiatry 5.6 (2016): 00310.

Banerjee, P and Puri A. “The symphony of OAM ( Oam Attitude Model) ImpactingPerformance and Mental Health”. EC Psychology and Psychiatry 1.4 (2016):149-157.

Banerjee, P and Puri,A ( 2016). The symphony of OAM (Oam Attitude Model)Impacting Performance and Mental Health. EC Psychology and Psychiatry, 1.4,149-157

Banerjee , P and AmitaPuri., et al. “Addressing Concerns of Gifted Adolescents through Optimism Attitude Model and Optimism AttitudeTherapy”. EC Psychology and Psychiatry 5.4 (2017): 134-139.

Banerjee, P and AmitaPuri ( 2018) Enhancing health and transforming lives through optimism attitude model(OAM): Panacea in 21st century The Business and Management Review, Volume 9 Number 4 July 2018 8 th International Conference on Restructuring of the Global Economy, 9-10th July 2018, University of Oxford, UK 135

Banerjee, P ( 2018) The Power of Positivity : Optimism and the Seventh Sense. Sage Publications

Barkley(1977) {published data onlyBarkley RA, Hastings JE, Jackson TL. The effects of rapid smoking and hypnosis in the treatment of smokingbehaviour. International Journal of Clinical and ExperimentalHypnosis 1977;25:7–17.

Hyman (1986) {published data only}Hyman GJ, Stanley RO, Burrows GD, Horne DJ.Treatment effectiveness of hypnosis and behaviour therapyin smoking cessation: a methodological refinement.AddictiveBehaviors 1986;11:355–65.

---



Lambe(1986) {published data only}Lambe R, Osier C, Franks P. A randomised controlled trial of hypnotherapy for smoking cessation. *Journal of Family Practice* 1986;22:61–5.

Rabkin(1984) {published data only}Kaufert JM, Rabkin SW, Syrotuik J, Boyko E, Shane F.

Health beliefs as predictors of success of alternate modalities

Carmody 2008 {published data only}\_ Carmody TP, Duncan C, Simon JA, Solkowitz S, Huggins J, Lee S et al. Hypnosis for smoking cessation: a randomized trial. *Nicotine & Tobacco Research* 2008;10(5):811–8.

Carmody TP, Duncan C, Solkowitz SN, Simon JA, Atchan J, Rauchwerger A, et al(2006).

.Self-hypnosis for smoking cessation:A randomized controlled trial (POS1-75). Society for Research on Nicotine and Tobacco 12th Annual Meeting February 15-18, Orlando, Florida.

Hayley J. *Uncommon Therapy – The Psychiatric Techniques of Milton H. Erickson*, MD. New York (US): W. W. Norton, 1993.

Barber TX. Hypnosuggestive procedures as catalysts for all psychotherapies. In: Lynn SJ, Garske JP, editors. *Contemporary Psychotherapies: Models and Methods*. Columbus, MO: Merrill Press, 1985:333-76.

Hammond DC. *Handbook of Hypnotic Suggestions and Metaphors*. New York: W. W. Norton, 1990:220-1.



## EXPERIMENTAL ANALYSIS ON STEEL FIBER CONCRETE

Prof. Supriya Tripathi<sup>1</sup>, Prof. Shreyans Kumar Jain<sup>2</sup> and Prof. Vasudev Rodwal<sup>3</sup>  
<sup>1-3</sup>Assistant Professor  
SAGE UNIVERSITY INDORE

### ABSTRACT

Concrete is one of the most broadly household development material for the most part delivered by utilizing nearby accessible ingredients. The present trend in concrete technology is towards rising the strength and durability of concrete to meet the demands of the modern construction. The steel fiber is mix at various proportions from 0% to 2.5% of the concrete. Tryout combine of varied percentage showed above which compared to conventional concrete mix and get the optimum mix of steel fiber in concrete and to investigate the compressive strength, split tensile strength of concrete. Tryout combine of concrete with calculation of steel fiber at 3% achieved more strength, compared to other combinations hence utilization of steel fiber which enhanced the strength in the concrete.

*Keywords*–Steel fibre, Compressive Strength, split tensile strength.

### I. INTRODUCTION

Concrete is one of the most important materials used in recent engineering. It is composite of coarse and fine aggregates which are bound jointly by means of hydration of cement acting as binding material. Concrete has many properties such as high compressive strength, durability and fire battle with cheaper construction as compared to the steel structures. But fibre reinforced concrete is the type of concrete to use for the formation of large structures. This is tough and capable material. By achieving the high strength that may be used at the manufacture prefabricated structures. The concrete are weak in tension and strong in compression but the steel strong in tension. While adding together steel as a fiber material and that may be increase the tensile strength of concrete. The try looked as a better idea to avoid shrinkage, cracking and manage of early thermal reduction right after placing the fresh concrete in the formwork. Concrete is considered by brittle failure, the nearly complete loss of loading capacity, once failure is initiated. The main objective of this project to addition of fiber at in the concrete to improve the post crack arresting property, river sand is also used replacing M sand. The various parameters considered in this study are as follows :-

- Effect of use of Steel fiber on workability.
- Effect on compression and tensile strength of concrete by using steel fiber of various size.
- Use of fiber will reduces micro cracks.
- Effect of using various mix proportion of steel fibre with M20 grade of concrete with steel fibre.



## II. LITERATURE

According to the previous literature review they are many work done with use of steel fiber in concrete. According to E. Arumakanthi et.al, In compressive strength and split tensile strength, the adding together of Steel fiber the strength is rising and Reza Babai et.al, Compressive, tensile and flexural performance of SFRC was improved as the result of an increase in fiber amount and Jegatheeswaran Dhanapal et al, An experimental analysis was done to verify the joined influence of micro and macro steel fibers in the hardened and ZL Wang et.al, Steel Fiber Reinforced Concrete (SFRC) possesses many excellent dynamic performances such as high resistance to explosion and penetration. In the present study, three types of SRFC specimens with 0.0% to 2% (percentage by volume) of ultra short steel fiber are fabricated and subjected to impact compression tests conducted on 74-mm-diameter split Hopkinson pressure bar (SHPB). In this paper the steel fiber is replaced partially and check the compressive strength and split tensile straight.

## III. MATERIALS

### 3.1 Cement

OPC of 53 grade is used for the construction purpose. It is superior crystallized structure and optimum particle size distribution so it can make that high strength and durability of concrete. As per by the IS: 12269-1987 the compressive strength must be 54.3 kg/m<sup>3</sup> is achieved. The specific gravity of the coarse aggregate is 3.17

### 3.2 Fine Aggregate

It is the aggregate most of which passes 4.75 mm IS sieve and contains only so much coarser as is permitted by specification. According to source fine aggregate may be described as:

- Natural Sand
- Crushed Stone Sand
- Crushed Gravel Sand

### 3.3 Coarse Aggregate

The crushed stone aggregates are available in 10 mm, 20mm, and 40mm. In this project the 20mm coarse aggregate is used. The specific gravity of the coarse aggregate is 2.71.

### 3.4 Steel Fiber

The typical diameter in the variety of 0.25-0.75 mm hook end steel fiber are being used in this project. Fiber Length is 30 mm and the feature of 55. Density of steel fiber is 7900 kg/cum.



Fig 1: Various steel fiber profile

## IV. EXPERIMENTAL WORK

### 4.1 Preparation of Concrete

All the materials necessary in this Projects are composed from various source. Cement is composed from the shop of 43 grade and OPC, natural river sand of size 4.75mm retained ,used 20 mm graded of aggregate and steel wire is collected from the shop and cut in pieces. The size of steel fiber is kept aspect ratio is less strength is more.used 5 mm and 10mm size of steel fiber. According to IS 1026 and IS 456:2000 use mix proportion and strength.

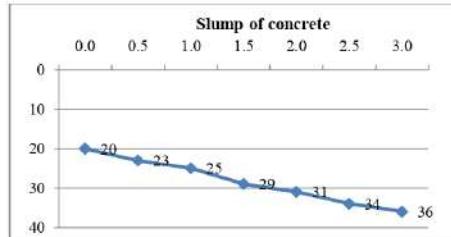
**Table 1- Mix proportion of concrete**

Cement (kg/ m <sup>3</sup> )	Fine Aggregate (kg/ m <sup>3</sup> )	Coarse Aggregate (kg/ m <sup>3</sup> )	Water (lit/ m <sup>3</sup> )	Water/cement ratio
384.34	580.35	1178.12	192.14	0.50

**Table 2 -Mix proportion of steel fibre**

% of Steel Fibre	Slump Value
0%	28
0.5%	27.5
1%	27.3
1.5%	27
2%	26.8
2.5%	26.5
3%	26.3

Graph 1. Slump Value of SFR Concrete



#### 4.2 Casting of specimen & Curing of specimen

For compressive strength test and tensile strength, cube and cylindrical specimens of size respectively 150 x 150 x 150 mm and 100mm x 200 mm were cast for M20 grade of concrete. The moulds were filled with 0% and 0.5%, 1%, 1.5%, 2%, 2.5% and 3% fiber. These specimens were removed from moulds after 24 hours and cured for each 7 days & 28 days in water tank.



Fig. 2 –concrete preparation

### V. RESULT AND DISCUSSIONS

#### 5.1 Concrete Testing

- Compressive strength
- Splitting tensile strength

We make the specimens of cube, cylinder & beam by using steel fibers to test the strength of structure by adding steel fibers.



Fig 3 –Compressive Test



Fig.4 –Splitting Tensile Test

Table 3– Compressive Strength of Concrete

Fiber (%)	Compressive Strength (Mpa)					
	7 Days		14 Days		28 Days	
		Average		Average		Average
0	20.00	20.11	24.54	24.61	27.32	27.30
	20.04		24.62		27.28	
	20.11		24.61		27.31	
0.5	21.44	21.31	25.94	26.31	29.25	29.21
	21.30		26.31		29.21	
	21.18		26.61		29.12	
1	21.72	21.72	27.05	27.22	29.74	29.80
	21.51		27.34		29.69	
	21.92		27.21		29.97	
1.5	22.60	22.41	28.50	28.51	31.40	31.40
	22.51		28.35		31.44	
	22.11		28.65		31.36	
2	24.25	24.30	29.44	29.40	32.80	32.20
	24.35		29.36		31.00	
	24.30		29.40		32.20	
2.5	24.64	24.81	28.89	29.70	32.67	32.70
	24.81		29.90		32.55	
	24.95		30.31		32.85	
3	25.77	25.70	30.05	30.05	33.06	33.00
	25.73		29.93		33.12	
	25.61		30.17		32.82	

Graph 2 : Combined Compressive Strength of Concrete with SFR

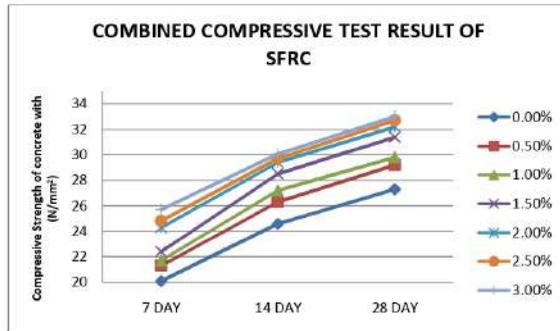
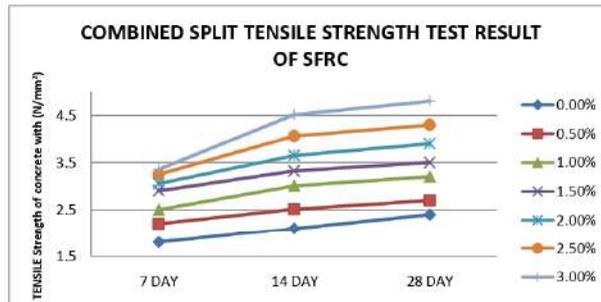


TABLE NO. 4. Split Tensile Strength

Fiber (%)	Split Tensile Strength Of Concrete					
	7 Days		14 Days		28 Days	
		Average		Average		Average
0	1.61	1.80	2.11	2.11	2.42	2.41
	1.91		2.41			
	1.90		2.37			
0.5	2.11	2.20	2.61	2.52	2.73	2.72
	2.10		2.52			
	2.41		2.41			
1	2.70	2.51	3.11	3.01	3.21	3.21
	2.51		2.90			
	2.30		3.03			
1.5	2.90	2.91	3.32	3.32	3.50	3.50
	3.12		3.01			
	2.72		3.63			
2	3.06	3.06	3.77	3.65	4.01	3.90
	3.07		3.50			
	3.05		3.68			
2.5	3.22	3.25	3.85	4.06	4.40	4.30
	3.25		4.06			
	3.28		4.27			
3	3.33	3.36	4.72	4.52	4.81	4.81
	3.39		4.52			
	3.36		4.32			

Graph 3 : Combined Split Tensile Strength of Concrete with SFR



#### V-CONCLUSION

Based on the results of Compressive strength, split tensile strength of the fiber reinforced concrete is achieved.

- The concrete has achieved higher strength in 3% steel fibre from the results of compressive strength, split tensile strength tests.
- The Compressive Strength of SFRC (Aspect ratio 60) for proportions of 0%,.50%,1%,1.5%,2%,2.5% and 3% from the result it is observed that the workability of Steel Fiber reinforced concrete decreases as the percentage of steel fiber increases.
- The addition of Steel Fiber in concrete increases the Tensile properties of concrete and also improves resistance to cracking.

#### ACKNOWLEDGEMENT

I am greatly indebted to thank to Asst. Prof. RUPESH RATHORE and Prof. DIPTI SURANA, in the department of Civil Engineering,also thank full to Asst.Prof. Shreyans Kumar Jain and Asst. Prof. Vasudev Rodwal, for guiding me every stage of this paper And also thank full to lab technician his valuable guidance, for dedicating his knowledge offering my many innovative ideas, helpful suggestion, unreserved encouragement and support throughout this Paper.



#### REFERENCES

- Reza Babaie, Milad Abolfazli\*, and Ahmad Fahimifar “Mechanical properties of steel and polymer fiber reinforced concrete” Journal of the Mechanical Behavior of Materials Volume 28: Issue 1 2019
- Jegatheeswaran Dhanapal, Sridhar Jeyaprakash “Mechanical properties of mixed steel fiber reinforced concrete with the combination of micro and macro steel fibers” 2019 “fib wiley”
- E. Arunakanthi, J. D. Chaitanya Kumar International “EXPERIMENTAL STUDIES ON FIBER REINFORCED CONCRETE (FRC)” Journal of Civil Engineering and Technology (IJCET) Volume 7, Issue 5, September-October 2016.
- ZL Wang, YS Liu, RF Shen :Stress–strain relationship of steel fiber-reinforced concrete under dynamic compression With reference to 2.4.4.
- D.Kanagaraj<sup>1</sup>, G.Siddesh<sup>2</sup>, R.K.Santhoshkumar<sup>3</sup>, D.Thirumoorthi<sup>4</sup>, “EXPERIMENTAL INVESTIGATION ON STEEL FIBER REINFORCED CONCRETE”
- ACI committee, “State - of - the art report in fiber reinforced concrete” ACI 554 IR -82 Detroit Michigan 1982.
- AmitRana, Some studies on steel fiber reinforced concrete, International Journal of Engineering and Technology Volume 3 Issue 1 (2013)
- ArnonBentur& Sidney Mindess, “ Fiber reinforced cementitious composites” Elsevier applied science London and Newyork 1990.
- ASTM C1018 – 89, Standard Test Method for Flexural Toughness and First Crack Strength of Fiber Reinforced Concrete (Using Beam with Third – Point Loading), 1991 Book of ASTM Standards, Part 04.02, American Society for Testing and Materials, Philadelphia, pp.507 – 513.
- Abdul Ghaffar, AmitS.Chavan, Dr.R.S.Tatwawadi, “Steel Fibre Reinforced Concrete”, International Journal of Engineering Trends and Technology (IJETT).
- Grzybowski, M. (1989). Determination of Crack Arresting Properties of Fiber Reinforced Cementitious Composites. Chapter 12, Royal Institute of Technology, Stockholm, Sweden.
- Hartman, T. (1999). Steel Fiber Reinforced Concrete. Master Thesis., Department of Structural Engineering. Royal Institute of Technology, Stockholm, Sweden.



## A COMPARATIVE STUDY OF STRESS LEVEL AMONG MALE ATHLETE'S AND NON-ATHLETES STUDENTS

**Nikita Mathur**

Assistant Professor, Physiotherapy Department  
Jagannath University, Jaipur, India

### **Abstract**

Students in higher education face a wide range of stress. Sometimes it is academic stress like grades, competition or sometimes it is personal excess. Stress can cause physical and emotional symptoms. Sports relax the stress. Purpose of this study is to measure the stress level in athlete & non athlete groups. Results of this research showed that the non-athlete students experienced more stress than the athlete group.

### **Samples and Methods:**

The sample size was 20 students of age 18-20 years, with average academic grade from IBB College of Physiotherapy, Kota .and from Udaipur Institute of Physiotherapy, Udaipur. Simple random sampling technique was used in this study. 10 student athletes (male) with a mean age 19 years and 10 non-athlete students (males) with a mean age of 19 years were selected from both physiotherapy colleges and 'Perceived Stress Scale' applied for calculating their stress level. Scores obtained revealed significant differences regarding stress levels

### **Result –**

Athletic sprit reduces the degree of stress among students at  $p < 0.05$  level of significance.

### **Conclusion-**

The study concluded that, non-athlete students experienced more stress than the athlete group.

**Keywords-** Stress, Exercise, Coping with Stress, Athlete students and Non athlete students.

### **Introduction-**

In a medical or biological context stress is a physical, mental, or emotional factor that causes bodily or mental tension. Stress is a feeling of emotional strain and pressure. Stresses can be external (from the environment, psychological, or social situations) or internal (illness, or from a medical procedure). **Stress** is a type of psychological pain. According to American Psychological Association (APA), there are 3 different types stress:

- ❖ **Acute stress:** Acute stress is the most common **type** of stress.
- ❖ **Episodic acute stress:** When acute stress happens frequently, it's called episodic acute stress



- ❖ **Chronic stress:** If acute stress isn't resolved and begins to increase or lasts for long periods of time, it becomes chronic stress.

Actually Stress is the body's natural defence against real or imagined danger. It flushes the body with hormones to prepare systems to evade or confront danger. Stress is a natural part of human life. Stress is important because it makes the life meaningful. Life without any stress will be lifeless and boring. Stress can make life worthwhile. Stress may be:

### 1. **Good Stress or Eustress:**

When we feel excited due to stress, this type of "Stress" is known as Good stress, or "eustress," Stress can boost the mood! Focusing on the positive aspects of stress can help in turn stress around. It may be a great motivating force, where anyone can do better. This type of stress is known as good stress or eustress.

Eustress is acute and therefore does not prolong over a long period of time. During the good stress, pulse quickens and hormones surge, but there is no threat or fear. We feel this type of stress when we compete for a promotion, or go to join a job, or new college. Good stress may be desired, beneficial, and even healthy. Good stress is positive stress that helps to improve the performance. It also plays a factor in motivation, adaptation, and reaction to the environment.

### 2. **Bad Stress:**

The bad form of stress shows itself in physical and emotional effects such as headaches, fatigue, alcoholism, smoking, irritability and chronic muscle pain. Bad Stress creates tension and one cannot handle the situations at hand and at times, in the absence of the stressor, you are unable to return to a relaxed state.

Bad stress typically causes anxiety, concern, and a decrease in performance. It also feels uncomfortable, and it can lead to more serious issues if not addressed.

Nowadays, stress is increasing very high in students' life. Students face a lot of pressure from most of the angles of their life. Studies show that the stress level among 18 to 30 years of age is very high in the world. Students spend most of their time balancing classes, projects, tests, final exams, personal life, and work; that is enough to make anyone feel overwhelmed. This stress can cause multiples problems, not just emotional, but physical as well.

Depression, anxiety, behavioural problems, irritability, etc. are few of the many problems reported in students with high academic stress. Adolescents were also reported to be indulging in various risky behaviours such as increased consumption of alcohol and drugs, unprotected sexual activities, physical inactivity, poor eating and sleeping patterns. According to Neerja Birla every one hour a student commits suicide in India due to this stress. Lancet report 2012 also states that the "15-29 age group bracket in India has the highest rate of suicide in the world.



**K. Jayasankara Reddy also stated in his article that,** the educational system also plays an enabling role subsequently leading to increased stress levels experienced by students. Some of the sources include overcrowded lecture halls, semester grading system, inadequate resources and facilities (Awing & Agolla, 2008), vastness of syllabus (Agrawal & Chahar, 2007; Sreeramareddy et al., 2007), long hours and expectations of rote teaching (Deb et al., 2015). Parents and institutions relentlessly instil the fear of failure which affects their self-esteem and confidence. Ang & Huan (2006) reported increased expectations as one of the factors responsible for increased stress levels.

An important health journal “Health Professions Education” Volume 4, Issue 2, June 2018, Pages 70-77 states that stress affects the quality of life of a student

Studies show that exercises is very effective at reducing fatigue, improving alertness and concentration, and at enhancing overall cognitive function. This can be especially helpful when stress has depleted your energy or ability to concentrate. Exercise and other physical activity produce endorphins—chemicals in the brain that act as natural painkillers—and also improve the ability to sleep, which in turn reduces stress. Meditation, acupuncture, massage therapy, even breathing deeply can cause your body to produce endorphins. And conventional wisdom holds that a workout of low to moderate intensity makes you feel energized and healthy.

Scientists have found that regular participation in aerobic exercise has been shown to decrease overall levels of tension, elevate and stabilize mood, improve sleep, and improve self-esteem. Even five minutes of aerobic exercise can stimulate anti-anxiety effects.

An article published by Harvard Medical School states that how aerobic exercise reduce mental stress. They said that aerobic exercises have a neuro chemical basis. Exercise reduces levels of the body's stress hormones, such as adrenaline and cortisol, and stimulates the production of endorphins, chemicals in the brain that are the body's natural painkillers and mood elevators. Many authors prove that students who exercise regularly or who are active in sports are have low level of stress then others. Since many study shows effect of different type of exercise on stress. there is need a new research which work not only on effectiveness of exercise but to know how much sports and activity affect the stress level of a student. Therefore, I studied the stress level of athletes and non athlete students.

## **II. Material & Methodology:**

Hypotheses: this empirical research aims to study the comparative stress level between athlete & non- athlete students. Our first hypothesis was that the athletic background reduces the stress level.

This comparative study was carried out on 20 male students of IBB College, Kota and Udaipur College of physiotherapy, Udaipur in April, 2020 by Google forum. Both colleges are situated in Kota & Udaipur cities of Rajasthan state of India. We randomly



selected 20 students for our study among the 58 students who offered their consent for the study. As our study was based on a comparative study between athlete & non-athlete, so we listed the students who generally actively participate in running and swimming like activities. We found only 10 such students out of total 58 students. Therefore, we took 20 subjects for our study i.e. 10 athletes & similar 10 non athletes. Here similar means having same average academic grade, physically healthy and having same family income that those of athlete group students. I prepared a common consent form for taking voluntary consent from the participants. In which I also gathered the information demographic data, normal sleeping and eating time, academic grade in last 2 years. This data helped me in selection of the members of non Athlete group. I used Perceived Stress Scale (PSS) a classic stress assessment instrument for scaling the stress level among the subjects.

### III Procedure:

First of all I organized two identical groups of 10 students each from 58 students having same Average age, Academic grade of last year, Marital status, History of physiological treatment, Average attendance in class, Diet & Sleeping pattern,

I requested to all 20 subjects of the study to co-operate during research procedure. All participants were given information in written and verbally about the objectives and methodology of the study in a group meeting. I provide them a questioner which was prepared according to Perceived Stress Scale (PSS). The Perceived Stress Scale (PSS) is a classic stress assessment instrument. The tool, was developed in 1983 & still popular choice to assess the stress level. The questions in this scale are asked about the feelings and thoughts during the last month. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way; rather indicate the alternative that seems like a reasonable estimate. I instruct the subjects to choose one of the following alternatives for each question:

- 0 for Never
- 1 for Almost Never
- 2 for Sometimes
- 3 for fairly often
- 4 for very often

The participants are requested to answer following questions keeping the position of last month in mind:

1. How often have you been upset because of something that happened unexpectedly?
2. How often have you felt that you were unable to control the important things in your life?
3. How often have you felt nervous and stressed?
4. How often have you found that you could not cope with all the things that you had to do?
5. How often have you been angered because of things that happened that been outside of your control?



6. How often have you felt difficulties were piling up so high that you could not overcome them?
7. How often have you felt confident about your ability to handle your personal problems?
8. How often have you felt that things were going your way?
9. How often have you been able to control irritations in your life?
10. How often have you felt that you were on top of things?

After getting their answer sheets, they are numbered as for the questions number 1,2,3,6,9 &10

- 1 for Never
- 1 for Almost Never
- 2 for Sometimes
- 3 for fairly often
- 4 for very often

&

- 4 for Never
  - 3 for Almost Never
  - 2 for Sometimes
  - 1 for fairly often
  - 0 for very often,
- for question 4,5,7 & 8 respectively.

The sum of their scores was their 'PSS score'.

On the basis of marks obtained in their PSS score they are classified in 3 categories.

These categories were as under:

- ▶ Scores ranging from 0-13 would be considered low stress.
- ▶ Scores ranging from 14-26 would be considered moderate stress.
- ▶ Scores ranging from 27-40 would be considered high perceived stress.

### Result

We studied Stress level on 2 groups of the students of IBB College, Kota and Udaipur College of physiotherapy, Udaipur. Out of which one was from athlete background & second one was from non athlete background. To examine the homogeneity of both groups in terms of Age, Academic Grade, History of previous physiological treatment, Diet, Marital status etc. are considered. The basic data of the both group was as under:

Sr.	Particulars	Unit	Athletes Group	Non athletes Group
1	Number of Participant	Numbers	10	10
2	Average Age	Years	20	20
3	Average academic grade	%	60%	60%
4	Married	Numbers	0	0
5	Unmarried	Numbers	10	10



6	History of any physiological treatment	Number	0	0
7	Average attendance in class	%	76%	77%
8	Diet/sleeping pattern		Normal	Normal

All the subjects are requested to answer all 10 questions as stated above within 5 minutes. The participants of both groups are classified into two categories on the basis of their score on PSS scale. The PSS scores for both groups are stated in the table:

Group	Group Detail	PSS score Obtained		Total
		Low Stress (0-13)	Moderate Stress (14-26)	
I	<b>Athlete Group</b>	7 (4) 2.25	3 (6) 1.5	10
II	<b>Non Athlete Group</b>	1 (4) 2.25	9 (6) 1.5	10
	<b>Total</b>	8	12	
	<b>Chi Square Test</b>	The chi-square statistic is 7.5. The p-value is 0.00617 significant at $p < 0.05$ .		
	<b>The Fisher exact test</b>	The Fisher exact test statistic value is 0.0198. The result is significant at $p < 0.05$ .		

The average overall PSS score of athlete subjects are found far less than non athlete subjects. On behalf of the PSS score they are listed in above table.

The chi-square statistic is calculated at 7.5 & the p-value is calculated at 0.00617, which is significant at  $p < 0.05$ . Similarly, the Fisher exact test statistic value is calculated at 0.0198. The result is significant at  $p < 0.05$ . This study clearly states that the athletes feel less stress in comparison to non-athletes. The study states that athletic background increase their confidence level, & decrease upsetting behaviour, angeriness, nervousness, irritation & make them able to make the things accordingly.

**CONCLUSION:**

The above study states that athlete subjects feel less stress in comparison to non-athletes. Regular athletic life can reduce stress. The athletic background increase their confident level, & decrease upsetting behaviour, angeriness, nervousness, irritation & make them able to make the things accordingly. Therefore, we may recommend a compulsory athletic class for the school & college students.

**DISCUSSION:**

**Reasons for Strain:**

There are plenty of reasons for stress. Stressors (things that cause strain or tension) perceive the person to person differently. Hence, some situations might be a threat for



any person, while it may be eustress (good stress). **When stress occurs frequently or constantly but the body is unable to manage it, it is felt as something negative.**

For making the body stress free some hormones like adrenaline, noradrenaline, and cortisol are released, which make the body more efficient for a *short time*. The age-old physical reaction – running – still helps our bodies and minds by stimulation of releasing hormones.

Several studies states that **physical activity** produce endorphins—chemicals in the brain that act as natural painkillers—and also improve the ability to sleep, which in turn reduces **stress**.

An another study of Mayo Clinic (<https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/exercise-and-stress/art-20044469>) states that physical activities helps bump up the production of brain's feel-good neurotransmitters, called endorphins. It is well known that sports is also a physical activity. Similarly, Harvard Medical School (<https://www.health.harvard.edu/staying-healthy/exercising-to-relax>) also advice for regular physical exercise. According to their advice, physical exercise brings remarkable changes in the body, metabolism, heart, and spirits of every person. It has a unique capacity to exhilarate and relax, to provide stimulation and calm, to counter depression and dissipate stress. They further states that it's a common experience among endurance athletes and has been verified in clinical trials that have successfully used exercise to treat anxiety disorders and clinical depression.

Expert clarifies that 'Sport' may reduce the stress but the positive association with the sport is necessary. In other words, sport person should enjoy the sport and not overdo it. A short workout that's not too exhausting helps relieve stress.

There are no advantages to choosing a sport or training plan that just creates more stress, because every person is too competitive or push him too hard. The key is to find out how much exercise needed to relax. A person may run 10 km to relax – but another one cannot do so.

The aim of the present study was to examine stress level between athletes & non athletes. It was hypothesized that there exists significant difference in the stress level between athletes & non athletes. Findings of the present study clearly indicated that – the athletes feel less stress in comparison to non-athletes. The study states that athletic background increase their confident level, & decrease upsetting behaviour, angriness, nervousness, irritation & make them able to make the things accordingly.

I used the Perceived Stress Scale (PSS) for assessing the stress level in the study. It is a classic stress assessment instrument. The tool, was developed in 1983 & still popular choice to assess the stress level among the scholars.

A limitation of this exploratory study was that it was conducted on the subjects of private universities with relatively demanding academic standards. This could influence the sources of stress experienced by the student-athlete, and future work needs to extend these findings to other more heterogeneous populations. Secondly, this study was not able to ascertain whether gender differences exist in the types of stress experienced by student-athletes and work needs to be conducted to determine whether males and females perceive similar sources of stress. Finally, this study was cross-sectional and



limited in its analysis. Future studies should examine the longitudinal effects of stress on the student athletes' well-being.

### References:

1. Seeking Positive Strengths in Buffering Athletes' Life Stress ...  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC7005223](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7005223)
2. Prediction of life stress on athletes' burnout: The dual ...  
[www.researchgate.net/publication/322507765\\_Predict...](http://www.researchgate.net/publication/322507765_Predict...)
3. Stress & Coping in Athletes and Non-athletes Students ...  
[www.researchgate.net/publication/277948178\\_Stress...](http://www.researchgate.net/publication/277948178_Stress...)
4. Stress & Coping in Athletes and Non-athletes Students ...  
[www.sciencedirect.com/science/article/pii/pdf](http://www.sciencedirect.com/science/article/pii/pdf)
5. The Effects of Stress on Student-Athletic Performance  
[pdfs.semanticscholar.org/...](http://pdfs.semanticscholar.org/...)
6. Stress and Anxiety in Athletics | The Sport Digest  
[thesportdigest.com/archive/article/stress-and-anxie...](http://thesportdigest.com/archive/article/stress-and-anxie...)
7. Comparing stress levels and coping styles in college athletes ... M Martin - 2018  
[scholar.utc.edu/cgi/viewcontent](http://scholar.utc.edu/cgi/viewcontent)
8. Stress Role in Sports Performance of Athlete's - International ...  
[www.kheljournal.com/archives/PartE](http://www.kheljournal.com/archives/PartE)
9. Effects of stress on academic and athletic performance - Metrifit  
[metrifit.com/blog/effects-of-stress-on-academic-and...](http://metrifit.com/blog/effects-of-stress-on-academic-and...)
10. Assessing College Student-Athletes' Life Stress: Initial ...  
[www.researchgate.net/publication](http://www.researchgate.net/publication)
11. Assessing College Student-Athletes' Life Stress - Initial ...  
[www.academia.edu/Assessing\\_College\\_Student-Athletes...](http://www.academia.edu/Assessing_College_Student-Athletes...)
12. Assessing College Student-Athletes' Life Stress: Initial ...  
[www.tandfonline.com/doi/abs](http://www.tandfonline.com/doi/abs)
13. Prediction of life stress on athletes' burnout: the dual role of ...  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC5772382](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5772382)
14. New Scale Developed to Measure Student-Athlete Stress  
[www.goodtherapy.org/GoodTherapyBlog](http://www.goodtherapy.org/GoodTherapyBlog)
15. Seeking Positive Strengths in Buffering Athletes' Life Stress ...  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC7005223](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7005223)



### Hkkjrh; vFkO; oLFk ea l dy ?kjsymRi kn

Jherh ie ifjgkj

Lkg; d vpk; ; b/ , O, e] jkt dh; clM+Lukrdkjkj egkfo | ky; ] MhMokuk %ukxkj % jktLFkku

#### I kjlk

Lkdy ?kjsymRi kn vFkO; thMhi h , d fof"kv l e; vof/k ea nsk dh l hekvla ds Hkhrj mRi knfr l Hkh rskj oLrka vksj l okvka dk eknd eW; gsrk gA ; g nsk dh vFkO; oLFk dks eki us dk l cl s vPNk rjhdk gA l oEke bu fopkjka ds vLkjk ij vlRjZVh; epk dks , oaf"o cfd ds l nL; nskla us thMhi h dh x.kuk dhA 1950 l s bl s fo"o ds l Hkh nsk viuk jgs gA Hkjr ea Hkh ; g 1950 l s gh viuk fy; k x; k gA thMhi h dh x.kuk dseki us ds fy, vlRjZVh; ekud iLrd fl LVe vKd uskuy vclm/4 1993 rskj dh xbl gA bl s iWZ , l , u, 66 ds rgr-dk; Zfd; k tkrk Fk ftl s 1968 ea cuk; k x; k FkA Hkjr ea thMhi h nls rjg dh gsrh gA 2020 ea oS"od nj 2-5 ifr"kr vksj 2021 ea 2-7 ifr"kr jgus dk vupku gA tcfD Hkjr ea; g 2020 ea 6-7 , oa 2021 ea 6-3 ifr"kr jgus dk vupku gA ijUrq djkuk egkekjh ds dkj.k l kjh vFkO; oLFk Bli gks xbl gA vc jsvx , t h fOp l kW; wku us 20 viSy 2020 dks Hkjr dh vkfFkd fodkl nj o'kZ 2020&21 ea 1-8 ifr"kr gh jgus dh l Hkkouk gA

e[; "kn% thMhi h] eki u] fodkl nj orZku n"kk

yfki =  
iLrlok&

fdl h Hkh nsk dk fodkl fdruk gvk gS ; g tkuus dks l c ykyf; r jgus gS ijUrq fodkl dks dS eki k tk, ; gh , d ; {k izku Fk t s fd l c nskla ds l keus [kMk FkA l Hkh nsk vius vius fgl ic l s vkfFkd fodkl dh x.kuk djrs FkA bl x.kuk l s , d nsk dh ml js nsk l s rnyuk djus ea vucl l eL; kvka dk l keuk djuk iMrk FkA vr%, d , d h fopkj/kjk dh vko"; drk Fk t s l c nskla ds fy, ekd; , oa Lohdk; Z gS ftl ea x.kuk dh vkl ku vksj l jy izkkyh dke ea yh tk, , oa ftl ds ifj.kle Hkh l vdrk , oa l koMksedrks ds utnhd gks vksj ftl ij l c vkl kuh l s fo"okl Hkh dj l da l dy ?kjsymRi kn ; k thMhi h % GROSS DOMESTIC PRODUCT OR GDP % , d vkl ku rjhdk gS ftl l s vkfFkd fodkl dk eki u fd; k tk l drk gA

v/; ; u dk mnns' ; &

1- Lkdy ?kjsymRi kn vFkO; thMhi h fd l s dgrs gS dks tkuukA

2- Lkdy ?kjsymRi kn dh x.kuk D; ka dh tkrh gS dks tkuukA

3- Hkjr ea bl dh x.kuk dS s dh tkrh gS dks tkuukA

4- orZku n"kk dk thMhi h ij iHko tkuukA

"kk fof/k&

iLr: "kk i = foj.kkRed "kk fof/k l s fy[kk x; k gA "kk i = fy[kus ea f}fr; d l ksrka dk iz; kx fd; k x; k gA bl grqfokhu idkj dh iLrdk if=dkv/ l ekpj i=k "kk i =ka , oa ocl kbv/ dk iz; kx fd; k x; k gA

"kk l ehk&

Ekjk 2019 us fy[kk gS fd 2008 dh oS"od einh l sigys Hkjr; vFkO; oLFk l EiUu Fk vksj thMhi h 8-8 ifr"kr FkA bl voLFk ea Hkjr rhoz vksj vkrfuHkj vkfFkd fodkl nj l s dk; Z dj jgh Fk ftl s vcl vKd dh voLFk Hkh dgrs gA ijUrq orZku ea vkfFkd vl rskj jkst xkj ea vl j {k dh Hkkouk fd l kuka dh vfuf"prrkj cjkst xkj dh c<Fh nj vkn ds dkj.k vc Hkjr; vFkO; oLFk l o'kZ dj jgh gA



Loleh dMh- 2018 us fy [kk gS fd vktkrh ds ckn l s gh nsk ea oMnR vkrFkd fodkl ugha gvk gS vFkr- l dy ?kjsymRi kn dh of) de gh gPZ gA vkrFkd fodkl nj ea of) ykus ds fy, ; g vko"; d gS fd jkt xkj l tu vf/kl gS dfk l s l e/kr {ks-ka ds vuphy cktkja dk fodkl gA ir(LI) Med uhr; ka dks bl idkj cuk; k tk, fd l dy ?kjsymRi kn ea of) gS l dA

Lky ?kjsymRi kn vFkr- thMhi h , d fofkV l e; vof/k ea nsk dh l hekvka ds Hkrj mRi knr l Hkh rS kj olr/ka vS l okva dk eknd eW; gkrk gA ; g nsk dh vFk; oLFk dks eki us dk l cl s vPNk rjhdk gA bl ea nsk ds l Hkh ykka vS dEi fu; ka }kjk mRi knr l Hkh olr/ka , oa l okva dk dy eW; gA bl ea l Hkh futh vS l koZfud [ki r] fuosk l jdkjh ij f0; ] futh vkr/dkj Hkrku fuezk ylxr vS fonskh 0; ki kj l rgy l Hkh "kkfey gkrS gA vFkr ; g , d nsk dh l exz vkrFkd xrfof/k; ka dk , d eki d ; a- gkrk gA bl dh x.kuk frekgh , oa ofkd vk/kj ij dh tkrh gA

vefjdk ea vkrFkd fo"ysk.k C; jls thMhi h dh x.kuk =ekf d vk/kj ij djrk gA vefjdk ds l kbeu dcy/ us 1935&44 ds nsk ku , d iz kx fd; kA bl nsk ku 1937 ea ogk dh dkd us , d fcy l r/ fd; k bl fcy dk uke us kuy bude 1929 Vm 1935 FkA bl fcy ea ; g crk; k x; k fd vefjdk dh vFk; oLFk dks eki us ds fy, ml ea ftrus Hkh ykx gS ; k ?Vd dk; Z dj jgs gS pgs oks , d fd l ku gS ; k l jdkjh depjh ; k cgj kVh; dEi fu; k ; k nsk ea dke djus okyh Lo; a dh dEi fu; k; gS bu l c ds }kjk mRi knr olr/ka ; k l ok dh cktj eW; l s x.kuk dh tkuh pfg, A ; s fopkj vFkr kL=; ka ds fy, u, Fk i j l r/ bl l s vFk; oLFk dk l Vhd eki u dj l drs FkA l o fke bu fopkj ka ds vk/kj ij vUrj kVh; epk dsk , oa fo"o cbl ds l nL; nsk us thMhi h dh x.kuk dhA 1950 l s bl s fo"o ds l Hkh nsk viuk jgs gA Hkrj ea Hkh ; g 1950 l s gh viuk fy; k x; k gA bl rjg l s x.kuk djus ij nsk vkrFkd l Fkr dk l Vhd , oa l gh vkdyu fd; k tk l drk gA i j l r/ bl rjg dh x.kuk l s olr/ka , oa mRi kn dh xqokk dk l gh vkdyu ugha gS i krk gA dkyu Dykd us dMh"ku vM bcku Med i ksd ea crk; k gS fd fd l h vFk; oLFk ds fodkl vS 0; kol kf; d < kps ea ? fu V l Ecl/ k gkrk gS tks vkrFkd fodkl dks i Hkr for djrk gA

thMhi h dh x.kuk rhu idkj l s dh tkrh gS ft l ea 0; ; i) fr of/kr eW; lk) fr vS vk; lk) fr i e[ k gA thMhi h dh x.kuk ds eki u ds fy, vUrj kVh; ekud i krd fl l Ve vM us kuy vMm/ 1993 rS kj dh xbZ gA bl i krd ds vUrj kVh; epk dsk ; jk h; l ?k vkrFkd l g; kx vS fodkl l a Bu l a r jk"V l ?k vS fo"o cbl ds i fr fu/ k; ka us fey dj rS kj fd; k gA ft l s, l , u, 93 dsuke l s tuk tkrk gA ; g jkVh; [kkrka ds eki u ds fy, fu; e/ka , oa i f0; kvka ds ckjs ea crkh gA bl ds ekud brus yphys, oa l jy gS fd os LFk; l h[; dh; vko"; drkva , oa i j l Fkr; ka ea < kys tk l drs gA bl l s i mZ, l , u, 66 ds rgr- dk; Z fd; k tkrk Fk ft l s 1968 ea cuk; k x; k FkA Hkrj dh thMhi h ea dfk m l s k 0; ki kj [k u] j (kk) fuezk , oa l ok {ks- i e[ k HMedk fuHkrS gA bl thMhi h l s vS ksd mRi knu l pdkd vS mi Hkr dk eW; l pdkd tkjh fd, tkrS gA Hkrj ea thMhi h dh x.kuk =ekf d vS ofkd vk/kj ij dh tkrh gA Hkrj ea thMhi h dh x.kuk nkrjg dh gsrh gS t s bl idkj gA

1- Hkrj dk l h[; dh foHkx mRi knu , oa l okva ds eW; kudu ds fy, , d vk/kj o'kz rS kj djrk gA bl o'kz ds nsk ku dherka dks vk/kj cukdj mRi knu dh dher vS rgykred of) dh nj Kkr dh tkrh gS bl s dklV/ ikbl dgrS gA ; g olRfod thMhi h Hkh dgykrh gS tks vk/kj o'kz ea fu/krj dherka ij olr/ka vS l okva dh Hkrurk dks crkh gA bl l s egxkbZ dks vyx j [kdj thMhi h nj dks l gh idkj l s eki k tkrk gA bl ea vk/kj o'kz dk fu/kr.k djrs l e; ; g /; ku ea j [kuk pfg, fd ml o'kz dkbZ ikdrd vki nk] egkekjh vFok ; d u gvk gA nsk ea 2011&12 dks vk/kj o'kz ekuk x; k gA l h[; dh vS dk; Z e f0; k lo; u ea-ky; o'kz 2017&18 dks vk/kj o'kz cukus dk fopkj dj jgk gS i j l r/ vHh ; g fopkj k/ku gh gA bl ij vire fu.kz ugha fy; k x; k gA

2- thMhi h ds mRi knu eW; ea vxj egxkbZ nj dks "kkfey dj fy; k tk, rls gea vkrFkd mRi kn dh orZku dher dk Klu gS tkrk gS bl s orZku eW; dgrS gA bl s v olRfod thMhi h Hkh dgrS gA

fo"o dh ekStmk vkrFkd l Fkr , oa bl dh l Hkrkoukva ds l a r jk"V l ?k dh o'kz 2020 dh oVMZ bcku Med fl pq"ku , .M i ki dV/ fji kVZ tuojh 2020 dks tkjh dh xbA l a r jk"V l ?k da vkrFkd , oa l kelft d ekeya ds foHkx ds vfrjDr vM vM rFk bl ds ikp {ks-h; vk; ksk ds l g; kx l s bl fji kVZ dks rS kj fd; k x; k gA bl fji kVZ ea 2020 , oa 2021 dh l Hkrkoukva , oa p/kr; ka ds ckjs ea crk; k x; k gA bl fji kVZ ea 2017&19 dh vkrFkd fodkl nj ds ckjs ea tkudkj nh xbZ gA fji kVZ ea crk; k gS fd fo"o ea vkrFkd



f"kfkyrk dk nlg tkjh gA bl ds vuq kj 2020 ea oS"od nj 2-5 ifr"kr vlg 2021 ea 2-7 ifr"kr jgus dk vupeku gA tcfD Hkjr ea ; g 2020 ea 6-7 , oa 2021 ea 6-3 ifr"kr jgus dk vupeku gA , d h gh fjikVZ fo"o cbl dh Xyky bdkuMed iKli DV4 fjikVZ 8 tuojh 2020 ea crk; k gSftl ea dgk x; k gSfd 0; ki kj , oa fuosk ea vi\$kk l s de of) ds dkj.k 2019 ea oS"od vFKD; oLFkk ea f"kfkyrk cuh jghA Hkjr ea 2020 ea 5-8 ifr"kr , oa 2021 ea 6-1 ifr"kr l dy ?kjsyw mRikn of) nj crkbZ gA dN bl rjg dh fjikVZ vUrjzVh; enk dsk dh tuojh 2020 dh oVMZ bdkuMed vlmVypd fjikVZ ftl s lQV/tjySM ds nkod ea fo"o vkfFKZ ep ds 50oa okf'kd l Eesy ea tkjh dh ftl ea crk; k fd o'kz 2020 ea fo"o dh vf/kdZrk vFKD; oLFkk ea fodkl nj igys dh vi\$kk de jgxA bl fjikVZ ea crk; k gSfd Hkjr ea xj cldak foUkh; l DVj dh eF"dyk ds dkj.k ?kjsyw elx rsth l s ?kVh gS vlg \_\_.kka ea f"kfkyrk vkbz gA TkhMhi h ds de gkus ds dkj.k &

- MKW l h jaxktu , oa MKW Mh ds JhokLro ds vuq kj nSk ea detlj elx ds dkj.k thMhi h de Fh vlg cpr , oa fuosk dh deh ds dkj.k ; g 2011&12 l s de gksjgh gA
- cM\$ i&kus ij phu l s fufeF mi HkDrk oLrq/ka ds vk; kr ds dkj.k ?kjsyw y?kq m |sxka dh mRiknu ea deh vk jgh gA
- ukv/cnh] th, l Vh dkyku ij jkd ds dkj.k Hh turk ea Ø; "kDr dh deh gksjgh gA tcfD dbZ vFKZ'kkl=h ekurs gSfd dky/ku ij jkd ds dkj.k l ekulrj vFKD; oLFkk dk fouk" k gS x; k tksfd l Ei wZ vFKD; oLFkk grq i k; %yfcZV/ dk dke djrh gA
- oS"od vkfFKZ enh dk nSk dh vkfFKZ fodkl nj ij Hh iMrk gA

thMhi h c<kus ds mi k; &

- [kk] i d kdj.k m |sxka dks c<kok fn; k tk, rkfd bl dh vxkkeh vlg lk"pxkeh fØ; kvka ds dkj.k vuod m |sxka dk fodkl gskk ftl l s jkstxkj ds vol jka dk fodkl gskkA
- Nk/s , oa dV/hj m |sxka dk fodkl fd; k tk, A
- Xkkeh.k {ks-ka jkstxkj ds vol jka dk fodkl fd; k tk, A
- Rkh l dh enh ds le; ts , e- dHl us iEi ikbfeax dk l q-ko fn; k Fkk tks vkt ds le; ea Hh dkjxj gA bl ea crk; k x; k Fkk fd vFKD; oLFkk ea elx ea of) fd, fcuk rsth ugha ykbZ tk l drhA futh , oa l koZtfud {ks-ka ea vf/kd fuosk dj jkstxkj ds vol jka dh of) djuh pkfj, A bl grq Jfedk dks x<M\$ [knsus vlg Hkjus tS s vuq i knd dk; Z djok dj Hh much Ø; "kDr ea of) dj elx ea btkQk fd; k tk l drk gA Hkjr ea eujsk tS h ; kstuk; ; blgha y{; ka dh i mZ djrh gA

vkfFKZ l eh(kk 2019&20 ea vkfFKZ l of) ds dkj.s ea crk; k gSfd vpy fuosk dh nj ea of) thMhi h ea of) rst djrh gS bl l smi Hkx ea of) gsrh gA mi Hkx dh mPp nj fuosk dks i k l kgr djrk gSftl l s varr% vpy fuosk ea of) gsrh gA ; |fi bl ds i Hkka ea le; varjky jgrk gS tks l keld; r; k 3&4 o'kz gsrk gA

ijUrqvkt dkyku egkekjh ds dkj.k l kjh vFKD; oLFkk Bli gksxbZ gA vc jSvax , t d h fQp l KW; wku us 20 viSy 2020 dks Hkjr dh vkfFKZ fodkl nj o'kz 2020&21 ea 1-8 ifr"kr gh jgus dh l EHkrouk gA jSvax , t d h bf.M; k jSvXl ~ , .M. fjl pZ bMjk us Hh pkyw thMhi h dk vupeku ?kVd dj 1-9 ifr"kr dj fn; k gA ; fn vFKD; oLFkk dkyku egkekjh l s tYnh ugha mcj ikrh gS rks ; g thMhi h fi Nys 41 o'kka ds l cl s fupys Lrj l s fQl y dj \_\_.kRed Hh gS l drh gA ; fn , d k gq/k tks 1951&52 ds ckn 6Bha ckj \_\_.kRed gskhA bl l s i mZ 1991&92 ea Hh thMhi h 1-1 ifr"kr FkA eMht ds vuq kj ; g 0; o'kku ftruk vf/kd yek gsk mruk gh vkfFKZ fodkl i Hkfor gskhA , d k gh vupeku Hkjr; ; fjtZ cbl yxk jgk gA vk"kk gS tYn gh bl egkekjh l s futr feyxh vlg vFKD; oLFkk "kq'k gh i Vjh ij vk tk, xhA



1 nHk&

1- MKW nhi kJh] i k j f E H k d I e f'V v F k z' k k L =] U; w l j L o r h g k m l i k b o v f y f e V M] u b z f n Y y h] 2016

2- E k g j k i n t k] n y k W V f m d M 2008&18] i s X o u j s M e g k m l b f . M ; k i k b o v f y f e V M] U k b z f n Y y h] 2019

3- L o k e h d s M h] v l r j k z V h; v F k z' k k L =] I k b v f Q d i f c y " k l z b f . M ; k] t k k i j] 2018

4- j k t L F k u i f = d k] t ; i j l k d j . k] 21 v i s y 2020] I k'V 8

5- n s u d t k x j . k] 28 v i s y 2020] I k'V l 4 ; k 6

6- I k f r ; k s x r k n i z k] t u o j h] 2020

7- v k f k z d l e h ( k ] 2019&20



## TEACHERS' ENGAGEMENT: COMPARATIVE STUDY ON PRIVATE AND GOVERNMENT SCHOOLS

**Mrs. Nandita Sharma**

Research Scholar, Department of Business Administration  
Mahatma Jyotiba Phule University, Bareilly, Uttar Pradesh, India

**Prof. Raj Kamal**

Research Supervisor, Department of Business Administration  
Mahatma Jyotiba Phule University, Bareilly, Uttar Pradesh, India

### ABSTRACT

In current market place employees play an important role to produce more because organizations have to face lots of challenges to compete with competitors. It is important to understand that employees do not demand higher salary but need good environment in the industry. Employee is considered as one of the most important factor in organizations so it is the responsibility of organization to satisfy them. Currently employee engagement is playing an important role everywhere because it tells the level of involvement among employees towards their workplace. The success of organization depends on the satisfaction level of workers. Highly satisfied and engaged employee can create better results and outcome. Similarly teachers are the backbone of country. Teachers have to play a crucial role in the development of country. Hence, it is important to improve their abilities and skills, provide them monetary and non-monetary benefits and motivate them to enhance the skills of their students. The undertaken research study is going to compare the teachers' engagement among private and government schools at Bareilly in Uttar Pradesh.

**Key words:** Government Schools, Private Schools, Teacher Engagement.

### INTRODUCTION:

In this current scenario, the main aim of any organization is to retain the talented people in the company by fully engaging them, capturing their minds and hearts at each stage of their work lives. Employee engagement has emerged as a critical driver of business success in today's competitive marketplace. Further, employee engagement can be deciding factor in organizational success. Employee engagement activities not only affect the productivity, loyalty and profitability but also it is a key link to customer satisfaction, company good will and overall stakeholder value. Thus to gain the competitive advantage, organizations are turning to HR to set the agenda for employee engagement and commitment.

As it has been found that attitude, behaviour and outcome are totally different in terms of engagement. In the organization setting an employee may feel pride while working i.e. attitude, employee can advocate of his company to client work hard to finish task i.e. behaviour of employee. Outcome may include less labour turnover, lower wastage,



higher productivity, lower accident rates, less conflict, more innovation etc. It is believed that attitude, behaviour and outcome are part of engagement.

The role of a teacher is to create interest among students in their subject. As everyone knows that it is not a simple task. Teacher is the only person who can develop their students' personality by creating positive attitude towards subjects. The teaching pedagogy of a teacher must be simple and easy to understand by their students. A great teacher can engage their students in the classroom during lecture. Hence, it can be understood by mathematical formula as follows:

Teachers Engagement = Students Engagement

The aim of school management is to engage their teachers because they are the backbone of society. It is necessary to involve the teachers in school activities so as to reduce labour turnover in the schools. It is being observed that schools management do not provide monetary and non-monetary benefits to their teachers. The result is low satisfaction and disengagement among teachers. It automatically affects the turnover and absenteeism rate in schools.

