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Dr. K.VICTOR BABU

Editor-in-Chief



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Editorial

Provoking fresh thinking is certainly becoming the prime purpose of International Journal of Multidisciplinary Educational Research (IJMER). The new world era we have entered with enormous contradictions is demanding a unique understanding to face challenges. IJMER's contents are overwhelmingly contributor, distinctive and are creating the right balance for its readers with its varied knowledge.

We are happy to inform you that IJMER got the high **Impact Factor 2.735, Index Copernicus Value 5.16** and IJMER is **listed and indexed in 34 popular indexed organizations** in the world. This academic achievement of IJMER is only author's contribution in the past issues. I hope this journey of IJMER more benefit to future academic world.

The current issue deals with Sustainable Development, Morality an Illusion, Human Education, Mental Health, Human Rights, Ethnographic Profile of the Koya and etc. These applied topics are a fund of knowledge for their utilization.

In the present issue, we have taken up details of multidisciplinary issues discussed in academic circles. There are well written articles covering a wide range of issues that are thought provoking as well as significant in the contemporary research world.

My thanks to the Members of the Editorial Board, to the readers, and in particular I sincerely recognize the efforts of the subscribers of articles. The journal thus receives its recognition from the rich contribution of assorted research papers presented by the experienced scholars and the implied commitment is generating the vision envisaged and that is spreading knowledge. I am happy to note that the readers are benefited.

My personal thanks to one and all.

(Dr.Victor Babu Koppula)



STRATEGIES FOR ACHIEVING SUSTAINABLE DEVELOPMENT IN 21ST CENTURY AFRICA

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Introduction

Africans suffering from many events and occurrences that are unabatedly stifling her developmental pace. There is no state or continent without history and culture no matter how backward it may be. The case of Africa is not an exception. Her history especially before the era of colonization seems documented with some bias and that has remained a source of challenge for reconstruction by many Africa scholars.

The relevance of culture in nation development cannot be overemphasized. This is because a nation without culture is a nation in crisis. Culture has been defined as the total way of living of a group of people. Its definition has been correctly noted by Wiredu when he said:

Culture goes beyond art, song and dance to include everything that is connected with a people's way of life. It is seen in their way of investigating nature and utilizing its possibilities; and in their way of viewing themselves and interpreting their place in nature. It also in the manner in which they house and cloth themselves; their methods of conducting war and peace; their system of reward and punishment; the way they regulate personal relations generally and their ideas underlying these institutions and practices.¹



From the foregoing, it is evident that a nation without culture would be a nation without self-identity, which is a condition for development of self confidence and self-esteem.

Africa states are in cultural crisis. It is important to elucidate that a nation in cultural crisis is one whose self-identity is also in crisis. As earlier noted, without self-identity, self-esteem and self-confidence cannot be successfully developed by group of people - necessary ingredients for development.

It is the intention of this paper to examine the stages of African national development and the strategies that can be implored to achieve significant development. In doing this, this paper shall start by discussing an historical background of the stages and phases of African struggle for development. It shall delve into the concept of development and underdevelopment. It would also highlight some of the factors impeding the development of African nations. Attempt would be made to provide some of the strategies needed to be embraced in order to truly bring development to Africa.

AN HISTORICAL BACKGROUND OF THE STAGES AND PHASES OF AFRICAN STRUGGLE FOR DEVELOPMENT

African scholars have argued that before the coming of and the invasion by the slave merchants and colonial masters, Africa though not developed technology wise, had a stable community setting.

There were kingdoms with rulers whose subjects were well fed, energetic and healthy looking – a reason why the colonial master thought them good enough to be beasts of burden. The incursion of the colonial masters however, dealt a devastating blow to the consciousness of the African intellectual and its cultural identity as rightly put by William



Abraham.² Hence, colonization has done damages to the African nations some of which include loss of self – identity which has led to loss of self-confidence and esteem, loss of internal impetus, loss of direction for nation development and change in intellectual orientation from that of inquiry to the culture of belief.³

Africannations when compared to Western Europe and some other parts of the world can be considered to be underdeveloped. Africa has its own institutions and ideas of governance even before colonial masters came to them. There is no doubt that the contact with other societies had influenced and affected their rate of development because if a culture has contact with other cultures, they are likely going to affect each other, though one effects on the other may be more negative. Africans are people that embrace and appreciate their cultural values and norms which are reflected in their ways of life; the way they talk, the manner in which they see death and appreciate new born and what they wear.

Africans interaction with foreign culture brought about a dramatic change in our way of life. The contact brought about certain development and makes some aspects of African culture to be jettisoned. The positive impact of Africa contact with Europe is worthy of recognition. Before the coming of colonial masters, there was nothing like electricity, good roads, social infrastructures, modern technology, formal education etc. Absence of all these could not make us to record significant development in Africa because we could not move at the pace with which the Europeans were moving. The unavailability of these facilities affected our development because everything had to be done manually

After the colonial masters left, Africans then realized that while they were developing, they had substituted their culture for foreign culture



forgetting that each culture has its own uniqueness. It then became difficult to identify the native culture because the natives were already mixed up. Europeans and Africans themselves in the colonial period lack due regard for the unique features of African culture.⁴ Africans were seen as inferior to the white. The great British philosopher, Hempel notes that:

The Negro is naturally inferior to the white. There are scarcely ever was a civilized nation of that complexion, nor even any individual, eminent either in action or speculation. No ingenious manufactures among them, no arts, no science.⁵

The above Western denigration of African culture and personality becomes more calamitous because of the psychological effects it has on the people's quest towards development.

UNDERSTANDING DEVELOPMENT AND UNDER - DEVELOPMENT

Under- development may not necessary be considered to mean the absence of development. In one way or another, every people have developed. The unevenness in the level of development from one country to the other makes it possible to refer to some nations as developed, some as developing and others as underdeveloped nations. For instance, if one compares Europe with say Africa, or Asia, or Latin America and North America, one would say European countries are developed; Asian countries are mostly developing while most African countries are underdeveloped. In recent times however, the term underdeveloped is being avoided. Most African countries are now euphemistically tagged developing-a term which seems to speak of hope for struggling nations of the world.



Underdevelopment is a kind of development – a retrogressive, regressive development and it is antithetical to progress which can be regarded as positive development. There are different meanings of underdevelopment. Underdevelopment has so many dimensions. A country can be said to be underdeveloped if it has valuable natural resources such as soil, water, mineral that are yet to be utilized. If a state is technologically backward, if its institutions are not favorable for investment, if it has low capital resources per head (per capita income) in comparison to Western Europe and if it has low output per head, such a state is often referred to as undeveloped. These are the indices recognized by W. A. Lewis.⁶ Our knowledge of underdevelopment shows that underdeveloped countries rarely record significant development.

Development is a social concept standing for the process through which human beings strive to improve the conditions of their lives (Oladipo: 94).⁷ Development has two broad dimensions namely, the tangible or technical aspect and the intangible or moral aspect. The tangible aspect of development is concerned with material progress. It involves the control and exploitation of the physical environment through the application of the results of science and technology. The primary goal of this process, of course, is human well-being. This involves, among other things, the eradication of certain human demeaning social phenomena, such as poverty, illiteracy, and low – life expectancy, and the creation and maintenance of what M .S Swaminathan calls “livelihood opportunities”.⁸ Intangible or moral aspect of development, on the other hand, has to do with improvement of “the quality of human relations between people”.⁹ It involves reduction of social inequality and the promotion of positive social values such as justice, freedom, compassion, tolerance and so on. The intangible aspect of development is very crucial as it enhances the capacity



of the individual to shape his or her life without being insensitive to the common good.

There are so many dimensions of development. We have development at the individual level, social level, economic level etc. Development at the individual level implies increased skill and capacity, greater freedom, creativity, self-discipline, responsibility and material well-being.¹⁰ Development at this level is encompassing. It no doubt raises many fundamental questions: If this is what it takes to record significant development at the individual level, the question is, can we have development in the real sense of development? Can individuals possess all these abilities intrinsic to development? Development at this level seems to be a mirage because it is encompassing.

FACTORS IMPEDING AFRICAN DEVELOPMENT (PAST AND PRESENT)

There are many factors that impeded and are still impeding Africanquest for development.

Slave trade is a basic factor in African under - development. Africans were free men but later became a slave or a captive when he had to work as a slave in the society. Africans were taken as captives to work in other parts of the world as property of those nations. Europeans purchased African captives and shipped them to their buyers. The process by which Africans were taken was in a forceful manner. Africans were tricked and kidnapped. These showvery clearly the destructiveness in the European approach. Amongst the slaves that were shipped to European countries, Africans recorded mortality in transshipment because some captives had to travel hundred miles to the coast. As many Africans that were taken captives who landed safely and those that died on their way represent the



number of African that were removed from the labour force of Africa. This affected African level of productivity because those that were taken were able body, young men and women ranging from 15 to 35years. They were also conscious of the people they shipped because of this, they shipped those who are healthy not the sickly of them. The implication is that Africans will be left with children and old people who were not strong enough to work and the sickly that needed care.

According to Bryan Edwards, a good mind may honestly derive some degree of consolation in considering that all such of the wretched victims as the slaves in Africa were, by being sold to the whites, removed to a situation infinitely more desirable, even in their native Africa".¹¹ In Africa, the slaves could not look forward to any security for their persons or properties. This period was full of tragedy and pain. It will also be necessary to note that from the onset slavery was not peculiar to only Africa people.

The record of the Hebrew, the Persians, the Egyptians, the Indians, Chinese are full of reference to slaves. Record shows that 90 % of the Greek population consisted of slaves. According to Aristotle, certain people are naturally free, others are naturally slaves. For these latter slavery is both just and expedient. Slavery was extensively practiced in African communities. What is remarkable "is that slavery is one of the harsh and unpalatable facts of history. The principal – almost the only - industry of tropical Africa for many centuries was the trade in slaves carried on mainly by the Christian people of Western Europe and by Muslims Arabs".¹²

The position of tillers, servants, cooks, hairdressers, musicians and gladiators were occupied by slaves that were drained from Britain, Europe, Asia and Africa. Other European groups brutally enslaved not only their weaker neighbours but those of lower classes as well. History recorded stages



of transfiguration from slavery to serfdom and to freedom. This stage was in a process of completion by the end of the medieval period. The agony suffered by African nations was a remarkable one. The fact that it was only in Africa that large slaves were "exported" to other parts of the world makes it remarkable.

It is however important to distinguish between voluntary slavery and domestic slavery because they are often confused with one another. There is a great difference between slaves who were captured from other groups in war and those who in themselves gave their consent and enter a master/servant relationship with someone who could serve as a protector. This cannot be referred to as slavery in the real sense. The concept of slavery goes with coercion and brutality. We also have those who gave themselves to the bondage creditors. These are people who have a particular debt unpaid or a relative incurred an unpaid debt that needs to be serviced whichever way.

Colonization is another crucial factor that affected the development of African nations. The occurrence of colonization to some people was a necessary evil; one that propelled the now developed world to the height it has achieved. Some others consider it the worst injustice served to humanity. Despite intensified efforts on both local and global fronts, Sub Sahara Africa remains the world poorest and least developed region while many Asians have made giant strides in advancing their development efforts. This current struggle for development in Africa was linked to its experience of colonization. Although, it can be argued that colonization took place in some Asian nations. It is also expedient to note that the structure of colonization in these regions differs. For example, Asians were given some degree of freedom because they were allowed to take up leadership positions in the sense that they handled the affairs of their states. On the contrary,



Africans were not allowed to experience this liberty. What was experienced was a destruction of our traditional African governance structure and ethnic grouping.

Around the world today, intractable conflict is found in many areas that were once colonized or controlled by Western European or Soviet powers (i.e. Africa, the Balkans, Southeast Asia, the Middle East, South America). The source of many of these protracted conflicts, in large part, lies in past colonial or Soviet policies, and especially those regarding territorial boundaries, the treatment of indigenous populations, the privileging of some groups over others, the uneven distribution of wealth, local government infrastructures, and the formation of non-democratic or non-participatory governmental systems. The modern world has been shaped by thousands of years of colonization which range from ancient times, through the Middle Ages and to modern era. Many migrate to other parts of the world and came in contact with other cultures. When culture came in contact with another culture, sometimes conflict occurs because the new culture is in conflict with the other leading to the destruction of one of the cultures. This accounts for the reason why some people ignore their indigenous culture for a new culture. At other times, people use it as a means of exchange of knowledge, goods and traditions.

Colonization is the forming of a settlement or colony by a group of people who seek to take control of territories or countries. Colonization also involves domination of original inhabitants of the area. Those colonized are usually under the control of their colonizers. They become a subject to them and they are expected to do whatever the colonizers dictate that they should do.



Colonization does not necessary has to do with force. It can be done in a forceful way and can be done in a very peaceful way without causing any violence. Colonialism does political, psychological and moral damage to the colonized as well.¹³ A stronger country can peacefully take over another territory by offering assistance and promising to look after such country. The implication of this is that the stronger country use the resources of the weaker one, exploit them while they become richer and stronger.

The main intension of colonization was not for a good reason. When parent countries need more land to grow crops or when the land is not fertile enough, the parent country looked for a new land to satisfy the need to grow more crops. As they move to a new land, they settle down there permanently.

The desire to acquire riches and precious metals such as gold and silver also drove people to colonize new lands. All these attitudes in turn affected African nations in a negative way. According to Bill Warren, colonialism may be bad because it relies on force and it is the genesis of third world development.¹⁴ Though, we cannot but acknowledge that this same colonialism brought to Africa education, infrastructural amenities such as pipe borne water, good roads, electricity and many useful technologies. Borrowing from the word of the Historians L. H. Gann and P. Duignan, "Africa probably benefited from colonialism on balance. Although, it had its faults, colonialism is one of the most efficacious engines for cultural diffusion in world history".¹⁵

Other factors which serve as impediment to the development of Africa include illiteracy, bad governance, and lack of access to technologies that can aid development.



STRATEGIES FOR ACHIEVING SIGNIFICANT DEVELOPMENT

Indeed, African nations cannot be said to be moving at the right pace developmentally. Many nations that were colonized have left Africa behind and they have been able to record outstanding development in different areas such as India, China, Turkey, and Malaysia. It is important therefore, that Africa asks herself some fundamental questions relevant to the development of her society. What can be done about the situation? What are the things that are wrong that need to be properly addressed in order to get to the desired level?

The following are some of the proposed interventions necessary in order to achieve the desired development: Re-orientation, identification with the positive aspect of our culture, good governance and discipline.

African states need to have a new orientation about themselves and their society. A lot is wrong with our self-perception and self-definition of us. We have given up hope and have entrusted our future into the hands of foreigners. Not until we realize this and work together as a nation, we may not be able to achieve anything meaningful development-wise. Let's take for example Nigeria as a nation. It is unfortunate that many Nigerians believe that success cannot be attained here because the environment is frustrating, not conducive for learning and do not believe in her products. This is the reason why an employer will prefer to employ a graduate from any University abroad than to employ someone from its own country.

It is pertinent to note that Africans have largely given up their culture and embraced foreign ideas, beliefs and culture. Culture according to Lloyd Thompson is "ways of thinking, feeling, believing and behaving and the system of related technologies and material goods that allow members of a given society to adjust to that society's physical and social environment" ¹⁶



In the word of Ngugi,

Culture embodies a community's structure of values the basis of their world outlook, and how they see themselves and their place in the universe and in relation to other communities. It is the values that a people have that are the basis of their collective and individual image of self, their identity as a people, since culture is an ideological expression of the totality of their activities.¹⁷

If this is what is meant by culture, then embracing a foreign culture would amount to embracing its way of life, feeling, values and beliefs. Though, some of these ideas, values and beliefs as earlier noted, assisted in the past and are still useful in the present. But near- total replacement of African culture by the foreign ones have brought significant damage to African society. Africans have to be very sensitive to the shortcoming of the prevailing capitalist ethos. There is no doubt that there are aspects of this ethos that need to be cultivated in order to survive and flourish in the contemporary world. Some of these ethos includes: rationality, precision, planning, involving calculation and anticipation, resourcefulness, thrift, among others.¹⁸ The danger of not learning the positive lessons of Africa's socio-cultural values and making it to bear on individual and social action is that Africa will remain permanently in the throes of underdevelopment. African should therefore endeavor to embrace the useful and positive aspect of their culture that could aid development.

Kaunda puts forward the dichotomy between African and western psychology in his book, *A Humanist in Africa*:



If I were, from my own observation, to try to summarize the difference between African and Western Psychology, I would say that the Westerner has a problem-solving mind while African has a solution-experiencing mind. The Westerner has an aggressive mentality. When he sees a problem he will not rest until he has formulated some solution to it. He cannot live with contradictory ideas in mind. ... Africans being a pre-scientific people, do not recognize any conceptual cleavage between the natural and the supernatural. They experience a situation rather than face a problem... they allow both rational and non – rational elements to make an impact upon them, and any action they may take could be described more as a response of the total personality to the situation than the result of some mental exercise. ¹⁹

This dichotomy appears to be a derogatory one. It painted Africans as set of people that do not reason well. It places Westerner as a set of perfect race. Many believed in this dichotomy and may therefore not see reason to perceive themselves of possessing useful ideas.

Another prominent thing to be worked on is the issue of bad leadership. Bad governance is one of the many factors affecting the underdevelopment of African states. There is no way significant development can be achieved when the society is not properly governed. Africans have had leaders who cared less and clueless about the development of their states. All that they have succeeded in is using public offices to enrich themselves and their cronies. Bad leaders should be completely



flushed out from governance this can be done when the people realize that the development of the country and self lies in the hands of the rulers. It is important that good candidate be encouraged to rule.

Of course, bad governance portrays indiscipline. A bad leader embraces many corrupt practices; an attitude that would foster indiscipline in their various domains. The legacy they leave behind is unfortunately followed by others. It is disappointing to know that many of the youth are looking forward to embezzling money when they finally find their way into politics.

Africans must accept the obvious fact that a lot has to be done to change the prospect for the Continent. Africans must stop ascribing blames. They must rise above the damaging effects of slavery and colonization. True, Africa has been exploited, brutalized and suffered in the hands of her colonizers yet the question remains, what is the way out? This is the question we ought to ask ourselves in order to move to the next level of development. Every man, they say is the architect of his fortune and misfortune. Africans should become the architects of their own development. Adebayo Ayodeji is right in saying that:

Europeans developed Europe, Americans developed America and Japanese developed Japan, and so only Africans can develop Africa. We can only be assisted by our foreign development partners.²⁰

It is crystal clear that we should not just continue to wait for help to fall from nowhere. Many nations have worked out their successes and Africans should work out their ways to move to a higher stage of development. All these suggest that the best form of development Africans could have is through self-effort. Therefore, conscious effort should be made to ensure that they break the yoke of dependency.



EVALUATION AND CONCLUSION

Having done some exposition of African past and present condition, it becomes clear that all of African predicaments cannot be attributed to colonization and slavery. In many obvious ways, Africans have also enslaved themselves by consciously giving up their values in exchange for other seemingly charming cultures and seeing themselves as inferior beings.

In order to record significant development, there is a need to reorientate ourselves, identify with the positive aspect of our culture, encourage and elect good leaders to take up leadership roles and make self-discipline our priority. Conclusively, this paper argues that continuous lamentation about our undeveloped situation without a conscious effort in our various capacities to make a difference would not take us thus far. Instead, African states should take the bull by the horn in carving a niche for themselves in world developmental affairs.

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ATTITUDE TOWARDS TEACHING MATHEMATICS OF PROSPECTIVE MATHEMATICS TEACHERS IN RELATION TO CERTAIN SELECTED VARIABLES

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Introduction

It is generally agreed that the quality of any educational programme to a large extent is dependent on quality of teachers available to implement it. There exists no doubt of the role teachers play in what happens in their classroom. The teachers provide a leadership or guiding role in teaching and learning context and therefore are highly influential. For instance, teachers are responsible for the environment and atmosphere that pertains in their classroom. They in a sense determine the other ethos of the classroom and set the standards as to how this is to be accomplished. Many things are expected of the teacher of Mathematics. His obligations not only are confined to the classroom but extend in many other directions also. It must not be forgotten that however, his first and foremost obligation is to teach his subject effectively. Teaching Mathematics is a task which, if sincerely undertaken, will challenge the best efforts of the best teacher. No teacher can do a thoroughly good job of teaching Mathematics unless he is willing to make a careful analysis of his job to be guided by that analysis. Development of logical thinking and reasoning ability among the students is very essential function of any mathematics teacher. The mathematics teacher needs to be very effective to realise his teaching objectives. Attitude of teachers towards teaching mathematics plays an important role in shaping the attitude of students towards the learning of



mathematics. It is needless to mention that attitude of a teacher towards his profession i.e. teaching is an important aspect that helps one to feel well in his job. A favorable attitude towards teaching is likely to prove helpful to teachers in maintaining harmonious relations with their pupils, characterised by sympathetic understanding and affection.

Background of the study

Diran Taiwo (1980) studied the influence of previous exposure of mathematics education on attitude of pre-service mathematics teachers towards teaching mathematics. Ramakrishnaiah (1980) found that attitude towards teaching profession is related to success in teaching. Chako (1981) found teacher and student characteristics as correlates of learning outcomes in mathematics that teacher's attitude towards teaching significantly predict student's attitude as well as achievement in mathematics. Eaton and Kidd, D Ernest (1988) found that pre-service secondary school mathematics teachers have negative attitude towards teaching of mathematics. Stephens (1993) found that pre-service elementary teachers possessed significantly more negative attitude towards teaching mathematics. Janet (1997) found pre-service elementary teacher's competency in mathematics develops process skills and attitude towards mathematics. Mapoleio (1998) suggested that knowing appropriate facts, algorithms and procedures are not sufficient to guarantee success of attitude towards teaching mathematics. Davies and Savell (2000) found that pre-service childhood students entering their teacher education programme feel negative about mathematics. Grootenboer (2002) found that pre-service mathematics teachers have negative attitude towards teaching mathematics. Bowen-James and Freislich (2003) found substantial relationship between attitude factors of mathematics anxiety and confidence in teaching mathematics. Amarto & Watson (2003) reported



that pre-service teachers do not always have the conceptual understanding of the mathematics content that is expected to teach. Vander Sandt (2007) found teacher's attitude regarding mathematics and students in relation to attitude towards the teaching mathematics has powerful impact on the atmosphere with in the mathematics classroom.

Statement of the problem

The present study is aimed at analysing the attitude towards teaching mathematics of prospective mathematics teachers in relation to certain variables, namely, locality, gender, educational qualification, academic achievement and community. This study is designed to know the general level of attitude towards teaching mathematics prevailing among the prospective mathematics teachers and to find out the influence of the selected variables on attitude towards teaching mathematics. The present study is stated as follows:

"Attitude towards Teaching Mathematics of Prospective Mathematics Teachers in relation to certain selected variables".

Significance of the Study

Teaching mathematics is a complex task. It has been a challenge to the teachers since the origin of human race due to its unique role in solving problems. It has occupied a significant position in the school curriculum. Effective teaching can be equated to the relationship of a teacher with the society and more particularly with his students whose growth and development are the major concern of a teacher. Generally highly talented students in mathematics are not attracted to teaching profession and they prefer to join in other courses. Even the students who have joined in teacher training programmes are not having teaching aptitude and professional attitude which are essential for effective teaching. Is our teaching



methodology and all the training not inspiring them to take up teaching profession seriously? To understand the intricacies of this problem and to estimate the student teachers aptitude in teaching and attitude towards teaching, this study has been taken up. Attitude towards teaching mathematics plays a major role in predicting the teaching effectiveness of the student teachers. In order to improve the teaching effectiveness of student teachers, there is a need for the development of positive attitude towards teaching mathematics. Today we are living in the world of technology. Our present society needs more and more technical professionals. Sound mathematical knowledge is essential for any profession. So, effective mathematics teachers play a key role in the present society. However, the identification of effective teacher has been a problem that had challenged educational leaders for years and it has yet to be resolved. The present study is an attempt to identify the attitude towards teaching mathematics of the prospective mathematics teachers who will be the future teachers of our country. This study may also be helpful for teacher educators to improve their teacher training programs by making some innovations in their programmes.

Operational Definitions

Attitude: In the study, attitude means the individual's prevailing tendency to respond favourably or unfavourably to an object. Attitudes can be positive or negative.

Teaching: In the study, the term 'teaching' refers to a series of actions through which a teacher attempts to bring desired behavioural changes in students.

Attitude towards Teaching Mathematics: In the study, the term 'attitude towards teaching mathematics' refers to the reaction of prospective



mathematics teachers on various teaching-learning situations or concepts as measured by an attitude scale developed for the purpose.

Prospective Teachers: In the study, students who are studying B.Ed. course in Colleges of Education are considered as prospective teachers.

Prospective Mathematics Teachers: Prospective teachers who have selected mathematics as one of the teaching method subjects in their B.Ed. course are considered as prospective mathematics teachers.

Objectives of the study

The following objectives were proposed for the present study.

1. To study the attitude towards teaching mathematics of prospective mathematics teachers.
2. To find out the influence of the selected variables viz., locality, gender, educational qualification, academic achievement and community on attitude towards teaching mathematics of prospective mathematics teachers.

Hypotheses of the study

Hypotheses were formulated in null form taking the objectives into consideration. The following hypotheses were formulated for the present study.

1. Prospective mathematics teachers do not possess high attitude towards teaching mathematics.
2. There is no significant difference in the attitude towards teaching mathematics of rural and urban prospective mathematics teachers.
3. There is no significant difference in the attitude towards teaching mathematics of men and women prospective mathematics teachers.



4. There is no significant difference in the attitude towards teaching mathematics of graduate and post-graduate prospective mathematics teachers.
5. There is no significant difference in the attitude towards teaching mathematics of low, average and high academic achievement group prospective mathematics teachers.
6. There is no significant difference in the attitude towards teaching mathematics of O.C., B.C. and S.C. prospective mathematics teachers.

Methodology of the Research

Method of Study: Normative survey method was used to conduct the study. The study is an attempt to examine the attitude towards teaching mathematics of prospective mathematics teachers in relation to certain selected variables, viz., locality, gender, educational qualification, academic achievement and community.

Population and Sample: The Population of the study comprised prospective mathematics teachers pursuing B.Ed. Course in Colleges of Education located in Guntur district. A sample of 300 prospective mathematics teachers was drawn by using stratified random sampling technique. The total sample of 300 prospective mathematics teachers consisted of urban prospective mathematics teachers - 150; rural prospective mathematics teachers - 150; men prospective mathematics teachers - 150; women prospective mathematics teachers - 150; graduate prospective mathematics teachers - 150; post-graduate prospective mathematics teachers - 150; low achievement Group - 100, average achievement group - 100 and high achievement group - 100; Prospective mathematics teachers (community wise): Open category (O.C.) - 100 , Backward Caste (B.C.) - 100 and Scheduled Caste (S.C.) – 100.



Research Tool Used: The researcher has prepared and standardised the 'Attitude towards Teaching Mathematics Scale' by following the usual procedure of test standardization. The final form of the attitude scale consisted of 40 statements.

Reliability of the Scale:

The reliability of the scale was measured by the split-half method. The attitude scale was split into two equal halves and the scores on the odd and even numbered items of 200 subjects was calculated using Karl Pearson's formula for product moment correlation, this gave the reliability of half test. The reliability of the half-test was 0.69. This was corrected for full length of the test by Spearman Brown Prophecy formula. The reliability of the full test thus obtained was 0.8166.

Validity of the Scale:

The validity of a measuring instrument can be estimated in various ways. So, there are different types of validity viz., content validity, intrinsic validity, criterion validity, predictive validity, factorial validity, concurrent validity, item validity, and construct validity etc. But for the present tool, content, criterion, item and intrinsic validities were established.

Data Collection Procedure

The prospective mathematics teachers who were selected as sample were given the booklets of attitude towards teaching mathematics scale and requested them to respond to all the statements of the attitude scale without leaving any. For the data collection, the researcher took the help of mathematics teacher educators concerned and administered the tests after taking the prior permission from the principal of the college. Before administering the tools, clear instructions were given to the prospective



mathematics teachers and their doubts were clarified. Research tool was administered in ideal conditions.

Scoring Procedure

Attitude towards teaching mathematics scale was scored on a three-point scale by giving weights 3 to 1 in the case of positive statements and 1 to 3 in the case of negative statements to the three alternatives, viz. Agree, Undecided and Disagree respectively. The grand total on the scale was obtained by adding the weights on all the 40 statements.

Analysis of Data

The total score of attitude towards teaching mathematics of each subject was taken to find out the level of attitude towards teaching mathematics of prospective mathematics teachers possessed by each sample as well as total sample of the study. The maximum score that a subject can get is 120 and the minimum is 40. In the present study, the highest score secured by a subject was 120 and the lowest was 48. For the purpose of classification of the level of attitude towards teaching of mathematics possessed by the sample, the attitude towards teaching of mathematics level was categorised by using the normal probability of distribution. The subjects who scored between 40 and 82 were kept in low attitude towards teaching mathematics group, who scored between 82 and 102 were put in average attitude towards teaching mathematics group, and who scored above 102 were placed in high attitude towards teaching mathematics group. The mean scores were used to identify the level of attitude towards teaching of mathematics possessed by the prospective mathematics teachers and to compare the sub-sample variation. The values of standard deviation were used to measure the dispersion of scores in a distribution. The t – test (C.R.) or F- test was used appropriately to test the significance of difference



in the means of the two or three sub-samples of each variable. The null hypotheses formulated for this study were accordingly accepted or rejected.

Testing of Hypotheses

Hypothesis 1: Prospective mathematics teachers do not possess high attitude towards teaching mathematics.

To test the validity of the hypothesis 1, the total scores of the whole sample were used to arrive at mean and standard deviation of the attitude towards teaching mathematics of the prospective mathematics teachers. The results are presented in Table-1.

Table-1: Attitude towards Teaching Mathematics possessed by the Whole Sample

Variable	Sample Size	Mean	Standard Deviation
Whole Group	300	94	9.2

As per the mean value in table-1, it is evident that the prospective mathematics teachers hold moderate attitude towards teaching mathematics. In the sample, as per the standard deviation, the distribution of attitude towards teaching mathematics was moderately scattered.

The hypothesis that "Prospective mathematics teachers do not possess high attitude towards teaching mathematics" can be accepted as subjects hold moderate attitude towards teaching mathematics.

Hypothesis 2: There is no significant difference in the attitude towards teaching mathematics of rural and urban prospective mathematics teachers.

To test the validity of the hypothesis 2, Means and Standard deviations (SDs) were calculated computed separately for the attitude towards teaching mathematics scores of rural and urban prospective mathematics teachers. From these values, the Standard Error of Difference between means (SED) and the Critical Ratio (C.R.) were calculated and the results are presented in Table-2.



Table-2: Comparison of Attitude towards Teaching Mathematics of Rural and Urban Prospective Mathematics Teachers

Locality	N	Mean	S.D	Difference Between means	SED	C.R.
Rural prospective Mathematics Teachers	150	93.1	8.8	1.8	1.05	1.71 #
Urban prospective Mathematics Teachers	150	94.9	9.4			

Not Significant at 0.01 level

The mean values in Table-2 indicate that the rural and urban prospective mathematics teachers had moderate attitude towards teaching mathematics. The standard deviation values indicate that the scores in the sub-samples were moderately scattered.

As per the critical ratio value in Table-2, it is clear that there is no significant difference in the attitude towards teaching mathematics of rural and urban prospective mathematics teachers. So, the locality of prospective mathematics teachers makes no significant difference on their attitude towards teaching mathematics.

The hypothesis that "There is no significant difference in the attitude towards teaching mathematics of rural and urban prospective mathematics teachers" can be accepted as there is no significant difference in the attitude towards teaching mathematics of rural and urban prospective mathematics teachers.

Hypothesis 3: There is no significant difference in the attitude towards teaching mathematics of men and women prospective mathematics teachers.



To test the validity of the hypothesis 3, Means and S.D.s were calculated separately for the teaching aptitude scores of the two sub samples of prospective mathematics teachers (men and women). Then, the Standard Error of Difference between means (SED) and the Critical Ratio (C.R.) were computed and the data are shown in Table-3.

Table-3: Comparison of Attitude towards Teaching Mathematics of Men and Women Prospective Mathematics Teachers

	N	Mean	S.D	Difference between means	SED	C.R.
Men Prospective Mathematics Teachers	150	96.4	9.8	4.8	1.03	4.66 *
Women Prospective Mathematics Teachers	150	91.6	8.1			

* Significant at 0.01 level

As per the mean values in Table-3, it is evident that the men and women prospective mathematics teachers hold moderate attitude towards teaching mathematics. The standard deviation values indicate that there is a moderate dispersion of scores in the distributions of men and women prospective mathematics teachers.

The C.R. Value in Table-3 indicates that there is a significant difference in the attitude towards teaching mathematics of men and women prospective mathematics teachers. Men prospective mathematics teachers were significantly superior to their women counterparts with regard to their attitude towards teaching mathematics. So, the gender of prospective mathematics teachers makes a significant difference in their attitude towards teaching mathematics.

The hypothesis that "There is no significant difference in the attitude towards teaching mathematics of men and women prospective mathematics



teachers" can be rejected as there is a significant difference between the sub-samples.

Hypothesis 4: There is no significant difference in the attitude towards teaching mathematics of graduate and post-graduate prospective mathematics teachers.

To test the validity of the hypothesis 4, means and SDs were calculated for the attitude towards teaching mathematics scores of graduate and post-graduate prospective mathematics teachers. These scores were used to compute the critical ratio and the results are presented in Table-4.

Table-4: Comparison of Attitude towards Teaching Mathematics of Graduate and Post-Graduate Prospective Mathematics Teachers

Educational Qualification	N	Mean	S.D	Difference between means	SED	C.R.
Graduate Prospective Mathematics Teachers	150	93.4	9.8	1.2	1.174	1.02 #
Post-Graduate Prospective Mathematics Teachers	150	94.6	10.5			

Not Significant at 0.01 level

As per the mean values in Table-4, it is clear that the graduate and post-graduate prospective mathematics teachers possessed moderate attitude towards teaching mathematics. The standard deviation values indicate that the dispersion of the scores in the sub-samples were at moderate level.

The obtained value of C.R. shown in the Table-4 indicates that the difference between the mean attitude scores of graduate and post-graduate prospective mathematics teachers was insignificant. Therefore, the educational qualification of prospective mathematics teachers has no significant influence on their attitude towards teaching mathematics.



The hypothesis that “There is no significant difference in the attitude towards teaching mathematics of graduate and post-graduate prospective mathematics teachers” can be accepted.

Hypothesis 5: There is no significant difference in the attitude towards teaching mathematics of low, average and high academic achievement group prospective mathematics teachers.

To test the validity of the hypothesis 5, means and S.Ds for attitude towards teaching mathematics scores of low, average and high academic achievement group prospective mathematics teachers were computed and a comparison was made among the mean attitude scores of these three groups. The results are presented in the Table-5.

Table-5: Comparison of Attitude towards Teaching Mathematics of Low, Average and High Achievement Group Prospective Mathematics Teachers

Academic Achievement	N	Mean	S.D.
Low Achievement Group	100	92.1	8.5
Average Achievement Group	100	94.2	10.9
High Achievement Group	100	95.7	9.6

The Table-5 indicates that high academic achievement group prospective mathematics teachers possessed higher attitude towards teaching mathematics than the other two groups (average achievement and low achievement groups). However, to test the significance of the differences among these three groups, one-way analysis of variance technique was employed and the results of which are presented in Table-6.

Table-6: Summary of ANOVA of Attitude towards Teaching Mathematics of Low, Average and High Academic Achievement Group Prospective Mathematics Teachers

Source of Variance	SS	df	MSS	F-ratio
Between Sum of Squares	654	2	327	3.46 *
Within Sum of Squares	28,038.8	297	94.4	
Total Sum of Squares	28,692.8	299		

SS: Sum of Squares, M.S.S: Mean Sum of Squares

* Not Significant at 0.01 level



The F-ratio in Table-6 indicates that there is no significant difference in the attitude towards teaching mathematics of low, average and high academic achievement prospective mathematics teachers. So, the academic achievement of prospective mathematics teachers has no significant influence on their attitude towards teaching mathematics.

The hypothesis that "There is no significant difference in the attitude towards teaching mathematics of low, average and high academic achievement group prospective mathematics teachers" can be accepted as these three groups of prospective mathematics did not differ significantly in their attitude towards teaching mathematics.

Hypothesis 6: There is no significant difference in the attitude towards teaching mathematics of O.C., B.C. and S.C. prospective mathematics teachers.

To test the validity of the hypothesis 6, means and S.Ds for attitude towards teaching mathematics scores of O.C., B.C. and S.C. prospective mathematics teachers were computed and a comparison was made among the mean attitude scores of the three groups. The results are presented in the Table-7.

Table-7: Comparison of Attitude towards Teaching Mathematics of O.C., B.C. and S.C. Prospective Mathematics Teachers

Community	N	Mean	S.D
O.C. Prospective Mathematics Teachers	100	93.4	9.6
B.C. Prospective Mathematics Teachers	100	94.8	10.7
S.C. Prospective Mathematics Teachers	100	93.8	8.9

An observation into the Table-7 reveals that B.C. prospective mathematics teachers exhibited better attitude towards teaching mathematics than the other two groups (O.C. and S.C. prospective mathematics teachers). However, to see whether the community of



prospective mathematics teachers had any significant influence on the attitude towards teaching mathematics of prospective mathematics teachers, one-way ANOVA technique was used. The results of the ANOVA are presented in Table-8.

Table-8: Summary of ANOVA for Attitude towards Teaching Mathematics of O.C., B.C. and S.C. Prospective Mathematics Teachers

Source of Variance	Sum of Squares	df	Mean Square Variance	F-ratio
Between Sum Squares	104	2	52	0.55
Within Sum of Squares	28,300.1	297	95.3	
Total Sum of Squares	28,404.1	299		

#Not Significant at 0.01 level

As per the F-value in Table-8, it is evident that there is no significant difference in the attitude towards teaching mathematics of O.C, B.C. and S.C. prospective mathematics teachers. So, the community of the prospective mathematics teachers makes no significant difference in their attitude towards teaching mathematics.

The hypothesis that "There was no significant difference in the attitude towards teaching mathematics of O.C, B.C and S.C prospective mathematics teachers" can be accepted as these three groups of prospective mathematics teachers did not differ significantly in their attitude towards teaching mathematics.

Conclusions and discussions

1. The prospective mathematics teachers hold moderate attitude towards teaching mathematics.

Effective and productive learning on the part of pupils can be achieved only when teachers possess desirable attitudes. A favourable attitude of teachers towards teaching is an extremely important aspect which has to be taken care of while trying to improve the system of



education and more specifically the quality of teaching-learning process. It is one of the important parameters in predicting the teaching effectiveness of prospective teachers.

2. There was no significant difference in the attitude towards teaching mathematics of the rural and urban prospective mathematics teachers and both of them had moderate attitude towards teaching mathematics.

Usually, attitude of rural and urban prospective mathematics teachers towards teaching had a significant difference. But if both of them would be exposed to the same type of teaching methods, teaching competence in lesson planning, presentation, closure of lesson, teaching experiences, good infrastructural facilities and exposure to various teaching skills which are involved in teaching of mathematics, this would set a good platform for the development of a favourable attitude towards teaching mathematics.

3. There was a significant difference in the attitude towards teaching mathematics of the men and women prospective mathematics teachers and men prospective mathematics teachers had better attitude towards teaching mathematics than their women counterparts though both of them possessed moderate attitude towards teaching mathematics.

Attitude towards teaching, irrespective of gender of teachers plays a major role in the acquisition of teaching competence. The maxims of teaching also indicate that one who accepts the profession as passion will become an effective and efficient teacher. Hence, both men and women prospective mathematics teachers need to develop required attitude towards teaching mathematics and inculcate interest in students in learning mathematics.



4. There was no significant difference in the attitude towards teaching mathematics of graduate and post-graduate prospective mathematics teachers and both the groups possessed moderate attitude towards teaching mathematics.

There is a need to explore the reason for this status and improve the present conditions, because though the post-graduates studied mathematics for five years, they possessed relatively lower attitude towards teaching mathematics than their graduate counterparts who had studied mathematics for three years after higher secondary education.

5. There was a significant difference in the attitude towards teaching mathematics of the low, average and high academic achievement group prospective mathematics teachers and all the three groups had moderate attitude towards teaching mathematics.

Though majority of the prospective mathematics teachers belonging to the above mentioned three categories are doing well academically at various levels, they possessed moderate attitude towards teaching mathematics without a significant difference. There is a need to examine the relevance of the present position of the academic achievement of prospective mathematics teachers in teacher training educational institutions in the context of their attitude towards teaching mathematics.

6. There was no significant difference in the attitude towards teaching mathematics of the O.C., B.C. and S.C. community prospective mathematics teachers and all the three groups possessed moderate attitude towards teaching mathematics.

It is a good sign that community of the prospective teachers had no significant effect on their attitude towards teaching mathematics. If the teacher educators forget about the community differences among their



student teachers and think that they are the teachers to build the progressive society, then they can prepare the student teachers with a favourable attitude towards teaching. This is a dire need of the day.

Suggestions for further research

In the light of the present study, the following studies may be taken up by the future researchers.

- Studies may be taken up to identify the influence of intelligence, interest in teaching, personality, mathematical aptitude, etc., on attitude towards teaching mathematics.
- Studies may be taken up to find out the impact of various personal and demographic variables which were not included in the present study on attitude towards teaching mathematics.
- Studies may be taken up to identify the influence of psychological factors on attitude towards teaching mathematics.
- Only a few independent variables were included in the present study. There are still some variables such as economic status of the parents, marital status, age, vocational interests, adjustment etc. Many such variables may be considered for further research studies on attitude towards teaching mathematics.

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READING HABITS AMONG THE USERS OF VISAKHA DISTRICT CENTRAL PUBLIC LIBRARY, VISAKHAPATNAM: A SURVEY

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INTRODUCTION:

Reading has been the passion of the greatest personalities of all times. Humans have been reading since ages and thus words of knowledge have been passed on through generations. The reading habit influences in the promotion of one's personal development in particular and social progress in general. Regular and systematic reading sharpens the intellect, refines the emotions, elevates tastes and provides perspectives for one's living; and three by prepares a person for an effective participation in the social, religious, cultural and political life. A modern saying "Today's Readers are tomorrow's Leaders". Sir Richard Steel has logically quoted "Reading is to the mind what exercise is to body".

WHAT IS READING HABIT:

In 'Reading habit' there are two words namely. 'Reading' and 'habit'. Reading is an action of a person who reads and habit is a product of this action or learning. Reading is certainly a very good hobby. Reading is the foundation of skills. It offers a productive approach to improve one's vocabulary, word power, and language skills. According to Encyclopaedia Americana "Reading involves looking at graphic symbols and formulating mentally the sounds and ideas they present".



According to New Standard Encyclopaedia, "Habit is a learned action or other form of behaviour, that is repeated often enough for it to become a largely automatic response to a particular stimulus on situation", Habits can be acquired a by conscious repetition and desire to achieve proficiency In an activity".

"Reading makes an informed citizen fit for democracy. Effective reading is pre-requisite for full participation in modern society" is a view of the United Nations Educational Scientific and Cultural Organisation (UNESCO)body. Francis Bacon rightly says "Reading makes a full man",

PUBLIC LIBRARY:

Public Library can be defined as "A Public Library is a library which is accessible by the public and is generally funded from public sources (such as tax monies) and may be operated by civil services". A public Library is one which is open to the public without any distinction of caste, freed, race, religion, sex, region, language, nationality, social status etc.,

The public Library is a practical demonstration of Democracy's faith in universal education is a continuing and life long process in the appreciation of the achievement of humanity in knowledge and culture.

The term "Public Library" brings together two concepts, namely PUBLIC and LIBRARY. The Manifesto (**UNESCO, 1972**) further emphasizes that.

1. The public Library should be established under the clear mandate of law
2. It should be 'maintained wholly from public fund
3. There should be no direct charge for any its services.



USERS:

There are various terms, which are employed, to refer to those who use a library. These include the terms like client, patron, reader, user, customer, inquirer, member etc.,

Categories of users may include a specialist, a student, unemployed youth, Adolescents, employees & business persons, house wives, old/ retired persons.

VISAKHAPATNAM DISTRICT CENTRAL PUBLIC LIBRARY:

Visakhapatnam District Central Public Library was established in 1952. It was located at the very heart of the Visakhapatnam city. It has opened 62 Branch Libraries , 7 Village Libraries , 2 Children Libraries provides various services like , Inter library loan services , Reference services , Circulation services and facilities like children library with a collection of more than **Onelakh** books in Regional languages as Telugu , Sanskrit , Hindi , and Urdu . It also subscribes to many daily newspapers, weeklies, fortnightly and monthly periodicals in Telugu and English languages.

REVIEW OF LITERATURE:

The study related literature implies locating; reacting and evaluating reports of research as well as report of casual observation and opinion that are relate to the individuals planned research problems. The studied reviewed focus on the activities engaged in by the people in their leisure time. The role played by public libraries in developing the reading habits of the people as also been given due importance.

Abdul Karim and AmellaHasan(2007) conducted a study entitled Reading habits and attitude in the digital age. This study knows the reading



habits and attitude of bachelor degree students of ITS and Arts from International Islamic University, Malaysia.

Sharma and Singh(2005) conducted a study under the title "Reading habits of Faculty Members in Natural science": A case study of university of Delhi. This study was based on the reading habits, and kind of literature read by respondents how frequently they visit the library.

Pros(2006)in his article entitled 'The public library and student's information'. This study based on uses of public libraries among the students for the students for the purpose of study and public library as a substitute for an academic library.

Yani (2003)posits that reading habits of Nigerians are a matter of concern in our educational and national development.

Suaiden (2003) in his paper entitled "The social impact of public libraries". Given the ideas about public library became a central point for the community in which it was situated and facilitated the introduction of books and reading into people's daily lives.

Satija (2002) examines that lays great emphasis has only upon one of the form of document. That is books. Study also enunciates the advantages of books and reading habits over other media of communication.

Buragoham (1999) explores the study relates to the socio-cultural back ground of human resource development and role played by the public library in continuing education.

Veeranjan and Rao (1999) in their article under the title "Role of public library in development of culture and civilization. An over view state the importance of public library as a social institution having the function of preserving and disseminating human culture and civilization.



FIELD WORK EXPERIENCE:

Field work is very interesting job because one comes across with different types of persons. The success of a field work depends on a great extent upon the way .It is carried out .It required a lot of time and patience .The research worker should be very clear in his concept and should have a thorough knowledge of the study .Field work experience means “the facts” the experience gathered by direct survey.

OBJECTIVES OF THE STUDY:

The main purpose of this study is to know the Reading habits among the users of the visakhapatnam District central public library. However some other main objectives can be listed as under.

- 1)To know whether people still manage to go to the library despite their busy schedules.
- 2)To ascertain which group of people to go the library more.
- 3)To Examine their purpose of reading
- 4)To know what type of materials they preferred
- 5)To know the impact that reading has on the people.

METHODOLOGY :

The instrument for collecting data was a Questionnaire. The population of the study are public library users are selected one Visakhapatnam district central public library in the Visakhapatnam city area only. One hundred public library users were randomly selected from public library under study. Simple percentage was used to analyse the data generated for easy interpretation and were presented in tables.