The purpose of research study is to compare the teachers' engagement in private and government schools in Bareilly. The private and government schools must engage their teachers so as to improve the education condition in country because the economic development depends upon the qualified and skilled personnel and teachers are the only person who can develop their students as per market requirement. This study is helpful to understand the comparison between private and public schools of Bareilly regarding engagement of their teachers.

#### LITERATURE REVIEW:

There are certain researches which have been conducted by different researchers. The findings of these researchers are as follows:

**Klein, Wesson et al. (1999)** described supervisor supportiveness as some resources that dedicated by supervisors to their employees as friendliness and listening employee opinion. Difficult goals setting that agreed by supervisor and employee would be perceived as fairer and more realistic, causing goal commitment to be higher.

**Harter et al. (2002)** explicitly referred to their measure (The Gallup Workplace Audit) "satisfaction-engagement" and defined engagement as "the individual's involvement and satisfaction with as well as enthusiasm for work". The Gallup survey items tap evaluative constructs traditionally conceptualized as satisfaction facets, including resource availability, opportunities for development and clarity of expectations perhaps even more directly, some practitioners.

**Sharma Baldev R et al (2010)** conducted research study on "Determinants of Employee Engagement in a Private Sector Organization: An Exploratory Study". Research study has been conducted in private organizations where the level of engagement among workers and the factors among sales executives have been investigated. The research study conducted by Baldev where responses have been collected from 51 sales executives of various manufacturing concerns which were



located in National Capital Region. The data were collected by using structured questionnaire and analysed through SPSS software. Multiple regression analysis has been used to study critical factors of employee engagement. As per research employee engagement has come as the most significant issue in human resource management. Study revealed that all the situations of working environment are the critical factors of employee engagement.

**Malavika Desai , Bishakha Majumdar , Ganapathy P.Prabhu (2010)** conducted research on “A Study on employee engagement in two Indian businesses”. The level of engagement among employees can be described as the commitment and involvement an employee show towards organization. It can be measured by the degree of positive and negative cohesiveness with their organization, colleagues and job. Level of engagement among employees affects the willingness to learn and perform in organization. The engaged employees are not only committed and faithful but also those who perform well in the organization and their performance satisfy both employees and organization. The undertaken research study finds the employee engagement across manufacturing organizations and IT organizations, and analyse the reasons behind low and high level of engagement among employees. In research study middle level executives of car manufacturing unit and fifty employees of IT firm located in Bengaluru has been selected as sample study. As per the study the engagement level among employees in manufacturing organization was significantly high as compared to IT organizations. In manufacturing organization the firm cares for employees, communicate freely with immediate boss, recognition of one’s contribution towards objective of firm and give opportunity to participate in decision making process. The employee engagement among organization plays a significant role in industries. The present study exposes many factors which affect the level of engagement among employees in Indian scenario, those factors are rewards and incentives, training and development opportunities, culture of organization etc. Hence, some other factors have been identified to improve level of engagement among employees such as organizational policies, rewards and incentives, interaction among colleagues, career development opportunities, improve brand image of organization.

**Katzenbach (2000)** conducted research study where they observed that engaged employees are fully dedicated, enthusiastic, active and problem solver. They always do best for the organization because their goals are same as organization’s goals. They put their heart and soul into their work and task which is given by employer to them. Employees always exert their energy to complete their assigned task. Engaged employees also take informed risks, are resilient, change direction quickly, and respond positively to challenges. The emotional involvement of such employees forces them to deliver product and services that can represent a sustainable competitive advantage for their employer.

**Dr. Amit Kumar (2015)** conducted research study on “**Job Satisfaction among Female Teachers: A comparative study**”. As per the study conducted by researcher teachers are the back bone of nation. It is necessary to improve the skills and knowledge of teachers so as to develop the skills of students. The purpose behind this paper was to



compare the job satisfaction among female teachers working in private and government schools. The study was conducted in Fatehabad District where 200 respondents were selected to give their opinion regarding job satisfaction. The study found that there is a large difference between the job satisfaction among female teachers working in private and government schools.

The study revealed some job satisfaction factors such as pay scale, location of school, opportunity for further development etc. The study suggested that overall environment should be good to satisfy teachers working in private and government schools.

### **IDENTIFICATION OF RESEARCH GAP**

Various aspects affect employee engagement in the organisation like motivation, salary, commitment, working conditions etc. As per the above literature various factors affecting employee engagement has been discussed out of which supervisor's behaviour, relationship between organizational performance and employee engagement, relationship between satisfaction and employee engagement, employee engagement in private organizations have been identified. Some studies suggested that the employee engagement strategies are considered as retention tool for organizations. The success of economy depends on the skilled workforce. Talented personnel are developed by faculty and teachers. Very less work was conducted on teachers' engagement. Therefore the undertaken research study is focusing on the comparative analysis on teachers' engagement strategies in private and government schools.

### **RESEARCH METHODOLOGY**

#### **Research Objectives**

There are following objectives of research which are as follows:

- To identify the drivers of the teachers engagement and most affected driver.
- To analyse the comparative study of factors affecting teachers' engagement with special reference to private and government schools.

#### **Research Hypothesis**

Null Hypothesis has been formulated:

$H_0$  = There is no significant difference between the engagement level of teachers' between private and government schools.

#### **Research Design**

Descriptive research methods are used when the researcher wants to describe specific behaviour as it occurs in the environment. The closed ended structured questionnaire having 15 statement based on the factors affecting engagement among teachers Five Point Likert Scale was used for rating the employee engagement from 1 Strongly Disagree to 5 Strongly Agree.

#### **Sampling Design**

Random Sampling technique has been used. Data has been conducted through primary and secondary sources. The respondents were selected from schools situated in Bareilly



and near-by region through *convenience sampling method*. The sample size of the study is **80 respondents**, comprising of 40 respondents from private schools and 40 respondents from government schools. The sample unit of the study is schools teachers of private and government schools. Basically two private and two government schools have been selected as the sample unit in undertaken research paper.

**Table 1**

<b>Demographic Factors</b>	
<b>Age</b>	<b>No. of Respondents</b>
Below 25	18
25-35	22
35-45	27
Above 45	13
<b>Total</b>	<b>80</b>
<b>Income (Monthly in Rs)</b>	<b>No. of Respondents</b>
Below 15,000	23
15,000-25,000	11
25,000-35,000	14
Above 35,000	32
<b>Total</b>	<b>80</b>
<b>Marital Status</b>	<b>No. of Respondents</b>
Married	49
Unmarried	25
Divorced	6
<b>Total</b>	<b>80</b>
<b>Gender</b>	<b>No. of Respondents</b>
Male	32
Female	48
<b>Total</b>	<b>80</b>

**DATA ANALYSIS**

**Table 2 (A):Teachers’ Engagement factors of both private and government schools**

Factors	Schools	Sample	Mean	SD	t-value
Level of satisfaction	Private Schools	40	1.5	0.61	-11.5
	Government Schools	40	3.85	0.93	
Financial policies	Private Schools	40	1.4	0.6	-21.52
	Government Schools	40	4.2	0.7	
Opportunity to speak	Private Schools	40	2.4	1.1	2.25
	Government Schools	40	1.95	0.76	
Work life balance opportunity	Private Schools	40	1.25	0.55	-26.33
	Government Schools	40	3.3	0.69	
Appreciation in front of colleagues	Private Schools	40	1.85	1.35	-5.46
	Government Schools	40	3.3	0.73	
Standard Reward system	Private Schools	40	1.35	0.75	-24.83
	Government Schools	40	4.5	0.51	
Recognition and Award	Private Schools	40	1.95	1.23	1.57
	Government Schools	40	1.6	0.5	
Communication with top management	Private Schools	40	2.6	1.73	2.58
	Government Schools	40	1.75	0.72	
Feel enthusiastic	Private Schools	40	1.3	0.47	-22.59
	Government Schools	40	3.7	0.47	
Work pressure	Private Schools	40	2.3	1.63	-3.8
	Government Schools	40	3.3	1.08	
Constructive Feedback by supervisor	Private Schools	40	3.95	1.58	3.177
	Government Schools	40	2.85	0.94	
Working conditions	Private Schools	40	3.7	1.82	3.29
	Government Schools	40	2.5	0.97	
Caring attitude of superior	Private Schools	40	3.15	0.55	-3
	Government Schools	40	4.2	0.94	
Job security	Private Schools	40	2	0.65	-20.53
	Government Schools	40	4.15	0.59	
Feeling engaged	Private Schools	40	2.2	0.32	-12.56
	Government Schools	40	4.3	0.49	

**\*Critical Value of t =2.022 (two tailed)**



The comparative analysis is done by private and government schools in Bareilly (U.P.) with respect to 15 statements. Here mean, standard deviation and t-value has been computed separately. Table 2 (A) found many results on the basis of 0.05 level of significance. The analysis of Table 2 (A) is given below:

**Level of satisfaction** is the key factor to improve the productivity of teachers working in private and government schools. Teachers must be satisfied to improve the quality of teaching in their classes. The above table denotes that the mean value of government schools is greater (Mean=3.85) than the mean value of private schools (Mean=1.5). The t-value of level of satisfaction is -11.50 which is greater than the critical value of t 2.022. Here the null hypothesis is rejected that means there is a significant difference between the satisfaction level of teachers working in private and government schools.

**Financial policies** must be good to fulfil the physiological need of teachers. It is being observed that private schools are not able to fulfil the financial needs of their teachers. The above table denotes that the mean value of government schools is greater (Mean=4.20) than the mean value of private schools (Mean=1.4). The t-value of financial policies is -21.52 which is greater than the critical value of t 2.022 (two tailed). Here the null hypothesis is rejected that means there is a significant difference between the financial policies providing to teachers working in private and government schools.

**Opportunity to speak** must be provided in every school so as to motivate teachers. Schools where teachers are asked to give their opinion and suggestions feel more enthusiastic and feel sense of responsibility towards schools. The above table is indicating that the mean value of private schools is greater (Mean=2.4) than the mean value of government schools (Mean=1.95) regarding opportunity to speak. Here, t-value of opportunity to speak is 2.25 which is greater than the critical value of t i.e.2.022 (two tailed). Hence, the null hypothesis is rejected which means that there is a significant difference between the opportunity to speak in private and government schools.

**Work life balance** must be maintained to reduce stress level because stress is the only reason to decrease productivity. Work life balance means to maintain balance between work and personal life of employee. The above table is denoting that the mean value of government schools is greater (Mean=3.3) than the mean value of private schools (Mean= 1.25) in Bareilly and computed value of t is -26.33 which is much higher than the critical value of t i.e. 2.022 (two tailed). Therefore, the null hypothesis is rejected that means there is a significant difference between the work life balance of government and private schools.

Every school must **appreciate** their teachers to encourage them to teach. Top management plays an important role to appreciate their teachers. The above table representing that the mean value of government schools is greater (Mean=3.3) than the mean value of private schools (Mean= 1.85) in Bareilly regarding appreciation in front of colleagues. The computed value of t is -5.46 which is greater than the critical value of t in two tailed i.e. 2.022. Hence, the null hypothesis is rejected that means there is a significant difference between the appreciation provided in government and private schools in Bareilly.

Every school must provide the remuneration to their teachers based on **standard reward system** so as to reduce feeling of biasness among them. The table is showing that the mean value of government schools is greater (Mean=4.5) than the mean value of



private schools (Mean=1.35). The computed value of  $t$  is -24.83 which is greater than the critical value of  $t$  i.e. 2.022 (two tailed). The null hypothesis is rejected that means there is a significant difference between the private and government schools in Bareilly regarding standard reward system.

**Recognition and reward** plays a significant role to engage any employee in the organization. Similarly it is necessary to engage teachers of government and private schools both. The above table is representing the mean value of private schools (Mean=1.95) which is greater than the mean value of government schools (Mean=1.6). The computed  $t$  value is 1.57 which is less than the critical value of  $t$  i.e. 2.022. Therefore, it can also be concluded that null hypothesis is accepted. The private schools are much aware to provide recognition to their teachers as compare to government schools.

**Communication between top management** and employees must be smooth. The employees should be given the opportunity to speak frankly in front of their superiors. The table is indicating the mean value of private schools (Mean=2.6) which is greater than the mean value of government schools (Mean=1.75) regarding communication with top management. The computed  $t$  value is 2.58 which is greater than the critical value of  $t$  i.e. 2.022. Hence, null hypothesis is rejected and it can be concluded that there is a significant difference between the private and government schools regarding communication with top management.

It is necessary to increase **enthusiasm level** of employees because enthusiasm affects the productivity of organization positively. The study is showing that the mean value of government schools (Mean=3.7) is greater than the mean value of private schools (Mean=1.3) regarding feeling enthusiasm. The computed value of  $t$  is -22.59 which is much greater than the critical value of  $t$  i.e. 2.022. Hence, the null hypothesis is rejected that means there is a significant difference between private and government schools regarding enthusiasm level.

It is being observed that the private schools give lots of lectures in a week along with the non-teaching work. **High work pressure** negatively affects the productivity of teachers in private schools. The result of high work pressure is low productivity of teaching staff. The result is showing that mean value of government schools is greater than the mean value of private schools. The computed value of  $t$  is -3.8 which is greater than the critical value of  $t$  i.e. 2.022. Hence, the null hypothesis is rejected and there is a significant difference between the private and government schools regarding work pressure.

Supervisor must give their **constructive feedback** to teachers so as to improve them time to time. The mean value of private schools (Mean=3.95) is greater than the mean value of government schools (Mean=2.85). The computed value of  $t$  is 3.177 which is greater than the critical value of  $t$  i.e. 2.022 (two tailed). The null hypothesis is rejected that means there is no significant difference between the private and government schools regarding constructive feedback.

In current environment **working conditions** should be good so as to work smoothly. Working conditions may involve the internet facilities, sitting facilities, cooling facilities, drinking water facilities etc. The mean value of private schools (Mean= 3.7) is greater than the mean value of government schools (Mean=2.5) regarding working



conditions. The t stat value is 3.29 which is greater than the critical value of t i.e. 2.022 (two tailed). Hence, the null hypothesis is rejected which means there is a significant difference between private and government schools in working conditions.

The **superior must care** their employees to improve efficiency. The table is denoting the mean value of private and government schools. The mean value of government schools is greater (Mean= 4.2) than the mean value of private schools (Mean=3.17). The computed value of t is -3 which is greater than the critical value of t i.e. 2.022. Hence, null hypothesis is rejected. There is a significant difference between private and government schools.

**Job insecurity** creates fear among employees and it will result as low productivity and efficiency. The table is denoting that the mean value of government schools is greater than the mean value of private schools and the computed value of t is -20.53 which is greater than the critical value of t i.e. 2.022 (two tailed). The null hypothesis is rejected that means there is a significant difference between the private and government schools regarding job security.

**Engagement of employees** must be necessary to improve overall productivity. Engagement means mental involvement and attachment in job. The table is presenting that the mean value of government schools (Mean=4.3) is greater than the mean value of private schools (Mean=2.2). The computed value of t is -12.56 which is greater than the critical value of t i.e. 2.022 which means the null hypothesis is rejected. There is a significant difference between the private and government schools regarding engagement.

**Table 2 (B)**

**Decision**

<b>t-Test: Paired Two Sample for Means</b>		
	<b>Private schools</b>	<b>Government Schools</b>
Mean	32.9	50.1
Variance	20.09230769	10.24615385
Observations	40	40
Pearson Correlation	0.204440094	
Hypothesized Mean Difference	0	
Df	39	
t Stat	<b>-21.99001526</b>	
P(T<=t) one-tail	6.92913E-24	
t Critical one-tail	1.684875122	
P(T<=t) two-tail	1.38583E-23	
t Critical two-tail	<b>2.022690901</b>	



Table 2 (B) is denoting the value of t test in two sample means i.e. private and government schools. Table is representing the mean value of private schools in Bareilly i.e. 32.9 and mean value of government schools i.e. 50.1.

$H_0$  is representing there is no significant difference between the engagement level of teachers' between private and government schools.

Table 2 (B) indicates the comparison between private and government schools regarding engagement level. As per null hypothesis there is no significant difference between private and government school in Bareilly. The data of engagement level has been calculated through t-test. At 5% level of significance, the critical value of t is 2.022. Here, in above table the computed value of t is -21.99 (two tailed) which is greater than the critical value of t. Hence, it falls in rejection region. Therefore, the null hypothesis is rejected and it can be concluded that there is a significant difference between the engagement level of teachers' in private and government schools.

### Conclusion

The purpose of the study was to compare the engagement level in private and government schools of Bareilly. As engagement is very important to encourage an employee to work willingly with zeal. Similarly development of country mostly depends upon the shoulder of teachers because they are the back bone of civilized society. The analysis shows a vast difference between the environment of private and government schools in Bareilly. As per table 2 (A), in most of the cases the satisfaction and engagement level of government schools is greater than that of private schools such as satisfaction level, financial policies, work life balance opportunities, appreciation in front of colleagues, standard reward system, feel enthusiasm, less work pressure, caring attitude of superior, job security and engagement level. But on the other side private schools are more focusing on opportunity to speak, recognition, communication with top management, constructive feedback by superior and working conditions. Therefore, it has been concluded that private schools should provide good salary, satisfaction, less work load, caring attitude towards their teachers etc. so as to build a harmonious environment at work place.

### Suggestions

It is being observed from the analysis that private schools in Bareilly are not able to engage their teachers so they should follow some techniques to improve the engagement level of their teachers because engaged teachers can build the engaged students. There are some suggestions to improve the engagement level of teacher working in private schools of Bareilly which are as follows:

- Private schools should reduce the work pressure of their teacher.
- They should not provide the clerical work to their teacher so as to improve their teaching pedagogy.
- Private school teachers should be provided good remuneration so as to improve their standard of living.
- Superior in private schools must support their teachers in every aspect.
- Working hours should be reduce so as to manage their work life balance properly.



## References:

- Kumar Amit (2015), Job Satisfaction among Female Teachers: A comparative study, International Journal of Core Engineering & Management (IJCEM), ISSN: 2348 9510, Volume 2, Issue 5.
- Desai Malavika , Majumdar Bishakha , P.Prabhu Ganapathy, A Study on employee engagement in two Indian businesses, Asian Journal of Management Research, ISSN 2229 – 3795.
- Juliet Gladies J.1 and Kennedy Vijila (2013), Comparison of Faculty Engagement Factors between Arts and Science and Engineering and Technology Institutions, Research Journal of Management Science, ISSN 2319–1171, Vol. 2(11).
- Sharma Nandita, Kamal Raj (2019), The comparative analysis of the affect of superior’s behaviour on employee engagement with special reference to private and public sector banks, International Conference on Challenges and Opportunities in Social Sciences, Humanities and Business Management, Amity Business School, Gwalior, Madhya Pradesh, ISBN: 9789-3892-98178.
- Sharma, Baldev R.; Anupama, Raina(2010),Determinants of Employee Engagement in a Private Sector Organization: An Exploratory Study, Academic Journal, Vol. 3 Issue 10, p52.
- Shekhar Toyaz (2016) Work life Balance & Employee Engagement- Concepts revisited, International Journal of Education and Psychological Research (IJEPR), Volume 5, Issue 1.
- Uddin Mohammad Rahim, Hoque Nazamul, Abdullah Mohammad Ahsanul Mamun, Uddin Md. Shahab (2013) Work-Life Balance: A Study on Female Teachers of Private Education Institutions of Bangladesh, International Journal of African and Asian Studies - An Open Access International Journal, Vol.1.
- <https://www.custominsight.com/employee-engagement-survey/what-is-employee-engagement.asp>
- [https://www.researchgate.net/publication/215713725\\_1\\_Faculty\\_Engagement\\_in\\_Higher\\_Educational\\_Institution\\_-\\_A\\_proposed\\_model](https://www.researchgate.net/publication/215713725_1_Faculty_Engagement_in_Higher_Educational_Institution_-_A_proposed_model)
- [https://www.researchgate.net/publication/284279913\\_Faculty\\_engagement\\_in\\_higher\\_education\\_prospects\\_and\\_areas\\_of\\_research](https://www.researchgate.net/publication/284279913_Faculty_engagement_in_higher_education_prospects_and_areas_of_research)



## SCIENTIFIC ANALYSIS OF SERVICES AND USER'S BEHAVIOUR OF SOUTH CAMPUS LIBRARY, UNIVERSITY OF DELHI

**Ms Deepa Singhal**

Research Scholar, Banasthali Vidyapith, Banasthali, Rajasthan

**Dr. Praveen Babel**

Faculty, Dept. of Library and Information Science, Banasthali Vidyapith, Banasthali, Rajasthan

This research study will focus on the scientific analysis of the user's behavior towards library functioning and services. The paper will discuss user satisfaction through the use of modern library services and also discusses the research behind met to satisfy. The study will incorporate the suggestion received by the users to improve the library services in the future. In the era of information communication technology, users are very much informed techno-centric and wish to grab all the information without wasting time. This study is conducted in the South Campus Library and this library is also fully automated and serves all the services to its users. The paper will also focus that how many users are scientifically accessing the library facilities and how frequently they visit the library? These respondents belong to different age groups and different disciplines like Commerce, Economics, English, Hindi, Sanskrit, Urdu, History, Law, Political Science, etc. This study will focus on the type of information technology tools and services it uses.

**Key Words:** Modern Library; User's survey; Information-Seeking Behaviour; Delhi University

### INTRODUCTION

The Library is the place of observation and experiments of the behaviour of the use of library users. To analysis, the behaviour of the users the information-seeking behavior study is one of the best techniques to measure the level of the users that how much time they are spending to access the library services and resources. The study will be focused to find ways that how we can improve the services in the development of library collections, availability of information, accessibility according to the requirements and needs of the users. During the last few decades, it is found that Information technology has a great impact on the services of the library specifically in academic libraries. Academic libraries are having so many databases, e-journals, e-books and other physical forms of resources to serve in better way libraries need to develop new techniques for the benefit of the users. Now libraries have transformed their traditional catalogue into OPAC and Web OPAC which are available on the library's website. With this facility, users may get the bibliographical details from anywhere about the physical availability of the resources in the library. Libraries are now providing access to all online resources to its users through INFED (Services provided by the INFLIBNET) and VPN (Virtual private network). Now the libraries are beyond the boundaries and books are now available for us to read in the library with one click. The technology has a great role to



develop the libraries as digital, electronic, online, beyond boundaries or library on click, terminology which makes us bound to study that how the users can access the desired information through technology with accuracy and scientifically. Now a day's almost all the libraries are providing all the services through online due to space problems. These services are found more effective and speedy in a scientific manner. In this study, the main focus will be on analyzing the data gathered through questionnaires based on the services provided by the library and will analysis scientifically with the help of ICT tools. This study will be measured for radical changes in information production, storage, organization, and usage in light of ICT, as a result of which the demand for the behavior of users has changed.

#### **ABOUT SOUTH CAMPUS LIBRARY**

Delhi University is a playing major role in the Indian educational phenomena. It was established in 1922 and it is situated in Delhi. It maintains higher standards of education and provides its best participation in higher education. The University of Delhi has two central libraries, one central library is located in the North Campus and the other is located in the South Campus. The South Campus Library established in 1973 to facilitate to emerging needs of access to the library for the benefit of South Delhi area students and the research community. Presently, this Library is located on Benito Juarez Road, in Dhaula Kuan complex since 1984. The library is housed in a four-story building on the south campus, which gives educational friendly environment to its users. South Campus library is fully automated from 2008 and using the Troodon 4.0 Software. The library has good infrastructure like they have 3 OPAC terminals, 15 computers for using the library staff, 6 printers, high-speed scanners, LCD Projector, Barcode Readers and Library has an RFID (Radio Frequency Identification) system also. The total collection of the Library has approximately 1, 65,000 books and bound journals, 4000 full text scholarly electronic journals through UGC-INFONET. The library provides many electronic resources for easy access to its users and they have approximately 120 CDs. In a year, more than 70,000 visitors visit the library and on average, about 250 visitors visit the library every day. If any book is not available in this library, then the library also provides that book through DELNET.

#### **REVIEW OF LITERATURE**

Maan (2018) conducted to explore the use of resources and services of the University Library at Punjabi University, Patiala. This study describes users' preferences about the print and electronic resources provided by the library and also highlights the library's use of different types of services.

Bankar (2017) contacted in Aurangabad in Shri Muktanand college library. For this study, 350 students were selected by adopting a simple random sampling method through questionnaires. Focuses on the problems faced by students while seeking information. Analysis in the study it is found that students have been shown more attracted to the formal collection in the library.

Rajpurkar and Powdwal (2017) tried to indicate in their study on the assessment of awareness of library resources and services and information needs of student-teachers in Mumbai B.Ed. colleges. In this study, 11 selected B.Ed. colleges of Mumbai a total of 353 samples of student-teachers were taken from the colleges through which awareness



of information needs, library resources, and services in libraries was explored and evaluated.

Singh (2016) conducted at Horticulture and Forestry College, Pasighat in Arunachal Pradesh for the use of e-resources in the era of ICT, which has undergone extensive changes in information collection, storage, and dissemination. In this study using a questionnaire method, 220 questionnaires were distributed among the students of the college.

Ahiazu and Ani (2015) focuses on the informational behavior of educational staff in Nigeria in emerging electronic information environments in Rivers State University of Science and Technology (RSUST). The author s finds that the academic staff is in favor of electronic information sources available on the Internet. As per study Internet is the most powerful tool to grab information sources (31.59%), to interact personally as well as officially.

Moly (2014) studied, the information need and information-seeking behavior of Information Science students at Haramaya University. The study shows that more than half of the students visit the library every day. Students mainly use reference services from the library and for which they depend on reference sources. The main purpose of visiting the library was for writing assignments/research and study.

Pareek and Rana (2013) examined to determine the information-seeking behavior and library use by research scholars of the Banasthali University. The overall purpose of the study to determine their information requirements and also determines their awareness of library services available to them. For this study, an open and closed questionnaire method adopted for a sample size of 100 researchers.

Basha and others (2013) examined, the primary objective of seeking information from the respondents was to obtain information in their subject area to achieve academic excellence as well as to keep current and latest information by referring to dailies. This study Anna University in Tirunelveli District in Tamil Nadu shows that the students were facing a major problem with the power supply (electricity), computer facilities, and poor shelf arrangement. A structured questionnaire was distributed in this study. This research recommended that documents should be properly organized on shelves to easily and easily obtain information.

Padma and others (2013) conducted with a sampling population of 50 postgraduate students of the School of Economics, Madurai Kamaraj University with a specific purpose to trace out their information needs and information-seeking behavior. In this study, a structured questionnaire tool was adopted for data collection.

Kadli and Kumbar (2011) conduct in 46 Commerce Colleges in Mumbai for this study examines that in the changing ICT environment, faculties have the same essential information in traditional as well as electronic form. Libraries and library professionals need to pay attention to library resources so that it is balanced. In this study, 200 questionnaires were distributed among the faculty members.

Sahu and Ramesh (2011) studied that has been made to assess the need for information and behavior of faculty members of ICFAI Business School, Hyderabad. In this study, questionnaires were distributed to 70 faculty members to collect data. Findings of the study that Library professionals are required for the maximum use of library resources



and the findings of the study are needed to create awareness among faculty members to use the library resources available to them.

### **OBJECTIVES**

To discover such patterns as types of information needs, approaches, purposes, and Sources used by the users for their information seeking in libraries of South Campus Library, Central University in Delhi.

1. Determine the needs which are met through formal and informal sources of information.
2. Determine the kind of information used by users for seeking information.
3. Study the purpose of information seeking by users.

### **PROBLEM OF THE STUDY**

Today's library users are very much technology friendly but facing many problems while accessing e-resources in libraries. To know their problems in accessing, the study has been conducted to resolve them.

### **METHODOLOGY**

In this research, the survey method has been followed. To collect samples, a random sampling method was adopted under this the author distributed 100 questionnaires among south campus library visitors who were selected on random basis from various departments of the university. Out of which 80 filled in questionnaires were collected in five to six visits. The remaining 20 in this research, the survey method has been followed. To collect samples, a random sampling method was adopted under this the author distributed 100 questionnaires among south campus library visitors who were selected on a random basis from various departments of the university. Out of which 80 filled in questionnaires were collected in five to six visits. The remaining 20 visitors did not respond at all. In the questionnaire, many simple and specific questions were asked from users for data collection to achieve the goal of the study. A face to face discussion was also held by the respondents in this regard. These respondents studying in PG, M. Phil, Ph.D. courses, and they belong to different disciplines like Commerce, Economics, English, Hindi, Sanskrit, Urdu, History, Law, Political Science, etc. The data have been collected, analyzed with the help of SPSS (statistical package for social Science) statistical software to find out the results.

### **DATA ANALYSIS**

#### **❖ Demographical Analysis**

In this study, 80 library users have been examined, out of which 48 participants are male and 32 female, and they are divided into two types of age groups, 77 participants are aged between 20-30 years and only 3 participants are 31-40 age group, there is an indications that the trend of using libraries in the youth is increasing.

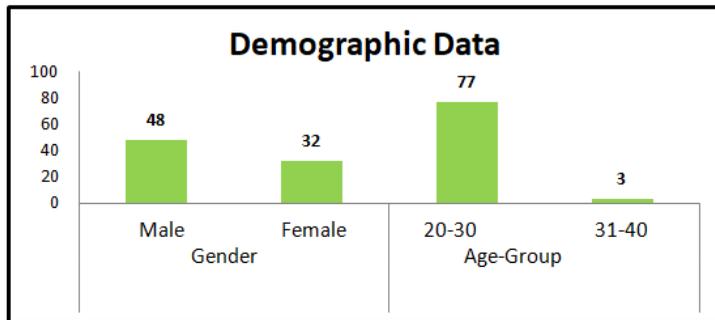


Fig. 1

### ❖ Qualification Wise Distribution

This research shows that 53 students visiting the library are studying in post-graduation, 17 users are studying in M. Phil, 9 users are doing Ph.D. and only one user is in under graduation. It is found that the majority of students perusing post-graduation and higher studies/ research scholars are frequently visiting the library to cater to their need for required information in comparison to undergraduate students.

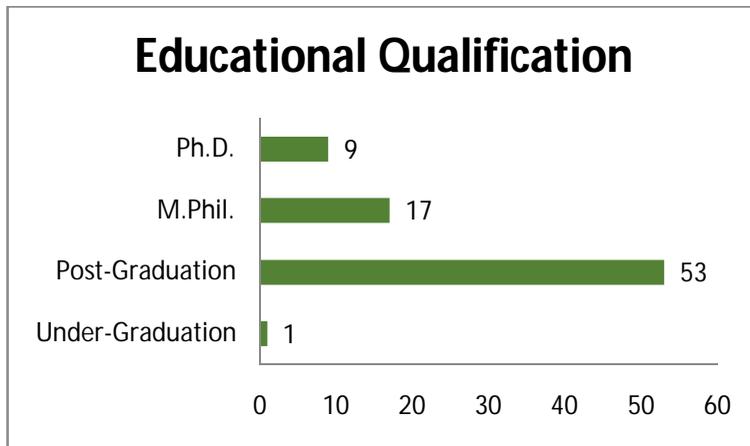


Fig.2

### ❖ Frequency of Library Visit

When in survey respondents are asked how often do you visit your Library, only 78 out of 80 users answered this question, majority of users 47 are visiting the library daily, 17 respondents visit their library several times in a week, 8 users have said that they only go when they require, 2 respondents visit the

library twice a week, 2 respondents use the library only one time in a week and another 2 respondents visit the library once in fortnight respectively. It indicates that the library is being used by users but according to the need to get the information.

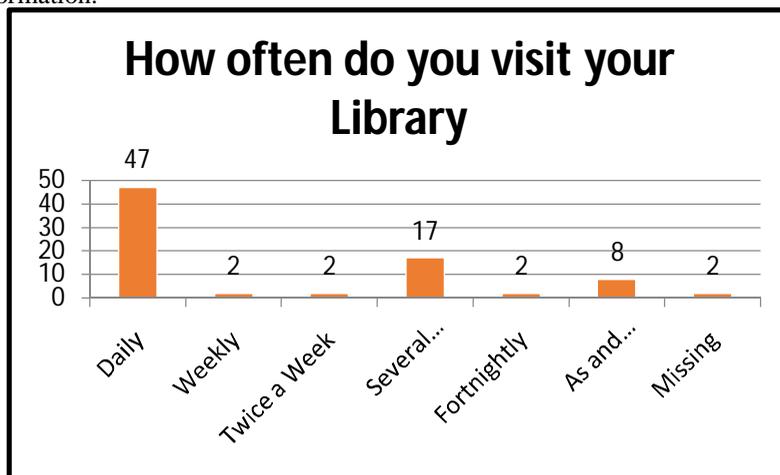


Fig.3

❖ **Purpose of Visit in Library**

The main aim of the respondent's primarily is to visit the library to knowledge update, for research work, for self improvement, preparation for class note, to consult reference source, for borrow and return books and access electronic data bases, Access e-resources/e-journals etc.

<i>Purpose</i>	<i>Respondents</i>	<i>Percentage (%)</i>
Research Work	53	66.25%
To update knowledge	56	70%
For self improvement	53	66.3%
Write research proposals/ Projects	25	31.3%
Prepare for class note	51	63.8%
To consult reference sources	43	53.8%
For borrow/ return books	38	47.5%
Browse Internet	21	26.3%
Access Electronic Data bases	27	33.8%
Access e-resources/ e-journals	38	47.5%

Table 1

This table depicted that visitor are visiting library to update their intellectual knowledge and very least users are visiting library for internet browsing. This means that the availability of internet on mobile phones is more effective to access the internet.

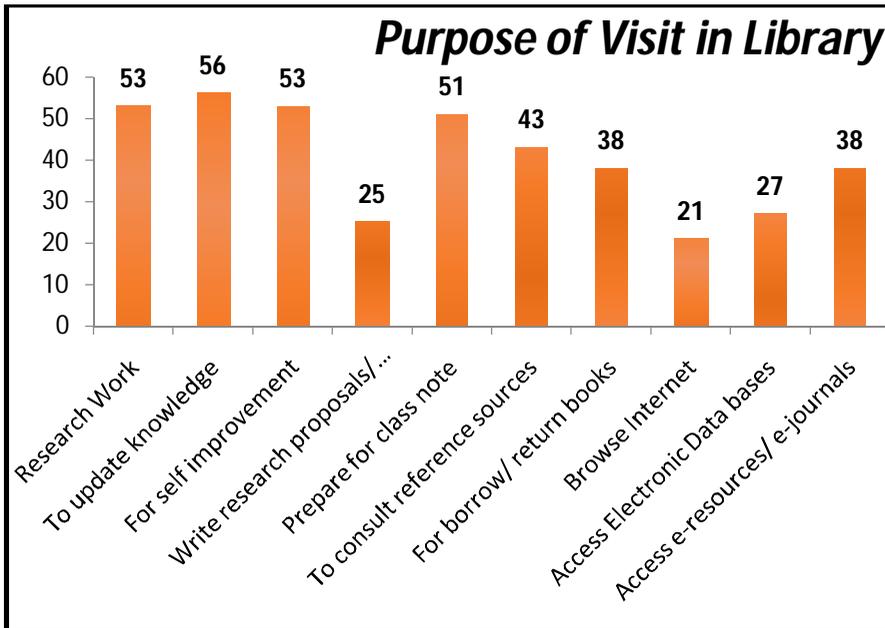


Fig. 4

#### ❖ Document Searching on OPAC

This study shows OPAC is play an important role for document searching method rather than traditional print catalogue. 45 (56.3%) respondents prefer to find their documents with the help of OPAC the main reason for the use of OPAC is to provide efficient and quick search results with Boolean searching system.

	OPAC		Library Catalogue (Print)	
	Respondents	Percentage (%)	Respondents	Percentage (%)
Documents	45	56.3	39	48.8

Table 2

#### ❖ Spent Time in Library for Collecting Information

In response to this question, 77 users out of 80 responded, 3 users did not respond. This study shows that users are spending time on collecting information. Upon analyzing the information collected from the users it is find that they spend their time in the library according to their need such as, 10 users spend more than 8 hours in the library, 5 users spend 7 to 8 hours, 6 users spend 6-7 hours, 9 users spend 5-6 hours, 10 users spend 4-5 hours, 15 users spend 3-4 hours, 11users 2-3 hours, 8 users spend 1-2 hours and only 3users spend less than an hour in the library for collecting information.

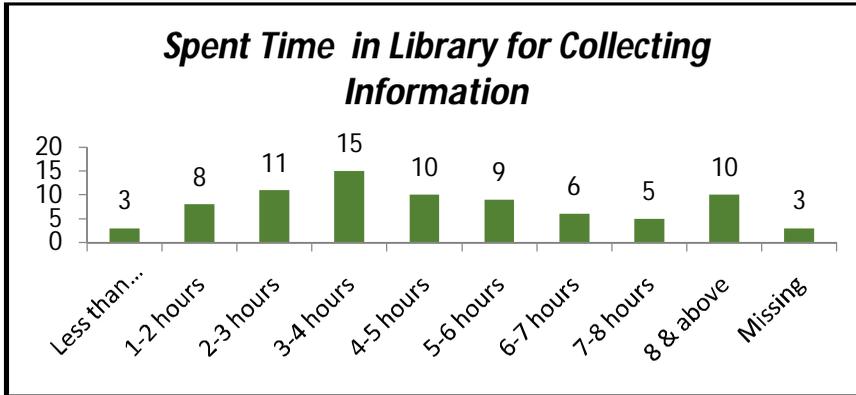


Fig.5

❖ **Users Satisfaction Analysis on Library Services**

In response to this question, 76 users out of 80 responded, 4 users did not respond, and this study shows that the users is not very satisfied with the services provided by the library, only 26 users believe that internet facility in the library is extremely satisfied, 14 users are very satisfied with bibliographic services and 12 user very satisfied with the location of documents. Most 34 users found the quality of documentation services is some extent; some users are satisfied with the reference services, circulation services. 27 users believe that the ICT service little extent satisfied, 21 users little extent satisfied with Reprography services, 20 users are satisfied with the bibliographic services, 17 are satisfied with the Inter Library Loan.

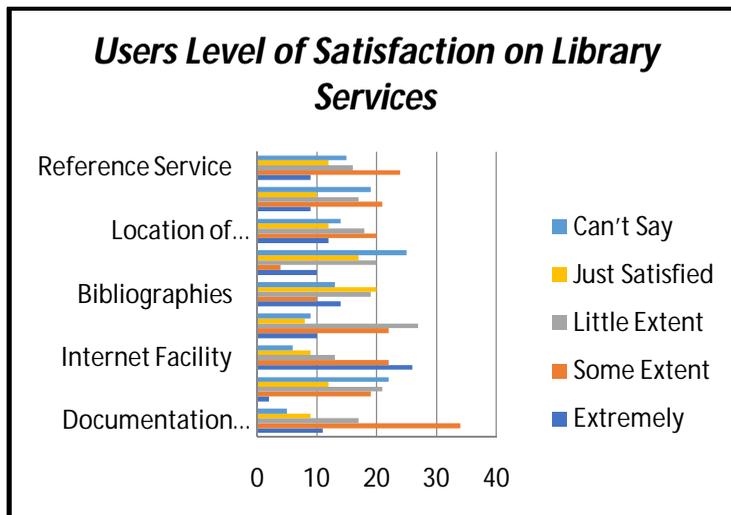


Fig. 6

### ❖ E-Resources Usages

This study shows that e-resources available in the library are used by the user as per their requirements, but very few users use e-resources to a greater extent, few users used e-resources to the full extent such as e-journals, e-theses and dissertations. Some users use e-books and web OPACs to some extent. Very few users use e-full text articles and online databases to some extent and some users do not use e-resources.

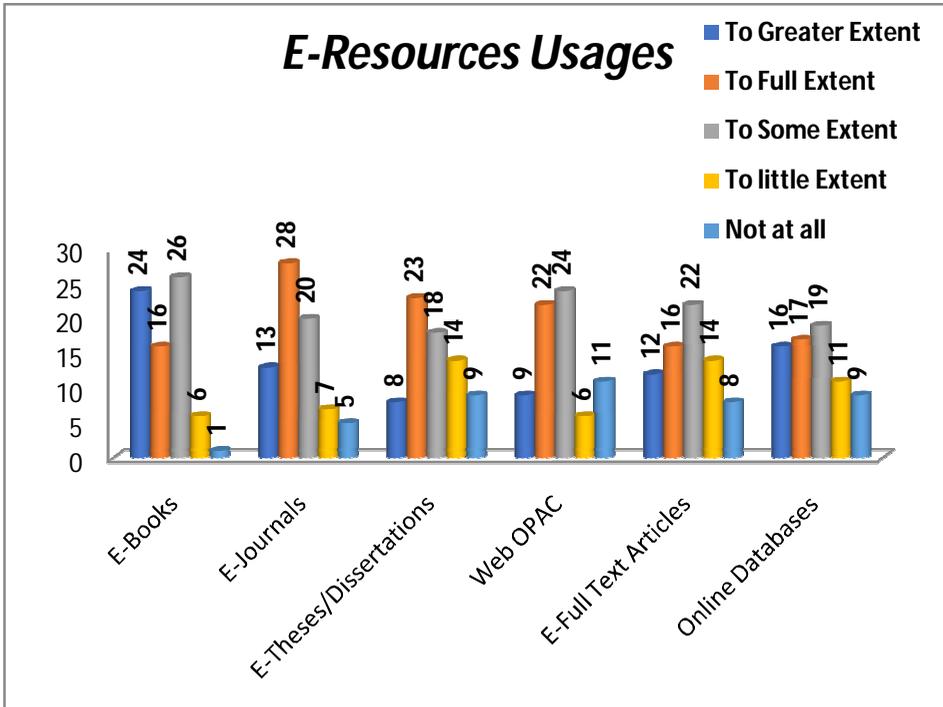


Fig.7

### ❖ User Feedback about Library Staff

Most users are extremely satisfied with library staff. Their helpful nature, their available at service point, team spirit, and their innovative nature for providing services to fulfill the user's requirements. Some users are satisfied to some extent, some users are satisfied with a little extent and there are some users who are only satisfied and some users who have said that they can't give any opinion about the behavior of employees of the library.

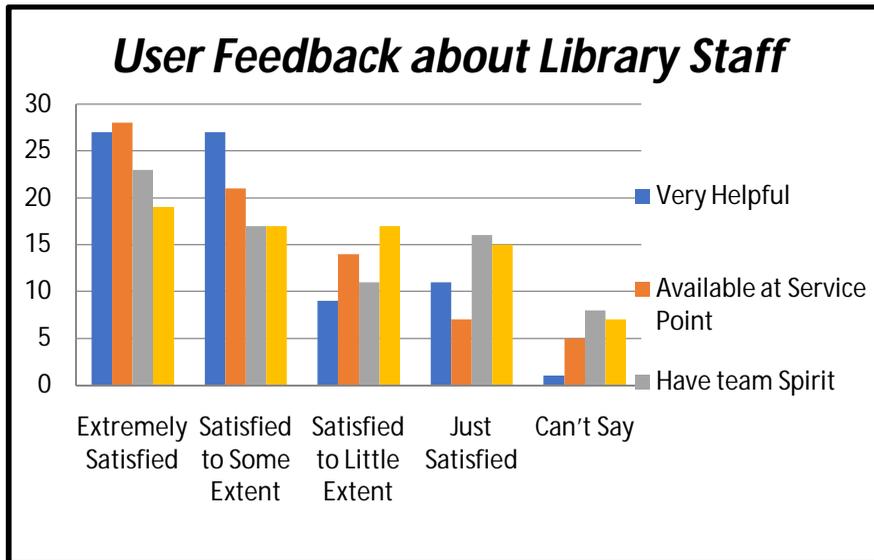


Fig.8

### USERS' FEEDBACK

There is some feedback from the user's point of view of a better use of library services in the future, given during face-to-face discussions with users and in questionnaires by users which is as follows.

- ❖ The library should organize an orientation programs from time to time for new users as well as registered users.
- ❖ The study suggests that web OPAC should be on the display screen on every terminal, which will help the users to know about the physical as well as online collection of library.
- ❖ Terminal facilities at the desk should be increased.
- ❖ Wi-Fi facilities for users should be available.

### CONCLUSION

In this analysis of library services and user's behavior of University of Delhi South Campus Library, the study highlights that most of the students who are using this library are in the age group of between 20-30 years old and would like to come and use the library almost all the days and some users come several times in a week. Many students wanted to sit in the library for more than 8 hours and some of them like to use the library for a few hours. The users of the library have different purposes, approx 66.25% of users are using the library for their research work and 70% are using the library services to enhance knowledge in specific subjects and competitive examination. Almost 63.8% are using the library services for their preparation of class notes, 53.8%



of users are using to consult reference sources for research activities, etc. This study shows that e-resources of the library are used by a limited number of users who need to be oriented to make them aware. Around 47.5% of users have shown their interest to access e-resources, 33.8% of users are access electronic databases and very few (26.3%) students visit the library just for internet surfing and entertaining.

## REFERENCES

- [1] Ahiauzu, Blessing Esuru & Ani, Okon Edet. (2015). A Survey of Information Seeking-Behavior of Academic Staff in a Nigerian University in Digital Age. *Science Journal of Education*, 3(4), 89-94.
- [2] Bankar, Nilima R. (2017). Information Seeking Behavior of Students of Shri Muktanand College Library, Gangapur. *International Journal of Research in Library Science*, 3(1) Jan.-June, 109-120.
- [3] Basha, Imtiaz, Rani, P., Kannan, K. & Chinnasamy, K. (2013). Information Seeking Behaviour of Engineering Students in Tamil Nadu: A Study. *International Journal of Library Science*, 7(1).
- [4] Kadli, Jayadev & Kumbar, B. D. (2011). Faculty Information-Seeking Behaviour in the Changing ICT Environment: A Study of Commerce Colleges in Mumbai. *Library Philosophy and Practice (e-journal)*, 580.  
From: <http://digitalcommons.unl.edu/libphilprac/580>
- [5] Maan, Inderjeet Singh. (2018). Use of Library Resources and Services of Punjabi University Patiala by the Research Scholars and Post Graduate Students. *Journal of Indian Library Association*, 54(3), JULY-SEP., 143-147.
- [6] Moly, T. Mathew. (2014). Information Need and Information Seeking Behavior of Information Science Students in Haramaya University, Ethiopia. *International Research: Journal of Library & Information Science*, 4 (2), 245-252.
- [7] Padma, P., Ramasamy, K. & Sakthi Renugadevi. (2013). Information Needs and Information Seeking Behaviour of Post Graduate Students of School of Economics at Madurai Kamaraj University: A User Survey. *International Journal of Educational Research and Technology*, 4(2) June, 33-42.
- [8] Pareek, A. K. & Rana, Madan S. (2013). Study of Information Seeking Behavior and Library Use Pattern of Researchers in the Banasthali University. *Library Philosophy and Practice (e-journal)* 887.
- [9] Prabha, Kumud. (2013). Information seeking behaviour of different types of users in selected libraries of Delhi. *International Research: Journal of Library & Information Science*, 3 (2) June, 308-323.
- [10] Rajpurkar, Sujata Sunil & Powdwal, Sushama Chandrakumar. (2017). Awareness of Information Need, Library Resources and Services: A Case Study of Select B.Ed. Colleges in Mumbai. *Journal of Indian Library Association*, 53(4) Oct.-Dec., 155-165.
- [11] Sahoo, S. K. & Ramesh, D. B. (2011). Information seeking behaviour of faculty members of ICFAI business school, Hyderabad. *International journal of information Dissemination and Technology*, 1 (4), 223-227.
- [12] Singh, Rajkumar. (2016). Use of E-Resources in College of Horticulture and Forestry, CAU, Pasighat, Arunachal Prades. *Journal of Indian Library Association*, 52(1&2) Jan-June, 51-54.
- [13] South Campus Library Website: <http://crl.du.ac.in/sdcl/>



## AN OVERVIEW ON INDIAN TRADE FAIRS

**Shrihari R. Vadavi**

Commerce Lecturer, Karnatak College, Dharwad

### Abstract

The term trade fairs means, it is like a festival where in business people of same industry gather together to demonstrate and to exhibit their products and services. The trade fairs we see is not of recent origin, we could see such programs and daises were also organized in the late eighteenth century especially in the region of Europe, in the era of merchant capitalism. Later because of its scope in attracting merchants of same industry and encouraging the extended development of business, even it spread over North America. This witnesses the importance and developed scope of trade fairs in boosting the business activities and making people aware of product launched and services rendered.

When we consider trade fairs industry with reference to the Indian context, it is still in the infant stage. There is a lot of scope for development, improvement, research, organization, management, investment and many more area. Hence this article is an attempt to know the practical problems faced and benefits gained in attending and organizing these trade fairs and also to gauge the impact of trade fairs on Indian economy. The article is developed using pooled secondary data from various online sources and some books. By this we can fairly understand how important this is for the growth of Indian economy.

**Keywords:** Trade Fairs, Origin, Benefits.

### INTRODUCTION

A trade show is an event conducted to bring together competitors of a particular industry to exhibit and demonstrate their latest products and services. Major trade fairs usually take place in convention centers in larger cities and last several days. Local trade fairs may be held at a local arena or hotel and allow businesses in the area to connect with prospects.

The trade fairs which are also termed as expositions or trade shows permit only competitors of same industry to attend it, As the main intention is to gather all competitors on a same platform to exhibit and launch their products. Trade fair organizers provide space for exhibition, create a platform for workshop or presentation and let exhibitors to interact with media. Organize different events like Private exhibition, award presentation. The competitors participate to find new potential customers, to build a good rapport with dealers, distributors and suppliers.



Attendees come to trade fairs to become familiar with the latest products being introduced, to take advantage of special show prices from exhibitors, and to become better educated about their industry.

The name, Trade fairs, expositions, scientific or technical conferences, conventions, may vary but the basic function of the activity represents a major industrial marketing event. They are “events that bring together, in a single location, a group of suppliers who set up physical exhibits of their products and services from a given industry or discipline”. Trade fairs rank second behind only on-site selling in influencing buying decisions of industrial purchases.

A trade fair is an excellent place to learn about industry trends by observing who is exhibiting the products and services they are promoting, the new products they are introducing, who else is attending the fair (job functions and companies), and so on. Many companies send employees to trade fairs to gather intelligence about their competitors. You can pick up valuable information by keeping your eyes and ears open, speaking to a wide range of exhibitors and attendees, and absorbing what’s going on around you.

Trade fairs, meetings and events of all types are the primary venues where promotional products are given out to increase brand awareness, corporate recognition, or to remind recipients of the purpose of an organization. Promotional items distributed at these gatherings provide a long-lasting reminder of exhibitors’ message or marketing theme through repeated exposure of their logo and message. Trade fairs offer a strong opportunity to enhance brand recognition, launch new products, promote company, generate leads and drive sales. Meetings, whether intra-corporate or to an audience of potential clients require a different and generally more upscale group of promotional items to drive home the themes of vision, direction, creativity, or the benefits of more expensive products and services.

A trade fair provides the opportunity for a producing company to display its products to many potential customers during a short period of time. With so many potential buyers at the same place, the trade fair becomes a time-saving communication tool. This could be compared to a situation where the companies would have to meet each customer individually, which takes a lot more time and costs more.

#### **OBJECTIVES:**

1. To know the history and timeline of trade fairs.
2. To find out possible challenges faced at the trade fairs.
3. To know the benefits of trade fairs.
4. To study the economic impact of trade fairs.
5. To understand the importance of trade fairs.

#### **ORIGIN OF TRADE FAIRS:**

Trade fairs, also known as industrial exhibitions, they are existed in the form of the ancient bazaars – vendors gathered within a central location to display their wares for prospective customers, who could conveniently study about many sellers’ products within a short period of time. The history of trade fairs can be traced back to the era of

---



King Herod (73-4BC), when a fair was held in a 3,200 square feet exhibit hall where merchants were encouraged to display their material wealth and merchandise for the aim of strengthening commerce and wealth within his empire. The concept has developed over the centuries to a highly sophisticated event where marketers not only display their wares or examples of their services, but also develop new customers, build customer retention and enhance their marketing skills, electronically monitor the data collected at these events.

Trade fairs have had a major role in Europe since the 12<sup>th</sup> century. The intention of trade fairs has always been the same, to get customers, and to showcase and sell products as the need to access wider world markets was important to the country's survival as an industrialized nation. The British under the leadership of Henry Cole, Joseph Paxton and Albert, Prince Consort, decided in 1849 that a trade shows was the only way to readily access world trading markets, creating the "Great Exhibition of the - Works of Industry of All Nations," and it was known as the Crystal Palace Exhibition held from 1 May to 15 October 1851. The first international trade fair was conducted in the name of Great Exhibition. It was a very good experiment where various kinds of products and services of similar industry were showcased and demonstrated but it was limited to a country or a specific geographic region.

A sudden increase in world and state fairs that were hosted throughout the United States from the late 1800s to the early 1900s played a significant role in the development of the exposition industry in the United States. However, in many cases, the focus was on international and outward or exporting products – showcasing American products to the wider world. Exhibiting at three, six month or even yearlong trade fairs was expensive and drained the fiscal and human resources of many firms. The country was growing, markets were expanding westward. As business and industry become more and more sophisticated, they began to develop their own specialized trade fairs.

The trade exhibitions were firmly established by the end of eighteenth century as a form of marketing strategy. The overall success of all state, national and international trade exhibitions have helped to create a foundation on which commercial trade exhibitions were able to build. The general public, by the beginning of the nineteenth century, was used to seeing products on display at exhibitions. Today's trade fairs are a bit less chaotic than those of ancient times, they can be overwhelming to both first-time visitors and seasoned veterans. With so many resources under one roof, a trade fair is an efficient way for vendors to spend their limited time. In a matter of a day or two, vendors can make many face-to-face contacts, which are often more valuable than phone calls or e-mail for the exchange of technical information.

#### **REASONS FOR TRADE FAIRS:**

When we have look at the marketing and its strategies, we find a lot of reasons, why we need trade shows. The reasons always be different from different perspectives and they may include meeting a specific audience, generating the sales leads, creating a market for the product, increasing the brand value of the product, marketers can meet the customers, competitors and suppliers in person, demonstrating the product is more



effective than other channels of advertising, can make contract with the distributing dealers and create awareness about the product among the target audience.

### **BIGGEST CHALLENGES AT TRADE FAIRS:**

Planning can be done much faster and with more efficiency with a simple checklist. The most important part of entire planning is budgeting and also it helps throughout the whole process. But most of the trade fairs fail to follow it, as they never had tools to manage it easily.

1. **STAYING ORGANIZED:** All factors of different areas must be taken care of before we plan to attend a trade exhibition. The things happen to be very tricky in all respect, especially in case of handling the logistics. If we be floppy in organizing and planning then the whole show will look very unprofessional

2. **GETTING NOTICED:** The purpose of the trade show is to ensure that our products are being noticed by the attendees. As per a research 76 percent of attendees have an agenda prior to the trade show and know exactly what booths they are going to visit. Hence Pre-show marketing is critical to attract the attention of attendees through Social media, Print ads and etc.

3. **TRAVEL AND OTHER EXPENSES:** There are a lot of moving parts in tradeshow marketing. When it comes to exhibiting huge machineries, shipping and I&D (installation and dismantle) make up a big part of those logistics. Add to that shipping product samples, getting everyone scheduled for the show and the booking a convenient hotel and many other bits and pieces and handling the logistics of tradeshow marketing is often outsourced.

4. **BUDGET MANAGEMENT:** It costs a lot of money to exhibit at tradeshow. For companies that do tradeshow, the amount invested in tradeshow marketing is about a third of their overall marketing budget. Making all of their tradeshow dollars stretch as far as possible is an ongoing challenge faced by all companies.

5. **STAFF MANAGEMENT:** According to Skyline research, 85% of trade shows success comes from who works your booth. Typically, management is selected by the organization, but recently there's been a shift. Marketing communication or product marketing associates are increasingly leveraged in booths. Trade show attendees are aware of your business more than ever before, so it's imperative to have knowledgeable staff who are ready to answer questions instantaneously.

### **BENEFITS OF TRADE FAIRS:**

1. **PUBLICITY:** A message delivered to a large number of interested people, around 86% of all show attendees represent a buying influence, are interested in a specific exhibited product or service and have not been called on lately by a sales representative; introduction of new products to a large number of people; uncovering potential customers; enhancing goodwill; and gaining free company publicity.



2. **COST-EFFECTIVE NETWORKING AND ADVERTISING:** Planning and designing a trade show booth, rent paid for space on the trade show floor, traveling expenses, paying for lodging and meals can seem like a steep price tag for a single marketing event. If you've done the pre-show marketing work leading up to the show, the potential that a trade show offers your business can far exceed the investment. Even you might have a heavy initial investment to exhibit your product at a trade show than any other advertising or networking methods, the cost to convert a prospect into a sale is often much lower than other alternatives but with proper research and planning.

3. **RAISE AWARENESS:** Exhibiting at industry events is a good way to raise your profiles and generate brand awareness. As well as taking a stand at an event, there are usually other advertising and sponsorship opportunities. One of the main objectives of any trade show is to showcase, various business, goods, and services to attendees and other interested parties. For a show that is meticulously designed in a way that it is inherently attractive complete with eye-catching booths along with a bunch of other attractions such as giveaways and promotional items, it becomes fairly simple to leave a lasting impression on the potential customer for a long time to come.

4. **BUILD YOUR DATABASE:** Meeting with potential customers at an exhibition helps you to start building your marketing lists and generate qualified sales leads. Fairs and exhibitions provide an opportunity to know the developments and trends in the industry concerned and also often enable participants and visitors to know about business opportunities, government policies, assistance packages etc. In trade fairs, participants include not only the manufacturers or sellers of the final products but also the suppliers of machinery and technology, raw materials and intermediates, packaging devices and materials etc.

5. **LEAD GENERATIONS:** This is one of the most imperative benefits of trade shows, especially those organized at a large scale, such as the India Expo Shop, to be organized in Greater Noida in April 2017, organized by Indian Exhibitions, Conferences & Events Services Association (IESA) which is slated to have exhibits from over 150 global exhibitors and a massive number of visitors. Given that each visitor has a potential customer within him/her that is ready to be tapped, the potential for lead generation becomes immense. Simply asking for contact information or getting the business cards of the visitors can go a long way in getting fresh leads and converting them. All that a business would need to do is getting in touch with the leads right after the exhibition.

#### **ECONOMIC IMPACT OF TRADE FAIRS:**

When we consider economy as a whole, Trade show is an integral part in the overall development of the country. The Association of the German Trade Fair Industry (AUMA) writes: "The regional economic effects at major international trade fair centers amount to five to seven times the organizers' own turnover. Thus trade shows secure a considerable number of jobs in the local region, particularly in small and medium-sized companies".



Irrespective of the size of the Trade shows not only the exhibition centers and organizers, but also the whole community especially supportive businesses for trade shows will be benefitted as entire local economy is involved in the event, from catering services and accommodation services to logistics, there are many service providers that benefit from an event being conducted at their city. Trade show visitors may use metro, taxis and trains; they may eat at local restaurants and stay in local hotels, depending on the duration and nature of their trip. The whole economy of the region surrounding a trade show is impacted by the event.

Internationally, the size of Trade fairs industry is 55 billion \$ with over 31,000 major trade shows & exhibitions taking place every year, whereas in India it is estimated at Rs 65,000 crores with more than 700 major Trade Shows taking place every year at a growth rate of 12% per annum. Exhibitions have a huge impact on the domestic economy and it's GDP. Apart from boosting or encouraging trade, innovation and better understanding between nations, it drives sectoral growth, tourism, hotel reservations, government initiatives, pumps event management companies and supplier businesses and a host of ancillary businesses linked directly or indirectly to the exhibitions.

The Indian trade fair market has witnessed a significant change and growth over the last 15 years, a promising future and is destined to grow. Worldwide, exhibitions are respected and considered as an Industry. Germany leads the Exhibition space with almost 60 percent of their total national business generated income through Exhibitions. In comparison to the international facts and figures, India is still at a nascent stage. The exhibition industry continues to fight issues and challenges like infrastructure for new exhibition, public-private partnership projects, venue rates and taxation policies, complex processes and procedures, temporary imports into India, industry status, professional management, training and development at root level, health and safety initiatives, greener and sustainable initiatives.

#### **RELEVANCE OF TRADE FAIRS:**

The conceptual domain of the image-building dimension includes all activities related to developing corporate image and reputation at the tradeshow. International trade fairs are large industry gatherings where one of the primary objectives for exhibiting is to create product interest and awareness. Another major thing is to build corporate image and reputation. With respect to relevance challenges, benefits, and economic impact are specially focused.

#### **LIMITATIONS:**

1. The study is limited to the Indian economy.
2. Non availability of primary data due to pandemic corona.
3. Study is totally based on secondary data.

#### **CONCLUSION:**

The trade fair industry is one of the best platforms for advertising. After analyzing about Indian trade fairs I conclude that, trade fairs are not of recent origin in India but were conducted in a limited edition. Indian trade-fair industry is growing in such a manner that surrounding environment is also benefitted by it but, the current working position of this industry depicts that, trade fair industry in India is still in infant stage, it has got very wide scope to grow. The improvement in the investment and

---



participation in this industry will definitely gear up the national GDP in the upcoming days.

## References

1. Black, Robert, The Trade Show Industry: Management and Marketing Career Opportunities, East Orleans, Massachusetts: Trade Show Bureau, 1986.
2. Parasuraman, A. "The Relative Importance of Industrial Promotion Tools," Industrial Marketing Management, Vol. 10, 1981, pp.277-281.
3. O'Hara, Bradley S., Evaluating the Effectiveness of Tradeshows: A Personal Selling Perspective, working paper, South-eastern Louisiana University, 1991.
4. Popli, R. S. Trade Fair Management and Exhibit Marketing. New Delhi, India: Deep & Deep Publications, 1990.
5. Bello, Daniel C and Gloria J. Barczak, Using Industrial Tradefairs to Improve New Product Development, The Journal of Business and Industrial Marketing, Vol.5, No.2, 1990, pp.43-56.
6. Banoma, Thomas V., Get More out of Your Tradefairs, Harvard Business Review, Vol.61, Jan-Feb, 1983, pp.75-83.
7. Moriarty, Rowland T., Jr. and Robert E. Spekman, An Empirical Investigation of the Information Sources Used during the Industrial Buying Process, Journal of Marketing Research, Vol.21, May 1984, pp.37-147.
8. Skolnik, Rayna, Getting the Brass to Take Tradefairs seriously, Sales and Marketing Management, Vol.139, October 1987, pp.99-102.
9. Mee, William W., Tradeshows: This Marketing Medium Means Business, Association Management, Vol.40, June 1988, pp.50-55.
10. Op.cit., pp.75-83.

## Websites:

1. <http://www.businessworld.in/article/>
2. <https://www.tsn.com/news/>
3. <https://www.quora.com/>
4. <http://www.tradeshowsblog.com/>
5. <https://www.business2community.com/>



## TURNAROUND OF NPAS STORY - PUNJAB NATIONAL BANK

### Mr. Anilkumar Nirmal

Ph.D Scholar, Parul Institute of Management & Research, Faculty of Management  
Parul University, Vadodara, Gujarat &  
Adjunct Faculty, Faculty of Commerce, Parul University, Vadodara, Gujarat

### Dr. Purvi Derashri

Assistant Professor, Faculty of Commerce, Parul Institute of Commerce  
Parul University, Vadodara, Gujarat

#### 1. Abstract

There are lots of stories about the banks some has grown and some have shut their doors after incurring huge losses and have never been able to stand up again with different reasons. But this is not the case with Countries' third public sector Bank in size that is Punjab National Bank. The bank has published the second quarter (Q2) result of FY 2019-20 and posted a profit of INR 507 Crores combine more than 1500 crores for half of the year. This becomes more interesting because in same quarter last year bank has posted a loss of INR 4532.35Cr. This is just turn the table kind of journey for the bank in the last few years after suffering from fever of "so called diamond king" couple of years back. PNB is looking in a very tragic situation where CASA is going down and profitability is getting hampered.

#### 2. Introduction of Punjab National Bank

**Punjab National Bank** is currently the third largest public sector lender after SBI and BOB. Punjab National Bank has primarily started its operations from 12 April, 1895 from Lahore, Currently situated in Pakistan. They have started the bank with authorized capital of 2 lakhs and working capital of INR 20,000. Punjab National Bank has been started with the great nationalist spirit where by 7 banks has been merged to form one bank and dream was about to form a first Swadeshi Bank.

If we look at the current scenario Mr Sunil Mehta is MD and CEO of Punjab National Bank. Current share capital of Punjab National Bank is INR 921 Crores. Total Deposits with the Bank is INR 6,76,030 Crores and total advances is INR 4,58,249. Total Business reported by the bank as on FY 2018-19 is INR 11,34,279 crores. Currently bank is operating with 6989 branches and 9255 ATMs across India. In the FY 2018-19 banks has reported the loss of INR 9975 due to huge provisions done by the bank. The main reason was NPAs which has eaten all the profits of the bank. The gross NPAs of the bank were 15.50% and net NPAs was 6.56%. But bank has able to manage the capital adequacy ratio (CAR) 9.73% which was the only good news about the bank. But in the first of the financial year 209-20 bank has reported the profit the profit of approximately INR 1500 crores and that became the base of writing the research paper on the given topic and for consideration of Punjab National bank.



### Award and Recognition

- PNB won BFSI Awards 2019- Mobile App and SME Connect
- PNB also won ‘Digital Payments Award 2018-19’ At MeiTY Start up Summit 2019.
- PNB also won ‘IBA Banking Technology Award’ Winner: Most Innovative Project using Technology Runner up : “Best use of Information Technology & Data Analytics for business outcome amongst large domestic banks ”
- PNB awarded “Bank of the year” award by Indo-American Chamber Of Commerce.
- PNB awarded 1<sup>st</sup> Prize for Rajbhasha Kirti Award.
- PNB won SCOPE Corporate Communication Excellence Award 2019, 3<sup>rd</sup> prize in the category of Crisis Handling.

### 2.1 Business Performance

Business figures of Bank from Mar, 2017 to Mar, 2019 is as below,

Parameters & ( Figures in crores )	Mar2017	Mar2018	Mar2019	Growth % Mar, 19/ Mar, 18	Growth % ( Mar 17, Mar 18 )	Growth % ( Mar 17, Mar 19 )
Gross International Business	1063455	1113523	1182224	6.2	4.7	11.16
Domestic Gross Business	957323.00	1030681.00	1145511.00	11.2	7.5	19.65
International Deposit	621704	642226	676030	5.3	3.3	8.73
Domestic Deposits	565573	600387	654536	9.0	6.15	15.72
Gross International Advances	441751	471297	506194	7.4	6.7	14.58
Domestic Gross Advances	391750	430294	490975	14.1	9.8	25.32
CASA Deposits	260016	263247	285040	8.3	1.2	9.62

In the above table we have compared business figures from March 17 to March 19. There was also the time when famous default has happened by using the “letter of undertaking” without having any collateral with the bank. Since then bank has strongly reemerged as winner after so many ups and downs which bank has seen. If we look at



the above table figures gross domestic advances has grown approximately 25.32% which is really commendable as which also shows the strength of the bank liability book wise. Similarly CASA deposits have grown approximately 9.62% and this is really crucial after so many rumors about the bank which emerges after the LOU big bang loss of the bank. Bank has also really outperformed in the gross International advances since 2017 and YOY grown about 7% approximately. Bank's gross domestic business has also grown 7.5% to 11.1% if compare the growth from the year March 18 and Growth Figures of March 2019 as per the above table. The final gross domestic growth is 19.65%.

### 3. Introduction to NPA

NPA is in limelight since last 2015 and from almost 4 year now as the government has started observing the defaulters and once started focusing on the bank's profitability and employee productivity. PNB has also been in limelight due to some wrong reasons but after that they have come out very strongly from there.

Below is the regulator guidelines and guidance on about the NPAs,

An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank.

A non performing assets (NPAs) is a loan or an advance where;

- Interest and/ or installment of principal remain overdue for a period of more than 90 days in respect of a term loan,
- the account remains 'out of order', in respect of an Overdraft/Cash Credit (OD/CC),
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,
- The installment of principal or interest thereon remains overdue for two crop seasons for short duration crops,
- the installment of principal or interest thereon remains overdue for one crop season for long duration crops,
- The amount of liquidity facility remains outstanding for more than 90 days, in respect of a securitization transaction undertaken in terms of guidelines on securitization dated February 1, 2006.
- In respect of derivative transactions, the overdue receivables representing positive mark-to-market value of a derivative contract, if these remain unpaid for a period of 90 days from the specified due date for payment.

In case of interest payments, banks should, classify an account as NPA only if the interest due and charged during any quarter is not serviced fully within 90 days from the end of the quarter.

#### 3.1 ASSET CLASSIFICATION

Type of NPAs

Banks are required to classify non-performing assets further into the following three categories based on the period for which the asset has remained non-performing and the reliability of the dues:

---



- Substandard Assets
- Doubtful Assets
- Loss Assets

### 3.1.1 Substandard Assets

With effect from March 31, 2005, a substandard asset would be one, which has remained NPA for a period less than or equal to 12 months. Such an asset will have well defined credit weaknesses that jeopardize the liquidation of the debt and are characterized by the distinct possibility that the bank will sustain some loss if deficiencies are not corrected.

### 3.1.2 Doubtful Assets

With effect from March 31, 2005, an asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months. A loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub- standard, with the added characteristic that the weaknesses make collection or liquidation in full, – on the basis of currently known facts, conditions and values –highly questionable and improbable.

### 3.1.3 Loss Assets

A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

## 3.2 NPAs background and data

As per Reserve Bank of India (RBI) data on International operations, aggregate gross advances of Public Sector Banks (PSBs) increased from Rs. 18,19,074 crore as on 31.3.2008 to Rs. 52,15,920 crore as on 31.3.2014. As per RBI inputs, the primary reasons for spurt in stressed assets have been observed to be, inter-alia, aggressive lending practices, willful default / loan frauds / corruption in some cases, and economic slowdown. Asset Quality Review (AQR) initiated in 2015 for clean and fully provisioned bank balance-sheets revealed high incidence of NPAs. As a result of AQR and subsequent transparent recognition by banks, stressed accounts were reclassified as NPAs and expected losses on stressed loans, not provided for earlier under flexibility given to restructured loans, were provided for. Further, all such schemes for restructuring stressed loans were withdrawn. Primarily as a result of transparent recognition of stressed assets as NPAs, gross NPAs of PSBs, as per RBI data on International operations, rose from Rs. 2, 79,016 crore as on 31.3.2015, to Rs. 8, 95,601 crore as on 31.3.2018, and as a result of Government's **4R's strategy of recognition**,

---



**resolution, recapitalization and reforms**, have since declined by Rs. 89,189 crore to Rs. 8,06,412 crore as on 31.3.2019 (provisional data).

Data on NPAs is regularly published by RBI as part of its Financial Stability Reports. NPA data is not collated by RBI in terms of corporate houses / companies. PSB-wise details of gross NPA (GNPA) for Industry category advances in domestic operations and total GNPA in International operations, as per RBI data, are at Annex.

As per RBI provisional data on International operations, as on 31.3.2019, the aggregate amount of gross NPAs of PSBs and Scheduled Commercial Banks (SCBs) were Rs. 8.06 Lakhs crore and Rs. 9.49 Lakhs crore respectively.

#### 4. Literature Review

Research on the banking sector in India or Public sector banks or private sector banks or group of banks are published. We found some of the related paper for the study purpose and we have analysed them. Research paper alone on PNB is not found but few papers were found where PNB was one of the integral part of study,

**4.1 Avani Ojha and Hemchandra Jha**, has done the study on impact of NPAs on working of the SBI and PNB by using the different research methods and tested the hypothesis from the complete study they have concluded that NPAs are contributing significantly. NPAs have huge impact on the profitability of banks as they majorly related to the productivity, profitability and asset liability management of the banks. NPAs are the result of under recovery or non-recovery of asset within certain period of time. They have recommended the constant analysis of NPAs by the banks purpose wise, borrower wise, region wise etc. there should be the methods and proper examinations of the borrowers before sanctioning the credit. Information on the financial position should be analyzed (Avani Ojha, 2018) extensively.

**4.2 Dr. Ganesan and R. Santhanakrishnan** has done the study on NPAs of state Bank of India for the duration of 2002-03 to 2011-12 by keeping the objective of deployment of funds, examining gross NPAs, investigate the impact of NPAs, measures to be suggested to control the NPAs. They have tested the hypothesis by calculating the mean and standard deviation and concluded the result on the mentioned objectives. They have concluded that banking industry has undergone many fold changes after the first phase of economic liberalization and due to this importance of credit management emerged. NPAs have increased with the economic growth and aggressive lending of the banks. After some default banks also become the cautious and government has taken the measures and ultimately it looks quite in control so far.

**4.3 Manisha Raj, Aashita Jain, Shruti Bansal, Tanya Verma** has done the study on NPAs and conducted the “A comparative study of SBI & ICICI Bank from 2014-17”. They have majorly done the study on NPAs and to check the trend of NPAs in 4 years from 2014-17 of SBI and ICICI Bank. Also they have compared the total advances, net



profit, gross NPAs and net NPAs of SBI and ICICI Bank. Also during the study, they have checked for a linear relationship in net profit and net NPAs in both the banks. They have concluded after study that management of NPAs is daunting task for every bank in the banking industry. After the study of figures for the given years it is found that it seems biggest challenge as far as liquidity is concern for both the banks as NPAs has increased and profitability has gone down. Even though SBI having higher NPAs than the ICICI Bank. As SBI is public sector bank, it is more vulnerable to give up the returns if the loans extended to general public. In the case of ICICI Bank their study found that there is no major profit or loss has been declared but the NPAs are settled against the profitability of the bank from time to time. In case SBI situation is worse as losses have increased due to increasing NPAs.

**4.4 Swathi.M.S, Sridhar.K** , has did the study of NPAs from year 2006-07 to to 2012-13 to analyze the ways in which NPAs can be fixed for the public sector, private and other categories of the banks. They have majorly used the secondary data released by the banks at the quarter end and at the year end and the RBI annual report. From the data extracted from secondary sourced they have took the net and gross NPAs to analyze and to find the fact and figures. They have majorly studies the cause and factor affecting the NPAs. The main point in the central light was willful default by the customers of the banks. Other reasons they found of the default was lenient lending norms, industrial crises, diversification of the funds, higher leverage and borrowing cost, sudden capital market downfall. Also remedies are suggested by them for the problems are in terms of Lok Adalat, Enactment of SARFAESI Act, Asset Reconstruction Company, Corporate debt restructuring etc.

## **5. The Design of Study and Research methodology**

### **5.1 Need for the Study**

NPAs are the big challenges for the banking system in entire world. As far as Indian banking system perspective NPAs has grown drastically in last few years since year 2014. There are number of reasons for this but foremost reason being the prevailing transparency now days in the system since then 2014. Total NPAs has reached more than 10.25 lakhs crores and it was became the matter of concern for the banks. There for different studies has been conducted on the same. PNB is one of public sector bank which has most dangerous asset book as far as NPAs are concerned and hence they were making huge losses. Hence we have selected to study the PNB for our study.

### **5.2 Statement of Problem**

Definition of NPAs has been changes in India from time to time and hence NPAs in India in banking sector has also been changes in increasing order. Since year 2014 NPAs has been seen as big monster in every corporate for different good reasons for which one of the reason being more transparency taken in to the picture especially in banking. To study these dynamic changes in NPAs for different banks become very



important and we have chosen one of the banks which are PNB which became performing for atleast first half in the year 2019-20.

Present study has focused on the different component like CAR, Gross Profit, ROA and total provision by keeping NPA ratios in the central for the study of non-performing assets of Punjab National Bank.

### **5.3 Scope of the study:**

The scope of the study is to analyze the “Turnaround Story of Punjab National Bank which makes the bank Profitable / performing in the first half of financial year 2019-20. Also it covers the data from 2014 to 2019 for the study purpose from the annual report of Punjab National Bank.

### **5.4 Objectives:**

1. To analyze impact of NPAs on overall functioning of bank.
2. To evaluate efficiency in managing NPAs.
3. To understand strategy this made the PNB profitable in the second quarter of 2019-20.

### **5.5 Hypotheses of study:**

H<sub>0</sub> = There is significant impact of NPAs on Profitability of Bank.

H<sub>1</sub> = There is no significant impact of NPAs on overall profitability of Bank.

H<sub>0</sub> = There is significant impact on ROA of NPAs.

H<sub>1</sub> = There is no significant impact on ROA of NPAs.

H<sub>0</sub> = There is significant impact on CAR of NPAs.

H<sub>1</sub> = There is no significant impact on CAR of NPAs.

H<sub>0</sub> = There is significant relationship between NPAs and Provisions.

H<sub>1</sub> = There is no significant relationship between NPAs and Provisions.

### **5.6 Methodology:**

Methodology describes the research route to be followed, the instruments to be used, universe and sample of the study for the data to be collected, the tools of analysis used and pattern of deducing conclusions.

For the purpose of the study, we will collect the required data from the Annual reports of Punjab National Banks which published every year and half yearly report of current



year. The study is based on secondary data. To supplement the data, the researcher elicits other relevant data available from the annual reports of PNB.

### **5.6.1. The Sample:**

The universe of the study consists of all the different ratios and variables of Punjab National Bank for the study purpose. Here, research has been done on PNB, to study the turnaround story of bank of which posted profit in QUARTER 2 of FY 2019-20.

### **5.6.2. Period of the study:**

The study has been carried out for a Six years and 6 Month, i.e., during 2014-2019 and till the second quarter of FY 2019-20. The study is based on secondary data.

### **5.7 Data collection tool and techniques:**

As per the nature of study following tools and techniques are used for testing the hypotheses,

- Tool - Ratio Analysis, Excel
- Statistical Techniques - Mean, Standard deviation and T – test.

### **5.8 Data Analysis**

The Data analysis is the core of the research. Scientific methods are been used now a days to get the output or study made authentic and can also suffice the purpose what the study meant for. The collected data now a day's analyzed by using the Microsoft excel with the in built formulas and helpful to researchers as well.

To reach certain relevant results, the data collected from all resources have been tabulated, analyzed and interpreted with the help of appropriate statistical techniques. In order to analyze the data and draw conclusions in this study, various statistical tools like Excel. The study is confined to a period of six years and Six Month i.e., from 2014 to 2019 and till second quarter of FY 2019-20

### **5.9 Limitations of the study:**

The present study has the following limitations such as,

- A) Comparison is restricted to the two banks of the public sector.
- B) The study is based on secondary data as published in various publications of RBI and other reports. These data are based on historical accounting concept, which ignores the impact of inflation.



C) The study, as limitations, is confined only to the selected and restricted indicators and the study is confined only for a period of five years.

### 6. Data Analysis and Interpretation

Entire collected data is analyzed with respect to Gross NPA Ratios and different test are conducted by keeping NPA ratio as primary parameter and other ratio as secondary parameter to tabulate the same.

However below mentioned data is authentically exported from the Annual and Half yearly reports of Punjab National Bank’s annual report.

By using the NPAs ratios we have compared the 4 parameters that are Gross Profit, CAR, ROA and total Provisions to check the significance level and impact.

#### 6.1 Gross NPAs Ratio vs. Gross Profit

In the below mentioned chart we have compared the Gross NPAs ratio to Gross profit of the Punjab National Bank. If we observe the data from the year 2014 to 2019 and then half yearly NPAs are increasing accept in 2019 where there is some falls from year 2018. In the half yearly figures of 2019-20 it is showing less than 2018. Its mean comes at 12.53 which is really big number as far as NPAs is concern for a bank or a financial institution if we look at the financial health of the company. Its correlation is near to (0.7) which indicate that NPAs has close correlations with the gross profit of the bank of bank as once NPAs increases in the institution at the same time profitability start declining. Same is visible on the chart-1 as well if we analyze it critically.

	Gross NPAs Ratio	Gross Profit
March, 2014	5.25	3343
March, 2015	6.55	3062
March, 2016	12.9	-3974
March, 2017	12.53	1325
March, 2018	18.38	-12282
March, 2019	15.5	-9975
Half Year -2019-20	16.63	1525.68
Mean	12.53	-2425.04
Standard Deviation	8.04	1285.03
Significant Level	0.05	
DF	12	
t stat	0.99	
t critical two tail	2.178	
P ( T <= t ) two tail	0.33	

Table -1

Here the t critical two tail (2.178) is greater than t stat value (0.99) so we should accept the null hypothesis which is “There is significant impact of NPAs on Profitability of Bank”. However there is a huge impact on the profitability of the bank once the NPAs start increasing in the system and ultimately it starts eating the earning of the institutions. While analyzing the above data standard deviation is 8.04.

Also if we look the significance level which is 0.05 is also lesser than the P value (0.33) this also evident and signifies to reject the alternate hypothesis and accept the null hypothesis.

If we look as per the below chart -1 gross NPAs ratio and profit of the bank maintaining good distance and moving in the opposite directions.

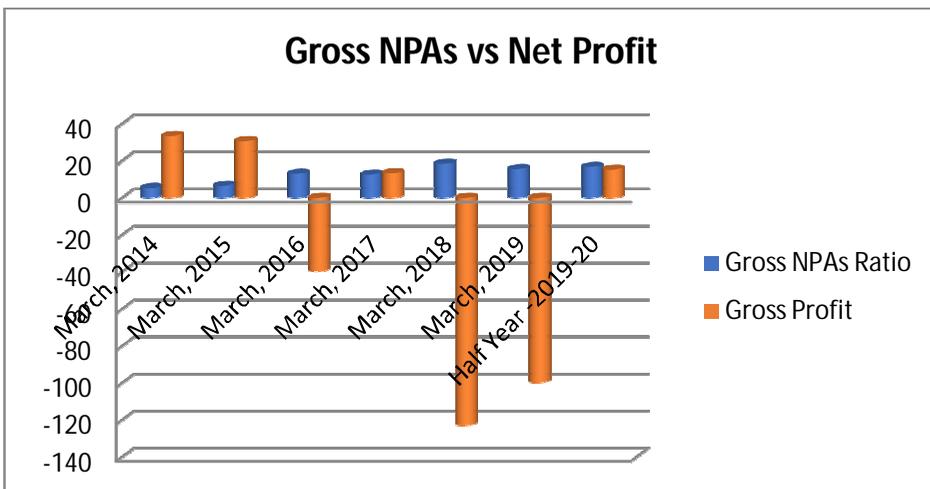


Chart -1

As per the chart-1 gross NPAs ratios and the profit of the banks are showing distant from each other in case of PNB by plotting the chart. Also during the t-test finding from the given data it reveals that there is no significance between these two data so we accepted the null hypothesis and rejected the alternate hypotheses.

## 6.2 Gross NPAs Ratios vs. Return on Asset (ROA)

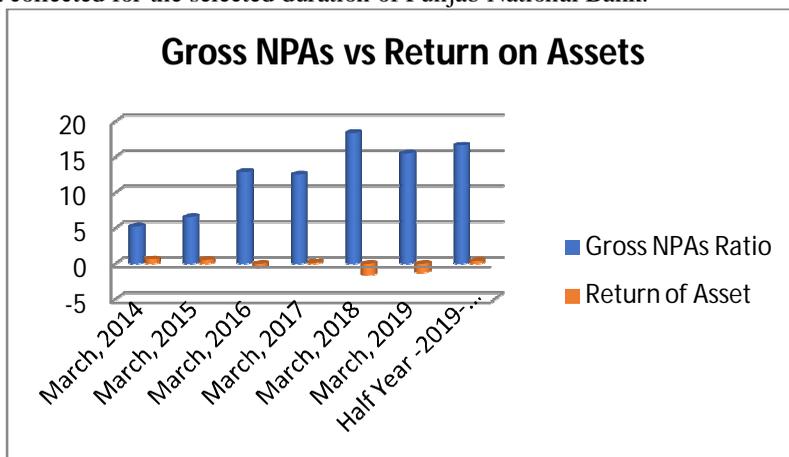
For the below mentioned comparison of Gross NPAs vs. Return of Asset we have analyzed the below mentioned data. Mean of the data comes to 12.53 and standard deviation is 8.04. Variation in the NPAs is bit big from lowest to highest figures.

	Gross NPAs Ratio	Return of Asset
March, 2014	5.25	0.64
March, 2015	6.55	0.53
March, 2016	12.9	-0.61
March, 2017	12.53	0.19
March, 2018	18.38	-1.6
March, 2019	15.5	-1.25
Half Year -2019-20	16.63	0.37
Mean	12.53	-0.24
Standard Deviation	8.04	0.19
Significant Level	0.05	
DF	12	
t stat	6.6	
t critical two tail	2.17	
P ( T <= t ) two tail	0.000002	

**Table -2**

As the study conducted above t critical two tail (2.17) which is lesser than the t stat (6.6) so we here reject the null hypothesis which is “There is significant impact on ROA of NPAs” and we will accept the alternate hypothesis that there is no significant impact of NPAs on ROA in case of Punjab National Bank for the selected duration of study. Also P value (0.000002) is small than the significant level (0.05) which suggests the same to reject the null hypothesis and accept the alternate hypothesis.

Here results suggest that NPAs don’t have any significant impact to ROA as far as data collected for the selected duration of Punjab National Bank.



**Chart -2**



### 6.3 Gross NPAs Ration vs. CAR

In the below table we are comparing the Gross NPAs ratios vs the capital adequacy ratio. We have calculated the required data using the excel sheet and with respect to t-test and we will check that by these data what the statistical result.

Capital adequacy ratio is the required liquidity which needs to maintain by the commercial banks in India according to Basel -3 norms and which is kept at 9.0% which is mandatory. As the hypotheses we will compute the significance of the ratios with Gross NPAs.

	Gross NPAs Ratio	CAR
March, 2014	5.25	11.52
March, 2015	6.55	12.21
March, 2016	12.9	11.28
March, 2017	12.53	11.66
March, 2018	18.38	9.2
March, 2019	15.5	9.73
Half Year -2019-20	16.63	14.07
Mean	12.53	11.38
Standard Deviation	8.04	1.80
Significant Level	0.05	
DF	12	
t stat	0.58	
t critical two tail	2.17	
P ( T <= t ) two tail	0.57	

Table - 3

As per the above table we can see that the mean of the NPAs and CAR is 12.53 and 11.38 respectively. Also the standard deviation for the mean is varying much higher than the SD of CAR which is nearly 1. If we look the P value (0.57) it is more than the significance level (0.05) and hence we will accept the null hypothesis which is “There is significant impact on CAR of NPAs” and we will reject the alternate hypothesis “There is no significant impact on CAR of NPAs”. As per the below mentioned data null hypothesis is getting accepted.

In the case of Punjab National Bank, the data from year 2014 to Sep, 2019 doesn't establishing the significance standard. However, if we look at the data in the year march 2018 and March 2019 when the NPAs ratios of higher and socking for the bank that 18.38 and 15.5 the CAR was 9.3 and 9.7 respectively that is at the bottom level and near the base requirement. In the other years CAR is considerably in the good

position even though NPAs are also lower. Interesting point is seeing in the year 2019 Sep, when NPAs are around 16% and then also CAR level are more than 15% this is because the fabulous recovery of NPAs which was approximately Rs 700 crores. Also Profits of banks for 2 quarter combining is more than rs 1500 crores. Also the second quarter profit of Rs 507 crores has made the headlines of the newspaper as well.

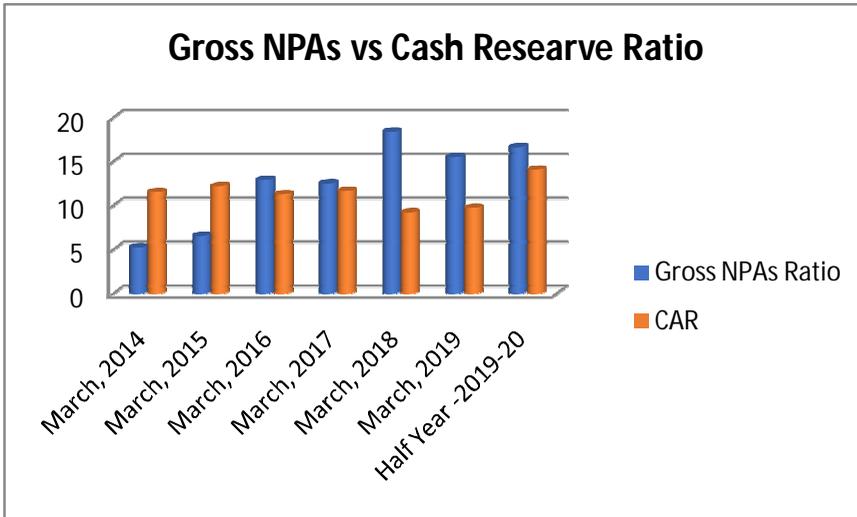


Chart -3

#### 6.4 Gross NPAs vs. Total Provisions

Gross NPAs ratio vs. Total provisions we are analyzing in the below table where mean of NPAs is approximately 12.53 and standard deviation is 8.04, for the Total Provisions Mean is 13776.48 and S.D. is 1867.90. While computing the student t test we have considered the significance level at 5% that is 0.05. We have computed the two tail t test with unequal variance. Same is computed by using the excel sheet Here P value is 0.0002 which lesser than the 0.05 significance level and hence we will reject the null hypothesis “There is significant relationship between NPAs and Provisions” but in this case we will accept the alternate hypothesis H1 that is “There is no significant relationship between NPAs and Provisions”

	Gross NPAs Ratio	Total Provisions
March, 2014	5.25	8042
March, 2015	6.55	8893
March, 2016	12.9	15313
March, 2017	12.53	13240
March, 2018	18.38	22576

March, 2019	15.5	22971
Half Year -2019-20	16.63	5400.39
Mean	12.53	13776.48
Standard Deviation	8.04	1867.90
Significant Level	0.05	
DF	12	
t stat	-5.22	
t critical two tail	2.17	
P ( T <= t ) two tail	0.0002	

Table -4

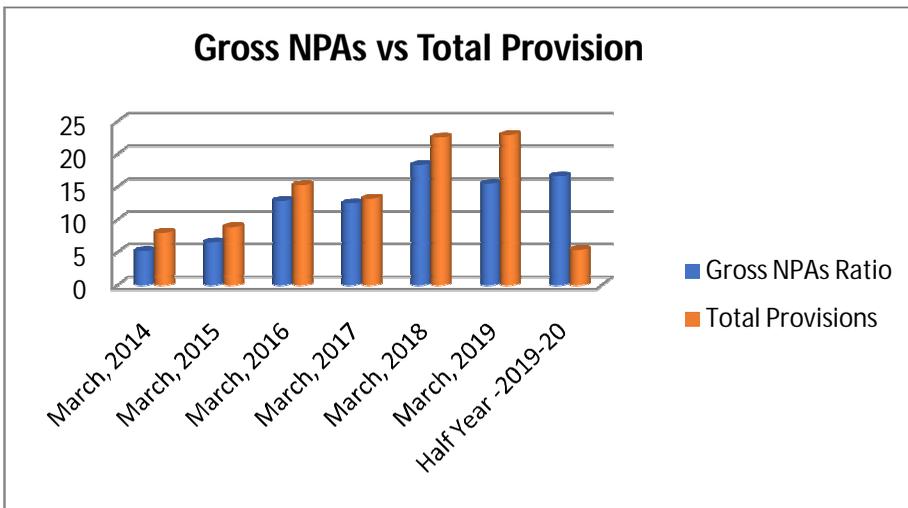


Chart -4

From the above chart it appears that as long as NPAs are increasing bank has to plan the bigger provisioning. Provision is nothing but the profits we are adjusting from the gross income of the bank and ultimately it's deeply hurt the profitability of the bank.

As per the chart if look the both blue and red lines which shows Gross NPAs ratio and Total Provisions are clearly state that with the larger NPAs ratios provisioning also has increased and ultimately profits are sacrificed. In the current financial year, the story of bank has changed as NPAs has been held the current level but the provisioning got down from the highest level of Rs 22,971 crores to Rs 5400.39 (half yearly). This is because bank's NPAs recovery policy got strengthened and target of Rs 2000 crores of NPA recovery decided and Rs 700 recovered in the half year time.



## 7. Summary, conclusion and recommendation

### 7.1 Summery

Also by looking result of last two quarters it is observed that bank has started showing profits in its balance sheet and in Q2 of financial year 2019-20 they have booked the profit of 507cr. This shows that bank has started showing its strength. They have left the past behind and recovered from the bad phase and started the new journey towards growth. Bank's management is believing that in the coming time country's GDP will see the upswing and it will be supported by continuous investment and robust consumption also they are expecting the impetus from the fiscal policy. FY 2019 was challenging for the bank as there was huge stressed asset with the bank and hence there was high provisioning has been done. There was capital constraint for the bank and hence it has hampered the profitability as well. Bank has made the strategy to come out from this situation and made the strategy as well for the same due to this bank has recovered the substantial NPAs and booked the profit in the first half of FY, 2020.

Bank has also launched greater mobile banking and net-banking services in to reach the young customers in the market place who are techno savvy and finally which can increase the reach of the bank. This will also destroy the fixed mindset of customers about the public sector banks, as most of the customer having the belief that public sector banks are not much techno savvy and they are good for the traditional banking only.

### Conclusion

NPAs are the junk for any banking system as well as they always eat the profitability of the bank and hence commercial banks are conscious and concern about the NPAs. PNB figures of NPAs vs. profitability shows no significance on each and hence we rejected the null hypothesis however this is the acceptance as NPAs are always considered to be eating the profit of the commercial bank and hence when NPAs goes high profitability goes down.

PNB has reduced the provisioning requirement substantially in the June quarter. In the last two years, PNB had an impact of a fraud (Nirav Modi and Mehul Choski) for which they had to make a provision of Rs 15,000 crores spread over two years. In this fiscal, they don't have any legacy provisioning requirement.

### 7.2 Recommendations

Below are the recommendations from the above study,

- a. Bank should focus on the loss and assets to recover them in order to increase the profitability of the bank which in turn will reduce the NPAs as well.
- b. Substandard assets need to be monitoring such a way that it should be categorized in the standard assets.



- c. As the research and data collected for the study purpose we found that there is significance relationship between NPAs and Total Provisions. So once bank should start focus to reduce NPAs, automatically they should not have to spare money in provisioning and that will ultimately help in increasing the profitability and more liquidity.
- d. Based on the study of PNB one of main reason of NPAs is also lending with low collateral or without collateral so it is recommended to have sufficient collateral while lending the money to any kind of corporate or individual customers.
- e. Bank may focus on retail loans rather than the big commercial loans which can increase the bank's penetration in the market as well as the small loans can lead to less risk of being NPA a large sum of money in a one go. Also small loans may increase the higher customer base which can increase the other product sell for them and ultimately customer engagement would be superior.
- f. Every month bank is publishing the list of willful defaulters on their website and have the long records of doing so (<https://www.pnbindia.in/wilful-defaulters.html> ) but they can also start focusing on showing the top 10 defaulters name on their websites as well as on the leading newspapers / NEWS Channels / Social Media on the regular basis in order build the reputation pressure on them so they clean up the loans on priority basis.
- g. There should be better enactment of SARFAESI Act can be done which can simply help in recovery of assets / dues, however PNB must be using them and setting up the higher target of NPAs recovery. In the current quarter of FY 2019-20 in Q2 also it is seen that bank has recovered the notable amount of NPAs.
- h. Recovery measures and steps against Large NPAs- the RBI coordinated the Public Sector Banks to inspect all the documents of default of Rs. 1 crore or more and document criminal cases against strong defaulters. The governing body is asked to audit NPAs records of 1 crore or more with reference to the responsibility of staffs in banks exclusively.
- i. Rotation of Staff - If HR practices in the banks are improved effectively and efficiently it can help to minimize and as well as reduce the frauds. If all the officers in banks are rotated in their roles, it could not only increase the supervision capacity of banks, but also helpful in overall development of banks and also all the staffs will gain knowledge of banking policies and regulations.



## Bibliography

1. Punjab National Bank. (n.d.). Retrieved February 16, 2020, from pnbindia: <https://pnbindia.com/profile.html?page=profile.html>
2. Avani Ojha, H. C. (2018). The Comparative study regarding impact of NPAs on working of the SBI and the Punjab National bank. *Abhinav National Monthly Referred Journal of Research in Commerce and Management* , 7 (3), 52-62.
3. India, t. o. (2019, november 6). pnb posts rs 507cr profit in q2 as provisions ease. *punjab national bank . vadodara, gujarat, india: times of india.*
4. Press Information Bureau Government of India, M. o. (2018, July). Measures to recover loan Amount From NPAs. Ministry of Finance , NA.
5. RBI. (2019, September). Reserve Bank Of India. Retrieved from <WWW.RBI.GOV.IN>
6. Santhanakrishnan, D. G. (2013). Non Performing Assets : A Study Of SBI. *Asia Pacific Journal Of Research*, 1 (X). 81-88.
7. Times, E. (2019, AUGUST (Swathi.M.S, 2019) 02). PNB plans aggressive recoveries to contain gross NPA below 12%. Mumbai, Maharashtra, India: <https://economictimes.indiatimes.com/industry/banking/finance/banking/pnb-plans-aggressive-recoveries-to-contain-gross-npa-below-12/articleshow/70484934.cms?from=mdr>.
8. Swathi.M.S, S. (2019). a study on different ways and means to fix non- performing assets in the banks. *ijmsrr* , 06, 21-24.
9. Finance, M. o. (2019, june 24). Press Information Bureau Government of India . Retrieved from <https://pib.gov.in/newsite/PrintRelease.aspx?relid=190704>: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=190704>
10. Staff, P. N. (2019, December). Profile Of Punjab National Bank. Retrieved from Punjab National Bank Website: <https://www.pnbindia.in/downloadprocess.aspx?fid=lwS2UC0Bvme58fKJBnQ9ew>  
==



## ONLINE LEARNING VS CLASSROOM LEARNING- A LITERATURE STUDY

**Sreeja K**

Assistant Professor, Department of Management Studies  
New Horizon College, Bangalore

### **Abstract**

This conceptual paper is an attempt to understand the changing role of educator in online learning and find out the benefits and problems of online learning. With this purpose the paper presents a literature review in the topic. The globalization and technological advancement have created an environment for global learning. E-learning/online learning/virtual learning is massively used nowadays by educational institutions and business organizations. Almost all organizations and educational institutions started using various online learning platforms in this global lockdown due to the attack of corona virus. Hence, it is important to find out the advantages and disadvantages of online learning in comparison with traditional classroom learning.

**Key words:** - On Campus Learning , Online Learning, Role of Educator

### **Introduction**

Learning is a process of acquiring knowledge, inculcating or enhancing skill which will lead to performance or success. We had the traditional classroom learning for many years. The technological advancement resulted in E-learning or online learning. As a result of this there are three kinds of learning environment :- classroom learning environment, online learning environment and by combining both of these learning environments, there exists blended learning environment.

Online learning can be defined as “learning that takes place partially or entirely over the Internet” (U.S. Department of Education, 2010). Learning that takes place partially or entirely over the internet that makes information or knowledge available to users disregarding time restrictions or geographic proximity (Sun et al. 2008). The delivery format in online learning goes by a number of names: e-learning, Internet learning, distributed learning, networked learning, tele-learning, virtual learning, or web-based learning (WCET, 2004).

This change in the learning environment has its impact on instructor as well as students. Online learning has brought a change in the role of instructors as well as students. Many people have favourable attitude towards online learning and vice versa. Let us examine the previous researches to find out the changes brought by online learning.

### **Literature review**

#### **The changing role of educators**

The shift from the traditional face to face classroom to online learning resulted in change in the role of educators in higher education. This change is a result of emergence of new theories of teaching and learning and development of new technologies which support and/or transform teaching and learning in higher education (Farrell et. al, 2019). Coppola et al. (2002) discussed about the changing role of educators and mentioned

---



about three main roles:-managerial, affective and cognitive. The cognitive role: As online teaching requires understanding, the affective role:-as relationship maintenance is required in online environment, the managerial role: - as class management changes from traditional to online.

There are three roles unique to the online environment; (1) a designer/planning role, which includes course planning, organising, leading and controlling; (2) a social role which is concerned with influencing students' relationships with their peers and educator(s) and (3) a cognitive role which "deals with mental processes pertaining to perception, learning, information storage, memory, thinking and problem-solving" (Alvarez et al.,2009)

(Farrell et. al, 2019) provided a synopsis of the definitions of the main roles mentioned in the six articles Paulsen (1995), Berge (1995), Goodyear et al. (2001), Coppola et al. (2003), Williams (2003), Bawane & Spector (2009) :-

1. Managerial/ Organisational/ Administrator:- Formulates the discussion objectives, the timetable, procedure, rules and norms of decision-making. Deals with issues of learner registration, security, record keeping and so on.
2. Social/ Process facilitator/ Affective :- Maintain a friendly environment. Facilitates many online activities which support student learning. Responsible for maintaining a positive virtual classroom atmosphere.
3. Pedagogical/ Content/ Cognitive/ Intellectual :- Ensure the learners understanding of course content and designs and implement instructional strategies. . Deals with the mental processes pertaining to perception, learning, information storage, memory, thinking, and problem solving.
4. Technical/ Technologist:- Ensure participants' comfort with the systems and the software. Selects, develops and suggests appropriate resources for learning.
5. Assessor/ Evaluator :- Provides grades, feedback and validates learners work. Monitors individual and group progress and performance.
6. Designer/ Instructional design :- Designs online learning tasks and instructions for interactive technologies.
7. Adviser/ Counsellor :-Works with students individually to provide advice on how to get the most out of their course and suggests measures to enhance performance.
8. Researcher: - Engages with the development of new knowledge that is relevant to the content of the course.
9. Professional: - Complies with ethics and standards, communicates effectively, updates knowledge and is committed to the learning process.

(Farrell et. al, 2019) put forward an Openteach model of online educator roles by providing a synthesis of the role definitions provided in the existing literature which consist of the following seven roles:- facilitator, content expert, managerial, pedagogical, social, technical, and assessor.

### **Online vs Classroom learning**

Online education has many advantages to both educators and students which include no commuting, ease of access for learners/ students who have career and family obligations (Ascough, 2002; Cook, 2007; Summers, Waigandt, & Whittaker, 2005). Online learning can provide new information not contained in traditional sources, and effectively



reinforce other course information by offering examples, explanations, assessments, and exercises. Thus online instruction can enhance learning compared to what can be accomplished using a classroom only approach (McEwen, 1997).

Online learning allow students to to focus more of their attention on the content of the course and less on issues such as parking, traffic, and other problems that can arise in the case of a traditional class environment (Thomson, 2010). Improved ability to use new technologies for the development and delivery of instruction: instructor can prepare course materials and deliver them in creative ways to motivate students, Improved ability to maintain contact with all students in the course:- Online teaching gives an opportunity to teachers to use numerous strategies to enhance student engagement because their t participation is must, Improved pedagogical versatility:- The proficiency of the teacher enhances by using various pedagogical tools, Improved student access to the course material during instructor absences, Improved student learning due to the repetitive availability of course material, including practice problems and solutions uploaded by the teacher (Mischelle Taylor Stone & Suzanne Perumean-Chaney, 2011). (Blackmore, Tantam, & van Deurzen, 2008) found that students learning through online were significantly more satisfied with course materials, were significantly more satisfied with their teachers, and spent significantly more time on course materials when compared with the on-campus students. Students who have undergone online learning scored better than their face-to-face counterparts in the summative assessments, even though they reported about their lower confidence about content mastery. It was also found that online students spend more time on content mastery and peer discussions which led to better result compared to the On campus group. Student satisfaction was also higher for the online student group than for the On campus student group. (Mgutshini, T., 2013). online instruction promote reflective thought and deep learning through realistically integrating and applying principles learned. Online instruction increase engagement and provide activities that actively engage learners to analyze, synthesize, and evaluate information while constructing knowledge (Driscoll & Carliner, 2005).

Five positive aspects of online learning are:- schedule flexibility, improved computer and Internet skills, positive interaction between classmates and exchange of ideas, useful course materials, and information exchange throughout the course. Three negative aspects include:- problems with technology, feeling disconnected from classmates, and the perception of too much course material (Moore et al., 2006). There are a multitude of options for students to work collaboratively and cooperatively with other learners and/or the instructor in live debates, reflective journal entries, peer reviews, discussion boards, and video or audio teleconferencing (Savenye, 2005). In the case of online learning students can repeat the material until they gain mastery of it by reflecting on and analyzing it (McIsaac & Gunawardena, 1996). Synchronous technologies can be used as a supplement or replacement for face-to-face or asynchronous learning (Schullo et al., 2007).

Murdock and Williams (2011) conducted a study to findout students' perceptions on online and on – campus learning and found that there is no significant difference in students' perceptions on both. Summers et al. (2005) found out the differences in course satisfaction between online and on-campus courses. They found that there are



significant differences on seven of sixteen items . online course participants rated the following items significantly lower:- instructor explanations, instructor enthusiasm, instructor openness to students, and instructor interest in student learning (instructor-related), quality of class discussion, quality of questions/problems, and evaluation and grading (class-related) in spite of the fact that the same professor taught both sections of the course.

Few potential problems of online learning discussed in various researches include:- a sense of learner isolation, learner frustration, anxiety, and confusion, higher student attrition rates, the need for greater discipline, writing skills, and self-motivation , and the need for online users to make a time commitment to learning (Brown, 1996; Hara & Kling, 2000; Piccoli, Ahmad, & Ives, 2001; Frankola, 2001; Laine, 2003; Ryan, 2001; Golladay, Prybutok, & Huff, 2000; Serwatka, 2003). A study conducted by (Laine, 2003) found out that online learning eliminates classroom interaction time, where a significant amount of “real learning” takes place as users assimilate information, utilize software, apply knowledge to problem solving, and interact with the educator and other learners .

### Conclusion

McDonald (2001) discussed five common characteristics of effective learning strategy for online learning:- Openness in the Education Process – choice and negotiation within the course, self-and peer-assessment, and tutor-learner relationships, Learning to Learn –students’ focus on learning, Prior Knowledge and Experience- results in discussion and clarification during the learning process, Problem/Action-Based Learning, A Sense of Community – learning activities ,group activities, encourage cooperation among group members and create a sense of community and promotes of learning as a social process .