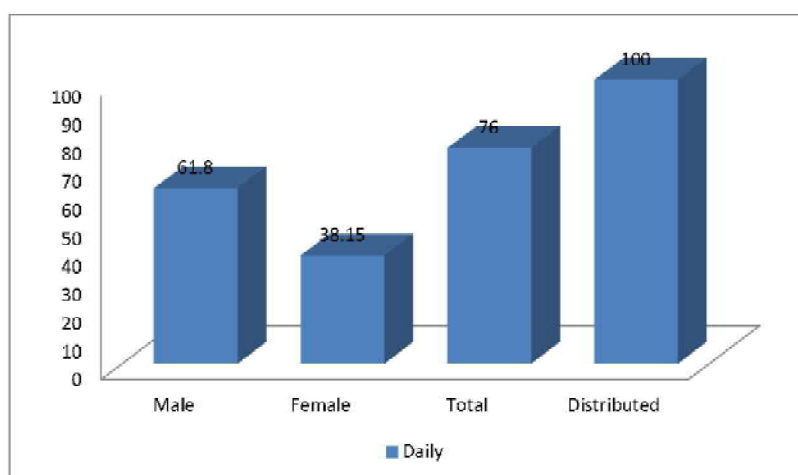
Table-1

Sr.No.	Name of the Public Library	No. of Questionnaires Distributed	No. of Questionnaires - Returned	% Percentage
1	Visakha District Central Library	100	76	76%
Total		100	76	76

Out of 100 public library users only 76 users responded to the questionnaire. 24 questionnaires were returned.

Table-2

Public Library Users		Total	Distributed
Male	Female		
47 (61.8%)	29 (38.15%)	76	100

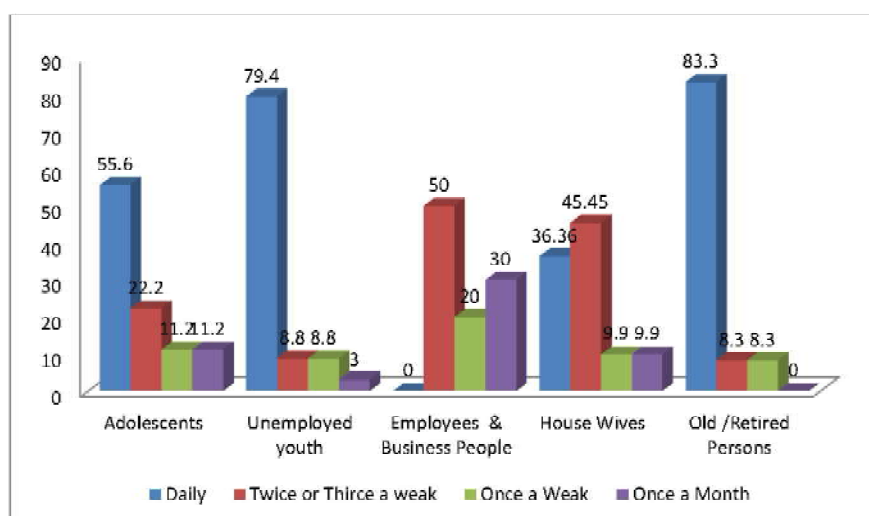


Question like five group of the respondents were formed as adolescents 9 (12%) unemployed youth 34 (48%) , employees & business persons 10 (13.15%) . House wives 11(14.47%) , Old/ retired persons 12 (16%) and out of 76 respondents , 47 (62%) were male and 29 (38.15) were female.



Table-3

Respondents Groups	Daily	Twice or Thrice a week	Once a Week	Once a Month	Total
Adolescents	5 (55.6%)	2 (22.2%)	1 (11.2%)	1 (11.2%)	9 (100)
Unemployed youth	27 (79.4%)	3 (8.8%)	3 (8.8%)	1 (3%)	34 (100)
Employees & Business People	-	5 (50%)	2 (20%)	3 (30%)	10 (100)
House Wives	4 (36.36%)	5 (45.45%)	1 (9.09%)	1 (9.09%)	11 (100)
Old /Retired Persons	10 (83.3%)	1 (8.3%)	1 (8.3%)	-	12 (100)



The frequency of user's visits to the library has been classified in to four times gaps as shown in table 3. From the above table it can be interpreted that majority of the adolescents, 5 (55.6%) visit the library daily, followed by 2 (22.2%) go there twice or thrice a week, followed by 1 (11.2%) go there once a week , followed by 1 (11.2%) go there once a month. Majority of the unemployed youth 27 (79.4%) visit the library daily, followed by 3 (8.8%)go there twice or thrice a week, followed by 3 (8.8%)go there once a week , followed by 1 (3%) go there once a month. Around 5 (50%) of the employees & business persons go to the library twice or thrice a week, followed by 3 (30%) go there once a month, followed by 2 (20%) go there once a week . Around 5 (45.45%) of the house wives go to the library



twice or thrice a week, followed by 4 (36.36%) go there daily, followed by 1 (9.09%) go there once a week, followed by 1 (9.09%) go there once a month. Majority of the Old / retired persons 10 (83.3 %), followed by 1 (8.3 %) go there twice or thrice a week, followed by 1 (8.3 %)go there once a week. It can be concluded from the table that maximum number of people manage to visit the library at least twice or thrice a week and followed by who go there once a week.

Table-4

Respondents Groups	Pleasure	To Pass an Exam	To be Current With development s	Information	Total
Adolescents	1(11.2%)	2 (22.2%)	2 (22.2%)	4 (44.5%)	9 (100)
Unemployed youth	1(3%)	18 (53%)	12 (35.29%)	3 (8.8%)	34 (100)
Employees & Business People	3 (30%)	5 (50%)	2 (20%)	3 (30%)	10 (100)
House Wives	4 (36.36%)	1 (9.09%)	2 (18.18%)	4 (36.36%)	11 (100)
Old /Retired Persons	7 (58.33%)	-	3 (25%)	2 (17%)	12 (100)

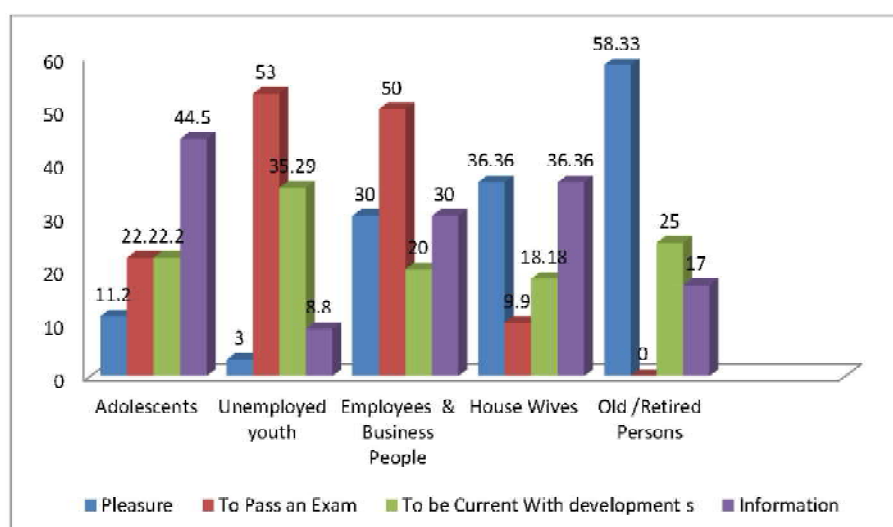




Table-4 shows that 4 (44.5 %) of Adolescents read for the purpose of gaining information and the rest of them 2 (22.22 %) read for both to pass exam and to be current with developments , a minor percent that 1 (11.2 %) read for pleasure only . Majority of the unemployed youth 18 (50 %) read for to pass exam, followed by 12 (35.29 %) read for to be current with developments , followed by 3 (8.8 %) read for information ,followed by 1 (3 %) read for pleasure . Around 4 (40 %) of the employees & business persons read for to be current with developments and rest of them 3 (30 %) read for both pleasure and information. Around 4 (40 %) of the house wives read for both pleasure and information , followed by 2 (18.18 %) read for to be current with developments , followed by 1 (9.09 %) read for to pass exam. Majority of the Old / retired persons 7 (58.33 %) read for pleasure , followed by 3 (25 %) read for to be current with developments , followed by 2 (17 %) read for information.

Table-5

Respondents Groups	News Papers	Magazines	Competitive Books	Novels	Religious Books	Trade & Business Books	Total
Adolescents	4 (44.5%)	2 (22.2%)	1 (11.2%)	-	2 (22.2%)	-	9(100)
Unemployed youth	6 (16.21%)	2 (6%)	24 (70.58)	-	1 (3%)	1 (3%)	34(100)
Employees & Business People	4 (40%)	1 (10%)	-	-	-	5 (50%)	10(100)
House Wives	-	1 (9.09%)	3 (27.27%)	5 (45.45%)	2 (18.18%)	-	11(100)
Old /Retired Persons	3 (25%)	1 (8.3%)	-	2 (17%)	6 (50%)	1 (8.3%)	12(100)

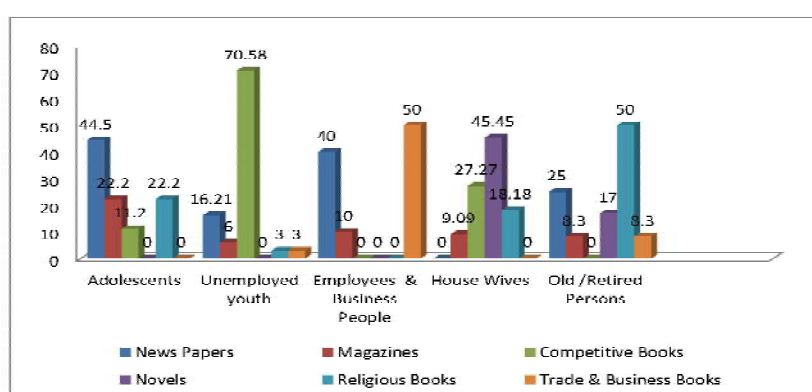




Table-5 shows that 4 (44.5 %) of the Adolescents prefer to read news paper , followed 2 (22.2 %) prefer to read magazines and another 2 (22.2 %) prefer to read religious books , followed by 1 (11.2 %) prefer to read competitive books , Majority of the unemployed youth 24 (70.58 %) prefer to read competitive books , followed by 6 (16.21 %) prefer to read news papers , followed by 2 (6 %)prefer to read magazines , followed by 1 (3 %) prefer to read religious books and another 1 (3 %) prefer to read trade &business books . Around 5 (50 %)employees & business persons prefer to read trade &business books , followed by 4 (40 %)prefer to read news papers , followed by 1 (10 %)prefer to read magazines . Majority of the house wives 5 (45.45 %) prefer to read novels , followed by 3 (27.27 %) prefer to read competitive books , followed by 2 (18.18 %) prefer to read religious books , followed by 1 (9.09 %) prefer to read magazines . Around 6 (50 %) Old / retired persons prefer to Religious books , followed by 3 (25 %) prefer to read news papers , followed by 2 (17 %) prefer to read novels , followed by 1 (8.3 %) prefer to read magazines and another 1 (8.3 %) prefer to read magazines and another 1 (8.3 %) prefer to read trade & business books .

Table-6 :

Respondents Groups	Every day	Usually	Some times	Rarely	Total
Adolescents	5 (55.55%)	3 (33.33%)	1 (11.2%)	-	9 (100)
Unemployed youth	33 (97.05%)	1 (3%)	-	-	34 (100)
Employees & Business People	6 (60%)	4 (40%)	-	-	10 (100)
House Wives	7 (63.63%)	3 (27.27%)	1 (9.09%)	-	11 (100)
Old /Retired Persons	9 (75%)	2 (16.66%)	1 (8.3%)	-	12 (100)

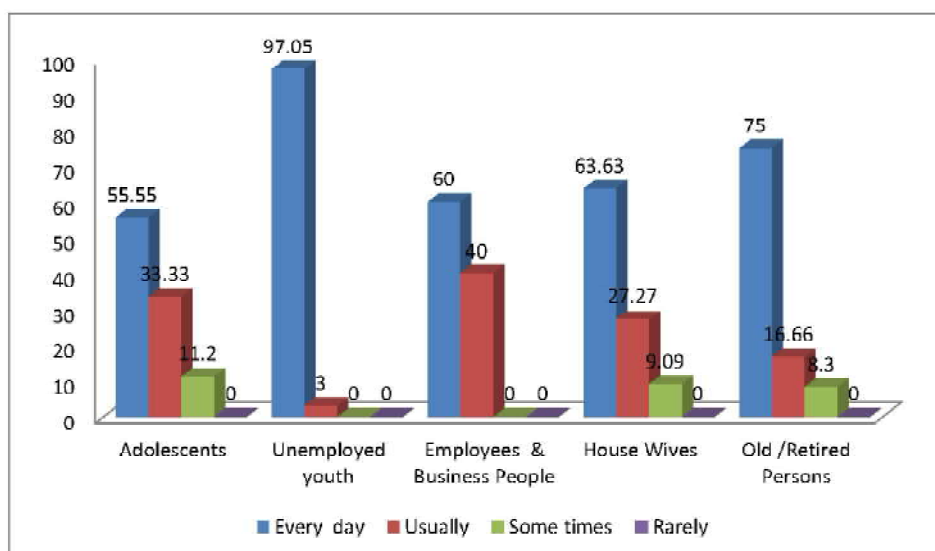


Table-6 shows that 5 (55.55 %) of the Adolescents read every day, followed by 3 (33.33 %) read usually , followed by 1 (11.2 %) read some times . Majority of the unemployed youth 33 (97.05 %) read every day and 1 (3 %) among them read usually . Around 6 (60 %) of the employees & business persons read every day and 4 (40 %) read usually. Around 7 (63.63 %) of the house wives read every day and 3 (27.27 %) read usually and 1 (9.09 %) read some times . Majority of the old / retired persons 9 (75 %) read every day , followed by 2 (16.66 %) read usually and 1 (8.3 %) read sometimes



Table -7

Respondents Groups	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Adolescents	2 (22.22%)	3 (33.33%)	-	-	9 (100)
Unemployed youth	3 (8.82%)	31 (91.17%)	-	-	34 (100)
Employees & Business People	1 (10%)	9 (90%)	-	-	10 (100)
House Wives	1 (9.90%)	10 (90.90%)	-	-	11 (100)
Old /Retired Persons	2 (16.6%)	10 (83.3%)	-	-	12 (100)

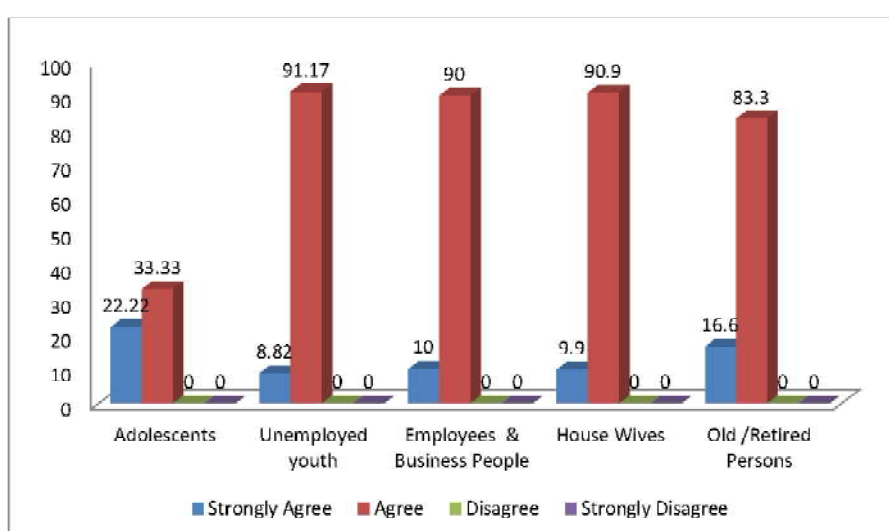


Table -7 shows that 2 (22.22 %) of the Adolescents strongly agree that they love to read and 7 (77.77 %) agree to it . 3 (8.82 %) of the unemployed youth strongly agree that they love to read where as 31 (91.17 %) say that they agree the same . Among the employees & business persons 1 (10 %) strongly agree that they love to read and the rest 9 (90 %) agree to it . 1 (9.90 %) of the souse wives strongly agree that love to read and the rest 10 ((90.90 %) agree to it .Among the Old / retired persons 2 (16.6 %) strongly agree that they love to read and the rest 10 (83.3 %) agree to it .



Thus it can be analysed that majority of the respondents agree that they love to read.

FINDINGS :

The following are some findings revealed by the study

- 1) A number of people go to the public library despite their busy schedules at least once in a week .
- 2) Respondents find the collection of the Visakhapatnam district central public library as fairly good , which also comprises books regional languages as Telugu ,Sanskrit , Hindi and Urdu .
- 3) Majority of the people visiting the library go there in order to keep themselves abreast with the activities of the world and update their knowledge .
- 4) The kind of materials being mostly read by the users are competitive books ,News papers ,Religious books and magazines .
- 5) The reading attitude of the readers of the Visakhapatnam district central public library is positive .
- 6) They enjoy reading and spend at least 2 to 4 hours in reading .

SUGGESTIONS :

- 1) The library must make an effort towards increased and wide usage of non-print materials. All the users should make aware of these facilities and the infrastructure for this should be improved.
- 2) The library must pay attention to the needs of the women readers . They should be made aware of the benefits of the library. A separate section should be created for the women readers consisting of special facilities.



CONCLUSION:

This survey has been conducted to study the reading habits of the users of the Visakhapatnam district central public library- Visakhapatnam city . The analysis of the data reveals that quite number of people go to the public libraries even in the digital environment where technology has taken up a large slice of the available time of the people. But still they have healthy reading habits and have a positive attitude towards reading . Almost all the objectives of the study have been fulfilled . It has been found out that more males than females go to the library . The highest percent of the unemployed youth visit the library more since it fulfils their success in competitive exams . The employees & business persons visit the library to meet their current & update developments. Old / retired persons and house wives also go to the library and enjoying reading .

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IS MORALITY AN ILLUSION?

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Questioning certain aspects of customary morality has been often a contributing factor in the evolution of our moral perception throughout history. Our perception about child-marriage, remarriage of widow, Sati system, casteism, racism etc are greatly changed. Our moral perception about woman and sexually are under colossal challenge and are about to change. In the meanwhile a new fashion is silently spreading its roots among us. Now, defying morality altogether has often found to be more fashionable. Morality is often mocked as “taboos” or as a trademark of one’s socio-economical station. Frederick Nietzsche does not seem to be the inspiration behind this, rather a misconstrued acceptance of a Darwinian mantra the “survival of the fittest.” Taken out of context this phrase serves perfectly the cutthroat competition of a consumerist structure where there would be hardly any restraint in respect to selfishness. Also, to shut up the last protesting voice a reductionist can use the magic words from Richard Dawkins about “selfish genes” Then the question arises: is morality really an illusion, a refuge for the weak and helpless? Does Darwinism actually promote selfishness?

Challenging the validity of morality as something binding for our behaviour is not altogether new. The 20th Century Analytic movement in philosophy, mainly advocated by A. J. Ayer, Wittgenstein and others, generated a strong Anti- Kantian moral philosophy, denouncing the hardcore rationalism in ethics as advocated in Kant’s moral philosophy. Their endeavour resulted in Emotivism- a theory in which ethical



statements are neither true nor false, but merely a special way to express our emotions, desires, or attitudes regarding certain social situations. This leads to a more aggressive assault on morality from J.L. Mackie. Mackie's Error theory rejects the cognitive value of moral statements, denies the possibility of ascribing moral terms like "good" and "bad" or "right" and "wrong" to any kind of action. For example when we utter the sentence "murder is wrong" it has no factual value like "X has committed a murder." The former expresses our approval or disapproval, hence cannot be true or false. The later could be true or false. It may appear therefore that morality has no cognitive value. Is that the end of morality or ethics? Is there any alternative? Recent development in the field of morality shows that could be the end in a sense.

In last few years advocates of experimental philosophy¹ have gathered evidence from numerous surveys that indicate the possibility of a new understanding of morality on the basis of theory of evolution and specifically, Darwinism. While the surveys suggest that (1) whether we act morally or not we still follow a near universal code of conduct in judging moral actions and passing our judgements. And (2) humans across the globe share the same moral attitude in respect to basic ingredients of survival like food, shelter and mating. These results have provoked thinkers to reconsider Darwinism. As a result Primatologist Frans De Waal, Biologist Marc Hauser and Philosopher Michael Ruse among others have discovered new dimensions of Darwinism. Michael Ruse demonstrated how Darwinism has often been misrepresented under the influence of Herbert Spencer's theory of evolution. It shows that the emphasis on "survival of the fittest" and "natural selection" was due to the enthusiasm shown by Spencer in applying evolutionary theory in social sciences. Surely it was favoured by the capitalist world. They actually sold Spencerian wine in a Darwinian



bottle. The reaction was impressive. It almost ruined social sciences and affected humanism. Racism and colonialism were supported on the basis of Darwinism. Hitler's idea of master race was also a result of Spencer's reactionary theory. Michael Ruse was right to say that Darwinism got a bad name because of Spencer. Darwin himself was not very sure about using the terms "natural selection" and was also very careful in using the phrase "survival of the fittest". It is true that Darwin accepted that only the fittest can survive in life-struggle, whether it is between two species or between individuals of the same species. But he also noted the significance of sympathy and other values that help the so-called unfit to survive among higher social animals. Darwin categorically mentioned in his book "The Descent of Man" that complex organisms like humans have adapted morality as a tool for survival. Recently, Primatologist Frans de Waal tried to discover the biological root of human morality. The findings are elaborated in his book "Primates and Philosophers". He and some others have gathered strong evidence for biological altruism. They have also discovered moral behaviour in animals. For example, Chimpanzees are found to punish cheater, console someone who lost a fight etc. These indicate that morality as a phenomenon might be an adaptation in the process of evolution. Marc Hauser in his famous book "Moral Mind" and Jonathan Haidt in his book "The Happiness Hypothesis" have argued for a biological mechanism that controls morality. Hauser's main thesis is that our species has "evolved a moral instinct, a capacity that naturally grows with each child designed to generate rapid judgments about what is morally right or wrong based on an unconscious grammar of action" According to Hauser, there is a concrete faculty of morality in our brain like the language faculty advocated by Chomsky.



For Hauser, moral judgments are produced by an unconscious process “a hidden moral grammar that evaluates the causes and consequences of our own and other’s actions. This account shifts the burden of evidence from a philosophy of morality to a science of morality.” (Hauser, 2007 p.2) As a biologist and psychologist Hauser offers to explain the way moral intuitions work and the causes behind its evolution.

Hauser accepts that reasoning and emotion have some role to play in moral behaviour but neither is sufficient to describe the process of arriving at moral judgment. The process can be understood with the help of recent scientific discoveries and by accepting the idea of a moral faculty. But what is this moral faculty? According to Hauser, moral faculty is “an organ of mind that carries a universal grammar of action.

Jonathan Haidt, in his *The Happiness Hypothesis* (2006) and other works, highlights the evidences against a rationalist approach to morality and proposes a Social intuitionist model as an alternative. This model is also based on what Hauser calls as moral-dumbfounding. According to Haidt, in the Social intuitionist model “one feels strong disgust after knowing something like incest and knows intuitively that it is wrong. He goes for a rational justification only when there is a social demand for that.” According to Haidt, however, the Social intuitionist model cannot be called anti-rationalist in a strict sense in which it says that moral judgments are seldom results of moral reasoning. The main thesis of Haidt is that “moral judgment is caused by quick moral intuitions and followed by (when needed) slow, ex-post-facto moral reasoning.”

The above accounts might be taken by someone positively. It seems, if morality is biological then it should be taken as real as our “limbs.” But that is not the case. After the publication of Hauser’s “Moral Minds” there



was an article in "The New York Times" by Nicholas Wade. Wade expresses his concern that the arguments and evidence provided by Hauser, Haidt and some others actually brings an end to morality and philosophers have nothing to do. Even the philosopher Michael Ruse, who thinks that morality evolved like our limbs, also states that morality in fact is nothing but an illusion created by our genes. In what sense it is an illusion? In what sense it comes to an end?

Philosophically, morality depends on three postulates or necessary presuppositions. These are: existence of god, immortality of soul and freedom of will. These are required to enable a person to decide on own, judge a moral action, and taking responsibility. If a secular ethics does not recognise god and soul as necessary, yet freedom of choice is a must. But if a Darwinian account is accepted apparently there would be no free will. Morality would be just an epiphenomenon or "memes" as Richard Dawkins says. Morality would entirely be controlled by our genes without a scope for rational choice. It seems therefore that morality will still remain, but without it's traditionally accepted connotations.

That is why Michael Ruse says that ethics does not have any objective foundation, but our biology leads us to think as if there is objectivity. Because ethics is a shared illusion of the human race, this has a foundation in the shared qualities of human nature and the unavoidable natural need for reciprocity. So, according to Ruse, the key to understand morality lies deep in the human nature for which we need an applied science.

Ruse later on agrees with the biological account in saying that biology has significantly influenced us in becoming moral beings. Morality is an adaptation like our limbs. So "morality has come through human evolution, and it is adaptive". But Ruse insists that there is no foundation



of morality as philosophers usually imagine. It does not mean that Ruse is denying the existence of morality; rather he is denying a foundation. That is why he says that normative ethics is a kind of illusion put in place by our genes, in order to make us good social co-operators. As such there is no objectivity but there is a belief that it is objective and that belief really works. He concludes that "ethics is subjective, but its meaning is objective."

But there still remains one point which can save morality from just being a instinctive mechanism. It is noticed that there is always a difference between fact and value, or between "what is" and "what ought to be". In morality we always seek to find what ought to be, what we ought to do etc. This keeps morality from not becoming purely mechanical. This is also accepted by Ruse. This Fact-Value divide keeps a hope for traditional morality and philosophical ethics.

Let me conclude that even if morality is termed as an illusion by some Darwinians, it does not actually deny the existence of morality. The best thing is even in a godless state of biological evolution the significance of morality is recognised. Darwinian account of morality reinstates the place of group or society over gross individualism. As a result now there is a scientific ground for morality. This will help us to extend our moral concern not only towards other humans but even for animals. As Peter Singer says, the circle is expanding.

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(Footnotes)

¹ Experimental philosophy is a recent development in philosophy where, against the old philosophical traditions, standard empirical methods are used to understand philosophical issues by referring to the intuitions of ordinary people and ordinary language. It was introduced by a group of scholars around 2000 who started experimenting about philosophical notions to fuse it with psychology. It was systematically explored in an edited volume entitled *Experimental Philosophy* by Joshua Knobe and others in 2008 which was published by Oxford University Press



AN INSIGHT ON CHILDHOOD OBESITY IN SAUDI ARABIA

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INTRODUCTION

The term "Globesity" is coined by WHO (2008) and describes it as "global obesity" in the world. Obesity and Overweight is one of the major emerging health problems of the world, associated with all ages, affecting physical, psychological and social health. Obesity is in high frequency in both developing and developed countries. World Health Organization (1998) described Obesity as "global epidemic". Many research studies (Kuczmarski 1992; Kuczmarski et al 1994; Al-Isa 1995; Rosenbaum & Leibel 1997; Whitaker et al 1997; WHO 1997; WHO 2001; Popkin & Doak 1998; Jebb 1999; NAO 2001) reported that there is rapid increased rate in overweight and obesity among children and adolescents of the society. Genetic, environmental and developmental factors are playing a very important role in the development of obesity. Popkin (1994) and Mo-suwan et al., (1993) described that obesity is associated with two extreme and rapid changes in life style patterns, urbanization and rapid economic development in developing countries. The developmental mechanism of obesity is not completely understood and it is assumed to be a disorder with many causes. Environmental factors, lifestyle preferences, physical and, cultural factors play a crucial role in high prevalence of obesity throughout the world.

Obesity can be described as "New World Syndrome" causing an enormous socioeconomic and public health burden in developed, developing and in poor countries of the world.



Table no:1

Childhood overweight and obesity and Health complications (Lobstein et al.,2004;& Speiser.,2005)

S.No	Organ system	Health complications
1.	Cardiovascular system	Hypertension, Abnormal lipid profiles Atherosclerosis, Left ventricular hypertrophy.
2	Endocrine system	Insulin resistance/abnormal glucose metabolism, Type 2 diabetes Menstrual abnormalities, Polycystic ovary syndrome.
3	Gastroenterological system	Nonalcoholic fatty liver disease, Gastro-oesophageal reflux, Gallstone development.
4	Respiratory system	Asthma, Sleep-associated breathing disorders.
5	skeletal system	Slipped capital femoral epiphysis, Genu valgum, Tibia vara, Flat feet, Low back pain, Scoliosis, Osteoarthritis.
6	Nervous system	Idiopathic intracranial hypertension.
7	Integumentary system	Acanthosis nigricans.

Obesity and Overweight among various age groups increase the risk factors for diabetes, CVS disease and many other diseases. Table no .1 shows the risk of development of health complications in later life due to Childhood overweight and obesity.

2. DEFINITION

According to Ebbeling (2002); WHO (2003) and Reilly et al., (2003), Obesity can be referred as a condition that shows the accumulation of excess of body fat which may enhance the risk of morbidity and death of an individual. Park (1995) defined Obesity as “ *an abnormal growth of the adipose tissue due to an enlargement of fat cell size (hypertrophic obesity); or an increase in fat cell number (hyperplastic obesity) or a combination of both*”.

According to National Heart, Lungs & Blood Institute (2006), Obesity can be defined “ *as a complex, multifactorial chronic disease which involves the interaction of both genotype and environment. It involves many factors of behavioral, social, cultural, physiological, genetic and metabolic systems*”.



World health organization (WHO) and International Obesity Task Force (IOTF) uses the terms like 'overweight' and 'obesity' while US CDC, uses the terms "at risk for overweight' and 'overweight" for obesity. Several countries like Canada, Chile, Australia and Mexico use the BMI(Body mass index) reference values of the USA.

Childhood obesity has become one of the serious and dangerous health problems because of its strong association with adulthood obesity and related health consequences. Dietz (1983) described Childhood obesity as a weight-for-height in excess of 120 % of the ideal.

There are many methods like multisite skin fold thickness (SFTs) measurements multi-frequency bioelectrical impedance analysis (BIA), dual-energy X-ray absorptiometry (DXA), underwater weighing, and magnetic resonance imaging (MRI) to measure body fat (Power ,et al.,(1997); Marshall et al.,(1991); & McCarthy et al.,(2003). As some of these methods are expensive and require trained and specialized people for assessment of overweight and of obesity these measures are not recommended for routine practice. Dietz et al.(1999) described that Body mass index (BMI) is used to measure overweight and obesity among children and adults. Body mass index (BMI) is calculated by using the weight in kilograms divided by the square of height in meters (kg/m^2). Generally Body mass index (BMI) is used for the assessment of body fat for children, adolescents, and adults (WHO, 1995) .The WHO developed a classification of BMI according to weight status and height ,based on its association with mortality and morbidity.



Table no: 2
Classification of weight status according to BMI (WHO, 1995)

S.NO	Classification	BMI (Kg/m ²)	Risk of comorbidity
	Adult		
1	Underweight	<18.5	Low
2	Normal weight	18.5-24.9	Average
3	Overweight	25-29.9	Increased
4	Obese class I	30- 34.9	Moderate
5	Obese class II	35-39.9	Severe
6	Obese class III	≥40	Very severe
	Childhood	percentiles BMI for age and sex	
1	Underweight	<5	
2	Normal weight	5-84.9	
3	Overweight	85-94.9	
4	Obese	≥95	

WHO expert consultation (2004) reported that relationship between BMI and body fat vary with ethnicity and also pointed that some Asian population have a higher body fat percentage at a given BMI than White Europeans of the same age, and sex . They are at higher risk of type 2 diabetes and cardiovascular disease, even below 25 kg/m² BMI cut-off (WHO,2004)

US Centre of Disease Control and Prevention (CDC) (Flegal et al.,2006) developed growth chart for sex specific Body mass index (BMI) for age reference values for ages 2-20 years. International Obesity Task Force (IOTF) (Cole et al.,2000) developed reference values for 2-18 years based on the data collected from six countries like UK, Brazil, Hong Kong, Netherlands, Singapore and United States.

3. PREVALENCE OF OBESITY IN THE WORLD:

According to WHO (2013), obesity has doubled since 1980 and reported that more than 1.4 billion adults, of age 20 and older were



overweight. There are over 200 million men and nearly 300 million women obese people in the year 2008. More than 65 percent of world's populations are overweight and obese. There are about 40 million children less than five years age overweight.

Table no :3

Distribution of Obesity by country (OECD Health Data ,2005)

Rank	Country	Frequency
1	United States:	30.6%
2	Mexico:	24.2%
3	United Kingdom:	23%
4	Slovakia:	22.4%
5	Greece:	21.9%
6	Australia:	21.7%
7	New Zealand:	20.9%
8	Hungary:	18.8%
9	Luxembourg:	18.4%
10	Czech Republic:	14.8%
11	Canada:	14.3%
12	Spain:	13.1%
13	Ireland:	13%
14	Germany:	12.9%
15	Portugal:	12.8%
16	Finland:	12.8%
17	Iceland:	12.4%
8	Turkey:	12%
19	Belgium:	11.7%
20	Netherlands:	10%
21	Sweden:	9.7%
22	Denmark:	9.5%
23	France:	9.4%
24	Austria:	9.1%
25	Italy:	8.5%
26	Norway:	8.3%
27	Switzerland:	7.7%
28	Korea, South:	3.2%

According to OECD Health Data (2005) United States is showing higher frequency of obesity when compared to other countries of the world.



Table no: 4
Distribution of Overweight / Obesity: Overweight (body mass index ≥ 25) by country
(WHO, 2008)

Country	Age	BMI > 25 (Age standardized estimate)		
		Male	Female	Both sexes
Afghanistan	20+	10.0 [1.8-27.2]	10.0 [1.8-27.2]	11.0 [3.5-25.1]
Albania	20+	60.5 [45.1-72.6]	48.2 [31.8-63.1]	54.0 [42.8-64.3]
Argentina	20+	66.8 [58.3-74.5]	61.1 [51.2-70.1]	64.0 [57.5-70.0]
Armenia	20+	49.2 [40.2-57.3]	59.3 [52.7-65.8]	55.1 [49.6-60.3]
Australia	20+	66.5 [62.6-70.3]	56.2 [51.3-60.9]	61.3 [58.1-64.3]
Austria	20+	56.9 [40.5-69.9]	42.1 [23.5-58.7]	49.6 [37.7-60.5]
Azerbaijan	20+	52.0 [44.5-59.0]	61.9 [55.3-67.8]	57.4 [52.3-62.2]
Belarus	20+	56.7 [34.0-75.0] ^f	55.6 [30.1-75.6] ^f	56.2 [39.4-70.1] ^f
Belgium	20+	59.8 [49.8-68.2]	43.1 [30.0-54.4]	51.5 [43.4-58.8]
Belize	20+	65.4 [57.7-71.6]	76.6 [71.0-81.6]	71.0 [66.1-75.2]
Benin	20+	20.4 [14.9-26.3]	31.7 [25.7-38.1]	26.1 [22.0-30.6]
Brazil	20+	53.5 [47.1-59.9]	52.0 [46.4-57.2]	52.8 [48.5-56.9]
Brunei Darussalam	20+	35.8 [13.9-59.5] ^f	24.6 [5.4-51.4] ^f	30.5 [15.1-47.7] ^f
Bulgaria	20+	61.2 [52.6-68.3]	47.1 [36.8-56.3]	54.3 [47.6-60.3]
Burkina Faso	20+	11.9 [4.5-23.6]	14.2 [8.0-22.2]	13.0 [8.0-19.8]
Cape Verde	20+	30.8 [23.8-37.5]	42.6 [33.9-51.8]	37.6 [31.7-43.7]
Central African Republic	20+	12.4 [2.3-32.4]	20.9 [7.2-38.1]	16.9 [7.1-29.2]
Chad	20+	14.6 [6.4-25.7]	16.9 [9.8-25.4]	15.7 [9.9-22.6]
Chile	20+	64.2 [56.4-70.3]	65.7 [58.0-72.8]	64.9 [59.4-69.9]
China	20+	25.1 [20.8-29.5]	24.9 [19.2-30.3]	25.0 [21.4-28.5]
Costa Rica	20+	60.3 [51.1-68.3]	58.8 [50.4-66.7]	59.6 [53.4-65.4]
Cote d'Ivoire	20+	21.8 [10.3-35.3]	32.3 [20.8-44.1]	26.9 [18.6-35.7]
Croatia	20+	61.6 [49.2-72.1]	44.6 [30.1-57.9]	53.2 [43.8-61.9]
Cuba	20+	47.5 [35.6-59.9]	57.9 [46.1-68.1]	52.8 [44.4-60.9]
Denmark	20+	54.6 [42.7-64.5]	42.1 [26.9-56.2]	48.4 [38.8-57.2]
Djibouti	20+	30.2 [10.1-53.0] ^f	37.4 [13.2-62.5] ^f	33.9 [17.9-50.9]
Dominica	20+	41.4 [34.0-49.7]	71.2 [64.5-76.9]	56.7 [51.8-61.8]
Dominican Republic	20+	49.0 [36.3-62.9]	61.1 [49.0-71.2]	55.4 [40.7-63.9]
Estonia	20+	57.8 [44.8-68.5]	45.0 [29.1-59.5]	51.0 [40.6-60.7]
Ethiopia	20+	7.1 [3.3-12.9]	9.0 [5.4-13.9]	8.0 [5.3-11.7]
Fiji	20+	60.1 [49.7-68.4]	72.9 [65.0-79.6]	66.6 [60.0-72.1]
Finland	20+	59.6 [53.5-65.1]	46.2 [39.1-53.3]	53.0 [48.3-57.6]
Germany	20+	62.8 [56.7-68.3]	46.6 [39.0-53.6]	54.8 [50.2-59.3]
Ghana	20+	24.2 [18.8-29.6]	36.7 [32.2-42.0]	30.4 [26.9-34.2]
Greece	20+	56.6 [47.1-65.4]	41.3 [30.3-51.8]	49.1 [41.7-56.0]
Grenada	20+	49.0 [26.6-68.9] ^f	62.2 [40.3-78.9] ^f	56.0 [41.3-69.5] ^f
Haiti	20+	35.0 [13.4-57.7]	29.4 [21.0-38.0]	32.0 [20.9-43.9]
Honduras	20+	46.7 [31.8-62.1]	57.8 [50.0-64.1]	52.4 [44.3-60.8]
Hungary	20+	65.8 [53.9-76.1]	49.4 [32.1-64.5]	57.7 [47.1-67.2]
Iceland	20+	63.6 [51.6-73.9]	49.1 [31.8-64.0]	56.4 [46.3-65.3]
Israel	20+	62.5 [56.9-67.8]	57.8 [51.5-64.2]	60.1 [55.9-64.4]
Italy	20+	58.3 [51.8-63.6]	40.1 [32.7-47.3]	49.2 [44.2-53.8]
Jamaica	20+	40.7 [34.6-47.2]	70.6 [65.1-75.3]	56.2 [52.1-60.2]
Japan	20+	28.9 [25.0-32.9]	15.9 [12.0-20.0]	22.4 [19.6-25.4]
Kuwait	20+	78.1 [74.1-81.9]	81.3 [77.3-84.8]	79.3 [76.4-82.0]
Kyrgyzstan	20+	43.4 [26.4-60.5]	48.9 [33.9-61.6]	46.6 [35.0-57.5]
Lao People's Democratic Republic	20+	11.6 [4.9-21.7]	17.8 [10.0-27.0]	14.8 [9.3-21.5]



Latvia	20+	59.4 [46.6-70.7]	47.8 [33.5-61.2]	53.6 [44.2-62.5]
Lithuania	20+	62.8 [50.4-72.8]	51.0 [37.5-63.5]	56.9 [47.9-65.3]
Luxembourg	20+	64.0 [49.7-76.0]	49.2 [30.7-65.7]	56.7 [45.3-66.6]
Madagascar	20+	12.6 [6.9-20.2]	8.8 [6.0-12.1]	10.6 [7.5-14.6]
Malawi	20+	16.7 [12.1-22.0]	24.3 [18.7-30.2]	20.6 [16.9-24.8]
Malaysia	20+	42.4 [36.5-48.8]	47.0 [39.6-54.1]	44.6 [39.8-49.5]
Mauritania	20+	22.8 [11.1-35.5]	53.9 [42.9-63.0]	38.7 [30.7-46.6]
Mauritius	20+	46.7 [33.8-59.7]	51.7 [38.3-62.2]	49.4 [40.4-57.9]
Mexico	20+	67.8 [62.9-71.9]	70.3 [65.3-74.9]	69.1 [65.6-72.3]
Micronesia (Federated States of)	20+	71.4 [63.2-78.7]	82.5 [75.7-88.0]	76.8 [71.6-81.6]
Mozambique	20+	16.5 [10.4-24.1]	28.0 [19.4-36.5]	22.7 [17.2-28.5]
Myanmar	20+	13.8 [9.6-18.7]	23.6 [16.0-31.5]	18.8 [14.3-23.4]
Namibia	20+	23.3 [15.5-31.6]	44.7 [36.7-52.0]	34.6 [28.8-40.2]
Nauru	20+	93.5 [91.0-95.3]	92.3 [89.2-94.9]	92.8 [90.9-94.6]
Niger	20+	11.0 [7.2-16.1]	16.6 [11.0-23.3]	13.7 [10.2-17.6]
Nigeria	20+	26.2 [15.5-37.1]	31.2 [24.8-37.2]	28.8 [22.7-35.0]
Norway	20+	62.3 [55.5-68.0]	47.6 [38.6-56.0]	55.0 [49.2-60.3]
Oman	20+	57.8 [47.8-66.1]	57.2 [46.0-66.1]	57.5 [50.1-63.8]
Paraguay	20+	50.9 [26.6-72.3] [†]	50.2 [21.8-73.5] [†]	50.5 [32.0-66.9] [†]
Peru	20+	43.3 [36.9-50.0]	52.2 [46.4-57.5]	47.9 [43.5-52.2]
Philippines	20+	24.5 [17.1-32.2]	29.1 [20.0-38.1]	26.9 [20.9-32.9]
Poland	20+	61.6 [55.9-66.6]	49.6 [43.1-56.0]	55.7 [51.5-59.8]
Romania	20+	51.7 [38.3-63.3]	45.4 [31.4-57.5]	48.6 [39.1-57.1]
Russian Federation	20+	55.8 [50.9-60.7]	58.9 [54.5-63.2]	57.8 [54.4-61.0]
Rwanda	20+	24.0 [6.0-47.8]	17.5 [10.8-25.5]	20.3 [11.1-32.0]
Saint Kitts and Nevis	20+	72.7 [66.0-78.9]	79.5 [73.4-84.5]	76.2 [71.6-80.3]
Sao Tome and Principe	20+	30.9 [23.3-38.0]	42.1 [32.1-52.2]	36.9 [30.5-43.3]
Saudi Arabia	20+	70.2 [66.0-74.6]	73.2 [68.9-76.7]	71.3 [68.3-74.2]
Senegal	20+	18.0 [6.4-34.2]	37.0 [28.1-46.4]	27.7 [20.2-36.7]
Serbia	20+	65.3 [60.2-69.7]	46.2 [39.2-52.6]	55.9 [51.5-60.0]
Seychelles	20+	50.9 [40.8-60.3]	64.1 [56.3-71.0]	57.7 [51.4-63.4]
Solomon Islands	20+	64.9 [56.3-71.9]	71.1 [62.5-78.3]	67.9 [62.3-72.9]
Somalia	20+	18.9 [4.9-38.8] [†]	24.0 [5.7-48.2] [†]	21.5 [8.8-36.9] [†]
South Africa	20+	62.0 [56.1-66.6]	73.6 [69.5-77.1]	68.0 [64.6-71.0]
Spain	20+	65.1 [60.2-69.8]	50.9 [44.6-57.0]	58.2 [54.2-62.0]
Sweden	20+	57.3 [49.6-64.1]	42.5 [33.6-50.9]	50.0 [44.2-55.4]
Switzerland	20+	55.0 [43.6-64.0]	34.1 [21.3-46.5]	44.3 [36.0-52.0]
Syrian Arab Republic	20+	63.4 [55.0-70.3]	69.3 [61.6-76.1]	66.4 [60.8-71.4]
Tajikistan	20+	33.7 [12.1-56.8]	33.9 [17.7-49.9]	33.8 [20.4-47.7]
Trinidad and Tobago	20+	59.7 [42.2-73.0]	69.6 [54.7-81.0]	64.7 [53.7-73.8]
Tunisia	20+	47.5 [34.9-59.0]	64.2 [54.0-73.1]	55.9 [47.7-63.5]
Turkey	20+	61.4 [57.6-64.7]	65.8 [62.1-69.4]	63.6 [61.0-66.1]
Turkmenistan	20+	47.1 [25.1-68.4]	40.4 [25.5-54.7]	43.6 [30.4-56.6]
United Kingdom	20+	65.6 [62.1-68.9]	57.5 [52.8-61.8]	61.5 [58.6-64.3]
United Republic of Tanzania	20+	22.1 [10.0-35.7]	25.8 [17.2-34.7]	23.9 [16.4-31.8]
United States of America	20+	72.5 [69.8-75.3]	66.3 [62.6-70.0]	69.4 [67.1-71.8]
Uruguay	20+	59.0 [50.9-66.6]	55.4 [46.1-63.9]	57.3 [51.3-63.0]
Yemen	20+	40.2 [18.7-62.7] [†]	51.0 [27.0-72.5] [†]	45.7 [29.8-61.1] [†]
Zambia	20+	9.1 [4.2-16.4]	26.0 [19.5-32.4]	17.8 [13.5-22.7]
Zimbabwe	20+	17.6 [10.5-25.6]	40.3 [32.3-48.6]	29.4 [24.0-35.3]



Figure no:1
Overweight and obesity among women, 2008 (%)

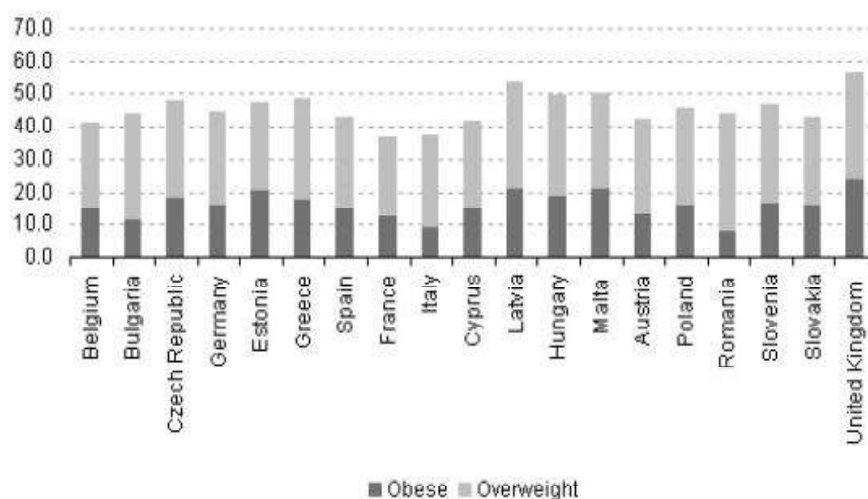
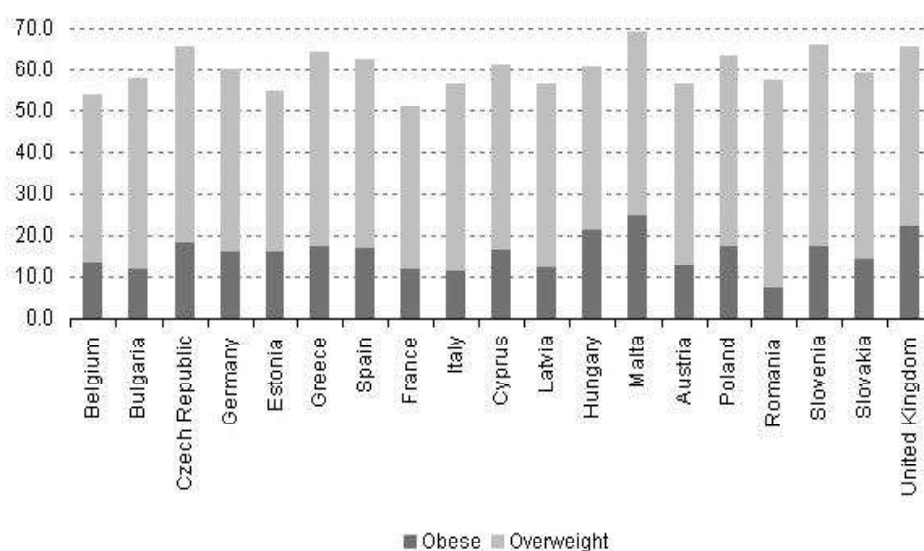


Figure no: 2
Overweight and obesity among men 2008 (%)





According to Eurostat (2011)(as cited in http://ec.europa.eu/eurostat/product?code=hlth_ehis_de1&language=en&mode=view) the frequency of overweight and obese people in the adult population of European union vary between 36.9 % and 56.7 % for women and between 51 % and 69.3 % for men during the year 2008-2009. It is observed that the lowest frequency of obesity for both women and men aged 18 years and over in countries like Romania (8.0 % for women and 7.6 % for men), Italy (9.3 % and 11.3 %), Bulgaria (11.3 % and 11.6 %) and France (12.7 % and 11.7 %).Whereas highest frequency of obese women were observed in the United Kingdom (23.9 percent), Malta (21.1 percent), Latvia (20.9 percent) and Estonia (20.5 percent in 2006), and of men in Malta (24.7 percent), the United Kingdom (22.1 percent), Hungary (21.4 percent) and the Czech Republic (18.4 percent) during the year 2008-2009.