### Bibliography

- i. Alvarez, I., Guasch, T., & Espasa, A. (2009). University teacher roles and competencies in online learning environments: A theoretical analysis of teaching and learning practices. *European Journal of Teacher Education*, 32(3), 321–336. <https://doi.org/10.1080/02619760802624104>
- ii. Ascough, R. S. (2002). Designing for online distance education: Putting pedagogy before technology. *Teaching Theology and Religion*, 5(1), 17-29. doi:10.1111/1467-9647.00114
- iii. Blackmore, C., Tantam, D., & van Deurzen, E. (2008). Evaluation of e-learning outcomes: experience from an online psychotherapy education programme. *Open Learning*, 23(3), 185-201. doi:10.1080/02680510802420027
- iv. Brown, K. M. (1996). The role of internal and external factors in the discontinuation of off-campus students. *Distance Education*, 17(1), 44-71.
- v. Cook, D. A., (2007). Web-based learning: Pros, cons and controversies. *Clinical Medicine*, 7(1), 37-42. doi: 10.7861/clinmedicine.7-1-37
- vi. Coppola, N. W., Hiltz, S. R., & Rotter, N. G. (2002). Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks. *Journal of Management Information Systems*, 18(4), 169–189. <https://doi.org/10.1080/07421222.2002.11045703>
- vii. Driscoll, M. & Carliner, S. (2005). *Advanced web-based training strategies*. San Francisco: Pfeiffer.
- viii. Frankola, K. (2001). Why online learners drop out. *Workforce*, 10, 52-60.
- ix. Golladay, R., Prybutok, V. & Huff, R. (2000). Critical success factors for the online learner. *Journal of Computer Information Systems*, 40(4), 69-71.
- x. Hara, N. & Kling, R. (2000). Students’ distress with a web-based distance education course: An ethnographic study of participants’ experiences. *Information, Communication and Society*, 3(4), 557-579.
- xi. Holmes, C. M., & Reid, C. (2017). A Comparison Study of On-campus and Online Learning Outcomes for a Research Methods Course. *The Journal of Counselor Preparation and Supervision*, 9(2). <http://dx.doi.org/10.7729/92.1182>



- xii. Laine, L. (2003). Is e-learning effective for IT training? *T +D*, 57(6), 55-60.
- xiii. McDonald, J. (2001). On-line learning: A radical pedagogy? *Adults Learning*, 12(5), 20-3.
- xiv. McIsaac, M. S., & Gunawardena C. N. (1996). Distance Education. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology: a project of the Association for Educational Communications and Technology* (pp. 403-437). New York: Simon & Schuster Macmillan.s
- xv. McEwen, T. (1997). Communication training in corporate settings: Lessons and opportunities for the academe. *Mid-American Journal of Business*, 12(1), 49-58.
- xvi. Mgutshini, T., 2013, 'Online or not? A comparison of students' experiences of an online and an on-campus class', *Curationis* 36(1), Art. #73, 7 pages. <http://dx.doi.org/10.4102/curationis.v36i1.73>
- xvii. Michelle Taylor Stone & Suzanne Perumean-Chaney(2011), *The Benefits of Online Teaching for Traditional Classroom Pedagogy: A Case Study for Improving Face-to-Face Instruction*, *MERLOT Journal of Online Learning and Teaching*, Vol. 7, No. 3.
- xviii. Moore, S. F., Degiorgio, L., Kampfe, C. M., Porter, D. F., Sax, C., McAllen, L., Sales, A. P., & Smith, S. M. (2006). Rehabilitation student perceptions of web-based learning. *Rehabilitation Education*, 20(1), 31-41. doi:10.1891/088970106805065412
- xix. Murdock, J., & Williams, A. (2011). Creating an online learning community: Is it possible? *Innovative Higher Education*, 36(5), 305-315. doi:10.1007/s10755-011-9188-6
- xx. Ní Shé, C., Farrell, O., Brunton, J., Costello, E., Donlon, E., Trevaskis, S., Eccles, S. (2019) *Teaching online is different: critical perspectives from the literature*. Dublin: Dublin City University. Doi: 10.5281/zenodo.3479402
- xxi. Piccoli, G., Ahmad, R. & Ives, B. (2001). Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS Quarterly*, 25(4), 401- 425.
- xxii. Ryan, S. (2001). Is online learning right for you? *American Agent & Broker*, 73(6), 54-58.
- xxiii. Savenye, W.C. (2005). *Improving Online Courses: What is Interaction and Why Use It?* (Undetermined). *Distance Learning*, 2(6), 22-28.
- xxiv. Schullo, S., Hilbelink, A., Venable, M. & Barron, A. E. (2007). Selecting a Virtual Classroom System: *Illuminate Live vs. Macromedia Breeze*. *MERLOT Journal of Online Learning and Teaching*, 3(4), 331-345
- xxv. Serwatka, J. (2003). Assessment in on-line CIS courses. *Journal of Computer Information Systems*, 43(3), 16-20.
- xxvi. Summers, J. J., Waigandt, A., & Wittaker, T. A. (2005). A comparison of student achievement and satisfaction in an online versus traditional face-to-face statistics class. *Innovative Higher Education*, 29(3), 233-250. doi :10.1007/s10755-005-1938-x
- xxvii. Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183–1202. doi:10.1016/j.compedu.2006.11.007
- xxviii. Thomson, L. D. (2010). Beyond the Classroom Walls: Teachers' and Students' Perspectives on How Online Learning Can Meet the Needs of Gifted Students. *Journal of Advanced Academics*, 21(4), 662-712. <http://joa.sagepub.com.pluma.sjfc.edu/content/21/4/662.full.pdf+html>
- xxix. WCET:Western Cooperative for Educational Telecommunications, (2004). *Distance education: A consumer's guide* < <http://wcet.wiche.edu>> Accessed 16.07.2012



## A STUDY OF OCCUPATIONAL STRESS AMONG TRAFFIC POLICE IN BENGALURU CITY

**Dr.Suma Singh**

Associate Professor, Department of Economics, Mount Carmel College, Bengaluru

**Spoorthi.M.S**

II MA Public Policy, Mount Carmel College, Bengaluru

### **ABSTRACT:**

Occupational stress is a feature of modern work place. Traffic police personnel are working in the most stressful environment which has a negative impact on work and their personal life. The paper is a study of the causes for occupational stress among the traffic police in Bengaluru a city with high population of humans and vehicles and impact of the stress on the health of the police personnel.

The paper analyses the causes and impact of occupational stress on health of police personnel. Questionnaire and interview methods was used for this exploratory and descriptive work. The paper also puts forward suggestions to improve the work environment to minimize the occupational stress.

**Key Words:** Occupational Stress, Health, Traffic Police Personnel, Bengaluru

**Introduction:** In modern workplaces, Occupational Stress has emerged as a grave health threat. Stress affects an individual, his family and his physical and mental wellbeing. One of the most stressful work space is of the police personnel who are the most critical players in any society. Among the police personnel it's the traffic police who are on the streets of cities and towns working in the most inhospitable work environment that encounter the maximum occupational stress. The occupational stress for a Traffic Police personnel is related to both external and internal factors. External factors comprise the physical environment, the job, relationships with colleagues, home environment, family dynamics, and also the situations/challenges/difficulties and expectations a Traffic Police personnel is confronted with on a daily basis. The internal factors which influences the Traffic Police personnel ability to handle stress includes his/her nutritional status, overall health and fitness levels, emotional well-being, and the amount of sleep and rest attained.

Bengaluru the IT capital of India has seen a jump in its population from 6.53 million in the 2001 to 9.58 million in the 2011. In 2019 the population was estimated to be around 12.476 million. This makes Bengaluru the 24<sup>th</sup> most populous city in the world. This has also meant a sharp rise in vehicular traffic on the roads of the city. There are 80.45 lakh vehicles in Bengaluru with 1750 vehicles getting registered every day according to the Transport Department. A sanctioned strength of 5306 personnel regulates the traffic across the 44,000 intersections present in the city. The exponential rise in human and vehicular population makes policing a challenge and a nightmare for Bengaluru traffic



police. In this background the current study was undertaken to assess the occupational stress among the traffic police in Bengaluru city.

**Objectives and Research Methodology:**

1. To determine the nature and causes of occupational stress among Traffic police in Bengaluru.
2. To study the impact of occupational stress on the health among the Traffic police personnel in Bengaluru

The study undertaken is qualitative in nature and the research design is exploratory and descriptive in nature. To study the objectives, mainly primary data sources are utilised to study the stated objectives. Sample survey method with a sample size of 200 was drawn from traffic police across the city and a curated three-page questionnaire was used to collect the required data from the Traffic Police personnel of city.

**Findings:**

- a. Based on review of literature the study listed the common stress factors at work place among police personnel. The questionnaire sought the feedback among the respondents on the listed 18 stress factors and the responses are summed up in the table below:

**Table 1: Nature of Stress among the Traffic Police  
(Figures given are in percentage)**

Parameters	Very Stressful	Moderately Stressful	Not Stressful
1. Shift Hours	26	72	2
2. Long Working hours	98	2	-
3. Working Conditions	40	60	-
4. Monotony & Boredom	12	84	4
5. Excessive Paperwork	69	31	-
6. Job Pressures	79	21	-
7. Non grant of leave	21	71	8
8. Delayed Promotions	45	52	3
9. Inadequate Salary	23	31	46
10. Limited Opportunities for Career Advancement	57	41	1
11. Frequent Transfers	37	61	2
12. Departmental Enquiries	75	25	-
13. Relationship with colleagues	15	13	72
14. Organizational pressures	44	50	6
15. Need to control emotions	52	4	44
16. Physical threat at work	61	38	1
17. Disruption of Family life	62	38	-
18. Negative Attitude of Public towards police personnel	61	38	1



From the above table we can infer the following with respect to the nature and causes of stress among traffic police personnel:

- The long working hours which go beyond the stipulated eight hours of working is the prime cause for stress among the respondents (98%). The long working hours disrupts their personal life and biological clock.
  - Job pressures in terms of the dealing with the superiors and public was a major cause of stress (79%).
  - Departmental enquiries initiated when there is a misconduct of a government servant as per the conduct rules laid down in the KCS (CCA) Rules of 1957 is also listed as another major cause of stress among the traffic cops (75%). These enquiries are looked as barriers in professional growth and also cause for personal embarrassment.
  - The other major stress inducers identified in the study are – excessive paper work (69%), disruption of family life (62%),negative attitude of general public (61%), physical threat at work (61%) and limited career advancement opportunities (57%).
  - In the moderately stressful factors monotony and boredom, shift hours at work, non-grant of leave, frequent transfers, working conditions and delayed promotion were ranked high.
  - Healthy relationship with colleagues and adequate salary were the positive inducers among the respondents.
- b. To study the impact of occupational stress on the health of the traffic police personnel the factors were classified into two major categories for the purpose of this study, and they are as follows:
- i. Factors affecting the body and,
  - ii. Factors affecting the mind

The findings from the survey is summed up in the table below:

**Table 2a: Occupational Stress & Health- Factors affecting the Body**  
(Figures given are in percentage)

	Always	Frequently	Occasionally	Never
1. Headaches	80	15	5	-
2. High blood pressure	60	10	10	10
3. Blood sugar fluctuations	5	15	-	80
4. Excessive fatigue	-	30	40	30
5. Weight gain	20	10	10	60
6. Excessive use of Alcohol	-	20	20	60
7. Excessive use of Tobacco	40	10	10	40
8. Lack of Sleep	-	30	30	40
9. Respiratory Problems	-	-	50	50
10. Skin issues & damage	70	15	10	5

From the above table we can infer the following with respect to occupational stress and body health with among traffic police personnel:

- Given the nature of work headaches is the most common health problem the personnel are facing. 160 of the interviewed policemen sited headaches as the most common problem that aggravated discomfort at work place and added on to further stress.
- The high levels of pollution and exposure to sun is triggering the diseases related to the skin according to 140 respondents. The common skin related problems listed by the traffic policemen were Tanning, Pigmentation, sun burns, skin irritations, and wrinkling.
- Stress is positively correlated to high blood pressure as research shows. 60% of the respondents cutting across age groups listed high BP as a major health concern.
- Given the nature of work and long working hour's excessive fatigue was another health hazard the personnel encountered.
- Respiratory problems is another health challenge which over 50% of the respondents reported given the pollution levels they encounter at work place.
- Use of substances like tobacco and alcohol among the personnel is in many ways related to the occupational stress. Over 60% of the respondents used tobacco and 40% consumed alcohol. This high usage of substances affected their health and personal life.
- Weight gain was another health issue that was found among 80 of the respondents. This was related to the work environment and erratic eating habits.

**Table 2b: Occupational Stress & Health- Factors affecting the Mind  
(Figures given are in percentage)**

	<b>Always</b>	<b>Frequently</b>	<b>Occasionally</b>	<b>Never</b>
1. Anxiety	65	15	20	-
2. Loss of memory (forgetfulness)	-	70	30	-
3. Depression	-	-	5	95
4. Frequent loss of temper	15	5	-	80
5. Irritation / Aggressiveness	10	-	40	50
6. Traumatic Incidents	0	30	30	-
7. Job dissatisfaction	25	-	25	50
8. Boredom	10	10	28	52
9. Unworthiness	-	10	10	80
10. Lack of concentration	-	2	13	85

With respect to the impact of occupational stress on mental health we can observe the following:

- Given the nature of work and limited family time, anxiety was the most common mental health issue among the police personnel. Studies show that this can trigger higher usage of substances like alcohol, tobacco and drugs.



- Traumatic incidents like accidents and deaths cause a lot of physical, emotional, psychological distress for the traffic police personnel. Over 60% of the respondents listed it as a factor affecting their mental health.
- Around 50% of the personnel expressed job dissatisfaction which was due to poor working conditions, over working, limited promotion leading to a lag in the career advancement and lack of recognition.
- It is heartening to observe that majority of the police personnel did not encounter the common mental health challenges like depression and temper loss at work place.

### Way Forward:

Traffic personnel are the life line in metros like Bengaluru. The adverse traffic police-population ratio in the city is an indicator of the general stressful work environment that the police personnel operate in.

At the organizational level the focus must be on the improving the work environment. Following measures would be recommended to make the work environment less stressful:

- The need is to have reasonable working hours as the long working hours is the most stressful factor. This will also help the personnel to strike work-life balance.
- Monetary benefit for personnel posted at highly congested areas can be proposed thereby compensating for the health risks that came with their work environment.
- Technology must be integrated into the work space in a bigger way. This would ease work pressure and also minimize the unnecessary paper work which many traffic personnel find stressful.
- Departmental enquiries must be handled in a time bound manner so that the personnel are not stressed over the delays and uncertainties of long drawn enquiries.
- The career progression needs to be well stated and rewarding personnel based purely on their work performance must be the HR policy which the department must adopt.
- Granting of leave must be based on need of the traffic personnel and superiors must not be biased or harassing in their approach. This is very important so that the family life-work balance is maintained.
- At an organizational level, the department must engage in image building so that the general public is made aware of the work and contribution of the personnel as appreciation from public can be a morale booster to the workforce.
- Medical insurance and benefits must be provided as the nature of work makes the personnel highly susceptible to medical threats.
- Regular medical check-ups must be a part of the system. Protective masks and creams must be given to address the rising respiratory and skin problems.

In conclusion occupational stress affects traffic personnel at a personal level and also adversely affects the organizational efficiency. Given the critical role they play it's important that policy measures must be initiated to build a work environment that enables the personnel to discharge their duties efficiently with minimal stress.



### References:

1. Singh, S., & Kar, S. K. (2015). Sources of occupational stress in the police personnel of North India: An exploratory study. *Indian Journal of Occupational and Environmental Medicine*.
2. Ragesh, G., Tharayil, H. M., Raj, M. T., Philip, M., & Hamza, A. (2017). Occupational stress among police personnel in India. *Open Journal of Psychiatry & Allied Sciences*, 8(2), 148.
3. Occupational Stress among Male and Female Police officers Engaged in Traffic Duty. *International Journal of Humanities and Social Science Invention*, 6(12), 52–54.
4. Ma, C. C., Andrew, M. E., Fekedulegn, D., Gu, J. K., Hartley, T. A., Charles, L. E., Violanti, J. M., & Burchfield, C. M. (2015). Shift work and occupational stress in police officers. *Safety and health at work*, 6(1), 25–29.
5. Gowda, G., & Thenambigai, R. (2020). A Study on Respiratory Morbidities and Pulmonary Functions among Traffic Policemen in Bengaluru City. (*Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 45(1) 23–26).



## EMOTIONAL INTELLIGENCE AND SPIRITUAL INTELLIGENCE OF THE SECONDARY SCHOOL TEACHERS IN RELATION TO TEACHER EFFECTIVENESS

**Dr. Shri Kant Dwivedi**

Associate Professor

School of Education, Galgotias University

### Abstract

The purpose of this research is to find out the emotional intelligence, spiritual intelligence and teacher effectiveness of secondary school teachers with reference to gender, location of the school and types of institute. Normative survey method was used for the study by the researcher. For the purpose of this research a sample of four hundred teachers was selected through stratified random sampling technique. The data was collected and analyzed by using various statistical methods i.e. mean, standard deviation, skewness, kurtosis, t-test and coefficient of correlation. The findings of research are; that the level of emotional intelligence spiritual intelligence and teacher effectiveness of secondary school teachers is high and there are no significant impact of locality of the school and types of school on emotional intelligence, spiritual intelligence and teacher effectiveness of secondary school teachers but gender has significant influence.

**Key Words:** Emotional Intelligence, Secondary School Teachers, Spiritual Intelligence and Teacher Effectiveness.

### Introduction

Teaching is a profession that forms the quality education. It is a core profession which formulates all other professions possible. Highly-qualified, caring and dedicated teachers improve curriculum and assess the schools are secure and of the maximum standards in the world. It can be accomplished merely when teachers have optimistic characteristics and qualities in them. A good quality teacher who is morally, ethically, and spiritually a model for the students, has realistic ideas and convictions, which he sets into action regardless of consequences. According to Sheela Mangla (2001), "Excellent teachers show a stability or balance of qualities, continuous development for excellence, willingness for guidance, set high-value principles so that they can equip the learner intelligently and effectively, they are purposeful whose energies and values are prearranged and focused on their instruction work; they are thinkers and well constructive workers with intellectual bend for achievements; they warm up the learners, appreciate their efforts and motivate them to work harder; they have a starvation for brightness, for completeness and wholeness in their ideas; they are receptive and responsive, they have a conscience, are tolerant and persistently inquisitive".

The greater quality teacher is concerned with what the student can do with the subject matter and how knowledge has an effect on the student, and not fundamentally by



means of the mastery of a subject for its own sake. The teacher starts with the innate competencies of the student, his experience in the residence and in the external world, his physical, moral, ethical, and spiritual potentialities and works with him to build up a person who can get together the problems of existence in an intellectual approach. Thus the great teacher is potentially the integrator of individualities, the counsellor and a guide to students, the developer of good citizens and the servant of the nation as protector of the individual.

During the past few decades, teacher effectiveness, emotional intelligence, and spiritual intelligence of teachers have assumed an immense importance in the realm of education throughout the nation and the world. In perspective of burning problems like excessive stress, depression, corruption, suicide, communalism, only mentally, emotionally, spiritually and culturally sublime teachers will lead learners to their good mental health, well being and finally facilitate them in achieving their goals. Spiritual intelligence and emotional intelligence facilitates in making optimistic attitude towards life and also lend a hand in personal effectiveness and career developments. Spiritual and emotional intelligence helps man to comprehend his rationale in life and his position in the universe. Emotional and spiritual intelligence facilitates in recognizing time honoured principles and regulations and applying the same to our modern situation.

#### **Emotional Intelligence and the Teacher**

Emotional Intelligence functions as a means to get better students' learning and facilitates teachers to increase accomplishment in their professional career. Teachers should have a consciousness of their emotions and feelings to assist them to solve their problems. People, who have the higher level of emotional intelligence advantage from a sense of creativity, build up a sense of believable thinking, supervise their nervousness, and establish a high-quality relationship with others. Emotional intelligence is a trigger for an individual to make happy his physical, mental, spiritual, and emotional needs, and to make a triumphant communication with other people (Singh, 2006). According to psychologists, emotional intelligence is dissimilar from other kinds of intelligence for the reason that it has a significant role in learners' contemplation and is very important in their academic achievement (Sharp, 2001).

An emotionally intelligent teacher may perhaps be enhanced identify the antagonizing factors of a position, be less likely to "take the bait" and competent of de-escalating or deflecting a condition by managing or controlling emotions. Emotionally intelligent teachers administer the emotions of learners most effectively. The contemporary classroom situations necessitate that learners be required to learn how to identify and accept dissimilarities in emotional expressions and organization among learners.

#### **Spiritual Intelligence and the Teacher**

International Commission on Education for Twenty-first century (UNESCO, 1996) has viewed that "Education should contribute to every person's complete development-mind and body, intelligence, sensitivity, aesthetics, appreciation, and spirituality". As a result in the current glance of innovation, the quality of being spiritually intelligent is essential for the teachers as well. According to Rego and Cunha (2008) when the individuals have the high level of spirituality in the workplace, it may be more and more responsible for the organization and they have a high loyalty. According to Emmons (2000), person who is spirituality intelligent encompass the ability of utilizing spiritual

---



resources to resolve conflicts and other issues. Noble (2001) assured that spiritual intelligence incorporates the qualities of flexibility and emotional resilience (that may happen out of spiritual experiences), which play a momentous role in psychological health and behaviour. Zohar & Marshall (2000) described that when Spiritual Intelligence is high, one should come out to be intellectual and comprise appropriate behaviour.

A teacher ought to be aware of what his students are thinking. Spiritual intelligence helps him enormous to comprehend this. Teachers are supposed to utilize the best practices and approaches to convene challenging demands of their profession. Teaching is not only conveying the subject matters but also inculcate the moral, ethical, spiritual and social values. Spiritual Intelligence creates self-efficacy, which ultimately facilitates them in managing their task performance at their respective professions, but also assists them in enhancing their relationships with colleagues, parents, and others. Hence, Spiritual Intelligence is very essential to the teacher to train the efficient, effective, and productive citizens to the nation.

### **Need and Significance of the Study**

A nation is built by citizens and citizens are moulded by teachers. Teachers are the real nation builders and educational institutions are the functional heads of all that goes to make the foundation of a nation strong. Schooling is basically the stage of foundation formation for the students where their personality, behavior and character is being given a proper shape which in fact determines the future course of life of the youths. Teacher is acknowledged as the guide and philosopher, the man of higher ideals in shaping the society. They can develop the intellectual growth of the children effectively. The ideal character of teachers leaves an everlasting impression on the minds of their students.

The more emotionally intelligent teachers are, the better equipped they will be as instructors to encourage the positive attitude and happier outlook of their students. Emotional intelligent teacher not only produce happier and well all-rounded students but also the ones who are better adjusted and more successful. Therefore the skill is really required to make the teacher performance very effective. This skill can make the teachers not only able to deal better with their students but with their colleagues as well. Emotional intelligence includes to control own and others feelings and emotions and a balanced state of emotions of a teacher will have healthy influence on student's achievement. Lack of emotional intelligence among the teachers may lead to the development of neurotic behavior of students. So it is obvious that without emotional intelligence and normal behavior of teachers, one cannot think of a well developed society.

The importance of a teacher in an institution is unquestionable. The entire edifice of an organization is shaky if the teaching is weak and ineffective. So the success of an institution is mainly determined by its effective teachers. Effective teachers are the role model of their students. Teachers who play a critical role in the positive development of the youth in all aspects must have teacher effectiveness, otherwise they will do harm than good. Moreover effective and productive learning on the part of the pupils can be achieved by employing effective teachers. Teachers can be the effective source of knowledge when they possess essential skills, knowledge and talents.



Thus spiritual and emotional intelligence of secondary school teachers in relation to teacher effectiveness is the important topic for study. A number of studies have been conducted in the western countries to find out the various factors associated with teacher effectiveness. As far as the investigator knows only a few studies have been conducted in India. That is why, that the present study therefore, is a humble effort in this direction to throw light on the significance of spiritual and emotional intelligence on teacher effectiveness of secondary school teachers. The present study is valuable contribution to the process of improvement in education and will be of immense value for the secondary school teachers.

### **Statement of the Problem**

Emotional Intelligence and Spiritual Intelligence of the Secondary School Teachers in relation to Teacher Effectiveness

### **Research Questions**

For this study following research questions were made that researcher wanted to get answer in his study:

1. What are the levels of teacher effectiveness, spiritual intelligence and emotional intelligence of the secondary school teachers?
2. Which demographic variables have influence on teacher effectiveness, spiritual intelligence and emotional intelligence of the secondary school teachers?
3. Is there any relationship between teacher effectiveness and spiritual intelligence of the secondary school teachers?
4. Is there any relationship between teacher effectiveness and emotional intelligence of the secondary school teachers?
5. Is there any relationship between spiritual intelligence and emotional intelligence of the secondary school teachers?

### **Objectives of the Study**

This study aimed at realizing the following objectives:

1. To find the level of emotional intelligence, spiritual intelligence and teacher effectiveness of secondary school teachers.
2. To find and compare the emotional intelligence of secondary school teachers in relation to gender, location of the school and types of institute.
3. To find and compare the secondary school teacher's spiritual intelligence in relation to gender, locality of the school and types of institute.
4. To find and compare the teacher effectiveness of secondary school teachers in relation to gender, locality of the school and types of institute.
5. To find the relationship between teacher effectiveness and spiritual intelligence of the secondary school teachers.
6. To find the relationship between emotional intelligence and teacher effectiveness of the secondary school teachers.
7. To find out the relationship between spiritual intelligence and emotional intelligence of the secondary school teachers.

### **Hypothesis of the Study**

Following hypothesis were formulated to carry out the study:

1. The level of emotional intelligence of secondary school teachers is high.
  2. The level of spiritual intelligence of secondary school teachers is high.
-



3. The level of teacher effectiveness of secondary school teachers is high.
4. There is insignificant impact of demographic variables i.e. gender, locality of the school and types of institute on emotional intelligence of secondary school teachers.
5. There is insignificant impact of demographic variables i.e. gender, locality of the school and types of institute on spiritual intelligence of secondary school teachers.
6. There is insignificant impact of demographic variables i.e. gender, locality of the school and types of institute on teacher effectiveness of secondary school teachers.
7. There is insignificant relationship between spiritual intelligence and teacher effectiveness of the secondary school teachers.
8. There would be insignificant relationship between emotional intelligence and teacher effectiveness of the secondary school teachers.
9. There is insignificant relationship between emotional intelligence and spiritual intelligence of the secondary school teachers.

### **Methodology**

Normative survey method has been adopted for the present investigation. The present study is an attempt to find the effect of the independent variables namely gender, locality of the school, type of institution, spiritual intelligence and emotional intelligence on dependent variable i.e., teacher effectiveness of secondary school teachers. The present investigation has been confined to a representative sample of 400 secondary school teachers from private and government schools. The sample has been taken from twenty eight secondary schools located in G. B. Nagar, Uttar Pradesh. Stratified random sampling technique has been used for the selection of the sample.

### **Tools for the Study**

The following standardized tools have been administered in the study for the collection of data for the study.

- Spiritual Intelligence Scale (SIS-DD) by Santosh Dhar and Upinder Dhar.
- Emotional Intelligence Scale (EIS-HPD) by Anukool Hyde, Sanjyot Pethe, and Upinder Dhar, 2001.
- Teacher Effectiveness Scale (TES) For Secondary Teachers, Constructed and Standardised by Dr. Pramod Kumar and Prof. D.N.Mutha, 1976.

### **Analysis and Interpretation**

The present study intends to find the teacher effectiveness, spiritual intelligence and emotional intelligence of the secondary school teachers. The formulated hypotheses were tested using suitable statistical methods and techniques like mean, standard deviation, t-test, co-relation and tabulated according to the objective.

### **Data Analysis of Emotional Intelligence, Spiritual Intelligence and Teacher Effectiveness of the secondary school teachers**

**Objective 1:** To find the level of emotional intelligence, spiritual intelligence and teacher effectiveness of secondary school teachers.



**Table 1**  
**Teacher Effectiveness, Emotional Intelligence and Spiritual Intelligence of the secondary school teachers**

Variable	N	Mean	% of Mean	S.D
<b>Emotional Intelligence</b>	400	142.2	83.65	13.75
<b>Spiritual Intelligence</b>	400	222.6	84	11.96
<b>Teacher Effectiveness</b>	400	300.6	87.13	12.86

From the table 1, it can be seen that the mean and standard deviation of emotional intelligence of the secondary school teachers is 142.2 and 13.75 respectively. The percentage of the mean is 83.65, from which it can be inferred that the secondary school teachers are exhibiting a high range of emotional intelligence. So the research hypothesis, “the level of emotional intelligence of secondary school teachers is high” is accepted.

From the table 1, it can be seen that the mean and standard deviation of spiritual intelligence of the secondary school teachers is 222.6 and 11.96 respectively. The percentage of the mean is 84, from which it can be inferred that the secondary school teachers are exhibiting the high level of spiritual intelligence. So the research hypothesis, “the level of spiritual intelligence of secondary school teachers is high” is accepted.

Third research hypothesis is analyzed in the light of the mean scores for the total group. One can score the maximum of 345 for teacher effectiveness. The higher the mean score is the indication of high level of teacher effectiveness. The mean score of the total sample for the present study is found to be 300.06 which is higher than the mid value of 172.5. Hence it is concluded that the higher secondary teachers have high level of teacher effectiveness. So the research hypothesis, “the level of spiritual intelligence of secondary school teachers is high” is accepted.

**Analysis of Emotional Intelligence in relation to certain demographic variables**

**Objective 2:** To find and compare the emotional intelligence of secondary school teachers in relation to gender, locality of the school and types of institute.

**Hypothesis 4:** There is no significant impact of demographic variables i.e. gender, locality of the school and types of institute on emotional intelligence of secondary school teachers.

**Table 2**  
**Emotional Intelligence of secondary school teachers w.r.t Demographic Variables**

	Demographic Variable	Sub-Group	N	Mean	SD	Critical Ratio	Level of Significance 0.05
Emotional Intelligence	Gender	Male	50	140.80	11.86	0.90	Not Significant
		Female	350	142.40	10.41		



nce	Locality of the School	Urban	22 5	140. 87	13. 64	2.54	Significa nt
		Rural	17 5	143. 90	10. 33		
	Types of Institute	Private	2 0 7	140. 89	12. 04	2.41	Significa nt
		Government	1 9 3	143. 6	10. 45		

From the above table 2, it is observed that obtained critical ratio (t) value of emotional intelligence of male and female teachers is 0.90, which is insignificant at 0.05 level. Consequently, the null hypothesis “there is no significant impact of gender on the emotional intelligence of the secondary school teachers” is accepted. The male secondary school teachers have comparatively similar levels of the emotional intelligence as their male counter parts. It may be inferred that gender does not have any significant influence on the levels of emotional intelligence of the secondary school teachers.

From the table 2, it can be observed that obtained critical ratio (t) value of emotional intelligence of residing rural and urban area is 2.54, which is significant at 0.05 level. Hence, the null hypothesis “there is insignificant impact in emotional intelligence of the secondary school teachers teaching in rural and urban schools” is rejected. The secondary school teachers working in rural schools had higher levels of emotional intelligence compared to secondary school teachers working in urban schools. It may be inferred that locality of school had a significant influence on the levels of emotional intelligence of the secondary school teachers.

From the above table 2, it can be observed that the obtained critical ratio (t) value of emotional intelligence of the secondary school teachers working in private schools is 2.41, which is significant at 0.05 level. Consequently, the null hypothesis ‘there is insignificant difference in emotional intelligence of the secondary school teachers working in private and government schools’ is rejected. The secondary school teachers working in government schools had higher levels of emotional intelligence compared to the working in private schools. It may be inferred that the type of school had a significant impact on the levels of emotional intelligence of the secondary school teachers.

**Analysis of Spiritual Intelligence in relation to certain demographic variables**

**Objective 3:** To find and compare the spiritual intelligence of secondary school teachers in relation to gender, locality of the school and types of institute.

**Hypothesis 5:** There is no significant impact of demographic variables i.e. gender, locality of the school and types of institute on spiritual intelligence of secondary school teachers.

**Table 3**

**Spiritual Intelligence of secondary school teachers w.r.t Demographic Variables**

	Demographic Variable	Sub-Group	N	Mean	SD	Critical Ratio	Level of Significance 0.05
Spiritual Intelligence	Gender	Male	50	219.4	12.04	2.01	Significant
		Female	350	223.05	11.88		
	Locality of the School	Urban	22 5	221. 9	10. 80	1.31	Not Significant
		Rural	17 5	223. 5	13. 12		
	Types of Institute	Private	2 0 7	222. 4	11. 17	0.34	Not Significant
		Government	1 9 3	222. 81	12. 79		

From the above table 3, it can be observed that obtained critical ratio (t) value of spiritual intelligence of male and female teachers is 2.01, which is significant at 0.05 level. Consequently, the null hypothesis “there is no significant impact of gender on the levels of spiritual intelligence of the secondary school teachers” is rejected. The female secondary school teachers have comparatively higher levels of spiritual intelligence than their male counter parts. It may be inferred that gender had a significant influence on the levels of spiritual intelligence of the secondary school teachers.

From the above table 3, it can be observed that the obtained critical ratio (t) value of spiritual intelligence of residing rural and urban area is 1.31, which is not significant at 0.05 level. Hence, the null hypothesis “there is insignificant difference in spiritual intelligence of the secondary school teachers working in rural and urban schools” is accepted. The secondary school teachers working in urban schools have similar levels of spiritual Intelligence compared to working in rural schools. It may be inferred that locality of school did not have any significant influence on the levels of spiritual intelligence of the secondary school teachers.

From the above table 3, it can be observed that the obtained critical ratio (t) value of spiritual intelligence of the secondary school teachers working in the private schools is 0.34, which is not significant at 0.05 level. Therefore, the null hypothesis “there is no significant difference in spiritual intelligence of the secondary school teachers working in private and government schools” is accepted. The secondary school teachers working in the government schools have similar levels of spiritual intelligence as the working in the private schools. It may be inferred that type of school did not has any significant influence on the levels of spiritual intelligence of the secondary school teachers.

**Analysis of Teacher Effectiveness in relation to certain demographic variables**

**Objective 4:** To find and compare the teacher effectiveness of secondary school teachers in relation to gender, types of institute and locality of the school.

**Hypothesis 6:** There is insignificant impact of demographic variables i.e. gender, locality of the school and types of institute on teacher effectiveness of secondary school teachers.

**Table 4**  
**Teacher Effectiveness of secondary school teachers w.r.t Demographic Variables**

	Demographical Variable	Sub-Group	N	Mean	SD	Critical Ratio	Level of Significance 0.05
Teacher Effectiveness	Gender	Male	50	296.4	9.06	3.35	Significant
		Female	350	301.2	16.66		
	Locality of the School	Urban	225	301.1	14.70	1.14	Not Significant
		Rural	175	299.95	11.02		
	Types of Institute	Private	20	301.81	13.41	1.53	Not Significant
		Government	19	299.3	12.31		

From the above table 4, it can be observed that the obtained critical ratio (t) value of teacher effectiveness of male and female teachers is 3.35, which is significant at 0.05 level. Hence, the null hypothesis “there is no significant impact of gender on teacher effectiveness of secondary school teachers” is rejected. The female secondary school teachers have comparatively higher levels of teacher effectiveness than their male counterparts. It may be inferred that gender makes a significant influence on the levels of teacher effectiveness of the secondary school teachers.

From the above table 4, it can be observed that the obtained critical ratio (t) value of teacher effectiveness of residing rural and urban area is 1.14, which is not significant at 0.05 level. Hence, the null hypothesis “there is insignificant impact of locality of teacher on teacher effectiveness of the secondary school teachers” is accepted. The secondary school teachers residing in the rural areas had similar levels of teacher effectiveness as residing in the urban areas. It may be inferred that locality of teacher did not have any significant influence on the levels of teacher effectiveness of the secondary school teachers.

From the above table 4, it can be observed that the obtained critical ratio (t) value of teacher effectiveness of secondary school teachers working in private schools is 1.53, which is insignificant at 0.05 level. Hence, the null hypothesis “there is insignificant difference in teacher effectiveness of the secondary school teachers working in government and private schools” is accepted. The secondary school teachers working in government schools have similar levels of teacher effectiveness as working in private schools. It may be inferred that type of school did not have any significant influence on the levels of teacher effectiveness of the secondary school teachers.

**Objective 5: To find the relationship between spiritual intelligence and teacher effectiveness of the secondary school teachers.**

**Hypothesis 7: There is insignificant relationship between teacher effectiveness and spiritual intelligence of the secondary school teachers.**

To test this hypothesis, Karl Pearson's product moment correlation was used for estimating the extent of relationship existing between spiritual intelligence and teacher effectiveness of the secondary school teachers.

**Table 5**  
**Relationship between Teacher Effectiveness and Spiritual Intelligence of the secondary school teachers**

Variable	Mean	S.D	Sample size N	Coefficient of Correlation (r)
Spiritual Intelligence	222.6	11.96	400	<b>0.493</b>
Teacher Effectiveness	300.6	12.86		

The above table 5 makes it understandable that the coefficient of correlation between spiritual intelligence and teacher effectiveness of the secondary school teachers with respect to the sample of the study is 0.493, which is greater than the tabulated value 0.062 with 398 degrees of freedom at 0.05 level. Hence the null hypothesis is rejected. It indicates that there is a strong positive relationship between spiritual intelligence and teacher effectiveness of the secondary school teachers. It suggests that with the increase in spiritual intelligence, the teacher effectiveness of secondary school teachers also increases to a great extent and with the decrease in spiritual intelligence, the level of teacher effectiveness is found to decrease to a great extent.

**Objective 6: To find the relationship between emotional intelligence and teacher effectiveness of the secondary school teachers.**

**Hypothesis 8: There is insignificant relationship between teacher effectiveness and emotional intelligence of the secondary school teachers.**

To test this hypothesis, Karl Pearson's product moment correlation was used for estimating the extent of relationship existing between teacher effectiveness and emotional intelligence of the secondary school teachers.

**Table 6**  
**Relationship between Emotional Intelligence and Teacher Effectiveness of the secondary school teachers**

Variable	Mean	S.D	Sample size N	Coefficient of Correlation (r)
Emotional Intelligence	142.2	13.75	400	<b>0.542</b>
Teacher Effectiveness	300.6	12.86		

The above table 6 makes it understandable that the coefficient of correlation between emotional intelligence and teacher effectiveness of the secondary school

teachers with respect to the sample of the study is 0.542, which is greater than the tabulated value 0.062 with 398 degrees of freedom at 0.05 level. Hence the null hypothesis is rejected. This indicates that there is a strong positive relationship between emotional intelligence and teacher effectiveness of the secondary school teachers. It suggests that with the increase in emotional intelligence, the teacher effectiveness of secondary school teachers also increases to a great extent and with the decrease in emotional intelligence, the level of teacher effectiveness is found to decrease to a great extent.

**Objective 7:** To find the relationship between spiritual intelligence and emotional intelligence of the secondary school teachers.

**Hypothesis 9:** There is insignificant relationship between spiritual intelligence and emotional intelligence of the secondary school teachers.

To test this hypothesis, Karl Pearson's product moment correlation was used for estimating the extent of relationship existing between spiritual intelligence and emotional intelligence of the secondary school teachers.

**Table 7**  
**Relationship between Spiritual Intelligence and Emotional Intelligence of the secondary school teachers**

Variable	Mean	S.D	Sample size N	Coefficient of Correlation (r)
Spiritual Intelligence	222.6	11.96	400	0.792
Emotional Intelligence	142.2	13.75		

The above table 7 makes it understandable that the coefficient of correlation between spiritual intelligence and emotional intelligence of the secondary school teachers with respect to the total sample of the study is 0.792, which is greater than the tabulated value 0.062 with 398 degrees of freedom at 0.05 level. Hence the null hypothesis is rejected. It indicates that there is a strong positive relationship between spiritual intelligence and emotional intelligence of the secondary school teachers. It was noticed that with the increase in spiritual intelligence, emotional intelligence of secondary school teachers also increases to a great extent and with the decrease in spiritual intelligence, the level of emotional intelligence is found to decrease to a great extent.

### Findings

Findings arrived at the result of analyses of the data:

1. Secondary school teachers were found to have the high range of emotional intelligence.
2. Secondary school teachers were found to have the high range of spiritual intelligence.
3. Secondary school teachers were found to have the high range of teacher effectiveness.



4. Secondary school teachers had comparatively similar levels of emotional intelligence with their male peers.
5. Secondary school teachers working in rural schools had comparatively higher levels of emotional intelligence than their peers working in urban schools.
6. Emotional Intelligence of the secondary school teachers working in the private schools was significantly higher than their government school peers.
7. Female secondary school teachers have comparatively higher levels of spiritual intelligence than their male peers.
8. Secondary school teachers working in rural schools have similar levels of spiritual intelligence as their urban school peers.
9. Secondary school teachers working in government schools have comparatively similar levels of spiritual intelligence as their private school peers.
10. Teacher Effectiveness of the female secondary school teachers was significantly higher than their male peers.
11. Secondary school teachers working in government schools had similar levels of teacher effectiveness as their private school peers.
12. Secondary school teachers residing in rural areas have comparatively similar levels of teacher effectiveness as their urban residing peers.
13. A strong positive relationship was reported between teacher effectiveness and spiritual intelligence of the secondary school teachers. It suggests that with the increase in spiritual intelligence, the teacher effectiveness of secondary school teachers also increases to a great extent and with the decrease in spiritual intelligence, the level of teacher effectiveness is found to decrease to a great extent.
14. A strong positive relationship between emotional intelligence and teacher effectiveness of the secondary school teachers was noticed. It suggests that with the increase in teacher effectiveness, the emotional intelligence of secondary school teachers also increases to a great extent and with the decrease in emotional intelligence, the level of teacher effectiveness is found to decrease to a great extent.
15. A strong positive relationship between emotional intelligence and spiritual intelligence of the secondary school teachers was noticed. It was clear that with the increase in spiritual intelligence, emotional intelligence of secondary school teachers also increases to a great extent and with the decrease in spiritual intelligence, the level of emotional intelligence is found to decrease to a great extent.

In the light of the findings following practical implications have been mentioned:

An emotionally stable environment will improve students' mental wellbeing. Teachers should be capable of understanding the changing emotional classroom environment and should be capable of empathizing, supporting and engaging with students at emotional level. Hence, the Clinical Psychologists visits may be scheduled in the educational institutions to improve emotional well-being of teachers which might help in securing their psychological and emotional distress.

Educational policy makers and administrators should organize training programmes and workshops every year in the educational institutions to develop better strategies, techniques and programmes to enhance emotional intelligence, spiritual intelligence and teacher effectiveness skills among the secondary school teachers in line with recent

---



technological trends, problem solving attitude, creativity and critical thinking. Findings may also help teachers become more accountable to their occupation by ensuring that they perform at their best to enhance student learning by their encouragement, task assignments, and tenure considerations and to a range of consequences for their career.

### **Conclusion**

The secondary school teachers possess high level of emotional intelligence, spiritual intelligence and teacher effectiveness. It have been confirmed in the present study that there is a significant contribution of emotional intelligence and spiritual intelligence on teacher effectiveness of secondary school teachers. Emotional intelligence and spiritual intelligence facilitates teacher effectiveness of secondary school teachers, as it is evidenced from the present study. Hence in general, the secondary school teachers should take keen interest in learning high standards of morality and etiquettes and should learn how to control ones emotions and feelings as well as that of others too in order to cope up with the odd situations successfully, which ultimately will prove fruitful in developing the personal as well as professional development of secondary school teachers. This will positively affect teachers to increase and use effective teaching skills while dealing with their students and colleagues as well. Once the students are taught by effective teachers, eventually it will result in taking the future generation in right direction which leads the nation in positive development.

### **Bibliography and References**

- Arménio, R., & Miguel P. C. (2008). Workplace spirituality and organizational commitment: an empirical study. *Journal of Organizational Change Management*, 21(1), 53-75.
- Della, G. S., & Sungoh, S. M. (2019). Influence of Emotional Intelligence on Teacher Effectiveness of Science Teachers, *Psychology*.
- Mukhtar, Y. & Umar, B. M. (2020). Personality traits and emotional intelligence among health care professionals in a tertiary hospital, *International Journal of Psychology and Counselling*.
- Nigam, S. (2019). Study of teacher effectiveness of secondary school teachers in relation to their service stream and caste category, E- methodology.
- Noble, K. D. (2001). *Riding the Wind horse: Spiritual Intelligence and the Growth of the Self*. Cresskill, New Jersey: Hampton Press Inc.
- Rego, A., & Cunha, M.P. (2008). Workplace spirituality and organizational commitment an empirical study. *Journal of Organizational Change Management*, 2(1), 53-75.
- Robert, E. (2000). Is spirituality and intelligence? Motivation, cognition and the psychology of the ultimate concern. *International Journal for the Psychology of Religion*. 10(1), 3-26.
- Sadique, K. P., Victor, C. O., Anthony, A. M. & Mohammed, S. M. (2001). *Teacher Education– Trends and Strategies*. New Delhi: Radha Publications.
- Sadique, K. P., Victor, C. O., Anthony, A. M., Mohammed, M. Y. & Musami, U. B. (2020). Personality traits and emotional intelligence among health care professionals in a tertiary hospital", *International Journal of Psychology and Counselling*.
- Sharp, P. (2001). *Nurturing Emotional Literacy-A Practical Guide for Teachers, Parents and Those Working in the Caring Professions*. London: David Fulton.
- UNESCO. (1996). *Learning: The Treasure within, Report of UNESCO of the International Commission of Education for the 21st century*. Paris: UNESCO publishing.
- Zohar, D., & Marshall, I. (2000). *SQ: Connecting with our Spiritual Intelligence*. New York: Bloomsbury.



## UTILIZATION OF HEALTHCARE SERVICES IN KERALA

<sup>1</sup>Dr.Rejimon P M and <sup>2</sup>Anumol P S

<sup>1</sup>Associate Professor & Research Guide, Post Graduate Research Dept. of Economics,  
Mar Dionysius College, Pazhanji,

<sup>2</sup>Research Scholar, Dept. of Economics, Union Christian College, Aluva

### ABSTRACT

Utilization of healthcare facilities is important in the maintenance of the health of an individual. Kerala has a high density of public and private healthcare facilities. The higher level of education, higher income, etc. increased the utilization of healthcare services. The rural areas have more public health facilities, but the urban areas are plenty in both public and private healthcare facilities. The present study is an attempt to understand the utilization of various healthcare facilities in the study area. The majority of the people in the district uses private hospitals than public hospitals. The poor quality of treatment, long waiting time, lack of free medicines, etc. prevents people from using public healthcare facilities. Modern and advanced treatment in private hospitals attract more people. A large number of people are unaware about the importance of health insurance policies and limited number of people have insurance coverage.

**Key Words** :Healthcare, Utilization, Medicines, Lifestyles,Treatment,Insurance, Diseases.

### INTRODUCTION

Healthcare utilization is the quantification or description of the use of services by persons for the purpose of preventing and curing health problems, promoting maintenance of health and well-being, or obtaining information about one's health status and prognosis. It is the use of healthcare services. Individuals use healthcare services for reasons like prevention, treatment, etc. Major factors influencing the healthcare utilization are distance to the healthcare facilities, income of the consumer, education level, cost of treatment, severity of illness etc.

### STATEMENT OF THE PROBLEM

The changing lifestyles, incidence of communicable, non-communicable,lifestyle and chronic diseases increased the demand for healthcare services in Kerala. The higher costs, poor facilities, etc. are the barriers in the healthcare utilization. Due to the poor facilities, the public healthcare facilities,especially in rural areas are remained unutilized. The higher utilization of private facilities increased the healthcare costs in Kerala and the treatment become unaffordable for the poor people. So the present study aims to examine the utilization of various healthcare facilities in the district.

### SIGNIFICANCE OF THE STUDY

Utilization of healthcare facilities is important in the health status of the individuals. By the better utilization of the available health facilities we can improve our health and treat diseases immediately. The accessibility of healthcare facilities is also important. Health care utilization studies helps to understand the use of healthcare facilities among



the people and the reasons for their utilization and non-utilization. It helps to understand the deficiencies in the existing health infrastructure system.

### SCOPE OF THE STUDY

Health and healthcare are important factors in our day-to-day life. The provision of high quality, affordable healthcare services is an increasingly difficult challenge. The rural – urban variation is widening. Through better utilization of healthcare services an individual can improve his health status. Healthcare studies have a great relevance because it provides information on disease trends, risk factors, healthcare utilization, healthcare costs etc.

### OBJECTIVE OF THE STUDY

The main objective of the study is to examine the utilization of healthcare facilities in the study area.

### METHODOLOGY

The area selected for the study is Thrissur district in Kerala. Both primary and secondary data are used for the study. A sample of 400 respondents has been selected using random sampling. The primary data have been collected using a pre-tested questionnaire. Statistical tools like percentages, chi-square tests, etc. has been used for the analysis of data.

### DATA ANALYSIS AND INTERPRETATION

#### FIRST CHOICE OF TREATMENT

This section examines the first preference of the individuals for treatment when they feel sick and the reasons for the selection. People use various sources for treatment like government hospitals, private hospital, private clinic government and private doctors in residence etc.

Table 1

First Choice of Treatment When Feel Sick

<i>Treatment Facility</i>	<i>Frequency</i>	<i>Percent</i>
Government Hospital	160	40.0
Private hospital	40	10.0
Private Clinic	20	5.0
Private doctor in residence	168	42.4
Govt. doctor in residence	8	2.0
Total	396	100.0

Source: Primary Survey

The above table shows the first choice of the consumers for treatment when they feel sick. Out of the total 396 respondents, 160(40%) utilized government hospital for treatment when they feel sick. About 40(10.0%) people used the private hospital for treatment. Private clinic was the first choice for 20(5.0%) people. There are 168(42.4%) respondents who utilized private doctor in residence. About 8(2.0%) visited a government doctor in residence.

#### NEAREST HOSPITAL AVAILABLE FOR TREATMENT

Distance to the healthcare centre reduces the risk of morbidity and mortality. If the treatment facilities are available near to the home, it will reduce the journey and travel

cost. Usually people use the nearest the hospital available for treatment and will move to other hospitals when the disease become severe or the available facilities in the nearest hospital is poor.

### UTILIZATION OF THE NEAREST HOSPITAL

Utilization of hospital facilities depends on various factors like the type of hospital, availability of doctors, medicines, diagnostic facilities, the quality of the treatment, the quality of service, etc. An attempt was made to understand that whether all people utilising the service of the nearest hospital.

**Figure. 1**

**Utilization of the Nearest Hospital**



Source: Primary Survey

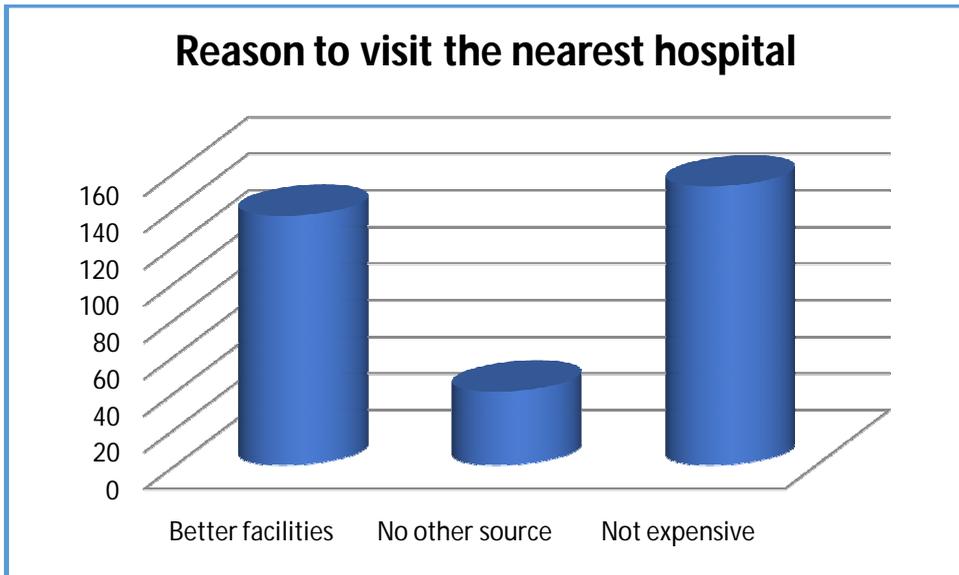
The figure shows that out of the 384 respondents, 244(63.5%) have used to visit the nearest hospital. About 140(36.0%) have replied that they are not interested in visiting the nearest hospital for treatment.

### REASONS FOR UTILIZING THE NEAREST HOSPITAL

The figure shows the reasons for the utilization of the nearest hospital. Better facilities in the hospital were the main reason for 136(34.0%) respondents for utilising the nearest hospital. About 40(10.0%) respondents replied that they have no other nearest sources for treatment. So they are always utilising the nearest source. For 152(38.0%) respondents, the reason for visiting the nearest hospital for treatment was, its less expensiveness.

**Figure 1.1**

**Reasons for Utilizing the Nearest Hospital**



Source: Primary Survey

### REASONS FOR NOT UTILIZING THE NEAREST HOSPITAL

Table 1.1

#### Reasons for not utilizing the Nearest Hospital

<i>Reasons</i>	<i>Frequency</i>	<i>Percent</i>
Poor facilities	80	20.0
Lack of diagnostic facilities	12	3.0
Long waiting time	104	26.0
Lack of doctors	8	2.0
Very expensive	4	1.0

Source: Primary Survey

People have different reasons for not utilizing the nearest hospital. Poor facilities in the hospitals are the main reason for 80(20.0%) respondents for not utilizing the nearest hospital. Lack of diagnostic facilities in the hospitals, prevents 12(3.0%) people from using it. Due to the long waiting time to meet the doctor, 104(26.0%) people did not utilize the nearest hospital. About 8(2.0%) respondents did not visit the nearest hospital due to lack of doctors. For 4(1.0%) respondents it was very expensive and avoided the utilization.

For a large number of people, public hospital is the nearest source. The poor facilities in public hospitals are the major reason for non-utilisation.

### UTILIZATION OF PUBLIC AND PRIVATE HOSPITALS

The public and private hospitals in Kerala provide both inpatient and out-patient treatment. The public services are poor in quality and lacking advanced treatment facilities. But the private sector provides advanced and better treatment compared to the public sector. The poor patient may take more use of public services because of the lack of money. People having higher income always interested to use private services because it is affordable for them.

**Table 1.2****Utilization of Public and Private Hospitals**

<i>Type of hospital</i>	<i>Type of area living</i>		<i>Total</i>
	<i>Rural</i>	<i>Urban</i>	
Public	32(20.0%)	52(21.7%)	84(21.0%)
Private	76(47.5%)	136(56.7%)	212(53.0%)
Both	52(32.5%)	52(21.7%)	104(26.0%)
Total	160(100.0%)	240(100.0%)	400(100.0%)

Source: Primary Survey

Out of the total 400 respondents, 84(21.0%) people used public hospital only. The number of people who visited only public facilities in rural area is 32(20.0%) and in urban area it is 52(21.7%). About 212(53.0%) people in both rural and urban areas used private health care facilities. In rural areas, it is 76(47.5%) and 136(56.7%) in urban areas. About 104(26.0%) people utilised both public and private hospitals. People who used both public and private facilities in rural area is 52(32.5%) and 52(21.7%) in urban areas.

To test the association between the type of hospital treated and the type of area living, the chi square test was conducted.

H<sub>0</sub>: The type of hospital treated is independent of the type of living area.

H<sub>1</sub>: There is a statistically significant association between the type of hospital treated and the type of area living.

#### Chi-Square Tests

	Value	df	P value
Pearson Chi-Square	5.982	2	.050
Not Significant			

The p value is greater than the significance level 0.05, so we accept the H<sub>1</sub>. The type of area, living has no influence on the type of hospital treated.

#### UTILIZATION OF PRIMARY, SECONDARY AND TERTIARY LEVEL TREATMENT

The type of care utilized depends on the healthcare needs of the people. The primary healthcare services are utilized for preventive purposes, maternity care, and for the treatment of minor illnesses. People need better treatment are referred to the secondary or tertiary care. The secondary level treatment is used for the treatment of diseases

which need diagnostic tests like X-ray, ECG, scanning and surgery, etc. The tertiary care is provided for those people who need advanced care.

**Table 1.3**  
**Utilization of Primary, Secondary and Tertiary Level Treatment**

<i>Level of treatment</i>	<i>Type of area living</i>		<i>Total</i>
	<i>Rural</i>	<i>Urban</i>	
Primary level	48(30.0%)	24(10.0%)	72(18.0%)
Secondary level	104(65.0%)	184(76.7%)	288(72.0%)
Tertiary level	8(5.0%)	32(13.3%)	40(10.0%)
Total	160(100.0%)	240(100.0%)	400(100.0%)

Source: Primary Survey

The number of people who utilized primary level treatment is 72(18.0%). Among these, the number of rural people is 48(30.0%) and urban is 24(10.0%). About 288(72.0%) respondents used secondary level treatment and among these, the number of rural and urban is 104(65.0%) and 184(76.7%) respectively. Only 40(10.7%) respondents went for tertiary level treatment. Among these, 8(5.0%) are from rural areas and 32(13.3%) are from urban areas.

To study whether any association between the level of treatment taken and the type of area living, the chi square test was conducted.

H0: The type of area, living have no influence on the level of treatment taken by the people.

H1: The level of treatment taken depends on the type of area living of the people.

**Chi-Square Tests**

	Value	df	P value
Pearson Chi-Square	5.982	2	<0.001
Significant			

Since the p value is less than the significance level 0.05, we reject the H0. That is the type of area living have an influence on the level of treatment taken by the people.

**UTILIZATION OF GOVERNMENT HOSPITAL FOR TREATMENT**

The public healthcare facilities are distributed in every part of the state. But there are regional variations in the distribution of hospitals between rural and urban areas. The quality of treatment and infrastructure facilities are less in public hospitals than the

private hospitals. Thus the poor people make more utilization of government facilities and the private healthcare utilization is higher among rich people.

**Table 1.4****Utilization of Government Hospital for Treatment**

	<i>Type of area living</i>		<i>Total</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	112(70.0%)	140(58.3%)	252(63.0%)
No	48(30.0%)	100(41.7%)	148(37.0%)
Total	160(100.0%)	240(100.0%)	400(100.0%)

Source: Primary Survey

Among the total 400 responses, 252 (63.0%) people utilised the service of the government hospital for treatment. Among these, 112 (70.0%) were rural and 140 (53.8%) were urban. About 148 (37.0%) people have not utilized government hospital and among these 48 (30.0%) were rural and 100 (41.7%) were urban.

To test whether any association exists between the utilization of government hospital and the type of area, living, the chi square test was conducted.

H<sub>0</sub>: The utilization of government hospital is independent of the type of area living.

H<sub>0</sub>: The utilization of the government hospital is influenced by the type of area living.

**Chi-Square Tests**

	Value	df	P value
Pearson Chi-Square	5.606	1	.018
Significant			

The p value is less than the significance level 0.05, so we reject the H<sub>0</sub>. Thus the utilization of government hospital is influenced by the type of area living.

**Table 1.5****Reasons for the Utilization of Government Hospital**

<i>Reasons</i>	<i>Frequency</i>	<i>Percent</i>
Near to home	192	48.0
Not expensive	84	21.0
Better facilities are available	44	11.0
Lack of money to treat in private hospital	100	25.0
Treatment is free	0	0.0
Free medicines are available	32	8.0

Source: Primary Survey

The table shows the reasons for the utilization of a government hospital. Out of the 400 respondents, 192 (48.0%) people used it because it is near to them. The government hospital was the nearest source of treatment for 368 (92.9%) people. For 84 (21.0%) people, it was not expensive. About 44 (11.0%) replied that the main reason for the utilization of government hospital is the better facilities available there. Lack of money to treat in a private hospital was the reason for 100 (25.0%) people for utilizing government hospital. Free medicines were the main attraction for 32 (8.0%) people for utilizing the government hospital.

**Table 1.6****Reasons for the Non-Utilization of Government Hospitals for Treatment**

<i>Reasons</i>	<i>Frequency</i>	<i>Percent</i>
Poor infrastructure	92	23.0
Lack of doctors and other professionals	4	1.0
Long waiting time	144	36.0
Poor treatment	16	4.0
Lack of diagnostic facilities	64	16.0
Modern equipment are not available	8	2.0

Source: Primary Survey

The above table shows the reasons for the non-utilisation of government hospital for treatment. About 92 (23.0%) people replied that the major reason for not utilising the government hospital is the poor infrastructures available there. 4 (1.0%) people did not utilise it because of the lack of doctors and other professionals. The majority of the public hospitals has limited doctors and paramedical professionals and they are not available at all times. There are 144 (36.0%) respondents who replied that the long waiting time is the major reason for not utilising the government hospitals. One of the major qualities found from the survey is that no respondents have reported the lack of hygiene in government hospitals.

In the earlier studies, many researchers have found out the poor hygiene in the public hospitals. But in this survey, people reported that the public hospital they are visiting is hygienic. About 64 (16.0%) people reported the non-availability of diagnostic facilities. In many hospitals, diagnostic facilities are available at once in a week. For checking their BP, cholesterol, etc. they have to wait for a particular day in the week. Due to the large number of patients, they have to wait for a long time to conduct the diagnostic test. 8(2.0%) people asked about the lack of modern equipment in the public hospitals.

**UTILIZATION OF PRIVATE HOSPITAL FOR TREATMENT**

The private hospitals dominate the healthcare sector in Kerala. Since 1990s private hospitals and dispensaries outnumbered government healthcare institutions. Private hospitals provide both inpatient and outpatient services. The private sector provides

various multi and super specialty hospitals providing advanced treatment and diagnostic facilities. The private hospitals compared to the public hospitals provide immediate treatment and all facilities are available there. The availability of advanced treatment facilities attracts more people to private hospitals.

**Table 1.7**  
**Utilization of Private Hospital for Treatment**

	<i>Type of area living</i>		<i>Total</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	144(90.0%)	224(93.3%)	368(92.05%)
No	16(10.0%)	16(6.7%)	32(8.0%)
Total	160(100.0%)	240(100.0%)	400(100.0%)

Source: Primary Survey

The above crosstab shows the utilization of private hospitals between rural and urban people. About 368 (92.05%) respondents utilized private hospitals for treatment and only 32(8.0%) people did not use it. Among the people who utilized private services, 144 (90%) people were from rural areas and 224 (93.3%) from urban areas.

To test whether any difference exists in the utilization of private hospitals for treatment between rural and urban areas, the chi square test was conducted.

H0: There is no difference in the utilization of private hospitals between rural and urban areas.

H1: There is a difference in the utilization of private hospitals between rural and urban area

#### Chi-Square Tests

	Value	df	P value
Pearson Chi-Square	1.449	1	.229
Not Significant			

Here the p value is 0.229 which is higher than the significance level 0.05. So we can conclude that there is no significant difference in the utilization of private hospitals between rural and urban areas.

**Table 1.8**  
**Reasons for the Utilization of Private Hospitals**

<i>Reasons</i>	<i>Frequency</i>	<i>Percent</i>
Advanced treatment	368	92.0
Immediate treatment	160	40.0
Diagnostic facilities are available	4	1.0
Better service	16	4.0
Hygiene	0	0.0

Source: Primary Survey

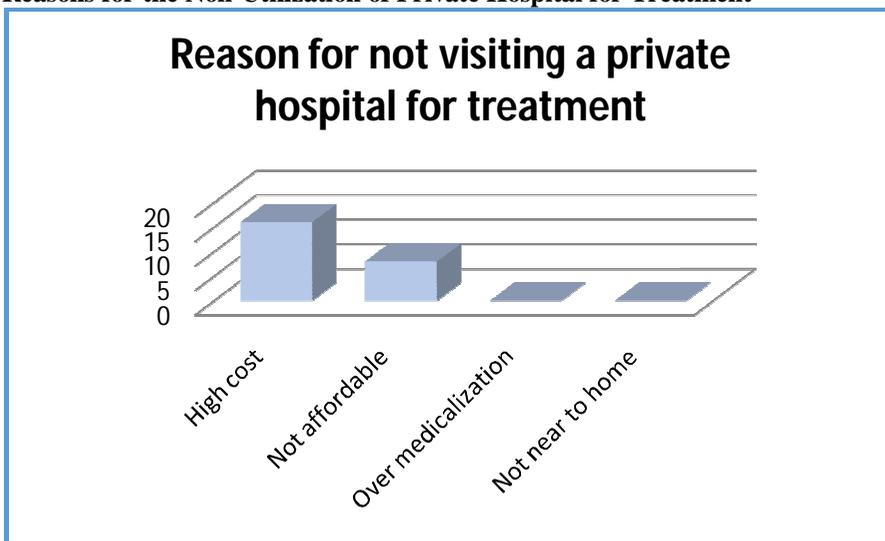
The above table shows the reasons for the utilization of private hospitals for treatment. About 36 (92%) people agreed that the advanced treatment offered by the private hospitals is the major attraction for them to utilize it. For 160 (40%) respondents, the immediate treatment was important. There are 4 (1%) respondents who liked the diagnostic facilities available in the hospital. Better service available in the hospitals was the major reason for 16(4%) respondents for utilizing private hospitals for treatment.

### Reasons for the Non-Utilization of Private Hospital for Treatment

The utilization of private hospitals is higher in both rural and urban areas. Only a small number of people agreed that they did not utilize the private facilities. The major reasons for the non-utilization of private hospitals is given below.

Figure 1.2

### Reasons for the Non-Utilization of Private Hospital for Treatment



Source: Primary Survey

The high cost of treatment is the major reason for 16(4.0%) respondents for the non-utilization of private services. About 8(2.0%) people agreed that the cost of treatment in private hospitals is not affordable for them. The over medicalization in the private hospitals is the reason for 32(8.0%) respondents.

### UTILIZATION OF HEALTH INSURANCE

The increase in medical healthcare cost makes it necessary to have health insurance. In our busy life, there is always chance of becoming sick and requires expensive treatment. It protects us from unexpected and high medical costs. The lifestyle and food habits are changing and the sedentary life style increases the morbidity in Kerala. The higher healthcare costs lead to borrowings, selling of assets, etc. and leads to poverty and indebtedness. By having an insurance policy we can reduce the money burden due



to morbidity. The study found that a majority of the respondents were not interested to take insurance policies or unaware about the importance of health insurance.

**Table 1.9**

**Utilization of health insurance policies**

<i>Insurance</i>	<i>Frequency</i>	<i>Percent</i>
Taken	120	30.0
Not taken	280	70.0
Total	400	100.0

Source: Primary Survey

Among the 400 respondents only 120(30.0%) have insurance coverage and about 280(70.0%) did not take insurance packages.

**UTILIZATION OF PRIVATE MEDICAL LABS**

The dependence on the private sector is increasing in Kerala. The public healthcare institutions equipped with inadequate infrastructure and staff shortage have struggled to handle patients. The government hospitals depend on private labs for their basic tests to confirm the disease. This situation is worse in primary health centres where only one medical practitioner and limited paramedical and other staffs. People have to depend on private labs even during treatment in public hospitals. With the increase in communicable, lifestyle diseases, etc. the demand for medical labs has increased. People have to take blood tests frequently. Various studies have shown that a large number of private labs in Kerala is functioning without proper approval from the government and their staffs are undertrained. But more people pot these labs because of lack of proper diagnostic facilities in public hospitals.

**Table 1.10**

**Utilization of private labs**

<i>Private medical labs</i>	<i>Frequency</i>	<i>Percent</i>
Private medical labs used	312	78.0
Not used	88	22.0
Total	400	100.0

Source: Primary Survey

The above table shows the utilization of private labs by the individuals. About 312(78.0%) respondents used private labs for their diagnostic facilities. 88(22.0%) people agreed that they did not visit private medical labs.

**UTILIZATION OF PRIVATE MEDICAL SHOPS**

The dependence on private medical shops is very high in Kerala. People have to depend on private medical shops, even during the treatment in public hospitals due to lack of medicines.



**Table 1.11**  
**Utilization of Private Medical Shops**

<i>Private Medical Shops</i>	<i>Frequency</i>	<i>Percent</i>
Utilized	386	96.5
Not utilized	14	3.5
Total	400	100

Source: Primary Survey

Out of the 400 respondents 386(96.5%) people used private medical shops for purchasing medicines. Only 14(3.5%) people replied that they never used private medical shops and purchased it from public hospitals only.

### **FINDINGS OF THE STUDY**

- About 40% respondents depended on government hospital for the first level of treatment and 10% on private hospitals. There were 5% people who utilized the private clinic when they feel sick. About 42.4% respondents visited private doctors in residence and only 2% people visited a government doctor in residence.
- About 64% respondents in the survey utilized the services of the nearest hospital. The major reasons for the utilization was availability of better facilities(34%), lack of other sources(10%) and less expensiveness(38%).
- The reasons for the non-utilization of nearest facilities are poor facilities(20%), lack of diagnostic facilities(3%), long waiting time(26%), lack of doctors(2%) and expensiveness(1%).
- About 21% respondents used public facilities only, 53% only private facilities and 26% people used both public and private facilities. There is no significant association between the type of hospital treated and the type of area living.
- Among the 400 respondents, 18% people utilized primary level treatment, 72% people used secondary level and 10% people used tertiary level of treatment. The chi square test shows a significant association between the type of area living and the level of treatment taken by the people.
- Among the total 400 respondents, 63% people utilized government hospital for treatment. There is a significant association between the utilization of government hospital for treatment and the type of area living.
- The utilization of government hospital for treatment was higher in rural areas (70%) than urban areas(63%).
- Out of the 400 respondents, 92.05% people utilized the services of private hospitals. Among these, 90% were from rural area and 93.3% from urban area. There is no significant difference in the utilization of private hospitals between rural and urban areas.
- About 30% respondents have insurance coverage.
- Out of the 400 respondents, 78% people utilized the services of private labs.
- About 96.5% people utilized private medical shops.



## CONCLUSION

The utilization of private hospitals is higher than public hospitals in both rural and urban areas. The rural people make more use of government hospitals than urban people. Major reasons for the government healthcare facilities are near to home, less expensiveness and lack of money to treat in private hospitals and the reasons for the non-utilization are poor infrastructure, long waiting time, etc. The health insurance coverage was less among the respondents and the majority of them are unaware about its importance.

## REFERENCE

1. T R Dilip (2010). Utilization of Inpatient Care from Private Hospitals: Trends Emerging from Kerala, India. *Health policy plan*
2. S IrudayaRajan (1993). Kerala's health status: some issues. *Economic and political weekly*, vol.28, No.36, pp.1889-1892



ifjorú"lhy l ekt vlg efgyk ifyl
mYljk[k.M dsfo"lsk l mHZeá

MMW jfo dMtr dqtj

"kkskNk=
W/kbDI HO, l O, l OvkJO ik; kstr
i k.v MMWVjy fjI pZ
l ekt"klL= foHkx]
jk/ksgfj jkt dh; LukrdkHj egfo |ky;]
dk"khij] m/ke fl g uxj] mRrjk[k.M

I kjlak

ifjorú idfr dk "kk"or fu; e gA bl fu; e dk i Hko vl; {ls=ka ds l eku gh l kelftd l jþuk , oa ekuoh; 0; ogkj
ij Li"V : i l snq[k tk l drk gA eluo l H; rk ds bfrngl ij n"V Mkyar k Li"V irhr glerk gsfed eluo vkt ftl
LFkku ij [kMk gþ og o"ka ds l ?k"z dk ifj. ke gA bl l ?k"z ds nlg ea efgykvla dh l LFkr vfi/ckl k le; gkfl , ij
jgh gA vkt rnh ds ckn efgykvla ds i q "ka ds l eku vfi/ckl j inku djus ds fy, vud l oðktud , oa oðktud ito/ku
fd, clotm bl ds vkt Hh bl dh l LFkr l rsktud ugha dgh tk l drh gA cnysr le; ds l kfk efgykvla ea c<fh
l k(kjrk , oa vius vfi/ckl ka ds ifr c<fh tkx: drk us , d vlg tga l fn; ka l smuds i s ka ea i Mh cyh dls rsktus dk
dk; Z fd; k gþ ogta vl; : i ka ea muds vfi/ckl ka dk guu , oa "kjhfd rFk ekuf l d "ksk. k dls c<kok fn; k gA vkt ds
ykdrlá=d l ekt ea efgykvla ds fo: ) c<rs bl idkj dh ?kVukva ij fu; æ.k djus rFk efgykvla ds l j[k.k inku
djus dk nfr; Ro jkt; l jdkj dk gA bl dk; Z ds fy, vkt efgyk ifyl dh fu; qDr ij fo"ksk cy fn; k tk jgk gA
yfdu ftu mls; ka dls vk/kj eludj efgyk ifyl dh fu; qDr dh x; h gþ muds ekxz ea Hh vud ck/k, a gA ; fn vkt
efgyk ifyl dls vius vfi/ckl ka ij [kMk mrjuk gsrks bu ck/kvka ds ckjs ea tkuuk vr; Ur egroiwz gis tkrk gA blgha
dkj. ka l si l r: "kksk&i= grq ifjorú"lhy l ekt vlg efgyk ifyl mYljk[k.M ds fo"lsk l mHZeá "k"z fo"l; dk
p; u fd; k gA

'lñ dqtj

l kelftd eW; ] mi HkDrkolnh l h dfr] l kEinfr; drkj ekuok/ckl j] l þuk ræ] ykdrlá=d eW; ] l ekt h d j. kj efgyk , oa
cyl vij/kA

ilrlouk

l ekt ifjorú"lhy gA bl dk iR; {k iæk.k cnysr l ekt d eW; , oa ifreku ds : lk ea l ekt ds l leus gA vkjHkd
l ekt ea vkfíZl fO; kvla dk ey mls; viuh ekyd vlo"; drkva dh iirZ djuk glerk Fk rFk pfj= dls l okz/ed
egro i ltr FkA vkfíZl fO; kvla dk foHktu fya] tfr , oa o.kz O; oLFk ds vk/kj ij foHkfr FkA O; fDr vius
i kjáfd dk; ka dls djusea xozegl H djrs Fk; yfdu vkt bl ea O; ki d ifjorú vk þpkl gA vkt vkfíZl fO; kvla dk
ey mls; de l s de le; ea vfi/ck l s vfi/ck /u vtú djuk , oa vr; f/kd mi HkDrkolnh l k&l fjo/kvka dk mi Hkx
djuk gA pfj= vkt viuk egro [kark tk jgk gA l ekt d iir"Bl dk ekud vkt pfj= dk txg mi HkDrkolnh
l k k/ku dh mi yCkrk us ysfy; k gA l ekt ea gsjgs bl idkj ds cnyko us l ekt dls foHku : i ka ea i Hkfor fd; k
gA bu ea dñ cnyko l ekt ds fy, ojnku l kfr gsjgs gþ rsk dñ vfk"ki HhA
ifjorú jk"V" dh ixfr dk vk/kj gA l ekt ea fO; k"lhy l eLr l kFkva , oa l epk; ka ea gks okyh ifjorú dh nj gh
jk"Vh; ixfr dh n"kk , oa fn"kk dk fu/kk. k djrh gA Hkjr tS s fodkl "lhy jk"V" ds fy, ifjorú dh : g i fO; k vlg
Hh egroiwz gis tkrh gþ D; k d ifjorú dh bl i fO; k ds dkj. k gh vkt jk"V" ixfr dh fur; u; h xkFk jpus ea l Qy
jgk gA l ekt ea gsjgs bl idkj ds ifjorú ea l ekt dh cnyrh eukofr] oðktud , oa rfdz d Kku] mi HkDrkolnh
l h dfr dk c<fk i Hko rFk vkfíZl fO; kvla dk c<fk egro vkn iez[k gA jk"Vh; fodkl ds fy, vk/kjHk i fj l LFkr
rS kj djus ea bu ifjorú ka dk egroiwz ; ksnku gA vkt bl ckr dls xHhjr i oðz Lohckj fd; k x; k gsfed nsk dh
vk/h vicln dh vogsyuk dj l Eiwlz fodkl dh ckr djuk , d dlijh dYiuk ek= gþ tics Hh gdhdr dk : i /kj. k
ughafj l drh gA ; gh dkj. k gsfed vkt dlnh; , oa jkt; Lrj ij efgykvla dh l ghkfxrk l kelftd] vkfíZl]
jktufred , oa iZkl fud vkn {s=ka l s l eLr l kFkva ea l fuif"pr djus ds fy, efgyk vlg {k.k dk ito/ku fd; k x; k
gA bu ixfr eyd cnykoka ds l kfk&l kfk efgykvla ds ifr fnu&ifrfnu c<fh vki jk/ed ?kVukva , oa vij/kk ds {s=
ea efgykvla dh c<fh l fylrrk us l ekt ds fy, xHh j þpkl h Hh mRi l lu djus dk dk; Z fd; k gA fnl Ecj 2019 ea
idkfr"kr vkt Hh ds vud kj 2018 ea jk"Vh; Lrj ij efgykvla ds fo: ) ?kVr vij/kk dh l f; k 378277 gþ ftuea 2817
ekeys døy mYljk[k.M ea ?kVr gq gA bl h idkj jk"Vh; Lrj ij ?kVr døy vij/kk dh l f; k 3132954 W/kbz i l h
vrxr i a dhr døy vij/kk ea ckyd , oafdkj }kj fd, x, vij/kk dh l f; k 31591 gþ ftuea døy mYljk[k.M ea





I l e k t l e k f t d l e a k k a d k , d t k y g a b l d s f d l h b e d t b z e a g k u s o k y s i f j o r u d k i H k k o l e i w k z l e k t i j i M r k g a ; g h d k j . k g s f d v k t l e i w k z f o " o , d x k b d s : i e a i f j . k r g k s x ; k g a f f k ; h k l j l u , o a f f k ; h k l j l u u s l e k t d k s , d , s l e m g d s : l k e a i f j h k k f ' k r f d ; k g f f t l d s i k l , d 0 ; k i d l e k f t d { l s = g r k g a f t l e a e k u o d h e a y h k r v k o " ; d r k v k a d k l a r t v d j u s g r q v k o " ; d e a y h k e l e k f t d l e f k k v k a d k l e k o s k g r k g a b l e a i j l i j l e k r H k i e d k v k a d k , d < l p k g r k g f f t l e a 0 ; f D r ; h a d s H k i e d k l e a k h 0 ; o g k j k a d k l e k f t d e k u ; r k v k a j k j k f u f " p r f d ; k t k r k g a b l h l a n h k z e a b ; k u j k b v l u u s l e k t d k s v k i l e a v r " k e 0 ; k d j u s o k y k 0 ; f D r ; h a d k l e m g d g k g f t k s , d g h H k a f . k . M i j j g r s g a r f k f t u d h l e d f r l e k u g l o r h g a ^

H k i j r h ; l e k t d h l e k f t d & l e d f r d b f r g k l i j u t j m k y u s l b l d h c n y r h i f j f l e k f r d s l i ' V l a d r f e y r s g a v k [ k v ' , o a l a g . k d j u s o k y s l e k f t d 0 ; o l f k l s y o d j m y k j v k / m p u d l e k t t k s d e l ; w j j e k e k b y b a / j u a v l e i f m ; k v k i n l s i h k k f o r g a r d d k l e ; f u j a r j i f j o r u d s n l g l s x o f j r k j g k g a l e k t e a g q b l i f j o r u d s f y , f o h k u f o p j d k a u s v y x & v y x d k j d k a d s f t e e n k j e k u k g a n q k h e d k e k u u k g s f d l e k t e a i f j o r u J e & f o h k k t u d s d k j . k g y k g a i m z v k s k s x d l e k t e a d u s r d r k v k / m f j r ; k e = d H k k b p k j s r f k k v k / m p u d v k s k k s x d l e k t e a d L o r a e r k v k / m f j r u s f x d H k k b p k j s d h c r h h n q k h e u s d h g a v u o j r t j i h i f j o r u d s d k j . k H k f o ' ; e a l e k t d s v l x s c < u s d h f n " k d s l a n h k z e a o s j u s f y [ k k g s f d ' c < e h g q h r k f d b r k d s d k j . k f o " o v o u f r d h v i j c < a k a ^ t c f d n q k h e b l l a n h k z e a f y [ k r s g a ' u , l a B u m i h k j d j l e k u s v k , a s t k s y k a d k s m u d s e r f i h k u r k d s l e k f g h c k a k d j j [ k a s r f k k m u d h v u ; f e r r k d h l e l ; k v a d k l e k / k u d j a k a

**ifyl**

ifyl j k T ; f u ; i = r , d e g r o i w k z l e f k k g a ; g y k o r k e = d l e k t d k e g r o i w k z l r e h k g a l i o / k u d h l k r o t a v u o j p h d s v a r x z l e k t e a " k h a r 0 ; o l f k k d k ; e d j d k u u , o a f o f / k 0 ; o l f k k d s l i q u f " p r d j u k j k T ; l j d k j d k n k f ; R o e k u k x ; k g a l j d k j d s b l n k f ; R o d s i j k d j u s o k y h v f k d j . k a e a u k x f d i f y l d h H k i e d k v x z k h g a v k h l Q k M Z f M D I u j h e a i f y l d s l i ' V d j r s g q f y [ k k x ; k g s f d ' i f y l , d , d k l a B u g f t k s y k a l s d k u u d k v n s ' k e u o k u s r f k k v i j k / k d k s j k c u s o l y > k u s d k d k e d j r k g a ^ f d l h h h l e k t e a i f y l d h m i l e k f r l e k f t d 0 ; o l f k k d s c u k ; s j [ k u s d h i k f i e d v k o " ; d r k g a l e k t e a l a c f B r g l o r h v j k t d r R o l a v i u s g d d s f y , v l a n s y u d j r k l e k u d ; u k x f d j f g a d m i n o , o a l e i n k f ; d n a s v k i n d s l e ; d k u u r f k k e u k o f / k d k j d h j k k d j u k , o a v i j k / k ; k a d h i g p k u d j m l s u ; k ; i k f y d k d s l e ( k i l n r d j u k , o a m f p r l k ; i l n r d j u ; k ; k e p r l e k l i q u f " p r d j u k k h h i f y l d k n k f ; R o g a

**ifyl e a e f y k , a**

ifyl i z ' k k l u j k T ; d h m u e g r o i w k z l e f k k v k a e a , d g s f t u d h d k ; l i z k y h l o k z / k d p u k s ' h i w k z , o a t k s [ k e l s H k j g a v k s k s x d j . k j o k k f u d r d u h d , o a l p o u k r a = d s f o c k l d s l e k f k l e k f v i j k / k d h c n y r h i z d r u s e f y k " k s k . k d k s c < k o k f n ; k g a l e k f g h e f y k v i j k / k ; k f o h k u i z d k j d s j k ' V h ; , o a l f k k u h ; v k l n s y u a e a e f y k v k a d h l f o ; H k x h k j h r f k k e f y k v k a d k s i n y k l e a k k f u d v f / d k j k a d h l i j k l l i q u f " p r d j u s d s f y , e f y k i f y l d f e z k a d h v i o " ; d r k e g l u d h x ; h a v a r j k z v h ; l r j i j e f y k v k a d h l o i i l e k e f u ; f D r v e s j d k e a l u - 1845 e a g q h f k h a b l d s l k " p k r 1896 e a d u k M k i f y l f o h k k x e a e f y k v k a d h f u ; f D r d k f l y f l y k i k j k k g a / k a 20 o t a l n h e a e f y k v k a d h i f y l f o h k k x e a f u ; f D r e a r s t h v k ; h a b l l n h e a c n y r h l e k f t d l e d f r d i f j f l e k f r ; k a d s l e k b l c i r d s e g l u f d ; k t i u s y x k f d u d o y e f y k v k a d s f c . ) v i j k / k j k c u s e a c f y d v l ; v i j k / k a d s j k c u s r f k k l e k f t d 0 ; o l f k k c u k ; s j [ k u s e a ; g v i u k e g r o i w k z ; k s r n k u n s l d r h g a i f y l f o h k k x e a e f y k v k a d s b l h e g r o d k s l o h d k j d j r s g q b a x y M e a e f y k i f y l d h i f k e f u ; f D r i f k e f o " o ; f d s l e ; 1914 l s 1918 d s c h p d h x ; h a b l n l g k u b u d k e f ; d k ; l v l g r i a r f k k y M f d ; k a d s c h p e a v i j k / k d ? k v u k v a i j f u ; a . k d s f y , i k d a , o a l s u d n k o f u ; k a e a x " r d j u k f k a b u e f y k v k a d s i f " k k i f y l d s i e f k v Q l j a d h f u x j k u h e a f n ; k t k r k f k a v a r j k z v h ; l r j i j d n i e f k n s ' k a d s i f y l f o h k k x e a e f y k v k a d h i f k e f u ; f D r d k f o o j . k l j . h l e ; k 01 e a f d ; k x ; k g a

**l i j . h l e ; k 01**

i e f k n s ' k a d s i f y l f o h k k x e a e f y k v k a d h i f k e f u ; f D r d k o ' z

Ø- l a	n s ' k d k u k e	i f k e f u ; f D r o ' z
01	L k a f D r j k T ; v e s j d k	1845
02	d u k M k 1 / 2 i f y l e S / k u @ , l - 1974 1/2	1896
03	b a x y M	1914
04	v k l v s y ; k	1915
05	i k s y M	1925



06	Tkki ku	1946
07	fl acki g	1949
08	b. Mksr6" k; k	1951
09	Ukbt hfj; k	1955
10	LohMu	1957
11	Eky6" k; k	1960
12	btjk; y	1960

Hkjr eafgyk ifyl dsbfrgkl ds l nhlz ea dN yf kdka us dksVY; ds vFkZ kL= dks vk/kkj ekuk gS tcf d dN yf kdka us bl sfcv" k dky dh nu ekuk gA ikr rF; ka ds vk/kkj ij Hkjr eafgyk ifyl dh iFke fu; qDr 1933 ea d j y ds =ko. kdj; ea gq h FkhA bl ds ckn vl; jkT; ka ea Hkh bl dh fu; qDr bl dh vko"; drkvla ds vk/kkj ij dh tkus yxhA Lorark iktlr ds lk" pkr l ko/ku inYk ekyd vf/kdkj la dh j{kk ,oa eafgykvla ds fo: ) c<rh ngst gR; kj "kji fjd "kks. kj ng 0; ki kj ekuf d mri hVla ,oa cykrdkj t h vki jk/ kd ?Vukvla ij fu; a. k LFkkir d j us rFk bl dh fu; i k t ap ds fy, efgk ifyl dh vko"; drk egl t dh tkus yxhA blgha vko"; drkvla ds dkj. k foHkhU jkT; ka }kjk vyx&vyx l e; eafgyk ukxfjd ifyl dh fu; qDr dk i ko/ku fd; k x; k gs ft l dk oxt d j. k l j. kh l q; k 02 eafd; k x; k g&

**I kj .kh I q; k 02**

foHkhU jkT; ka ea ifyl eafgykvla dh iFke fu; qDr o' lz dk foj .k

Ø- l a	jkT; dk uke	iFke fu; qDr o' lz
01	d j y ½=kou d k ½	1933
02	dkuij %mYk insk½	1938@1939
03	cEcbz	1939
04	kkat kc	1947&1948
05	fnYyh	1948
06	Xka jkr	1948
07	dky dkrk	1949
08	vk lz insk	i h- 1950 o 1950
09	fcgkj	1952
10	jkT LFku	1955
11	e/; insk	1956
12	duk d	1960
13	mMh k	1961
14	Ef. ki j	1961
15	f=i jk	1961
16	t f e w v l g d " e t j	1965
17	lkf"pe cak y	1965
18	gfj; k. kk	1966
19	vl e	1967
20	ukxyM	1968
21	fl fDce	1970
22	eSkly;	1973
23	rfeyukMw	1973
24	lknpjh	1974
25	fgekpy insk	1975
26	pMhx<+	1977
27	v: .kpy insk	1977
28	fetlje	1987

I k r %ch i h v k j -Mh ubz fnYyh

mi; qDr oxt d j. k l s; g Li "V gs fd Hkjr h; l ekt ea ukxfjd ifyl eafgykvla dh Hkr lz dh i f 0; k Lorark in 0z i k j k g l s p q h FkhA Lorark iktlr ds ckn ; g i f 0; k v l g Hkh rst dj nh x; h rFk vf/kd l s vf/kd



efgykvla dks bl l ok l s t m us ds fy, vj{k.k.k ; k fo"sk Hkriz ifo; k vi uk; h tk jgh gA cktm bl ds vkt Hh iq 'k ifyl dh ryuk eaefgyk ifyl dh l ; k cgr de gA

**mYjk[k.M ifyl eaefgyk,a**

9 uofcj 2000 dks mYjk[k.M jkT; ds : i ea, d u; sjkT; ds xBu ds l kfk gh mYjk[k.M ifyl & cy dk xBu gA bl l s i m z bl {le- ea dk; jr ifyl & cy mYj insk ifyl ds uke l s tkuk tkr FkA ifyl vf/kfu; e 1861 ds eku dha vl/kj ij l u-1876 bZ ea mYjkj ikr vlg vo/k ifyl cy dks iqukter fd; k x; k FkA 1902 bZ ea bl s la Dr ikrh; ifyl rFk 1954 ea bl s mYj insk ifyl uke l s l ok/kr fd; k x; kA mYj insk ifyl eaefgyk ifyl dh vlo"; drk l oi Fke 1938 ea dku ij ea etnj gMfky ds le; egl i dh x; hA r r k "pkr 1939 ea dku ij ea efgyk ifyl dh fu; Dr dh x; hA LFk; h r g ij bl {le- eaefgyk ifyl dh fu; Dr dh ifo; k 1974 l s i jk gh gq h gA u; sjkT; ds : i ea vLrRo ea vks ds ckn l s ; gla dh cnyrh l k k f r d & l k d f r d , oa v k f r d i j f l F k r ; ka ds dkj .k efgyk ifyl dh l ; k ea of) ij /; ku fn; k x; k gA ; gh dkj .k g s f d bl {le- ea 2005 eaefgyk ifyl dfez ka dh dgy l ; k dgy ifyl dh l ; k ds 3-07 ifr "kr Fk t s e g t r j g o "k ds v r j k y ea c < e j 20-58 g l s x ; h gA bl v k d i m s l s ; g Li 'V g s f d j k Vh ; Lrj ij dgy ifyl depkfj ; ka , oa vf / k d k j ; ka ea efgyk ifyl depkfj ; ka , oa vf / k d k j ; ka dh v d r i f r "kr l ; k 11-47 l s c g r j g s y d u v i u s o k l r f o d y ; 30 i f r "kr l s v c Hh c g r n j g A

Lora-rk i k f r ds l k "pkr efgykva , oa cky dha dh l j (k r Fk i k r l o / k f u d v f / k d k j ka dh j (k ds fy, vud o k k f u d i t o / k u f d ; s x ; s g A l e l ; k v k a dh cnyrh i d f r , oa i k r v f / k d k j ka ds c < f s n q l k ; k s x u s e f g y k i f y l dh v k o " ; drk d s c < o k f n ; k g A j k T ; , oa j k Vh ; Lrj ij c < r h j k t u h f r d v k d n s y u i k N k = i n " k u j J f d v k d n s y u v k f n ea efgykva dh c < r h H k x h n j h ds L k F k & l k F k e f g y k v i j k / k , oa v i j k f / k ; ka dh l ; k ea of) ] cky , oa f d " k j v i j k / k dh ? V u k v l a e a of) g q h g A l o / k u i n Y k l e k u r k d s v f / k d k j v k f r d i f o ; k v k a d k c < f k e g R o j f o h k l u d k j . k a l s e f g y k i f y l dh c < r h v k o " ; drk , oa efgykva } j k j v i u s j k s t x k j d s f o d Y i ds : l k ea bl {le- dk p ; u e f g y k i f y l d f e z ka dh l ; k ea of) d s v l n " k i " B h k e r s k j d j u s d k d k ; f d ; k g A m Y j k [ k . M j k T ; e a f i N y s , d n " k d ea efgyk ifyl dfez ka dh l ; k ea g q h of) d s Li 'V d j u s d s f y , 2005 , oa 2015 ea mYjk[k.M ifyl eaefgyk ifyl dfez ka dh j d i o k b t o k l r f o d l ; k d k Li 'V h d j . k l j . k h l ; k 03 e a f d ; k t k j g k g A

**l j . h l ; k 03**

mYjk[k.M ifyl eaefgyk ifyl dfez ka dh j d i o k b t o k l r f o d l ; k

in@j d	efgyk ifyl vf / k d k j ; k d e p k f j ; ka dh l ; k		
	2005	2015	2018
DGP	0	0	0
IGP	0	0	0
DIGP	0	0	2
AIGP/SSP/SP	0	7	06
ASP / DY. SP / DY. COM / ASST. COM.	2	11	17
INSPECTOR	1	1	10
SUB – INSPECTOR	20	82	275
ASST. SUB- INSPECTOR	0	0	0
HEAD CONSTABLE	7	60	45
CONSTABLE	440	1360	1927
TOTAL	470	1521	2282

Lkr % ch i h v k j - m h u b z f n Y y h  
 Efgyk ifyl dh H f e d k , o a n k ; R o



Llekt ea lelr 0; fDr] l enp; ; k l k f k l s d n j u d n j v i f k k , a g l s r g a bu v i f k v l a d s v k / k j i j g h mudh H h e d k d k f u / k j . k f d ; k t r k r g a g f j d . k j k o r u s m p p r j l e k t " k k L = f o " o d k s e a f y [ k g s f d H h e d k f d l h , d l e k t f d i f l f k r d s l k f k t m l a g q f o p k j a d k , d , d k l e g g s t k f d l h m l j s d h i n & i f l f k r d s l k f k m l d s l a k k a d s i j h h f k r d j r k g a c n y r s l e k t d i f j o s k e a l e k t d h c n y r h v l o " ; d r k v l a , o a c < f h t f v y r k v l a u s l e k t d s v l ; { s = d s l k f k & l k f k i f y l & t u r k l a k k a d s H h i h k f o r f d ; k g a i f y l l o k e a e f y k v l a d h c < f h l g h f k r k , o a m l d s i f r y l o k a d h v i f k v l a d k c < e u k l e k t e a v k ; s c n y l o d k g h i f j . k k e g a b u c n y l o k a d s v u q i m y k j [ k . M i f y l d s f u n t " k r , o a f u ; e - r d j u s r f k k y l o d r i e = d l e k t d h l e c k y t u m i ; k s r k d s v u q i i f y l & c y d h H h e d k , o a n k f ; R o d k s l f u f " p r d j u s d s f y , m y k j [ k . M i f y l v f / k f u ; e 2007 d k f u e l z k f d ; k x ; k A b l v f / k f u ; e d s v k / k j i j g h o r e k u l e ; e a m y k j [ k . M i f y l & c y e a d k ; j r e f y k , o a , o a i q " k d e p k j h , o a v f / k d j h v i u s n k f ; R o l a d k f u o g u d j r h g a

E f y k i f y l d s m n h o , o a f o d k l d s v o y k o d l s ; g L i ' V g l o k g s f d b l d h v j k h k d H h e d k e f y k c i n ; k a , o a v i j k / k ; k a i j f u x j k u j [ k u k ] e f y k v l a d h l j { k k l f u f " p r d j u k , o a e f y k v l o n y u d k f j ; k a i j f u ; a . k j [ k u k f k a c h r s l e ; d s l k f k l e k t d h l e k t d & l k a d f r d ] v k f f k z , o a j k t u h f r d i f j l f k r ; k a e a v k ; s c n y l o u s b u d h H h e d k v l a d s t f v y l o ; i i n k u f d ; k g a v k t v i u s i k j a f j d d k ; k a d s l k f k & l k f k y l o d r i e = d e w ; k a d h j { k l f u f " p r d j u k ] d y v i j k / k , o a e f y k v i j k / k d h l r ; r k d h t h o d j u k ] o h v k z i h l j { k k ] p u k o d s l e ; " k a r 0 ; o l f k k d k ; e d j u s e j v k l n y u ; k f o n t a g d s l e ; ] e f y k l " k f D r d j . k v k f n { s = k a e b u d h c < f h m i y / k r k b u d h H h e d k d k m n k j . k g a o r e k u l e ; e a e f y k i f y l } j k f u l k ; s t k u s o k y H h e d k v l a d s m u d h i d f r d s v k / k j i j e f ; : i l s n l s H h k k a e a c k a x ; k g a

- 1 i k f j o f j d ; k l e k t f d H h e d k
- 2 f o l k x h ; ; k i n l s l a e / k r H h e d k

1 i k f j o f j d ; k l e k t f d H h e d k % l e k t e a v k t H h ? j y q d k ; k a d s e f y k v l a d k n k f ; R o e k u k t r k g a c p p l a d h n f k k k y , o a m u d s v k j h k d l e k t d j . k d h H h e d k i k j a f j d : l k e a e f y k v l a d h j g h g s l k f k g h i f j o k f d j i n r & i f j o k t k a d k f u o g u d j u k ] l e k t ; k i j k l e a g l u s o k y / k f e z l ; k l k a d f r d v k ; k s t u l a e a H h m u d h m i l f l f k r v f u o k ; Z e k u h t r k g a v k t " k g j h l e k t k a e a b l i z l j d s v k p l f j d m i l f l f k r d k e g r o d e g r k g s y f d u x t e h . k l e k t e a b l i z l j d h H h e d k d s v r ; U r e g r o i w z e k u k t r k g a i f y l f o l k x e a d k ; Z d h v f / k d r j ] v k i k r d k y t u i f j l f k r , o a d k e d s ? k a s d h v u f " p r r k b l f o l k x e a d k ; j r e f y k v l a d s f y , d h k h & a l l h c h l e l ; k c u t r k g a ; f n i f j o k d h i d f r l a o r g l s r l s v d l j m l s H h e d k l a k l z d h l f l f k r d k H h l e u k d j u k i m r k g a

- 2 f o l k x h ; ; k i n l s l a e / k r H h e d k % i f y l f o l k x d k e g r o i w z n k f ; R o l e k t f d 0 ; o l f k k d s c u k ; s j [ k u k g a b l d s f y , b l s d k ; k y ; h , o a { s = h ; n k u l a i z l j d h H h e d k f u l k u h i m r h g a e f y k v i j k / k v l o s k . l ] a n x k e f y k v l a d h f u x j k u l ] i h m r e f y k v l a l s i n r i k n r f k k m u d h l e l ; k v l a d s f u j k d j . k d h 0 ; o l f k k d j u k ] v i j k / k ; k a d h f x j Q r k j h e a i q " k l g d f e ; k a d h l k f k n u l ] g l m r k y ; k v k l n y u d s l e ; " k a r 0 ; o l f k k c u k ; s j [ k u k v k f n e f y k i f y l d s i e f k { s = h ; d k ; Z g a d k ; k y ; h d k ; Z d s v a r x t V s y h Q k u ; k o k ; j y d l p t y u ] d e l ; w j l p t y u , o a l e r y f k u d k ; Z l f e e f y r f d ; k t r k r g a e f y k v l a d s i f y l f o l k x e a v k u s d s b r u s l k y c l n H h m l g a i q " k l g d f e ; k a d s c j k j u g h a l e - k t r k g a ; g l a v k t H h e f y k v l a d s d e r j v k a d k t k j g k g s , o a m l g a n s e n t a d k l e - k t r k g a b l g a v k t H h d k ; k y ; h d k ; k a d s v u p h y e k u k t r k g a c l o t m b l d s m y k j [ k . M i f y l e a d k ; j r d n e f y k , a v i u h H h e d k ] d r d ; , o a n k f ; R o d s f u o g u d s f o l k x e a v i u k f o f " k V l f k u j [ k r h g a m n k j . k L o : i 2005 c p d h i h l h , l v f / k d j h v i j i f y l v / k h { k d e e r k c j k u s h r k y / m l e f l g u x j v l g n j k n u e a v i u h d k ; k o f k / k h k v s v l g v i j i f y l v / k h { k d } e a c g r j i n " k u d j t i h t k s h j s d h m ] g f j ; k . k k d s i m z l k a n d s c v s l k a c o k u ; k s u " k s k . k v l g p l g k l i y d s f x j u s d s e k e y s t s p p r e k e y l a d k f u l r j k . l Q y r k i m o z l f d ; k A b l e k e y s e a f u l i { k v l g f u l h k z g l c j j 13 v f / k d f j ; k a v l g B e t n k j a d s f [ k y Q v j k i i = H k s t k A , y c h , l v d k n e h e a : c h p l a k j h d s Q t h z i f " k [ k v k b z , , l i z l j . k e a m u d s } j k j k t h o i f d z ; k d s v l r e : i f n ; k x ; k A v k i j s k u L e k y d s r g r i n s k H k j e a x e g q 766 c p p l a d h c j k n x h i j x g e a - h j k t u k f l g u s m l g a f n y h e a l e k f u r f d ; k A J e r h c j k d g r h g s f d " g j L r j i j e f y k v l a d s l E e k u v l g L o r a - r k d h t : j r g a d o y e f y k f n o l i j ; k n d j u s l s , d k g l u s o k y u g h g a x e h . k v p y l a e a e f y k v l a d s f d r u h L o r a - r k g s ; g f d l h l s f N i k u g h a g a b l l k p e a c n y l o y l u s d h t : j r g a " e f y k m i f u j h { k d " o r k H V V e f y k m R i t h u e d s Q V i j c m h e f t e e n k j h f u l k j g h g a j k T ; L r j l s 1090 i j v k u s o k y f " k a d ; r l a v l g e f ; k y ; L r j i j f e y u s o k y f " k a d ; r l a i j f u l i { k d j k b z d j u s v l g i h m r k l s l e l o ; c u k d j l a r q v d j u s d k d k e d s c g r j < x l s i j k d j j g h g a j k T ; L r j h ; x B r o e u l y e a " o r k d e B , o a l f d ; l n L ; d s : i e a v i u h f t e e n k j h f u l k j g h g a i n s k H k j e a v i j k / k i h m r k v l a d s f n , t k u s o k y e a k o t k b u d s L r j l s t k j h g l o k g a 2008 e a i f y l l o k e a v i u h J e f r H V V u s F k u l a e a e f y k m R i t h u e d s e k e y l a e a c [ k h d k e d j v i u h i g p l u c u k ; h g a f o e h l p n o k 2003 c p d h i g y h v k z i h , l v f / k d j h g s t k s x g f o l k x d s v y o k v l ; m l j s f o l k x e a v i j l p o c u h l k f k g h c y f o d k l f u n s t k y ; d h i g y h v k z i h , l f u n s t d c u h a y m f d ; k a d s N A M A M + d s e k e y s d k j k l u s d s f y , m l g l u s " k s k z , i " o k z 2014 e a u s h r k y e a y h o f d ; k f k a m l o d r o g u s h r k y d h , l i h f k a b l d s c l n " k s k z , i " m / k e f l g u x j ] p e l y h ] i h m h



I er ni jsftyla ea ykfb fd; ka ckn ea dlnz l jclj us bl s Lohdr fd; ka Lchya dkyyst ka ea NMMNM+ dh ?KVuk, a jklus dsfy, vls yMfd; ka dks tkx: d djus dsfy, Lchya ea f'kfoj Jqkyk "kq dhA bu dsi ka ea yMfd; ka dks cpko ds rjhds crk, x, vls mlga tkuckjh nh xbl fd, d h ?KVukvla ds jklus dsfy, fdl vfkclj dh ds l fpr fd; k djA bl ds l kfk gh cykrdij l s i hMf efgykvla ea QJ l s vkr fo"okl txkus vls mlga vol kn dh LFkr ea mckjus ds fy, dkm fyak l y dk xBu fd; ka orku ea Jherh foeh l pnoh vij l po ed; e=hl efgyk l "kDr dj. k, oacky fodkl j pfdRI k LokLF; , oaiftoj dY; k.k vls funskd vkbz l h Mh, l gA

mi; Dr efgyk ifyl jkjk fd, x; s dk; l ikjajfd fopj/kjk l s vks c<ej vl; efgyk ifyl vfkclj; ka, oa deplj; ka dsfy, , d vkn'z l npr fd; k gA vkt efgyk, au dny iq 'ka ds l kfk dks l s ddk feykj vks c<+jgh gs cYd dbz ekeyla ea bl siq 'k l gdfz, ka dh ryuk ea cgrj ekuk trrk gA Homant rFk Kennedy us 1984 ea "A Content Analysis of Statements about Police Women's handling of Domestic Violence" "h'cl ij v/; ; u fd; ka bl v/; ; u ea 66 efgyk, oa iq 'k ifyl l gdfz, ka ds fopjka ds v/; ; u l s; g tkus dk iz kl fd; k x; k fd ikfjokfd fga k l eakh ekeyla ea efgyk ifyl dk n'Vdsk iq 'k ifyl dfez ka l sfdl izkl fklU gA fu'd'z ds: i ea ik; k x; k fd i hMf efgykvla ds ir efgyk dfez, ka ds n'Vdsk cgrj rFk l dkjRed gA bl izkl ds v/; ; u l s; g Hh Li'V gtrk gs efgyk, oacky vij/k ij fu; a. k rFk ?kVr ?Vukvla ds vlosh. k ea bl dh Hkedk vr; Ur egrOiwz gtrk gA mi hMf rkonh l kdr, oa ik'pr; l h; rk ds c<+s i hko vut pfd l kftd fu; a. k dk vHko ds dlj. k Hh vkt l ko'fud LFkya ij efgykvla, oa cPka dh v'yhy, oa vj kfk/d xrfok; ka ds fu; a. k ea efgyk ifyl dh Hkedk egrOiwz gtrk; h gA bl ds vrfjDr puko ds l e; efgyk l efkcha ds xj dmuh dk; ka ij fu; a. k j[kul efgyk cRjka dh l j{k l fu'pr djuk oh vkbz i h l j{k vkn fo'k; ka ea Hh efgykvla dh Hkedk l fu'pr dh x; h gA

fu'd'z

efgyk ifyl ifjorU"hy l ekt dh t: jr gA bu t: jrka dks ijk djus dsfy, Lorark i kfr ds lk'pr vucl iko'ku fd; s x; s gA orku l e; ea m'Yjk [k.M ifyl ea 30 ifr'kr l gHkfxrk dk vfkclj Hh bu iko'ku ea, d gA vkt vucl efgyk ifyl deplj; ka, oa vfkclj; ka us vius dk; l ds cy ij iq 'k l gdfz, ka dks i hNs NMM+fn; k gA bl ds kotm efgykvla dks vkt Hh ed; : lk l s dk; ky; h dk; l ds; k; ekuk trrk gA m/le flg uxj tuin ds l elr Fkula ea ead, x; s, d l o' l s; g irk pyk gs fd vfkclj efgykvla dks dk; ky; h dk; ka ea yxk; k x; k gA bl l s muds l Ei w'z {kerk dk vdyu l Hko ugha gis ikrk gA orku l e; ea insk ea efgyk ifyl dfez, ka dh l gHkfxrk ek= 20-58 Ohl nh gs tks fudV Hko; ea 30 Ohl nh gis tk, xA, d s ea; fn efgyk ifyl dh {kerkvla dk oLrfod vdyu ugha fd; k x; k r s fohkx ds l e{k, d xhkhj l e; k [kVh gis l drh bl dsfy, t: jr bl cr dh Hh gs fd efgyk ifyl dks, d LoLFk fohkx; ekgsy inku dj viuh Hkedk fuo'bu ea vks okyh gj pakt; ka dk l euk djus dsfy, i k l kgr fd; k tk, A vkt efgyk ifyl vucl izklj dh fohkx; l e; kvla l s t; jgh gs ftuea l gdfz, ka, oa vfkclj; ka } jk; k; "kksk. k dh ?KVuk; a iq 'k l gdfz, ka ds l g; kx dk vHko mpr i f'k(k. k dk vHko) cPka dh n'k; j k; , oamudh f'k(k 0; oLFk l eakh i j s kfu; ka vkn i e{k gA bu l e; kvla dk Hh muds dk; l {kerk ij 0; ki d i hko i Mf k gA orku l e; ea cnr h i j f l Fkr; ka ds vuq lk u dny efgyk ifyl dh l e; k c<uk t: jh gs cYd mudh {kerk dk fodkl dj, d is'oj ifyl dk : lk inku djuk Hh vr; Ur egrOiwz gA : g rHh l Hko gs tcd fcuk fyak Hh ds mudh {kerk dk vdyu fd; k tk, A fohkx ea c<+s; k; "kksk. k dh ?KVukvla ij v'qk yxkus dsfy, tuin jat, oa ed; ky; Lrj ij tlp fohkx dh LFki uk dh tk, ftudk vfkclj efgyk ds fu; Dr fd; k tk, rkd vjka ka dh fu' i {k tlp gis l ds, oa i hMf k ds l; k; fey l dA bl izklj dh 0; oLFk efgykvla dks ekuf d : lk l s l "kDr ckrh gA ifyl fohkx ds ml s; ka dh i kfr dsfy, ml l s t; j deplj; ka dk "kjhjd, oa ekuf d : i l s l "kDr gksk vr; Ur vko"; d gA : gh dlj. k gs fd efgyk ifyl ds l e{k mri l u l e; kvla ds l e'ku ds mik; fd; sfcuk mudh l Ei w'z {kerk dk mi; kx dj ikuk l Hko ugha gA

l m'z xdk

- 1- ik.M; kj jkesojh vls mikl ulj vjrh] okhu ifyl %bl qe a .M psyatst l fj; yl iftydskul ubzfnYyh] 2014
- 2- "ke'z Mh Jherh vuie] efgyk ifyl l s vi{k, a ch i h vj- Mh] ubzfnYyh] 2012
- 3- fl g] f'kr'j deplj] Hkjrh; ifyl vls turk] Mh ts iftydskul] ubzfnYyh] 2010
- 4- l b j QW, DI hyd l ifyl ea efgykvla dh jkt; Lrjh; dMqD ij fj i k' jkt LFku ifyl vclnehl us; uxj t; ij] 14&15 ekp 2011
- 5- dtbe LVsVlVd l bu bAm; k 2018 oM; e & A
- 6- ifyl v'k'xskbt sku bu bAm; k 2005
- 7- ifyl v'k'xskbt sku bu bAm; k 2015
- 8- ifyl v'k'xskbt sku bu bAm; k 2018
- 9- l d l 2011
- 10-vej mtkyj] ngjknw



## APPLICATION OF BLOCKCHAIN TECHNOLOGY TO BUSINESS

**Dr. B. Prathima**

Lecturer in Commerce

S.R.R. & C.V.R. Govt. Degree (Autonomous) College

Vijayawada, Andhra Pradesh

### ABSTRACT

Blockchain is a technology that allows information to be distributed but not copied. Blockchain technology created the backbone of a new type of internet. A blockchain is in the simplest of terms a time stamped series of immutable records of data that is managed by a cluster of companies not owned by any single entity. Each of these blocks of data is secured and bound to each other, using cryptographic principles.