Obesity is one important cause of mortality and morbidity, occurring with high prevalence regardless of age and geographical variation around the world. According to World Health Organization GSoD, Physical Activity and Health (2008) report, reveal that there are about 1 billion individuals who are overweight and 300 million obese individuals out of overweight people in the world.

Abdullah et al., (2004) described that there are about 14% of children and adolescents overweight and 20% are at risk for overweight in United States. In USA , 20% of adult men and 25% of adult women are obese.

Strauss (2001) reported that 21.5 % of African-Americans, 21.8 % of Hispanics and 12.3 % of non-Hispanic white children from North America are overweight ,and also reported that frequency increased rapidly between 1986 and 1998. Booth, et al.(2001) described that 16% of boys



and almost 20% of girls are overweight in Australia. According to Langendijk et al., (2003) the prevalence of childhood obesity in primary school children is about 10.8 % in urban and wealthy region of Northeast Thailand.

Jaber et al., (2005) reported that prevalence of overweight is 26% both in boys and girls in Beirut.

According to National Health Survey of Pakistan (as cited in Ahmad et al., 2005) the prevalence of obesity among 25–64 aged adults is as follows.

Table no: 5

s.no	Category	Rural areas	Urban
1	Low socioeconomic status	9 %,	21%,
2	middle socioeconomic status	15%	27%
3	high socioeconomic status	27%	42%

Warraich et al.,(2009) reported that 6% was obese and 8% overweight in School-Going Children of Karachi and also observed that 70% of obese children, belongs to the higher socio-economic status (SES) group in Pakistan. World Health Organization project monitoring of cardiovascular diseases (MONICA), (1998) reported that Iran has the highest prevalence of childhood obesity .

4. PREVALENCE OF OBESITY IN SAUDI ARABIA:

Obesity is a problem in Saudi Arabian region and many research studies have been carried out to determine the prevalence of overweight and obesity in the Saud Arabia, and shows that obesity is common among children, adolescents and adults.



Table No: 6

Distribution of obesity according to region (Al-Othaimeen et al.,2005)

s.no	REGION	OBESITY (%)
1	Ha Il	33.9
2	Al Sharqiya	27.7
3	Al Qasim	26.5
4	Tabuk	25.2
5	Al Taif	23.9
6	Riyadh	21.7
7	Mecca	19.3
8	Jeddah	16.4
9	Asir	16.2
10	Farason	15.7
11	Medina	15.1
12	Jizan	11.7

The above table reveals that the highest rate of obesity is in northern and eastern provinces like Ha Il, Al Sharqiya, Al Qasim, it may be due to cultural, sedentary lifestyle patterns and diet. Whereas the lowest rate of obesity is observed in south western Jizan, It may also be due to maximum people involved in agricultural work, fishing and active life (Al- Othaimeen et al.,2005).

Figure no :3

Distribution of BMI/Overweight/obesity prevalence in Saudi Arabia during 2005(Al-Hamdan et al., 2005)

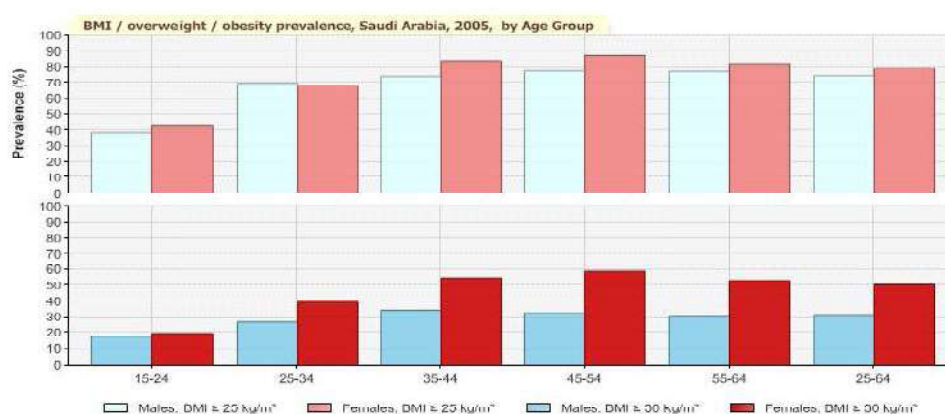




Table no :7
Overweight and obesity prevalence in Saudi Arabia and other Countries during the year 2005 (Al- Othaimeen et al.,2005)

s.no	Country	Age range (years)	Over weight (%)		Obesity (%)	
			Males	Females	Males	Females
1	Saudi Arabia	18-60	30.7	28.4	14.2	23.6
2	Sweden	16-84	35	24	7	8
3	USA	20-74	34	24	12	12
4	Italy	15-90	39	25	7	6
5	Australia	25-64	34	24	7	7

The above Table reveals that there is increased prevalence of Overweight and Obesity in Saudi Arabia when compared to other countries like Sweden, USA, Italy and Australia during the year 2005 (Al- Othaimeen et al.,2005).

5. CHILDHOOD OBESITY IN SAUDI ARABIA:

The increase of frequency of Childhood obesity is an increasing health care concern in Saudi Arabia. There are many studies conducted to know the magnitude and burden of overweight and obesity among Saudi Arabian children. The perceived causes may be increased dietary intake , reduced physical activity , food at school, changing family structure, cultural influences ,changing dietary habits, changing life style, increased sedentary activity , westernization and other factors for increased rate of obesity in school children in Saudi Arabian. Al-Hazzaa (2006) pointed that lifestyle transformation is one of the main factor for increase in the prevalence of obesity among Saudi children. Al-Hazzaa et al., (2012), described several lifestyle factors associated with obesity and they are important targets for prevention and management of obesity among Saudi Arabian children.



Table no :8
Summary of Various studies on prevalence of overweight and obesity among children in Saudi Arabia (Al-Dossary, et al., 2010)

s, no	Region	Target children	Sample No.	Ages (years)	Sex	Overweight prevalence (%)	Obesity prevalence (%)	Reference
1	Eastern province	School children, Private hospital	7056	2-18	Male & Female	19	23.3	Al-Dossary 2009
2	West Riyadh	Elementary school	1072	8-12	Female	n/d	14.9	Alam, 2008
3	Al Hassa	Primary schools	1139	10-14	Male	14.2	9.7	Amin, 2008
4	Riyadh	Primary schools	1082 (1988) 702 (2005)	6-14	Male		3.4 (1988) 24.5 (2005)	Al-Hazzaa, 2007
5	Riyadh	Primary care clinics	267	12-20	n/d	18.7	21	Al Turki, 2007
6	Abha city	Schools	2696	11-19	Male	11	5	Mahfouz, 2007
7	Abha city	Schools	767	7-20	Male & Female	11	15.9	Farghal, 2007
8	Al-Khobar	Intermediate and all 3 grades of secondary school	1766	14-19	Male & Female	19.3 (M) 11.8 (F)	17.2 (M) 10.2 (F)	Al-Almaie, 2005
9	Riyadh	Intermediate and secondary schools	894	12-20	Male	13.8	20.5	Al-Rukban, 2003
10	Different provinces	Primary and preparatory schools	2239	6-17	Female	20	11.0	Al-Saeed, 2003
11	Different provinces	Household screening programme	12 701	1-18	Male & Female	23.4	12.7	El-Hazmi & Warsy, 2002
12	Different provinces	National epidemiological household survey	12 071	1-18	Male & Female	10.7(M) 12.7(F)	6.0 (M) 6.7 (F)	El-Hazmi, 2002
13	Al-Khobar city	Adolescent girls	676	12-19	Female	28		Abahussain, 1999
14	Different provinces	School children	9061	6-18	Male	11.7	15.8	Al-Nuaim, 1996



The above table reveals that the rate of overweight and obesity increased and positively correlated with increasing age. The increased rates of obesity and overweight were found with age from ages 5–9 years to 14–18 years and is peak at age 10–13 years respectively

Al-Nuaimi et al., (1996), conducted three stage stratified cluster sampling from a sample of 9061 children of twelfth grade level of boys school (6-18 years) in Saudi Arabia. They reported that Overweight of 11.7% and Obesity of 15.8% respectively and higher frequency of obesity, of 18% in Riyadh and lowest of 11% in the southern region of Saudi Arabia.

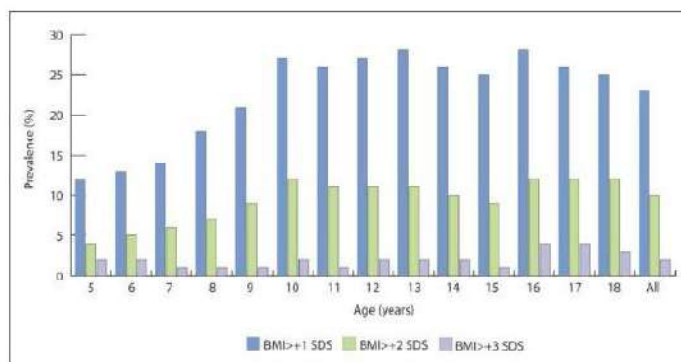
Al-Hazzaa (2007) conducted two cross-sectional studies in 1988 and 2005 to know body fatness and obesity among Saudi primary schoolboys and reported that there is significant increase in weight (Wt), height (Ht), biacromial (BA) and bi-iliac (BI) widths, triceps (T), subscapular (S) skinfolds, S/T ratio, body mass index (BMI), body fat percentage (fat%), , and the proportion of obese boys except lean body mass (LBM). Al-Hazzaa (2007) conducted **three national cross sectional studies** between 1988 and 1996 to know the trends in body mass index (BMI) of Saudi male adolescents and reported that there is rising trends in BMI such as increase in BMI from 9.6 to 10.8% at the 50th percentiles.

Mohammad et al., (2010) investigated the prevalence of overweight, obesity and severe obesity among 19,317 healthy children and adolescents from 5 to 18 years of age. They reported that the overall prevalence of overweight, obesity and severe obesity in all age groups was 23.1%, 9.3% and 2%, respectively in Saudi Arabia. It is represented in the following figure xx.



Figure no:3

Prevalence of overweight, obesity and severe obesity by age among children and adolescent in Saudi Arabia (Mohammad et al., 2010)



Mohammad et al., (2010) described the BMI distribution among Saudi children and adolescents and calculated it by using World Health Organization (WHO) cut-off values and reported that BMI for age was above +1 and +2 standard deviation scores above the upper cut-off values.

Al- Herbish et al.,(2009) studied the 35,275 full-term and healthy children and adolescents by using anthropometric measurements and compared four BMI curves from birth to 36 months and 2 to 19 years for girls and boys with WHO and CDC BMI charts. They reported that Saudi children differed from Western counterparts and Saudi children have equal or higher BMIs. Al-Hazzaa et al., (2012), pointed several lifestyle factors associated with obesity and described that important targets for prevention and management of obesity among Saudi adolescents.



6. EATING BEHAVIOR PATTERNS AMONG SAUDI ARABIAN CHILDREN:

Eating is one of the basic human need and activity to fulfill the biological needs of an individual. Generally, Children eating behavior patterns during infancy is the basis for the pupil's eating patterns at the later stages and is influenced by several factors like parental food preferences, exposure and availability of a wide variety of foods, color, cost, and taste of foods, genetic predispositions for preferences for taste influence the eating behaviour patterns. (*Centre for Community Child Health, 2006*). The individual differences in eating patterns may result in both underweight and overweight (Marchi & Cohen, 1990; Barkeling, Ekaman & Rossner, 1992). Dehghan et al., (2005) described that individuals with a childhood obesity history will become obese individual in later age. Childhood obesity increases the risk of maturity onset diabetes in the young (MODY), high blood pressure metabolic syndrome and cardiovascular disease. A study on Obesity on Saudi children reported that the overall prevalence of overweight was 19.0% and of obesity was 23.3% (Al-Dossary *et al*, 2010).

Marti et al., (2004) described Obesity as a multifactorial disorder and is developed from interaction of genetic factors, metabolic factors, environmental, socioeconomic and behavioral factors. Some factors like nutrient poor food consumption, skipping of breakfast, fewer intake of fruit and vegetables, excessive eating while watching television (TV) are influencing the more calorie consumption, eating habits, and dietary behaviors.



Al-Hazzaa et al., (2011) reported that 80% of Saudi Arabia adolescents didn't consume milk, fruit, and vegetables according to US-Dietary Guidelines Recommendations (DGR). They also found that breakfast was not consumed regularly and 67% of males and 57% of females have unhealthy food choices like sugar sweetened beverages, which are most often consumed. They reported that 37% of male and 52% of female Saudi adolescents consume candy and chocolates.

Mahfouz et al. , (2008) conducted test on 2696 adolescent school boys (aged 11–19 years) in Abha city (southwestern) to know the proportion of daily intake of soft drinks and found that among Saudi adolescent differed from 33% in Abha city and is more than 62% in Riyadh city, Saudi Arabia.

There are different opinions on influence of frequency of eating in relation with obesity. World Health Organization (2003), pointed that obesity may depend on the kind, amount, and time of eating of food or snacks. Among the youth or adolescents, skipping breakfast is one common unhealthy dietary habit, throughout the world. Several research investigations showed a positive association between skipping breakfast and obesity. Horikawa et al.,(2011) conducted a Meta-analysis on Skipping breakfast and prevalence of overweight and obesity in Asian and Pacific regions and reported that a positive relationship between skipping breakfast and overweight and obesity in many countries of the world , regardless of their cultural diversity. Al-Hazzaa et al., (2011) reported that the frequency of skipping breakfast ranged from 15% to 49% in Saudi Arabian children. Musaiger (2007) also reported that frequency of skipping breakfast or irregularly consuming is about 74% among school girls of 12-16 years in Saudi Arabia.



Generally readymade food or ready to eat foods are in low dietary fibers and calcium levels and rich in fat, cholesterol, and calories. These foods are having increased amount of artificial food color or flavor additives. Among Arab States of the Gulf (GCC) states (United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar, and Kuwait) eating out is highly prevalent in middle-income families of urban areas (Musaiger ,2011).

Musaiger (2011) studied that the frequency of obesity and observed anticipated rate of obesity higher than 52% among children who eat outside home for five times per week in Saudi Arabia. Among Arab States of the Gulf (GCC) states (United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar, and Kuwait), the extreme weather conditions and absence of indoor recreation centers, increased women in work force, lack of time for preparation of food, increase of income per capita and other factors resulted in dinning out at restaurants(Musaiger ,2007).

Amin et al., (2008) reported that there is a positive association between the occurrence of obesity and eating outside. It is significant ($p < 0.001$) among primary school children of age 6-11 years and also found that obesity rate increased to 53% among children who eat outside the home for five times per week in Saudi Arabia. Al-Hazzaa et al., (2011) conducted a study on Saudi Arabian school children and youth of grades 10, 11, and 12 during 2009 and reported that sixty percent of children and more than seventy percent of youth do not engage in enough physical activity.

Guthold et al., (2010) studied the Physical activity and sedentary behavior among school children among 34 countries and found that 24 % of boys and 15% of girls were exhibiting moderate to vigorous physical activity per day. Al-Hazzaa et al., (2012) conducted a study on 2,906 adolescents of 1,400 males and 1,506 females and observed that about fifty



percent of the boys and higher than 75% of the girls did not meet sixty minutes of daily physical activity. They also found that physical inactivity patterns are observed more among females.

TV watching time is one of the important factors influencing physical inactivity and increases the consumption of excessive food and unhealthy junk food and results in developing overweight/obesity in children. Musaiger (2007) observed that TV is widely used media for advertising food stuff and having effect on eating habits of children and also reported that food and snacks with low nutritional value like chocolates, potato chips, nuts and soft drinks are consumed while watching TV among school children in the Arab Gulf Countries.

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A STUDY ON CLASSROOM CLIMATE PREVAILING IN THE HIGHER SECONDARY SCHOOLS OF VISAKHAPATNAM DISTRICT OF ANDHRA PRADESH

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INTRODUCTION

Classroom climate sometimes is referred to as the learning environment as well as by terms such as atmosphere, ambience, ecology and milieu. The impact of classroom climate on students and staff can be beneficial for a barrier of learning.

Both the climate of the classroom and the school reflect the influence of a school's culture, which is a stable quality emerging from underlying institutionalized values and belief systems, norms, ideologies, rituals and traditions. And of course, classroom climate and culture both are shaped by the school's surroundings and embedded Political, social, cultural and economic contexts (e.g., home, neighborhood, city, state, country).

The concept of classroom climate implies the intent to establish and maintain a positive context that facilitates classroom learning but in practice, classroom climates range from hostile or toxic to welcoming and supportive and can fluctuate daily and over the school year.

REVIEW OF LITERATURE

NEED AND SIGNIFICANCE OF THE STUDY

The destiny of a nation lies in the Classroom. The students of today are the future leaders of tomorrow, therefore it is the responsibility of parents, teachers, society and government to see that they are physically, mentally,



emotionally and educationally healthy. Hence the investigator was interested to study the Classroom Climate prevailing in Higher Secondary Schools in the Visakhapatnam District.

OBJECTIVES OF THE STUDY

1. To find out the nature of Classroom Climate of Higher Secondary Schools.
2. To find out whether there is any significant difference between the selected pairs of sub samples in respective of Classroom Climate of Higher Secondary School students.

HYPOTHESES

1. The nature of Classroom Climate of Higher Secondary Schools students is favourable.
2. There is significant difference between the selected pairs of sub samples in respect of Classroom Climate existing in Higher Secondary Schools.

METHOD OF STUDY

The present investigation was conducted by using Normative Survey Method.

TOOL USED

Classroom Climate Inventory constructed by the Investigator

STATISTICAL TECHNIQUES

In this present investigation the following Statistical techniques were used.

Descriptive Analysis and Differential Analysis **SAMPLE OF THE STUDY**

The present study consists of 800 Higher Secondary School Students studying in Visakhapatnam District. The sample was selected by using simple random sampling technique. The sample forms a representative sample of the entire population. Due proportionate weightage was given to various sub-samples.



DESCRIPTIVE AND DIFFERENTIAL ANALYSIS NATURE OF CLASSROOM CLIMATE PREVAILING IN HIGHER SECONDARY SCHOOLS.

Table No.1

Nature	Frequency	Percentage
Favourable	460	57.5%
Unfavourable	340	42.5%

NATURE OF CLASSROOM CLIMATE

The data collected from 800 students of Higher Secondary School have been analysed. The nature of Classroom Climate have been calculated.

It may be inferred from the Table No. 1, among the 800 students 460 have registered favourable Classroom Climate. It is 57.5% percentage of the entire sample. 340 students have registered unfavourable Classroom Climate. It is 42.5% of the entire sample.

ANALYSIS OF MEAN OF CLASSROOM CLIMATE OF THE HIGHER SECONDARY SCHOOLS

The Significance of the Difference between the Means of Classroom Climate Scores of the Male and Female Students

Table No.2

Sub-Samples	N	Mean	Standard Deviation	t-value	Significance at 0.05 level
Male	355	21.89	5.75	2.59	Significant
Female	445	20.91	4.76		

From the Table No.2, since the 't' value is significant at 0.05 level and it is concluded that there is significant difference between male and female Higher Secondary School students with respect to their Classroom Climate.



ANALYSIS OF MEAN CLASSROOM CLIMATE SCORES OF SUB SAMPLES OF DIFFERENT RELIGIONS OF THE HIGHER SECONDARY STUDENTS

The Significance of the difference among the Means of Classroom Climate Scores of the Sub samples of different Religion of the Students

Table No.3

	Sum of Squares	Df	Mean Squar	F	Significance at 0.05 level
Between Groups	28.12	2	14.06	0.51	Not significant
Within Groups	21997.87	797	27.60		
Total	22026.00	799			

From the Table No.3, since the 'F' value is not significant at 0.05 level and it is concluded that there is no significant difference among the Hindu, Muslim and Christian Higher Secondary School students with respect to their Classroom Climate.

ANALYSIS OF MEAN CLASSROOM CLIMATE SCORES OF SUB SAMPLES OF

VARIOUS COMMUNITY OF THE HIGHER SECONDARY STUDENTS

The Significance of the difference among the Means of Classroom Climate Scores of the Sub samples of various Community of the Students

Table No.4

	Sum of Squares	df	Mean Square	F	Significance at 0.05 level
Between Groups	93.35	3	31.11	1.12	Not
Within Groups	21932.64	796	27.55		
Total	22026.00	799			

From the Table NO.4, since the 'F' value is not significant at 0.05 level and it is concluded that there is no significant difference among OC, BC, Minority and SC/ST Higher Secondary School students with respect to their Classroom Climate.



**ANALYSIS OF MEAN CLASSROOM CLIMATE SCORES OF SUB
 SAMPLES OF DIFFERENT TYPE OF INSTITUTIONS TYPE OF
 THE HIGHER SECONDARY STUDENTS**

**The Significance of the difference among the Means of Classroom
 Climate Scores of the Sub samples of the different Type of
 Institution of the Students**

Table. No. 5

	Sum of Squares	Df	Mean Square	F	Significance at 0.05 level
Between Groups	22.66	2	11.33	0.41	Not significant
Within	22003.33	797	27.60		
Total	22026.00	799			

From the Table No.5, since the 'F' value is not significant at 0.05 level and it is concluded that there is no significant difference among Self-financing, Govt. Aided and Govt. Higher Secondary School students with respect to their Classroom Climate.

**ANALYSIS OF MEAN CLASSROOM CLIMATE SCORES OF SUB
 SAMPLES OF NATURE OF INSTITUTIONS OF THE HIGHER
 SECONDARY SCHOOL STUDENTS**

**The Significance of the Difference between the Means of Classroom
 Climate Scores of the Sub samples of Nature of Institution of the
 Students**

Table No.6

Sub-Samples	N	Mean	SD	t-value	Significance at 0.05 level
Boys	250	21.75	5.83	2.69	Significant
Girls	275	20.53	4.42		
Boys	250	21.75	5.83	0.09	Not
Co-Education	275	21.80	5.37		
Girls	275	20.53	4.42	3.02	Significant
Co-Education	275	21.80	5.37		



From the Table No.6, since the 't' value is significant at 0.05 level for the, Boys & Girls and Girls & Co-education Higher Secondary School's students and not significant for Boys & Co-Education Higher Secondary School's students and it is concluded that there is no significant difference between Boys & Co-Education Higher Secondary School students and there is significant difference between Boys & Girls and Girls & Co-education Higher Secondary School students with respect to their Classroom Climate.

FINDINGS OF THE STUDY

There is significant difference between the following sub samples of Higher Secondary School students with respect to their Classroom Climate.

- Male and female students
- Boys & Girls Schools
- Girls & Co-Education Schools

There is no significant difference between the following sub samples of Higher Secondary School students' with respect to their Classroom Climate, Self-financing, Govt. Aided and Govt. Higher Secondary School

- OC, BC, Minority and SC/ST
- Hindu, Muslim and Christian
- Boys & Co-Education School

CONCLUSION

Classroom Climate is one of the important factors that facilitate academic excellence of students. Establishing and maintaining this bring improvement in learning process. Keeping this in mind the researcher conducted a study with Higher Secondary Students belong to the Visakhapatnam District of Andhra Pradesh. This investigation reveals that



there is no significant difference between sub samples of religion, community and type of institutions and there is significant difference among the gender, nature of School students belong to the Visakhapatnam District with respect to their Classroom Climate.

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STATUS OF DESERTIFICATION AROUND SAMBHAR LAKE AREA

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Introduction

Desertification is globally becoming serious problem for environment as well as Living being. About one third of the total geographical area of the earth is under arid Condition. In case of India, about 32.07% of total geographical area is under desertification. 13 districts are located in the north-western part of Rajasthan, 12 are desert districts which serve about 1, 75, 000 sq km of total area. The area around Sambhar Lake is under danger of land degradation because it is a transitional zone between western desert and eastern plains.

Small water bodies and the water channels, which are sustaining Sambhar Lake either changing their course or dying fast due to desertification and human interference. Desertification is continuously leading to climate change and decreasing rainfall. Afforestation and gap filling are the only way to stop the land degradation. Remote sensing and satellite data are the important tools to monitor the expanding sands.

Study Area-

The study area lies between 74°30' E-75°55' E longitudes and 26°45' N -27°30' N latitude enveloping 1800542 ha. area.

Materials and Methodology-

Interpretation technique has been used to analyze and compare the satellite data and collateral data on 1:50,000 scale using ERDAS and



Arc map. Base map has been prepared using IRS LISS III FCC geocoded data and topographical maps.

Results-

The desertification status map prepared using IRS LISS III FCC Satellite data depicts three things- land cover type, process of degradation and severity of degradation. All of this is shown in each polygon. The various processes of land degradation in the study area have been aeolian erosion or deposition, salinity, vegetation, degradation and some water erosion.

Table- Desertification Status Mapping Units and Their Area

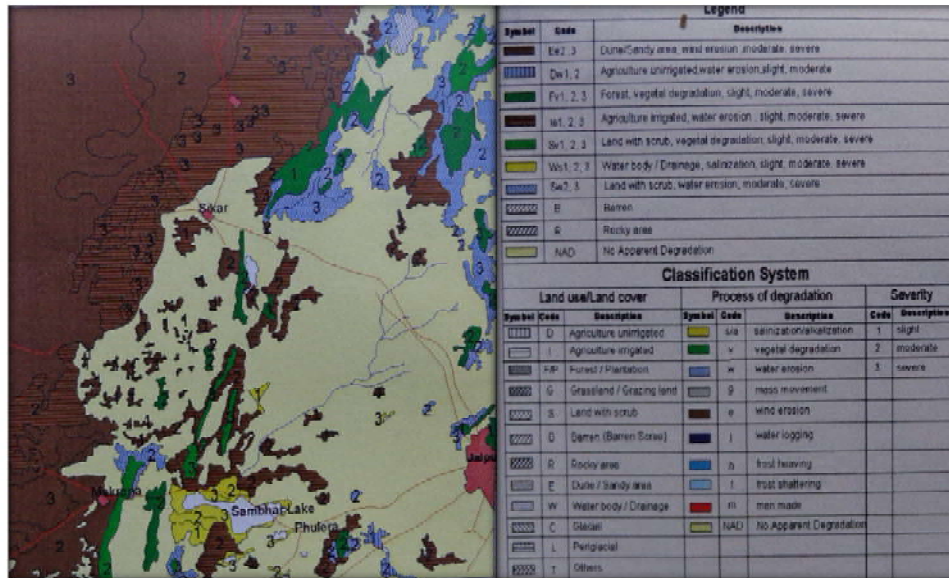
	Units	Area (ha)	Percentage
1	Agriculture irrigated, water erosion, slight	22621	1.26
2	Agriculture irrigated, water erosion, moderate	264391	14.68
3	Agriculture irrigated, water erosion, Severe	24975	1.39
4	Dune/Sandy area, wind erosion, moderate	205600	11.42
5	Dune/Sandy area, wind erosion, Severe	270500	15.02
6	Land with scrub, water erosion, moderate	80099	4.45
7	Land with scrub, water erosion, severe	24809	1.38
8	Barren	5490	0.30
9	Rocky area	19800	1.10
10	Forest / Plantation, Vegetal degradation, slight	33100	1.84
11	Forest / Plantation, Vegetal degradation, moderate	2960	0.16
12	Forest / Plantation, Vegetal degradation, severe	7159	0.40
13	Land with scrub Vegetal degradation, slight	1145	0.06
14	Land with scrub Vegetal degradation, Moderate	1550	0.09
15	Land with scrub Vegetal degradation, severe	7859	0.44
16	Water bodies/Drainage, salinization, slight	4960	0.28
17	Water bodies/Drainage, salinization, Moderate	5790	0.32
18	Water bodies/Drainage, salinization, severe	11766	0.65
19	Agriculture unirrigated, wind erosion, slight	1965	0.11
20	Agriculture unirrigated, wind erosion, moderate	1774	0.10
21	No Apparent Degradation	779841	43.31
22	Water body/ drainage	14500	0.81
	Total Area	1800542	100

Source: Prepare on the basis of interpretation of Satellite imageries

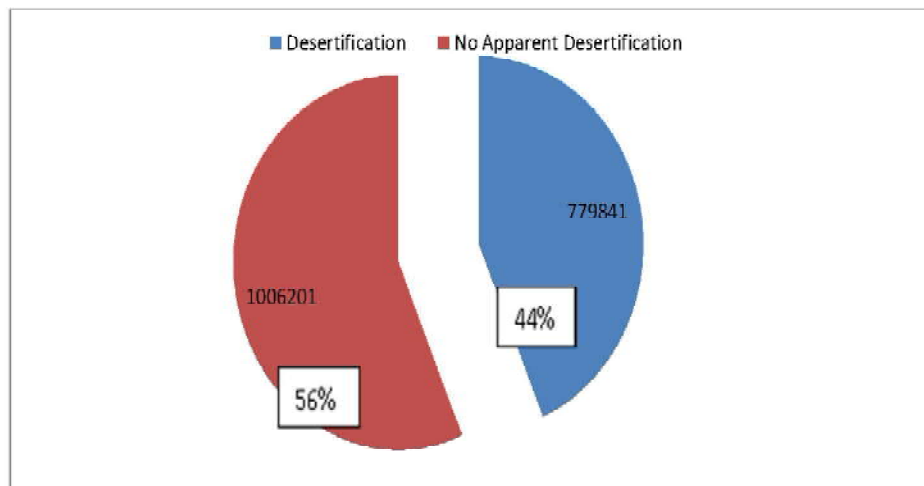
Desertification Status Map

Sambhar Lake Area, Rajasthan

0 5 10 km



Source: Prepared on the basis of interpretation of Satellite imageries





It is significant to note that 56% area is under the process of desertification and continue to remain so, as per the evidence gathered from satellite images and field photographs. There are 22 categories that could be delineated while interpreting the satellite data, of which 20 categories represent the desertification.

The sand accumulations are of stabilized nature and indicate a western origin due to their proximity to the sambhar gap in Aravallis hill range on its east facilitating south-westerly 'wind corridor' for lift and drift of desert sand movement, especially during the dust storm periods in the summer.

Though there are indications about lateral drift of sandy conditions eastward drift of the rendering some agricultural lands infertile, yet it is too primitive to establish the eastward drift of the Indian desert, though the observations do indicate towards fresh aeolian activity in hitherto sand free alluvial land parcels east of Arivallis hill range. Systematic, multi-disciplinary and detailed multi-temporal examination of entire fringe line of the Thar is required to be carried out using high resolution remote sensing data, to be followed by detailed comparative laboratory examination/ analysis of the drifted sand for its provenance studies with reference to the sand of deep Thar, all along the fringe of the Thar desert, north to south.

Conclusions-

The remotely sensed data has been found to be very useful in studying various aspects of desertification. In fact, Afforestation and gap filling must be done in forest and scrub land areas, particularly those showing vegetal degradation around the lake area, so as to stop the silt



and sand movement towards the lake. The results of the study suggest that the analysis of sequential and high resolution data offer means of extraction of information on desertification.

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INDUSTRIAL RELATIONS AND EMPLOYEE PRODUCTIVITY

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INTRODUCTION:

In India, the payment of bonus to the industrial employees of the Government of India has been linked to productivity. While clamour is made for productivity-linked wage increase in the management and official circles, trade unions are equally vociferous in resisting such a linkage, not only because they do not treat the existing distribution of income as sacrosanct, but also because they fear that linking wage and bonus payments to productivity is a device to cheat them of their legitimate claim to a living wage. Though there is so much of talk of the importance of growth in productivity for speeding up economic growth, there is little analysis of the concrete situation, which can facilitate or hinder improvements in productivity. The gains of the 'green revolution' are reflected in the improvements in productivity. But there has not been any reference to the quality of human inputs, as if it does not have much to contribute. In the industrial field, also, new technologies are being introduced and additional capital input of improved quality is being provided to increase production. Larger inputs can give larger returns but that does not necessarily mean improvement in productivity. In all economic organizations, apart from the quality and the quantity of material input, it is recognized on all sides that the quality of the human input is the crucial factor in promoting productivity, consequently in economic growth and development.



THE QUALITY OF HUMAN INPUT:

It is a well-known fact that the quality of human input is the determinant of the level of productivity under a particular technological situation. This quality has two aspects

a) *The capacity to work*: technical efficiency depending upon training, education, physical climate, standard of living, etc.

b) *The will to work*: depending upon the motivation and morale. The management may take extreme care to recruit technically the most competent person and provide them with the latest possible technology and other inputs necessary for production, still, if the will to work is weak, a plant may not attain its rated capacity and productivity may still continue to be low. It is recognized on all sides that there is a gap between the potential performance of the human input and its actual realization. This gap between potentiality and actual performance is the result of diverse sociological and personal factors. Chief among them being the alienation of the human input, that is, the workers, from the enterprise. It is self evident that modern industrial workers working for a wage or a salary have very different motivation from that of a self-employed person. The self-employed person if he works hard and gives his best to the production process the product of his efforts will directly accrue to him. Thus, he does not need any additional stimulus to induce him to put forth the best. His welfare is directly linked to the quality and quantity of his efforts. This situation completely changes when he turns into a wage or salary earner. In a large organization, his efforts are merged in the efforts of hundred of others. The results of his efforts are rarely known to him. Not only that, the link between his efforts and product of his enterprise becomes tenuous, but also that, he receives a fixed remuneration not linked to this efforts and productivity.



The relationship between the employer and his employees is a necessitous relationship flowing from the necessity of the worker for a job and the necessity of the employer for labour. Therefore, the worker tends to give the least which is just sufficient enough to protect his job and the employer also seeks to give him the least barely sufficient enough to retain the worker in the firm. Chamberlain calls this situation a relationship of 'conjunction' and not of 'cooperation'. This relationship is vividly and dramatically illustrated in the answer to a question, which you can put to the workers of any enterprise.

THE QUALITY OF INDUSTRIAL RELATIONS:

It has been said so far that given the technological and material inputs and a given capacity of the worker, the will to work materially affects the productivity of the workers and, therefore, of the enterprise. Apart from the other influences on the morale of the workers, "the quality of industrial relations has a direct bearing on the workers" will to work. When it is said that the quality of industrial relations has an important bearing to productivity, it is to be realized that it is not so much the role of strikes and lockouts that I have in mind while emphasizing the importance of industrial relations to productivity. There are many factors influencing the quality of industrial relations that are beyond the control of any individual management. Factors like political climate, multiplicity of union, economic factors like inflation and depression, market fluctuations and technological changes cannot be controlled by any one management. This will influences the approach and behaviour of the workers and their union and also the management.



Traditional Ways of Managing the Enterprise, Particularly, the Human Resource:

Traditionally the manager either as an individual or as a group has been himself the owner of the enterprise or his representative. As such the entire responsibility for and the power to take, decision rested with the owner and his representatives. The decisions were in respect of not only material inputs but also the human resources. The owner was the master and the worker his servant and the relationship between the two was known as the master servant relationship. Orders were given from above and obedience expected from below. As organisations became large, a hierarchy of management was created, the workers being at the bottom of this pyramid. Cogent political and economic arguments were available to support this arrangement and the system of the management of economic enterprises, chief among them being what has been called the golden rule of capitalism, that is, risk and control go together. Today, the situation has changed, no doubt, and there are statutory laws and collective agreements to regulate the exercise of managerial power. But as traditions die hard, managements' reliance on their traditional theory and practice of management has not completely disappeared.

Tools and techniques of Management:

As a corollary to the theory of management, the tools and techniques of management centered round what has been termed as the carrot and stick theory. A donkey can be made to move or quicken its pace by the use of stick from behind or by dangling a carrot in front or by using both. Similarly, the worker can be motivated to work and, work still better, by a suitable combination of punishment and reward, the capital punishment being in this context dismissal from employment. Peter Drucker calls the



sticks "the big fears and the little fears". In India, the management cannot, now, very freely use either the big sticks of dismissals or the little sticks of disciplinary actions to extract the best from the workers. But the use of carrot as a tool of motivation still continues to be potent in country where there is so much of poverty and low standard of living.

The net result is that there is a crisis in managerial techniques. Old techniques do not work; new techniques have not been evolved~ Sticks have become ineffective~ Carrots are scarce theory 'X' is replaced by the theory 'Y'~ Supervisors are trained in human relations~ Paternalistic autocracy is substituted by participative management~ But nothing works. There is crisis all around and the search for overcoming workers apathy, indifference, enstrangement, and nay even open hostility persists. There is an overall climate of distrust~ Distrust on the part of the worker, as if he is sheep facing a lion~ Distrust on the part of management, as if it is facing a butcher who is bent upon killing the goose that lays golden eggs. No management appears convinced that it is receiving a fair day's work for a fair day's wage and vice versa. Perhaps, both are right in their own ways. Each firm or enterprise operates in a dynamic environment where technologies change fast, new products and processes come into existence~ Market expand and contract~ Etc all these demand continuous adjustments. The process of adjustment cannot be successfully undertaken unless the entire organization cooperates. The management as the leader of the enterprise has to carry other elements with it. Nothing can help the management better than trusting its employees and their organizations. If love begets love, hate begets hate, and then certainly trust will begets trust.



The Role of Trade Unions:

In any effort to improve the quality of industrial relations and thereby to create a climate for improved productivity, the trade unions have a major role to play. There are many employers who still look upon trade unions with suspicion and distrust and view them as illegitimate organizations. The presence of outsiders as the leaders of trade unions further aggravates their suspicions. At one point of time this picture of the role of the trade unions was all pervasive in the circle of employers, though today the traditional hostility to trade unions has somewhat softened. Trade unions are a child of industrialism under a capitalist framework. Their existence, however, inconvenient to some cannot be wished away. They came with capitalism and will also disappear with it.

Trade unions do not create conflict between the employer and his employees. Conflict is inherent in the situation. They merely give an institutional expression to the conflict, which would have assumed chaotic proportion in their absence.

It is futile to talk of trade unions being irresponsible or making them saner and responsible to the society or the consumers. The trade unions are a working class organization and the trade union leader is responsible to the members of the trade union. This is the only test of the responsibility of a trade union. It is in the very nature a trade unionism to act as the representative of its members. It is behaves in any other way, it is acting contrary to its nature. If it hurts others, it is only incidental to its main objective of protecting the interest of its members. It is in the very nature of fire to against fire if it burns and hurts. That is its 'dharma'. The only expectation that one should have of a trade union is that is should serve its members rightly and effectively. The employment relationship in



a large industrial organization of today is not simply a marriage of convenience~ It is more like sacramental marriage. In individual workers may come and go but the collectivity continues to exist. Howsoever unhappy be relationship, howsoever frequent the pinpricks, the relationship has to continue without a divorce. Therefore, there is not must that, an external agency like law and the government can do to make the relationship smooth and harmonious. No law of marriage can make a marriage stable and happy. The law at best, again, can take care of only occasional outbursts.

The employers have to appreciate the role of trade unions in the maintenance of a stable pattern of industrial relations. I feel bold enough to assert that an employer gets the trade union he deserves, just as the people get the government that they deserve. Integrating the trade unions into the institutional structure of the enterprise is the prime responsibility of the management. A socialist society achieves this integration in much more effective and efficient way. Sharing what has been so far called, managerial prerogatives with the trade unions either collective bargaining, pure and simple, or through productivity bargaining or various forms of workers' participation in management, has resulted in at least partial integration of the trade unions in the administrative structure of the enterprise.

Conclusion

Harmonious and peaceful industrial relations results in improved productivity. It very much depends upon the relations that the concerned managements maintain their relations with the employees, trade unions and the governments. Employees are the back bone to any organization. If the employees are treated well, paid reasonable wages/salaries, motivated, it is certain that they will contribute towards higher productivity.



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PERSPECTIVE OF WOMEN EDUCATION IN INDIA

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Introduction

Education is one of the main components for all developments and a powerful tool to form knowledge-based society in this post-modern world. It has become an imperative concept that education is most essential for individual growth and societal developments, which is now been accepted unanimously and universally.

Women education is the vital role to contribute for national progress and a good indicator of development. Women cover more or less half of the population in the world. Women's development is regarded as an important approach to raise the level of productivity and to reduce the vicious circle of poverty and slavery, ultimately enriches health and hygiene which are also needed for a better society. It improves the physical well being of the individuals and enhances their productivity and ability to contribute to the 'national income'. Pandit Jawaharlal Nehru said that "if you educate a man, you educate an individual; if you educate a woman, you educate the whole family. Women empowered means mother India empowered".

Women in India have also been a major preoccupation of both the government and civil society as educated women can play a very important in the development of the country. India is poised to emerge as one of the most developed nations by 2020, high literate, more knowledge, women rights, awareness for all, political and economically at the forefront.



The slow but steady progress of women's education in the Pre-Independence period should be analysed after taking into account some of the socio-economic factors such as prevalence of Purdah system and segregation of women-folk, Child marriage, sati, subjugation after marriage and absence of Divorce System, enforced asceticism for widows, system of Devadasis, Female enforced asceticism for widows, Mental/Physical harassments on women and so on. After independence, women education has sought good improvement, but yet to reach to the literacy level of men.

Present century women are going to get equal rights and credits in the all the fields like, political, social, economic, legal etc. The Indian society has established a number of institutions for the educational development of women and girls. India has also signed a number of MOUs in several international conventions that aim to ensure the rights of women as well as for right to education. These educational institutions aim for immense help and are concerned with the development of women in all sectors. In the modern society, women in India have come a long way. Indian women are at par with men in all kinds of tasks like reaching the moon, conquering Mount Everest, and participating in all fields. All these have made possible just because of education and the profound impact it has had on women.

The augment of feminist ideas has, however, led to the marvellous development of women's condition in the society throughout the world in recent the times. Access to education has been one of the most urgent and important demands of theses women's rights movements. It gives awareness to the women in the society as India has been in many dimensions of educational disparities in the society in common and also in general.

Gender discrimination, the main obstacle for women, still persists in India and lot more needs to be done in the field of women's education



India. The gender literacy gap is a simple indicator for male and female literacy. While the male literacy rate was 9.8 per cent and female literacy rate was 0.7 per cent according to 1901 census in India. Last year census year report is the male literacy rate is 82.14 and female literacy rate is 65.46 according to 2011 census in India. Girl's school enrolment is low over the year from 1951 to 2010 as compared to men in India.

Objectives

1. To study the girl's enrolment in school education in India.
2. To analyse the female literacy rate in over the census year in India.

Methodology

The present study based on fully secondary data from various sources related to objectives. Information on girl's enrolment in school education at different levels of class I-V, class VI-VIII and class IX-XII was obtained through the reports of the Statistical of School Education and Ministry of Human Resource Development, New Delhi-2011. And female literacy rate at different levels from 1901 to 2011 was obtained through the reports of Census of India in 2011.



Database and Interpretations

Table1: Girls enrolment in school education in India

(In Lakhs)

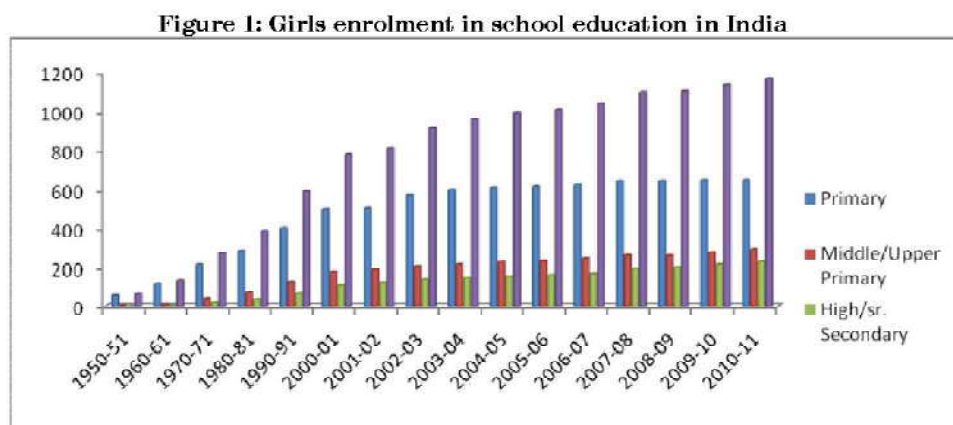
Year	Primary Class I-V	Middle/Upper Primary class VI-VIII	High/sr. Secondary (class IX-XII)	Total Class I-XII
1950-51	54	5	2	61
1960-61	114	10	7	131
1970-71	213	39	19	271
1980-81	285	68	34	387
1990-91	404	125	63	592
2000-01	498	175	107	780
2001-02	503	187	121	811
2002-03	573	206	137	916
2003-04	599	215	144	958
2004-05	611	227	154	992
2005-06	616	233	161	1010
2006-07	626.32	246.22	169.50	1042.05
2007-08	643.84	261.54	193.19	1098.54
2008-09	644.72	260.47	199.52	1104.72
2009-10	648.24	275.92	215.35	1139.52
2010-11	648.48	292.48	228.94	1169.91

Source: *Statistical of School Education*
Ministry of Human Resource Development

Table1: shows that girl's enrolment in education at differential levels class I-V, class VI-VIII and class IX-XII in India, girl's enrolment in school education has been increased from 61 lakhs in 1950-51 to 1169.91 lakhs in 2010-11. After republic period the primary class I-V girl's enrolment in school education has been increased from 54 lakhs in 1950-51 to 648.48 in 2010-11. Overall middle/upper primary class VI-VIII girl's enrolment in school education has been increased from 5 lakhs in 1950-51 to 292.48 in 2010-11. And high/sr. Secondary class IX-XII girl's enrolment in school education has been increased from 2 lakhs in 1950-51 to 228.94 lakhs in 2010-11. It is general observation from the table indicates girl's enrolment school education has been raised from 1950-51 to 2010-11 at differential



levels in primary, middle/upper primary and high/sr. Secondary in India. During 2007-08 to 2008-09 period girl's enrolment in school education slowly increased at different class levels, but middle/upper primary enrolment was declined from 2007-08 to 2008-09.