With many practical applications for the technology already being implemented and explored, blockchain is finally making a name for itself. As a buzzword on the tongue of every investor in the nation, blockchain stands to make business and government operations more accurate, efficient and secure. This paper throws light on what blockchain is, how it work and application of blockchain technology to business.

**Key Words:**Blockchain, Business, Bitcoin, Cloud Storage, Cryptocurrency, Internet, Smart Contracts, Supply Chain Communication.

### Introduction

Blockchain is a technology that allows information to be distributed but not copied. Blockchain technology created the backbone of a replacement kind of internet. A blockchain is within the simplest of terms a time stamped series of immutable records of knowledge that's managed by a cluster of companies not owned by any single entity. Each of these blocks of data is secured and bound to each other, using cryptographic principles. With many practical applications for the technology already being implemented and explored, blockchain is finally making a reputation for itself. As a buzzword on the tongue of each investor within the nation, blockchain stands to form business and government operations more accurate, efficient and secure.

### Blockchain Basics:

A blockchain is just a sequence of blocks that contains information. Each block features a cryptographic hash of the previous block, a timestamp, and transaction data. Although the design is simple, it is this design that makes Blockchain invulnerable to data tampering.

Blockchain technology is an open distributed ledger which will record transactions of two parties securely and efficiently. As it is distributed, Blockchain is usually managed by a peer-to-peer network working simultaneously together to unravel complex mathematical problems so as to validate new blocks. Once recorded, the data in any



given block cannot be updated retroactively without changing all subsequent blocks, which requires the confirmation of the majority in the network. This is the most reason why blockchain technology is secure and not vulnerable to hacking.

### **Parts of Block Chain**

“Blocks” on the blockchain are made up of digital pieces of knowledge . Specifically, they have three parts:

- Blocks store information about transactions like the date, time, and amount of most recent purchased product/service.
- Blocks store information about who is participating in transactions. A block for purchase made would record name of purchaser along with product/service provider’s name. Instead of using actual name of purchaser, purchase is recorded without any identifying information using a unique “digital signature,” like a username.
- Blocks store information that distinguishes them from other blocks. Each block stores a unique code called a “hash” that allows us to tell how it is unique apart from every other block. Hashes are cryptographic codes created by special algorithms.

### **Working of Blockchain**

When a block stores new data it's added to the blockchain. Blockchain, as its name suggests, consists of multiple blocks strung together. In order for a block to be added to the blockchain, however, four things must happen:

- A transaction must occur. A block will group together potentially thousands of transactions, so the information about purchase made will be packaged in the block along with other users' transaction information as well.
- That transaction must be verified. After making purchase, transaction must be verified. With blockchain, that job is left up to a network of computers. That is, they confirm the details of the purchase, including the transaction’s time, amount, and participants. That transaction must be stored in a block. After the transaction has been verified as accurate, it gets the green light. There, the transaction will likely join hundreds, or thousands, of others love it .
- That block must be given a hash. Once all of a block’s transactions are verified, it must tend a singular , identifying code called a hash. The block is additionally given the hash of the foremost recent block added to the blockchain. Once hashed, the block are often added to the blockchain.

When that new block is added to the blockchain, it becomes publicly available for anyone to look at along side information about when (“Time”), where (“Height”), and by who (“Relayed By”) the block was added to the blockchain.

### **Blockchain's Practical Application**

The blockchain technology has been getting tons of attention lately for its industry-disrupting capabilities. As a result, many industries are falling over themselves to undertake and incorporate the blockchain. The concept of blockchains technology is set to revolutionise not just the finance or healthcare industry but many aspects of business, government and even our personal lives. Some important applications of blockchain are mentioned below:

Banking



Financial institutions only operate during business hours, five days every week . That means if a check is deposited on Friday at 6 p.m., depositor needs to wait until Monday morning to see that money being deposited. Even if money is deposited during business hours, the transaction can still take one to three days to verify due to the sheer volume of transactions that banks need to settle. Blockchain, on the other hand, never sleeps. By integrating blockchain into banks, consumers can see their transactions processed in as little as 10 minutes, basically the time it takes to feature a block to the blockchain, regardless of the time or day of the week. With blockchain, banks even have the chance to exchange funds between institutions more quickly and securely. In the stock trading business, for instance , the settlement and clearing process can take up to 3 days (or longer, if banks are trading internationally), meaning that the cash and shares are frozen for that time. Given the dimensions of the sums involved, even the few days that the cash is in transit can carry significant costs and risks for banks.

### **Cryptocurrency**

Blockchain forms the bedrock for cryptocurrencies like Bitcoin. Currencies like the U.S. dollar are regulated and verified by a central authority, usually a bank or government. Under the central authority system, a user's data and currency are technically at the whim of their bank or government. If a user's bank collapses or they sleep in a rustic with an unstable government, the worth of their currency could also be in danger . These are the concerns out of which Bitcoin was borne.

By spreading its operations across a network of computers, blockchain allows Bitcoin and other cryptocurrencies to work without the necessity for a central authority. This not only reduces risk but also eliminates many of the processing and transaction fees. It also gives those in countries with unstable currencies a more stable currency with more applications and a wider network of people and institutions they will do business with, both domestically and internationally (at least, this is often the goal.)

### **Healthcare**

Health care providers can leverage blockchain to securely store their patients' medical records. When a medical history is generated and signed, it are often written into the blockchain, which provides patients with the proof and confidence that the record can't be changed. These personal health records might be encoded and stored on the blockchain with a personal key, in order that they're only accessible by certain individuals, thereby ensuring privacy

### **Property Records**

The process of recording property rights is both burdensome and inefficient. Today, a physical deed must be delivered to a government employee at the local recording office, where its is manually entered into the county's central database and public index. In case of a property dispute, claims to the property must be reconciled with the public index.

This process isn't just costly and time-consuming—it is additionally riddled with human error, where each inaccuracy makes tracking property ownership less efficient. Blockchain has the potential to eliminate the necessity for scanning documents and tracking down physical files during a local recording office. If property ownership is



stored and verified on the blockchain, owners can trust that their deed is accurate and permanent.

### **Smart Contracts**

A smart contract may be a code which will be built into the blockchain to facilitate, verify, or negotiate a contract agreement. Smart contracts operate under a group of conditions that users comply with . When those conditions are met, the terms of the agreement are automatically administered .

### **Supply Chain**

Suppliers can use blockchain to record the origins of materials that they need purchased. This would allow companies to verify the authenticity of their products, along side health and ethics labels like “Organic,” “Local,” and “Fair Trade.”

### **Voting**

Voting with blockchain carries the potential to eliminate fraud and boost vote , as was tested within the Nov. 2018 midterm elections in West Virginia. Each vote would be stored as a block on the blockchain, making them nearly impossible to tamper with. The blockchain protocol would also maintain transparency within the electoral process, reducing the personnel needed to conduct an election and supply officials with instant results.

### **Future of blockchain**

There is no doubt that blockchain is not a Fad anymore. Its usefulness can easily be gauged from its use-cases itself. Many businesses have already implemented blockchain in their processes. And, many other businesses want to implement blockchain. The fact that blockchain is currently being used in vital processes, including cross-border payments, supply chain, identity, and so on, makes it more than ready for future-implementation. However, it is hard to say how the impact will be and whether it will be really impactful in different verticals and solutions.

### **References:**

1. Boersma, J.(2016). Blockchain Technology: 9 Benefits & 7 Challenges..
2. [hackernoon.com/stablecoins-designing-a-price-stable-cryptocurrency-6bf24e2689e5](https://hackernoon.com/stablecoins-designing-a-price-stable-cryptocurrency-6bf24e2689e5)
3. [medium.com/@argongroup/stablecoins-explained-206466da5e61](https://medium.com/@argongroup/stablecoins-explained-206466da5e61)
4. [medium.com/coinmonks/asset-tokenization-on-blockchain-explained-in-plain-english-f4e4b5e26a6d](https://medium.com/coinmonks/asset-tokenization-on-blockchain-explained-in-plain-english-f4e4b5e26a6d)
5. [www.nasdaq.com/article/how-tokenization-is-putting-real-world-assets-on-blockchains-cm767952](https://www.nasdaq.com/article/how-tokenization-is-putting-real-world-assets-on-blockchains-cm767952)
6. [www.investopedia.com/terms/f/fungibility.asp](https://www.investopedia.com/terms/f/fungibility.asp)



## RIGHT TO DEVELOPMENT OF WOMEN IN INDIA WITH SPECIAL REFERENCE TO TRIPURA

**Dr. Aparna De**

Assistant Professor

Government Degree College, Kamalpur

Dhalai District, Tripura

### Abstract

A resolution was adopted by the General Assembly of United Nation's Organisation, on "Right to Development" of all human being, in the year 1986. The resolution describes the Right to Development is an inalienable human right. Almost all member-states of UNO had made several provisions for making people to exercise the inalienable right. India is no exception. But, after 72 years of independence, most of the women are not able to exercise their right to development in India. The present paper is an attempt to assess the development status of women in India with special reference to Tripura, a tiny state of North-East India.

**Key Words:** Rights, Women, Development, Participation, Literacy.

**Introduction** According to the Declaration on Right to Development adopted by General Assembly resolution no. 41/128 of 4<sup>th</sup> December 1986, "The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized".

Article 8 of the Declaration on Right to Development explains that-1) States should undertake, at the national level, all necessary measures for the realization of the right to development and shall ensure, inter alias, equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income. Effective measures should be undertaken to ensure that women have an active role in the development process. Appropriate economic and social reforms should be carried out with a view to eradicate all social injustices; 2) States should encourage popular participation in all spheres as an important factor in development and in the full realization of all human rights.

Dr. Amartya Sen (1999) sees development as freedom which in turn empowers. He emphasizes, indeed the empowerment of women is one of the central issues in the process of development for many countries in the world today. Half of the humanity-women have been suffering from discrimination, disability, injustice and inequality all over the world for almost centuries.



Although Indian Government has taken all necessary measures to ensure equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income, without distinction as to race, sex, language or religion, but there are huge difference between male and female persons regarding development status. The Indian society treats women subordinate to men. Women are discriminated and deprived simply because of their sex in the guise of culture, tradition, custom and religion. Tripura is not exception, although in some Tribes, women bears equal status with men. Women are being deprived from basic rights to life, food, education, enjoyment and so many. There is always a tendency of social, political and economic disempowerment of women in society for which a lacking in independent decision-making power is seen in all spheres of women's life.

The role of women in the socio-cultural, political and economic development and social process is underestimated and underscored in India. Language, literature, education, symbols, art, architecture, learning process all are male dominated and male-centric. These indicate gendered and negative value system towards women and support inferior position of women in society. The usage of values and societal attitudes, presentation and communication of these values are highly irrational and anti-women in nature.

The traditional social structure, family, marriage, superstitions, beliefs, customs, religion and rituals developed in due course of history support the perpetual exploitation of women which have direct bearing on her position in society. The subordinated status is reflected in the unequal access to economic resources, political power, educational opportunities and health care facilities. Inequality and vulnerability of women in all spheres of life point out to the fact that several social processes and institutional arrangements are responsible for such prevailing inequality.

The above mentioned propositions can be examine through factual data regarding different parameters of Right to Development:

#### **Right to life:**

The development of civilization has made the right to development and self-determination as the core of human rights. These rights, which are inalienable and universal denoting the right to life, liberty, equality and dignity in particular, have been enumerated in the most of the Constitutions of the world as a fundamental rights and basic freedom. However, despite these safeguards - constitutional, legal and international, complaints of violation of human rights have assumed wide dimensions as the incidents of torture, assault, injury and unnatural death in domestic and community level. While violence against women manifests itself alarmingly in rape, molestation, stripping, eve-teasing, kidnapping and abduction, domestic violence include wife-beating, dowry harassment, dowry death, cruelty to women driving them to commit suicide etc. or other forms of murder like female feticide, infanticide, sati, daini etc. Scientific advancement and technological progress have brought with it emerging crimes paving the way for a tremendous increase in the commission of different heinous crimes against women such as burning after rape or gang rape, murder after rape, acid throwing etc. to quote a few in this arena.



Inalienable natural right, which human being gets by birth is Right to Life. But in almost every stage of life of female person is insecure. Present Sex Ratio shows the reality. Now the vital question is if there is no security of life, how women can enjoy right to development?

**Table 1**  
**Sex Ratio in Tripura and India**

Year	Tripura	India
1951	905	946
1961	932	941
1971	943	930
1981	946	935
1991	945	927
2001	948	933
2011	961	943

Source: Census reports of India

The sex composition is influenced by factors such as differentials in the mortality condition of males and females, sex-selected migration and sex ratio at birth. Sex ratio is measured as the number of females per 1000 males in the population. While sex ratio is determined through a complex interplay of socio-economic factors, it can be taken as the indicator of women's development. The above table shows that unlike India as a whole, the sex ratio in the state increased steadily till 1981. The sex ratio decreased slightly in 1991 and again increased in 2001 and 2011 in Tripura. Since 1971 the sex ratio in the state has always remained above the national figure.

Sex ratio (defined as number of females per one thousand males) is often considered as a summery indicator of women's health nutrition and survival status. A lower sex ratio typically represents a lower social status of women and sign of discrimination at various levels.

### **Literacy and Education**

Education system in the past was an expression and extension of religion. From the time it became a formal institution, it was controlled by men. Knowledge as practiced by men was the only recognized form and hence, only men regarded as the creators, practitioners and users of knowledge. The formal institution of education was thus instrumental to women's subordination as women had very limited access to these institutions.

In modern times also the formal education system reinforces patriarchy and women's subordination in direct and indirect ways. The objectives of education as laid down by the social reformers and political leaders were in expression of traditional role requirement of women that is women's education was perceived as the foundation of a good home, good family and good children. The role of wife, mother, and home maker was highlighted in this education process. In the last century education was prescribed for women as a part of upliftment and enlightenment of women.

The content of education is an important aspect in connection with women's empowerment. If the curriculum is aimed at empowerment, then it will be of real use for the largest segment of women. Women are exemplified as a nurturant, self-sacrificing, ever-available mothers and wives and as obedient daughters rather than self-actualizing individuals with dignity. The message of education should improve a woman's self image, help to discover herself, and enable her to participate in public life fruitfully and meaningfully. Following table shows women's literacy rate in India and in Tripura.

**Table 2**  
**Women's Literacy rate in India and in Tripura**

Country/ State	2011 Census			2001 Census			Change (%)
	Total Literacy (%)	Male (%)	Female (%)	Total Literacy (%)	Male (%)	Female (%)	
India	74.04	82.14	65.46	65.38	75.85	54.16	8.66
<u>Tripura</u>	87.75	92.18	83.15	73.19	82.42	64.33	14.56

Source: 2011 Census Report

### Gender gap in Literacy

Like India as a whole, the literacy rate both for male and female in the state increased during the period 1951-2011. It cannot be denied that Tripura has made remarkable improvement in the level of literacy and since 1971. The literacy rate in the state has always remained above the national figure. Gap in male-female literacy rate in the State reduced to 8.80 percent in 2011 as against 16.1 percent in 2001. Table 3 shows male female literacy gap in the state in the country as a whole.

**Table 3**  
**Gender Gap in Literacy in Tripura and India**

Year	Tripura			India		
	Female	Male	Male Female Literacy Gap	Female	Male	Male Female Literacy Gap
1951	7.71	22.55	14.84	8.86	27.15	18.3
1961	12.36	35.31	22.95	15.13	40.40	25.07
1971	27.84	46.84	19.00	21.97	45.95	23.98
1981	38.0	61.5	23.5	29.76	56.38	26.53
1991	49.7	70.6	20.9	39.29	64.13	24.84
2001	65.41	81.47	16.06	54.16	75.85	21.69
2011	82.73	91.53	8.8	65.46	82.14	16.68

Source: Census India Reports

Note: Literacy rates for 1951, 1961 and 1971 relate to population aged 5 years and above whereas rates for 1981, 1991 and 2001 relate to population aged 7 years and above.

The above table shows that there is a big literacy gap exists between men and women and the literacy gap indicate the women are facing certain difficulties on the way of their development.

**Table 4**  
**Vocational education of women aged 15 and above**

(In percentage)

Country/State	Formal training	Informal training	No Training	Total
Tripura	1.22	1.63	97.15	100
India	2.25	5.14	92.61	100

Source: NCW Report on Social, Economic and Political Empowerment of Women I North East States

The above table show that percentage of women gets formal or informal training vocational training is very poor in Tripura as well as in India. Further those who are trained in vocational skills are mainly trained through informal system. It indicates that girls have not come out of the conventional courses as far as this education is concerned. This is bound to have a bearing on their job prospects in non-traditional fields of employment and their economic development.

### **Political Participation**

All the political arrangements in general and the state in particular are almost universally patriarchal in nature. It connotes women's relative powerlessness in a given society.

India has quite progressive laws for women. Indian women enjoy equality before law, equal opportunities of right to vote and fundamental liberties. But in reality we observe several gaps and loopholes in the legal procedures, which make it easy to either misuse or evade. Hence, through these loopholes and gaps the subordinate status of women is either maintained or reinforced by the law.

According to the Inter-Parliamentary Union, an international group that works for promoting democracy, peace, and co-operation in the world ranked India at 98 in the world with only 10.8% of women representation in the Lok Sabha and 10.3% in Rajya Sabha. India, the largest democracy, comprised 66 women, only 12.15 % of total membership in 16<sup>th</sup> Lok Sabha. In 17<sup>th</sup> Lok Sabha there are 78 women MPs, which constitutes 14% of total 543 elected MPs (highest since independence).

In the present Tripura Assembly too only 3 are women out of sixty (60) members Assembly. Through 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment 33% seats are reserved for women in local self Governments in India. One step ahead, Tripura created history by reserving 50% seats for women in the local bodies including Agartala Municipal Council and at Tripura Tribal Area Autonomous District council. Two relevant bills i.e. Tripura Panchayat (Fifth Amendment) Bill, 2010 and The Tripura Municipal (Fourth Amendment) Bill, 2010 ("reservation bills") were passed unanimously in a session of State Assembly, on the same day when the women reservation bill got assent of the Rajya Sabh. The ruling Communist Party of India led left front and opposition Congress - Indigenous Nationalist Party of Tripura alliance extended support to the bills that



sought reservation for women in the local bodies. But in actual situation, men behind women representatives are enjoying the actual political power.

Low percentage of women's representation in highest law making body of India indicates the lower progress of women's political empowerment.

### **Health care services and Nutrition**

Health has been defined by the World Health Organization as "a complete state of physical, mental and social wellbeing, and not merely the absence of disease or infirmity". While considering the health of women in India, it is necessary to focus on those aspects of female health that distinctly differ from male health and to address the critical questions related to analyzing the nature of the problem.

a) Girls and women have less access to food and health care than men. In the house the men and the sons eat first followed by women and daughters, resulting in low consumption of proteins and vitamins. Women are the ones who generally finish the left-over. When resources are scarce and insufficient, as in the poor families, the deprivation of girls and women from food may be especially severe. Health problems of women are neglected /overlooked and even if acknowledged, treated mostly by home-remedies. Malnourishment, exhaustion, alienation are commonly experienced and are considered as natural to female members of a family.

b) Women shoulder a triple workload. Most women in India face multiple demands of productive work, household maintenance as well as childbearing and child rearing. When the heavy workload is accompanied by less food or poor quality food the outcome is nutritional deficiencies especially nutritional anemia.

c) Girls and women are subject to gender-related violence. Cases of "Dowry-Death" or "Dowry-ill treatment" and sexual violence in and outside marriage are known to occur in India and in Tripura too. The threat of violence against the physical and emotional health are often neglected or underestimated.

d) Another significant factor is "the culture of silence" which engulfs women in any traditional society. Women are not expected to verbalize their problems, either physical or emotional, but to suffer in silence what is predetermined by fate. When the culture of silence is combined with an attitude of fatalism, the result is that the treatment for the health problems of women is either not sought at all, or is sought to late when the problem has attained unmanageable proportions. Utilization of the available health services by women is, therefore, generally not in keeping with their health needs.

### **Nutritional Status of Women in Tripura**

Health of women is an important factor in determining the overall health of the society. If women are not well nourished they are more likely to give birth to weaker babies leading to a higher infant mortality rate.

Tripura has a higher prevalence of Anaemia than the national average. Anaemia among women in Tripura may be due low intake of dietary iron, poor absorption of iron due to inhibitors and increased demand due to pregnancy and lactation.

**Table 5**  
**Anaemia among Women in Tripura and India**  
(Percentage of Ever-married Women Classified by Degree of Anaemia)

Country/State	Mild Anaemia	Moderate Anaemia	Severe Anaemia	Any Anaemia
India	38.6	15.0	1.8	55.3
Tripura	49.0	14.8	1.3	65.1

Source: NFHS-3, India

A large number of women in Tripura and India are suffering from any kind of Anaemia. Though Govt. has taken initiative for providing Iron & Folic Acid tablets to women through Anganwadi Centres (AWC) and Health Sub-centers in Tripura, special drive should be taken to overcome the situation. In every AWC-wise monthly mother's meeting, awareness on prevention of Anaemia should be discussed.

### **Employment and Economic opportunity**

An economy can be broadly divided into three sectors namely: the primary ,secondary and tertiary sectors. Agriculture is the most important constituent of primary sector including forestry, animal husbandry, mining and fishing. The secondary sector contains all type of industries and tertiary sectors represents the service sector includes banking, insurance, trade and other services.

The occupational distributions of men and women in terms of domestic circumstances focus on sexual division at home based on the socially constructed gender roles. Women in the family are supposed to carry the responsibility of cooking, cleaning etc. It is assumed that, women have relations to domestic circumstances and men to wage labour. For women this division entitled disadvantageous both in terms of accommodated hours of waged work to the domestic responsibilities and also in terms of lower occupational attainment and income. Whereas it was advantageous to men for they can claim as wage earners along with domestic responsibilities.

**Work participation rate (WPR):** Work participation rate means the proportion or percentage of work and employment to the total population. With the whole perspective of women's work and employment in Tripura, we now tern to present the level, extent and pattern of female work participation on the basis of primary and secondary data which may give a brought idea about the situation of women's work and employment in Tripura.

In determining the level of economic activity of women and their contribution to the Tripura's production, the size of women work force in the state is of great importance. The size of women work force in the state is also an indicator that, in most cases, directly captures the economic attainments and hence the level of well-being of women in the state. For women workers, proper measurement of their work and contribution to the economy of the state is expected to improve the identification of problems faced by them as well as remedial actions.

The WPR, proportion of working population to total population, has been taken here as a measure to determine the level of economic activity of women. The work force participation rate in a country as well as state depends upon factor like age, sex composition, attitude to work, availability of work etc. All these factors differ in

different states and differ even within same state in different periods. The following table shows male and female workers in rural and urban areas of India as well as of Tripura.

**Table 6**  
**Proportion of Total, Main and Marginal workers to Total Male and Female population in Tripura and India**

Country /State	Total Worker				Main Workers				Marginal Workers			
	2001		2011		2001		2011		2001		2011	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Tripura	50.6	21.1	73.75	26.24	45.2	10.9	64.54	13.74	5.4	10.1	9.21	12.49
India	51.93	25.68	53.26	25.51	45.3	14.7	45.1	14.7	48.1	74.3	6.6	11

Source: Census of India 2001 and 2011.

Source: Census of India 2001 and 2011.

1. The work participation rate was lower for females than for males both in Tripura and India as a whole in 2001 and 2011.
2. The proportion of marginal workers was higher among females than among males in Tripura in 2001 and 2011. It indicates that the marginalization was deeper among women in Tripura and in India as a whole.

### **Access to wealth and property**

Prior to enactment of Hindu Succession Act 1956, Hindus in India were governed by *Shastric* and customary laws which varied from region to region and sometimes it varied on caste basis. The multiplicity of laws in India diverged in their nature made the property laws even more complex. A Hindu wife was not capable of holding any property separate from her husband. In fact the wife was considered to be a property of her husband and she could not own property herself. Only *Stridhan* women could hold during her lifetime and she could not alienate the same. In the Constitution of India equality to women was guaranteed for the first time. To secure equality of status, to improve Hindu women's right to property, Hindu Succession Act 1956 came into force.

At the time of enactment of this Act, daughters could not become members of the coparcener and the Act did not afford right of natural inheritance to daughter. In order to lay down a uniform law and a comprehensive system of inheritance, the Hindu Succession Act 1956 amended in July 2005 and discrimination between the male and female has been removed. The daughter is allotted the same share as is allotted to a son. The daughter shall have a right to claim partition in the joint family properties as well as the right to claim right of partition in the dwelling house of the joint family. This privilege is only given to Hindu women. The laws applicable to Muslims & Christians do not give equal rights in inheritance property to women.



### **Cultural & Ritual Participation**

Women have no place in religious authority structure in India. Male Gods slowly replaced Mother Goddesses during the evolution of all modern religions. Thereafter respectable women or even Goddesses have been convinced as mother or consorts of Gods. (e.g. Marry, Parvati). As per the role in different religious rites and rituals are concerned, women either do not have a role or play a secondary role.

More important aspect of religion, affection in women is the ideological support provided to patriarchy. Religions naturalise and justify women's subordination in every field of life. Religion constructed morality, ethics and the definition of social conformity and deviance. As powerful means of social control, religion controls women's sexuality, relations of reproductions, their mobility in the public sphere and ensures their conformity by justifying violence against women in private or public sphere.

A modern law in most of the societies is based on religion and therefore reinforces the structures of subordination by maintaining the traditional base of marriage, family and stratification. In India, for instance, most of the documents governmental, non-governmental or the application forms demand that a women describe her identity in terms of her father's/husband's name and address. Religion thus maintains and reinforces women's subordination to men.

### **Status in family**

Family is the basic social unit which binds men, women and children in a network of mutual ties obligations. But its significance for defining the life options of men and women is totally different. Family as an institution defines and controls the sexual division, rights, duties and privileges of the members. Here the following aspects are worthy of discussion:

a) Position in family: - In patriarchal families, women's position is subordinate to its male members. The eldest male is the "Karta" who controls property, takes decisions regarding all aspects of her life. She is burdened with the domestic work. Her mobility, participation outside the house is linked to her role in the family. In short, she shoulders many responsibilities with no role in decision-making.

The Indian family structure situates married women in a number of role relations through her husband. Except in the role of a mother and of a mother-in-law (especially after middle age) she does not enjoy power in family relations. Marriage is considered as the only role alternative to women. If single or widowed, her situation in the family and society worsens. The rate of desertion of women is also on the increase. These women represent single parent, female-headed households.

b) Motherhood:- Patriarchy is sustained and reinforced through the glorification of motherhood. It is perceived as the most important aspect of marriage. A woman is perceived by the society as 'nurturant by nature' and thus her child-bearing and child-rearing is looked as the 'natural' and 'essential' for society, social celebration of mother-hood, while men's lives are usually characterized as head of household or wage earner.

Begetting a son in India is perceived as socially prestigious and ritually rewarding and desirable. This puts specific pressures on women's reproductive capacity for which she is not at all responsible. But her sexuality and reproductive capacity is



controlled in the framework of socially acceptable form of marriage (e.g. among Hindus a marriage within caste or sub-caste) and patriarchal dominance.

Mother-hood and the ideology glorifying responsibilities and duties of a mother as the most important for the family and larger society define and constrain her mobility and participation in public life.

In short, family as an institution determines the framework of women's relation to the society. It drains their productive capacity (unpaid domestic work, and paid or unpaid productive work), reproductive capacity (sexuality, fertility and social celebration of motherhood) and participation in the public sphere.

**Measures taken by the Indian state for making women enjoy the Right to Development:** After independence the Indian Government passed progressive laws to enable women to vote, to take education, to fight against various customs like dowry, child marriage etc. for enjoying the Right to Development.

**a. Legal measure:** India is one of the countries with the largest number of laws for women. The Dowry Prohibition Act, 1961, The Commission of Sati (Prevention) Act, 1987, National Commission for Women Act 1990, Indecent Representation of Women (Prohibition) Act'1986, Protection of Women from domestic Violence Act'2005, Prevention of Women from Sexual Harassment at Workplace Act, 2017 are the efforts to protect Indian Women and enable them to participate in the process of India's development.

**b. Women Welfare schemes:** Different welfare schemes have been initiated by the Central government and state governments of states of India for all-round development of women. Different Social pension schemes, Girl Child incentive schemes, Indira Gandhi Matritwa Sahoyog Yojana (IGMSY); Swadhar Greh or Short Stay home for women; Support to Training and Employment Programme (STEP) etc. are few to mention.

**c. Conscientisation of women:** This is a process of change from which empowerment occurs as person realizes the causes and sources of subordination and awakens to one's potentialities. The women's movement in India, specially the post 1975 movement, believed firmly in conscientisation as a strategy to end subordination of women. To achieve this, women's organizations have used different strategies-songs, posters and slogans, demonstrations, street plays, films, talks, conventions with messages of undoing subordination.

**References:**

1. Agarwal, Rashmi and Rao, B.V.L.N.: 2004, *Gender Issues: a road Map to Empowerment*; Shipra Publication, Delhi.
2. Ahuja, R.; 1992, *Rights of Women*; Rawat Publications, Jaipur.
3. Alekar, A.S.; 1978, *The Position of Women in Hindu Civilization*; Motilal Banarasidas, Delhi.
4. Biju. M.R.; 2006, *Women's empowerment: politics and policies*; Mittal Publication, New Delhi.
5. Sen. Amartya; 1999, "*Development As Freedom*", Oxford University Press, New Delhi.
6. Sing, Pitam; 2003, *Women Legislators in Indian Politics*; Concept Publishing Company, New Delhi.



## ELECTRONIC VOTING MACHINE WITH FINGER PRINT USING ARDUINO

**Chukka Samsonu<sup>1</sup>, K.Kranthi Kumar<sup>2</sup>, Bhanu Prakash.K<sup>3</sup>**

Associate Professor, <sup>2</sup>.Assistant Professor, <sup>3</sup>UG Student  
Kallam Haranadhareddy Institute of Technology, Guntur

### **Abstract:**

Biometric Finger print devices are used in the Electronic balloting machine (E.V.M) for elector verification. The projected system designed a fingerprint based mostly balloting machine victimisation that rigging activities may be reduced. The elector wants solely to place his Finger on the device, so permitting the capturing of associate degree on-spot fingerprint from the elector that is employed as associate degree identification. This Finger print scanner reads the small print from the fingerprint of the elector. This knowledge is passed to the ARDUINO receiver that's a dominant unit for the verification of fingerprint. The controller fetches the knowledge from the scanner and compares this knowledge with the already existing knowledge keep throughout the registration of the voters. If information matches with the already keep information of the registered fingerprint, the person is allowed to forged his vote. If not, a warning message is displayed on digital display together with the alert message to the blink app and the person is barred from polling his vote. The vote casting mechanism is carried out manually victimisation the push buttons. Show |LCD |digital display alphanumeric display is used to display the connected messages, warnings and succeeding results. the ultimate results of the balloting may be seen through blink app.

**Keywords:** Fingerprint, ARDUINO , E.V.M, LCD.

### **I. INTRODUCTION**

Voting method is thought as a method for a bunch by means that of a gathering or democratic select orders to require a free call. this way contemplates because the best commonly found in republic and democratic governments (IDEA international, 2012) Common elections systems are exist already for hundred years past.[1] All those earlier election systems, but they'd been thought of being acceptable in past days, they began to reveal its disadvantages, day once day.[2] These disadvantages, result in an enormous development within the style and magnificence of electronic mechanical device. [3]

Previously back to 1960, the election systems used were all run manually. This involves, the election system that use paper, were the voters' votes casted and counted by hands. [4]



In 1965 a successful card choice developed by Joseph P. Harris, card systems use a card (or cards) and a little clipboard-sized device for recording votes. [5] Voters punch holes within the cards with a ballot marking device.[6]

Electronic choice is that the customary means that of conducting elections victimization Electronic choice Machines, typically referred to as "EVMs" in Bharat. the employment of EVMs and electronic choice was developed and tested by the state-owned physical science Corporation of Bharat and Asian nation physical science within the Nineteen Nineties.[7] They were introduced in Indian elections between 1998 and 2001, in an exceedingly phased manner. The electronic choice machines are utilized in all general and state assembly elections of Bharat since 2004.[8]

Bharat is that the largest democracy within the world. however Bharat faces an enormous threat of rigging in election, because of the population of over a billion during which several of the citizen fails to authority to vote.[9] this is often used as a plus by some political parties to impersonate the traveller voters to rig the elections to their advantage. This cause a threat to integrity of our country and therefore the subject trust within the electoral commission.[10] To eliminate such limitation and improve the responsibility of the choice processes, the govt. initiative AADHAR[11] is used to spot the individuality of every citizen and at an equivalent time guaranteeing their namelessness and their selection of candidate. EVM machines are wont to vote and AADHAR is employed for identification, however the EVM machine permits anyone to press the button which means it cannot stop the rigging. So, the planned is a concept to avoid fraudulence in mechanism to create e-voting in Bharat a reality. It improves the protection performance and avoid forgery vote as a result of naturally one human finger print is totally different from alternative human. From the paper titled "Electronic mechanical device With Fingerprint" the documented voters and polling information security aspects for e-voting system was mentioned.[12] They insured that polling can't be altered by unauthorized person. The citizen authentication in on-line e-voting method are often done by formal registration through directors and by coming into just the once word. In offline e-voting method authentication are often victimization Iris reorganization that permits the electronic ballot reset for permitting voters to forged their votes. [13] within the paper titled "Security Analysis of India's Electronic choice Machines" they gift a security associate analysis of a true Indian EVM obtained from an anonymous supply. [14] They conjointly represented the machine's style and operation very well, and that they evaluated its security, in lightweight of relevant election procedures. [15] They complete that in spite of the machine's simplicity and marginal software package trustworthy computing base, it's prone to serious attacks which will alter election results and violate the secrecy of the ballot.[16]

## II. RELATED WORK

TRADITIONAL choice PROCESS: ancient choice method consists of the subsequent stages

- Authentication: during this part, elector presents his/her positive identification to prove his/her identity for authentication purpose; this step is public and verified by the leader.



At the tip of authentication method, leader provides a ballot paper to elector to forged his or her vote. • Vote: The vote takes place in a very protected booth wherever elector can not be seen by a person. The elector forged their vote by writing it with a pen on the paper ballot, folds the ballot paper and place into the box wherever all the votes are mixed Vote counting: At the tip of choice time, the leader deposits the box containing ballots at the reckoning center for reckoning of votes. afterward with the assistance of members of the election committee nominative bye election commission of Republic of India, the ballot boxes are opened and votes are counted and therefore the results are then declared.

• Verification: numerous kinds of verification method are used, most procedure are public and verified by the representative of candidates of competitor parties. Recount is additionally attainable if there's any fraud or error. standard choice systems aren't economical because of long amount of preparation, bastard choice, embody papers, punch cards, mechanical levers, optical-scan machines . These systems aren't economical as they're conducted manually and so fairly often aren't correct. As a consequence, it's obligatory to hold the accessible choice through associate degree electronic system.

#### **DRAWBACKS OF ancient choice PROCESS:**

- Corrupted officers might tamper with the choice count.
- Impersonation of the traveller voters to bias the results towards a specific candidate.
- Eligibility and therefore the identity of elector isn't recognized.
- Dubiously obsolete and basic technology makes it straightforward for malpractice and controversies in results.

#### **Less reliableness.DRAWBACKS OF TRADITIONAL VOTING PROCESS:**

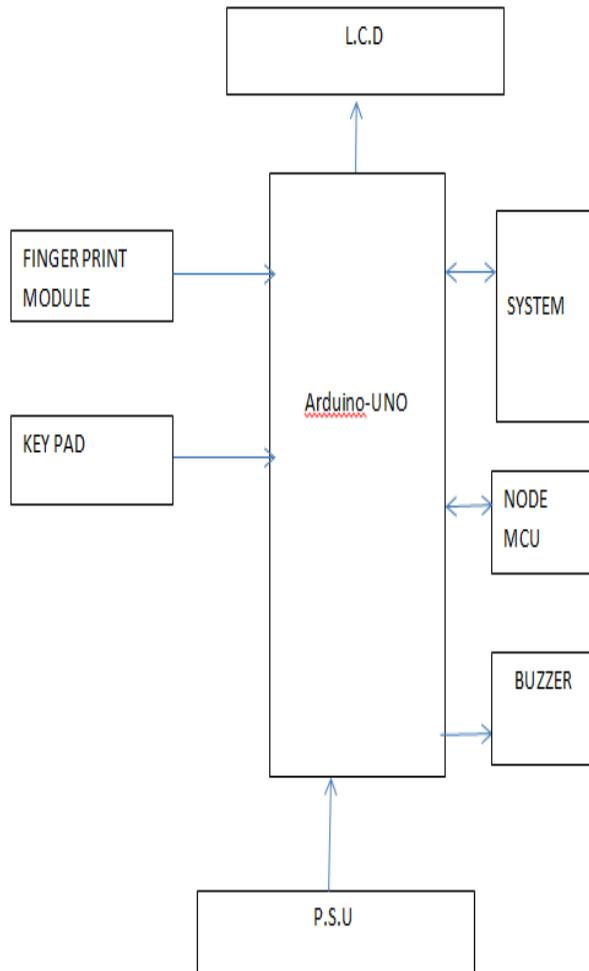
- Corrupted officers may tamper with the voting count.
- Impersonation of the absentee voters to bias the results towards a particular candidate.
- Eligibility and the identity of voter is not recognized.
- Questionably outdated and basic technology makes it easy for malpractice and controversies in results.
- Less Reliability.

### **III PROPOSED SYSTEM**

In planned system we have a tendency to store all the fingerprints of the voters on with their AADHAR numbers. once ballot procedure starts , the elector needs to enter the AADHAR variety and if the AADHAR variety is correct then the elector needs to place his/her finger on the fingerprint scanner for authentication. If the elector is documented then he/she will forged their vote to any party of their would like. this can facilitate to scale back the unauthorized ballot or rigging and can turn out fare ends up in the elections. Finger print module is employed here to scan voter's finger. it's directly connected to the ARDUINO receiver pin through connexion. If live finger print is

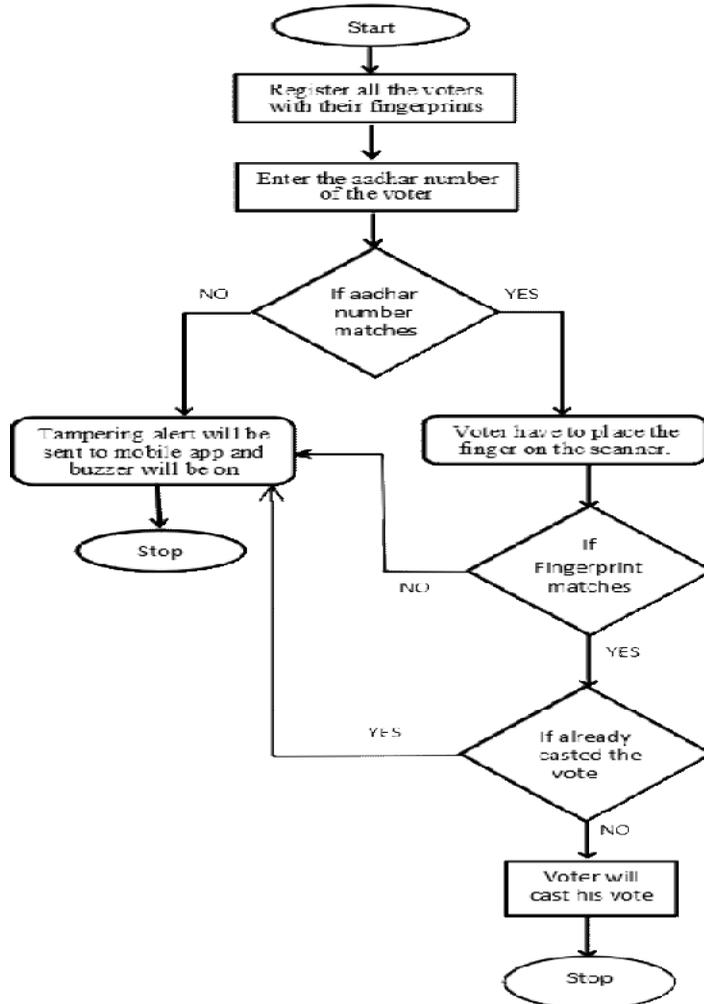
matched with AADHARfinger, mechanically vote right are provided thereto corresponding user. Those persons, United Nations agency area unit having vote right will solely will utilize their votes through provided computer keyboard. If any matrimony activities like rigging happens, mechanically a warning message are sent to the election commissioner mobile app through IoT technology.

**ARCHITECTURE:**



**Fig 1 : Proposed Architecture**

**FLOW CHART:**



**Fig 2 : Flowchart**

**Advantages of Proposed System:**

- Rigging can be avoided
- Fair results can be generated
- Cost effective
- Immediate results can be produced
- In case of rigging, higher authorities will be automatically notified
- Results can be seen from anywhere in the world through mobile

## IV RESULT ANALYSIS

### 1. Screenshots:

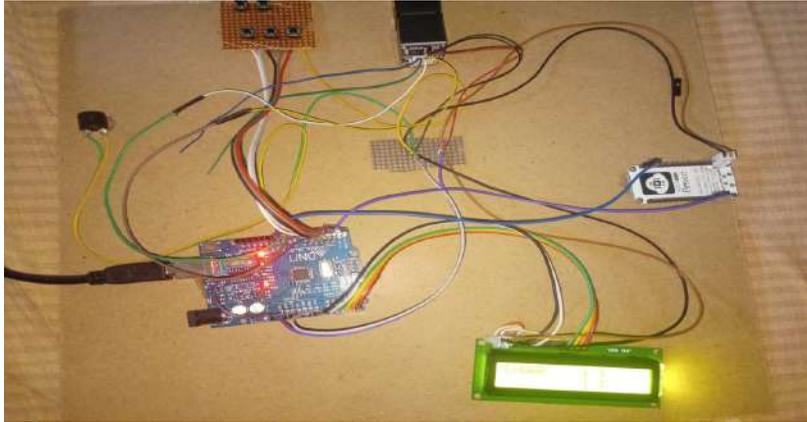


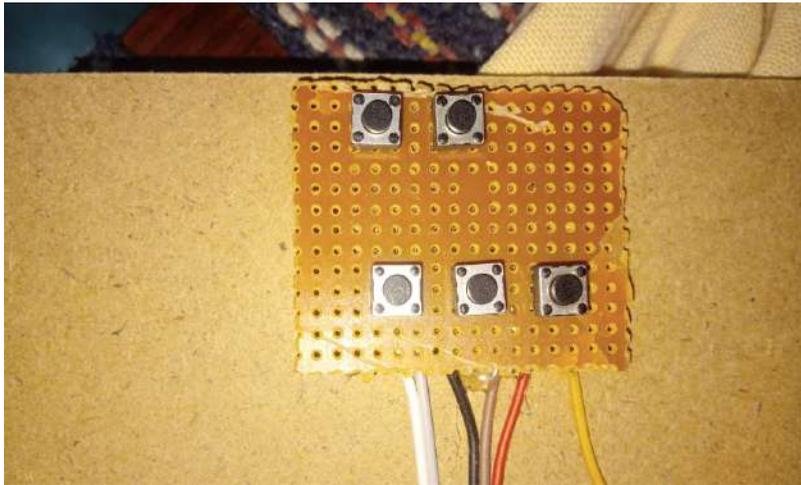
Fig 3 : EVM with fingerprint



Fig 4 : Serial monitor for enrolling Fingerprints



Fig 5: LCD Displaying to enter AADHAR



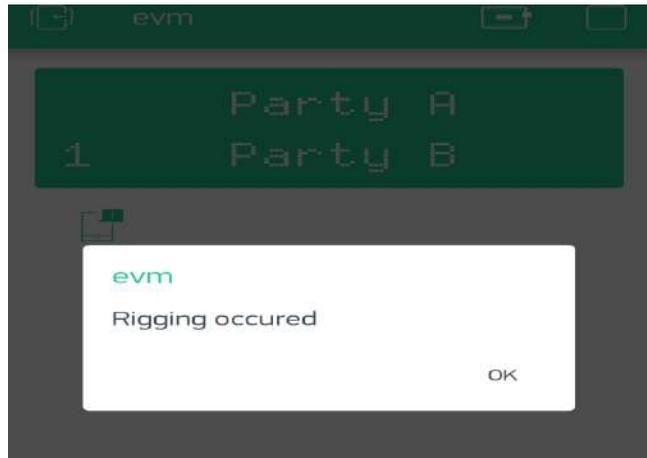
**Fig 6: Keypad to enter AADHAR**



**Fig 7 : LCD Display in case of unauthenticated voter**



**Fig 8 : LCD Display in case of Tampering**



**Fig 9: Alert received in mobile in case of tampering**



**Fig 10 : LCD display in case of authenticated voter**

c

## V. CONCLUSION

This paper counsel that the EVM system should be any studied and innovated to achieve all the degree of community, so the voter's trust of the election method can increase and election officers can create a lot of involvement in buying the innovated EVM's for conduct economical, secure, corruption free Elections . any innovations is created so the citizen will vote where they're throughout the election, aiming to opt for the candidate competitive in their home body while not the need of travel. The represented model consisting of fingerprint device may be changed to be used with tissue layer scanner that provides even safer and technologically advanced resolution to pretend ballot and impersonation. This concludes that the AADHAR primarily based EVM can helpful to avoid rigging in election by impersonation, to avoid time consumption and every one



the whereas keep the voter's data a lot of secured. the standard paper ballot technique additionally consumes heap of man power and security problems to the Electoral Commission which might by reduced by this technique.

## VI. REFERENCES

- [1]. D. L. Chaum, "Untraceable Electronic Mail, Return Addresses, and Digital Pseudonyms," Communications of the ACM, Vol.24, No.2, 1981, pp.84-88.
- [2] Qadah, G.Z., Taha, R.: Electronic voting systems: requirements, design, and implementation. Compute. Stand. Interf. 29(3), 376-386 (2007).
- [3] A. M. Keller, A. Dechert, K. Auerbach, D. Mertz, A. Pearl, and J. L. Hall, "A PC-based Open-Source Voting Machine with an Accessible Voter-Verifiable Paper Ballot," Proceedings of the USENIX Annual Technical Conference, U.S.A., 2005, p.52.
- [4] Brown, J.S., Duguid, P.: Borderline Issues: Social and material aspects of design. Human-computer interaction. Lawrence Erlbaum Associates, Inc9(1):3-36 (1994).
- [5] Yao, Y., Murphy, L.: Remote electronic voting systems: an exploration of voters' perceptions and intention to use. Eur. J. Inf. Syst. 16(2), 106-120(2007).
- [6] Jain, K, Ross, A, Prabhakar, S (2004). *An Introduction to Biometric Recognition*. New York, USA.
- [7] JawadNagi, (2009). Design of an Efficient High-speed fingerprint Recognition System.Final Year Project Proposal. College of Engineering,UniversitiTenagaNasional.
- [8] Z. Pan, H. Bolouri (2010). fingerprint matching on Discrete Cosine Transform and Neural Networks. University of Hertfordshire, Herts, UnitedKingdom.
- [9] Xiao Yun Jing and David Zhang (2009).*A fingerprint Recognition Approach Based on minutiae DCT Feature Extraction*. Nanjing University of Science.
- [10]Bakshi U.A., Bakshi A.V., Bakshi K.A. (2007), *Digital Image Processing*, 1st ed. Pune: Technical Publications.
- [10]Vishal Vilas Natu "Smart-Voting using Biometric "International Journal of Emerging Technology and Advanced Engineering", Volume 4,Issue 6, June 2014.
- [11] Virendra Kumar Yadav,SaumyaBatham, Mradul Jain, Shivani Sharma "An Approach to Electronic Voting System using UIDAI ".2014 International Conference on Electronics and Communication Systems.
- [12] Chris Roberts Biometric Technologies- fingerprint.
- [13] KashifHussainMemon, Dileep Kumar and Syed Muhammad Usman,Next Generation A Secure E-Voting System Based On Biometric Fingerprint Method 2011 International Conference On Information And Intelligent Computing IPCSIT Vol.18 (2011)
- [14] D.Ashok Kumar, T.Ummal Begum, 2011 "A Novel design of Electronic Voting System Using Fingerprint"
- [15] Mary Bellis. The history of voting machines.About.com:Inventors, 2000.
- [16]Jefferson D., Rubin A., Simons B., and Wagner D., "A Security Analysis of the Secure Electronic Registration and Voting Experiment.



## THE INTER-RELATIONSHIP OF TEACHING AND RESEARCH THROUGH REFLECTIVE PRACTICE AS MEANS OF PROFESSIONAL DEVELOPMENT IN THE ERA OF GLOBALIZATION

**Binoy Biswas**

Lecturer

Jiaganj Institute of Education and Training, West Bengal, India

### **Abstract**

In a professional setting, reflection is deliberate, purposeful, structured, about linking theory and practices, to do with learning, about change and development– becoming a reflective teacher. Professional strategy is a general strategy of professional realization to engage and master the language of reflective practice. The realization of such a professional language is of increasing importance as it draws upon substantive research developments in our understanding of both teaching and the academic and professional development of teaching. The notion of reflective practice as a means of professional development was later highlighted by Donald Schon (1987) and promoted reflection as an important tool for beginning teachers to improve their practice. Bartlett (1990) points out that becoming a reflective teacher involves moving beyond a primary concern with instructional techniques and “how to” questions and asking “what” and “why” questions that regard instructions and managerial techniques not as ends in themselves, but as a boarder educational purposes. Asking “what and why” questions give us a certain power over teaching. The teachers identify a variety of different aspects of their lessons for their partners to observe and collect information. These include organization of the lesson, teachers’ time management, students’ performance on tasks, time on task, teacher questions and student responses, student performance during pair work, classroom interaction, and class performance during a new teaching activity. The teachers gain a number of insights about their own teaching from their colleague’s observations and that they would like to use peer observation on a regular basis. They may also obtain new insights into aspects of their teaching. This article explores different aspects of reflective practice which is an ongoing, dynamic process of thinking honestly, deeply and critically about all aspects of professional practice. Reflective practice which is a process of systematic awareness to self analyze and self assess own practice, in order to design new strategies that can enhance teaching.

**Key words:** Reflective Practice. Professional Development, Higher Education.

### **Introduction:**

Professional strategy is a general strategy of professional realization to engage and master the language of reflective practice. The realization of such a professional language is of increasing importance as it draws upon substantive research developments in our understanding of both teaching and the academic and professional development of teaching. The intention of this strategy is to offer a critical approach for the development of a reflective, evidence based approach to realizing and improving teaching and learning. Three descriptive features frame the general structure of this

---



strategy. The first feature describes the concrete spatial location of the realization. It is not a neutral space, rather, is situated within the teacher's discipline, department and institution. Ideally, it depicts a space in which engagement with students, colleagues and the disciplinary knowledge-base is critical to a full and complete realization of the language. The second feature draws on past experience and looks forward to ongoing experience and development. The third feature encompasses the wide range of material, experience, practices, situations, relationships and values with which the academic engages. It suggests that teachers be informed in their relationships with that matter by conceptual framework of engaged dialogical learning and guided by the critical learning matrix.

### **Reflective Practice in Higher Education and Professional Development:**

The term can be used in two different but related ways:

1. Teachers, as professionals, reflecting on the practice of teaching
2. Teachers employing activities and assessments that require students to reflect on their learning.

Most of us focuses on the first definition, but the second definition is also relevant, and is covered in another discussion on '*In-depth Reflective Practice*' for learners. The aim of this discussion is to develop skills in reflective practice for teachers (using Fink's Taxonomy) :--

- Foundational knowledge - Understand the concept of reflective practice;
- Application of knowledge - Build skills in reflecting on practice both individually and collaboratively;
- Caring about the subject - Explore the value of reflective practice to teaching and professional development
- Learning how to teach and learn - Develop an ability to reflect on teaching practice
- The human dimension of learning - Understand oneself and how one's teaching impacts on learners;
- Integration of knowledge - Develop skills as a reflective practitioner that are transferrable to other spheres of life.

### **Reflection-in-Practice and Reflection-on-Practice:**

Reflection on practice is part of evaluation of teaching practice. As teachers, many of us routinely think about what we do in teaching spaces and how and why we do it. Reflective practice allows us to ask questions, in a structured or disciplined way, about those issues, particularly about the unspoken assumptions that we bring to our practice. Reflective practice typically involves the application of a reflective cycle such as this one for language teachers from the National Capital Language Resource Center in Washington. Here's a graphic model from the School of Computer Science, University of Birmingham:



Both the Living Curriculum and reflective practice view teaching and learning as ongoing conversations, where knowledge is constructed in collaborative activities. As reflective teachers and learners within the Living Curriculum, our challenge is to work with change and uncertainty, and to respond to the dynamic nature of professions in the 21st Century through innovative teaching. e-learning, which puts learners in touch with a world of constantly evolving ideas, is a critical part of this process.

### **Integration of Research and Practice of Teaching:**

Traditionally both research and teaching are seen independent to each other rather than an dependent issue in the construction and extension of knowledge the focus on the common goal of learning and the advancing of knowledge highlights the critical significance of this research teaching relationship within disciplinary practice.

In a broad sense, research includes both qualitative and quantitative approaches and incorporates a wide range of disciplinary cultures. Research is intrinsically fused with theory in so far as it informs theory, modifies theory, subverts theory, embodies theory and / or generates new theory. Research and theory can be grouped into four categories regarding the practice of teaching.

- The first concerns research looking at the practice of teaching.
- The second category draws together the vast reservoir of research on adult and student learning.
- The third focuses on research of more specific relevance to the individual genres of practice.
- The fourth category draws upon research concerned with the professional issues facing learning and teaching in higher education.

It addresses the social and epistemological issues and values of the professional role of teaching within academic practice, higher education institutions and society in general. It challenges academics to reflect upon and think about their teaching in the changing wider social, political and economic contexts in which it situated. These categories offer a wide range of research that can be drawn upon in the development of the practice of learning and teaching. They do not describe a practical framework for understanding the different relationships between research and practice in the realization of professional practice.

The theory phase of integrating research and teaching has sometimes been referred to as scholarly teaching which is often differentiated from excellent teaching. Excellent



teaching is essentially best practice in which teachers focus on student learning but do not formally draw upon the literature on learning and teaching. The scholarship of teaching suggests an enquiry into 'some or all of the full act of teaching in a manner susceptible to critical review by the teacher's professional peers and amenable to productive employment in future work by members of the same community. Teaching, informed by relevant research, by theory, by specialized knowledge, by expert and critical ways of understanding is a vital ingredient of reflective and professional practice. it provides the knowledge and the conceptual framework, for reflecting upon and 'critiquing' one's knowledge, practice and common experience as a learner.

### **Teaching vs Research:**

Teachers in higher education bring their own rich experience of learning to the learning and teaching situation. Through their own academic research and scholarship, they can also bring to the encounter with the students a shared experience of the struggle and exhilaration of learning. This phase focuses on the development of teaching within a broader conception of disciplinary research and scholarship. It includes a more understanding of research as a deeply engaging learning activity with rich lessons for our understanding and practice of teaching. Teachers in higher education are master learners in their disciplines and professions. That, probably more than anything else, is what makes them academics as they know the way of learning their chosen field intensively. The language of teaching does not, therefore, simply draw upon generic understandings of teaching / learning but, rather, on profound disciplinary experiences of research and learning.

### **Teaching as Research:**

The movement towards understanding teaching as research brings together of the cycle in a process/method of practical realization. It articulates a strategy for professional realization that incorporates and integrates the other three. It describes a process of becoming critically engage in practice through action research. It aims at professional realization practical realization. It articulates a strategy for professional realization that incorporates and integrates the other three. It describes a process of becoming critically engage in practice through action research. It aims at professional realization transforming academic practice as habitual or customary action into 'academic praxis' into informed, critical and committed academic action. Action research helps to encourage the critical attitude we wish to foster in our students but also in ourselves personally and as exemplars for students. It incorporates the integration of educational theory with personal research into teaching. It provides a rigorous research basis from which to understand and contribute to the debate concerning academic accountability to society, giving academic staff a professionally grounded voice with respect to academic policies, future curriculum, decisions and so on it offers practitioners a robust and critical method of self evaluation for on going development. Finally, it sustains the capacity to contribute to the development of professionalism in higher education.

Corn and kermis (1983) describe three kinds of action research which address these issues, albeit at different levels of practitioner engagement. They are differentiated by the relationship between the educational researcher and the practitioner. In the first,



technical action research, the researcher who facilitates the process establishes and judges the standards for improving the effectiveness of educational practice. The practitioner is mainly engaged in the process at a technical level. The second, practical action research, also aims to improve the effectiveness of practice but encourages the practitioner to engage more fully and self-reflectively in the research process to develop their practical understanding and professional development. The third type, emancipator action research, encourages the full participation of practitioner as researcher to explore critically the effectiveness of practice and its practical understanding within the social and organizational constraints that enclose practice. Improvements, here, encompasses organizational enlightenment. It is characterized by a more complete engagement and critical dialogue, essential to the full realization of practice.

### **The inter-relationship of Teaching and Research through Reflective Practice:**

The essential outcome of professional development is integrating the issues of learning apparent in research and scholarship with those of learning and teaching. It views professional development as moving beyond learning and teaching practice to embrace all academic practices. General approach can be used within a formal programme of training or to engage with it more skillfully. Categories of programmes might include:

- Institutional : Programme provided by an institution.
- Disciplinary : programme provided by discipline associations.
- Peer : programmes established with in parameters agreed with peers; and
- Individual : programme individually constructed

As the basis for action research, however, programmes require a systematic and strategically planned approach. Teaching practice does not exist in a vacuum. It is situated practice and, in so far as the practitioner / research in researching their own practice within their particular department and institution, both the research project and the associated research documentation will also be concretely situated and grounded in their own academic discipline (s) development programmes and projects are not, therefore, focused on helping practitioners to compile evidence of generic skills. They are aimed at helping them to identify, examine critically and develop expertise and skills in relevant practices embedded within their own discipline, department and institution. The realization of practice will need to proceed towards the production of evidence of professional realization, for sharing with colleges in the best tradition of peer review and for informing and developing ongoing development.

The disciplinary situation of practice is at the heart of professional realization through action research approach approaches. It provides the vital context of the practitioners investigations and explorations. It is, ultimately, the space in which the research is embedded – where the plans are designed, interventions constructed, methods identified and developed within the situation, the multiplicity of designs, interventions and methods available needs to be understood in terms of the overall realization of the objectives of the research. These will be dependent on the general parameters of the research (e.g. national professional requirements, instructional criteria, programme objectives ) as well as the initial questions and the outcomes (e.g. improving learning, teaching development and improvement, evaluation of learning and teaching). Action research of this sort is not aiming at wide – scale generalization or application but, rather, at individual development. Essentially it employs case-study methodology in

---



which the case is related to the researcher's own practice within their own concrete academic situation. Such cases might range, for example, from exploring a single, specific teaching innovation or specific use of course material, to broader redesigns of an entire course or curriculum.

Case situated action research will work with and draw from concrete categories of experience, evidence and activities, including:

- Learning and teaching practices and resources, etc
- Programme, course, module and session materials and documentation
- Relevant departmental and institutional documents
- Disciplinary and syllabus subject matter – texts, readings, techniques, etc.
- Disciplinary research and scholarship; and
- Students, colleagues, mentors / advisers.

Each offers significant research potential employing a broad range of methods and techniques of data collection and analysis. These will include documents or textual analysis not only of the kind of institutional and programme / course documentation but also, crucially, of student essays, papers, online discussion, project and lab reports etc. it may also include the systematic collection and analysis of both formative and summative written comments given to students.

Practitioners may also employ techniques and methods of observation, particularly with respect to classroom practice. Interviews with students also offer an invaluable source of data for analysis, reflection and further development. They might aim at better understanding of student experiences and / or conceptions of learning within the practitioner's practical teaching and learning situation. Strategies questionnaires and surveys of students might also be effectively used. Practitioners might ask students and colleagues for that matter to participate in exercises utilizing a range of focus group techniques. Depending on permission, time and resources, practitioners might also find methods of cognitive experimentation valuable. So, research can be strategically and creatively employed for the improvement of practice.

### **Conclusion:**

The realization of 'Professional Language' is critically inter-related with the two other aspects of the language are : its overall conceptual framework and its main genres. Fluency in the language and practice is characterized by a reflective use of practical skills, informed by an appropriate professional knowledge, a critical understanding of the relevant conceptual frameworks and a command of the key teaching genres. Realization must sustain the 'openness' with respect to its creative potential but also with respect to the diversity, multiplicity, complexity and uncertainty of the students, the university and the future with which it must continually and fully engage. It is also due to the prevailing way in which the university is primarily understood as contrasting practices, research and teaching, and not as a unifying goal, knowledge and learning. Ultimately, the realization of reflective practice is grounded in the realization of student learning. The goal of 'teaching as research' is legitimated only in so far as that research explores and documents theoretical, empirical and methodological advances in the development of student learning at the 'cutting-edge'. The teacher's research resides in the research capacities developed by their students and is, or should be recognized as a



critical part of an academic's contribution to a university's research mission. The implications of this formulation are even more radical, raising the opportunity for a thorough rethinking and integration of research and teaching through the central ideas of learning.

## REFERENCES

- Albirini, A. (2006). Teachers' Attitudes toward information and communication technologies: The case of Syrian EFL teachers, *Computers & Education*, (47), 373-398.
- Akbari, R., 2007. Reflection on Reflection: A critical Appraisal of Reflective practice in 12 Teacher Education.system, 35(2), pp 192-207.
- Bangou, F. (2003). A situated approach to knowledge construction related to technology-enhanced foreign language teaching and learning for preservice teachers in a large Midwestern master of education program, *DAI-A*, 65(20).
- Bartlett, L. 1990. Teacher development through Reflective Teaching. *In second language Teacher Education*, Richards, J.C AND Numan, new York: Cambridge University Press, pp 2002-204.
- Bordbar, F. (2010). English teachers' attitudes toward computer-assisted language learning, *International Journal of Language Studies*, 4(3), 27-54.
- Jacobs, M ; Vakalisa, N.C.G & Gawe, N ., 2011. *Teaching Learning Dynamics* . Cape Town: Pearson.
- Kettle, B. & Sellars, N., 1996. The Development of Student Teachers Practical Theory of Teaching. *Teaching and Teacher Education*, 12(1), pp 1-24.
- Priya Mathew, Prasanth Mathew, Prince, J. Peechattu 2017. Reflective Practice: A Means to Teacher Development. *Asia Pacific Journal of Contemporary Education and Communication Technology*, 3 (1), pp 126-130.
- Smyth, 1993. Reflective Practice in Teacher Education *Australian Journal of Teacher Education*, 18(1).
- Sellars, M. 2012. Teachers and Change: The Role of Reflective Practice. *Procedia-Social and Behavioral sciences*. 55, pp 461-469.
- Schon, D., 1983. *The Reflective Practitioner : How Professionals Think in Action*. New York: Basic Books.



## CRIME, INTERNATIONAL CRIME AND INTERNATIONAL CRIMINAL LAW

**Anmol Jain**

Mindsprings Associates

House no. 205, Sec -7, Urban Estate, Ambala City

### **Abstract**

A country without judiciary or judicial system is incomplete. Every country set some basic principles for the welfare of its citizen and for administrating the country smoothly and without any crime. Whenever the word crime I heard, since childhood, it just disturbed my mind by asking what do you mean by crime. As I grew, the craze and curiosity to know the meaning of it also grew. Hence, this paper tries to answer the question which I opine may be come in the mind of every individual. This paper is just a step to find the answer of the question that what is crime? What does a crime constitutes? This paper also highlights the meaning of international crime and International law along with its relationship with each other and their interdependence with the crime.

**Keyword:** Judiciary, Judicial System, Curiosity, Crime, International Criminal Law, International Crime

### **CRIME**

Criminal system of every country entails some basic understanding and workings of the law. One question that readily comes to mind is what constitutes a crime? The general purpose however, is that, criminal laws of states limit anti-social behaviour to guarantee a safer community.

The very first question that would arise in proceeding with the study is - What is crime? It is indeed a Herculean task to define crime due to number of researches on the topic. Profound author - R.C. Nigam says that to answer the question, as to what is crime, it is to be known at first, what is Law, because these two questions are closely interrelated. Traditionally, it is known that law is a command enjoining a course of conduct. "A crime may, therefore, be an act of disobedience to such a law forbidding or commanding it. But then, sometimes, disobedience of all laws may not be a crime, for instance, disobedience of civil laws. Therefore, crime would mean something more than mere disobedience of a law."<sup>1</sup>

Of all branches of law, the branch that closely touches and concerns man in his day-to-day affairs is criminal law, yet the law is not in a satisfactory state.<sup>2</sup> Many attempts have been made to define crime, but they all fail to help us in precisely identifying what kind of act or omission amounts to a crime. The very definition and concept of crime is a changing notion from time to time and from place to place. For instance, suicide was a

---

<sup>1</sup> R.C. Nigam, Law Of Crimes In India

<sup>2</sup> Peter Brett, An Enquiry into Criminal Guilt, The law Book Co. Australia.



crime in England until the Suicide Act, 1961 was passed,<sup>3</sup> and abortion was a complete crime in India until 1971, but now legal excepting in some excepted circumstances.<sup>4</sup>

### **What is crime according to eminent Jurists ?**

Now we shall examine the definitions of crime given to us by the eminent jurists:

1. **Sir William Blackstone** in his classical work, Commentaries on the Laws of England, Volume IV, which is devoted to “Public Wrongs or Crimes,” attempted to define crime at two different places in his work. At one place, he states that crime is “an act committed or omitted in violation of a public law forbidding or commanding it.”<sup>5</sup>

2. At second place he further defines crime as “a violation of the public rights and duties due to the whole community considered as a community.”<sup>6</sup>

3. Serjeant Stephen, while editing Blackstone’s commentaries modified the definition to some extent and his definition is: “A crime is a violation of a right considered in reference to the evil tendency of such violation as regards the community at large.”

4. Raffaele Garofalo defines crime in some sociological perspective in the following words: “Crime is an immoral and harmful act that is regarded as criminal by public opinion, because it is an injury to so much of the moral sense as is possessed by a community- a measure which is indispensable for the adaptation of the individual society.”<sup>7</sup>

5. Edwin Sutherland, noted criminologist defines crime in terms of criminal behaviour as: “Criminal behaviour is behaviour in violation of criminal law. No matter what the degree of immorality, reprehensibility, or indecency of an act, it is not a crime unless it is prohibited by criminal law. The criminal law in turn, is defined conventionally as a body of specific rules regarding human conduct which have been promulgated by political authority, which apply uniformly to all members of the class to which the rules refer, and which are enforced by punishment administered by the state, characteristics which distinguish the body of rules regarding human conduct from other rules, are therefore, politically, specificity, uniformity and penal sanction”<sup>8</sup>

6. According to Austin, “A wrong which is pursued at the discretion of the injured party and his representatives is a civil injury: a wrong which is pursued by the sovereign or his subordinates is a crime.”<sup>9</sup>

7. Professor Kenny modifies Austin and defines crime to be “wrongs whose sanction is punitive and is in no way remissible by any private person, but is remissible by the Crown alone, if remissible at all.”

8. An American author, Professor Paton observes: “In crime we find that the normal marks are that the state has power to control the procedure, to remit the penalty or to inflict the punishment.” Similarly Professor Keeton says: “A Crime today would seem to be any undesirable act which the state finds it most convenient to correct by the

---

<sup>3</sup> Smith and Hogan, Criminal Law, Butterworths, London, 1983

<sup>4</sup> P.Rathinam Nagabhusan Patnaik V. Union of India, AIR 1994 SC 1844.

<sup>5</sup> Sir William Blackstone, Commentaries on the Laws of England

<sup>6</sup> Ibid

<sup>7</sup> Raffaele Garofalo, Criminology, Boston, Little Brown.

<sup>8</sup> Edwin H. Sutherland, Principles of Criminology

<sup>9</sup> John Austin, Lectures on Jurisprudence Status, Edn, 1920.



institution of proceedings for the infliction of a penalty, instead of leaving the remedy to the discretion of some injured person.”

9. According to Justin Miller, a crime is: “to be the commission or omission of an act which the law forbids or commands under pain of punishment to be imposed by the State by a proceeding in its own name.”<sup>10</sup>

10. According to Odger, “A crime is a wrongful act of such a kind that the State deems it necessary, in the interests of the public, to repress it; for its repetition would be harmful to the community as a whole.”<sup>11</sup>

11. According to the positive theory of crime, crime is a man-made concept, which is a violation of a man made command of the Sovereign, a violation identified as a public wrong.<sup>12</sup>

12. Halsbury defines crime as, “an unlawful act or default, which is an offence against the public and which renders the perpetrator of the act or default liable to legal punishment”<sup>13</sup>.

13. The Supreme Court of India in the case law, T.K. Gopal v. State<sup>14</sup>, defines crime as: “an act specifically forbidden by law: it may be an offence against morality of social order.”

14. Meaning of crime according to oxford dictionary: “an offence against an individual or the state which is punishable by law.”

15. According to P. Ramannatha Aiyer’s Law Dictionary, “A crime is an act or omission which is prohibited by law as injurious to the public and punished by the state.”<sup>15</sup>

All attempts made from time to time beginning with Blackstone down to various other jurists of modern times to define crime but it have proved abortive. Russell in this context observes that “to define crime is a task which so far has not been satisfactorily accomplished by any writer. In fact, criminal offences are basically the creation of the criminal policy adopted from time to time by those sections of the community who are powerful or astute enough to safeguard their own security and comfort by causing the sovereign power in the state to repress conduct which they feel may endanger their position.”<sup>16</sup> In the same way, Roscoe Pound has also put forth his opinion in this respect and says: “A final answer to the question ‘what is Crime?’, is impossible, because law is a living, changing thing, which may at one time be uniform, and at another time give much room for judicial discretion, which may at one time be more specific in its prescription and at another time much more general”<sup>17</sup>

It is thus observed that none of these definitions can delineate the representative picture of crime for all time whereas each one gives its own contribution towards defining crime to a certain extent. Conceptions of crime vary so widely from culture to culture

---

<sup>10</sup> Justin Miller, Miller on Criminal Law Handbook, West Publishing Co.; First Edition edition (1934)

<sup>11</sup> W.B. Odgers, The Common Law of England (London: Sweet & Maxwell Limited, 1911), page 101.

<sup>12</sup> K.D. Gaur, Criminal Law; Cases and Materials, Butterworths, 1999

<sup>13</sup> Halsbury's Laws of England, LexisNexis.

<sup>14</sup> T.K-Gopal V. State, (2000)6 SCC 168.

<sup>15</sup> P. Ramanatha Aiyer, Concise Law Dictionary, 3rd Edn. 2011, p. 280.

<sup>16</sup> Russel On Crime, Vol. 1, 12th Edn.

<sup>17</sup> Roscoe Pound, Interpretation Of Legal History, Harvard University Press, 1946

---



and change with time to such an extent that it is extremely difficult to name any specific act universally regarded as crime.<sup>18</sup>

Crimes (except strict liability crimes) have two basic objective and subjective 'elements'. Actus Reus, guilty act, voluntary act or omission (objective elements) to which criminal responsibility can attach and mens Rea, intent or guilty mind, criminal intent (subjective element) which makes the performance of a particular act a crime.<sup>19</sup>

The event or state of affairs is called the actus Reus, whilst the state of mind is known as the mens Rea of the crime.<sup>20</sup> The actus rea amounts to a crime when accompanied by appropriate mens Rea the absence of either element weakens the liability for an offence. However, 'strict liability' offences do not require mens rea such as possession of 'hard drugs' is an example of common law strict liability offence.<sup>21</sup>

### **Elements which need to prove**

Elements of crimes are to be proven to convict in a court of law. For example, murder is an intentional killing of a human being at peace time. The elements are that the defendant must have (1) intention (malice aforethought) (2) caused the death<sup>22</sup> (3) of a human being (4) as prohibited under law. To obtain a conviction, the State (prosecutor) must prove all the elements of the crime 'beyond reasonable doubt'.<sup>23</sup> However, in general the chief elements necessary to constitute a crime are: (a) A human being under legal obligation to act in a particular way and a fit subject for the infliction of appropriate punishment. (b) An evil intent on the part of human being. (c) An act committed or omitted in furtherance of such an intent. (d) An injury to another human being or to society at large by such act.<sup>24</sup>

### **INTERNATIONAL CRIMES**

There is no universally accepted definition of an international crime nor general criteria for determining the scope and the content of an international crime. However, the term international crime is a collective term for certain extremely serious violations of international law.

In the 1948 Hostages case, an international crime was defined as "such an act universally recognized as criminal, which is considered a grave matter of international concern and for some valid reason cannot be left within the exclusive jurisdiction of the state that would have control over it under ordinary circumstances."<sup>25</sup>

Prof. Schwarzenberger says, "acts which strike at the very roots of International society are called International crimes."<sup>26</sup> Prof. Quincy Wright defines it as "a crime against international law is an act committed with intent to violate a fundamental interest protected by International law or with knowledge that the act will probably violate such

---

<sup>18</sup> Peter B. Norton (ed.), The New Encyclopaedia Britannica, Micromelia Vol 1-10, 15th Edition.

<sup>19</sup> Smith and Hogan, J C Smith, Criminal Law (10th edn, LexisNexis Butterworths, 2002) 3-5.

<sup>20</sup> David Ormerod, Smith and Hogan's Criminal Law (13th edn, Oxford University Press, Oxford 2011) 29.

<sup>21</sup> Catherin Elliot and Frances Quinn, Criminal Law (6th edn, Pearson Longman, England 2006) 32-50.

<sup>22</sup> R v Blaue [1976] 61 Cr App R 271.

<sup>23</sup> Woolmington v DPP (1934) AC 462 HL.

<sup>24</sup> S.N. Misra, Indian Penal Code, 18th edn. 2011, p. 7.

<sup>25</sup> US v. List et al., 19 February 1948, Trials of War Criminals Before the Nuremberg Tribunals under Control Council Law No. 10 (Washington, DC: US Government Printing Office, 1950) Vol IX 1230, 1241.

<sup>26</sup> G.Schwarzenberger, The Problem of International Criminal Law, 3rd Edn. (1950), p.263.

---



an interest and which may not be adequately punished by exercise of the normal jurisdiction of any State.”

Nevertheless, various attempts have been made to define the general characteristics of international crimes:

- Crimes which violate or threaten fundamental values or interests protected by international law and which are of concern to the international community as a whole;
- Criminal norms emanating from an international treaty or from customary international law, without requiring intermediate provision of domestic law;
- Criminal norms which have direct binding force on individuals and therefore provide for direct individual criminal responsibility;
- Crimes which may be prosecuted before international or domestic criminal courts in accordance with the principle of universal jurisdiction;
- A treaty provision or a rule of customary international law establishing liability for an act as an international crime binds all (or a great majority of) States and individuals.<sup>27</sup>

Thus, International Crimes consist of those acts which violates the International rules and regulations, and are intolerable to the community of nations. In its Preamble, the ICC Statute refers to the most serious crimes that are of concern to the international community as a whole and recognises that such crimes threaten the peace, security and well-being of the world.<sup>28</sup>

#### **Crimes which considered 'Genuine'**

In accordance with the above general criteria for defining an international crime, the following crimes have been regarded as genuine or 'core' international crimes:

- genocide;
- war crimes;
- crimes against humanity; and
- crime of aggression (also referred to as crimes against peace).<sup>29</sup>

The international courts and tribunals, including the ICTY, ICTR and ICC, have been given jurisdiction over these crimes. For that reason they are also referred to as 'core' crimes or international crimes in the narrow sense. In a broader sense, however, other crimes may also be considered as international crimes. The common denominator of these 'non-core' crimes is the existence of an international treaty which obliges States parties to criminalise certain acts in their domestic laws.

---

<sup>27</sup> M Cherif Bassiouni, *International Criminal Law* (Transnational Publishers Incorporated, New York 1999) 3

<sup>28</sup> ICC Statute (17 July 1998) UN Doc A/CONF.183/9, paras (3)–(4) of Preamble.

<sup>29</sup> According to Cassese, torture (as distinct from torture as one of the categories of war crimes or crimes against humanity) and some extreme forms of terrorism (serious acts of State-sponsored or -tolerated international terrorism) also fall within the narrower definition of international crimes. Jescheck, on the other hand, considers piracy as one of the crimes in light of the narrow definitions (in addition to the core crimes). Referred from: M Cherif Bassiouni, *International Criminal Law* (Transnational Publishers Incorporated, New York 1999) 24

---



During negotiations on establishing the ICC, there were discussions about including terrorist offences, drug trafficking offences and individual acts of torture within the ICC jurisdiction.<sup>30</sup> Although terrorist acts and international trafficking of illicit drugs were considered as extremely serious crimes, they were not included within the Court's jurisdiction since it proved impossible to reach agreement on the definitions of these two crimes. The Statute of the ICC, however, provides for a review mechanism, which allows for an expansion in future of the jurisdiction of the Court.<sup>31</sup>

### **INTERNATIONAL LAW AND INTERNATIONAL CRIMINAL LAW**

The primary object of International Law, which is accepted to most of the nations and experts of law, is to preserve the public order of the world. In the process of maintaining the public order of the world, the International Law also has in its meaning, the powers to punish those who disrupt or attempt to disrupt this order. These powers are in the shape of sanctions. The matters of peace and security of mankind form the public order. International Law consists of the rules of conduct for States and their citizens for preservation of International peace and security. It governs the relations among States.

According to Oppenheim, "Law of Nations or International law is the name for the body of customary and treaty rules which are considered legally binding by civilized States in their inter course with each other."<sup>32</sup> Though in the ninth edition of Oppenheim's book the term 'International Law' has been expanded and defined as: "International law is the body of rules which are legally binding on States in their intercourse with each other. These rules are primarily those which govern the relation of Organisations and, to some extent, also individuals may be subjects of rights conferred and duties imposed by International law."<sup>33</sup>

According to Starke, "International law may be defined as that body of law which composed for its greater part of the principles and rules of conduct which states feel themselves bound to observe, and therefore, do commonly observe in their relations with each other, and which includes also :

(a) The rules of law relating to the functioning of international institutions or organisations, their relations with each other, and their relations with states and individuals; and (b) Certain rules of law relating to individuals and non-state entities so far as the rights or duties of such individuals and non-state entities are the concern of the international community."

On the basis of above definitions we may say that International Law is a body of rules and principles which regulate the conduct and relations of the members of international community. The contention that States alone are subjects of international law is not only inconsistent with the changing character of international law but has become completely obsolete and inadequate.

---

<sup>30</sup> Final Act of the United Nations Diplomatic Conference of Plenipotentiaries on the Establishment of an International Criminal Court (17 July 1998), UN Doc A/CONF.183/10, Res E.

<sup>31</sup> Article 121 and 123 of the Rome Statute.

<sup>32</sup> L. Oppenheim, International Law, Longman Group Limited, London, Vol.I, 8th Edn. (1970, Reprint), pp. 4-5

<sup>33</sup> Oppenheim's International Law, 9th edn. (Longman Group U.K. Ltd. And Mrs. Tomoko Hudson, 1992), Vol. 1, Edited by Sir Robert Jennings and Sir Arthur Watts, p.4.

---



Lord Chancellor Sankey aptly remarked that international law is a “living and expanding code.” In view of changing character and expanding scope of international law today, international institutions, some non-State entities and individuals have also become the legitimate subjects of International Law.<sup>34</sup>

On the other hand, to learn about International Criminal Law (ICL) it is important to firstly ascertain the purpose of the criminal law. The purpose of criminal law is to define the conduct of accused persons socially and to punish them for their delinquent behaviour with accepted norms of law. Criminal law defines the duties which an individual owes to society, breaches of which are subject to penal sanction by a State. International criminal law partly derives its origin from and draws upon national criminal law and is “largely the result of the gradual transposition onto the international plane of rules and legal conducts proper to national criminal law or to national trial proceedings.”<sup>35</sup>

Thus, by reading the two terms International Law and Criminal Law separately we can say that, International law typically governs the rights and responsibilities of States; criminal law, conversely, is paradigmatically concerned with prohibitions addressed to individuals.<sup>36</sup> Hence to say about ICL it is lucid that, “the broad purpose of International Criminal Law could in no way be different from that of municipal criminal law. It too ought to preserve the world public order and attempt to punish conduct, which is intolerable to the community of nations.”<sup>37</sup>

### What is International Criminal Law ?

Following are some notable definitions of International Criminal Law:

1. According to Cassese, “International Criminal Law is a body of international rules designed both to prescribe certain categories of conduct (war crimes, crimes against humanity, genocide, torture, aggression, international terrorism) and to make those person who engage in such conduct criminally liable. These rules either authorize states, or impose upon them the obligation, to prosecute and punish such criminal conducts. ICL also regulates international proceedings before international criminal courts, for prosecuting and trying person accused of such crimes.”<sup>38</sup>

2. According to Bassiouni, “International Criminal Law specifies conducts identified as harmful to a given world social interest whose protection is deemed to require the imposition of criminal sanctions on violators and which sanctions are enforced by the member states of the world community through international collective, cooperative or national action.”<sup>39</sup>

---

<sup>34</sup> Re Piracy Jure Gentium Case, (1934) A.C. 586, 589.

<sup>35</sup> Antonio Cassese, Paola Gaeta et. al, Cassese's International Criminal Law, Oxford Univ Press, 3rd edn. 2013. p. 67.

<sup>36</sup> Glanville Williams, ‘The Definition of Crime’ (1955) 8 Current Legal Problems 107.

<sup>37</sup> Ramesh, “The Legal Nature of International Criminal Court: An Analysis”, Indian Bar Review, Vol. XXX (2003) p.59.

<sup>38</sup> Antonio Cassese, Paola Gaeta et. al, Cassese's International Criminal Law, Oxford Univ Press, 3rd edn. 2013. p. 3.

<sup>39</sup> M. Cherif Bassiouni, “International Criminal Law: A Draft International Criminal Code, Sijhoff Publishers (1980), p. 1.



3. Schabas in Encyclopaedia Britannica defines international criminal law as “a body of laws, norms, and rules governing international crimes and their repression, as well as rules addressing conflict and cooperation between national criminal-law systems.”<sup>40</sup>

4. According to Duhaime’s Legal Dictionary, “International criminal law is a body of law that includes those treaties and other international documents which define and prescribe punishment for prohibited conduct for international crimes.”<sup>41</sup>

5. According to Aghenitei, “International criminal law is a body of international law designed to prohibit certain categories of conduct commonly viewed as serious atrocities and to make perpetrators of such conduct criminally accountable for their perpetration. Principally, it deals with genocide, war crimes, crimes against humanity, as well as the crime of aggression.”<sup>42</sup>

6. According to Doebbler, “International criminal law might be described as the law providing for the punishments of acts that have been made crimes under international law. A narrower definition might confine this law to crimes that are punished by international tribunals.”<sup>43</sup>

7. According to Podgor, International Criminal law in a broad sense is “the subject that covers all the problems lying in the area where criminal law and international law overlap and interact.”<sup>44</sup>

8. According to Triffterer, International Criminal Law in strict sense is “the totality of international law norms of a penal nature which conjoins typical legal consequences of criminal law with a decisive conduct namely the international crime and such can be applied directly.”<sup>45</sup>

To conclude, I would pen down by saying that in particular, international criminal law places responsibility on individual persons and proscribes and punishes acts that are defined as crimes by international law. However, the development of a body of international criminal law which imposes responsibilities directly on individuals and punishes violations through international mechanisms is relatively recent but its roots are comparatively ancient.

## References

1. Smith and Hogan, Criminal Law, Butterworths, London, 1983
2. P.Rathinam Nagabhusan Patnaik V. Union of India, AIR 1994 SC 1844.
3. Sir William Blackstone, Commentaries on the Laws of England.
4. Raffaele Garofalo, Criminology, Boston, Little Brown.
5. Edwin H. Sutherland, Principles of Criminology
6. John Austin, Lectures on Jurisprudence Status, Edn, 1920.

---

<sup>40</sup> William Anthony Schabas, “International criminal law”, available at: <http://www.britannica.com/topic/international-criminal-law> (visited on: 16/09/2015)

<sup>41</sup> Lloyd Duhaime, Duhaime's Legal Dictionary, Available at: <http://www.duhaime.org/LegalDictionary/I/InternationalCriminalLaw.aspx> (Visited on: 16/06/2015)

<sup>42</sup> Mihaela Aghenitei, “International Criminal Law”, Journal of Law and Administrative Sciences, Special Issue/2015

<sup>43</sup> Curtis F. J. Doebbler, Introduction to International Criminal Law, CD Publishing, 1st edn 2007 p. 4.

<sup>44</sup> Ellen S. Podgor, Rodger S. Clark, International Criminal Law: Cases and Materials, 3rd edn. 2009 LexisNexis, p.1.

<sup>45</sup> Otto Triffterer, Untersuchungen, Albert Publishers (1966), p. 35.



7. Justin Miller, Miller on Criminal Law Handbook, West Publishing Co.; First Edition edition (1934)
8. W.B. Odgers, The Common Law of England (London: Sweet & Maxwell Limited, 1911)
9. K.D. Gaur, Criminal Law; Cases and Materials, Butterworths, 1999
10. Halsbury's Laws of England, LexisNexis.
11. P. Ramanatha Aiyer, Concise Law Dictionary, 3rd Edn. 2011
12. Russel On Crime, Vol. 1, 12th Edn.
13. Roscoe Pound, Interpretation Of Legal History, Harvard University Press, 1946
14. Peter B. Norton (ed.), The New Encyclopaedia Britannica, Micromelia Vol 1-10, 15th Edition.
15. Smith and Hogan, J C Smith, Criminal Law (10th edn, LexisNexis Butterworths, 2002) .
16. David Ormerod, Smith and Hogan's Criminal Law (13th edn, Oxford University Press, Oxford 2011)
17. Catherin Elliot and Frances Quinn, Criminal Law (6th edn, Pearson Longman, England 2006)
18. US v. List et al., 19 February 1948, Trials of War Criminals Before the Nuremberg Tribunals under Control Council Law No. 10 (Washington, DC: US Government Printing Office, 1950) Vol IX .
19. G.Schwarzenbergar, The Problem of International Criminal Law, 3rd Edn. (1950)
20. M Cherif Bassiouni, International Criminal Law (Transnational Publishers Incorporated, New York 1999)
21. ICC Statute (17 July 1998) UN Doc A/CONF.
22. L. Ophenheim, International Law, Longman Group Limited, London, Vol.I, 8th Edn. (1970, Reprint), pp.
23. Oppenheim's International Law, 9th edn. (Longman Group U.K. Ltd. And Mrs. Tomoko Hudson, 1992), Vol. 1, Edited by Sir Robert Jennings and Sir Arthur Watts.
24. Re Piracy Jure Gentium Case, (1934) A.C. 586, 589.
25. Antonio Cassese, Paola Gaeta et. al, Cassese's International Criminal Law, Oxford Univ Press, 3rd edn. 2013.
26. Glanville Williams, 'The Definition of Crime' (1955) 8 Current Legal Problems.
27. Ramesh, "The Legal Nature of International Criminal Court: An Analysis", Indian Bar Review, Vol. XXX (2003)
28. Antonio Cassese, Paola Gaeta et. al, Cassese's International Criminal Law, Oxford Univ Press, 3rd edn. 2013.
29. M. Cherif Bassiouni, "International Criminal Law: A Draft International Criminal Code, Sijhoff Publishers (1980)
30. William Anthony Schabas, "International criminal law", available at: <http://www.britannica.com/topic/international-criminal-law>
31. Mihaela Aghenitei, "International Criminal Law", Journal of Law and Administrative Sciences, Special Issue/2015 44 Curtis F. J. Doebbler, Introduction to International Criminal Law, CD Publishing, 1st edn 2007
32. Ellen S. Podgor, Rodger S. Clark, International Criminal Law: Cases and Materials, 3rd edn. 2009 LexisNexis, p.1. 46 Otto Triffterer, Untersuchungen, Albert Publishers (1966)



Liek; kst; u ds l unHZeaf'k{k dh HMedk

MH- l h , l - 'lqyk  
'Nek funad  
foHkck/; {H f'k{kcd f'k{k l alk;  
o)eku dkyst} fctulS

vt; dely 'keli  
'NedfHf f'k{kM=  
,e- ts ih : gy[k.M  
fo'ofu |ky;] cjsyh

Lijk & lek; kst; u fujlRj pyus okyh , d h ifØ; k gSftl ea 0; fDr vius okroj .k ds l kfk Lo; a dk l ketL; LfKfiri djrk gSftl ea f'k{k egRo iwz HMedk fuHkkrh gA tks 0; fDr f'k{kkr glrs gA; k mudk f'k{k Lrj vf/kd glrk gSosvkl kuh l sl ek; kst; u djrs gSnu jh vlg tks 0; fD; de f'k{kkr glrs gA; k mudk f'k{k Lrj de glrk gSosl ek; kst; u djus ea Hkh dfBukbz egl w djrs gA vr% fo | kffkz ka ea l ek; kst; u {kerk dk fodkl djus ds fy, muds f'k{k Lrj dks mBk; k tkuk pkfg, A

'Nek dely & lek; kst; u Lrj] f'k{k LrjA  
ifjp; & lek; kst; u] 0; fDr dk , d l keli; , oa vko'; d xqk gS tks l Hkh 0; fDr; ka ea de ; k vf/kd : i l s feyrk gSftl ds fcuk 0; fDr dk thou pyuk dfBu gA 0; fDr dks vius thou ea l ek; kst; u djuk iMrk gA 0; fDr l ketL; LfKfiri djus ds fy, dHkh vius 0; ogkj ea l dkkj djrk gS rks dHkh og vius okroj .k ea ifjorZu djrk gA l ek; kst; u 0; fDr ds l Hkh {ts-ka dks de ; k vf/kd : i l s vko'; d i Hkfor djrk gA tks 0; fDr vius vlnj ftruh vf/kd l ek; kst; u {kerk dks fodfl r dj yrs os vius thou dks mruk gh vf/kd l Qy cuk yrs gA tks 0; fDr l ek; kst; u {kerk dks vius thou ea fodfl r ugha dj i krs gA os vius thou ea dfBukbz egl w djrs gA

lek; kst; u & lek; kst; u thou i; lR pyus okyh , d h ifØ; k gSftl ea 0; fDr i fjflFkfr , oa i; kbj .k ds chip vius vki dks l ek; kst; u djus ds fy, vius 0; ogkj ea ifjorZu yrk gA l ek; kst; u dh ifØ; k ea 0; fDr dHkh Lo; a ds vuphy l kelftd okroj .k d<sup>o</sup> cuk yrk gS r<sup>o</sup> dHkh Lo; a dks okroj .k ds vuphy cnydj ml l sl ketL; LfKfiri dj yrk gA l ek; kst; u dks fo}kula us fuEufyf[kr : i ea 0; Dr fd; k gA

cljz] y&OYM o oYM dsvuq kj&  
^l ek; kst; u , kkh ifØ; k gS ftl ds }kjk ik.kh viuh vko'; drkva , oa bu vko'; drkva dh ifrZ dks i Hkfor djus okyh i fjflFkfr; ka ea l Ury;u cuk, s j [krk gA\*\*

xv4 o vU; dsvuq kj&  
^l ek; kst; u fujlRj pyus okyh ifØ; k gS ftl ds }kjk 0; fDr Lo; a vlg Lo; a okroj .k ds chip l Ury;u l Eclw/k j [kus ds fy, vius 0; ogkj ea ifjorZu djrk gA\*\*

tii l h dlyeñ dsvuq kj&  
^l ek; kst; u og 0; ogkj gSftl ds }kjk 0; fDr ruko dk l keuk djrk gS vlg viuh vko'; drkva dks ijk djus dk iz kl djrk gS vlg ftl ds }kjk }kjk 0; fDr vius i; kbj .k l sl ketL; i wkz l Eclw/k cuk; s j [krk gA\*\*

,Me dsvuq kj&  
^l ek; kst; u , d {kerk gSftl ds }kjk i R; sl 0; fDr /kulRed i qCy , oa ifrQy mRlUu djrk gS rFk udkjRed ifrQy l scprk gS

gsjhl hleFk dsvuq kj&  
^vPNs l ek; kst; u l s gekj rRi; Z ml 0; ogkj l s gS tks fd ; FkFkZ ij vk/kfjr rFk l rsk nss oky gA de l s de og dkyurj ea 0; fDr dh mu d}kva rukola , oa nq' p}rkva dks de dj aftudk de gkuk vfuok; Z gA\*\*



I ek; k̄tr 0; fDr dh fo'k̄rk, a&

- I ek; k̄tr 0; fDr Lo; a c̄) dk iz k̄ Bhd <x djrk ḡs v̄g og viuh l eL; kv̄la ds vkus ij c̄) rFk food l s l eL; kv̄la dk l keuk djrk ḡs ft l l s og l eL; kv̄la l s?k̄jrk ugha ḡA
- I ek; k̄tr 0; fDr vius v̄k̄rfjd }U}ka l seDr jgrk ḡA og vius c̄) rFk food ds vk/kj ij }U}ka ds okLrfod : i ,oa c̄k̄j.k d̄s tkudj mudk dk l ek/kku <k̄rk ḡA
- I ek; k̄tr 0; fDr thou dh okLrfodr d̄s l e>rk ḡs rFk ml ea fo'okl j [krk ḡA og d̄Vi ukv̄la ea viuk l e; c̄dkj ugha djrk ḡs rFk og ml j̄ka l s vk/kj ghu vi s̄k̄, a ugha djrk ḡA
- I ek; k̄tr 0; fDr viuh ftEenk̄j; ka rFk dr0; k̄ d̄s l e>rk ḡs v̄k̄ mlga fuHkrk ḡs v̄g og foifjr ij fLFkr; ka ds ḡkus ij Hkh vius dr0; ka l s Hkxrk ugha ḡs cf̄yd mudk MVdj l keuk djrk ḡA
- I ek; k̄tr 0; fDr viuh foifjr ij fLFkr; ka ea Hkh /k̄s l d̄s cuk; s j [krk ḡs rFk i j s̄kkuh vkus ij og fopyr ugha ḡrk ḡs, oa mudk l keuk djrk ḡA
- I ek; k̄tr 0; fDr] v̄l; 0; fDr; ka ds l k̄k l g; k̄ rFk fe=rk cuk; s j [krk ḡs, oa og ml j̄s 0; fDr; ka ds fy, fo'okl ik= ḡrk ḡs v̄k̄ t: jr i M̄s ij mudh v̄k̄; drkuđ kj l gk; rk Hkh djrk ḡs rFk mudk l gl ; k̄ d̄j s l s i h̄Ns ugha ḡVrk ḡA
- I ek; k̄tr 0; fDr] v̄k̄; drkuđ kj vius 0; ogkj ea c̄nyko dj yrk ḡA I ek; k̄tr 0; fDr ; k r̄s ij fLFkr; ka ds Lo; a ds v̄uḡy cuk yrk ḡs ; k fQj og v̄k̄; drkuđ kj Lo; a ds 0; ogkj d̄s ij fLFkr; ka ds v̄ud kj c̄ny yrk ḡs rFk ij fLFkr; ka ds l k̄k l ketL; LFkr dj yrk ḡA
- I ek; k̄tr 0; fDr viuk v̄k̄e l a e cuk; s j [krk ḡA rFk og N̄k/h&N̄k/h c̄rka ij m̄r̄f̄tr ugha ḡrk ḡA og ifrd̄y okroj.k ea Hkh viuk l a e cuk; s j [krk ḡA
- I ek; k̄tr 0; fDr ix̄r'k̄y fopkj/k̄j d̄s oky 0; fDr ḡrk ḡs og : <hok̄nr̄kv̄la ea viuk fo'okl ugha djrk ḡA
- I ek; k̄tr 0; fDr vius iR; d̄ dk; l d̄s v̄PNs , oa 0; ofLFkr : i l s djrk ḡs rFk og vius y{; d̄s /; ku ea j [k̄j vius dk; l dh ; k̄st uk cukrk ḡA
- I ek; k̄tr 0; fDr vius eu ea ud̄k̄r̄redr dh vi s̄k̄ l d̄k̄r̄redr ea v̄f/kd fo'okl j [krk ḡA I ek; k̄tr 0; fDr iR; d̄ dk; l d̄s l d̄k̄r̄red l k̄p ds l k̄k djrk ḡs ft l l s dk; l l jy , oa l f̄o/k̄i m̄d̄ ḡrk ḡA
- I ek; k̄tr 0; fDr ekuf̄l d : i l s LoLFk 0; fDrRo oky 0; fDr ḡrk ḡs ft l l s og l gh l e; ij l gh fu.k̄z ys i krk ḡA

I ek; k̄tu i f̄; k &

or̄eku l e; ea 0; fDr v̄ud i d̄k̄j ds ruko] d̄B̄k] n̄f̄'p̄rk] v̄k̄rfjd }U} n̄f̄'k̄] i j s̄kkuh vkfn l s f̄'k̄j ḡrk ḡs og bu l Hkh i d̄k̄j ds ruko] d̄B̄k] n̄f̄'p̄rk] v̄k̄rfjd }U} n̄f̄'k̄] i j s̄kkuh vkfn d̄s de ; k l ekr d̄j s ḡr̄q vius 0; ogkj ea i f̄jor̄u yrk ḡs ; k vius okroj.k ea i f̄jor̄u d̄j s dk iz kl djrk ḡs ft l l eL; k̄st u dgk t̄rk ḡA tc f̄d l h 0; fDr ds l keus f̄d l h i d̄k̄j dh d̄k̄z l eL; k v̄krh ḡs r̄s og 0; fDr vius 0; ogkj ea bl i d̄k̄j l s i f̄jor̄u yrk ḡs ft l l s ml dh l eL; k gy ḡs tk, A og viuk , d̄ k 0; ogkj djrk ḡs ft l l s 0; fDr ea 0; k̄r d̄q̄B̄k] ruko] n̄f̄'p̄rk] vkfn i j s̄kkuh; ka de ; k l ekr ḡs tk, A og ml v̄k̄ iz kl jr jgrk ḡs ft l v̄k̄ d̄B̄k , oa fujk'kk de ḡA tc 0; fDr foifjr ij fLFkr; ka ; k okroj.k ea v̄kr ḡs r̄s 0; fDr e[ ; i l s n̄s i d̄k̄j dh i f̄; kv̄la d̄s djrk ḡA l c̄l s i ḡys og foifjr ij fLFkr; ka ea c̄nyko d̄j s Lo; a ds v̄uḡy cukus dk iz kl djrk ḡs v̄k̄ ; fn 0; fDr bu i f̄rd̄y ij fLFkr; ka ds Lo; a ds v̄uḡy ugha cuk i krk ḡs r̄s 0; fDr Lo; a ds 0; ogkj ea i f̄jor̄u ykdj l eL; k̄st u djrk ḡA bu n̄k̄ka i f̄; kv̄la l s 0; fDr ml i f̄; k d̄s gh v̄f/kd p̄rk ḡs t̄s 0; fDr d̄s l jy , oa l f̄o/k̄t̄ud yxrh ḡs v̄k̄ 0; fDr dk l n̄b ; g iz kl jgrk ḡs f̄d ml dh fujk'kk] n̄f̄'p̄rk] d̄B̄k] vkfn i j s̄kkuh; ka de l s de ḡs l d̄A 0; fDr viuh foifjr ij fLFkr; ka ea l eL; k̄st u ḡr̄q viuh l eL; kv̄la t̄s s fujk'kk] d̄B̄k] ruko] n̄f̄'p̄rk] vkfn d̄s n̄f̄'k̄r̄k ḡs ft l ds c̄n viuh (kerkv̄k̄ ; k̄; r̄kv̄a , oa i f̄r̄H̄k̄v̄la d̄s i ḡp̄kr̄k ḡs rFk Lo; a d̄s i ḡp̄kuus ds c̄n l eL; kv̄la ds l ek/kku ds fy, mik; [k̄st̄rk ḡs rFk muds c̄j s ea ; k̄st uk cukdj mudk f̄; k̄b̄; djrk



gsftl l s 0; fDr dh l eL; kvka dk l ek/kku gls tkrk gsrFkk ml dseu ea 0; kir d[dk] fujk'kk] ruko] n['] plrk , oa ijs krfu; ka de ; k l ekkr gls tkrh gs v[ks] bl izdkj l s 0; fDr foifjr i fjlFkfr; ka ea /s[ ] i[ ] v[ ] Rel a e , oa y{; dks /; ku ea j[kdj vius vki dks l ek; k[tr dj yrk gA tks 0; fDr l ek; kst u vkl kuh l s dj yrs g[ mu 0; fDr; ka ea l ek; kst u {kerk vf/kd gsrh gsrFkk tks 0; fDr vkl kuh l s l ek; kst u ugha dj i krs g[ mu 0; fDr; ka ea l ek; kst u {kerk de gsrh gA 0; fDr; ka dh l ek; kst u {kerk 0; fDr; ka dk 0; fDr xqk gs tks l Hk 0; fDr; ka ea vyx&vyx feyrk gsrFkk foHkku dkj dka l s t[ ] & vk; j[ ] okrkoj .k] [kku iku] vuHko] f'k[kk vkfn l s i Hkfor gsrk gA bu l c dkj dka ea f'k[kk 0; fDr; ka dh l ek; kst u {kerk dks fo'ks'k : i l s i Hkfor djrh gA l ek; : i l s n[ ] kus ea vk; k gs fd ftu 0; fDr; ka dks m[pr , oa vPNs Lrj ds dh f'k[kk feyrh gs mu 0; fDr; ka ea l ek; kst u {kerk vf/kd gsrh gsrFkk ftu 0; fDr; ka dks m[pr , oa vPNh f'k[kk ugha feyrh gs mu 0; fDr; ka ea l ek; kst u {kerk de gsrh gD; k[ad l ek; kst u 0; fDr ekuf l d {kerk ; k ekuf l d fLFkr ds vu[ ] kj djrk gs tks fd f'k[kk l s i Hkfor g[ sfcuk ugha jg l drh gs bl fy , 0; fDr; ka ea l ek; kst u {kerk dk fodkl d[us ds fy , vPNh f'k[kk dk izu/k djuk pkfg, A

**I ek; kst u dks fodkl r d[us ds mik; &**

- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , m[ds ?kj dk okrkoj .k l dkj kRedrki n[ ] z g[sk pkfg, os okLrfodkr dks l e> l da v[ks] os vius fopkj ka dks ?kj ea vkl kuh l s j [k l dA
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , m[ds ?kj dk okrkoj .k , d k g[sk pkfg, ft l l s muea i e] l g; l x] l ekur l gu'khyr[ ] ykdr k[=drk vkfn xqkka dk fodkl gls l ds rFkk os vki l ea fey & > y jg l dA
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , fo | kFkz; ka dks vPNh f'k[kk feyuh pkfg, ft l l s os , d n[ ] js ds fopkj ka dk l Eku dj l dA
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , 'k[dk] Hke. kka dks c-kok fn; k tkuk pkfg, ft l l s muea n[ ] js 0; fDr; ka ds fopkj ka dks l qus , oamudk l Eku d[us rFkk fopkj foekz d[us dh {kerk dk fodkl gls l dA
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , fo | kFkz; ka dks i kB; l gxkeh fdz; kvka ea Hkx[ ] yus ds fy , ijr fd; k tkuk pkfg, ft l l s muea l k[kt] drk dk fodkl ds l kFk&l Fk os vkl kuh l s l ek; kst u dj l dA
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , m[ga okn&fookn] fopkj & foekz ds vol j mi yC/k dj k; s tkus pkfg, A
- 0; fDr; ka ea l ek; kst u {kerk ds fodkl ds fy , fo | ky; 0; oLFk[ ] kvka ea l q[ ] djrs gq , d k okrkoj .k kukuk pkfg, ft l l s os fo | ky; 0; oLFk[ ] kvka ds i fr l dkj kRed gka , oa muea l ek; kst u {kerk dk fodkl gls l dA

**I UnH[ ] x[ ] f'k[ ] p[ ] h &**

- ✓ f=i kBh] 'k[ ] fyxte 1/1996% f'k[ ] k 0; ogkj- ubz fnYyh %jk/k i fcydsk u
- ✓ v[ ] xug[ ] s-h] v[ ] k; Z MNW c[ ] H[ ] ; ky- f'k[ ] dh Hkjr h; i j j k vkn'z v[ ] s; l x- b[ ] njk x[ ] k[ ] h j k'Vh; eDr fo'fo | ky; 1/2005% vf/lxe ds fy , exh'ku- ubz fnYyh% xh[ ] k v[ ] d l v/ fi BV l Z
- ✓ x[ ] r[ ] k MNW , l -i-h- 1/2003% mPprj f'k[ ] k euk[ ] oKku- by[ ] g[ ] k[ ] n% 'k[ ] jnk i l rd Hkou-
- ✓ i kBd] i h-Mh- 1/1994% f'k[ ] k euk[ ] oKku- vxj k% founk i l rd eflnj
- ✓ ekF[ ] j MNW , l - , l - 1/1990% f'k[ ] k euk[ ] oKku- vxj k% founk i l rd eflnj-
- ✓ l y[ ] eku] MNW egEen 1/2002% mPprj f'k[ ] k euk[ ] oKku- fnYyh% ek[ ] rhyky kuj l hnk l
- ✓ fl g] chOchO , oa i kg[ ] k (2006) , Hkjr ea f'k[ ] k 0; oLFk[ ] dk fodkl ] ej B% vkj 0 ykyO cpl fmi ka
- ✓ d[ ] s] , y0 (1998) , 'k[ ] dk vu[ ] kku dh dk; i z k[ ] y[ ] ubz fnYyh %fodkl i fcy'f'k[ ] gk A l A
- ✓ fl g] , Od[ ] (1998) , f'k[ ] k euk[ ] oKku] i Vuk %Hkjr h Hkou i fcy'k l Z , M fMLVAC; w l A
- ✓ i k.Ms] vkj 0, l 0 (2007) , Hkjr ea f'k[ ] k dk fodkl ] vxj k % vx[ ] ky i fcydsk u l A



## Analytical Study of Elements of Art in Chandra's Work

Abdul Salam Khan

Assistant Professor, School of Design and Visual Arts, Apeejay Stya University, Haryana, India

### Abstract:

*Satish Chandra was a great minimalist and impressionist painter of northern plane. He was always fascinated to explore the beauty of nature. So he traveled from Kashmir to Kanyakumari. Modest attempt of this research is to develop the visual literacy to analyze, interpret and evaluate the elements of art in Chandra's paintings and justify he is one of the foremost legendary artists of contemporary India.*

*Though it is largely a pictorial documentation, the effort has been to give a comprehensive idea of his color pallet rather reclusive personality behind such a wonderful work. His warm and vibrant color scheme stands apart from other contemporary artist. The evanescent aspects of his landscapes and innovative use of air, light, and color made him great artist of genre.*

**Keywords:** *Analyze, contemporary, comprehensive, documentation, elements, evanescent, interpret, impressionist, justify, Modest, pictorial, reclusive, visual literacy.*

### AIM OF STUDY:

To analyze and synthesize the craftsmanship of visual works and the distribution of visual elements (Line, Texture, Shape, Form, Color, and Value) which communicate the theme and experiences through various medium. Justify the use of elements of art in Chandra's work. Understanding the application and brush handle according to the Six-Limbs of Indian painting and the effectiveness of the space distribution. Select appropriate work of Chandra in relation to concepts and forms of art.