Above figure clearly explains that very highest enrolment in school education girls were studied at primary level, one fourth of enrolment in school education girl's were studied at middle/upper primary level for total enrolment and low level of enrolment in school education were studied at high/sr secondary level for total enrolment in India.

Table 2: Literacy Rate in India

Year	Persons	Males	Females
Pre-Independence Literacy Rate in India			
1901	5.3	9.8	0.7
1911	5.9	10.6	1.1
1921	7.2	12.2	1.8
1931	9.5	15.6	2.9
1941	16.1	24.9	7.3
Post-Independence Literacy Rate in India			
1951	16.7	24.9	7.3
1961	24.0	34.4	13.0
1971	29.5	39.5	18.7
1981	36.2	46.9	24.8
1991	52.1	63.9	39.2
2001	65.38	76.0	54.0
2011	74.04	82.14	65.46

Source: Census of India (2011)



Table-2 reveals that the pre-Independence period literacy rate for women had a very low in 1901 as compared to literacy rate of men in India. This is evidence from the fact that women literacy rate had rise from 0.7 per cent to 7.3 per cent where as the literacy rate of men had risen from 9.8 per cent to 24.9 per cent, overall literacy rate had risen from 5.3 per cent to 16.1 per cent during these five census periods. The post-independence period women literacy rate has been raised from 7.3 per cent to 65.46 per cent where as the literacy rate of men has raised from 24.9 per cent to 82.14 per cent, overall literacy rate has been raised from 16.7 per cent to 74.04 per cent during last seven census periods in India.

Figure 2.1: Pre-Independence Literacy Rate in India

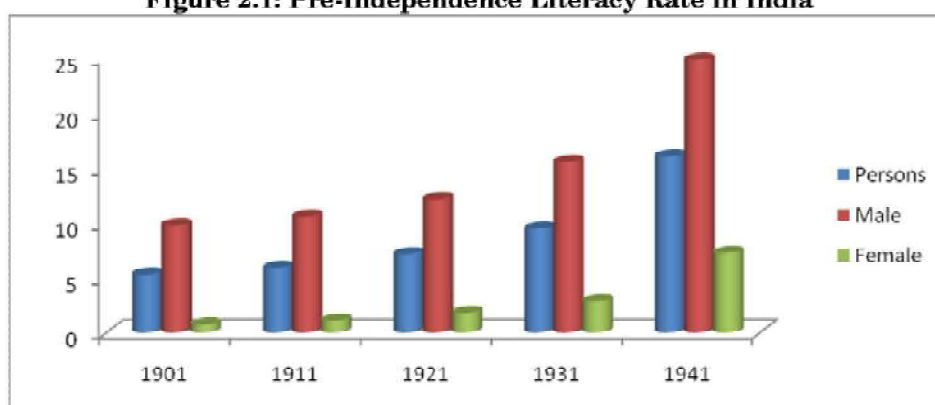


Figure 2.1 shows that the male's literacy rate had been strongly and fast increased from 1901 to 1941 in pre-independence period. The female's literacy rate had been increased very slowly from 1901 to 1941 when compared to men literacy rate in pre-independence period.

Figure 2.2: Post-Independence Literacy Rate in India

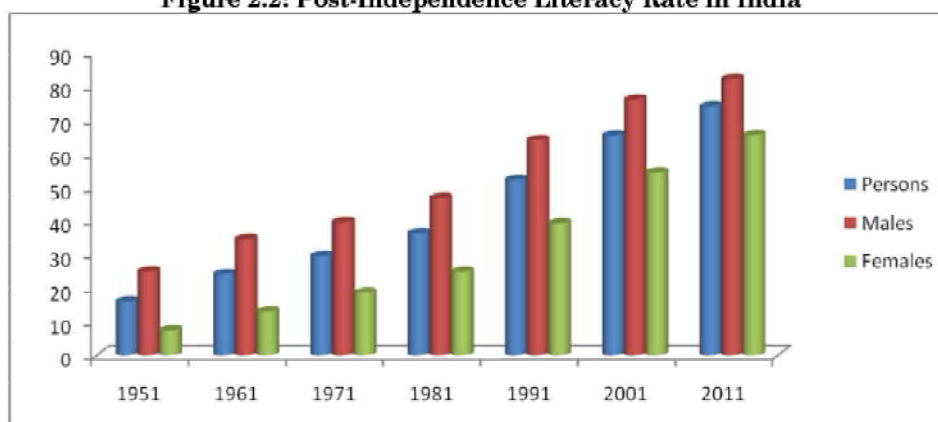


Figure 2.2 shows that the male's literacy rate has been increased strong and steadily in post-independence period and female's literacy rate has been well increased in post-independence period but still not beat men's literacy level in India.

Suggestions

The present study gives some suggestions related to objectives and through results for encouragement of girls and women education in India.

1. Providing free and compulsory education for girls up to 18 years.
2. Establishment of more number of primary school.
3. Comprehensive of literacy programmes in all governmental schemes.
4. Remove the gender bias in the school curriculum.
5. Increase the enrolment in school education and literacy level in India.
6. Adopting new welfare schemes and educational programmes for girls/women education.
7. Promote gender equity and women's empowerment



Conclusion

The present paper examined to study the girls' enrolment in school education and analyse literacy rate in India over the census year. We concluded that girls' enrolment in school education has been increased year by year in India. At the similar time women literacy level is low as compared to literacy rate of men. But female literacy level rapidly increased but still not achievement of men literacy level in India. Still women literacy rate is only half of women are literates and in men literacy rating, three fourth of men are literates. High rate of illiterate women is definitely attributing for women depends on men as well as to mainly play a secondary role. Government should adopt more programmes for improving women education and reduce the gender discrimination in educational avenues in India.

"Education is the Chief Defence of Nations" –Edmund Burke.

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AN OVERVIEW OF FACTORS LEADING TO SATISFACTION OF ORGANIZED RETAIL CUSTOMERS IN JAIPUR

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INTRODUCTION

Retail success in today's competitive environment is all about getting the right product to the right place at the right time & at the lowest cost possible. There is a debate regarding the factors that are responsible for the purchases from an organized and unorganized retail outlets. People have their own preferences with regards to make purchases from an organized or unorganized retail store.

Jaipur (Rajasthan) has started seeing the presence of organized retail in the past few years. Several formats of organized retail have come up challenging the unorganized retail stores and at the same time providing ease, comfort and a style of living to the people. The organized retail provides entertainment, variety, style and comfort, convenience and various other things which actually propel a customer to go there. A brief study of the various organized retail stores in the city have been undertaken to find out whether there is an association between customer satisfaction and the features of organized retail.

LITERATURE REVIEW

John B.Clark, Hojong Hwang (2000) conducted a study and compared the features leading to customer satisfaction in the American and Korean discount stores with the help of an questionnaire in which around 20 items were there. The items included cleanliness of store, location of outlet, store



layout, ease in finding things, quality, fashionableness, no. of salespeople, politeness of the sales people etc. The findings of the study were that the customers in both the countries were mainly affected by merchandise value and location and ad factors.

Kerrie Bridson , Melissa Hickman(2003)discovered in their study that both the hard and soft attributes were the significant predictors of satisfaction with the merchandise and customer satisfaction at the store.

Subhashini Kaul (2005) concluded in her findings that the customers who are satisfied with the service quality are more likely to remain loyal to the store. To gain the competitive advantage and retain strategic importance, service quality is a big measuring tool.

Vaishali Agarwal(2008) came to the conclusion in her study that quality, convenient location and availability were the parameters that lead to customer satisfaction and were ranked high on 5-point scale as compared to price , ambience and display of the store.

HYPOTHESES

- 1. Ho: There is a significant relationship between product characteristics and customer satisfaction.**

Product characteristics here include the variety, quality, value for money and the uniqueness of the product.

- 2. Ho:There is a significant relationship between physical aspects and customer satisfaction.**

Physical aspects include convenient location, parking facility, outlet atmosphere and lighting arrangement.

- 3. Ho:There is a significant relationship between personnel interaction and customer satisfaction.**



OBJECTIVE OF THE STUDY

- 1) To explore the level of customer satisfaction.
- 2) To rank the satisfaction level.

METHODOLOGY

The study is descriptive in nature and is based on sample size of 150 customers. Questionnaire was used as an instrument to collect the primary data and judgement sampling technique was used. Before the actual survey was conducted, a pilot study was undertaken and based on it the required modifications in the content of questionnaire were made. 5 point Likert scale was used in the questionnaire.

TOOLS USED FOR DATA ANALYSIS

Chi-square test was applied to find out the relationship between the dimensions of service quality and customer satisfaction.

ANALYSIS AND INTERPRETATION

A brief profile of the sample respondents is presented in Table 1 which indicates that:

- a). Out of the total respondents 62% are male and 38% are female.
- b). Majority of the respondents i.e. 67.33% fall in the age group of below 30 years, 22.67% in the age group of 31-40 and only 10% respondents are above 40 years.
- c). 20% respondents were educated upto school level, 50% were graduates and the remaining 30% were post graduates.
- d). 19% of the respondents were in business, 16% were professionals, 45% were service class and the remaining 20% were under the household category.



e). 58% respondents belonged to the income bracket of below Rs. 300000, 29.33% were from the income bracket 300001-500000 and the remaining i.e. 12.67% were in the income group of above 500000.

S.No.	Factor	Category	No. of respondents	Percentage
1.	Gender	Male	93	62
		Female	57	38
		Total	150	100
2.	Age	Below 30 years	101	67.33
		31-40 years	34	22.67
		Above 40 years	15	10
		Total	150	100
3.	Education	Up to metric	30	20
		Graduate	75	50
		Post graduate	45	30
		Total	150	100
4.	Occupation	Business	28	19
		Profession	24	16
		Service	68	45
		Household	30	20
		Total	150	100
5.	Annual income	Below Rs.300000	87	58
		300001-500000	44	29.33
		Above Rs. 500000	19	12.67
		Total	150	100

ASSOCIATION TEST

TABLE 2: Product Characteristics And Level Of Customer Satisfaction

Product Characteristics	Level of customer satisfaction					Total Score(%)	Rank
	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied		
Quality of Product	81	68	6	5	0	665(26.23)	I
Value for money	52	72	16	7	3	613(24.18)	IV
Unique & trendy goods	61	60	20	8	1	622(24.54)	III
Variety of goods	64	67	10	8	1	635(25.05)	II

From the above table , it can be inferred that product characteristics are related with customer satisfaction as the calculated chi square test value is 21.95 which is less than the tabular value 24.054 at level of significance .02. **Thus, (1) Ho is accepted.**



Quality of the products at the store got the highest score percent (26.23) followed by variety(25.05), uniqueness(24.54) and value for money(24.18) respectively. These aspects of the organized retail stores satisfy most of the customers.

TABLE 3: Physical Aspects And Level Of Customer Satisfaction

Physical Aspects	Level of customer satisfaction					Total Score(%)	Rank
	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied		
Convenient location	67	62	16	3	2	639(26.29)	I
Parking Space	48	78	17	5	2	615(24.34)	III
Outlet Atmosphere	56	74	18	1	1	633(24.05)	IV
Lighting Arrangement	59	75	13	3	0	640(25.32)	II

For the above, the calculated chi-square test value is 8.75 which is less than the tabular value(24.054) at the significance level .02 which clearly state that the physical aspects are related with the customer satisfaction.

Thus, (2) Ho is accepted.

Convenient location is ranked at the first position followed by lighting arrangement, parking space and outlet atmosphere respectively.

TABLE 4: Personnel Interaction And Level Of Customer Satisfaction

Personnel Interaction	Level of customer satisfaction					Total Score(%)	Rank
	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied		
Salesperson's Attentiveness	60	65	20	4	1	629(25.55)	I
Willingness to resolve queries	46	69	27	6	2	601(24.41)	IV
Good mannered	56	69	20	4	1	625(25.39)	II
Helpfulness of staff	47	70	28	3	2	607(24.65)	III



The calculated chi-square test value for the above Table is 7.01 which is less than the tabular value at significance level .02. So, it can be said that there is an association between customer satisfaction and personnel interaction. **Thus, (3) Ho is accepted.**

FINDINGS

The findings of the study undertaken were:

- 1) The majority customers were from the age group of below 30 years.
- 2) The male respondents who visited organized outlets were more in comparison to female respondents.
- 3) Majority of the respondents are satisfied with the quality of products, good value for money, unique & trendy products and variety of products.

SUGGESTIONS

Based on the findings, the following suggestions are recommended:

- 1) Since the major crowd is the people below 30 years, so their needs must be taken into account before devising a marketing strategy and branded products should be made available at reasonable prices.
- 2) Retail outlets can actually compel the females to visit the stores by offering products of their choice.
- 3) Organized retail stores are suggested to offer convenient location and variety of products to the customers along with good ambience as it is found that people who stay back for long hours at outlets tend to make purchases.



- 4) Proper parking facility should be there along with free parking for regular customers. Also, valet parking should be there specially for women.

IMPLICATIONS

The research was useful for the organized retail outlets as it will help them to identify the needs of the customers.

LIMITATIONS

1. Time was the biggest constraint while conducting the research.
2. Casual Approach of some of the respondents towards filling the questionnaire.
3. In a growing population of consumers, a sample size of 150 may be inadequate.
4. Respondents are not always willing to furnish actual details
5. Lack of awareness of respondents towards certain features.
6. The constraint of keeping the questionnaire concise since the number of features that were studied had to be limited.
7. The area of study was confined to a few areas of Jaipur only and so it was a constraint.

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ACADEMIC STRESS AS CORRELATE OF MENTAL HEALTH AMONG ADOLESCENTS

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Introduction

The quality of nation depends upon the educated citizens which further depends upon good mental health and adjustment of adolescents. Education is the powerful instrument for the social, political and economic development of the country. A child's delicate and sensitive personality is influenced by the character of the parents, their mutual behavior towards the children, the child's reaction with brothers, sisters and other relatives in the family. Hence it is essential that they may be healthy. It is the need that students should be trained for sound mental health conditions to be adjustable everywhere.

But academic stress has an adverse effect on the mental health of adolescents, healthy parents and healthy teachers are always boon to the society. In the classroom situation the task of the teacher is always challenging and baffling, when even he faces the heterogeneous group with multiple diversity in the traits. It is very much true that some students are under active stress and some are normal, some are adjusted and some are maladjusted. In such situations, it is very important to understand each child and also find out the impact of negative traits and positive traits in the development of the child. If such individuals are not taken care, they may lose equilibrium of the self and with the environment. Hence it is very important to identify the adolescents possessing stress and also to see the effect of stress on the health of the adolescents.



Previously homes were the most important agency of imparting education but now the school have almost equivalent role to shape the personality of students. The sense of security, the love and affection which homes were supported to give have become responsibility of school. The modern teachers have to play the role of guide, friends and philosopher because either the parents are illiterate or they are over busy in their professional endeavour, but difficulty is that the teachers are not conscious of their obligations and they do not discharge their duty with sense of commitment and devotion. This results in lack of guidance among adolescents which cause greater stress among students. Lazarus (1984) defined "Stress is as a feeling of tension that is both emotional/physical, it can accruing specific situation different people perceive different situation struggle".

Good health depends on the state both body and mind. A healthy person is not only physical healthy but also mentally healthy. Mental health is an index which shows the extent to which person has been able to meet his environment demands i.e. social , emotional or physical when a person find himself trapped in a situation for which he does not have coping strategies to deal effectively, he gets himself mentally strained. This mental strain is generally reflected in symptoms like anxiety, tension, restless or hopeless. The emotional life of an individual plays a very important part in maintaining the mental health. By healthy emotional life is meant that person has an attitude of love and affection towards his near and dear ones.

Mental health is a global term which refers to that condition of an individual which results from the normal organization and functioning of his mind. It is a combined outcome of five type of health like physical, emotional, moral, spiritual and social health, Mental Health is an important



component of the total health of the person. Right thoughts right attitude and right actions are very useful and necessary to maintain good mental health. Mental health can also be called as the process of human self satisfaction, self realization and fully successful existence. A self satisfied and healthy person has a state of mind that enables him to experience the greatest amount of happiness and to attain the maximum efficiency in spite of the presence of strain and conflict. He does not have the anxiety to live or the dinging attitude that everything must happen as suits his design. He is not keen to grab or hoard or have so many mouthful pleasure himself but give away more than taking and shares with other his leisure, time energy, wealth and whatever he has. Crow and Crow (1951) defined "mental health is the state that deals with human welfare and persuades all fields of human relations". Chauhan (1987) defined "mental health is a condition which permits the maximum development of physical, intellectual and emotional status of the individual so that he can contributes maximum to the welfare his ideas and aims in life". Jha (2004) found that academic stress is mental or physical strain resulting from adjusting demands or challenging where the learner is to profit from instructions in a given area of learner. Diane (2005) stated that high academic stress resulting in low achievement motivation. Menhas (2006) in her study revealed significant relationship between academic stress and self-concept. Significant difference in emotional intelligence was found with respect to sex. However, no significant difference in emotional intelligence was found with respect to organizational set up and stress. Gupta (2002) found that there is significant relationship between emotions intelligence and mental health.

Rationale of the Study

One of the most challenging problems faced by psychologists, counselors, educational administration and teachers of today is the accurate



prediction of psychological traits of children. This problem has aroused the attention of many psychologists and is assuming greater importance day by day as our society has changed drastically .Because adolescence is the age of stress and strain and children have to cop up with many type of stressful situation, but academic stress affects the personality make up of the child the most .It has adverse effect on the mental health of the students. Therefore knowledge of the stress management helps the student to cope up with the problem of stress. Thus for this it becomes necessary to study the effect of academic stress on mental health. The present study is helpful to school administrator, curriculum makers and counselors to provide educational and vocational guidance and counseling to the students. The study is also beneficial to the parents so that they can help their children in study and be particular about their need in the academic affairs and thus reducing their academic stress.

Objectives of the Study

1. To study the effect of academic stress on mental health of adolescents.
2. To study the effect of academic stress on mental health of male adolescents
3. To study the effect of academic stress on mental health of female adolescents.

Hypotheses of the Study

1. There is significant difference in mental health of the adolescents with regard to high and low level of academic stress.
2. There is significant difference in mental health of male adolescents with regard to high and low level of academic stress.



3. There is significant difference in mental health of female adolescents with regard to high and low level of academic stress.

Methodology

Sample was selected randomly from +1 class students including boys and girls from the Bathinda district. It was further divided into two categories i.e. male and female. To study the academic stress, scale of academic stress taken from Bisht battery of stress, developed by Abhabisht (1987) was used. Mental health inventory developed by Srivasta and Jagdishrai (1987) was used to study the mental health. Data were analysed quantitatively. Descriptive statistics namely mean, S.D. and t-test were calculated.

TABLE 1

Statistical Scores in Mental Health of Adolescents with regard to high and low Academic Stress.

Dependent Variable	Group of academic stress	N	Mean	S.D.	DF	t-value
Mental Health	High academic stress	51	92.45	20.49	104	2.36*
	Low academic stress	55	99.96	10.9	104	

*Significant at 0.05 levels

From the results of table 1 it is found that the mean score of mental health of adolescents whose academic stress is high is 92.45, SD is 20.47 while the mean score of mental health of adolescents whose academic stress is low is 99.96, S.D. is 10.9 and t-ratio is 2.36. Significant difference is obtained in the mental health of adolescents due to high and low level of academic stress as t-value is found to be significant at 0.05 level ($t=2.36$). Therefore, as per the result of the present study mental health of adolescents is very much influenced by academic stress. Mean scores of adolescents on the variable of mental health shows that mental health score of adolescents who have high level of academic stress is lower as



compared to the adolescents who have low level of academic stress. This may be due to the reason that in modern times either the parents are illiterate or they are over busy in their professional work, so they do not guide the adolescents properly. Modern teachers have to play the role of guide, friend and philosopher, but the difficulty is that teachers are not conscious of their obligations and they do not discharge their duty with commitment and devotion. It is justified that lack of guidance among adolescents which cause great stress among them deteriorates mental health. Thus, hypothesis no. 1 that there is a significant difference in mental health of adolescents with regard to high and low level of academic stress is accepted.

TABLE 2

Statistical Scores in Mental Health of Adolescents with regard to high and low Academic Stress.

Dependent Variable	Group of academic stress	N	Mean	S.D.	DF	t-value
Mental Health	High academic stress	16	80.67	22.44	54	2.54*
	Low academic stress	40	93.64	14.67	54	

*Significant at 0.05 levels

From the results of table 2 it is found that the mean score of mental health of male adolescents whose academic stress is high is 80.67 and S.D. is 22.44. While the mean score on mental health of male adolescents whose academic stress is low is 93.64 with SD is 14.67 and t-value is 2.54. Significant difference is obtained in the mental health of male adolescents due to high and low level of academic stress as t-value is found to be significant at 0.05 levels (t-2.54). Mean score of male adolescents on the variable of mental health shows that mental health of male adolescents who have high levels of academic stress is lower as compared to male adolescents who have low level of academic stress. This may be due to the reason



that there is severe competition in all academic levels. Priority to excel the exams and pressure from the part of parents and teachers lead to poor mental health. Thus the hypothesis no. 2 that there is a significant difference in mental health of male adolescents with regard to high and low level of academic stress is accepted.

TABLE 3

Statistical Scores in Mental Health of Adolescents with regard to high and low Academic Stress.

Dependent Variable	Group of academic stress	N	Mean	S.D.	DF	t-value
Mental Health	High academic stress	34	71.07	19.61	46	2.16*
	Low academic stress	14	83.88	12.24	46	

*Significant at 0.05 levels

From the results given in table 3 it is found that the mean score of mental health of female adolescents whose academic stress is high is 71.07 and S.D. is 19.61. While the mean score of mental health of female adolescents whose academic stress is low is 83.88 with SD 12.24 and t-value is 2.16. Significant difference is found in the mental health of female adolescents due to high and low level of academic stress as t-value is found to be significant at 0.05 levels (t-2.16). Mean score of female adolescents on the variable of mental health shows that mental health of female adolescents who have high levels of academic stress is lower as compared to female adolescents who have low level of academic stress. This may be due to the reason that there is parental pressure for excellence in performance irrespective the potential of the girl students. This leads to high academic stress and the mental health of the girl adolescents deteriorate. Thus the hypothesis no.3 that there is a significant difference in mental health of female adolescents with regard to high and low level of academic stress is accepted.



Findings and Conclusions

There is significant difference in the mental health of adolescents with regard to high and low level of academic stress as t-value is found to be significant at 0.05 level. There is significant difference in the mental health of male adolescents with regard to high and low level of academic stress as t-value is found significant at 0.05 level. Significant difference is also found in the mental health of female adolescents with regard to high and low level of academic stress as t-value is found significant at 0.05 level. It can be concluded that when the academic stress of adolescents increases the mental health of adolescents deteriorates.

Educational Implications

The findings of the study have many educational implications. It will help the teachers understanding the child psychology, so that they should not over burden the students with work and should not over expect beyond the capabilities of the child. The school curriculum can be planned in such way that it provides equal opportunities for participation to all students, which will definitely boost their performance both in academic and extracurricular activities. The study will help the teacher in comprehending the direction of mental health of students (high and low), the teacher will try to nurture responsiveness and reciprocity in children in order to develop positive and high mental health. Emphasis should be given on different vocation instead of choosing some specific vocation and pushing the child toward it.

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“नाट्यशास्त्रानुसारं रङ्गमंचस्य सैद्धान्तिकविवेचनम्”

प्रस्तुतकर्त्री
अंजना कुमारी
पी-एच.डी. शोधच्छात्रा (नेट/जे.आर.एफ.)
संस्कृत-विभागः
पंजाब-विश्वविद्यालयः, चण्डीगढ़म्

(मम शोधपत्रस्य विषयोऽस्ति— “नाट्यशास्त्रानुसारं रङ्गमंचस्य सैद्धान्तिकविवेचनम्।” अस्मिन् शोधपत्रे मया नाट्यशास्त्रे विवेचितं रङ्गमंचस्य सैद्धान्तिकरूपेण वर्णनं कृतमस्ति। यद्यपि नाट्यशास्त्रे ‘रङ्गमंचः’ इति शब्दः न उपलभ्यते। रङ्गमंचस्य स्थाने रङ्गशीर्षरङ्गपीठशब्दयोः प्रयोगः कृतोऽस्ति। परन्तु तस्मिन् काले रङ्गमंचस्य सा एव स्थिति आसीत् यद् अद्यत्वे वर्तते। आधुनिककाले तकनीकीप्रयोगेण अस्मिन् किञ्चित् परिवर्तनं वर्तते परन्तु मूलरूपेण रङ्गमंचः तथा एव अस्ति यथा भरतमुनेः समये आसीत्।

अस्मिन् शोधपत्रे नाटकं रङ्गमंचस्य सम्बन्धानां परस्परम् अल्परूपेण वर्णनं कृतमस्ति। यत् कथम् असौ परस्परम् अन्योन्याश्रितमस्ति। रङ्गमंचः बाह्य संसारस्य आधारः अस्ति। यतोहि रङ्गमंचे मानव-जीवनस्य नित्यघटितघटनानां प्रदर्शनं क्रियते। कोऽपि नाटकं तावत् पर्यन्तं सफलीभूतं न मन्यते यावत् पर्यन्तं तस्य प्रदर्शनं रङ्गमंचस्य उपरि न क्रियते। प्रेक्षकः एव नाटकस्य गुणदोषानां साक्षी भवति। रङ्गमंचः जनसाधारणानां मनोरंजनस्य साधनमस्ति। यतोहि नाटकस्य प्रदर्शनं रङ्गमंचे भवति, तथा दर्शकाः एकरिम् स्थले एकत्रीभूत्वा रङ्गमंचे नाटकं पश्यन्ति। रङ्गमंचः मानवजीवनस्य दर्पणमस्ति तथा येन माध्यमेन वयं समाजे सुगमतया परिवर्तनं कर्तुं शक्नुमः।)

मानवजीवनस्य मूलप्रवृत्तिः भावनानाम् अभिव्यक्तिरस्ति तथा भावनानां अभिव्यक्तेः साधनं नाटकम् अस्ति। मानवः नाटकं रङ्गमंचस्योपरि प्रस्तुत्य स्वकीय विचारान् अभिव्यक्तिं च जनमानसे प्रेषयति। नाटकस्य तथा रङ्गमंचस्य परस्परं अन्योन्याश्रितः सम्बन्धरस्ति। रङ्गमंचः राष्ट्रस्य प्रतीकमस्ति। नाटकं तावत् पर्यन्तं सफलीभूतं न मन्यते, यावत् पर्यन्तं तस्य प्रस्तुतिकरणं रङ्गमंचस्योपरि न क्रियते। ‘नाटकं+रङ्गमंचः’ एकः विलष्ट – विविधायामी – अनुकरणमूलक – सामूहिकी – रङ्गमंचस्य कलाः सन्ति। अस्मिन् जीवनतथ्यानाम् उद्घाटनस्य क्षमता अस्ति।



रङ्गमंचः शब्दद्वयानां मेलनेन जातम्— 'रङ्गः तथा मंचः।' 'मंच' शब्देन अभिप्रायः रथानविशेषेन अस्ति, यत्र सुव्यवस्थित-सुचारुरूपेण अभिनयं क्रियते तथा 'रङ्ग' शब्देन अभिप्रायः सौन्दर्यप्रसाधानसाधनैः, वर्णप्रकाशव्यवस्थाभिः, विविधप्रकाराणां ज्वनिकाभिः तथा वस्त्रैः नास्ति। 'रङ्ग' जीवनस्य विविधस्थितिभिः सम्बन्धितोऽस्ति, यं वयं दृश्य-काव्यस्य (नाटकस्य) माध्यमेन मंचे क्रियानुभूताः पश्यामः।¹ जीवनस्य व्याख्याकरणं 'रङ्गमंचस्य' मूलोद्देश्यमस्ति।

नाटकं मानवजीवनं सम्पूर्णतया चित्रितं करोति। नाटकस्य चाक्षुषप्रतीते आधारः रङ्गमंचोऽस्ति। रङ्गमंचः नाटकस्य निकषमस्ति। नाटकं दर्शकानां दृष्टे उत्तमं अनुत्तमं वा अस्य निर्णयं रङ्गमंच एव करोति।

यद्यपि रङ्गमंच+शब्दस्य प्रयोगः भरतस्य नाट्यशास्त्रे नास्ति तदपि भरतमुनिः रङ्गमंचशब्दस्य रथाने 'रङ्गपीठं तथा 'रङ्गशीर्षं' शब्दैः रङ्गमंचस्य प्रत्यारोपणं कृतवन्तः। भरतकालीन रागाज्जे वर्ग-वैषम्यानाम् आधिक्यम् आसीत्। निम्नवर्गाणां जनाः उच्चवर्गाणां प्रतिष्ठाजन्यैः आयोजनैः सम्मिलितं भवितुं न शक्नुवन्ति स्म। येन उच्चवर्गीय-निम्नवर्गीयजनेषु विद्वेषभावना उत्पन्ना जाता।² येन सामाजिक-व्यवस्थां सामान्यकरणाय नूतनमार्गस्य आवश्यकता अनुभूता। एतदर्थं ब्रह्मणा शूद्रादीनां सर्ववर्गाणां कृते उपयोगी पंचमवेदः 'नाट्यवेदस्य' उत्पत्तिः कृता।³ नाटकस्य विघ्ननिवारणाय नाट्यगृहस्य निर्माणं कृतवन्तः। नाट्यगृहस्य विभाजनं विकृष्टचतुर्भुजप्रकारेषु कृतम्। त्रिप्रकाराणाम् अपि विभाजनं ज्येष्ठमध्यमावररूपेण कृतम्।⁴ एवं नवप्रकाराणां नाट्यमण्डपानाम् चर्चा भरतमुनेः नाट्यशास्त्रे अस्ति। येषु ज्येष्ठस्य प्रयोगः देवानां कृते, मध्यमः राजानां कृते तथा अवरः सामान्यजनानां कृते प्रयुक्तः भवति।⁵ ज्येष्ठमण्डपस्य परिमाणः 108 हस्तः, मध्यमः 64 हस्तः तथा अवरः 32 हस्तः भवति।⁶

विकृष्टरङ्गमंचः आयाताकारः, चतुर्भुज वर्गाकारः, त्र्यङ्ग त्रिभुजाकारो भवति। नाट्याचार्यभरतमुनिः नाट्यगृहं द्विभागेषु विभक्तं करोति। रङ्गमंचस्य अर्धभागः रङ्गपीठरङ्गशीर्षश्च भवति तथा अन्यार्धभागे प्रेक्षागृहस्य निर्माणं क्रियते। प्रेक्षकस्य समीपे यद् स्थानं भवति तद् रङ्गपीठमुच्यते तथा रङ्गमंचस्य पृष्ठभागः रङ्गशीर्षमुच्यते।



रङ्गपीठरङ्गशीर्षस्य पृष्ठभागे नेपथ्यं तथा द्विद्वाराणां विधानमस्ति।⁷ नेपथ्यस्य प्रयोगं न केवलं पात्राणां सज्जा तथा ध्वनिप्रभावानां कृते भवति, परन्तु वर्जितदृश्यानां कृतेऽपि असौ उपयोगी सिद्ध्यति। यतोहि वर्जितदृश्यानां प्रयोगः संस्कृतनाटकेषु निषेधोऽस्ति।⁸

प्रेक्षागृहस्य विभिन्नस्थानैः नानाविधदेवानां पूजा भवति स्म।⁹ आरम्भिकपूजनं 'पूर्वरङ्गः' उच्यते तथा अन्तिमांशः 'नान्दी'। यस्य प्रयोगः अद्यापि संस्कृतनाटकेषु क्रियते।

नाट्यशास्त्रानुसारं रङ्गमंचे वेदिकायाः बाहुद्वये पूर्वनिर्दिष्टप्रमाणः तथा विधे अनुसारं चतुरस्तम्भैः युक्तः 'मत्तवारणी इति' निर्माणं भवितव्यम्।¹⁰ यतोहि 'मत्तवारणी' नाटकप्रस्तुतिः समये अकस्मात् आगतविधानं निवारयति। नाटकस्य मध्ये यस्य पतनम् अशुभं भवति।

प्राचीनकाले भारते त्रयप्रकारमंचाः भवति स्म – 'समतलबहुधरातलीय-मुक्ताकाशश्च।' येषु समतलमंचः तथा द्विभूमीयः अर्थात् बहुधरातलीयः मंचः आदौ निम्नः तथा उत्तरोत्तरं क्रमशः उच्चः भवति स्म। यस्य वर्णनं नाट्यशास्त्रेऽस्ति। तृतीयः मुक्ताकाशमंचः लोकमंचः भवति स्म।

प्राचीनकाले जनसमूहः एकस्मिन् निश्चितस्थाने एकत्रीभूय रिक्ताकाशस्य नीचैः नाट्यप्रदर्शनं कुर्वन्ति स्म। सैव मंचः मुक्ताकाशः भवति स्म।

भरतमुनिना समतलमंचं सर्वश्रेष्ठम् अङ्गीकृतम् तथा कूर्मपृष्ठवत् मंचस्य निषेधं कृतम्।¹¹ तैः द्विभूमीयनाट्यमण्डपं शैलगुह्याकृतेः निर्माणस्य निर्देशं कृतम्। यतोहि अस्मिन् मन्दवायुः प्रवहति। असौ बहुवायुवेगेन विरहितः तथा च गम्भीरशब्दैः गुञ्जायमाणः भवति, अर्थात् अस्मिन् उच्चारितशब्दाः प्रतिध्वनिताः भवन्ति।¹² मुक्ताकाशमंचे आधुनिककाले रामलीला, रासलीला- नौटंकी – इत्यादयः लोकनाट्यानि दृश्यते।

संस्कृतरङ्गमंचः यथार्थवादी आदर्शवादी चासीत्। अस्मिन् घृणोत्पादकः अथवा उद्वेगजनकदृश्यानां प्रदर्शनं सर्वथा वर्जितम् आसीत्। नाटकरङ्गमंचयोः परस्परं घनिष्ठसम्बन्धरस्ति। सम्पूर्णसंसारस्य घटनानां चित्रणं नाटके भवति, यस्य प्रस्तुतिकरणं रङ्गमंचस्य माध्यमेन भवति। रङ्गमंचः सामाजिक-गुणदोष – राजनीति – धर्मोऽस्ति। असौ शिक्षा तु प्रददाति एव तथा सार्धमेव मनोरंजनमपि करोति। आदिमानवकालात्



आधुनिकालपर्यन्तं मानवजीवनस्य घटनानां वर्णनं रङ्गमंचमाध्यमेन भवितुमर्हति।¹³ आदिमानवः आदिवसम् आखेटं करोति स्म तथा रात्रौ स्वकीयं संस्मरणान् प्रकटयितुं कुत्रचित् एकस्मिन् स्थले जनसमूहः एकत्रितः भवति स्म। तेषां संस्मरणान् अभिव्यक्तभूमिः रङ्गमंचस्य रूपं धरति। सः स्वकीयप्रसन्नतया नृत्यति स्म, गायति स्म। तदेव अद्यापि नाटकस्य अङ्गमस्ति। आदिमानवः प्रकृतेः बहुं सम्मानं करोति स्म। अतः तेन क्षेत्र-चौपाल-वन-उपवन- इत्यादिकं सर्वं रङ्गमंचरूपेण प्रयुक्तम्।¹⁴ नाटकस्य यदा रङ्गमंचे अभिनयं भवति तदा तस्मिन् जीवनस्य सम्पूर्णभावरसकर्मावस्थानां समाहारो भवति।¹⁵ तस्मिन् चरित्रगत् कृतीनां तथा उक्तकथ्यानां दर्शकानां मनसि रूपाकारधारणं करोति। चरित्रगत् रामरावणं तस्य कृते रामायणस्य रामरावणयोरनुभूतिः कारयति। नाटकं केवलमात्रं व्यक्तिगतजीवनस्य व्याख्या एव नास्ति, अपितु राष्ट्रसांस्कृतिकजीवनस्य एवं सामाजिकलोकजीवनस्य दर्पणं भवति।¹⁶ रङ्गमंचः गतिशीलक्रियाशीलजीवनं प्रस्तौति। यदि नाटकम् आत्मास्ति तर्हि रङ्गमंचः देहः अस्ति। यथा शरीरेण बिना आत्मनः स्वरूपं न भवति तथैव रङ्गमंचेन बिना नाट्यस्य कल्पना भवितुम् नर्हति। रङ्गमंचमाध्यमेन समाजे सुगमतया परिवर्तनं कर्तुं शक्नुमः। रङ्गमंचः समाजं यथार्थजीवनं प्रति आनयति।

संस्कृतरङ्गमंचस्य सुदीर्घा परम्परा सिद्धयति यत् असौ परम्परारूपेण सर्वाधिकप्राचीना, सर्वतोभावेनविकसिता एवं च समृद्धा परम्परा अस्ति।¹⁷ नाटकस्य माध्यमेन जीवनस्य स्थितिः प्रदर्शयते। प्रत्येकनाटकस्य स्वकीयः रङ्गमंचः सार्धमेव उत्पद्यते। नाट्यरचनायाः विधानं यद्यपि केनापि प्रकारेण कृतः भवेत् परञ्च यावत् पर्यन्तं तस्य मूल्याङ्कनं जीवनसन्दर्भेण न भवेत् तावत् पर्यन्तं रचनाविधानस्य आंतरिकं सौष्टवः कदापि स्पष्टः न भविष्यति।¹⁸

रङ्गमंचः जनानां परस्परं सम्बन्धस्थापनस्य साधनमपि आसीत्। यतोहि नाटकस्य मंचनम् एकस्मिन् निश्चितस्थाने भवति स्म। जनाः नाटकं द्रष्टुं तत्र एकत्रिताः भवन्ति स्म। यत् तेषां पारस्परिकसम्बन्धान् सुदृढं करोति स्म। रङ्गमंचे यदा नाटकस्य अभिनयं भवति, तदा प्रेक्षकः तस्य गुणदोषानां परिशीलनमपि करोति। नाटकं प्राचीनकालादेव मनोरंजनस्य साधनमासीत्। जनाः आदिवसं कार्यं कुर्वन्ति स्म तथा रात्रौ श्रान्तता



दूरीकरणस्य साधनं नाटकस्य रङ्गमंचीय प्रस्तुतीकरणमासीत्। यदा नाटकं रङ्गमंचे प्रस्तूयते, तदा सामाजिकजनाः स्वदुःखान् विस्मृत्य नाटकस्य आनन्दं ग्राह्यन्ति तथा रसानुभूयन्ते। रङ्गमंचे तदेव नाटकं सफलं भवति यस्य अधिकाधिकसम्बन्धः मानवजीवनस्य प्रतिदिनं घटितघटनाभिः भवति। रङ्गमंचः कस्याः कलायाः नाम नास्ति, अपितु समस्तललितकलाणां समूहोऽस्ति। यस्मिन् काव्य-संगीत चित्रकला-स्थापत्य-इत्यादिसर्वकलाणां सन्निवेशः भवति।¹⁹ रङ्गमंचः सामाजिक जीवनस्य दर्पणमस्ति। असौ सामाजिकघटनानां प्रस्तौता अपि अस्ति। आधुनिकयुगे सामाजिक समस्याम् उद्धर्तुं रङ्गमंचः सुष्ठु साधनोऽस्ति। संस्कृतस्य अधिकतरनाटकानि रङ्गमंचे प्रस्तुतानि। कोऽपि नाटककारः तत्कालीनपरिस्थितेरनुसारं नाटकं रचयति। रङ्गमंचः तान् सर्वान् प्रस्तौति।

नाटकं यदा रङ्गमंचे प्रस्तूयते तदा असौ सूत्ररूपेण बद्धं भवति। यस्मिन् नाटककार-सूत्रधार-रङ्गकर्मी-अभिनेता-दर्शकाः, सर्वे सम्मिलिताः भवन्ति। यस्मिन् एकोऽपि चेत् त्रुटिः करोति, तदा नाटकम् असफलं भवितुं शक्नोति। रङ्गसङ्केतानाम् अभावेन नाटके परिवर्तनं कर्तुं शक्नुमः। भाषा-सम्वाद-मंचीयप्रस्तुतेः यदा उचितसामंजस्य न भवति तदा परिवर्तनस्य आवश्यकता भवति अथवा रङ्गमंचस्य आवश्यकतानुसारं तस्मिन् योजनमपि कर्तुं शक्नुमः।

नाटककारस्य दृश्यात्मकपरिकल्पना मनसः अमूर्तरङ्गमंचेन अवतीर्य नाटकप्रदर्शनसमये मंचे मूर्तरूपं गृह्यणाति। नाटके दृश्यानां परिवर्तनं बहुवारं भवति, परन्तु रङ्गमंचः सदैव एकदृशमेव भवति।

नाट्यशास्त्रानुसारं रङ्गमंचस्य सज्जा काष्ठकर्मण भवति। यस्मिन् गज-सर्पादिनाम् आकृत्याः भवेयुः। काष्ठे नानाप्रकाराणां वेदिकाः शोभितचित्राणि, कपोतानां छत्रम् इत्यादिकम् अपेक्षितं भवति।²⁰ काष्ठकर्मस्य पश्चात् चित्रकलायाः स्थानमस्ति। पूर्वं भित्तेः श्वेतचूर्णस्य लेपनं कृत्वा तस्मिन् स्त्रीपुरुषाणां चित्राणि, लताबन्धानि, विविधक्रीडानां चित्राणि अङ्कितानि भवेयुः।²¹ रङ्गमंचसज्जायै जवनिकायाः प्रयोगं क्रियते। असौ विविधवर्णयुक्ता भवेत्। ध्वनिप्रयोगेण दृश्यपरिवर्तनाय सहायतां



भवति। रङ्गमंचः युगाविशेषस्य जनरूचिः तथा च तत्कालीनार्थिकव्यवस्थाधारेण निर्मितं भवति। विभिन्नदेशानां नाटकानां तथा रङ्गमंचानां ऐतिहासिकाध्ययेन स्पष्टं भवति यत् यथावसरं नाटककाराः तथा च रङ्गमंचस्य उन्नायकाः स्वकीय सामाजिकोत्तरदायित्वानां पालनं कृतवन्तः।²²

रङ्गमंचः समूहगतजीवनस्य पर्यायं प्रतीयते। अस्य निर्माणं, सज्जा तथा अन्याः क्रियाकलापाः सामूहिकप्रयासमुपरि एव अवलम्बिताः सन्ति। एतदतिरिच्य सामान्यविशिष्टपरिस्थितिषु रङ्गमंचस्य आयोजनम् एतदर्थं क्रियते यत् सः सामूहिकचेतनां जागरणाय सहायको भवति।²³ नाटकीयरङ्गमंचेन सामूहिक – भावनायाः प्रचारे अत्यधिकसहायता मिलति। तस्मिन् आचार-विचाराणां प्रदर्शनम् एकस्मिन् एव स्थले भवति। प्रत्यक्षकला तथा मनोरंजनस्य साधनेन परिपूर्णं सति दर्शकानां तस्मिन् विशेषा रूचिः भवति। अतः नाटकं सामूहिक भावनायाः प्रेरणया निर्मितं भवति तथा च समूहगतप्रवृत्तिं विकसति परिष्करोति च। रङ्गमंचीयता नाटकस्य प्रधानलक्षणमस्ति। रङ्गमंचस्य विशेषता अस्ति यत् असौ समयस्य अल्पतायामपि अधिकानां घटनानां प्रत्यक्षीकरणं कारयति। नाटकीयानुकृतेः स्वभाविकतायाः तथा वास्तविकतायाश्च विकासे सर्वाधिकमहत्त्वपूर्णस्थानं रङ्गमंचस्य एवास्ति।

आधुनिककाले मुख्यरूपेण समस्यानाटकेषु, रङ्गमंचे अधिकाधिकस्वभाविक-घटनानामेवं दृश्यानाम् प्रदर्शनस्य आग्रहमस्ति। अस्य ध्यानम् अवश्यमेव कर्तव्यं यत्,— यथा अस्माकं नित्यजीवनं भवेत् तथा एव रङ्गमंचीयजीवनं भवेत्। तयोः परस्परं सम्बन्धः अवश्यमेव भवेताम्। रङ्गमंचस्य माध्यमेन वयं स्वकीयविषयाणां तथा सिद्धान्तानाम् अधिकाधिकप्रदर्शनं कर्तुं शक्नुमः।

अस्मिन् शोधपत्रे रङ्गमंचस्य संक्षिप्तरूपेण सैद्धान्तिकवर्णनं कृतमस्ति। असौ शोधपत्रं शोधार्थिनां तथा रङ्गमंचीयजिज्ञासूनां कृते रङ्गमंचस्य अल्परूपेणावबोधनाय सहायकं भविष्यति, इति अहं मन्ये। अस्मिन् शोधपत्रे रङ्गमंचस्य स्थितेः यथासम्भवं वर्णनं कृतमस्ति। यत् असौ रङ्गमंचीयनियमानुसारं सदैव ग्राह्यम् अस्ति।



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THE SIGNIFICANCE OF OPERATE TRAINING IN THE HOTEL INDUSTRY- A CASE STUDY

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Introduction

Staff training is chosen to be the topic of this thesis, because understanding Human Resource Management extensively in business brings unimaginable benefits and due to the author's personal interests in this subject after finishing her practical training. Moreover, this is also a great opportunity to get to know Human Resource Management in a deeper perspective, although Staff Training is just a small part of Human Resource Management, it is really interesting to take a close look at it. The world is changing rapidly in everyday life. In order to be able to catch up the paces, making the best use of the personnel's skills became of tremendous significance in the businesses, therefore Human Resource Management needs to be carefully considered and implemented. It should be able to deal with the effects of the changing world of work, which means that people who work in the Human Resources Department have to be aware of the implications of globalization, technology changes, workforce diversity, labor shortages, changing skill requirements, the contingent workforce, decentralized work sites, and employee involvement etc. Because when either one aspect of above changes in the working process, it could change the whole business operation, therefore, it is important for the Human Resource Department to be prepared and to take control.



Aim of the study

This thesis is going to present to the readers a thought of what is HRM, Staff Training and the importance of staff training in the hotel industry, and at the same time, a research is conducted on staff training in the case hotel where the author did the practical training, in the research opinions about staff training in the hotel from employees in different positions will be obtained, front line staff, supervisor, manager etc. In the conclusion part the author will briefly go through the whole thesis study, discuss about the research study results and according to the results got from the research study, comments and suggestions about the employees attitude towards the staff training and how could the Human Resource Department do to improve the trainings as well as to get better results from the training will be provided.

Sample Selection

The study involved four star hotel properties. Three properties were part of nationally recognized chain hotels, and one was independently owned. While one was a limited service, three others were full-service properties. The first full-service hotel had 191 rooms; the second had 140 guestrooms, while the third property had 116 rooms. The last property which had 40 rooms was limited service. Questionnaires were distributed to all employees. The survey participants were employed in several departments of the hotel, including but not limited to catering, front desk, maintenance, and housekeeping

Data Analysis

The eight research questions were analyzed using the following statistical procedures: An independent t Test was used to determine if there was a difference in commitment levels between males and females,



as well as if there was a connection to education level and commitment. An independent t test was also used to determine connections between past related work experience and job commitment. A Pearson correlation was used to determine the relationship between age and commitment, and to determine if duration of employment at the current job was related to commitment. Multiple regressions were run to test the relationship between types of training received and an employee's training satisfaction. A Pearson correlation was used to determine the relationship between an employee's length of training and their training satisfaction. A Pearson correlation was also used to determine the relationship between follow up training and training satisfaction. Simple Linear Regression was used to study the relationship between an employee's training satisfaction and their overall job satisfaction. Multiple regressions were used to determine if incentives that may or may not have been received by an employee affected their job satisfaction. Multiple regression was used to determine the relationship between benefits received and job satisfaction as well. Simple linear regression was used to determine the relationship between an employee's overall job satisfaction and their overall job commitment.