### I. INTRODUCTION

"Pictures speaks more than thousands word" this phrase speaks about the values of visuals. In order to understand the meaning of visuals we must have the visual literacy that is only acquired through observation, analysis and interpretation of art work along with deep understanding of innovative concepts, formal language of visual elements such as Line, Texture, Shape, Form, Color, and Value. Not only that but the piece of work should be able to impart the

communicate experiences of a creator's thought process. Know the limitation and de-limitation of various medium and materials (Beloil, G. and Riabovitchev, A, 2013).

Every piece of art has its own language, a visual vocabulary that gives it a structure as well as and interest. The vocabularies here consist of all the above said elements. Each of the above basic art elements are important to create harmony or rhythms. Each element has its own characteristics and features. There are many types of lines:

1. **LINES:** The usage of line by the artist gives us an understanding of the characteristic of line whether it static or dynamic. It helps to determine motion, direction and energy in a work of art (Castillo, J, 2008).

1.1. **ACTUAL LINES:** are those lines which are physically present in compositions (Richmond, L, 2012).

1.2. **IMPLIED LINES:** are those created by visually connecting two or more areas together. By visually connecting the space between the heads of all the figures in the painting, we have a sense of jagged implied line that keeps the lower part of the composition in motion, balanced against the darker, more static upper areas of the painting. Implied lines can also be created when two areas of different colors or tones come together.



Figure 1 Lines and His Composition



Figure 2 Lines and His Composition

1.3. **STRAIGHT OR CLASSIC:** lines provide structure to a composition. Vertical and horizontal straight lines provide the most stable compositions. Diagonal straight lines are usually more visually dynamic, unstable, and tension-filled (Birren, F, 1976).

1.4. **EXPRESSIVE LINES:** are curved, adding an organic, more dynamic character to a work of art.

1.5. **OUTLINE OR CONTOUR LINE:** is the simplest of these. They create a path around the edge of a shape. In fact, outlines often define shapes.

1.6. **HATCH LINES:** are repeated at short intervals in generally one direction. They give shading and visual texture to the surface of an object.

1.7. **CROSSHATCH LINES:** It provides additional tone and texture. They can be oriented in any direction. Though impressionist artist believe nature has no line as impressionist Chandra had also believe as same. Instead of using line's majorly his works have variety of color for distinction between two layers. Beside's this, lines are playing an important role in Chandra's creation. He is chiefly known as a landscapist and landscape is no other then the composition of vertical and horizontal line so maximum of his composition having the verity of lines. Chandra articulated many diagonal lines by scratching canvases to create the impression of ripe grasses. Most of his iconic painting series the "Massey Jungle" had same treatment. Chandra also used some of classical, expressive, crosshatching lines in their water color series but his applications of lines are very soft and mystic and some time Chandra produced some the above lines by left the paper white. (Callen, A, 2004).



Figure 3 Lines and His Composition

## 2. SHAPE

Shape here refers to a two dimensional (2D) enclosed areas. If any linear composition covered from all sides or a close path is known as shape. Shape is an important element to form a graphics and it is divided in two types' i.e. geometric shapes and organic shapes.

### 2.1. GEOMETRIC SHAPES AND ORGANIC SHAPES:

Shapes can be further categorized into geometric and organic. Examples of geometric shapes are the ones we can recognize and name: squares triangles, circles, hexagons, etc. though Chandra was a landscapist so he never used any of the categorized shapes. such. But organic shapes are based on organic or living things or irregular shapes most are free from such as the shape of a tree, face, monkey, cloud, etc.

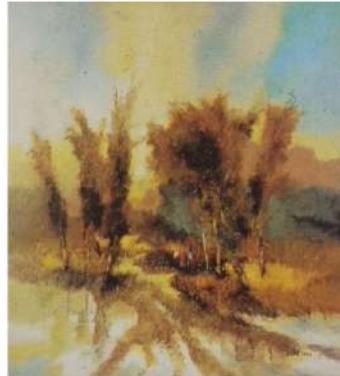


Figure 4 Organic Shape

Chandra used as many as organic shapes in his masterly crafted work or in his iconic style of paintings incorporated many organic art forms like trees, birds, herbs, shrubs, flowers etc. The innovative and stylized shapes of trees create Chandra's famous "Massey jungle" series. He was a nature lover and explores form of nature in his day-to-day life so he inspires by the variety of shapes and form occurred in raw nature.

### 2.2. FORM

Third dimension shape is known as form. The 3D illusion obtained by adding color and value. Chandra was an impressionist who has inspired by British landscapist John Constable and J.W.M. Turner. Being a landscapist Chandra incorporated lots of organic form in his compositions. 3D quality is obtained by used of heavy plasticity of colors or by thick layered of colors (Meslay, O. 2005).



Figure 5 Lily as a Form

### 3. SPACE

Space is explained in art as empty area surrounding or between real or implied objects. Space is basically understood as positive or active space and negative or dead space. Space is the key element of Chandra's painting, most of his paintings are based on formal space distribution with classical color scheme as similar as Barbizon school and some of his later phase work has contemporary approach having informal division of space



Figure 6 Space Distribution

distributions. For a good composition it is mandatory to balance both positive and negative space otherwise harmony will lack and in absence of harmony. The rhythm is lost somewhere. Chandra has hence always taken care of space distributions (Rankin, P. H, 1976).

### 4. VALUE AND CONTRAST

Value (or tone) is the virtual lightness or darkness of a shape in relation to another.

By using values like 2D shape, illusion is formed. It contributes an entire composition a sense of tonality. Chandra was an impressionist by nature but while as per Chandra's color palette is concerned he loves to use vivid or hue colors as expressionist does.



Figure 7 Chandra in his Studio

Some of his work curved very beautifully with monochromatic color scheme specially seascape series with turquoise blue tints and shades. (Evans, P. and Thomas, M.A., 2012).

### 5. COLOR

Color is considered the most important and complex aspect for an artist. Because the color palate totally depends on the experience and expertise of an artist. Every color palate varies from person to person considering its application and use. Impact every humans respond to color scheme differently, and artists learn and employ color to express their feelings. Color is fundamental element to many art forms. Its significance and usefulness in a work is depending on the medium of work. Chandra is well griped on his color palate and excellent control over the color spectrum, henceforth he earn titled as " Master of Colorist" also known as successor of light and shades. (Leland, N, 2008)

Chandra style of Impressionism meant that color and the light that created it were at the forefront of the image. In the manner in which the sun or the moon bathed objects in different types of light was of key importance. (Batchelder, E, 1906).



Figure 8 Chandra Color Palate



Figure 9 Chandra Color Palate

His style was key to his identity, as the artist sought to portray color and light in even more indigenous ways. His thirst to depict this element of art took him as far as the Mediterranean and various locations in the northern plain. To the result of such exploration was the birth and genesis of an artistic style that is still greatly revered today. By utilizing



Figure 10 Chandra Color Palette

the different elements available in the academics - those of light and shade of external and tonal range – his designs 'propelled' depictions of Nature, which in oils, have all the delicacy of an aquarelle. There is a pinch of enchantment, riddle and charm in his paintings –that incomprehensible extra quality that separates his work of art from others.

He highlights the delicacy of color patterns and the lucidness of composition. The pigments are put so thinly, often so diluted that they flow freely, giving his landscapes the elusive, radiant transparency of watercolors. The extensiveness and massiveness associated with his work gives it a subtle and engaging depth (Gentner, F. and Foufelle, D, 2016).

He used vivid colors and most of them are the primary and direct colors. Sap green and blue are the base color. In his later period, black had also disappeared from his color plate as a matter of habit he use flake white, cadmium yellow, vermilion, Crimson, cobalt blue, emerald green, turquoise blue. After close analysis of his paintings, it is found that he used these twelve colors such as, titanium white,



Figure 11 Chandra Color Palette

yellow ochre, chrome yellow, cadmium yellow, viridian green, emerald green, French

ultramarine, cobalt blue, turquoise blue, madder red or Indian red, vermilion, burnt sienna, ivory black (Riley, N. and Bayer, P, 2003).

## 6. TEXTURE

The trades of fine art dealing with the 3D works, such as sculpture and architecture have actual texture. This is obtained by incorporate of real objects or materials like, wood, stone, bronze, clay, etc.

The two-dimensional (2D) works of art like paintings, drawings, and prints show implied texture or tactile texture through the use of lines, colors, or other ways. Sometimes

the artist applied thick colors, direct from tube on the surface or base to create lot of texture.

This technique is known as impasto. In most of his paintings he used colors direct from the tube or he used knife to create thick layers or paint. He also used variously-sized brushes as well as knife to get the desired effects. (Ross, D.W, 2018) (Bell, S, 2013)

While his impasto grows more aggressive and sculptural when the scene contains a harsher, stronger light. This series of paintings also emphasizes the speed at which Chandra must have to work to capture the light at the right moments.

The main fields of color were blocked-in using texture applied with dry and undiluted paint (see image on the above). His brush strokes are incredibly simple and to maintain the same level of spontaneity and energy throughout, he has not worked any part of the painting past the level of a



Figure 12 Tactile Texture



Figure 13 Implied Texture

few short strokes, allowing the viewer's eye to "optically blend" color and value information.

Some of his work has short strokes and heavy impasto anticipate both the work of JWM Turner and Constable. (Rimmer, W, 1864)

#### **CONCLUSION**

Modest attempt of this research is to know the innovative use of elements of art such as line, shape, form, space, value, color and texture in his iconic style of paintings. Developed the visual literacy to read and understand the justification of elements of art in Chandra's work.



Figure 14 Implied Texture

Analyze, interpret and evaluate the form and content of his art works. Acquired the knowledge of art theory to analysis the practical methodology behind Chandra's work. The theoretical and practical geneses of Chandra's work strengthen and defend Chandra as an artist of intellect also it analyzed his works of art contextually.

The paper compasses on the features of arts and also helps to understand the psychological as well as aesthetical aspects of his works. Helps to know the artist and his methodology and application along with the foundational readings and importance of different elements of art.

Also provides the professional terminology and vocabulary of art. It provides an in-depth understanding of subject and various aspects of elements in Chandra's work.

#### **ACKNOWLEDGMENT**

Author is thankful to Prof (Dr.) Chitralkha Singh, Dean, Department of Performing & Visual Arts, Mewar University, Gangrar, Chittorgarh for providing valuable time and analytical data.



#### REFERENCESS

- Batchelder, E. (1906). The Principles of Design. Inland Printer Company.
- Bell, S. (2013). Elements of Visual Design in the Landscape. Routledge.
- Beloeil, G. and Riabovitchev, A. (2013). Art Fundamentals: Color, Light, Composition, Anatomy, Perspective and Depth. 3DTotal Publishing.
- Birren, F. (1976). Color Perception in Art. Schiffer Pub.
- Callen, A. (2004). Techniques of the Impressionists. Gary Allen.
- Castillo, J. (2008). 7 Elements of Art. Morgan James Publishing,
- Evans, P. and Thomas, M.A. (2012). Exploring the Elements of Design. Cengage Learning.
- Gentner, F. and Foufelle, D. (2016). Impressionists: from Monet to Van Gogh: Coloring Book. du Chene.
- Leland, N. (2008). Confident Color: An Artist's Guide To Harmony, Contrast And Unit. North light books.
- Meslay, O. (2005). Turner: life and landscape. Harry N. Abrams Inc.
- Pumphrey, R. (1996). Elements of Art. Prentice Hall.
- Rankin, P. H. (1976). Composition in Art. Courier Corporation.
- Richmond, L. (2012). Essentials of Landscape Composition. Courier Corporation
- Riley, N. and Bayer, P. (2003). The Elements of Design: The Development of Design and Stylistic Elements from the Renaissance to the Postmodern Era. Octopus Publishing Group.
- Rimmer, W. (1864). Elements of Design. J. Wilson and son.
- Ross, D.W. (2018). A Theory of Pure Design: Harmony, Balance, Rhythm. Creative Media Partners LLC.



## CUSTOMERS' PERCEPTION AND SATISFACTION OF RETAIL BANKING SERVICES OFFERED BY NEW GENERATION PRIVATE SECTOR BANKS – AN ANALYTICAL STUDY

<sup>1</sup>Dr. S. Gowri and <sup>2</sup>C. Karthikeyan

<sup>1</sup> Research Supervisor in Management, Bharathiar University, Associate Professor, Dept. of Commerce, PSG College of Arts & Science, Coimbatore

<sup>2</sup>Ph.D., Research Scholar in Management, Bharathiar University, Coimbatore

### Abstract

Banks are the source of Indian financial and economic activities. One of the significant changes experienced by the Indian banking sector in the recent period is the involvement of banks in the retail banking practice. Retail banking focuses on small retail-customers and entrepreneurs rather than big-corporate. Indian customers, particularly metropolitan and urban customers, are now not only educated about banking products but also they are increasing their demand for the services offered by a bank. Though retail banking customers are generally loyal, with increasing publicity on the services offered by competing banks, it has become tempting for the customer's to check the services in other banks too.

Customer satisfaction is considered as the essence of success in today's competitive world of business. The significance of customer satisfaction and customer retention for a market oriented and customer focused firm cannot be underestimated in Indian banking sector. If banks can understand the customers of new generation private sector bank they will be able to manage and influence the customer's evaluations and perception of the offering which will help them to retain their customers' loyalty. Drawing relevance from the above discussions this study aims to analyse the consumer perception and satisfaction towards retail banking services offered by New Generation Private Sector Banks.

**Keywords:** Retail Banking, Perception, Satisfaction, Retention

### Introduction

The banking industry in India has undergone drastic change in the post-independence era. The opening of the economy in the 1990s and the government's decision to privatize banks resulted in the banking reforms. The banks have started realizing the fact that business depends on client service and the satisfaction of the customer. With the current changes, the purpose of banking is being redefined. Customers in urban India no longer want to wait in long queues and spend hours in banking transactions. This change in customer attitude has gone hand in hand with the developments of technology based banking like e-banks, ATMs, phone and net banking. The world class banking by the new generation private sectors has raised the bar of customer expectation.

The entry of New Generation Private Sector Banks (NGPSBs) has changed the entire banking scenario in India and the banks are embracing the retail banking culture both in terms of deposits mobilization and lending practices. In the competitive



environment, New Generation Private Sector banks are forced to examine their performances in the upcoming years to check their overall efficiencies. In response, NGPSBs have been trying to adopt and adjust themselves to improve their efficiencies in the changing social and economic environment. Financial and marketing experts claim that the efficiency of a banking sector depends upon how best it can deliver services to its target customers. Meeting customer expectation on time will lead to customer satisfaction with the related services.

### **Materials and Methods**

The above theoretical discussion provides the required scope for the study and aims to analyse the customers' perception towards retail banking services offered by new generation private sector banks and the level of satisfaction derived by the customers. This analytical study is focused on New Generation Private Sector Banks and its customers in Coimbatore city. The design of the research is descriptive in nature. The primary data required for the study have been collected from around 700 respondents having bank account in various branches of private banks at Coimbatore. The tools applied include Frequency distribution, Weighted Average and Multiple regression analysis.

### **Review of literature**

Retail banking in India has emerged as a driver for the overall banking sectors and has witnessed enormous growth in the recent past. Reviews to the performances of retail banking in India are summarized here.

Hirtle and Stiroh (2005) defined retail banking as banking activities involved in accepting deposit, lending and offering of other financial services to consumers and small business through all various delivery channels, including branches, virtual business office, call centers and in other form of digital media. Prakash (2006) drew a detailed discussion on growth of retail banking in India. The study had focused on high growth pattern of the retail banking. Joshi's (2008) research paper attempted to study the emergence of retail banking in India. The study observed that in India retail banking emerged during the mid 1990's. It was observed that customers and information are the two factors important for the growth of retail banking sector. Uppal (2009) analyzed the growth in the retail banking portfolio of various bank groups in 2008.

Customers' perception, expectation and satisfaction towards retail banking services and practices are changing with the phase of time and technology advances. Reviews collected in these contexts are summarized here.

Safeena et al., (2010) study aimed to determine the customer's perception on adoption of internet banking practices. The study revealed that customers understanding on the perceived usefulness of internet banking, ease of its usage, consumers' awareness on the banking practices and their understanding on service related risk are the important determinants of online banking adoption by the retail banking customer. A comparative study conducted by Singh and Arora (2011) assessed various bank customers perception and satisfaction with the services rendered to them in Delhi. It was inferred that customers of nationalized banks were not satisfied with the employee behavior and infrastructure available inside the banks; whereas, private and foreign banks' clients were found to be dissatisfied with high charges claimed by the banks, accessibility and communication with the bank staff.

Khare’s (2011) research work attempted to understand the customers’ perception towards the service quality of multinational banks operating in India. The study revealed that there exist differences in customers’ perception on the service quality of multinational banks operating in India. The study also stated that Indian customers express positive perception on the performance of multinational banks in India and they consider themselves-efficient and competent since they are associated with multi-national banks. Public and Private sector customers perception towards services provided in Coimbatore region was analysed by Linda (2012). The study findings revealed that private banks are found to provide better services to its customers compared to the public sector banks.

**Results**

**Demographic and Socio-Economic Profile**

Customers become more demanding and their needs become complex, banks need to differentiate themselves through enhanced service delivery, improved transparency and knowledge about their demographic and socio-economic divides. The following table outlines the socio-demographic profile of the sample respondents’ involved in the survey.

**TABLE: 1  
DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE OF RESPONDENTS**

Sl. No	Gender	No. of Respondents	Percentage
1.	Male	430	63.70
2.	Female	245	36.30
	<b>Total</b>	<b>675</b>	<b>100</b>
Sl. No	Age	No. of Respondents	Percentage
1.	26-30 years	213	31.56
2.	31-35 years	253	37.48
3.	36-40 years	133	19.70
4.	41-45 years	36	5.33
5.	46-50 years	22	3.26
6.	51-55 years	18	2.67
	<b>Total</b>	<b>675</b>	<b>100</b>
Sl. No	Marital Status	No. of Respondents	Percentage
1.	Married	233	34.52
2.	Unmarried	442	65.48
	<b>Total</b>	<b>675</b>	<b>100</b>
Sl. No	Education	No. of Respondents	Percentage
1.	School Level	18	2.64
2.	Undergraduate	271	40.15
3.	Postgraduate	364	53.94
4.	Diploma	22	3.27
	<b>Total</b>	<b>675</b>	<b>100</b>
Sl. No	Occupation	No. of Respondents	Percentage
1.	Private Sector Employee	599	88.74
2.	Public Sector Employee	39	5.78
4.	Businessmen	37	5.48
	<b>Total</b>	<b>675</b>	<b>100</b>
Sl. No	Monthly Income	No. of Respondents	Percentage
1.	Up to Rs. 25,000	233	34.52
2.	Rs. 25,001 to Rs.35,000	171	25.33
3.	Rs.35,001 toRs.45,000	119	17.63
4.	Rs.45,001 & Above	152	22.52
	<b>Total</b>	<b>675</b>	<b>100</b>

Source: Primary Data



**Hypothesis framing:**

To test the relationship between new generations private sector bank customers’ level of perception and satisfaction:

**H1: There exists a close relationship between new generation private sector bank customers’ level of perception towards retail banking services and their level of satisfaction derived by them.**

The dependent variable considered was new generation private sector bank customers’ level of perception towards retail banking services and the independent variables are new generation private sector bank customers’ level of satisfaction towards retail banking services.

New generation private sector bank customers’ level of satisfaction towards retail banking services  $(Y1) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} + \beta_{14}X_{14} + \beta_{15}X_{15} + \beta_{16}X_{16} + \beta_{17}X_{17} + \beta_{18}X_{18} + \beta_{19}X_{19} + \beta_{20}X_{20} + \beta_{21}X_{21} + \beta_{22}X_{22} + \beta_{23}X_{23} + \beta_{24}X_{24} + \beta_{25}X_{25} + \beta_{26}X_{26} + \beta_{27}X_{27} + e$

Where,

Y1= New generation private sector bank customers’ level of satisfaction towards retail banking services

$\beta_0$  = Intercept

$\beta_1$ - $\beta_{27}$ = Slopes (estimates of coefficients)

X<sub>1</sub>= Location of Branch –Convenience

X<sub>2</sub>= Layout of Branch–Convenience

X<sub>3</sub>= Security & Safety

X<sub>4</sub>= The level of privacy offered in the branch

X<sub>5</sub>= The cleanliness of the branch

X<sub>6</sub>= Branch's cash machine Being clean and tidy

X<sub>7</sub>= Branch's cash machine providing readable printouts

X<sub>8</sub>= Handling of account efficiently/ Transaction time

X<sub>9</sub>= Prices of Services provided

X<sub>10</sub>= Statement of Accounts

X<sub>11</sub>= Way in which staff answer call

X<sub>12</sub>= Efficiency in enquiries are passed between staff

X<sub>13</sub>= Quickly in understanding customer enquiry & responded to it

X<sub>14</sub>= The ease of reaching the person you need to speak with

X<sub>15</sub>= The time taken by bank to respond to your letters

X<sub>16</sub>= Letters of enquiry are answered clearly

X<sub>17</sub>= Complained are handled efficiency

X<sub>18</sub>= Less Time Taken to Sort Out the Complaint

X<sub>19</sub>= Quick follow-up contact –received

X<sub>20</sub>= Knowledgeable

X<sub>21</sub>= Able to give good advice

X<sub>22</sub>= Able to give 100% of their attention to the new generation private sector bank customers

X<sub>23</sub>= Pleased to assisting new generation private sector bank customers

X<sub>24</sub>=Smart and professional

X<sub>25</sub>=Apologies for any mistake

X<sub>26</sub>=Efforts to reduce queuing time

X<sub>27</sub>=How quickly cashiers carry out your instructions

e = Random error, which the authors assumed as NID for this research.

**TABLE: 2**  
**MULTIPE REGRESSION MODEL SUMMARY**  
**RELATIONSHIP BETWEEN NEW GENERATION PRIVATE SECTOR BANK**  
**CUSTOMERS' LEVEL OF PERCEPTION TOWARDS RETAIL BANKING**  
**SERVICES AND THEIR LEVEL OF SATISFACTION DERIVED**

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE	F Value	Sig
.920	.846	.840	.305	132.113	.000

Level of Significance: 5 per cent

$$Y = .757 + .601X_1 + 1.120X_2 + .251X_3 + .125X_4 + .347X_5 + 1.359X_6 + 1.336X_7 + .516X_8 + .393X_9 - .339X_{10} + 1.014X_{11} + .442X_{12} + .008X_{13} + .587X_{14} - .047X_{15} + .689X_{16} + .211X_{17} + .140X_{18} + .820X_{19} + .027X_{20} + .113X_{21} + .584X_{22} + .491X_{23} + .757X_{24} + .162X_{25} + .161X_{26} + .843X_{27}$$

It has been revealed from the above econometric analysis that F ratio (132.113) is statistically significant at 5 per cent level. This indicates that the entire regression is significant; it establishes 92 per cent relationship between the variables tested. From the above table it is seen that the coefficient of correlation (R) value .920 which describes good relationship between variables and the coefficient of determinant (R<sup>2</sup>).846 value does not establish significant association between the 27 variables tested. Therefore the hypothesis framed stands accepted and it has been concluded that there exists a close relationship between new generation private sector bank customers' level of perception towards retail banking services and their level of satisfaction derived.

Correlation and regression value of individual variables are presented in the below mentioned table.

**TABLE: 3**  
**NEW GENERATION PRIVATE SECTOR BANK CUSTOMERS' LEVEL OF**  
**PERCEPTION TOWARDS RETAIL BANKING SERVICES AND THEIR**  
**LEVEL OF SATISFACTION DERIVED**

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	.757	.071	-	10.728	.000	-	-
Location of Branch – Convenience	.601	.117	-.519	5.121	.000	.723	3.256
Lay Out of Branch – Convenience	1.120	.057	1.404	19.797	.000	.747	1.185
Security & Safety	.251	.095	-.272	2.647	.008	.723	4.354
The Level of Privacy Offered in the Branch	.125	.079	.147	1.594	.112	.728	1.721
The Cleanliness of the Branch	.347	.050	.429	6.916	.000	.762	2.176
Branch's Cash Machine Being Clean and Tidy	1.359	.177	-1.839	7.688	.000	.804	2.080
Branch's Cash Machine Providing Readable Printouts	1.336	.129	1.800	10.393	.000	.708	1.388
Handling of Account Efficiently/ Transaction Time	.516	.088	.574	5.890	.000	.725	3.969
Prices of Services Provided	.393	.072	-.438	5.493	.000	.837	2.735
Statement of Accounts	.339	.086	-.380	3.962	.000	.726	3.786
Way in which Staff Answer Call	1.014	.063	1.294	15.985	.000	.736	2.621
Efficiency in Enquiries are Passed Between Staff	.442	.089	-.580	4.991	.000	.718	1.989
Quickly in Understanding Customer Enquiry & Responded to it	.008	.090	.010	0.092	.927	.719	2.094



Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std.Error	Beta			Tolerance	VIF
	<b>The Ease of Reaching the Person You Need to Speak With</b>	<b>.587</b>	<b>.029</b>	<b>-.862</b>	<b>19.955</b>	<b>.000</b>	.727
The Time Taken By Bank to Respond To Your Letters	.047	.077	-.060	0.614	.539	.825	3.893
<b>Letters of Enquiry are Answered Clearly</b>	<b>.689</b>	<b>.188</b>	<b>.845</b>	<b>3.666</b>	<b>.000</b>	.804	2.060
Complained are Handled Efficiency	.211	.127	-.258	1.665	.096	.710	1.489
<b>Less Time Taken to Sort Out the Complaint</b>	<b>.140</b>	<b>.039</b>	<b>-.200</b>	<b>3.582</b>	<b>.000</b>	.676	3.154
<b>Quick Follow-up Contact –received</b>	<b>.820</b>	<b>.071</b>	<b>-1.156</b>	<b>11.532</b>	<b>.000</b>	.624	2.319
Knowledgeable	.027	.153	-.027	0.174	.862	.610	1.373
Able to Give Good Advice	.113	.066	.155	1.708	.088	.729	3.495
<b>Able to give 100% of their Attention to the New Generation Private Sector Bank Customers</b>	<b>.584</b>	<b>.116</b>	<b>-.739</b>	<b>5.047</b>	<b>.000</b>	.711	1.370
<b>Pleased to Assisting New Generation Private Sector Bank Customers</b>	<b>.491</b>	<b>.137</b>	<b>-.693</b>	<b>3.595</b>	<b>.000</b>	.806	1.446
<b>Smart and Professional</b>	<b>.757</b>	<b>.090</b>	<b>.970</b>	<b>8.366</b>	<b>.000</b>	.818	1.607
Apologies for Any mistake	.162	.107	-.216	1.509	.132	.712	1.211
Efforts to Reduce Queuing Time	.161	.099	.213	1.625	.105	.814	2.430
How Quickly Cashiers Carry Out your Instructions	.843	.048	1.124	17.569	.000	.758	1.238

**Level of Significance: 5 per cent**

Out of 27 parameters considered twenty were statistically significant. The standardized co-efficient beta column reveals that new generation private sector bank customers’ level of satisfaction towards retail banking services met have beta standard co-efficient .757 which is statistically significant at 0.000.

The computed Tolerance values and VIF (Variance Inflated Factor) fall within the set marks were above .500 and VIF were with five per cent of Tolerance value.

**Predicated Value**

- New generation private sector bank customers’ level of satisfaction towards retail banking services= .757 (Constant)
- .601(Location of Branch –Convenience)
- 1.120 (Layout of Branch–Convenience)
- .251 (Security & Safety)
- .347 (The cleanliness of the branch)
- 1.359 (Branch's cash machine being clean and tidy)
- 1.336 (Branch's cash machine providing readable printouts)
- .516 (Handling of account efficiently/ Transaction time)
- .393 (Prices of Services provided)
- .339 (Statement of Accounts)
- 1.014 (Way in which staff answer call)
- .442 (Efficiency in enquiries are passed between staff)
- .587 (The ease of reaching the person you need to speak with)
- .689 (Letters of enquiry are answered clearly)
- .140 (Less Time Taken to Sort out the Complaint)
- .820 (Quick follow-up contact –received)



.584 (Able to give 100% of their attention to the new generation private sector bank customers)

.491 (Pleased to assisting new generation private sector bank customers)

.757 (Smart and professional)

.843 (How quickly cashiers carry out your instructions)

### **Discussion**

From the empirical data analysis it has been inferred that 63.70 per cent of bank new generation private sector bank customers' surveyed are male and most of them are aged between 31-35 years. It has been observed that 53.94 per cent of customers' surveyed are post graduates and their monthly earning ranges within Rs.25,000.

Multiple regression analysis indicates that out of 27 tested variables nineteen variables namely location of branch –convenience, lay out of branch–convenience, security and safety, the cleanliness of the branch, branch's cash machine being clean and tidy, branch's cash machine providing readable printouts, handling of account efficiently/ transaction time, prices of services provided, statement of accounts, way in which staff answer call, efficiency in enquiries are passed between staff, the ease of reaching the person you need to speak with, letters of enquiry are answered clearly, less time taken to sort out the complaint, quick follow-up contact –received, able to give 100% of their attention to the new generation private sector bank customers, pleased to assisting new generation private sector bank customers, smart and professional and how quickly cashiers carry out your instructions were found to be statistically significant. Among all the variables, cashiers carrying out the instructions quickly was found to be the highest significant variable with a beta co-efficient value of .843 followed by the variable quick follow-up contact received with a beta value of .820 and the third highest significant variable was found to be smart and professional quality with a beta value of .757.

The study found that majority of the sample retail bank customers have been found satisfied with the efficient bank branch layout for the customer conveniences, location of the bank branches, efficient account handling, providing and updating statement of accounts, bank's publicity regarding its services and performance, service charges, computerization and the expertise of bank employees regarding the bank service. Hence, with the conduct of multiple regression analysis it has been concluded that there exists a close relationship between customers' level of perception towards retail banking services and their level of satisfaction derived.

Retail bankers are bound to provide quality and efficient services. Banks can enhance their service quality by adoption of latest technology, maintenance of efficient service delivery standards and adoption of business re-engineering process. To educate and ensure proper risk disclosures for safe and smooth technology banking, the new generation private sector bankers are suggested to educate their customers about effective means of using banking technologies, SMART banking practices and also the risk attached with the wrong operation of technology based services.

### **Conclusion**

The growth of Indian banking sector is experiencing fast changes in development and competitive structures in adoption of effective strategies to meet

---



customer satisfaction. Banks have to understand the changing needs of customers, their aspirations, perceptions and expectations to create value. With the adoption of retail banking practices these days' banks execute transactions directly with the customers. Hence, bank should also have a strong customer relationship management system that would indicate the worth of the customer and be able to understand his needs. The study would like to conclude that there is a need of constant innovation in retail banking. A paradigm shift in bank financing through innovative products and mechanisms involving gradation and revalidation of the banks' internal systems and processes is called for. NGPS banks now need to use retail as a growth trigger.

## References

### Books:

- 1) Orme B (2010). Getting started with conjoint analysis: Strategies for product design and pricing research. *Second Edition, Madison, Wis.: Research Publishers LLC.*
- 2) Rajalakshmi C (1990). A critical appraisal of general utility services of commercial banks in Aruppukottai Town. Unpublished M. Phil Dissertation, Annamalai University, 25-32.
- 3) Storbacka K.E (2000). Customer profitability: Analysis and design issues, in Sheth, J., Parvatiyar, A (Eds), *Handbook of relationship marketing. Sage publications, Thousand Oaks, CA.*
- 4) Thirumagal Vijaya M (2006). A study on marketing of services by public sector banks: Customer perspective. Unpublished Ph. D Thesis, April, Bharathiar University.

### Journals:

- 1) Arpita Khare (2011). Customers' perception and attitude towards service quality in multinational banks in India. *International Journal of Services and Operations Management*, 10(2), 199-215.
- 2) Bhayani, S.J. (2005). Retail banking awareness: An empirical analysis, *Indian Journal of Marketing*, 35(9), 27-38.
- 3) Bhupendra Kaur Saluja, Vivek Sharma & Juhi Naik (2013). The study of customer perception towards banking services of banks in Indore region. *Altius Shodh Journal of Management and Commerce*, 1(2), 201-206, ISSN 2348 – 8891.
- 4) Birendra Kumar (2009). Performance of retail banking in India. *Asochem Financial Pulse (AFP), India.*
- 5) Linda Mary Simon (2012). A study on customer perception towards services provided by public sector bank and Private sector bank. *PARIPEX - Indian Journal of Research*, 1(12), 113-115.
- 6) Lovelock, C. (2001). Loyalty in private retail banking: An empirical study, *IUP Journal of Management Research*, 9(4), 21-38.
- 7) Parasuraman, A. (1988). SERVQUAL: a multiple -item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64, 12-40, Spring.



- 8) Ranganathan (1994). Customer services paper presented in the seminar on Indian banking by 2000AD. Organized by the Department of Commerce, Madras University, P.G. Extension Centre, Salem, and October.
- 9) Ranganathan S (2013). Customers' perception towards retail banking services of the commercial banks in Cuddalore District. *SIT Journal of Management*, 3(2), 287-305, December, ISSN: 2278-9111.
- 10) Surabhi Singh & Renu Arora (2011). A comparative study of banking services and customer satisfaction in public, private and foreign banks. *Journal of Economics*, 2(1), 45-56.
- 11) Uppal, R. K. (2009). Business retail banking strategies in the liberalized and globalized era. *The IUP Journal of Business Strategy*, 6(3 & 4), 95-106.
- 12) Uppal, R. K. (2008). Customer perception of e-banking services of Indian banks: Some survey evidence. *The IUP Journal of Bank Management, IUP publications*, 0(1), 63-78.

#### Websites:

- 1) Hirtle, Beverly, J. & Kevin, J. Stiroh (2005), The return to retail and the performance of U.S. banks, Retrieved from <http://www.ssrn.com/abstract=id873848.pdf>.
- 2) Retrieved from <http://www.scribd.com/doc/22095932/A-Study-on-Customer-Perception-Towards-the-Services-Offered-in-Retail-Banking-by-South-Indian-Bank-Vennikulam-Branch-Kerala>.
- 3) Jaroslav Belas & Lenka Gabcova (2014). Reasons for satisfaction and dissatisfaction of bank customers. Study from Slovakia and the Czech Republic, *International Journal of Entrepreneurial Knowledge*. 2(1), Retrieved from [http://ijek.org/files/IJEK\\_1-2014v2/ijek\\_1-2014,v.2\\_belas,j.gabcova,1.pdf](http://ijek.org/files/IJEK_1-2014v2/ijek_1-2014,v.2_belas,j.gabcova,1.pdf).
- 4) Sethuraman, J. (2010). Retail banking - Models, strategies, performances and the future -The Indian Scenario, Indian Institute of Banking and Finance, Mumbai, 85-144, Retrieved from <http://www.iibf.org.in/documents/research-report/Report-12.pdf>.



## Vehicle Speeden System Using GSM and GPS

Anumeha Garg

Department Of Information Technology, AKTU University, India

[Anumeha.garg.it.2016@miet.ac.in](mailto:Anumeha.garg.it.2016@miet.ac.in)

Arshita Jain

Department Of Information Technology, AKTU University, India

[Arshita.jain.it.2016@miet.ac.in](mailto:Arshita.jain.it.2016@miet.ac.in)

Ashutosh Singh

Department Of Information Technology, AKTU University, India

[Ashutosh.singh.it.2016@miet.ac.in](mailto:Ashutosh.singh.it.2016@miet.ac.in)

Neelakshi Aatray

Department Of Information Technology, AKTU University, India

[Neelakshi.aatray.it.2016@miet.ac.in](mailto:Neelakshi.aatray.it.2016@miet.ac.in)

Mr. Ajay Kumar

Department Of Information Technology, AKTU University, India

[Ajay.kumar@miet.ac.in](mailto:Ajay.kumar@miet.ac.in)

**Abstract** - Vehicle speeden system is a well-established technology in this era. A vehicle speeden system is a programmed device which is capable to send the current speed to an IOT platform. This paper presents a system that uses GPS and GSM as technologies. By using GPS tracking , the position can be viewed on a map back drop either in real time or while evaluating the track later. We are using SIM 800L module which is a small GSM module. The module is available for SMS and GPRS message data remote transmission. We can see the graphical plotting with the comparison of current and previous speed. When the current speed is more than the previous speed , the user will get an alert message regarding the overspeeding of the vehicle. We are using adafruit.io as a google API over the internet.

**Keywords**- GPS; GSM; Maps; Microcontroller; Vehicle Speeden; Arduino; Adafriut.

### 1. Introduction

Because of progression in innovation, presently a-days we are seeing digitalization everywhere throughout the world. At present we have made an equipment which will be proficient to send the present speed to an IOT platform. This IOT platform take this speed information and plot the diagram and can oversee different statics also. In this undertaking we are going to utilize a GPS module for getting pace of an article on which this gadget will be put. As we realize that GPS is able to ascertain the speed of vehicles with the goal that's the reason we are utilizing this. By utilizing this GPS module all other limitations are disposed of speed number cruncher by different gadgets. Presently other module we are going to utilize wifi or GPRS module which is skilled to transmit the speed information to the IOT server and then we can see the graphical plotting and compare our current speed with the previous speed , if the current speed is higher than previous speed then user will received a message through SIM800L to over speed .

This framework empowers the proprietor to watch and track the vehicle and get some answers concerning vehicle development and past exercises of car. This innovation famously called continuous Vehicle Following Frameworks.

The sign is handled and changed over into computerized utilizing microcontroller. The information got is shown in Fluid Gem Show which is an electronically optical gadget. They are utilized to show the characters. This base station is utilized for checking reason. It is joined by maps, for example, Google maps, Here maps, Bing maps and so on for the portrayal of the area. This administration is regularly given requiring little to no effort. This data is accessible to approved clients of the framework through web sites.

## 2. Background Work

### *Vehicle Speeden System*

Vehicle Speeden System is the technology which determines the speed of a vehicle. Vehicle Speeden System is a headway in the tracking technologies. Graphical plotting is being used to compare the previous speed with the current speed of the vehicle. It also describes the trail of the vehicle like speed, coordinates of location and distance. It can be viewed using Adafuit IO via internet.

At observing focus different programming are utilized to plot the Vehicle on a guide. Along these lines the Vehicle proprietors can follow their vehicle consistently. Because of continuous following office, vehicle following frameworks are getting progressively famous among proprietors of costly vehicles.

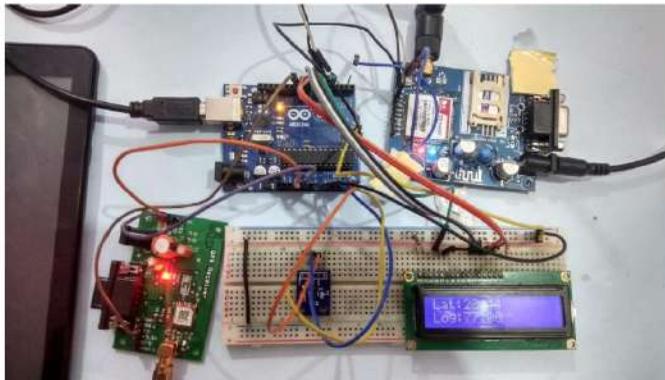


Fig. 1 Working of Vehicle Speeden System

### *GPS Technology*

The GPS (Global Positioning System) is space-based worldwide route satellite framework that gives solid area and time data in all climate and consistently and anyplace on or close to the earth when and where there is an unhindered view to at least four GPS satellites. This is a route innovation giving precise area and data.

A GPS beneficiary computes the radio signals that are musically sent from the satellites. It quantifies the sign from at least 3 satellites to discover the longitude and scope utilizing different strategies. It is a space based route framework that sends information from satellites circling earth to GPS recipients on the ground that can utilize that information to decide position and the present time anyplace on the earth. It is kept up by the US government and is unreservedly open by anybody with a GPS collector.

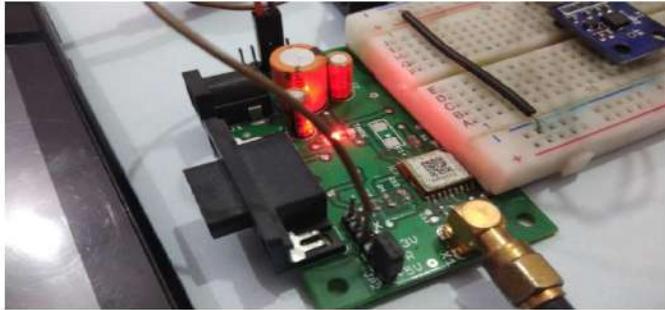


Fig. 2 GPS Module

#### *GSM Technology*

The Worldwide Framework for Portable Interchanges Global System for Mobile Communications (GSM). This GSM innovation was set up in 1982 to build up a typical cell phone standard.

GSM reception apparatus is thin, conservative and profoundly touchy. The receiving wire extends away from its base with a stick-on back, so you join it to a hook in case you're making something, for example, a DIY telephone. It takes after the conventional modem, however contrasts in the manner in which it transmits and gets information. A dial-up modem utilizes phone lines though a GSM modem utilizes radio waves. A GSM modem utilizes orders with each order starting with AT for example Consideration followed by a character.

A GSM modem is a particular kind of modem which acknowledges a SIM card, and works over a membership to a portable administrator, much the same as a cell phone GSM utilizes a procedure called circuit exchanging. This strategy for correspondence permits a way to be built up between two gadgets. When the two gadgets are associated, a consistent stream of computerized information is handed-off.

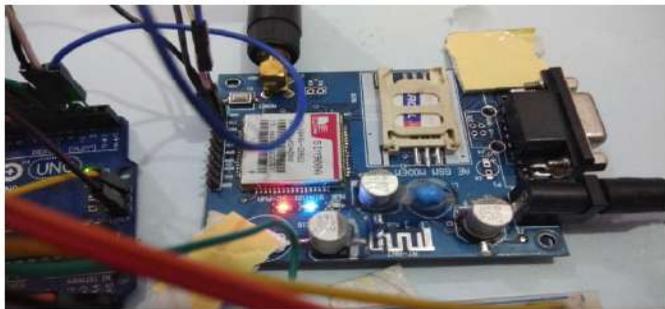


Fig. 3 GSM Module



#### *Maps*

Google map is freely available software. It utilizes satellite imaging to show items, for example, 3D objects, pin objects demonstrating the focal point or a line article to show tracks. It is a guide worked with the Maps JavaScript API gives real-time perceivability of our vehicles.

Maps use GPS to provide the coordinates of a location via satellite. Using this information adds yet another dimension to the product, providing users with such things as real-time location updates and so on.

#### *Microcontroller*

Microcontrollers are little chips which disentangle the working. It is answerable for going about as an interface between GSM module and GSM beneficiary. Cheap design and adding knowledge to the system makes microcontroller chips exceptionally solid. It is programmed to empower the modem when mentioned regarding message sending.

The microcontroller utilized in Arduino is ATMEGA 328. It is a little PC that contains a processor to execute directions, incorporates different sorts of memory to hold information and guidelines and gives different roads of sending and accepting information.

#### *Arduino*

Arduino is an open-source gadgets stage. The Arduino Nano is a little, complete, and breadboard-accommodating board dependent on the ATmega328 (Arduino Nano 3.x). It has pretty much a similar usefulness of the Arduino Duemilanove, yet in an alternate bundle. It needs just a DC power jack, and works with a Smaller than usual Mini USB link rather than a standard one.

Arduino board comprises of six simple information and yield pins and 14 computerized input and yield pins. These simple signs read by the simple pins of the Arduino board (A4,A5) while different pins are sans left. Arduino can be introduced and utilized in any working framework stage. Arduino ventures can be mimicked with an instrument called an Integrated Development Environment (IDE).

Every one of these Digital & Analog Pins are doled out with various capacities however their principle work is to be designed as information or output. They are gone about as info pins when they are interfaced with sensors. It is modified utilizing Arduino IDE which is a Coordinated Advancement Condition that runs both disconnected and online. The Nano gadget accompanies a capacity to set up a correspondence with different controllers and computers. The Arduino Nano is customized by Arduino Programming called IDE which is a typical programming utilized for practically a wide range of board accessible. Arduino Nano consists wide range of an application like Real-Time Face Detection, Android Applications, GSM Based Projects.

#### *LCD*

LCD (Liquid Crystal Display) is an electronically modulated optical device, that helps to flash a light-modulating properties of liquid crystals instead using a backlight or reflector to produce images in color or monochrome. LCD modules that show characters, for example, content and numbers are the most cheap and easiest to utilize the entirety of LCDs.

LCD technology works by blocking light specifically, an LCD is made up of polarized glass which is of two pieces that contains a crystal in liquid form between them. We are using 16\*2 LCD that helps to flash the characters like text and numbers. LCD has very wide range of applications like LCD TV, Laptop monitors, cell phones calculators, etc.

### 3. Methodology

#### Block Diagram

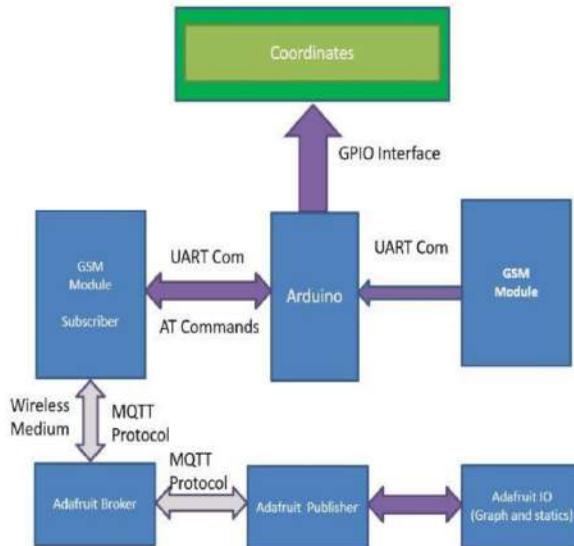


Fig. 4 Block Diagram of Vehicle Speed System

#### Block Description

Fig. shows a Block diagram of a system that is built on a GSM and GPS platform. It consists of an Arduino with power supply.

The coding is done using C++ programming language. The project proposes a design of an embedded system which is used for tracking of any vehicle by using Global system for mobile communication (GSM) and Global Positioning System (GPS). Microcontroller is assembled serially to a GSM Modem and GPS Receiver. Coordinates are fetched using GPS via satellites by which speed and other parameters can be described. The parameters are further fetched by Arduino through the code .Connection is established through Adafruit IO between the subscriber and the intended user.The speed is then transfer to the broker using SIM 800L. GPS only carries data whereas GSM pass on as well as receive data. After digitalizing the signals, they are transmitted to the LCD.

On the user end the GSM enabled device acts like an SMS .In terms of power, input of 12 volts is provided by battery to GSM and the supply to arduino, GPS and LCD is 5 volts. MQTT protocol is used to establish the connection with the server.



#### 4. Application

The proposed system can have varied applications:-

- Fleet management
- Predicting the winner in case of a tie
- Theft control of vehicles
- In tracking of ground services
- Can be used by various cab services
- Can be utilized as a parental control system
- Can be used in location enabled devices

#### 5. Advantages

- The system has applications in fields like security, remote accessing, navigation, monitoring, tracking.
- Easy tracking of drivers
- Fleet management system is easiest
- Remote accessing is possible
- Maintaining control over the assets is easy
- Vehicle utilization is increase

#### 6. Conclusion

Measuring speed of vehicles is essential in today's time as number of vehicles are increasing at an exponential rate. We have developed a vehicle speeden system that is flexible, customizable and accurate. The Arduino is the cerebrum of the framework and the GSM modem is constrained by AT orders that empower information transmission over GSM network while the GPS give the location. We have made a hardware which is capable of sending the current speed of the vehicle to an IOT platform. The IOT platform i.e., Adafuit IO take this speed data and plot the graph comparing the current and preceding speed of the vehicle.

The system provides accurate data in real time that makes it possible for the user to track and measure the speed of the vehicle. There can be various other applications that can be built over the existing platform. Hence, the system is designed in such a way that upgrading this system is untroublesome which makes it open for future requirement without the need of rebuilding everything from scratch which makes the system even more competent. This system can be used for the furtherance of current security and tracking systems used by many organizations.

#### 7. Future Scope

In this paper, we have present a method of advancing a speed measuring device by assimilating arduino by an embedded system. LCD is used to check the status of GSM module.

Speed is measured by the proposed device. In supplementary, graphical plotting is being used for comparing the current speed with the previous speed of the vehicle. SIM 800L is used for data transmission via sms. For locating the vehicle, Global Positioning System(GPS) is used. For future advancement, this idea can be developed further as theft preventing application or accident prevention application by using GPS tracking.

#### 8. Acknowledgement

We are very thankful to our project guide Prof. Ajay Kumar, Department of Information Technology, Meerut Institute of Engineering & Technology, Meerut for providing his stimulating advice, constructive criticism and exceptional supervision without which the project would not have completed. We also thank him for his effort in guiding the team in achieving the goal and maintaining the progress throughout.



Funding: This work is not funded by any agencies and the study is as part of the B.Tech degree.

#### **9. References**

- [1] Katina Michael & Roger Clarke, —Location and Tracking of Mobile Devices!, ELSEVIER - Computer Law & Security Review 29(2013) 216-228.
- [2] Changsheng Cai & Yang Gao, —Precise Point Positioning Using Combined GPS and GLONASS Observations!, Journal of Global Positioning Systems (2007), Vol.6, No.1: 13 – 22
- [3] Mr. Pankajverma; Design And Development Of Gps-Gsm Based Tracking System With Google Map Based Monitoring
- [4] L. SeokJu, G. Tewolde and K. Jaerock, “Design and Implementation of Vehicle Tracking System Using GPS/GSM/GPRS Technology and Smartphone Application”, IEEE World Forum on Internet of Things (WF-IoT), Seoul, March 2014.
- [5] Baburao Kodavati, V.K.Raju, S.Srinivasa Rao, A.V.Prabu, T.Appa Rao, Dr.Y.V.Narayana “GSM and GPS based vehicle location and tracking system”, International Journal of Engineering Research and Applications (IJERA), www.ijera.com Vol. 1, Issue 3, pp.616-625
- [6] Microcontroller-based Speedometer-Cum- Odometer- Arun kumar vadla