Research Methodology

The research methods of this topic will be discussed, how the data is collected, the contents of the research will also be talked about in this chapter. In the final part there will be a validity and reliability analysis

Research Methods

There are two kinds of research methods, qualitative research and quantitative research, in the empirical part of this topic; both of the research methods are used. Quantitative research was done by sending questionnaires to the employees to the Food & Beverage department



employees; and qualitative research—personal interviews with the Assistant Human Resource Manager, Training Manager and supervisor of the Chennai restaurant.

“Quantitative research allows the researcher to familiarize him/herself with the problem or concept to be studied, and perhaps generate hypotheses to be tested.” Quantitative research seeks to quantify the collected data for analyzing, and find a final course of the action. It is based on statistics, the objects are large number of respondents and it is structured. In this thesis quantitative method is used to gather the information from the employees of F&B department about their attitudes towards the hotel s staff training.

Qualitative research forms a major role in supporting marketing decision-making, primarily as an exploratory design but also as a descriptive design.” Meaning that by using qualitative research, “why” instead of “how” will be found out. Qualitative Research focuses on developing an initial understanding out of the research, and it is not based on statistics. Qualitative can be used alone or to support quantitative research.

Data Collection

The data of this study is the primary data coming from the survey and the interviews. All the employees in Food & Beverage department are the sample group of this study, the questionnaire designed is about the staff training system in the chosen hotel. The questions on the questionnaire can be divided into two parts, the first part is about the respondent s basic information, their gender, age, previous hospitality education, previous hotel working experience etc. and the second part is about the training they had in the hotel, how they felt about the training, and what opinions they have about the training system, how do they realize the importance



of the organized training. The total collecting time was two weeks from 10.11.2013 till 25.11.2013, because questionnaires were handed and returned to the author through e-mail, it took more time than expected to get all answers. There are 96 questionnaires issued to the Food and Beverage department including Chinese restaurant, western restaurant, kitchens, banquet, bar and pastry, 73 were answered. The response rate is 69.7%.

The interviews were done through telephone, individually with the Assistant Manager from Human Resource department, Training Manager and the original supervisor of the chennai restaurant. They are specialists of staff training, and their opinions represent different views from different positions. The interviews were done on different dates, which are 16 Nov, 2013 with Assistant Human Resource Manager and Training Manager, 29 Nov, 2013 with the supervisor.

Limitations of the Study

The present study has a number of limitations. One is that the research focuses on Non governmental workplaces, focusing on a small number of no more than six volunteering organisations in both four star and five star. Access to these organisations was gained via the researcher's personal networks; the findings of the study may therefore have some limitations.

Results and Discussion

Totally 96 questionnaires were sent out, and 73 of them have been returned by the respondents, there are 42 male respondents and 31 female respondents accordingly. The ratio of male to female is approximately 3:2. In the Food and Beverage department, south Indian kitchen and North Indian kitchen have mainly male at work, which is the reason of the difference in gender. Result shows that the main age group in Food and



Beverage department is between 18 and 25; the rest 13 respondents are in the age of 26 to 35. Since hotel and restaurant business stands in a competitive and fast changing environment, young employees from 18 to 35 are mostly chosen to work in this industry as they can adjust to new environments quickly and easily. The HR department should consider the age groups when conducting training, young workers do not like theory too much but more interesting information is accepted by them, on the other hand, employees who are between 26 and 35 years old can accept both. By considering this aspect, the effectiveness of trainings could be improved.

the respondents, more than half of the respondents have 0 to 2 years of related working experience, which indicates that they need more training to be more skillful and professional than other respondents do, because they are less experienced and other respondents have received more training throughout their past working life.

The main position group in F&B department is "full time workers", the other 9 respondents belong to higher level of positions Employees are at higher level of positions received more training than full time worker did, more attention should be paid to full time workers because they need to have more trainings to improve their abilities and skills at work in order to reach a higher level of position When analyzing the question of previous hotel working experience with employees positions, we can find out that normal full-time workers have less experience, some of them have just graduated from college, and some of them do not have a related education. Employees like supervisors, managers have more previous experience. As we discussed above, full time workers should have more training to improve themselves in order to reach a higher level, and they should be earnestly considered when trainings are conducted



respondents have worked in the hotel for 0 - 12 months; they received less. Training compared with the rest 21 respondents who have been working in Chennai Star Hotel for more than one year. This question aims to look for persons who are responsible for the trainings held in Chennai star hotels 44 of all respondents receive trainings which held by trainers and supervisors, other 29 respondents are trained by the trainers.

Importance of training is 33 respondents chose "Motivates employees and helps them to perform better" as the most important factor of staff training. Then for the second importance 25 respondents chose "Management team can evaluate employees performance" and "Motivates employees and helps them to perform better". 11 respondents thought trainings "Helps organizational development" is the third most important reason of trainings. Except one respondent considered training not important, 16 participants chose "Encourages self-development & self-confidence" as the least important reason. The results let us know that employees do not consider trainings as a tool for self-development or for building up self-confidence, but the trainings are important that they motivate employees to perform better in competition and provide a channel for communication between management and employees as well as management can evaluate the training better in order to set appropriate goals for future trainings and make the best use what employees are good at

By knowing the satisfaction of employees towards staff trainings helps Human Resource department to adjust the trainings which will lead to preferable results the results explain us that over half of the respondents were feeling very satisfied with the organized trainings, other 25 participants do not feel the trainings are at their best favorites.



Conclusion

Human Resource Management has been enormously important in the hotel business, when dealing with people; the basic requirement for the enterprise is to have good internal relationships between management and employees. Favorable Human Resource Management ensures business growth, and staff training is the most effective way to develop employees in order to have a good HRM. Therefore, staff training is concerned a lot in nowadays businesses. Staff training is an essential management tool, it has many benefits, such as shortens the study time, increases work effectiveness, helps employees and the company itself to compete in the fast changing environment, reduces damages and wastage. Staff training is a way of motivating employees, upgrading their skills, expanding their knowledge, preparing employees for self-development. From both quantitative research and qualitative research we know that the trainings are very important and should be carefully considered, but in Chennai Star Hotel there are some existing problems with trainings.

The outcomes of training are not as expected; because some employees are not aware of the importance of training and what they will benefit from staff training so that trainings are regarded as normal courses to participate.

There is a lack of good communication between management and employees, when employees have complaints about trainings for instance the trainings are time consuming, but management team does not know, so that the trainings would never be improved until they communicate.

About one thirds of the employees felt they did not get self-development and build self-confidence after the training, which did not match the purpose of the trainings.



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RURAL NON-FARM SECTOR - IMPACT ON POVERTY ALLEVIATIONS- A CASE STUDY OF NORTH COASTAL ANDHRA PRADESH

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Introduction:

Rural non-farm sector has gained importance for its potential of employment generation and poverty alleviation in rural areas. There is large section of our society which has remained poor due to lesser accessibility of employment opportunities and non-farm sector is the area where employment can be given to people of this section with comparatively low level of investment and skill. As a result the issue has been a subject of analysis by the scholars. The employment status of socially disadvantaged groups like scheduled castes, scheduled tribes, and OBCs in non-farm sector has been examined by many scholars. The prominent among them are (unni 1991 and Benerjee 1989), (Sharma and Sabarwal 2005), (Thorat 1993, Thorat and Sabarwal 2005). As is well known that many of the non-farm activities are traditional, being carried out exclusively by the socially disadvantaged groups in yajmani system. However, the employment and earnings in this system were limited. With the change of time, the yajmani system has become redundant. However, due to traditional family occupations, a large number of socially disadvantaged people are still dependent on non-farm activities for their sustenance.

Rural non-farm sector (RINFS) plays an important role in the process of economic growth and structural transformation of rural economy.



Rural non-farm employment is considered to be particularly important to the landless and small and marginal farmers. It was suggested that income from rural households, in contrast with its 20-25 percent share of employment (Hazell & Hagblade 1991). It was also argued, based on NCAER data, they argued that the higher income than employment share provided greater returns to labour in non-farm employment or extensive part time and seasonal non-farm activities which were not captured in the employment statistics. It was also argued, based on NCAER data, that the proportion of non-farm income to rural households was increased from 20 to 27 percent between 1971-72 and 1981-82, while the share of agricultural income fell from 60 to 53 percent (Fisher et.al 1977). It was emphasized that non-farm employment is particularly important to small and marginal farmers, as well as the landless, which cannot derive sufficient income in agricultural sector, and also find the sector to be an important safety net to rural households to spend between 20 to 50 percent of their working days on non-farm activities (Walker & Rayan 1990). The growth of real percapita non-agricultural output can have a significant impact in reducing rural poverty if growth exceeded its usual trend. The scholars argued that raising non-agricultural income can also increase inequality, as more well endowed benefit from the transition into more remunerative activities of non-farm sector than poorer groups (Dutta & Ravallion 1996 and Ravallion 2000). Through a case study in Punjab it was found that rural non-farm sector has emerged as a major source of employment, engaging 57 percent of the male and 82.5 percent of the female workers (Vata & Garg 2008). They further stated that a relatively larger proportion of rural households were deriving their income from rural non-farm sector compared to the farm sector. Not only that almost 70 percent of the rural households has access to rural non-farm income but for almost 51 percent of the households,



it was the major source of their income (Chaddha 1993 and Sen 1994). The size and structure of rural non-farm sector can be measured in terms of (a) number and size of establishment (b) income and earnings and (c) employment.

Methodology:

The study is based primarily on the empirical data collected through the field survey. The field survey was conducted in two districts Visakhapatnam and Srikakulam of the North coastal Andhra Pradesh. Besides collection and analysis of primary data through field survey. Secondary data and pertinent literature was also compiled from published and documented sources. For the purpose of primary data collection within the two districts; one having the highest employment in rural non-farm sector and other having the lowest employment in rural non-farm sector, as per 2001 Census data, were selected. In each of the two districts, two blocks have been selected on the same criteria. Further, in consultation with the Block Development Officials of the sample blocks, two villages from each block, having sizeable number of non-farm activities have been selected randomly. Within each sample village, listing of all the household was prepared on the basis of household's main source of employment. Thereafter, thirty households who were engaged in non-farm activities have selected randomly on the basis of 'Tables of Random Number's for primary data collection in each sample village. Thus, the sample size of the study consisted of one region, two districts, four blocks, eight villages and two hundred eighty (200) households.

On the basis of our survey conducted in four villages of Visakhapatnam district, it became evident that a total of twenty (20) different types of rural non-farm activities were being undertaken. The



activities ranged from manufacturing, services and various types of tertiary activities. Among them major activities were small eateries, general shops, electronic shops, basket making, tailoring, vegetable vendoring, rickshaw pullers, pottery, leather works, barber shops, other type of service activities drivers, construction, flour mill, and carpentry and bangle shops.

In Srikakulam district, field work was also carried in four villages which have revealed that there were twenty (20) different types of rural non-farm activities in which people were found to be engaged. The major rural non-farm activities were construction, tailoring, general shops, carpentry, flour and rice mills, pan tea shops, cycle repairs, barber shops, electronic shops, vegetable vendors and service related activities like drivers, washer men and gold smithy.

Average Employment Days in Non-Farm Activities:

Average annual employment days per family and hired worker have been worked out in Table – 1. The average employment days were calculate on the basis of primary data collected from the field in both the districts. The analysis has indicated that the rural non-farm activities provided average employment of 250 days in a year considering all the non-farm activities in Visakhapatnam district. This situation represented the fact pointed out about that rural non-farm activities were providing substantial employment to the persons engaged in these activities. In case of family workers, average employment days have been estimated to be 228 days and in case of hired worker 136 days in Visakhapatnam district. There were certain activities in Visakhapatnam which provided substantial days of employment to hired workers as well. Such activities were basketry, flour mill, general shop, leather work, tailoring, washing of clothes, service, cement shop and hotel work.



In Srikakulam district rural non-farm activities provide employment of 217 days in a year. The family workers reported to have got the employment of 184 days while hired workers got employment of 113 days. The activities which provided substantial days of employment in Srikakulam where the barber shop, pan-tea shop, tailoring, vegetable vendor , washing of clothes, cycle shop, electronic shop, hotel works, mini rice mill and construction. The activities which provided substantial days of employment in Srikakulam district where the leather works, tailoring, electronic shop, hotel works, mini rice mill, driving etc.



Table: 1 Employment Days in Non-Farm Sector in Sample Districts

Activity	Average Number of employment Days	Average Number of Employment Days of Family Workers	Average Number of Employment Days of Hired Workers
VISAKHAPATNAM			
Bangle shop	217	217	0
Barber	280	190	160
Basketry	279	270	310
Blacksmith	182	236	0
Carpentry	190	268	0
Pan, tea	246	220	114
Flour mill	190	121	230
General shop	256	160	210
Leather work	235	270	210
Pottery	241	241	0
Tailoring	317	303	320
Vegetable vendor	280	235	144
Washer man	285	285	285
rickshaw puller	309	309	0
Cement shop	336	330	336
Cycle repairing	289	217	0
Electronic shop	180	103	0
Hotel worker	270	239	289
Driver	184	120	115
Construction	227	235	0
Total	250	228	136
SRIKAKULAM			
Barber	260	232	178
Basketry	168	160	0
Carpentry	180	180	148
Pan, tea	245	235	89
Flour mill	180	180	120
General shop	213	189	0
Leather work	189	185	185
Tailoring	280	226	187
Vegetable vendor	260	260	0
Washer man	225	225	0
Rickshaw puller	250	250	0
Cement shop	220	220	0
Cycle repairing	180	180	108
Electronic shop	200	189	273
Hotel works	250	199	325
Mini rice mill	206	153	221
Driver	300	0	300
Goldsmith	125	125	125
Construction	240	104	0
Fertilizer	180	180	0
Total	217	184	113



Income from non-farm activities:

In Table-2 activity-wise gross income of rural non-farm activities was calculated. Similarly the net income was also calculated after deducting paid out cost which represented the expenditure incurred during performance of the activity. In Visakhapatnam district the gross income was estimated to be Rs. 23,382 taking into account all the activities. The paid out cost was Rs. 8,714. Thus, the net income was Rs. 19,018 per unit in case of all the activities. There were activities like cement shop, construction, electronic shop and services which provided substantial net income to entrepreneurs in Visakhapatnam district.

Table: 2 Activity-wise Gross and Net Income per Rural Non-Farm Activity: Visakhapatnam District

Activity	PER UNIT (Rs.)		
	Gross income	Paid out cost	Net income
Bangle shop	21000	4600	16400
Barber	17125	3625	13500
Basketry	22733	6453	16280
Blacksmith	24725	7515	17210
Carpentry	21600	7200	14400
Pan, Tea shop	15025	4716	10309
Flour mill	32000	17067	14933
General shop	22891	11055	11836
Leather work	27286	14315	12971
Pottery	18500	6667	11833
Tailoring	23700	7926	15774
Vegetable vendor	22400	12340	10060
Washer man	10000	3800	6200
Rickshaw puller	22750	850	15900
Cement shop	50000	30000	20000
cycle repairing	18750	7225	11525
Electronic shop	29000	9333	19667
Hotel worker	23530	9170	14360
Driver	18000	4000	14000
Construction	26632	6434	20198
Total	23382	8714	19018



In Srikakulam district, gross income was estimated to be Rs. 23,912 and paid out cost was Rs. 9,465. Thus, the net income was Rs. 14,448 which was relatively lesser to that of the net income obtained in Visakhapatnam district. In Srikakulam district, Goldsmith, mini rice mill, Carpentry, Driver, Construction and Flour mill provided substantial income to the persons engaged in these activities. (Table-3)

Table: 3 Activity-wise Gross and Net Income per Rural Non-Farm Activity: Srikakulam District

Activity	Per unit (rs)		
	Gross income	Paid out cost	Net income
Barber	15400	4200	11200
Blacksmith	20000	10000	10000
Carpentry	23875	6325	17550
Pan. Tea shop	17067	6417	11250
Flour mill	23286	6715	16575
General shop	29860	17050	12810
Leather work	18000	2000	16000
Tailoring	24052	10233	13819
Vegetable vendor	22667	10000	12667
Washer man	10333	2333	8000
Rickshaw puller	10000	3000	7000
Cement shop	15000	5000	10000
Cycle repairing	14083	5000	9083
Electronic shop	29500	13250	16250
Hotel works	21600	10000	11600
Mini rice mill	55429	29143	26286
Driver	31333	6666	24667
Goldsmith	49000	25000	24000
Construction	17167	1961	15206
Fertilizer	30000	15000	15000
Total	23912	9465	14448

Distribution of income:

The pattern of income distribution among households engaged in different rural non-farm activities has been represented in Table-5 which shows that near about half of the total households were in the income



bracket of Rs. 10,000 to Rs. 20,000. It was further evident that as the income slab increased, the percentage of households in each group decreased except in the income range Rs. 50,000 and above in which percentage of households were marginally higher. The genesis of analysis has pointed out that the majority of the households earned income in the range of Rs. 10,000 to Rs. 40,000 per annum.

Table: 5 Percentage Distribution of Rural Non-Farm Households in Different Income Groups

Income group	Percentage
< 10,000	18.97
10,000 – 20,000	46.41
20,000 – 30,000	16.37
30,000 – 40,000	7.29
40,000 – 50,000	4.59
50,000 and above	6.37
Total	100.00

Several activities were carried out in the gamut of rural non-farm sector. The primary data collected in the sample districts has revealed that a total of 20 different types of rural non-farm activities were carried out in Visakhapatnam district and 20 rural non-farm activities were carried out in Srikakulam district. The different types of rural non-farm activities can be club as (i) manufacturing (ii) trading (iii) construction (iv) transport and (v) services. The classification is based on the services rendered by each activity. The income earned from different rural non-farm activities considering both the district together has been shown in Table- 7. The table showed that the contribution of manufacturing activities in total income earned from all activities was highest while services were the next in the contribution of total income in different non-farm activities. The share of other sub-sector within the rural non-farm sector was around 10 percent in total income earned from the rural non-farm activities (Table-6).



Table: 6 Contribution of different rural non-farm activities in households

Activities	Percentage
Manufacturing	39.41
Trading	12.31
Construction	13.65
Transport	12.12
Services	22.51
All Activities	100.00

Share of Farm and Non-Farm Income:

On the basis of sample data, contribution of farm and non-farm income in total income households in Visakhapatnam and Srikakulam districts was worked out in Table – 7. It was evident that at the combined level of both the districts, contribution of non-farm sector in gross income of households was around 61 percent while of farm sector contributed was 39 percent. At the district level, contribution of non-farm sector in gross income of households in Visakhapatnam district was 56 percent while of the farm sector it was 44 percent. In Srikakulam district, non-farm sector contributed 66 percent in total income of households versus 34 percent contribution came from farm sector. Thus, the non-farm sector was found to be the main contributor in the income of households in the North Coastal region of Andhra Pradesh and share of this sector in total income was comparatively higher in Visakhapatnam district than the Srikakulam district.

Table : 7 Contribution of farm and non-farm sector in total income of households

Activity	Visakhapatnam	Srikakulam	Total
Farm Sector	43.74	33.80	38.77
Non-Farm Sector	56.26	66.20	61.23
Total	100	100	100



Conclusion: It may be concluded that rural non-farm sector was contributing significantly in rural employment and income generation in the North Coastal region of Andhra Pradesh. The non-farm activities were not only confined to traditional village industries, which were vanishing in many areas. The existing type of rural non-farm activities comprises of a highly diversified set of activities ranging across the primary, secondary and tertiary sectors. Thus, the importance of rural non-farm sector was paramount and its role in reducing poverty is certainly significant.

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PREDICTION AND DETERMINANTS OF LOAN DEFAULT; USING LOGISTIC REGRESSION ANALYSIS

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1. Introduction

A mortgage loan is a loan secured by real property through the use of a mortgage note which evidences the existence of the loan and the encumbrance of that realty through the granting of a mortgage which secures the loan. However, the word mortgage alone, in everyday usage, is most often used to mean mortgage loan.

According to Anglo-American property law, a mortgage occurs when an owner (usually of a fee simple interest in realty) pledges his or her right to the property as security or collateral for a loan. Therefore, a mortgage is an encumbrance on the right to the property just as an easement would be, but because most mortgages occur as a condition for new loan money, the word mortgage has become the generic term for a loan secured by such real property. The borrower is declared as defaulter and the loan is said to be 'in default', when he/she is not able to repay the loan or interest amount.

A mortgage default is a situation in which someone is not making payments on his or her mortgage, and the loan is considered to be "in default," meaning that the agency which holds the note choose to take over the property. Defaulting on a mortgage result in the loss of a piece of real estate, and it should be avoided at all costs. Even if the property is not lost to the bank, a mortgage default will drag down a credit score significantly, making it harder to negotiate with the bank or to secure credit for other loans in the future.



A mortgage is issued along with a monthly due date for payments is usually specified. Many mortgages include a grace period of one to two weeks, meaning that payments sent during the grace period are considered on time. After the grace period has elapsed, however, late fees start to be levied. If more than 30 days after the due date go by, the mortgage is considered to be in default. Once the bank determines that 30 days has elapsed, it sends a notice of mortgage default to a credit agency, impacting the credit score immediately. The bank usually retains the services of a credit collection agency in an attempt to get the homeowner's past due payments within weeks time. This adds to the fees associated with mortgage default. Many banks also insists on a full payment including late fees and collection fees to bring the homeowner current, and they do not accept partial mortgage payments when the mortgage is in default.

The bank sends a notice of mortgage default to the homeowner within 60 to 90 days of the determination that the mortgage has defaulted. This is the first step in foreclosure proceedings, giving the property owner a chance to make up the missed payments immediately and in full, or to risk having the property taken over by the bank and sold at auction. The bank also be oblige to post a public notice about the foreclosure, and the property owner have a chance to ***buy the property back during the foreclosure auction***, if he or she muster up the funds in cash.

Some people choose to default on their mortgages and simply walk away, deciding that the negative impact on their credit scores is better than sinking any more equity into the home. This is most common in areas where property values have declined radically; leaving people with loans which are larger than their homes are worth. Other people may try to sell their homes before their mortgages go into default so that they wipe the slate and start over again.



Indian Mortgage market scenario:

India Mortgage Market is one of the largest divisions in the banking financial services and insurance sector in India. The India Mortgage Market was previously known as the Indian housing finance industry. At present the total worth of the India Mortgage Market is nearly US \$ 18 billion. The gross domestic product to mortgage ratio in India is very low in comparison to other developed countries. The ratio in the foreign countries ranges from 25% to 60% whereas in India the ratio is 2.5%. The India Mortgage Market is showing fast growth in the past few years. The foremost players in this sector are the finance corporation but presently the commercial banks are also started playing an important role in the development and growth of the India Mortgage Market. At present the market leader in the India mortgage market is the Housing Development Finance Corporation (HDFC), with the State Bank of India (SBI) following the lead. Mortgage defaults are widely seen as costly, which has led to both academic and policy discussions about the reduction of default rates. For instance, in the U.S., Qualified Residential Mortgage rules proposed by regulators make higher down payments necessary to obtain more favorable interest rates. Critics argue that these rules could have significant negative effects on the homeownership rate. Others have proposed to allow mortgage creditors to take defaulters' assets or income (Feldstein, 2008). The findings in this paper shed light on the possible effects of such mortgage default prevention policies (IMF, 2011) describes the utilization of these policies across countries.

2. Review of literature

Related to borrowers profile

Borrower's age is negatively correlated with the default probability [Capozza et al. (1997); Hakim and Haddad (1999); Jacobson and Roszbach



(2003); Cairney and Boyle (2004)]. Von Furstenberg and Green (1974) and Avery et al. (2004) in their studies they have assessed local situational factors as factors of default risk. They found that inclusion of a situational factor like the age of the borrower improves the performance of the scoring models. Orla and Tudela (2005) found that persistence in mortgage payment problems was greater among households in which the head's age was 35 years old, or over than it was among households headed by younger individuals. The younger households are more capable of getting out of problems than those aged 35 or over. Kumar (2010) found that there is no significance between the age of the borrower and mortgage defaults. Von Furstenberg and Green (1974), Avery et al. (2004) in their studies they have assessed local situational factors as factors of default risk. They found that inclusion of situational factor like marital status of borrower improves the performance of the scoring models. Cairney and Boyle (2004) showed that the marital status (single, widowed, or divorced) was significantly positively correlated with the default risk of credit loans. Jacobson and Roszbach (2003) indicated that the applicant's gender was significantly negatively correlated with the unsecured loan default. Education level is significantly negatively correlated with the mortgage loan default [Liu and Lee (1997); Cairney and Boyle (2004)]. Stansell and Millar (1976); Vandell (1978); Ingram and Frazier (1982) found that payment-to-income ratio is positively correlated with the probability of default i.e. higher the payment to income ratio, greater is the default risk. Clauretie (1987) has also argued that other non-equity factor like sources of income play a larger role in affecting default levels. Income is negatively correlated with the default probability [Capozza et al. (1997); Hakim and Haddad (1999); Cairney and Boyle (2004); Har and Eng (2004)]. While as Jacobson and Roszbach (2003); Teo and Ong (2005) indicated that the annual income from wages was significantly positively correlated with the unsecured loan default.



Related to Loan Contents

Clauretie (1987) has argued that other non-equity factor like property value played a large role in affecting default levels. The default imposes personal costs on borrowers that include limits on occupational and credit opportunities, social stigma and damage to reputation (Kau, Keenan and Kim, (1993) and Vandell and Thibodeau, (1985)). The costs exceed the absolute value of negative equity. The borrower will not default when Paul Bennett et al. (1997) found that the structural change in the mortgage market had increased homeowners' propensity to refinance. Bajari et al. (2008) studied empirically the relative importance of the various drivers behind subprime borrower's decision to default. They emphasize the role of the nationwide decrease in home prices as the main driver of default. Foote et al. (2008) examined homeowners in Massachusetts who had negative home equity during the early 1990s and found that fewer than 10% of these owners eventually lost their home to foreclosure. Lee (2002) has identified the 'purpose of purchasing real estate property' is one of the key determinants of default risk. Therefore, when the market price of collateral falls sharply or economic performance becomes much worse, the property frequently is abandoned by the owners thereby limiting their loss. Har and Eng (2004) showed that the use purpose of collateral was negatively correlated with the mortgage loan default. Paul Bennett et al. (1997) found that loan size is negatively correlated with the mortgage defaults. Hakim and Haddad (1999) studied the influences of the borrower's attributes and the loan characteristics on the mortgage loan default using failure-time model. Their results indicated that the loan amount was negatively correlated with the default probability. Campbell and Dietrich (1983) showed that the interest rates significantly explain mortgage prepayment, delinquencies and defaults by using logit model. Har and Eng



(2004) showed that the loan interest rate was significantly positively correlated with the mortgage loan default. Teo and Ong (2005) indicated that the interest rate was significantly negatively correlated with the mortgage loan default. Danny (2008) indicated that any empirical test of the relation between the LTV ratio and the default risk incorporated the interrelationship among the LTV ratio, credit score and interest rate. Smith et al. (1996) found that the default probability was significantly affected by the loan type. Campbell and Dietrich (1983) showed that the LTV ratio explain mortgage prepayment. Lawrence et al. (1992) stated that the default risk was positively correlated with the ratio of loan amount to collateral. Smith et al. (1996) found that the default probability was significantly affected by the loan-to-value (LTV) ratio. Liu and Lee (1997) presented that the LTV ratio were significantly positively correlated with the mortgage loan default. Capozza et al. (1997) indicated that the LTV ratio was an important factor affecting the mortgage loan default. Campbell and Cocco (2010) showed that mortgage default is triggered by negative home equity, which results from declining house prices in a low inflation environment with large mortgage balances outstanding. The level of negative home equity that triggers default depends on the extent to which households are borrowing constrained. High loan-to-value ratios at mortgage origination increase the probability of negative home equity. High loan-to-income (LTI) ratios also increase the probability of default by making borrowing constraints more severe. Interest-only mortgages trade of an increased probability of negative home equity against a relaxation of borrowing constraints.

Related to collateral

Teo and Ong (2005) indicated that the collateral type was significantly positively correlated with the mortgage loan default. Yildiry



Yildirim (2007) found that loans within the same geographical area and property type tend to exhibit correlation in default incidence. Clauretie (1987) has also argued that other non-equity factor like property value played a large role in affecting default levels. The default imposes personal costs on borrowers that include limits on occupational and credit opportunities, social stigma and damage to reputation.

3. Research Methodology

This section includes the statement of the problem, presents arguments for the need for the study, the objectives, data collection, sampling, statistical tools; proposition and the limitations of the study. The description of all these aspects of methodology follows.

Statement of the Problem

In changing economic conditions customers are not able to foresee their income and value of their own property. It is because of the existence of limited sources of information available to them. When the customer income and their property value decreases, it is likely to result in mortgage default. Companies try to maximize their returns in various means of charges on mortgage loan. The increased charges of banks lead to mortgage default. Mortgage default has an additional cost of transaction for both lender as well as borrower. The different factors which are responsible for mortgage default are payment records, the ratio of loan amount to collateral value and the ratio of the borrower's income to expenditure (Lawrence et al. 1992), loan-to-value ratio, length of loan, the fluctuation rate of housing price, unemployment rate, divorce rate, and the borrower's moving frequency (Capozza et al. 1997; Liu and Lee, 1997) percentage of first loan, the loan interest rate, the floor area, and the borrower's credit risk (Har and Eng, 2004) and whether the borrower's house is owned by himself or rented,



the marital status (single, widowed, or divorced), the degree of living pressure, and the borrower's credit risk (Cairney and Boyle, 2004). In effect, the mortgage default is on the rise due to piling up of various reasons in personal risk, loan value and collateral security.

Need for the Study

In this study, researchers have attempted to evaluate three pronged approach of important dimensions which directly or indirectly affect mortgage default. The effects of borrowers' profile, loan value and collateral security on mortgage default are studied. Therefore the present study is an effort to bring an understanding of the existing situation with respect to mortgage default. This study aims to evaluate the procedure that facilitates the existing mortgage loan borrowers and also in time with bank's policy. Also the suggestions take care of customer in order to manage mortgage defaults.

Objectives of the Study

This work aims:

1. To study the impact of borrower's profile on mortgage default.
2. To measure the association of borrower profile, loan value and realty of collateral security on mortgage defaulters' outstanding balance.
3. To assess relationship of loan value, collateral security and outstanding balance.
4. To find out the difference between the present market value of collateral security against outstanding balance of mortgage defaulters.
5. To extrapolate the reason for mortgage default due to socio-economic variables, interest rate, loan schemes, use of loan, secondary finance, loan-to-value ratio and loan-to-income ratio.



Research Design

The study is a descriptive research about mortgage default. A mortgage default is a situation in which borrower is not making payment on his/her loan. The variables used in this study are categorized into three dimensions: borrower profile, loan value and collateral security. Borrower profile includes age, marital status, gender, educational qualification and income of borrower. Loan value includes loan amount, loan amount repaid, outstanding balance, interest rate, loan type, loan-to-value ratio (LTV), loan-to-income ratio (LTI) and purpose of loan. By its side collateral security includes value of security, type of security and secondary finance.

Data Collection Design

The whole study is based on extracted data collected from Jammu and Kashmir Bank Ltd. from secondary sources maintained in bank but not published. The collected data is from those borrowers who have been declared as defaulters from April 2011 up to March 2012. One of the researchers has spent twenty days in the bank in order to understand the problem in depth and to understand suitability and reliability of data. This researcher has recorded the data from the default borrower's file. Details about all the variables for the whole sample size are collected.

Sampling Design

The systematic sampling methods have been adopted to select sample defaulters. The total number of defaulters was 578, out of which 115 is taken as sample. Every fifth borrower was chosen. Due to more variation of data from average value 15 cases of the sample were eliminated in order to maintain proper intervals. The study area is Jammu and Kashmir and sample unit is mortgage defaulters. The study period spread from September 2011 to August 2012. Sample size is calculated based upon the



scale given by Aaker et al. (2009). Co-efficiency of variance for loan-to-value (LTV) has been computed for 30 cases as a pilot study. The computed value is 0.19 and based on this value sample of 99 was taken.

Statistical Design

The researchers have adopted relevant statistical tools for analysis of data describing mortgage loan defaulters. The following are the relevant tools used for analysis of data viz., chi-square, correlation, regression, ANOVA, paired 't' test and logistic regression have been selected for the proper of analysis of data. SPSS 17.0 is used for the analysis of all the above statistical tools and tabulation of processed data.

Propositions

P1: Average amount of default loan is not varying with the loan value, property market value directly and the collateral security, secondary finance, socio-economic variables, marital status, gender and age of both commercial and residential borrowers indirectly.

P2: The amount of default loan is not significantly associated with the loan value, property market value directly and the collateral security, secondary finance, socio-economic variables, marital status, gender and age of both commercial and residential borrowers indirectly.

P3: The amount of default loan has no linear relationship with the loan value, property market value directly and the collateral security, secondary finance, socio-economic variables, marital status, gender and age of both commercial and residential borrowers indirectly.

Limitations of the Study

Bank kept some of borrower's information confidential. The confidential data maintained by banks, especially contact details were not



provided to the researchers. The area of borrower was not available for research and therefore it was difficult to denote the geographic location where there was loan default. Researchers want to study as much data as possible in order to identify replication of results. This was not supported for completion. Electronic softcopy of data was sought by researcher, but it was not permitted to him. The crosscheck of data collection was done by the researcher and not by the bank.

4. Analysis and Interpretation

The dimensions viz. borrowers profile, loan value contents and characteristics of collateral security have been tested for relationship with borrowers outstanding loan balance by applying correlation test. The borrower profile consists of five variables as age, gender, marital status, educational qualification and monthly income of borrower. The value of correlation co-efficient between outstanding balance and the age of the borrower " r " = 0.308 indicates that 30.8% of the variation in outstanding balance is explained by the age of the borrower. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and age at 99% level of confidence. The value of correlation co-efficient between outstanding balance and educational qualification of borrower " r " = -0.088 indicates that 8.8% of the variation in outstanding balance is explained by the age of the borrower. And p value is >0.05 so, there exists a very weak relationship between the outstanding balance and educational qualification at 95% level of confidence. The value of correlation co-efficient between outstanding balance and gender of borrower " r " = 0.196 indicates that 19.6% of the variation in outstanding balance is explained by the age of the borrower. And p value is >0.05 so, there exists a very weak relationship between the outstanding balance and gender at 95% level of confidence. The value of correlation co-efficient between outstanding balance and



marital status " r " = 0.385 indicates that 38.5% of the variation in outstanding balance is explained by the marital status of the borrower. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and marital status of borrower at 99% level of confidence. The value of correlation co-efficient between outstanding balance and monthly income " r " = 0.539 indicates that 53.9% of the variation in outstanding balance is explained by the monthly income of the borrower. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and monthly income of borrower at 99% level of confidence.

The loan content dimension consists of four variables as loan amount, amount repaid, loan-to-value ratio and loan-to-income ratio. The value of correlation co-efficient between outstanding balance and interest rate " r " = 0.424 indicates that 42.4% of the variation in outstanding balance is explained by interest rate. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and interest rate at 99% level of confidence. The value of correlation co-efficient between outstanding balance and type of loan " r " = -0.155 indicates that 15.5% of the variation in outstanding balance is explained by the type of the loan. And p value is >0.05 so, there exists a very weak negative relationship between the outstanding balance and type of loan at 95% level of confidence. The value of correlation co-efficient between outstanding balance and loan amount " r " = 0.847 indicates that 84.7% of the variation in outstanding balance is explained by the loan amount. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and loan amount at 99% level of confidence. The value of correlation co-efficient between outstanding balance and loan amount repaid " r " = 0.036 indicates that 3.6% of the variation in outstanding balance is explained by the loan



amount repaid. And p value is >0.05 so, there exists very weak relationship between the outstanding balance and loan amount repaid at 95% level of confidence. The value of correlation co-efficient between outstanding balance and loan-to-value ratio " r "= 0.557 indicates that 55.7% of the variation in outstanding balance is explained by loan-to-value ratio. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and loan-to-value ratio at 99% level of confidence. The value of correlation co-efficient between outstanding balance and loan-to-income ratio " r "= 0.371 indicates that 37.1% of the variation in outstanding balance is explained by loan-to-income ratio. And p value is <0.01 so, there exists a positive relationship between the outstanding balance and loan-to-income ratio at 99% level of confidence.

The collateral security characteristics consist of three variables as form of security, value of security and secondary finance. The value of correlation co-efficient between outstanding balance and type of security " r "= 0.209 indicates that 20.9% of the variation in outstanding balance is explained by type of security. And p value is <0.05 so, there exists a positive relationship between the outstanding balance and type of security at 95% level of confidence. The value of correlation co-efficient between outstanding balance and value of property " r "= 0.602 indicates that 60.2% of the variation in outstanding balance is explained by value of property. And p value is <0.01 so, there exists a strong positive relationship between the outstanding balance and value of property at 99% level of confidence. The value of correlation co-efficient between outstanding balance and secondary finance " r "= 0.099 indicates that 9.9% of the variation in outstanding balance is explained by secondary finance. And p value is >0.05 so, there exists a very weak relationship between the outstanding balance and secondary finance at 95% level of confidence. The value of correlation



co-efficient between outstanding balance and use of loan " r " = 0.048 indicates that 4.8% of the variation in outstanding balance is explained by use of loan. And p value is >0.05 so, there exists a very weak relationship between the outstanding balance and use of loan at 95% level of confidence. (Table 1)

I. ANOVA Analysis

The variables viz. income, loan amount, LTV, value of collateral security and loan amount repaid has been tested for equality of mean with borrower's outstanding balance by applying ANOVA.

Outstanding Loan Balance Based on Monthly Income

In order to test the group variation in mean scores, a null hypothesis was proposed.

H_0 : Means of outstanding loan balance is not significantly influenced by monthly income.

H_A : Means of outstanding loan balance is significantly influenced by monthly income.

In order to test the hypothesis, ANOVA test has been applied (Table 5). It has been found that F value is 34.536 and the 'p' value for the level of significance is 0.000. As the 'p' value is less than 0.01, it indicates that alternative hypothesis is accepted as outstanding loan balance is significantly influenced by monthly income at 99% level of confidence.

Outstanding Loan Balance Based on Loan Amount

In order to test the group variation in mean scores, a null hypothesis was proposed.



H_0 : Means of outstanding loan balance is not significantly influenced by loan amount.

H_A : Means of outstanding loan balance is significantly influenced by loan amount.

In order to test the hypothesis, ANOVA test has been applied (Table 3). It has been found that F value is 65.503 and the 'p' value for the level of significance is 0.000. As the 'p' value is less than 0.01, it indicates that alternative hypothesis is accepted as outstanding loan balance is significantly influenced by loan amount at 99% level of confidence.

Outstanding Loan Balance Based on Loan Amount Repaid

In order to test the group variation in mean scores, a null hypothesis was proposed.

H_0 : Means of outstanding loan balance is not significantly influenced by loan amount repaid.

H_A : Means of outstanding loan balance is significantly influenced by loan amount repaid.

In order to test the hypothesis, ANOVA test has been applied (Table 3). It has been found that F value is 0.039 and the 'p' value for the level of significance is 0.844. As the 'p' value is greater than 0.05, it indicates that null hypothesis is accepted as outstanding loan balance is not significantly influenced by loan amount repaid at 95% level of confidence.

Outstanding Loan Balance Based on Value of Security

In order to test the group variation in mean scores, a null hypothesis was proposed.



H_0 : Means of outstanding loan balance is not significantly influenced by value of security.

H_A : Means of outstanding loan balance is significantly influenced by value of security.

In order to test the hypothesis, ANOVA test has been applied (Table 3). It has been found that F value is 41.374 and the 'p' value for the level of significance is 0.000. As the 'p' value is less than 0.01, it indicates that alternative hypothesis is accepted as outstanding loan balance is significantly influenced by value of security at 99% level of confidence.

Outstanding Loan Balance Based on Loan-to-Value Ratio (LTV)

In order to test the group variation in mean scores, a null hypothesis was proposed.

H_0 : Means of outstanding loan balance is not significantly influenced by LTV.

H_A : Means of outstanding loan balance is significantly influenced by LTV.

In order to test the hypothesis, ANOVA test has been applied (Table 3). It has been found that F value is 13.471 and the 'p' value for the level of significance is 0.000. As the 'p' value is less than 0.01, it indicates that alternative hypothesis is accepted as outstanding loan balance is significantly influenced by LTV at 99% level of confidence.

II. Logistic Regression

Strength of relationship between outstanding balance with age, income, educational qualification, LTV, interest rate, purpose of loan and secondary finance has been studied.



Accuracy is measured as correctly classified records in the holdout sample.

There are four possible classifications:

1. Prediction of 0 when the holdout sample has a 0 (True Negative/TN)
2. Prediction of 0 when the holdout sample has a 1 (False Negative/FN)
3. Prediction of 1 when the holdout sample has a 0 (False Positive/FP)
4. Prediction of 1 when the holdout sample has a 1 (True Positive/TP)

Precision and recall is calculated as (Table 5)

Precision = $tp / (tp + fp)$

Precision = $49 / (49 + 5) = 0.908$

Recall = $tp / (tp + fn)$

Recall = $49 / (49 + 10) = 0.830$

The percent of correctly classified observations in the holdout sample is referred to the assessed model accuracy. Additional accuracy can be expressed as the model's ability to correctly classify 0, or the ability to correctly classify 1 in the holdout dataset.

The regression model is given as: (Table 6)

*Outstanding balance = 0.258 - 0.91*age - 4.895*Income + 2.618*LTV + Edu*0.377 - 2.405*Interest Rate - 0.915*Loan Amount + 0.684*Purpose of loan + 3.601*Secondary Finance.*

The R square value is 0.643, (Table 4) which means that 64.3% of variation in outstanding balance is due to the variation of LTV, LTI, Income, Loan



amount, Interest rate, age, educational qualification, purpose of loan and secondary finance. The precision of the model is 90.8% and its recall percentage is 83%. The level of significance from table 8 shows that Income (0.000), LTV (0.051) and Secondary finance (0.026) are mainly responsible for mortgage default.

The ROC curves (figure 1 & 2) have been drawn for the outstanding balance above and below the average with age, income, LTV, LTI, educational qualification, interest rate, loan amount, purpose of loan and secondary finance on collateral security. The results shows that the age of the borrower, income of borrower and interest rate are the main factors responsible for mortgage default (Table 6). Income has been main factor in both the cases.

6. Findings

6.1 Impact of borrower profile on Mortgage Loan

Relationship between outstanding balance and borrower's profile

The correlation result shows that outstanding balance has positive relationship with age, which is against the results of Jacobson and Roszbach (2003). The correlation result shows that outstanding balance has positive relationship with marital status which is supported by of Cairney and Boyle (2004). The correlation result shows that outstanding balance has positive relationship with income which is supported by Jacobson and Roszbach (2003). The correlation result shows that outstanding balance has positive relationship with gender which is against the results of Jacobson and Roszbach (2003). While as educational qualification is negatively correlated with outstanding balance which are in line with the results of Liu and Lee (1997), Cairney and Boyle (2004).



6.2 Impact of Loan Value Contents on Mortgage Default

The interest rate shows that higher the interest rate more the defaults. The defaults according to loan scheme are dominated by those borrowers who have opted for term loan. Loan amount borrowed shows that higher loan amount have less defaults compared to the lower loan amounts. Loan amount repaid is dominated by 0-15lacs group.

Relationship between outstanding balance and loan value contents

Correlation between loan value contents and outstanding balance has been studied. The correlation result shows that outstanding balance has positive relationship with loan amount which is against the results of Hakim and Haddad (1999). The correlation result shows that outstanding balance has positive relationship with loan amount which is supported by the study made by Lawrence et al. (1992). The correlation result shows that outstanding balance has positive relationship with LTI which is supported by the results of Campbell and Cocco (2010). The correlation result shows that outstanding balance has positive relationship with loan amount repaid.

Influence of monthly income, loan amount, LTV, value of security and loan amount repaid on mean of outstanding balance amount-ANOVA

Mean and S.D based on outstanding balance and monthly income, loan amount, LTV, loan amount repaid and value of security has been studied. The results show that mean of outstanding balance is significantly influenced by monthly income, loan amount, LTV and Value of security. While as mean of outstanding balance is not significantly influenced by loan amount repaid.



6.3 Impact of characteristics of collateral security on mortgage default

The value of security shows lower the value of property higher the defaults and vice versa. LTV ratio shows that 78% of defaults have LTV value between 0.51-0.75. LTI ratio is dominated by 0.26-0.5 group. The form of security shows that those who has kept "land" as security defaults more. 'Purpose of loan' shows that 48% of defaulters have used loan for business investment. Secondary finance variable shows that 87% of defaulters have not opted for secondary finance.

Relationship between outstanding balance and characteristics of collateral security

Correlation between characteristics of collateral security and outstanding balance has been studied. The correlation result shows that outstanding balance has positive relationship with value of security which is supported by the results of Claurette (1987). The correlation result shows that outstanding balance has positive relationship with form of collateral security which is supported by the results of Teo and Ong (2005). The correlation result shows that outstanding balance has positive relationship with secondary finance.

Logistic Regression findings

Logistic regression results shows that Income, LTV and secondary finance are mainly responsible for mortgage default. While as ROC curves show Age, Income and Interest rate are responsible for mortgage default. In both the cases **Income** has been the factor of loan default.

Suggestions

The study is about mortgage default and the researcher is intending to propose the following suggestions in order to manage mortgage loan accounts in an effective way.



1. There is need for effective evaluation of borrowers profile especially age, marital status and monthly income. Lesser loan amount should be sanctioned to married people with age group of 37-47years and income level of 66-116k.
2. Loan value contents mainly LTV, LTI & interest rate and Characteristics of collateral security especially value of security and form of security land have direct effect on outstanding balance and should be taken care of, at the time of loan agreement. The LTV and LTI ratio should be kept below 0.5 and 0.25 respectively. The loans with interest rate of 9+4.25 should be given preference.
3. Revenue generating securities should be preferred over idle securities.
4. Borrowers whose property value lies in between 11-70lacs group should be sanctioned loan within 4-42lacs group.
5. Interest rate, secondary finance and income should be given more weightage while sanctioning the loan.

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Table 1: Correlation test between borrower's profile, Loan value contents, collateral security and outstanding balance

Variables	Pearson Correlation Coefficient	Sig. (2-Tailed)
Educational qual.	-0.088	0.385
Gender	0.196	0.052
Age	.308**	0.002
Marital Status	.385**	0.000
Income of Borrower	.539**	0.000
Loan Rate	.424**	0.000
Loan Type	-0.155	0.126
Loan amount	.847**	0.000
Amount repaid	0.036	0.361
LTV	.557**	0.000
LTI	.371**	0.000
Collateral Security	.209*	0.038
Property Value	.602**	0.000
Secondary finance	0.099	0.328
Use of loan	0.048	0.636

**correlation is significant at the 0.01 level (2-tailed)

*correlation is significant at the 0.05 level (2-tailed)

Table 2: Descriptive based on outstanding balance

Factors	Outstanding balance groups (lacs)	Mean	Std. Deviation	Std. Error	95% Confidence Interval for	
					Lower Bound	Upper Bound
Monthly Income (k)	4-44	64.77	37.774	4.650	55.49	74.06
	44-84	107.97	24.778	4.380	99.04	116.90
	Total	78.88	39.584	3.909	70.94	86.81
Loan Amount (lacs)	4-44	26.24	16.493	2.030	22.18	30.29
	44-84	55.80	17.895	3.163	49.35	62.26
	Total	35.89	21.882	2.210	31.51	40.28
Loan Amount Repaid (lacs)	4-44	6.92	13.762	1.694	3.54	10.31
	44-84	6.42	5.908	1.044	4.29	8.55
	Total	6.76	11.753	1.187	4.40	9.12
Value of Collateral Security (lacs)	4-44	46.86	30.203	3.718	39.43	54.28
	44-84	84.77	20.154	3.563	77.51	92.04
	Total	59.24	32.565	3.290	52.71	65.77
LTV	4-44	.5720	.10440	.01285	.5463	.5976
	44-84	.6572	.11456	.02025	.6159	.6985
	Total	.5998	.11450	.01157	.5768	.6228



Table 3: ANOVA

Factors	Sources of variation	Sum of Squares	Df	Mean Square	F	Sig.
Monthly Income (k)	Between Groups	40211.97	1	40211.9	34.5	.000
	Within Groups	111778.5	96	1164.36		
	Total	151990.5	97			
Loan Amount (lacs)	Between Groups	18838.45	1	18838.4	65.5	.000
	Within Groups	27609.25	96	287.596		
	Total	46447.71	97			
Amount Repaid (lacs)	Between Groups	5.461	1	5.461	.039	.844*
	Within Groups	13393.05	96	139.511		
	Total	13398.51	97			
Value of Collateral Security (lacs)	Between Groups	30981.53	1	30981.5	41.4	.000
	Within Groups	71886.82	96	748.821		
	Total	102868.3	97			
LTV	Between Groups	.157	1	.157	13.5	.000
	Within Groups	1.115	96	.012		
	Total	1.272	97			

Table 4: Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	69.620 ^a	.476	.643

Table 5: Classification table

Classification Table					
	Observed		Predicted		
			Outstanding Balance		Percentage Correct
			0	1	
Step 1	Outstanding Balance	0	35	5	87.5
		1	10	49	83.1
	Overall Percentage				84.8



Table 6: Variables in the Equation

Variables in the Equation							
		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1	Age	-.091	.635	.020	1	.887	.913
	Income	-4.895	1.267	14.928	1	.000	.007
	LTV	2.618	1.340	3.815	1	.051	13.709
	EDU	.377	.645	.341	1	.559	1.458
	Interest	-2.405	1.521	2.501	1	.114	.090
	Loan	-.915	.614	2.218	1	.136	.401
	Purpose	.684	.877	.608	1	.436	1.981
	Second	3.601	1.613	4.986	1	.026	36.647
	Constant	.258	1.570	.027	1	.870	1.294

Figure 1: ROC Curve for values above average of Outstanding Balance

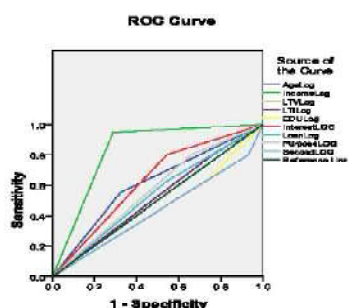
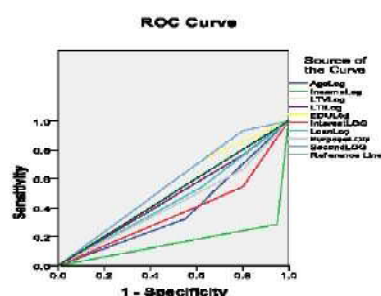


Figure 2: ROC Curve for values below average of Outstanding Balance





SIGNIFICANCE OF THE BUILT HERITAGE OF SRIRANGAM – AN OVERVIEW

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1 INTRODUCTION

The identity of cities and regions is often deeply entangled with the identity of their past. This past is mirrored in its idiosyncratic stock of built heritage. Until the first half of the twentieth century, the definition of heritage was restricted to monuments, archeological sites, and movable heritage collections. With the Venice Charter, the concept of heritage was extended from monuments and sites to include almost the whole built environment. Accordingly, the notion of “value” merited more attention, study and role identification in the justification for conservation and approach to interventions.

In India, traditional cities are developed around the temple at the centre, the markets immediately adjacent. Bordering these public areas are the residential districts. The study area Srirangam is based on the ancient town planning called “Sarvathobhadra”- (HariRao, 1967) The Srirangam temple dominates the town with Vedic people occupying the fringe adjacent to the temple as they served the temples and their settlements called as agraharas mark one of the finest architectural heritage of Tamil Nadu. Srirangam is known for its impregnable agraharas settlements and other old residential buildings dating back to 2nd millennium BC. This unique seven-enclosure temple town has been continuously inhabited

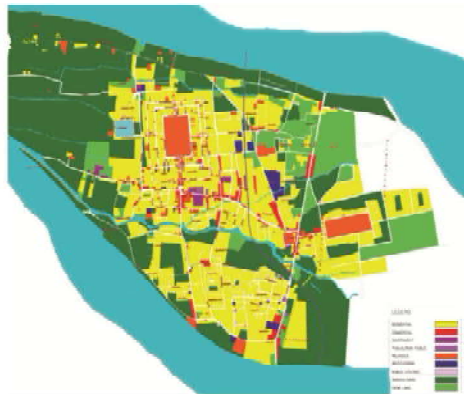


Figure 1 Showing the location and Landuse of Srirangam

for more than 1,300 years. Not only the temples, the houses too bear witness to its past. Some of them even carry century-old inscriptions. Realising the significance of this place, the State government, as early as 1993, declared it a heritage town. Srirangam aspires to be an international destination for its cultural, spiritual, historical, architectural and tourism potential. But, it is losing its charm as the places near temples, gates, etc., have been encroached by commercial establishments, illegal constructions, contemporary buildings and not much concern from government agencies/authorities including people at large.

Heritage is not valued and important old buildings have been systematically destroyed around the town spoiling the heritage precinct of the temple. The conservation of old buildings is a must in retaining the characters of the city. The paper presents the significant assessment of heritage areas and suggests conservation measures for sustenance of the historical town of Srirangam.

2.0 Background of study area

Srirangam assembly constituency is part of Tiruchirappalli. Srirangam, known as “BhoolokaVaikundam”(Abode of Vishnu on Earth), is an islet bounded by the Kaveri River on one side, and its distributary Koleroon on the other side. Sri Ranganathaswami temple is the focal point of this Vaishnavite settlement and covers an area of about 631,000 square metres (6,790,000 sqft) with a perimeter of 4 km. It occupies a unique position in the Hindu myth &



legend because of the invaluable inscriptions, iconography, religious architecture and highly articulated cosmic geography, known for its rich culture, architecture and built heritage. The city of Srirangam, which not only has a remarkable religious heritage but also continuous and homogeneous sets of values in the built heritage in varying dimensions. **Srirangam** situated on a village close to the city of Trichy, has a main temple in the centre, surrounded by seven wall enclosures with altogether twenty one towers.

Table 1 - Showing the spatial structure of the enclosures in Srirangam.

FIRST WALL ENCLOSURE	MAIN TEMPLE
SECOND-FIFTH WALL ENCLOSURE	SECONDARY TEMPLE,KITCHEN,STORE HOUSE(PILGRIM NEEDS)
SIXTH AND SEVENTH ENCLOSURE	AGRAHARAS AND COMMERCIAL SPACES

Hence for the study of the built heritage these two enclosures are taken which consists of agraharas, markets, chattrams&mattams. There is strong need to investigate the heritage conservation of temple and their settings and the associated public value they inherit. This research aims to understand the relationship between heritage of sacred historic monuments and its settings for providing a framework for conservation of Historic areas. The outcome of the research will give new dimension for the setting of heritage monuments and its precinct.

2.1 Buildings & styles of Architecture

The heritage buildings of Srirangam can be classified as colonial, traditional Tamil houses, vernacular Brahmin houses based on their architectural features. The town planning is predominantly identified by their profession. For instance the streets near the temple are allocated to the upper class Brahmins and further grid patterns are allocated for blacksmiths and potters. The city has evolved with a combination of various land use models



(i.e)concentric and linear with basically commercial and residential land uses (Chakrabarti, 1998) Predominantly the residential areas dominate on the concentric lines. It may be noticed that in historical times the front yard of the house were used for setting up small shops serving the religious and other needs of pilgrims visiting this place. Thus the dwelling units on the main temple street were mixed use. There were Mandapas constructed in the enclosure proclaiming the vijayanagar influence and functionally it has also served as waiting place for pilgrims during processions.

The amalgamation of various architectural elements in the study area is due to the influence of various rulers in this place. The influence of various rulers in Srirangam influenced various styles in the built heritage by contributing buildings and elements that define the character of the place.

Table 2 - Showing the contribution of various rulers in Srirangam

RAJA MAHENDRA CHOLA	Construction of first enclosure
NAYAK OF TANJORE	Reconstructed outer walls and gopuras, built mandapas
CHOKKANATHANAYAKA	Laid out wide avenues, agraharas
MADURAI NAYAKAS	Jambukeshvara temple
VIJAYANAGAR	Thousand pillared hall, kilimandapa, shesharayamandapa and corridors
PALLAVA	Basement sculpture with prancing horses and wheels

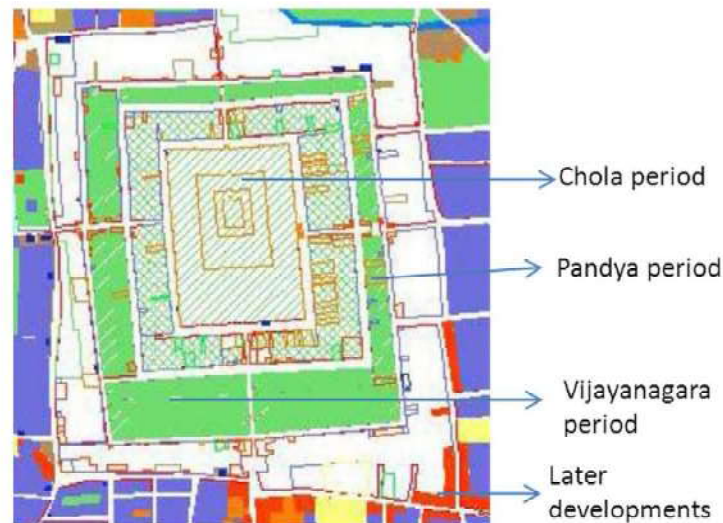
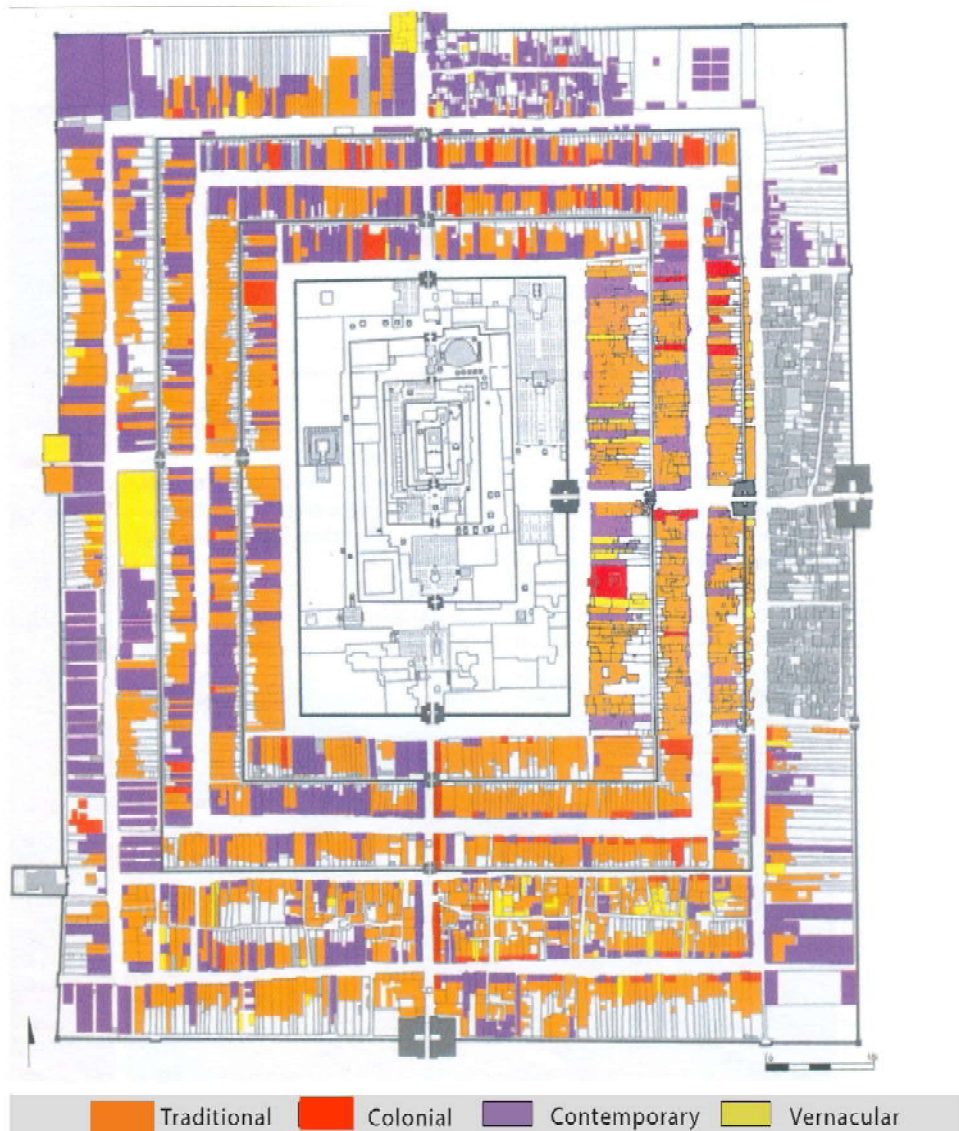


Figure 2 – Sketch showing the additions of various rulers in Srirangam

3.0 Need for significance Assessment

Wide experience confirms that the assessment of built heritage or significance is essential first step in the conservation process (Getty,200) . This may seem obvious, but its neglect is a major factor in poor conservation planning. It is necessary for several reasons to state clearly all the values of a given place (Fielden, 2003). Values and assessment processes are threaded through the various spheres of conservation and play an enormous role as we endeavor to integrate the field . Values give some things significance over others and thereby transform some objects and places into “heritage.” The conservation of built heritage is generally perceived to be in the long term interest of society. This can be better understood if categorized under ‘economic’, ‘cultural’, and ‘environmental’, although they are not mutually exclusive and, indeed, they are often interlocked. The surrounding areas are getting developed in a non harmonious manner without any due respect to the fine existing architecture. The detracting and non-contributory buildings



Map 1 Showing the style of buildings in Srirangam (Source : JauquesGaucher, 2007) will deface the heritage area losing its identity due to non harmonious approach by the agencies and people. These heritage buildings and areas are to be made their significance assessment for undertaking the conservation and preservation. First, an articulated statement about the significance of a place is an essential piece of information to consider in making basic decisions about



the place's future. Second, even when we are aware of the value of a place in general terms, and the decision has been made to conserve it, the comprehensive enumeration of all its values is needed for the formulation of a successful conservation plan. The aim of such a plan should always be to retain the cultural significance of the place. Hence this paper focusses on the need for significance assessment of the built heritage, which comprises of eclectic architectural styles. These architectural styles are very unique and is the part of the built heritage of Srirangam, which needs to be identified, assessed its significance for conservation and management of these buildings to future generations.

3.1 Objectives of the study

Conservation must preserve and if possible enhance the messages and values in the built heritage. These values help systematically to set overall priorities in deciding proposed interventions. Assessment of the values attributed to heritage is a very important activity in any conservation effort, since values strongly shape the decisions that are made. However, even though values are widely understood to be critical to understanding and planning for heritage conservation, the whole range of heritage values has to be assessed in the context of heritage conservation. This paper aims to explore value assessment as a particular aspect of conservation.

The principal objective of a conservation assessment is to

- Identify the built heritage
- Evaluate its potential
- Statement of Significance
- establish appropriate conservation and management regimes based on the potential of the built heritage

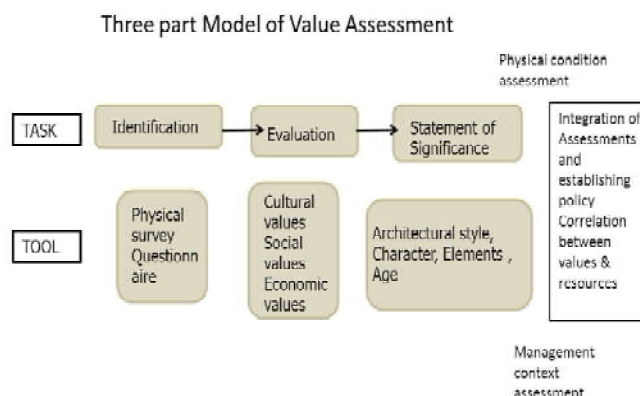


Figure 3 Flow chart for three part Assessment Model

Assessment can be broken down into three parts: identification, elicitation and elaboration, and statement of significance. The purpose of conservation is to retain the heritage values of an historic place while change happens, so a clear articulation of the values of the place is essential for the development of an effective and practicable plan. The significance assessment is an essential pre-requisite in making decisions about the future of a place. The overall objective of this research paper is to estimate the significance of the built heritage in the conservation process of Srirangam heritage town. The findings and conclusions of the paper is to present results by evaluating the significance using Harold's Kalman Criteria in the built heritage, with the aim to establish a framework for the conservation.

3.2 Methodology

The research was intended to gather findings to assess the identity of the town and its potential for conservation. A pluralistic approach was adopted for the field survey, using questionnaires and mental map sketching techniques.

The overall outline of this paper involves four phases

FOUR PHASES IN THE ASSESSMENT OF BUILT HERITAGE



1st Phase of the paper – Information gathering prior to assessment about the built heritage by means of physical survey using maps and satellite imagery.

2nd Phase of the paper – Information gathering during assessment by on-site observations and interviews with the help of Harold Kalman's Evaluation sheet (APPENDIX A)

3rd Phase of the paper – identifying and analysis of the built heritage

4th Phase of the paper – Statement of significance based on survey data and significance assessment of the built heritage – Findings & Conclusions

The evaluation procedure consists of four stages:

- 1) Building Research
- 2) Evaluation
- 3) Scoring
- 4) Classification

The findings of the statement of significance conclude the potential for conservation of the built heritage of Srirangam.

3.3 Criteria for Evaluation & Assessment

An evaluation system needs to be based upon well-defined criteria to which standards may be set for evaluation. It is possible to limit the subjectivity of the evaluation process by using the standard set of evaluation principles.

To ensure that the evaluation system will aid decision-making for the identification of significant heritage buildings and potential heritage conservation in Srirangam, and to ensure that it will be of assistance when dealing with applications to alter or demolish identified heritage buildings. The criteria used in evaluating heritage buildings were chosen to describe the qualities that contribute to the heritage significance of that building. The evaluation criteria can be grouped into three main categories:



- Historical
- Architectural
- Environmental (Cultural)

However, for the purpose of study of Built Heritage, the scope has been enhanced by defining any structure that belongs to pre-independence period and 1950 has been considered as the cut off date. This has been decided considering the fact that heritage structures during pre-Independence period show the influence of colonial architecture and sometimes the typical traditional architecture of a region that are no more in continuity. Hence these are unique to our present architectural tradition. Further, such built heritage will be considered for documentation that is architecturally, historically, archaeologically or aesthetically significant for reconstruction of regional history. The documentation of few buildings in the sixth enclosure is taken for evaluation and significance assessment as a first part of the research component.

Table 3 - Showing the Date of construction and scores for it

Date of Construction & Scoring			
Excellent	Good	Fair	Poor
1500 to 1599	1600 to 1799	1800 to 1950	1951 & later
10	08	06	04

The Architectural assessment is conceded based on the styles of architecture used in construction, the elements, age of the buildigs, its cultural / historic relation to the setting, the unique features and its function it is intended to.

Harold Kalman's criteria for evaluation and assessment of Heritage buildings (1979) is an accepted criterion all over the world and is to be adopted in assessing the architectural significance of the built heritage of Srirangam.



Further for the study purpose they are classified into

Primary Significance = Buildings with what appears to be a high degree of intactness that significantly contribute to the heritage value and character.

Contributory Significance = Buildings that contribute to the heritage significance and character of the Area but whose significance has been reduced by loss of original materials/detail, unsympathetic additions or inappropriate decorative detail.

Intrusive Significance = Buildings whose impact on the heritage of the Area is neutral, or those which have an adverse impact on the Area because of their scale, design, assertiveness, materials or because their original qualities have been altered or removed.

4.0 Research Methods & Analysis

The scoring procedure is adopted in the evaluation process of the historic buildings. The scoring procedure to be used involves two basic levels. First, the building is scored according to its appropriate level of importance under each of the individual criteria within the three major categories (Historical, Architectural and Environmental/Cultural). The results of each category are totaled for a maximum of 100 points.

Table 4 - Showing the scoring for the categories in the Built Heritage

Architectural Significance	40%
Historical Significance	40%
Environmental Significance	20%
Overall Significance	100%

Second, each of the three categories is assigned a percentage value that varies depending on whether the building is to be considered an individual entity or an entity within a heritage conservation district/study area.



Table 5 - Showing the scoring for the indicators under Architectural Significance

Indicators	Grading	Score
Architectural design	Outstanding Very Good Good	10
Architectural style		
Architectural Elements		06
Year of construction		
Architectural condition		04
Aspect of Integrity		

Finally, an overall score out of a possible 100 points is derived and the building can be classified as to its relative significance.

Table 6 - Showing the scoring for the classification of the Buildings

Points	Group	Significance
60-100	Group 'I'	Of major significance and importance, worthy of designation
30-59	Group 'II'	Significant , worthy of preservation
Less than 30	Group 'III'	Noteworthy , worthy of documentation

4.1 Findings & Results

The findings of this research paper details the significance of the built heritage based on the scoring in specific buildings identified in the Utthirai street in Srirangam and the results are tabulated in Table 6 below.

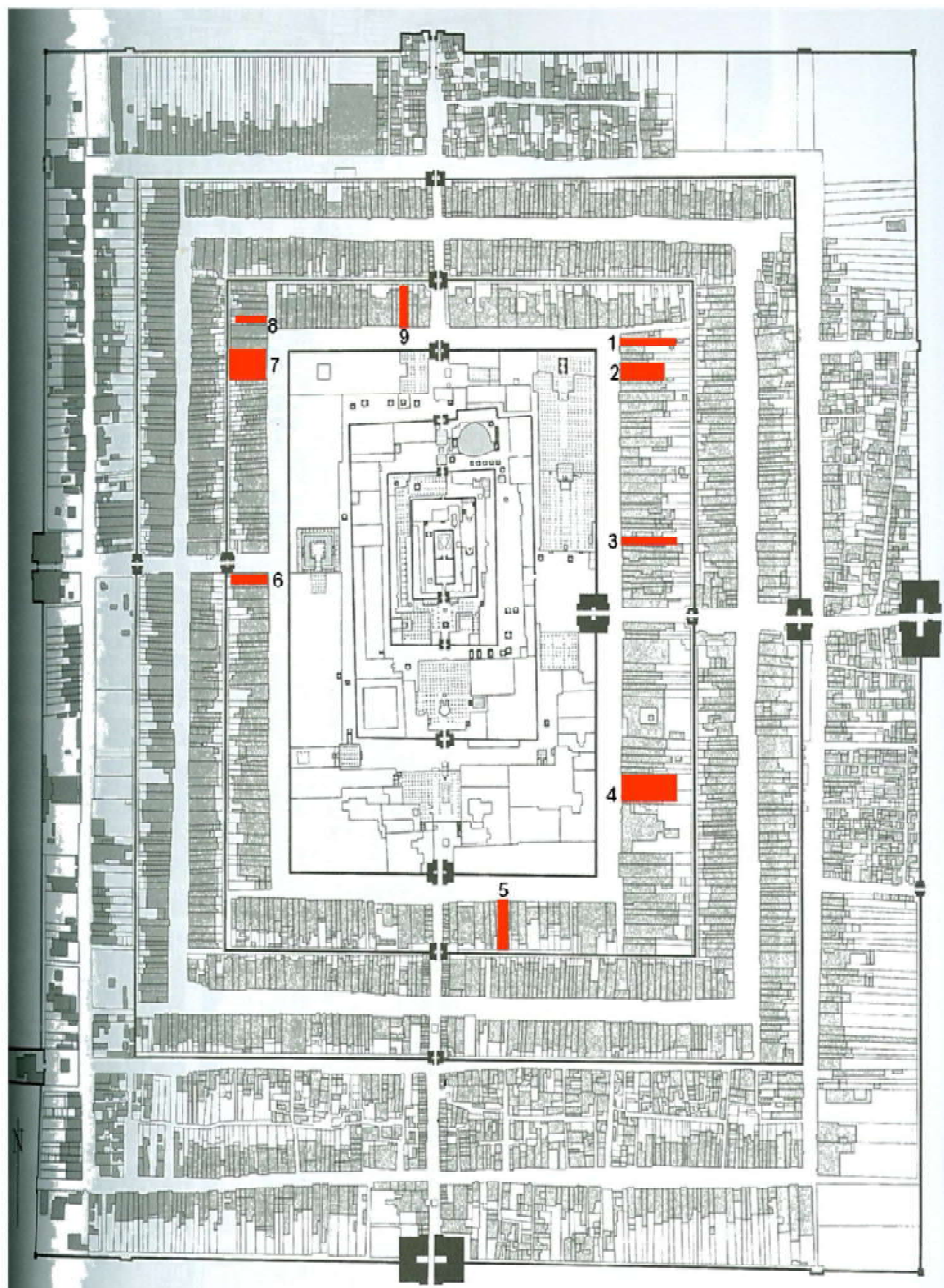
The buildings is ranked based on the scoring and it clearly denotes the significance of the building and the degree of intervention to be adopted in the conservation process.

5.0 Conclusions

The history of the town is written in its old buildings and streets. Though a



town should have new structures, it is not wise to lose the old buildings, as every building has some history related to it. The statement of significance is an important step in the conservation process as it plays a major role in the future management of the resource. The significance assessment presented here states the historical, architectural, cultural and aesthetic aspects of the town. The potential for conservation is enhanced by this statement of significance. The conservation measures can be taken to preserve the built heritage of Srirangam based on the values it has. Therefore, it is high time to conserve the core area (within the seven enclosures) to regain the past glory through varying degrees of interventions.



- | | | |
|--------------------------------------|---|-------------------------------------|
| 1. Rajagopalan House | 2. Sri Renganatha Yadhukula Vidhyalaya | 3. Ragavachandran & Anand Rao House |
| 4. Koil Kandhadai Annan Thirumaligai | 5. Parasara Thiruvengada Bhattar Thirumaligai | 6. Seshadri Iyengar House |
| 7. 100yr Old Colonial House | 8. Jairaman Vijayan House | 9. 1940- Krishnamoorthy House |

Map 2 Showing the position of buildings taken for Significance Assessment in Srirangam
 (Source : Base map JauquesGaucher , 2007)

Table 6 Showing the scoring calculation based on survey & the final Grouping

S. No	Name of the building	Architectural style	Architectural design	Character defining Elements	Landmark / setting	Historic value	Year of construction	Total score	Grouping
1	Rajagopalan house (Figure 4)	6	4	4	4	4	6	28	IV
2	Koilkandhadai Annan Thirumaligai (Figure 5)	6	6	6	10	6	10	44	II
3	RengunathaYadhukaVidhyalaya (Figure 6)	6	6	6	6	4	6	34	III
4	Ragavaachandran&Anand Rao house(Figure 7)	4	6	4	4	4	6	28	IV
5	Jairamanvijayan house (Figure 8)	4	6	6	4	6	4	30	II
6	SheshadriAyyangar House (Figure 9)	6	6	6	6	6	4	34	II
7	ParasabhattarThirumaligai	4	6	4	6	10	6	30	II
8	Old Building West utthirai street (Figure 10)	6	10	6	6	6	6	36	II
9	1940 Krishna Moorthy House (Figure 11)	6	6	6	10	6	6	40	II

Figure 4 – HOUSE NO 1: RAJAGOPALAN HOUSE , EAST UTTHIRAI STREET

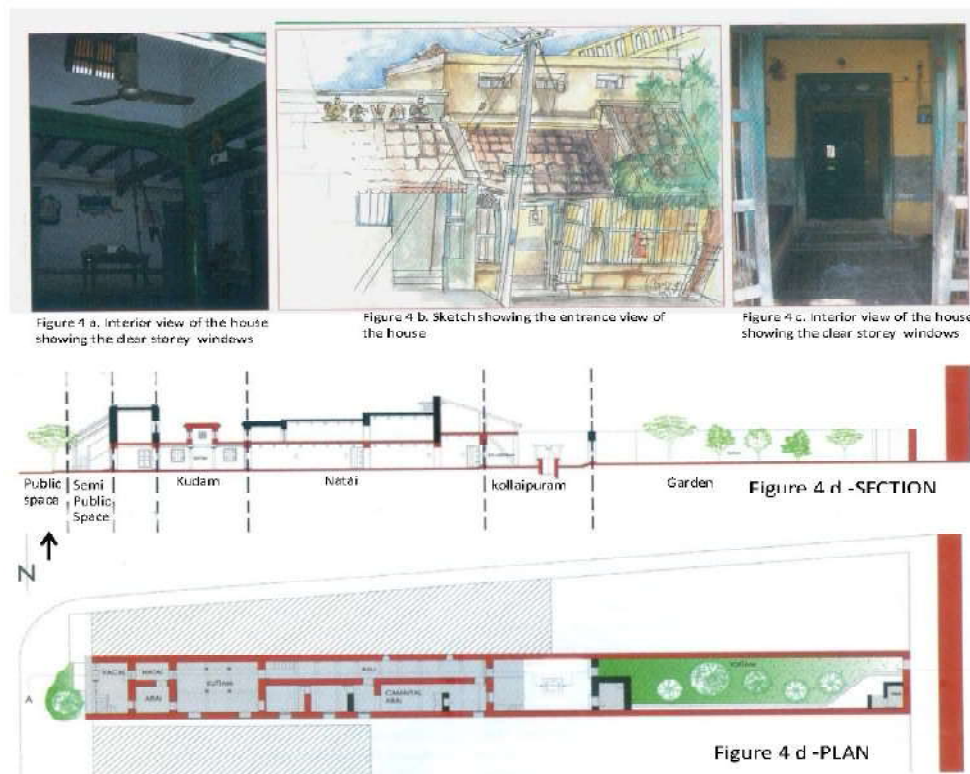


FIGURE 5 – HOUSE NO 2: SRI RENGANATHA YADHUKULA VIDHYALAYA



Figure 5 a Exterior view of the building

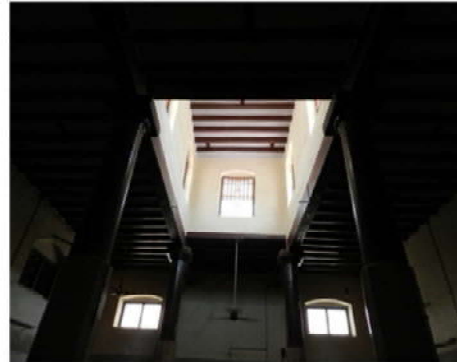


Figure 5b Interior view Showing the lighting detail in the Kudam



Figure 5c Interior view Showing the pointed arch depicting ins style

Figure 5 d Interior view Showing the pointed Arch with twin columns



Figure 5 e Interior view of the Entrance Foyer & steel staircase



Figure 5 f Interior view Showing the ceiling detail

FIGURE 6 – HOUSE NO 3 RAGAVACHANDRAN AND ANAND RAO HOUSE



Figure 6 a Exterior view of the house



Figure 6b Interior view of the house showing the flooring detail



Figure 6 c interior view of the house showing the ceiling detail



Figure 6 d -SECTION

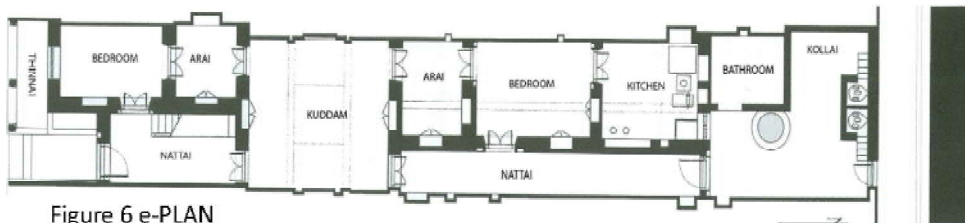


Figure 6 e-PLAN

FIGURE 7 HOUSE NO 4: KOIL KANDHADAI ANNAN THIRUMALIGAI

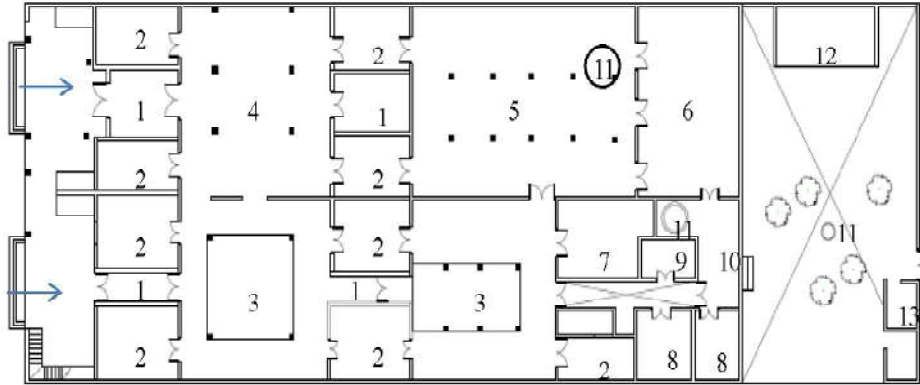


Figure 4 a Plan showing the Spatial Arrangements

1. Nattai / Pathway
2. Room
3. Kudam
4. Mandapam of Shrine
5. Dinning hall of Shrine
6. Madappalli
7. Kitchen
8. Store
9. Bathroom
10. Back Verandah
11. Well
12. Cow Shed
13. Toilet



Figure 7 b Exterior view of the house



Figure 7c Interior view of Utility area

Figure 7c Interior view of the Kudam with the skylight

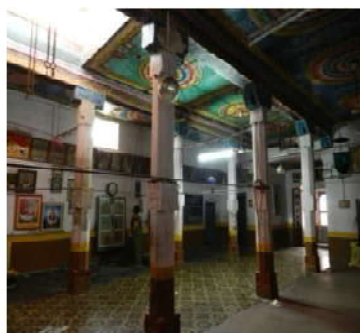


Figure 7c Interior view of Mandapam



Figure 7f Interior view of the Shrine

FIGURE 8 – HOUSE NO 5 : PARASARA THIRUVENGADA BHATTAR
THIRUMALIGAI



Figure 8 a Exterior view of the house



Figure 8 b Interior view of the clear
storey windows in the kudam



Figure 8 c View of the terrace showing
the skylight



Figure 8 d Interior view of the Kudam
with the room for the deity.

FIGURE 9 – HOUSE NO 6 : SESHADRI IYENGAR HOUSE



Figure 9 a Exterior view of the

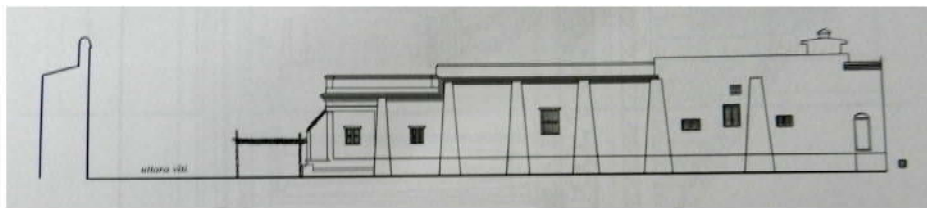


Figure 9 b - Side

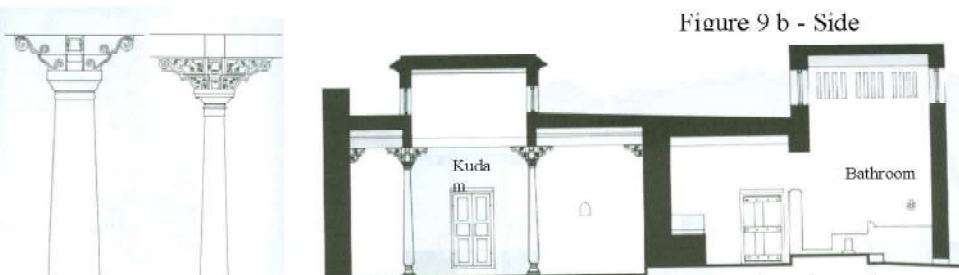


Figure 9 c – Section along the

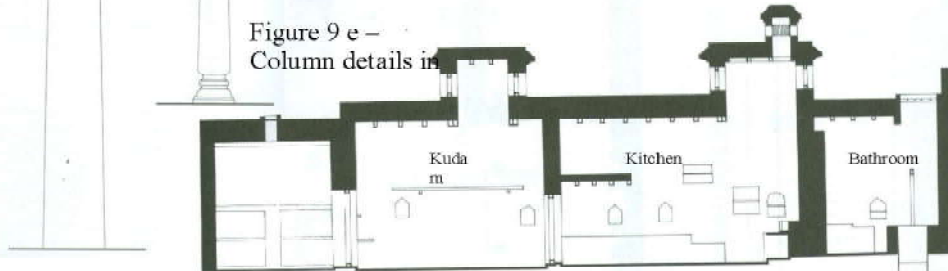


Figure 9 d – Section along the Kitchen &

FIGURE 10 – HOUSE NO 7 : 100 YRS OLD COLONIAL HOUSE



Figure 10 a Exterior view of the house



Figure 10 b Interior view Showing the windows in the upper level



Figure 10 c Interior view Showing the ceiling detail



Figure 10 d Interior view of the Entrance Foyer



Figure 10 e Interior view of the Kudam

FIGURE 11 – HOUSE NO 8 : JAI RAMAN VIJAYAN HOUSE



Figure 11 a Exterior view of the house



Figure 11 b view of the Thinnai showing ceiling detail

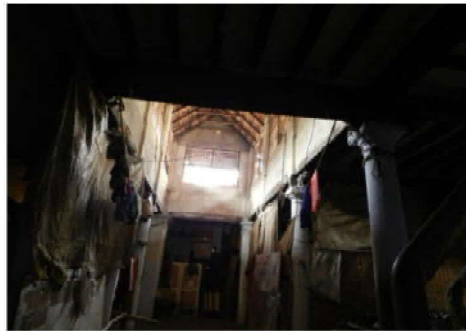


Figure 11 c Interior view of the Kudam showing the Skylight detail



Figure 11 d view of the Thinnai

FIGURE 12 – HOUSE NO 9 : 1940 KRISHNAMOORTHY HOUSE



Figure 12 a Exterior view of the house



Figure 12 b Interior view showing the structural detail

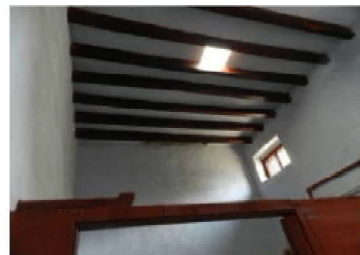


Figure 12 c interior view of the house showing the ceiling detail



APPENDIX A

Building Evaluation Sheet

Name

Location

Reference Number

A Architecture

1 Style E VG G F/P

2 Construction E VG G F/P

3 Age E VG G F/P

4 Design E VG G F/P

5 Interior E VG G F/P

B History

7 Person E VG G F/P

8 Event E VG G F/P

9 Context E VG G F/P

C Environment

10 Continuity E VG G F/P

11 Setting E VG G F/P

12 Landmark E VG G F/P



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INTELLECTUAL PROPERTY RIGHTS AWARENESS FOR ENGINEERING AND SCIENCE STUDENTS: A GUIDE

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INTRODUCTION

Creativity is fundamental nature of humankind to go forward. It ensures a better and more prosperous future of mankind. It is the essence of our development, our past and our future. Idea, inspiration, ingenuity are the seeds from which creations grow. The invention and creativity should be rewarded in respect of one's skill, capital and labor spent to take it out for public convenience (Karki, 2009). The protection and regardless of creator and inventor is done through intellectual property rights.

Since students' age is the most creative form of human life. It is basic necessity to provide awareness about the right regarding intellectual property. Awareness of intellectual property adds the motivation in the student to put their inputs in creating or inventing new idea. Also encourages the students to recognize themselves the essential qualities of curiosity, creativity and perseverance of which individual to invent. They should expose to a roadmap for invention, taking students through the whole innovation process from idea, to intellectual property protection (Karki, 2009).

This is the knowledge economy & competitive surroundings; intellectual property is the base of the economic growth. Being an intangible asset, Intellectual Property played an important role in the socio-economic development, their creation & protection which is essential for the sustained



growth of a nation. Increasing significance of intangible assets in the global economy is forcing business organizations to actively manage the role of IPRs as a key driver for building & sustaining their competitive advantage & achieving superior performance (ASSOCHAM, 2013).

Intellectual property teaching and learning has become an increasingly widespread and influential occurrence during the past two decades. Although IPRs teaching and learning programmers have become more common and important, therefore far they have not attracted much scholarly vigilance from researchers interested in international IPRs principle and benefits (Beer, 2010).

The focus of the international organization of United Nation, World intellectual Property Organization, and WIPO are because of its key role in human resources development and capacity building in international intellectual property management, although the work of other relevant organizations and institutions is not overlooked (Beer, 2010).

The relationship between IPRs and development has changed significantly in recent years. The international IPRs discourse has been influenced by the belief that development requires strong IPR protection and IPR protection invariably causes development. Developed countries should more involve with private sectors and international organizations to strengthen the ideas that make strong systems of IPR protection are always good for development and stronger and free economy (Beer, 2010).

Trade Related of Intellectual Property Aspects (TRIPS) multilateral agreement, WIPO Internet Treaties on copyrights, performances and phonograms (1996) and a host of other bilateral and multilateral agreements, international standards of IPR protection have risen to unprecedented levels. These standards apply homogenously to countries



at very different levels of development, regardless of their varying economic, social and cultural circumstances. A few concessions do exist in terms of the substance and timing of obligations for developing and least developed countries, but the normative principles animating the last century's international IPRs laws (Beer, 2010).

The TRIPS Agreement, in particular, and the legal changes it entailed, created a significant demand for IP education and training in developing countries. It became quickly apparent that much of the substantive work to harmonize higher standards of IPR in domestic legislation throughout the world could not, alone, yield the results that advocates of stronger protection wanted. research confirms that, especially in developing countries, there is often a wide gulf between IP laws on the books and day-to-day realities (Beer, 2010).

In jurisdictions where the basic concepts of IPR may be foreign and unintuitive, including many developing countries, IP education was advocated not just for technical training. It was necessary to promote and instill in the local culture the value of IP's underlying principles. Government officials, private sector businesses and the general public in many developing countries n needed to be convinced that enacting and enforcing strong IP laws would lead to development and particularly economic growth (Beer, 2010).

Against the background it is imperative that the academies of developing counties need to turn their attention to IPR issues and help to IPR awareness, moreover implication of IPR bring largely prospective, the younger generation now learning in universities and colleges need to be sensitizing to IPR issues. To this end, courses and programs in the IPR should be designed and incorporated in the academia of universities and



colleges. Through there are many institutions addressing these issues, in respect to teaching research and extension, would like to take the lead in the addressing issues related to IPR in special focus on the all sectors (Rao, 2006).

DIFFERENT TYPE OF INTELLECTUAL PROPERTY

Intellectual property, very broadly, means the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields. Countries have laws to protect intellectual property for two main reasons. One is to give statutory expression to the moral and economic rights of creators in their creations and the rights of the public in access to those creations. The second is to promote, as a deliberate act of Government policy, creativity and the dissemination and application of its results and to encourage fair trading which would contribute to economic and social development [4]. Intellectual property law aims at safeguarding creators and other producers of intellectual goods and services by granting them certain time-limited rights to control the use made of those productions. Those rights do not apply to the physical object in which the creation may be embodied but instead to the intellectual creation as such. Intellectual property is traditionally divided into two branches, "industrial property" and "copyright" (WIPO, 2004).

Intellectual property shall include rights relating to literary, artistic and scientific works, performances of performing artists, phonograms and broadcasts, inventions in all fields of human endeavour, scientific discoveries, industrial designs, trademarks, service marks, commercial names, designations, protection against unfair competition and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields. The expression "industrial property" covers inventions



and industrial designs. Simply stated, inventions are new solutions to technical problems and industrial designs are aesthetic creations determining the appearance of industrial products. In addition, industrial property includes trademarks, service marks, commercial names and designations, including indications of source and appellations of origin, and protection against unfair competition. Here, the aspect of intellectual creations although existent is less prominent, but what counts here is that the object of industrial property typically consists of signs transmitting information to consumers, in particular as regards products and services offered on the market, and that the protection is directed against unauthorized use of such signs which is likely to mislead consumers, and misleading practices in general (WIPO, 2004).

The areas mentioned as literary, artistic and scientific works belong to the copyright branch of intellectual property. The areas mentioned as performances of performing artists, phonograms and broadcasts are usually called "related rights," that is, rights related to copyright. The areas mentioned as inventions, industrial designs, trademarks, service marks and commercial names and designations constitute the industrial property branch of intellectual property. The area mentioned as protection against unfair competition may also be considered as belonging to that branch, the more so as Article 1(2) of the Paris Convention for the Protection of Industrial Property (Stockholm Act of 1967) (the "Paris Convention") includes "the repression of unfair competition" among the areas of "the protection of industrial property"; the said Convention states that "any act of competition contrary to honest practices in industrial and commercial matters constitutes an act of unfair competition" (Article 10*bis*(2)) (WIPO, 2004).



Types of Intellectual Property

i. Patents

A patent is a legal document, issued, upon application, by a government office (or a regional office acting for several countries), which describes an invention and creates a legal situation in which the patented invention can normally only be exploited (manufactured, used, sold, imported) with the authorization of the owner of the patent. "Invention" means a solution to a specific problem in the field of technology. An invention may relate to a product or a process. The protection conferred by the patent is limited in time (generally 20 years) (Rao, 2006).

Patents are frequently referred to as "monopolies", but a patent does not give the right to the inventor or the owner of a patented invention to make, use or sell anything. The effects of the grant of a patent are that the patented invention may not be exploited in the country by persons other than the owner of the patent unless the owner agrees to such exploitation

The right to take action against any person exploiting the patented invention in the country without his agreement constitutes the patent owner's most important right, since it permits him to derive the material benefits to which he is entitled as a reward for his intellectual effort and work, and compensation for the expenses which his research and experimentation leading to the invention have entailed (WIPO, 2004).

ii. Copyrights

Copyright law is a branch of that part of the law which deals with the rights of intellectual creators. Copyright law deals with particular forms of creativity, concerned primarily with mass communication. It is



concerned also with virtually all forms and methods of public communication, not only printed publications but also such matters as sound and television broadcasting, films for public exhibition in cinemas, etc. and even computerized systems for the storage and retrieval of information (WIPO, 2004).

Copyright law, however, protects only the form of expression of ideas, not the ideas themselves. The creativity protected by copyright law is creativity in the choice and arrangement of words, musical notes, colours, shapes and so on. Copyright law protects the owner of rights in artistic works against those who “copy”, which is to say those who take and use the form in which the original work was expressed by the author (WIPO, 2004).

Copyright protection, from the viewpoint of the creator of works, makes sense only if the creator actually derives benefits from such works, and this cannot happen in the absence of publication and dissemination of his works and the facilitation of such publication and dissemination. This is the essential role of copyright in developing countries. Copyright laws provide for the protection of types of work like Literary works, musical works, artistic works, maps and technical drawings; holographic works, motion pictures (“cinematographic works”) and computer programs (either as a literary work or independently) (WIPO, 2004).

iii. Trademarks

A trademark is any sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors.” This definition comprises two aspects, which are sometimes referred to as the different functions of the trademark, but which are, however, interdependent and for all practical purposes should always be looked at together.



In order to individualize a product for the consumer, the trademark must indicate its source. This does not mean that it must inform the consumer of the actual person who has manufactured the product or even the one who is trading in it. It is sufficient that the consumer can trust in a given enterprise, not necessarily known to him, being responsible for the product sold under the trademark (WIPO, 2004).

Similarly, service marks enable the consumers to distinguish between the different services such as insurance companies, car rental firms, airlines, etc. Some countries also provide for the registration of collective and certification marks, which are used to indicate the affiliation of enterprises using the mark or which refer to identifiable standards met by the products for which a mark is used.

iv. Industrial Designs and Integrated Circuits

a. Industrial Designs

Industrial design, in a lay or general sense, refers to the creative activity of achieving a formal or ornamental appearance for mass-produced items that, within the available cost constraints, satisfies both the need for the item to appeal visually to potential consumers, and the need for the item to perform its intended function efficiently.

b. Integrated Circuits

The layout-designs of integrated circuits are the new type of IPRs. There is a continuing need for the creation of new layout-designs which reduce the dimensions of existing integrated circuits and simultaneously increase their functions. The smaller an integrated circuit, the less the material needed for its manufacture, and the smaller the space needed to accommodate it. Integrated circuits are utilized in a large range of products,



including articles of everyday use, such as watches, television sets, washing machines, automobiles, etc., as well as sophisticated data processing equipment (WIPO, 2004).

v. Geographical Indications

“Geographical indications” are defined at Article 22(1) of the World Trade Organization’s (WTO) 1995 Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) as “indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographic origin.” Examples of geographical indications from the United States include: “Florida” for oranges; “Idaho” for potatoes; and “Washington State” for apples (Thomas, 2013).

vi. Trade secrets

A trade secret is virtually anything that is secret, and that imparts value to its holder as a consequence of that very secrecy. Technical and scientific information, such as formulae, manufacturing methods and specifications, designs, computer code and the like receive protection as trade secrets. Commercial and financial information may also qualify as a trade secret. Customer lists, customer buying preferences and requirements, the identity of customer decision-makers, pricing information, marketing and business plans, internal cost structure, supplier arrangements, and other similar non-public information can be protected (Thomas, 2013).

PROPOSED SYLLABUS

The intellectual property rights are very large area. There are lots of factors in IPR laws legal aspects, acts and that are affected by the decision



by the court decisions of national court and international agreement / treaties signed by the governments of countries. It can become tough for engineering/science students to go through deep in IPR with their regular curriculum. It may affect their inputs of their regular study. So it becomes necessary to put light course and study material just for awareness point of view .

The syllabus which should be introduced in curriculum should include the basic concept of IPRs, meaning of patents, trademark, copyrights, layout designs, breeder's rights, trade secrets, industrial designs and other relevant concepts. Detailed description of important agreements like TRIPS which highly affect the economic policies, there historical perspective, and relevant aspects should put in the syllabus. The relation of economy value of intellectual property with latest example should be introducing in the curriculum.

Universities should make the literature available related to intellectual property. The organization of seminars/workshops and scholar-experts meet type activities should be conduct . Otherwise the interested students may move for parallel online courses available in different sites.

ONLINE PLATFORM FOR LEARNING INTELLECTUAL PROPERTY RIGHTS

Intellectual property academic scenario is very vast. The student with have science or engineering background need to take more attention on to learns basics or advance knowledge of intellectual property. There a number of paid or free online courses are available. Some of important courses are listed here.

A. WIPO Worldwide Academy

The overall objective of the WIPO Worldwide Academy (WWA) is to serve as an educational institution providing teaching, training and research



services in intellectual property, particularly for developing countries. In order to meet its objectives, the Academy carries out its programs both at its Headquarters in Geneva, and in different parts of the world, and cooperates with several academic institutions and intellectual property offices.

The Professional Training Program offers intermediate and advanced training courses for managers and technical staff of intellectual property offices and other professional users of the system. These courses are not only for persons working in intellectual property offices, but also for those involved with research work in universities and Research and Development institutions, as well as for those in chambers of commerce and industry. In addition, special Academy sessions are organized for specific interest groups and also to deal with special or topical issues, such as strengthening the teaching of intellectual property for professors and the enforcement of intellectual property rights for the judiciary. The Distance Learning Program is an advance in teaching methodology, with the attendant advantages of flexibility of time and space, cost effectiveness and the capacity to reach the unreached. Distance learning courses are a complement to traditional training methods, as well as a means of increasing the range of training beneficiaries. These courses are delivered via the Internet, using a format that allows for online registration, student-teacher interaction, student tests and course monitoring and evaluation systems (WIPO, 2004).

B. MIT Open Course

The online intellectual property right courses are available on MIT open source site. This subject is an intensive introduction to the law of intellectual property, with major emphasis on U.S. patent law. The course



also focuses on copyrights, provides a brief look at trademarks and trade secrets, presents comparisons of what can and cannot be protected, and what rights the owner does and does not obtain. Issues relating to information technology, biogenetic materials, and business methods are highlighted. Most of the assigned readings are case decisions and excerpts from federal statutes. Class sessions combine discussion with lecture, and students are expected to read the assigned material carefully prior to each class (MIT,2013).

C. British Library

The British library has also made e-courses for intellectual property. There are three Business & IP Centre online courses available on intellectual property (British, 2013)

D. FICCI Open courses (FICCI.2013).

E. National patent office courses (Web address, 1).

F. Other different University online program (Web address, 2)

DISCUSSION

The knowledge of intellectual property right protection in the student adds value and takes out the inventor inside of them. For especially in the developing country, where there are a huge intellectual properties is generating, but because of unawareness of citizen, they are not getting their proper reimbursement or returns. Adding the intellectual property in the academic curriculum will be advantageous to the students. But this designed course should not affect the regular course. So it will good the add only basic awareness course in curriculum. Behind it, it is also easy to get knowledge about the Intellectual property knowledge through online study material/courses available on the internet from basics to advance



course in IPRs. Authenticity of the intellectual property courses provider is necessary. Specially for the advance course, it is necessary to see the updating of the course according to the law changes, which is highly varies with court suit decisions, policy changing and agreement/ treaties at bilateral or multilateral level of countries. Also point to keep in mind while choosing the course that IPRs laws are also varies from jurisdiction of countries.

CONCLUSION

Different types of intellectual property are described. The rights, values, and protections of different intellectual property holders are described briefly. The necessary of awareness intellectual property rights with curriculum course and different authentic online study/courses available on different international/ national authority, organization or university are listed.

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SOCIO – CULTURAL PROFILE OF KONDA REDDI – A VULNERABLE TRIBE OF ANDHRA PRADESH

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Andhra Pradesh is the traditional home of 35 tribal communities. The Konda Reddi recognized as particularly vulnerable tribal group inhabiting the hilly and Forest areas of East Godavari, West Godavari and Khammam districts. Etymologically 'Konda' means 'hill' and Reddi means 'headman'. They claim that they were descendants of Pandavas. They call themselves Pandava Reddi after the five Pandava brothers mentioned in the epic Mahabharata. The Konda Reddi men wear a dhoti and a shirt. The traditional dress of a Konda reddi woman is saree and ravika (Blouse). Their mother tongue is Telugu.

Population:

Population of Konda Reddis:

Sl.No.	Year	Male	Female	Total
1.	1961	17,546	17,893	35,439
2	1971	21,089	21,738	42,777
3	1981	27,352	27,333	54,685
4	1991	38,309	38,082	76,391
5	2001	41,459	41,637	83,096

The above table depicts the population of Konda Reddi from 1961 census to 2001 census. In 1961 census, the population of Konda Reddi was 35,439 persons. This population had grown up to 83,096 persons as per the 2001 census.



Food Habits:

The staple food of Konda Reddi is Jowar(sorghum vulgare) besides ragi(eleusine coracana) and rice(oryza sativa). They are non-vegetarians. Generally they take pork, fish, fowl, goat, rabbit, adavi-gorre(wild sheep), 'savadi dumpa', Donda dumpa, 'adavi vaimu' etc. In addition, bamboo shoots are powdered and cook as curry. They take alcoholic drinks like country liquor, Jeeluga Kallu (Sago palm), Thati kallu (Borassus flabellifera) etc. It is informed that they used to eat the wild roots, caryota pith, and mango(mangifera indica) kernels. At present, they have given up eating the mango kernels. They eat the tubers like Nara dumpa, Sheanda gadda, Teana dumpa etc.

Social Organisation:

The Konda Reddi are divided into three divisions, Pandava Reddi, Raja Reddi and Surya Vamsa Reddi. In this community, the main gotramulu are 'Ganga gotram' and 'Pasupuleti gotram'. The social organization of the Konda reddi is based on exogamous surnames (intiperlu) which regulate the marital alliances. Some of the surnames of Konda Reddis are

1. Chintala
2. Katchala
3. Sankuru
4. Kulla
5. Vetla
6. Kondla
7. Valla
8. Araganta



9. Kopala
10. Pamileti
11. Mula
12. Golla
13. Jampa
14. Pittala
15. Kadala

Descent among the Konda Reddi is patrilineal. The rule of residence is partilocal. Traditionally, joint families were common among them. At present, nuclear families are more common among the Konda Reddi male equigeniture is common among them. Monogamous marriages are common among them but polygyny is rare. Cross cousin marriage (menarikam) is a preferential marriage rule (cross cousin marriages i.e. one's mother's brother's daughter or father's sister's children). The modes of acquiring mates among the Konda Reddi are marriage by negotiation, elopement and marriage by capture. Marriage payments among them are bride-price, or dowry. Bride-price or 'Oli' is paid to the parents of the bride. 'Oli' is paid in terms of cash or kind. Now a days, the educated Konda Reddi are demanding dowry only. Divorce is socially accepted.

It is observed that there is no specific pre-delivery ritual among the Konda Reddis. They believe that the birth of a child is due to the blessings of the ancestral spirits.

Generally they conduct delivery at their home. After a child is born, 'Dhaye' or mantrasani cuts the umbilical cord with a knife. On the next day, she washes the child with the hot water. After three days of confinement, the mother of the child is given bark of the Jalbu tree to



chew as they believe that it helps her to prevent fever or pain. A domestic ceremony is performed at the end of the period of impurity. The period of impurity is lasted for 4 days.

The naming ceremony is usually done on the eighth or ninth day. On the day, the house is cleaning. The father of child presents new clothes to the child. A non-vegetarian feast is arranged on the day. For male children, they use the title 'reddy'. Tonsure ceremony is performed after the completion of one year.

After attaining the first menarche, a girl is secluded in a separate hut which is locally called 'Samartha gudise'. During this period she is not allowed to touch household articles. On the ninth day, she is given bath on the ninth day. Her maternal uncle presents her with new cloths and the priest sprinkles turmeric water on the girl to remove pollution. The hut is burnt after the purificatory bath.

The marriages are performed after the girl attains puberty. The marriage rule is endogamous marriage. Marriages with other tribes or castes are not permissible. Generally marriage takes place at the bride's groom's house. The initiation starts from the grooms' side. The father of a particular girl visits the house of the bride. No formal ceremony is attached to these negotiations. In case, the girl's parents accept the proposal they fix another day for engagement. After wards, both the parties fix to perform the marriage on an auspicious day. The bride is given new clothes with ornaments by the groom's party. On the marriage day, a ceremonial bath is given to the bride and groom. Generally the barber trims finger and toe nails of the bridal couple. The bride groom ties the 'pusthe' round the neck of the bride. Now the couple are considered as a husband and wife.



The other methods of acquiring mates among the Konda Reddi are marriage by capture, marriage by elopement and marriage by service.

Widow remarriages are allowed in this tribe. This marriage is a simple affair. The person who desires to marry a widow gives a feast to the village people and offers alcoholic drinks. Divorce is permitted and may be initiated from either side of the party 'Kulamkattu' settles all these disputes like divorce, widow remarriages etc.

Generally the Konda Reddi bury the dead. They observe pollution period for three to nine days after the death of an individual. They carry the corpse on a stretcher made of bamboo poles. The Konda Reddi observe two obsequial ceremonies known as 'chinna' and 'pedda dinam'. These death rituals are performed by the 'vejju' a magico-religious priest. On the pedda dinam, the vejju sits and speaks to the spirit of the dead asking the cause of his death. Konda Reddis believe in the soul and it leaves the body only after it is offered food on the ninth day. In social hierarchy, the Konda Reddi is higher than the Koyas as the Koyas eat beef and the Konda Reddis do not eat the beef. In Koruturu village (West Godavari district), the Konda Reddi do not accept food from the Koyas, but the Koyas accept food cooked by the Konda Reddis.

Economy:

Traditionally the Konda Reddi depended on shifting cultivation. This cultivation is locally known as 'podu'. They raise gantelu, saamalu, kandi(cajanus cajan), jonna(sorghum vulare) etc. in podu cultivation and paddy in the settled cultivation. They also depend on settled agriculture and wage labour. Their secondary occupation are forest labour and basket making. In addition, they collect forest products from the forest for their livelihood. They also collect the minor forest products gathered include



'adda'(bauhinia valhii) leaves, advai vaimu, donda dumpa and other products like sheekai(acaia concinna), soap(sapindus emarginatus) nuts, hill brooms(thysonela maxima), tamarind(tamarindus indica) and honey. They also collect mango, jeedi mamidi(anacardium occidentale), citrus fruits from the forests.

Political Organisation:

Locally the traditional village council is known as 'kulamkattu'. The village headman is locally called 'pedda' kapu. His post is hereditary. The pedda kapu is assisted by a china kapu. The main duties of the village council are to settle the disputes like elopement, adultery, divorce etc. In the Konda Reddi villages both traditional and modern political organizations exist. A few members are elected as panchayat members, panchayat presidents etc.

Religion:

By and large, they are Hindus. They worship a number of local gods and goddesses like Konda Devatha, Adavirajulu, Gangamma Talli, Bhumidevatha etc. They worship the Bumidevatha for good cropping and Gangamma for good health.

The Konda Reddi observe the festivals like Bhoomi Panduga, Mamidi Panduga and Samakotha Panduga which are related to the new crop rituals. According to Haimendorf(1982), "The Reddis' attitude toward other deities and spirits is one of caution rather than reverence, for these supernatural beings are deemed potentially dangerous as well as helpful. The hills and forests are believed to be inhabited by a host of anthropomorphically conceived divinities, many of whom have their seats on mountain tops, and are hence referred to as 'konda devathalu' i.e. 'hill deities'. Ordinary people cannot see them, but there are magicians and shamans who can



communicate with supernatural forces in dreams as well as in a state of trance”.

Development Programmes:

Since independence, Govt. of India implemented a number of development programmes for development of the scheduled tribes. The policies, programmes and strategies have changed from plan to plan for the welfare of the tribals. After implementation of eleventh – five year plan, the schemes under tribal development programmes have changed from infrastructure building to peoples participation and empowerment (K.Mohan Rao, 1999). In tribal development, some important issues like poverty, education and health are given top priority for the welfare of the tribals.

The criteria for identification of ‘PTGs’ is as follows:

1. Pre agricultural stage- hunting and gathering stage or shifting cultivators.
2. The stagnant or diminishing population.
3. The low literacy rate.

Government of India identified 12 tribal groups as “Primitive Tribal Groups” in Andhra Pradesh. These vulnerable tribal groups were classified in three stages during different periods.

1. In the first stage, Chenchus were identified as PTG in the year 1975-76.
2. Konda Reddi and Kolams were identified as PTG in the second stage during the year 1980.



3. Konda Savara, Thoti, Gadaba subgroups, Khond subgroups were classified as PTGs in the year 1983.

Village Tribal Development Agencies (VTDA) are established in all habitations. The VTDA function as umbrella organizations at village level encompassing various types of specific interest groups established for specific purposes like forest management, credit management, school management, grain management, etc.

The salient features of VTDA are as follows:

1. The VTDA will act as Grama Sabha under the Act 7 of 1998 and ensure coordination between elected bodies and village based organizations.
2. The Sarpanch of Grama Panchayat shall be the president of the VTDA, Vice President and secretary.
3. No development work should be taken up in the village without consultation and involvement of VTDA.
4. The VTDA shall be vested with powers to monitor and review the functioning of village level institutions.

In view of the new strategy of development of pre-agricultural strategy of economy of Konda Reddi, 3-ITDAs (Rampachodavaram-E.Godavari district, Kota Ramachandra puram - W.Godavari district and Bhadracharam- Khammam district) were established. These ITDAs for Konda Reddi have been implementing several antipoverty schemes such as purchase of private agricultural lands and assign to Konda Reddi families, provision of irrigation wells/ bore wells, distribution of goat and sheep units. For their educational development, various types of schools like Ashram schools, govt. schools, Girijan vidya vikas kendras (GVVKs), Gurukulams etc. were implemented.



MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Scheme) provides a minimum of 100 days employment to the Konda Reddi and they were engaged in various public works of government and community infrastructural development programmes.

Literacy rates among the Konda Reddis:

Sl.No.	Year	Male	Female	Total
1.	1961	3.09	0.64	1.85
2	1971	6.68	1.90	4.25
3	1981	11.13	4.44	7.77
4	1991	23.49	12.33	17.92
5	2001	48.28	33.86	41.06

According to the 1961 census, the literacy rate among the Konda Reddi is only 1.85% which increased to 4.25% in 1971 census. The literacy rate among them increased from 7.77% in the 1981 census to 17.92% in 1991 census. According to the 2001 census, the literacy among the Konda Reddi is 41.06%. From the above table, it is noted that the literacy rate of females among the Konda Reddi is lower than that of males.

One of the main reasons for poor educating among the Konda Reddi is poverty. Their children are economic assets to their family. The children go to forest for collection of non-timber forest products and edible roots, tubers etc., In addition, the grown up children involve in child rearing practices. Another reason for slow growth of education among them is social reason. After attaining the puberty, the girls dropped from the school.

Health:

They avail health care systems through herbal healers, spiritual healers, community health workers, and qualified doctors. The common diseases among the Konda Reddi are malaria, viral fevers, gastro enteritis, diarrhea, T.B. etc.



The following reasons are impinging the path of progress among the Konda Reddis.

1. It is observed that a large number of Konda Reddi are addicted to illicit liquor, but neither government nor NGO has taken my initiative to wean the Konda Reddi from liquor addiction.
2. Several development programmes like Education and poverty alleviation programmes are not successful due to lack of proper education and sincere efforts by the officials.
3. Their world view is that they don't think of tomorrow, their concern is only today. Even today most of them do not have habit of saving the money for future.

Strategies for Sustainable development:

1. Local tribals should be participated in development planning, monitoring and evaluation.
2. 'Grain Banks' should be revived in their villages.
3. Conservation and regeneration of natural resources are needed to ensure food security and sustainability for the Konda Reddi.
4. Literacy programme should form a part of integrated approach to development. Literacy training should be combined with saving, credit and technical assistance for income generating activities. Basic aspects of health and nutrition should be taught along with literacy programmes.



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INTRICATE STUDY OF SOUTH INDIAN BRONZES

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Introduction:

An important branch of Indian sculpture is classed under 'Bronzes'. The art of metal casting always received great attention and is of the highest Antiquity. Metal images were cast by the 'Cire Perdue' or 'Lost wax Process'. The subject was modeled in wax and model coated with clay. After the wax has been melted out, the liquid metal was poured into the mould. This was the technique employed in making all the beautiful images in bronze or brass.

The southern School of Indian Bronze which flourished between the 10th and 11th century was of such aesthetic quality and creative abundance, that it is regarded as representing 'Art at its Best'! It had its beginning in the time of Pallavas i.e. 7th and 8th century A.D., but attained its climax during the reign of Cholas. Thus, it is said that the Final and the finest chapter of Dravidian Art is their history of Metal work in South India. South India here refers to the home of Tamil Race which was dedicated entirely to 'Hindu Religion', especially to worship of Shiva. The popularity of The Great Yogi, Shiva, is depicted as his image of the 'Creator' as well as the 'Destructor' till the 8th Century A.D. After that, the Holy Men of 'Saivite Religion' visited the whole country, and their success in conversation was so great that by the year 1000, the traces of all previously



prevalent religions dimmed and the Art form this period onwards started showing signs of their dominance.

Findings:

Basic Characteristics discovered in South Indian Bronze Sculptures:-

The South Indian bronzes were made from Metals like Copper, Brass and Bronze. The technique employed for casting the sculptures was 'The technique of Lost Wax Process'. These sculptures were made according to cannons of Proportion. The total height of the sculpture or statue was calculated by the artisans in 'Thalams'. There were three distinct poses were especially reserved for depicting the spiritual qualities of Deities in complete state of Equilibrium. The poses were voluntarily decided on the basis of 2-3 points of the sculpture's axes (Plural to axis). The special Poses for Gods personified 'Cosmic Movement' and this presentation was performed by portraying different 'Mudras'. Also, there was depiction of peculiar Emotions or Moods. There were used different types of Headdresses and Jewellery for the Deities, which altogether created a Tremulous Movement in form. There can be seen Attenuation and Liteness in particular poses of Gods and Goddesses. There is Marvellous realization between the Movement and Tranquility in the depiction of Mudras. On intricate study of numerous Pieces, the idea or theme of Bhakti, tension and exaggeration of bodily proportions and ecstatic readiness of Divinity is observed.

Main Features observed in South Indian Bronze and Metal Sculptures:-

The earliest metal sculptures in South India were closely related to Primitive stone-carving technique. A beautiful example of this technique is 'The Bronze Statue of Shiva' that is a great illustration of Fullest Expression in Bronze, and yet has something that is of Static and Rigid



Quality. There are other early works like the 'Figure of Durga', giving the same feeling as 'A Stone Relief'. Unlike these metal statues, a typical impression of South Indian Bronze Statue of the 11th century that gives full place to expression.

The Most Important South Indian Bronze Sculptures:-

1. Shiva Saint Sundermurti Swami: It is a typical production of Bronze School of Sculpture which belongs to the 8th century. It was Sundermurti Swami whom Shiva claimed his disciple on his Wedding Day. It is a typical personification of God showing him arrested in a moment of sudden ecstasy. The figure of Shiva is in Tribhanga Pose. Artists in his moving lines wanted to depict those gestures of hand which inculcate and impart feeling of tremendous movement in the form of this Metal Statue. The exaggeration of features shows 'Lotus form Eyes', 'Lion like Torso' and 'Breathless raptures denoted by the Gestures and Forms'. There is marvelous realization between 'Movement' and 'Tranquility' and personification of 'Quality' and 'Devotion'. Ecstatic readiness of the 'Devotees' for their 'Divinities' is observed and there is combination of traditional elements and Elegant Attenuation and Lithness. Hence it can be said that the sculpture of 'Shiva Saint Sundermurti Swami' is a portrayal of Hindu Saints along with concrete presentation of Ideas of 'Bhakti' and symbolizes 'Dedication'. (Refer Image.1)



Image1.)The 3 foremost Nayanars with Manikkavachakar - collectively called the Nalvars: (from left) Sambandar, Appar, Sundarmurti, Manikkavachakar

3. Bronze of Parvati from South India: It is an extraordinary image of Parvati. It is currently at the 'Freer Gallery, Washington D.C.'. According to an inscription dated 941, Sembian Mahadevi is said to have made an endowment so that a lamp may be kept permanently lit in front of the Shiva deity. It is a processional image seen by the Holes and Poles. The figure has extreme attenuation of Thalamus. It is a slim and cylindrical figure with elongated Limbs, which gives the Goddess Air, Aristocracy and Grace. The refinement of the Figure is shown in Manumit Style of Europe. The Figure is blessed with Dynamic Aliveness, somewhat like 'Sanchi Tree Goddesses'. The roundness of the breasts gives traditional description of Urns. The tower-like Headgear and Crown of Parvati is connected with Chalukyas. Lovely features of the Figure, Lotus Eyes, Arched Eyebrows, small Mouth, Round Breasts, Flowing Arms, and Jewellery in the neck and Arms are observed. The figure is Otherwise Nudity, but there is suggestion of Cloth around the Legs.



Queen SembiyanMahadevi as goddess Parvati, Tamil Nadu
(Chola Period)height 92.1 cm (36 1/4 in.), Freer Gallery
(Washington D.C.)

4. Kali from Thanjavur: It is an indifferent Sculpture of 'Kali', one of the terrible subjects of the shrine Goddess of Death, worshipped in the temples of Calcutta, who claimed the lives of Millions. It is a statue of dreadful, animated Hag holding the Symbol of 'Ghoulis Dance'. Suggestion of tension and animated moments are clear in the statue. Dominance and modeling of Enormous Eyes shows Ferocious movement emphasizes the 'victim'.

As a whole, the abstraction of tuberous limbs and other gestures show a somewhat a belonging with other Indian Goddesses.

5. Nataraja from South India: Shiva as a Divine dancer and the King of Dance symbolize both Creation and Destruction. The dance symbolizes both Creation and Destruction and establishes the 'Rhythm of Universe'. The image is Dynamic and commanding and

greatly revered. The Chola Bronze casters at the height of their aesthetic achievement created the statue of Nataraja with four arms, the right rear hand holding 'damaru'- the small hand drum, marking the rhythm of Dance and rear Left holding the 'Flame'. The Left forward Arm crosses the body either held at ease or when the Left foot is raised Pointing to it. The right hand makes the Gesture of 'Protection' or 'Reassurance'. It represents Divinity in 'Catura Pose' i.e the Legs forming a Square and Dwarf Figure holding a snake, symbolizing 'Evil' or 'Ignorance'. The God wears a high crown, large round earrings, and at the left, a profusion of other Jewellery. He wears a Benign and Reassuring Smile.



Bronze Nataraja, Chola, 10th century A.D. height 71.5cm,
at National Museum, New Delhi

Conclusion:

The Bronze School of Art has bestowed upon the already rich heritage of the Art of Sculpturing in the Indian Subcontinent, an impeccable contribution, which is very prevalent in so many parts of the country and the world even today. The Art of Bronze Sculpturing is well accredited to the South Indian Region where this form reached its Zenith in the reign of



The Chola Dynasty. The Artisans of this Metal Craft were well versed in implementing the Godliness, Divinity and Sanctity in an Indifferent Fashion that is Suggestive of Motion and Movement in a Balanced, yet Graceful Manner. There is special attention paid towards depiction of peculiar Mudras and Gestures and the intrinsic face and Body features that gave this Art Form an Idiosyncratic Feel. Hence this Unique and Distinctive mode of Heavenly Expression and Artiness became a Fundamental and Profound Organ of the Extravagant Culture of Indian Art.

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STREET CHILDREN AND HUMAN RIGHTS: A STUDY IN VISAKHAPATNAM CITY

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Introduction:

Street children are a term used to refer to children who live on the streets of a city. They are socially deprived of family care and protection. Most children on the streets are between the ages of about 5 and 17 years old, and their population between different cities is varied. Street children live in abandoned buildings, cardboard boxes, parks or on the street itself. A great deal has been written defining street children, but the primary difficulty is that there are no precise categories, but rather a continuum, ranging from children who spend some time in the streets and sleep in house with ill-prepared adults, to those who lives entirely in the streets and have no adult supervision or care. It is a well known fact that children are an asset for any society. Any nation that fails to ensure the safety, survival protection and development of its children is doomed to destruction and disintegration. Therefore, it is the responsibility of the society to nurture them through various phases of their development to enable them to make a meaningful contribution to the society only after reaching to the stage of adulthood. And yet, the phenomenon of millions of children working for pittance across the populous countries of Asia, Africa, and



Latin America is a grim reminder of the failure of society to protect and nurture its greatest asset and to tackle one of the most serious anomalies of modern development in countries of these continents. It is pertinent to note that the population of children in India has grown faster than the total population and its share in the country's population has increased. The state of Andhra Pradesh has the dubious distinction of having the highest number of child labourers in the country. Where about 9 per cent of the children are workers, in other words, while 3.3 percent of the state's population is the child workers, 7.8 percent of the total labour forces in the state are child workers. Of the total child labour in India, 13 percent are in the state of Andhra Pradesh only. Of course while 92 percent of the total child workers in the state work in rural areas, the rest 8 percent belong to urban labour force.

Definitions of Street Children:

The International Catholic Church Bureau; Geneva, has viewed street children as "those for whom the street more than their family, has become their real home, a situation in which there is no protection, supervision or direction from responsible adults". UNICEF suggested that the term street children should refer to "children of 5 to 15 years of age who work on the streets of urban areas, without reference to the time they spend there or to the reasons for being there" (UNICEF : 1986). The United Nations defines street children as "boys and girls for whom 'the street' has become their home or source of livelihood, and who are inadequately protected or supervised by responsible adults." The definition suggests that a child in the street may be a working child a school dropout, or a homeless boy or girl; some agencies argue that the term "street children" is inappropriate because it creates an artificial category and diverts attention from the interconnected dimensions of child vulnerability.



Distribution of street children:

Estimates vary but one often cited figure is that the number of children living independently in the streets totals between 100 million and 150 million worldwide. Street children may be found on every inhabited continent in a large majority of the world's cities. The following estimates indicate the global extent of street child populations. India-11 million; Egypt-1.5 million; Pakistan-1.5 million; Kenya-3 lakhs; Philippines-2.5 lakhs; Congo-2.5 lakhs; Morocco-30 thousand; Brazil-25 thousand; Germany-20 thousand; Honduras-20 thousand; Jamaica-7 thousand; Uruguay-3 thousand; Switzerland-1 thousand. Although there are variations from country to country, 50 per cent or more of street children are boys.

Understanding Street Children:

Every street child has a reason for being on the streets. While some children are lured by the promise of excitement and freedom, the majority are pushed onto the street by desperation and a realization that they have nowhere else to go. In many countries; street children are named after their main survival activities. What is obvious is that street children are poverty-stricken and their needs and problems are a result of wanting to meet basic needs for survival. Street children go through the struggle of providing themselves with basic things such as food, shelter, health and clothing. Providing targeted interventions that meet the needs of street children requires an understanding of who they are, what they need, what they do and how they can be identified. A 'child of the streets', is having no home but the streets. Some children live on the sidewalks or city squares with the rest of their families.



Reasons for why Street Children on Streets:

The reasons why street children live on the street vary and however, there is one explanation that holds true for both developed and developing countries i.e. poverty. Most street children go onto the street to look for a better way of life and some of the common reasons are to earn money; to find shelter; to escape from family problems; low family income; homelessness; neglect and abuse; loss of parents; to escape from work; to escape from children homes; societal influence; illiteracy; discrimination; violent environment; stigmatization; injuries; sexual and physical harassment; stressful conditions; transitory lifestyle; mental health etc.

Government response:

Because they have not reached the age of majority, street children have no representation in the governing process. They have no vote themselves nor by proxy through their parents, from whom they likely are alienated. Nor do street children have any economic leverage. Governments, consequently, may pay little attention to them. The rights of street children are often ignored by governments even though nearly all of the world's governments have ratified the UN Convention of the Rights of the child. Governments are often embarrassed by street children and may blame parents or neighboring countries. Non-governmental Organizations may also be blamed for encouraging children to live in the streets by making street life more bearable or attractive through the services they provide. When governments implement programs to deal with street children these generally involve placing the children in orphanages, juvenile homes or correctional institutes. However, some children are in the streets because they have fled from such institutions and some governments prefer to support or work in partnership with NGO programmes.



The main objectives of the study are:

1. to study the nature and extent of the problem of the street children;
2. to assess the physical, psychological, social and basic needs of the street children for their growth and development;
3. To develop a socio - economic profile of the street children living in the city.

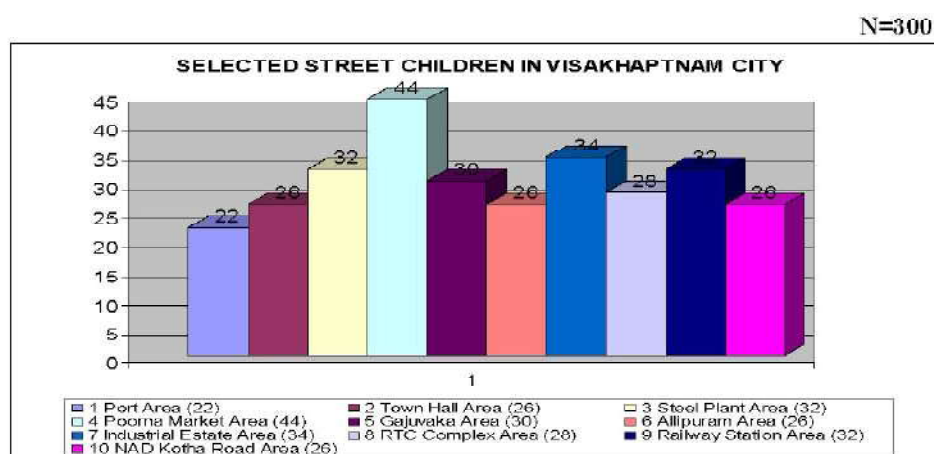
Study of Street Children in Visakhapatnam:

It is a well recognized fact that children are the most precious human resource of a nation. Still, the fate of a substantial chunk of them remains tragic. There are children trapped as the victims of the difficult circumstances how require special attention and care but not receiving the same. Placed in critical and difficult circumstances, these children venture on the streets of the cities in search of their survival. The origin of the problem lies in the multiplicity of factors such as family poverty, family disorganization, broken families, abuse and exploitation of parents and deprivation of minimum needs required by the children.

Visakhapatnam city is a rapid developing city on all fronts and has emerged in recent times as a prominent industrial city with the location of several small and large industries, private and public sector undertakings. The city has spread over an area of about 76 sq.kms and as per 2011 population census; the city contains about 38.32 lakhs population. The city is divided into 71 census localities distributed into 50 Municipal wards, essentially displaying the characteristics of three different zones, namely, residential, industrial and market - cum - commercial zones. Eventhough the street children keep on moving from one place to another in the city, it was very difficult for the researcher to prepare and follow any established



conventional sampling frame for the present study. In view of these constraints, the best strategy that suited for selecting a sample frame was the "Snow ball" or "referral technique" (Callan:1980). So far no official, systematic and scientific enumeration of street children in India has taken place and it is difficult to estimate the extent of the problem at various levels. Since very little work has been done on this problem in our country, the main aim of the present study was to draw a socio - economic profile of the selected street children operating in the city of Visakhapatnam located in the state of Andhra Pradesh, India, and analyze the physical, economic, familial and 'social conditions in which they are living. The study has covered a **Sample of 300** street children operating within the city limits. The instrument for data generation was the interview -schedule prepared for this purpose, the findings and experiences or the study, it is hoped, will be of some help to planners, administrators and policy makers for drawing up suitable action based programmes that benefit the street children.





Main findings of the study:

The study reveals that street children are not a homogenous lot. While 51 percent of them are children on the street, 33 percent are children of the street and the remaining 16 percent are the abandoned children. As many 78 percent of the sampled children are males (street boys) as against 22 percent females (street girls). Their age ranges from 6 to 16 years, average age being 11 years. A significant majority of them (72 percent) come from 11 to 16 years age cohort. Again while a majority of 68 percent of the sampled street children were born outside the city of Visakhapatnam, those who were born in the city constitute 32 percent of the sample. While a dominant 76 percent belong to Hindu religious fold, 14 percent are Muslims and 10 percent are Christians, by faith. A look at the caste composition reveals that a single largest majority of 42 percent of the sampled children come from Backward Castes, followed by 18 percent who belong to forward castes, 31 percent to scheduled castes and 9 percent to the scheduled tribes. It is also noticed that a significant majority of 76 percent are totally illiterate. Even those who received some education 24 percent were forced to dropout from their schools only to enter into this profession. Data on nature of work of these street children reveals that 46 percent are rag-pickers, 18 percent are footpath vendors, 13 percent are bogie\car\scooter cleaners, 9 percent are beggars, 8 percent are shoe shining boys, and the remaining 6 percent are the children engaged in other service activities as helpers. That means, all the studied street children are depending on urban unorganized sector for their day living. It is further noticed that 48 percent of these sampled children live in the city's slums. While 18 percent have no fixed place of residence in the city, 12 percent live on foot paths, 10 percent reside on railway platforms, 8 percent in bus shelters and the



remaining 4 percent stay around the places of worship in the city. It is curious to note that for 58 percent of this unfortunate lot, the main reason for their current fate was family disorganization in the forms of broken families and maltreatment and abuse they experienced at their homes. But while 24 percent felt that their family poverty was the main cause, 10 percent are the school drop-outs with no interest in pursuing education, and the remaining 8 percent stated other reasons for their involvement in the present profession. Thus it is not family poverty alone but significantly added to this is the family disorganization and maltreatment of children which ultimately results in the development of this problem.

These street children work on average 7 hours per day, earning on average Rs. 20 per day within a range of Rs. 5 to 40 per day. Despite the hard labour and long hours of work, the return is very meager. The income earned is hardly enough to meet their sustenance and survival. A significant majority of 76 percent of these children is aware of and has sufficient knowledge about their families and homes irrespective of their contact with them. In other words, only 24 percent of the sampled children have no knowledge about and contact and communication with their families and hence experience the problem of loneliness and isolation. Our data indicate the preponderance of large size families among the street children. For instance, 56 percent of those children who are quite aware of their families come from families having 6 to 8 members each followed by 32 percent whose families have 4 to 6 members each. The remaining 12 percent belong to those families with more than 8 living members each. Thus large family size coupled with poverty lead the children to deprivation of their basic needs which ultimately pushed them out to the streets. In our sample 69 percent of the children came from families where both their parents are alive and active. While in the case of 52 percent of the children, their basic



needs are poorly met by their parents, for 36 percent their basic needs are partly met. In other words, only 12 percent of the children are satisfied with the provision of basic needs given by their parents. Regarding parent-child relations, it is noticed that 32 percent of the children studied are loved of course by both the parents. But what is significant to note is that the proportion of the children not getting any affection or love from their parents is considerably high with 24 percent. Similarly, it is interesting to observe that 54 percent of the children love both the parents. About 69 percent of the respondents revealed that they get parental care when ill and in the case of the remaining 31 percent they do not receive any such care or help whatever. When we analyze their sibling relationships, 78 percent of those who have either brothers or sisters or both, maintain relationships with them with love and affection. Thus on the whole the bonds between the street children and their parents and siblings are not quite positive and encouraging. The findings also reveal that 62 per cent feel as if they are mould and made as the instruments of money spinning by their parents. Another 38 percent felt that they are the source of exploitation by their parents to the extent of using their income to supplement their family income. On the whole the street children work on the streets of the city to earn a living for themselves and for their families. A majority of the sampled street children possess composed personality traits with submissive and social nature which is really a positive but an unexpected trend noticed in them. While 68 percent exhibit their ambitions and aspirations in their lives ranging from planning for further education and training in any vocations to seeking services in any sector of activity permanently, the remaining 32 percent exhibited no such things. While 72 percent of these children are friendly with their peers, 64 percent gained sympathy from their neighborhood. Nearly 42 percent of the children are



leading their lives with moderate health conditions. While 40 percent are acutely suffering from ill health, only 18 percent are looking hale and healthy at the time of the present study. Their common diseases are skin disease, jaundice, asthma, stomach problems, frequent cold and fever etc. Yet another interesting finding of our study is that 89 percent are excessively prone to environmental hazards, 62 percent are excessively prone to work hazards, 69 percent are excessively exploited by their parents, and 72 percent are excessively exploited by their employers. The overall picture that emerged from our analysis of various basic needs is that their need fulfillment is unsatisfactory in most cases (66 percent) and just satisfactory in small number of cases (23 percent). The remaining 11 percent of the children only claimed that their basic needs are met and fulfilled in a satisfactory way. At the same time it is heartening to note that 78 percent were never apprehended for any unlawful activity or taken to observation homes in the city or outside. While 14 percent were arrested once only, the rest 8 percent were apprehended more than once. While 86 percent have no knowledge and awareness about child welfare services and centres available in the city, 72 percent are not even willing to go if any such chance comes to them. Considering the magnitude and dimensions of the problems of street children the provision and organization of services for them in our country are very poor and inadequate.

The Concept of Human Rights:

The United Nations Convention on the Rights of the Child, which came into force in September 1990, has had a huge impact in defining conceptual frameworks and humanitarian concerns regarding children in adversity. The Convention asserted a number of rights for children worldwide, formulated basic principles to be applied, and created a legal obligation to put these rights and principles into practice. Concern for



children in difficult circumstances was no longer a matter of humanitarian and charitable concern, but now is a legal responsibility falling on a state as party to the Convention. The Convention listed the areas where the rights and interests of children must be taken into account for instance, separation from parents, and freedom of expression, health, education and employment-and enunciated that in all actions concerning children, "the best interest of the child shall be a prime consideration". This universal mandate was carefully worded to formulate a clear principle to empower intervention while leaving room for some flexibility and cultural interpretation. Recent publications concerning street children have explicitly referred to children's rights and their best interests as advocated in the convention.

UN Convention on the Rights of the Child:

In many ways the Child Rights Committee (CRC) is the most important legal instrument in relation to juvenile justice because it is legally binding on all countries except Somalia and the USA. It is therefore more powerful and more widely applicable than some of the other instruments. The most specific articles in relation to juvenile justice are Articles 37 and 40: Article 37 prohibits torture, cruel inhuman, degrading treatment or punishment, capital punishment and life imprisonment, arbitrary or illegal arrest, detention or imprisonment; stipulates that arrest and detention shall only be used as a last resort and for the shortest appropriate period of time; outlines the right of children deprived of their liberty to be treated with humanity, respect and dignity in a manner that takes into account their age, to be separated from Jail's, to maintain family contact, to have prompt access to legal and other assistance, to challenge the legality of their detention and to expect a prompt decision in relation to any resulting action. Article 40 more specifically covers the rights of all children accused



of infringing the penal law. However, bearing in mind the need for a holistic approach and the fact that Articles 37 and 40 do not deal with broader - yet essential - issues of prevention, it is very important to set Articles 37 and 40 in the context of the overall framework of the CRC and its umbrella rights. These include:

Article 6 (the right to life, survival and development) Article 3.1 (the best interests of the child as a primary consideration) Article 2 (non-discrimination on any grounds) Article 12 (the right to 'participation') Article 4 (implementation - including of economic, social and cultural rights to the maximum extent of available resources). This more holistic approach allows a broader scope for lobbying for reform from a child rights-based approach. Other articles pertinent to street children and juvenile justice, including aspects of prevention, are: Article 3.3 (standards of care in institutions and services) Article 9 (separation from parents) Articles 13, 14 & 15 (freedom of expression, thought, conscience, religion, association and assembly) Article 16 (right to privacy) Article 17 (access to information/ role of the media) Article 20 (special protection and assistance for children deprived of a family environment) Article 23 (children with mental and physical disabilities) Article 24 (health) Article 25 (periodic review of placements) Article 27 (adequate standard of living) Articles 28 & 29 (right to, and aims of, education) Article 30 (minority rights) Article 31 (right to rest, leisure and play) Articles 32, 33, 34, 36 (protection from. economic exploitation / child labour, substance abuse, sexual exploitation and abuse and other forms of exploitation) Article 39 (recovery and reintegration of victims of all forms of neglect, exploitation or abuse).

Rights and Laws:

United Nations Convention on the Rights of the Child outlines the basic rights of children and the responsibilities of the governments to



protect children. Street children have the same rights as other children and the same laws should apply to them. A summary of the convention is importance of understanding about Rights and Laws; street educators should familiarize themselves with rights and laws for the following reasons; street children often get into conflict with legal authorities. Street educators at times need to act as unofficial advocates for them. To carry out this function, street educators need to develop working relationships with the local police, military, court authorities, centres for juvenile offenders and lawyers. Sometimes street educators are regarded with suspicion by the authorities because of their close association with street children.

HIV and Children's Rights:

Street children are at a high risk of acquiring HIV infection and less capable of coping with the consequences of HIV. An adaptation of relevant human rights for HIV / AIDS patients is given below. The right to education and information; street children should have access to education and information on HIV prevention. The right to non-discrimination; a child's HIV status should not lead to discriminatory treatment. The right to health; street children should not be denied access to health care and prevention services because they are HIV positive, for example services for STDs or clean injection equipment. The right to privacy; The right to liberty; The right to education and work; The right to marry and have a family; The right to social security, assistance and welfare; The right to freedom of movement.

Human Rights Issues of Street Children:

The turn of the twenty-first century has seen a change in most of the writing concerning street child and youth. The term street children itself has almost disappeared from the welfare and analytical literature,



which now uses different appellations to refer to street children and other underprivileged groups. Children themselves, of course, are still on the streets, easily visible in the great majority of urban centers. What has been called the global or "worldwide phenomenon of street children" has neither vanished from sight nor effectively been solved. However, current perspectives tend not to demarcate street children so radically from other poor children in urban centers or to conceptualize the homeless in isolation from other groups of children facing adversity. Welfare agencies now talk of "urban children at risk", which conceptualizes street children as one of a number of groups at risk and requiring urgent attention. There is accumulated evidence that children move fluidly on and off the streets and that the street does not represent the sum total of their social networks or experiences. A dialogue between academics and welfare practitioners has also been instigated to broaden the insights gained by people working with different categories of unaccompanied, institutionalized, abused, refugee, street, or working children.

International Principles on the Rights of the Child:

The Human Rights Commission has come forward with a Convention on the Rights of the Child in 1989. For the first time in history, human rights for children set out in more than eighty international laws, covenants and declarations have been brought in one Convention which, when accepted by the General Assembly of the United Nations in 1989, will have the force of a binding obligation. The draft Convention consists of 54 articles covering civil, political, economic, social and cultural rights ranging from 'survival' rights, such as adequate health care, food, clean water, and shelter, to rights of protection against abuse, neglect and exploitation; the right to safe and proper development through formal education; and freedom to participate in the social, economic, religious, and political life of their



culture. The Convention and the rights it sets out are based on three principles: that children need special safeguards beyond those provided to adults; that the best environment for a child's survival and development is within a protective and nurturing family setting; and the governments, and the adult world in general, should be committed to acting in the best interests of children.

International Programme of Action for Street Children:

Well before the United Nations and or even the League of Nations existed, international action specifically meant for street children was perhaps first initiated by the voluntary organization related to religious order. It is perhaps the work of Don Basco and the Salesian Fathers. Within International Catholic' Child Bureau (ICCB), several members have been working for street children before the problem attracted international attention. The former MEPS Commission of the ICCB have been aware of the problem for several years. In 1979, it organized an international seminar on street children in Bombay which was a forerunner to the international action that was followed in 1980s. For the last several years, field workers of different organizations, including UNICEF, have been well aware of the phenomenon of street children in different countries of the world. However, they worked in isolation and neither any concerted effort was made nor any "collective awareness" of the problem was evinced in the media or international organizations. *The turning point came with the declaration of 1979 as the International Year of the Child (IYC, 1979). It was here where the problem of street children was brought to the public attention. As a result of International Year of the Child and the pioneering work of its MEPS Commission, ICCB launched an international pilot programme for street children. Since the scope of the problem was far too wide for one single organization to tackle, this pilot programme envisaged close co-operation'*



with other international non-governmental organizations (NGOs). UNICEF participated as an observer to the programme's meetings. This "Inter-NGO Programme on Street Children and Street Youth" functioned for a period of three years from 1982-1985. Its main objectives were: creation of contacts and exchanges between field worker, increasing public awareness of the issue and investigation on possible guidelines for field workers as well as policy alternatives. The programme published a newsletter "The Street", as well as two series of profiles of street children projects. It also organized seminars on regional basis for field workers and policy makers in Maseilles (France, 1983) and in, Grand-Bassam (Ivory Coast, 1985). The latter was immediately followed by national meetings in Dakar, Kinshasa and Abidjan, organized by Environment, Development and Action (ENDA) in the Third World, where street children themselves could speak out. Besides these, several other initiatives were taken parallel to the inter-NGO programme, or within its context: One, the Covenant House, a major programme for street children in New York, organized "Shelter '83"-an international conference on street children, in December 1983, with representatives all over the world; and two, the UNICEF organized seminars for field workers on children at high risk', a term which includes street children, in Brazil, Colombia, and Mexico. The Inter-NGO Programme reached the end of its mandate in August, 1985. By then, the street children phenomenon had been put on the agenda of several international and national organizations. The international scene concerning street children had changed considerably as compared to few year earlier. The street children phenomenon came to be recognized as a major policy issue by some governments. Credit goes to the joint efforts of the Inter-NGO Programme, its founding members and UNICEF for contributing considerable to this turn about. April 1986 was a turning point in the growing wave of international action for street children. Three



significant events occurred, each showing in a different way the importance and public recognition given to the street children issue.

National Principles on the Rights of the Child:

India is constitutionally committed to an all-sided development of children. In the Directive Principles of the State policy of the Constitution of India, it is provided that the state shall, in particular, direct its policy towards securing that the children are given opportunities and facilities to develop in a healthy manner in conditions of freedom and dignity, and that childhood and youth are protected against exploitation as well as moral and material abandonment (Article 39, Clause f). These Constitutional provisions related to children's survival, development and protection have been made the part of the national policy. The National Policy for Children 1974 seeks to provide adequate services to children before and after birth and through the period of growth to ensure their full physical, mental and social development. The National Policy on child labour was presented in the Parliament by the Minister of State for Labour on August 21, 1987. It envisages a three-point policy whose ingredients are: (1) a legal action plan; (2) a focus on the welfare measures for working children and their families; and (3) a project-based plan of action. Under the legal action plan, emphasis would be placed on the strict and effective enforcement of the various Acts related to working children, such as the Child Labour (Prohibition and Regulation) Act, 1987; the Factories Act, 1948; the Mines Act, 1950; the Plantation Labour Act, 1951, etc. The policy also envisages the utilization of various programmes for the benefit of child labour and their families. The existing welfare programmes in the areas of education, health, nutrition and employment for the poor are to be used to create socio-economic conditions in which compulsions of early employment could be diminished and children could be encouraged to attend school.



Policy implications and suggestions:

From our analysis of various dimensions of the problems of urban street children, it is clear that the phenomenon is on the rise and these children are subjected to super exploitation. The economic subordination of children, the social and cultural construction of gender relations in our society, the existing power relations in the society and within the family unit and the prevailing informal and unorganised manufacturing and service sectors, all of these clearly explain the subordinate position of children in our society. Given the existing situation, emphasis, if any, should be given in focusing our legislative, protective, welfare, poverty alleviation and educational policies to rehabilitate and protect these children. In other words, the protective and rehabilitation programmes should aim at eliminating super exploitation of urban working children in the short run. It should be noted here that prevention of children appearing on the urban streets should be one of the major objectives of the welfare and rehabilitation programmes. However, some of the specific programme needs of these children in India are as follows as outlined by Jain (1993):

- Ø To look into the problem of street children through further critical research so as to gather and accumulate scientific information on different dimensions of the problem. This is a precondition for evolving and outlining effective protective policies and action - oriented rehabilitation programmes,
- Ø The existing poverty - alleviation and welfare programmes of our states need to be modified to cover the poor families to which street children belong,
- Ø Strategies should be evolved to check the entry of individual child migrants into urban areas,



- Ø Basic sanitary, health care, educational and other facilities need to be provided to protect street children from both the vagaries of nature and the effects of rapid urbanization in India,
- Ø Provisions for setting up of centres where street children can earn and learn simultaneously need to be created. This will help in reducing super exploitation of these children; and
- Ø Finally, a campaign against the problem of street children should be undertaken by the government, voluntary organizations, trade unions, and other groups to create awareness of the problem among the general public.

The problems of street children are of a special nature. Any plan of action must keep this fact in mind. Access to education and training in basic skills can improve the lot of these children. Attempts should be made to overcome dropout incidences by providing free education. Widely diversified existing and new vocational programmes should be accessible to street children so as to enable them to have a wide choice of employment opportunities. There is also the need to change the society's perception of street children. The public should look at them sympathetically and try to change their attitudes towards them. Here comes the role of mass media in moulding favourable public opinion towards this problem. The community's promotive, preventive and curative health care measures should be geared so as to reach the street children. Non- governmental organizations should expand their nets extensively so as to cover street children on a wider scale for their care and protection. The knowledge and experience gained by the NGO's in this field should be used by the government to work out successful models. Further a scientific and reliable data base should be established to generate data needed for preparing estimates to gauge the magnitude and dimensions of the problem.



Professional social workers who are trained man power in understanding the people's malady and helping them in bringing solutions can play a significant role in this field. Also activation of urban community development wings of the municipal corporations and their active involvement in the care, curative and rehabilitative programmes meant for the street children is the need of the hour. Government alone cannot do all to contain the problem. NGO's, religious, philanthropic and charitable missions, municipal corporations, all should lend their helping hand to the government in mitigating the problem, approaching it with an integrated methodology. It appears that whatever action has been taken so far, it has been done by the NGO's. The government's and Municipal Corporation's efforts give a dismal reading on this front. The human rights of the child need be protected with utmost care. "The street child deserves the best that mankind has to give" which must be given right now. Weaning children away from the streets would have to be preceded by proper planning for creating adequate infrastructure for their schooling and other facilities so that they can enjoy their childhood. In fact the Ministry of Education, Government of India has recently reviewed its National Education Policy and the emphasis seems to be shifting towards non-formalizing formal education rather than developing a parallel non-formal system for the poor and working children. Educationists suggest that emphasis should also be laid on the nutritional status of child workers and strict enforcement of labour laws. What needs to be recognized is that while the poverty angle has its own validity, the abject failure of governments to provide proper schooling has contributed substantially to the ever swelling ranks of child labour. The knee - jerk efforts of the government to wean away children from the streets and work places through poverty alleviation programmes do not seem to have worked out



since the percentage of school dropouts continues to be increasing. But one is left then with the pessimistic conclusion drawn by Weiner (1991) that "barring a conceptual change in the thinking of those who make and implement policy, and a new direction in policy by the Indian government, the number of children in the labour force will not significantly decline; conditions for working children will not significantly improve; school retention rates will not significantly increase; and literacy rates will continue to grow at a slow pace and will leave a large part of the Indian population illiterate well into the middle of the twenty first century... India's global share of illiterates and child labourers will continue to increase." Still, India has the capacity to tackle, if not overcome, the daunting challenge. The question is whether there is the will to do it.

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SMAP: SECURE MESSAGE AUTHENTICATION PROTOCOL AND DELAY REDUCTION IN VANET

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I. INTRODUCTION

VANET is a growing technology which is a sub-category of MANET. Vehicular Ad-hoc network support a variety of applications such as, traffic efficiency, security, safety, infotainment and driver assistance. Moreover vehicles can communicate with each other, V2V communication approach is most suited for Short range vehicular networks. When moving to global size communication V2V is not affordable, V2I provides a solution to longer range communication between vehicular networks by using an RSU interface. To get communication between V2I each vehicle will be in need of a certificate which will be provided by the RSU to all the vehicles that are connected. This certificate will be provided to the vehicle which has authorization, authorization will be checked by the public key carried by the vehicle. The certificate will be maintained by the RSU itself, and the message transfer to vehicles through infrastructure will also be maintained by RSU. So overload in RSU may occur, which lead to delay in providing communication between vehicles through RSU. So many algorithm has been used by authors to overcome the delay in RSU. Mostly certificate authority is been used to overcome the delay of RSU, here the certificate will be maintained in a separate place where a bunch of Road Side Unit



will be connected and get update when need with certificate authority. This will help the RSU to minimize the overload, and will allow the data/information to be transmitted without any delay. For this purpose paper [17] gives a new protocol called EMAP (Expedite Message Authentication Protocol) which allow to replace the CRL (Certificate revocation List) checking process to an efficient revocation checking process by means of fast and protected HMAC function. Here HMAC is employed with a key, where the key is used for the calculating the messages that are being shared between unrevoked OBU.

In this paper we present a M-ECDSA (Modified Elliptic Curve Digital Signature Algorithm) to generate a digital signature of information for authentication purpose, done by mean of signature of the vehicle user. For each and every vehicles will gets the digital signature information to be generated for the authentication need, so that will be able to communicate with other vehicles and also vehicle to infrastructure communication.

II. REALATED WORKS

Providing communication between moving vehicles is a common process in VANET, but providing secure communication is a challengingwork in the VANET. In paper [1] a solution for certificate revocation problem has been provided, here the certificate will be verified whether the certificate is present in the list or not, updating the certificate list is also done in [1]. The author of paper [4] gives the security aspects in certificate revocation, here the online status of the certificate will be provided to the end entities by using an OCSP client API, and this is done to integrate into PKI application for online revocation checking. In paper [7] a new scheme for certificate revocation is given which is based on the mathematical puzzle. This can able to count the certificate provided to the



vehicles, so that density of traffic can be identified. In paper [9], the author gives a concept of selecting and authorizing the certificate. A brief survey of the certificate revocation and concluded with challenges and researches issues in VANET. In paper [11], a general and secure certification based encryption construction is provided, the certificate provided to the vehicle network architecture will be encrypted and then provided to the vehicular nodes, so that the certificate provided will be secure. Only with the public key in the vehicle can decrypt the certificate message. In paper [18] cross layer approach to privacy preservation is done to secure the data/information which is being broadcasted and providing privacy for the vehicle to vehicle communication which as using Road Side Unit. In paper [13] certificate distribution and application architecture for VANET, here certificate will be distributed between vehicles for the authentication progress. So that communication between vehicles can be done.

III. ORGANIZATION OF THE PAPER

We have passed away from abstract which give the overview and also say about the main concept of the paper. In section I, served with a brief and clear introduction about the VANET and security purpose in VANET. In session II, Literature survey gone through has been given as related work. In session IV, system which is in present, is given as existing system. Session V is allocated with the problem definition, which says about the problem faced in existing system. In session VI, the proposed concept will be given as Proposed System. Session VII certificate generation process is explained with algorithm. Session VIII certificate verification is carried on for authentication. Session IX is filled with certificate updating function so that new certificate is not needed. In session X the conclusion and future work has been discussed.

IV. EXISTING SYSTEM

VANET is developed for the purpose of communication between vehicles through a network, when communication is been established there is need for getting vehicles to get authorization.[1] This authorization is done with the help of the certificate provided to the vehicle by the infrastructure. When the certificate reaches the vehicle and verified with the authentication, then the vehicle is authorized to communicate through the infrastructure (RSU). As the vehicle are in motion, they will move away from the range of the RSU which provided them authorization and allow them to communicate with infrastructure will *release the certificate* as they exit the range of infrastructure. Then the vehicle will be moving to another range of an RSU and then the same process of certificate providing and verification process will be done by another infrastructure, the certificate provided by the RSU will be a new certificate.

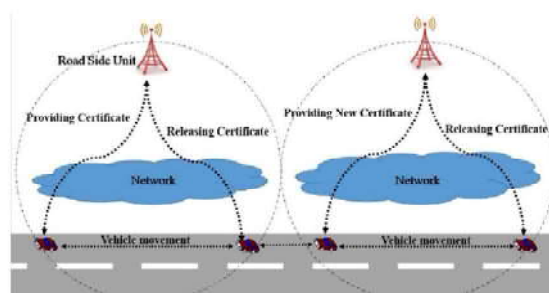


Fig 4.1: RSU Certificate providing process

In the above figure 4.1 how the certificate are been provided and released are shown. Here we can see a vehicle which is entering into the range of the RSU will be provided with a *unique certificate*. When the certificate itself will verify the vehicle authentication and after the authorization only the vehicle will be allowed to communicate with the



other vehicle through RSU. When the vehicle exit the range of the RSU, the *certificate release* function will be carried on. Then the vehicle will be moving to another RSU range, there a *new certificate* will be received by the vehicle from the new RSU, then again the same process of certificate verification, validation, authorization, authentication will be processed.

V. PROBLEM DEFINITION

Each and every time when the vehicle moves from one RSU to another a new certificate will be provided. We know that the RSU is responsible for the communication between vehicles, here the RSU itself will be maintaining the certificate that is been provided so the *delay* may occur while transferring data, due to the maintenance of the certificate RSU faces *mobility* problem too. A new certificate will be provided received by the vehicle, when it moves from one range to the other, so and every time the vehicle authentication process need to be done. Now consider that a vehicle got authorized and communication with other vehicle, as the vehicle is moving the vehicle may move away from the range of the RSU and enters a new range of RSU. now the vehicle need to get authentication process again, So the communication between the vehicles stops temporarily and delay in communication will occur.

VI. PROPOSED WORK

When people travel in roadway through a vehicle, they mostly expect to move in a safety and in a faster manner. For this purpose VANET is introduced, this will allow the pilot to communicate with other vehicles this helpsto get the roadway information, traffic details, and communication with other vehicle (V2V) by using Road Side Unit (RSU) and many more service. But to get these services the vehicle need to get authentication, this authentication make the vehicle to authorized, so it can access the



server to get the information. This verification or authentication of the vehicle is done through a certificate provided by the RSU. The certificate can be only received by the vehicle which has a Public key, this makes the vehicle authorized.

I. Centralized Server:

Centralized Server(CS) is the storage area where the vehicles certificate will be stored,CS will be maintained by the Certificate Authority (CA). A direct interlink has been established between Certificate Authority (CA) and Centralized Server (CS). The centralized server will be providing certificate to the certificate authority when requested, then CS will update about the certificate provided.

II. Certificate Authority:

Certificate Authority (CA) is the one which has a direct link with RSU's within its range. Many CA will be maintaining more than one RSU, each and every RSU will be requesting for certificates to be provided to vehicles. These certificates will be containing some encrypted information that can be only obtained by vehicles having Public Key. When a vehicles attains the certificate, then the vehicle is treated as an authorized vehicle, else will be preserved as malware or an attacker.

III. RSU:

Road Side Unit which cover a range of area to connect with the vehicles which are in its range. When a vehicle enters the range, then the authorization of the vehicle is a must process to be verified, so that attacking of network can be prevented. For this purpose certificate is been used by the RSU. When a vehicle need some information from the RSU or from other vehicle communication is needed to be established. i.e., V2V

communication and V2I communication. For a strong communication the vehicle must get authorization, this authorization is performed by the certificate which are provided by the RSU. By getting the certificate the vehicle encrypt the certificate by using its own private key and get communicated with RSU for safety and faster travel.

IV. Network:

The range of the RSU is normally said be a network, but there is a huge difference between the network and range. The network is to be established for the communication between vehicles to infrastructure communication. The certificate which are to be transmitted to the vehicles are by using the network. Not only are the certificate, the information that are need to be transmitted to other vehicles also done by network coverage. The network is based on the Road Side Unit range, the network covers the RSU range.

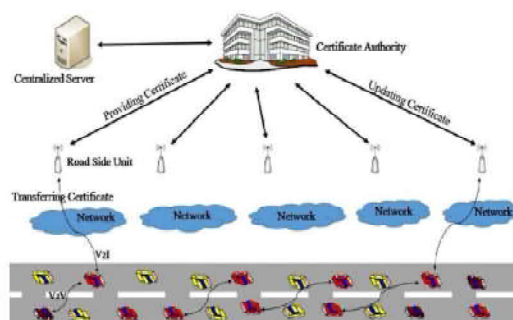


Fig 6.1: Certificate authority providing and updating certificate

In proposed work, a certificate authority is been maintained with a centralized server to store information. When a vehicle enters into the range of a particular RSU, the vehicle will get connected to the RSU. But the vehicle will not be able to share information with other vehicle or acquire information from RSU. As we know this can be only done by an authorized vehicle, now the RSU will request for a unique certificate from



the certificate authority for a new vehicle entered into the coverage of its range. The certificate authority will also provide a unique certificate to the RSU, which will be transferred to the vehicle through the network maintained by the RSU. In the above diagram gives the whole working principle of the paper, certificate providing and updating using a centralized server. Now consider a vehicle has entered into the range of particular RSU, and the RSU has detected the vehicle through the network. Now RSU will request for a certificate from the centralized server, the server will generate the vehicle certificate after request has been received. The certificate generation is as follows:

VII. CERTIFICATE GENERATION

After the request has been received for the certificate generation a public key Q which has been associated with a domain parameter randomly will be generated for the particular vehicle.

- Public Key $Q = (x_Q, y_Q)$, with domain parameter (q, a, b, G, n, h) generated for entity.
- Select a random or pseudo-random integer d in the interval $[1, n-1]$.
- Compute $Q = dG$.
- A's public key is Q ; A's private key is d .

VIII. CERTIFICATE VALIDATION

After the certificate has been generated the certificate will be transferred to the RSU from the Certificate Authority, then to the vehicles through a network. When the certificate reaches the vehicle, authentication of the vehicle will be done, this authorization is carried out by certificate



verification, this is based on the private key associated in the vehicle. The verification process is done as follows

- A public key $Q = (x_Q, y_Q)$ associated with a domain parameter (q, a, b, G, n, h)
- Check that $Q \neq O$
- Check that x_Q and y_Q are properly represented elements of $GF(q)$.
- Check that Q lies on the elliptic curve defined by "a" and "b".
- Check that $nQ = O$.

IX. CERTIFICATE UPDATING

After the certificate generation and Validation the vehicle will be able to communicate with the other vehicles and infrastructure for sending and receiving data/information. In existing system the RSU will be the certificate provider and when the vehicle moves from one RSU range to the other a new certificate will be provided to the vehicle and following the process of certificate generation, providing and validation. So that the communication between the vehicles is going on mean the communication will be stopped temporarily due to the certificate providing and verifying. Due to this the flow of data will be stopped. To rectify this problem, *certificate update* process is carried on by the certificate authority. Here when a certificate is been provided to a vehicle by a RSU and the vehicle got authenticated to communicate then there is no need to get authentication process again is the main view of the certificate update function. So when a vehicle which got authentication by a RSU through the certificate then the vehicle will be authenticated by all the RSU passes through. When the vehicle moves from one RSU to another RSU then only the certificate update process will be done by the RSU through the

certificate authority. The certificate update is done by the Certificate authority and RSU, as soon as a vehicle enters with a authentication the certificate will be obtained from the vehicle by RSU and will be verified with the certificate authority and update of the certificate will be done.

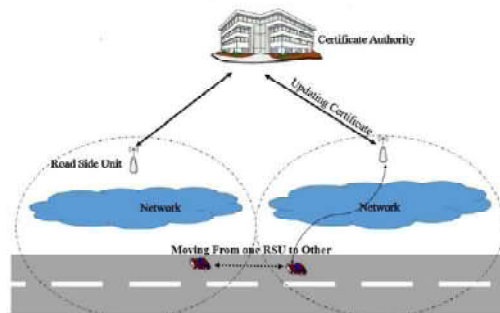


Fig 9.1: Certificate Update

Here in the above figure 9.1 the vehicle which moves from one coverage of RSU to other range is shown. When the vehicle enters the new coverage of the RSU, the new RSU will request for the certificate from the vehicle, if the vehicle has no certificated associated with in it then the vehicle is considered as a new vehicle and regular process will be carried on. But if the vehicle responded with a certificate then the certificated update function is done between the RSU and Certificate Authority (CA). then received certificate will be sent to the CA, the CA will check about the certificate, if it found that the certificate is a valid , then update process will be initiated. If the received certificate is invalid then the vehicle will be treated as a malware or an attacker and will not get authentication function. The information about the vehicle will be gathered and distributed among the vehicle about the attacker so that the vehicle will be alerted before attack.



X. CONCLUSION

The above proposed M-ECDSA algorithm allow us to get the current location information so that we can get navigated to some destination point. The scheme to get the data packet without delay and getting updates about the certificate are done by proposed SMAP. The certificate will be provided by the certificate authority. Increasing security and increasing throughput can be done as the future work.

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COMPARISON OF MUSCULAR STRENGTH AMONG ADOLESCENT SCHOOL BOYS OF NORTH-EASTERN STATES OF INDIA

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INTRODUCTION

Life styles affect people's health with eating habits and regular physical activity being the two most influential factors ^[1], irrespective of sex, age or country of residence ^[2]. Current study focuses school going adolescents are facing health hazard problems that leads to physical, physiological and psychological problems. Basic data among adolescent's shows, they are not receiving adequate physical activities and capacity building to equip them for the future. Ability of a muscle or group of muscles to generate force in a single maximal effort is called muscular strength ^[3]. Studies need to conduct in India to high light various areas of concern with respect to adolescent life style ^[4].

METHODOLOGY

To achieve this purpose (n= 3000) boys from various schools of each state of Tripura (TR), Meghalaya (ML), Assam (AS), Mizoram (MZ), Manipur (MN), Nagaland (NL) and Arunachal Pradesh (A.R.) N=21000 adolescent boys from whole North-Eastern states of India were selected as subjects at random. Their age ranged from 13, 14 & 15 years (studying from 7th to 10th standard). Muscular strength was measured by the number of push-ups in a one minute ^[5]. The collected data were analyzed by using one-way ANOVA ^[6]. Among the group if any significant difference, scefte's



post hoc test was used to find out the paired mean difference. The confidence level to test the significance was fixed at 0.05 ($P < 0.05$).

RESULT

TABLE- I

ANOVA of North-Eastern States of Indian Adolescent on Muscular Strength

Age		Sum of squares	df	Mean square	F
13 Years	B	11871.396	6	1978.566	66.301*
	W	125128.443	4193	29.842	
14 Years	B	14530.233	6	2421.705	60.541*
	W	167725.130	4193	40.001	
15 Years	B	29940.293	6	4990.049	152.677*
	W	137042.705	4193	32.684	

$P > 0.05$ / table value = 2.09/df 6 & 4193

TABLE-2

Scheffe's Post hoc test on Muscular strength for North-Eastern States Adolescent Boys

AGE	TR vs ML	TR vs AS	TR vs MZ	TR vs MN	TR vs NL	TR vs A . R .	ML vs AS	ML vs MZ	ML vs MN	ML vs NL	ML vs A . R .	AS vs MZ	AS vs MN	AS vs NL	AS vs A . R .	MZ vs MN	MZ vs NL	MZ vs A . R .	MN vs NL	MN vs A . R .	NL vs A . R .	CJ .
13	3.75*	.84	2.08*	.43	2.57*	.45	4.60*	1.66*	4.18*	1.18*	4.20*	2.93*	.41	3.41*	.39	2.51*	.48	2.53*	3.00*	.02	3.02*	1.05
14	4.18*	2.57*	1.35*	.50	.91	.04	6.75*	2.85*	3.68*	3.27*	4.19*	3.90*	3.07*	3.48*	2.61*	.83	.41	1.28*	.41	.45	.86	1.20
15	2.49*	1.16*	5.67*	3.85*	6.13*	5.34*	3.66*	3.17*	1.33*	3.69*	2.85*	6.88*	5.02*	7.35*	6.51*	1.81*	.51	.32	2.33*	1.49*	.84	1.09

TR: Tripura, ML: Meghalaya, AS: Assam, MZ: Mizoram, MN: Manipur, NL: Nagaland and A.R.: Arunachal Pradesh.



The result of the study shows that, 13, 14 and 15 years boys of North-Eastern States were significantly differ on muscular strength. The post hoc results indicate that, in *13 years*: Meghalaya boys significantly better on muscular strength than all the others. However Nagaland and Mizoram also exhibit better on muscular strength, in *14 years*: Meghalaya boys are remarkably better on muscular strength than rest of the boys. Further Mizoram and Nagaland boys also show better muscular strength and in *15 years*: Nagaland, Mizoram and Arunachal Pradesh boys are recorded high muscular strength than their pear of other states.

DISCUSSION

Changes in height and weight during childhood and adolescence are well documented, yet there is comparatively little comprehensive information about muscular development during this time. In a cross-sectional survey standing height, body weight and isometric strength of the elbow flexor and quadriceps muscles have been measured. In the pre-adolescent phase of growth, muscle strength of the elbow flexors and quadriceps increased as a function of height squared and cubed respectively, suggesting that stretch as a result of elongation of the long bones, and for the quadriceps, loading, may be the primary stimuli during this phase. In the post-pubertal phase some other stimulus, such as a direct action of hormones on the muscle, must be responsible for the continued increase in strength in the boys ^[7].

Data for individual children were aligned to the time of peak height velocity and associations between strength, height, weight and circulating testosterone were investigated using multi-level modelling. For girls, quadriceps strength is proportional to height and weight while for boys



there is an additional factor which can be fully attributed to increasing levels of testosterone ^[8].

An individual's physical strength is determined by two factors; the cross-sectional area of muscle fibers recruited to generate force and the intensity of the recruitment. Individuals with a high proportion of **type I** slow twitch muscle fibers will be relatively weaker than a similar individual with a high proportion of **type II** fast twitch fibers, but would have a greater inherent capacity for physical endurance ^[9].

Bone strength and "mass" normally adapt to the largest voluntary loads on bones. The loads come from muscles, not body weight. Bone modelling can increase bone strength and "mass," bone remodelling can conserve or reduce them, and each can turn on and off in response to its own threshold range of bone strains. During growth, the loads on bones from body weight and muscle forces increase, and modelling correspondingly increases bone strength and "mass." In young adults those loads usually plateau, so bone strength can "catch up" and modelling can turn off ^[10].

Older women have an enhanced capacity to store and utilize elastic energy compared with similarly aged men as well as with younger women and men ^[11]. The level of strength portrayed can vary greatly; from just outside the "normal" human range of the strongest **weightlifters** of a given size or muscle mass ^[12].

While no mechanical effects associated with aging should contribute to that age-related bone loss too, a new skeletal paradigm suggests the above mechanical influences would dominate control of the process in time and anatomical space ^[10].



Age-related strength losses are mainly secondary to decline in skeletal muscle mass in men and women. While women may experience earlier strength losses than men, overall, age associated decreases in strength are similar when controlling for muscle mass ^[13].

Exercise seems to enhance the efficiency of muscle mitochondrial DNA in rodents. Reduced physical activity as a contributor of age-related mitochondrial dysfunction remains to be determined. It is proposed that a reduction in tissue mitochondrial ATP production signals the hypothalamic centres to reduce spontaneous physical activities. Voluntary physical activity is regulated by cognitive centres and could attenuate the progressive decline in mitochondrial functions that occurs with age ^[14].

Body size is the most important element in the weight-bearing lower limb skeleton, while both body size and muscle strength are important in the upper limb, especially in males ^[15]. Men and women of all ages can increase their muscle size and muscle strength through progressive strength training. However, the rate of strength gain appears to be greater during the years of normal growth and development, generally considered to be from ages ten to twenty.

Low muscle strength in adolescence is strongly associated with a greater risk of early death from several major causes. High body mass index (BMI) and high blood pressure at a young age are known risk factors for premature death, but whether muscular strength in childhood or adolescence can predict mortality is unclear. High muscular strength was associated with a 20-35% lower risk of early death from any cause and also from cardiovascular diseases, independently of BMI or blood pressure. No association was seen with cancer deaths. Male adolescents with the lowest level of muscular strength showed the greatest all-cause mortality and



also the greatest mortality in cardiovascular disease and suicide before age 55 years. Low muscular strength in adolescents “is an emerging risk factor for major causes of death in young adulthood, such as suicide and cardiovascular diseases.” People at increased risk of long term mortality, because of lower muscular strength, should be encouraged to engage in exercise programmers and other forms of physical activity ^[16].

The muscular strength and endurance can be improved during the adolescent years by increasing physical exercises. The result of the present study shows that, chronological increase of age will develop muscular strength positively during the adolescent period of boys. It indirectly indicates the increase of muscle mass, cross section area, quality of muscles and bone strength are increased/developed.

CONCLUSION:

1. During growth and development period (adolescent and post adolescent) the muscular strength of boys are steadily increased.
2. Meghalaya adolescent boys were better on muscular strength during adolescent periods but the improvement was not constantly increased during post adolescents.
3. Mizoram and Nagaland adolescent boys exhibit constant improvement on muscular strength.

IMPLICATION:

Health awareness will be reformed for the adolescent boys of North-Eastern states of India. Further the state government and school education department will take necessary steps to improve health related fitness of the adolescent boys.



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NATURE AND AUTHENTICITY OF THE COVERAGE OF MULLAI PERIYAR WATER CONFLICT IN TAMIL NEWSPAPERS

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Introduction

The media occupies a vital role in this dreadful world. Especially, at times of distress, every single space of print media is really significant. Every word uttered or impressed, can have the power to concord the minds of people or simultaneously they have the power to make great revolutions and evolutions. Throughout centuries, the power of words and messages are clearly reflected in the dawn and dusk of civilizations. They have the power to throne and dethrone civilizations.

The media, both print and electronic, can play an important role in diffusing tensions, reducing and curtailing conflicts. It can do so by being deeply aware of the fragility of a country's social fabric, of the efforts being expended at unifying a country's polarized and ethicized politics and more importantly by objectively reporting conflict incidences as they unfold. Media has gone beyond being mere fact-deliverers to news analysts by providing enough and candid information to create empathy for all sides involved in a conflict. Journalists should avoid simplistic representations of issues by probing further and verify their sources in order to uphold the dignity of the media houses they work for and also to take to a higher level the role of media in peace building, well beyond reproach.



“Professional journalists do not set out to reduce conflict. They seek to present accurate and impartial news. But it is through good reporting that conflict is reduced” (Ross Howard, 2003). Mass media often plays a key role in today’s conflict. Generally, they take two different and opposed roles. Initially, they indulge in the coverage of the conflict and keeping the society informed on the incidents. secondly, it stays unbiased and free, providing resolution for the conflict and harmony in the society. “Which role the media takes in a given conflict, and in the phases before and after, depends on a complex set of factors, including the relationship the media has to actors in the conflict and the independence the media has to the power holders in society”. (Phuddepatt, 2006)

Background of the study

Mullai Periyar dam is a portmanteau of Mullaiyar and Periyar as the dam is located after the confluence of the Mullaiyar and Periyar rivers, the west flowing perennial rivers that originate from the Sivagiri group of hills in the Western Ghats traversing through Idukki and Ernakulam districts of Kerala and joins the Arabian Sea. Mullai Periyar dam, Idukki and the Lower Periyar Hydel projects and the Periyar Valley Irrigation Project of Kerala are located in the main Periyar River. There are densely populated human settlements along the downstream stretch of this dam. The total drainage area of the Periyar river basin is 5398 sq.km of which 114sq.km lies in Tamil Nadu. (Thatheyus et al 2013). The century old Mullai Periyar dam has conflict over four decade. The stakeholders of the dam Tamil Nadu and Kerala have entered legal and political battle. In this circumstances the researcher intended to study the role of media in handling the age old water conflict.



Related studies on Media and Conflict

Conflict has been described in different connotations. Jake Lynch & Annabel McGoldrick (2005) defines Conflict, as a relationship between two or more parties (Individual or groups) who have, or think they have, incompatible goals, needs and safety. Conflict can be also conceptualized as a 'distribution' or 'collaboration' problem between parties with competing and unable to get along demands. (Zartman & Rubin, 2000) commonly in such a situation, one party (intentionally or otherwise) frustrates over another actor's objectives (Frey, 1993). Further Conflict can also be perceived as a contest that parties try to win through various strategies (Schelling, 1960) dissimilarity can also be a decisive influencing variable that determines the level of conflict (Dutta & Mishra , 2005), and it is important to understand that this extend to both inter-state and intra-state scenarios.

Various roles are attributed to the media: to report and cover events; to interpret and suggest a broader meaning to events; to monitor the powerful and strong in society; to advance the weak and promote social justice; to mediate between the public and the political leadership; and to enable individuals to practice their freedom of speech. Some expect journalists to report conflicts "objectively". However, the very presence of the media might change the course of the conflict, and in fact interfere in its dynamics. Sometimes the media becomes an active performer within the controversy (Gamson & Modigliani, 1992). In the 1960s, the conflict theory in the social sciences pointed out the emergence and escalation of many conflicts. Sometimes the media plays a double role in conflicts. On one hand, it covers them; and on the other hand, the media's very choice of topics and words reflects a point of view with regard to the conflicts at stake. The more the media covers disputes – the more arrows of public



criticism might be pointed at it. As with any other representation of reality, the media's picture of it is, by definition, partial, and does not necessarily reflect it without bias. The more a complex a conflict, the harder it is to agree about its coverage by the media (Caspi, 1995).

In a linear model recommended by Wanta (1997), the types of sway and the extent to which the media influences the agendas of persons are determined by a set of variables that include demographic traits, behavioral patterns, and dependence on the media as a reliable source of information. Printed newspaper shaves an advantage over television because they enable readers to perceive the dispute's depth and complexity, and they allow each reader to process the information at his or her own pace. Reporters and editors are structurally dependant on dominant power groups as sources of information, partly because they offer a regular supply of news. Although journalists tend to support the dominant value system (Gans, 1979), other research shows that they tend to be slightly more liberal than either the general public or the elite groups (Weaver & Wilhoit, 1986). This also suggest that media at times have the capacity to produce stories critical of the status quo. The media can also influence the strategies and behavior of those in power.

Water Aid in Nepal (2012) in this report said that the media and community radio have also played a strong role in disseminating information to these areas. Many were aware of the benefits received by communities in allowing government agencies or other communities to use the water sources in their locality.

In most cases, communities chose more than one negotiator, approaching government representatives, political leaders, social leaders and media representatives, among others. Social and political leaders played



a catalytic role in managing conflict at the community level. WaterAid in Nepal (2012).

In the case of Tamil Nadu, there is no published information from the government in the public domain to gauge the government's stance. However, on the basis of reported items in the newspaper media, and occasional statements in the Policy Notes in the State Legislature, the following points can be identified.

From human development and other macro-indicators, the two riparian states are not significantly different, although they have distinct languages and traditions. This may have played a role in facilitating the discourses of identity creation. For example, different languages mean that there is some degree of monopoly by newspapers or other media (such as television networks) depending on where they are based, even if English-language dailies make an attempt to be less parochial than vernacular media. As briefly discussed by K. T. Appiah (2001).

Just as state institutions can shape identity, media can have an influence. As in the case of communal riots (see Varshney, 2004), in the case of inter-state or international conflicts, the development of inter-ethnic or inter-group institutions may be crucial to the development of trust. Such trust formation may be crucial to questioning and de-constructing perceptions about identity of the other P B Anand (2007).

At present, the legal approach recognizes only the governments of the disputant states as legitimate parties in the case of a river water dispute. Citizens cannot directly contribute or know about the proceedings of the tribunals. They can only express their view-points through collective action (mobilizing an interest group) or 'voice' through media P B Anand (2007).



Media as an institution has played a decisive role in the Mullai Periyar conflict. There had been press reports as early as 1925 reporting leakages in the dam and expressing concern over the safety of the dam. The possibility of downstream disaster due to the breaking of the old dam was reported by 'Times of India', Bombay in 1962 as a fallout of which a joint inspection of the dam was held in 1964, followed by electrification and installation of wireless sets at the dam site. In 1979 a report carried in the Malayalam daily 'Malayala Manorama' on the unsafe dam had finally precipitated matters that marked the beginning of the current conflict. From print media to the latest online news channels, Mullai Periyar has been a topic of intense debate and opinion building since the 1990s. (Madhusoodhanan C.G. and Sreeja K.G., 2010).

Methodology

The study works on the basis of quantitative content analysis. Four leading Tamil newspapers based on sales, *Daily Thanthi*, *Dinamalar*, *Dinakaran* and *Dinaman* were selected for analysis. The entire news cycle of the conflict, which starts from 1st January 2010 to 31st December 2010, was taken as the period of the study. Articles and news stories of various forms – News, Features, Columns, and Editorials and others pertaining to the conflict become the primary data for the study. In order to meet the objectives of the study the researchers developed a detailed coding sheet to collect the relevant data. The coded data was analyzed by using percentage analysis.

Results and Discussion

Nature of the Coverage of the conflict news stories

In this section, the researcher intended to study the *nature of the coverage* of the Mullai Periyar water conflict by the four regional



newspapers. The *themes of the news stories, geographic focus, length of the story, and genre of the news stories* of the conflict were analyzed to study the nature of the coverage of the conflict. The obtained results are presented in this section.

Table 1: Newspaper wise distribution of Themes in the News Stories

Themes in the News Stories	Type of the newspapers								Total
	Dinathanthi		Dinakaran		Dinamalar		Dinamani		
	N	%	N	%	N	%	N	%	
Political	20	29.4%	18	26.5%	11	16.2%	19	27.9%	68
Government	13	23.2%	14	25.0%	14	25.0%	15	26.8%	56
Violence	2	16.7%	6	50.0%	3	25.0%	1	8.3%	12
Police/Crime	0	0.0%	1	20.0%	2	40.0%	2	40.0%	5
Law/Order	1	16.7%	4	66.7%	1	16.7%	0	0.0%	6
Court/Legal	22	36.7%	14	23.3%	12	20.0%	12	20.0%	60
Others	4	12.1%	13	39.4%	10	30.3%	6	18.2%	33
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

Table 1 shows that law and order has been the dominating theme in the coverage (66.7% Dinakaran) followed by violence (50%) *Themes of the stories* on a whole in the newspapers on a whole in *Dinathanthi* reveals that 29.4% is Politics, 23.2% is Government, 16.7 % is Violence, 0.0% is Police/crime, 16.7% is Law/order, 36.7% is Court/legal, & 12.1 % of the others. Themes of the stories on a whole in the newspapers on a whole in *Dinakaran* reveals that 26.5 % is Politics, 25.0 % is Government, 50.0 % is Violence, 20.0% is Police/Crime, 66.7% is law/order, 23.3% is court/legal and 39.4% is others.

Themes of the stories on a whole on the newspapers on a whole in *Dinamalar* reveals that 16.2 % is Politics, 25.0% is Government, 25.0 is Violence, 40.0% is Police/Crime, 16.7% is law/order, 20.0% is court/legal and 30.3% is others. Hence majority of the themes of the stories by the newspapers on a whole is 66.7% Court/Legal.



Table 2: Newspaper wise distribution of Geographic focus of the stories

Geographic focus of the stories	Type of the newspapers								Total
	Dinathanthi		Dinakaran		Dinamalar		Dinamani		
	N	%	N	%	N	%	N	%	
Local	0	0.0%	1	50.0%	1	50.0%	0	0.0%	2
State/Regional	50	24.6%	60	29.6%	45	22.2%	48	23.6%	203
National	10	31.2%	8	25.0%	7	21.9%	7	21.9%	32
None	2	66.7%	1	33.3%	0	0.0%	0	0.0%	3
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

The role of news paper relating to the factors of Geographic focus of the stories is analyzed in this section. The factors relating to the factors of Geographic focus considered for the study are Local, State/Regional, National and None news and the results are shown in Table 2 Percentage wise distribution Table 2 reveals that 0.0%of the *Dinathanthi*, 50.0 %of the *Dinakaran*, 50.0% of the *Dinamalar* & 0.0% of the *Dinamani* exhibits Local News. Similarly 24.6 %of the *Dinathanthi*, 22.2% of the *Dinamalar*, 23.6% % of the *Dinamani* & 29.6 %of the *Dinakaran* exhibits State/Regional News. Regarding 'National News' *Dinathanthi* exhibits 31.2 %, *Dinamalar* 21.9%, *Dinamani* exhibits 21.9% & *Dinakaran* exhibits 25.0%. Regarding 'None' *Dinathanthi* exhibits 66.7%, *Dinamalar* 0.0%, *Dinamani* exhibits 0.0% & *Dinakaran* exhibits 33.3%.

Table 3: News paper wise distribution of Length of the News Story

Length of the News Stories	Type of the newspapers								Total
	Dinathanthi		Dinakaran		Dinamalar		Dinamani		
	N	%	N	%	N	%	N	%	
>800	2	15.4%	7	53.8%	0	0.0%	4	30.8%	13
400-799	10	23.3%	17	39.5%	9	20.9%	7	16.3%	43
150-399	32	29.9%	31	29.0%	26	24.3%	18	16.8%	107
100-149	13	20.0%	14	21.5%	15	23.1%	23	35.4%	65
<100	5	41.7%	1	8.3%	3	25.0%	3	25.0%	12
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

Percentage wise distribution Table 3 shows that the Length of the stories in *Dinathanthi* reveals that 15.4% is > 800, 23.3% is 400 - 799, 29.9% is 150-399, 20.0% is 100-149 & 41.7% is <100 psychological out-



come. The Length of the story in *Dinakaran* reveals that 53.8 % is > 800, 39.5 % is 400 - 799, 29.0 % is 150-399, 21.5% is 100-149 & 8.3 % <100 of Psychological outcome. The Length of the story in *Dinamalar* reveals that 0.0 % is > 800, 20.9 % is 400 - 799, 24.3 % is 150-399 23.1 % is 100 - 149 and 25.0 % of the psychological outcome is <100. The Length of the story in *Dinamani* reveals that 30.8% is > 800, 16.3% is 400 - 799, 16.8% is 150-399, 35.4% is 100 - 149 and 25.0% of the psychological outcome is <100.

Table 4: News paper wise distribution of Genre in the News Story

Genre in the News Stories	Type of the newspapers								Total
	Dinathanthi		Dina karan		Dina malar		Dina mani		
	N	%	N	%	N	%	N	%	
Hard News	3	17.6%	8	47.1%	4	23.5%	2	11.8%	17
Soft News	11	26.8%	13	31.7%	11	26.8%	6	14.6%	41
Analysis/Feature	23	26.4%	21	24.1%	18	20.7%	25	28.7%	87
Comments or Criticism	25	27.2%	27	29.3%	20	21.7%	20	21.7%	92
Editorial	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1
Interview	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

Percentage wise distribution Table 4 reveals that 17.6% of the *Dinathanthi*, 47.1% of the *Dinakaran*, 23.5% of the *Dinamalar* & 11.8% of the *Dinamani* exhibits Hard News. Similarly 26.8% of the *Dinathanthi*, 31.7% of the *Dinakaran*, 26.8% of the *Dinamalar* 14.6% of the *Dinamani* exhibits soft News.

Regarding 'Analysis/Feature' *Dinathanthi* exhibits 26.4%, *Dinakaran* 24.1%, *Dinamalar* exhibits 20.7% , *Dinamani* exhibits Analysis/Feature news 28.7%. Similarly Comments or Criticism 27.2% of the *Dinathanthi*, 29.3% of the *Dinakaran*, 21.7% of the *Dinamalar* 21.7% of the *Dinamani* exhibits Comments or Criticism. Regarding 'Editorials' exhibits 0.0% & *Dinakaran* exhibits 0.0%. And *Dinamalar* exhibits 0.0%, *Dinamani* exhibits 100.0%. Regarding 'Interview' *Dinathanthi* exhibits 0.0%, *Dinakaran* 50.0%.



Authenticity of the conflict news stories

To measure the authenticity of the conflict news stories the researcher analyzed the existence of sources in the conflict news and origin of the news stories were studied. the obtained results are presented in this section.

Table 5 : News paper wise distribution of Existence of the sources in the News Stories

Articles by Existence of sources	Type of the newspapers								Total
	Dinathanthi		Dinakaran		Dina malar		Dina mani		
	N	%	N	%	N	%	N	%	
Tamilnadu Government	23	27.1%	20	23.5%	20	23.5%	22	25.9%	85
Kerala Government	8	15.7%	20	39.2%	13	25.5%	10	19.6%	51
Source from Central Government	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2
Source from Common man	4	18.2%	9	40.9%	5	22.7%	4	18.2%	22
Farmers Association	2	28.6%	3	42.9%	1	14.3%	1	14.3%	7
Judicial Sources	25	35.2%	16	22.5%	14	19.7%	16	22.5%	71
Anonymous	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

Percentage wise distribution Table 5 reveals that the source of 27.1 % of the *Dinathanthi*, 23.5 % of the *Dinakaran*, 23.5 % of the *Dinamalar* & 25.9% of the *Dinamani* is Tamilnadu Government. Similarly the source of 15.7% of the *Dinathanthi*, 39.2% of the *Dinakaran*, 25.5% of the *Dinamalar* & 19.6% of the *Dinamani* is Kerala Government.

Regarding 'Source from other countries' the source of *Dinathanthi* is 0.0%, *Dinakaran* 50.0%, *Dinamani* 0.0%, *Dinamalar* is 50.0%. *Dinathanthi* is 18.2% and *Dinakaran* is 40.9%, *Dinamalar* is 22.7%, *Dinamani* is 18.2% regarding 'Source from Common man'. Regarding the source of 'Public' *Dinathanthi* 28.6%, *Dinakaran* is 42.9% & *Dinamalar* is 14.3%. *Dinamani* 14.3%, is Farmers Association, Regarding the source of 'Public' *Dinathanthi* 35.2%, *Dinakaran* is 22.5% & *Dinakaran* is 19.7%



and *Dinamalar* 22.5%, is Judicial Sources. Regarding 'Anonymous' the source of *Dinathanthi* is 0.0%, *Dinakaran* is 50.0%, *Dinamani* 0.0% %, *Dinamalar* is 50.0%.

Table 6: News papers wise distribution of Origin of the News Stories

Origin of the News Story	Type of the newspaper								Total
	Dinathanthi		Dinakaran		Dinamalar		Dinamani		
	N	%	N	%	N	%	N	%	
Wire service	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2
Staff/Correspondent	58	25.1%	68	29.4%	52	22.5%	53	22.9%	231
Freelancing Correspondent	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1
Reader	3	60.0%	1	20.0%	1	20.0%	0	0.0%	5
Unknown	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1
Total	62	25.8%	70	29.2%	53	22.1%	55	22.9%	240

Percentage wise distribution Table 6 reveals that 0.0% of the *Dinathanthi* and *Dinamalar*, 50.0% of the *Dinakaran* & *Dinamani* in wire service news stories. Regarding the source of 'Staff/Correspondent' *Dinathanthi* 25.1%, *Dinakaran* is 29.4% & *Dinamalar* is 22.5%. *Dinamani* 22.9%, Staff/Correspondent. Regarding the source of *Dinathanthi* 100.0%, *Dinakaran*, *Dinamalar* and *Dinamani* is 0.0%, are Freelancing Correspondent. Regarding 'Reader' the source of *Dinathanthi* is 60.0%, *Dinakaran* and *Dinamalar* are 20.0%, *Dinamani* 0.0% . 100 % of the *Dinamani* is freelancing correspondent Unknown and 0% of the *Dinathanthi*, *Dinakaran* and *Dinamalar* is reader.

Conclusion

The study on the nature and authenticity of the coverage of Mullai Periyar water conflict in Tamil newspapers clearly proved that media has played a significant role in shaping the conflict. Almost 240 stories have been published on a whole and there was equal distribution along all the Newspapers. More of importance was given to political theme, which shows



the sensitizing nature of the coverage. Substantiating this, more than 90% of the news stories have provided a regional focus providing a sensitive frame to the conflict.

Further, studying the authenticity of the coverage, the study shows that almost all the stories have been covered by the staff reporters/ correspondents and the sources were acquired from the Government of Tamil Nadu. This shows that the conflict has been covered with greater authenticity but on a biased side. No due importance was given to other sources, neglecting them from opinion.

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DESIGN OF LOW COMPLEXITY TEST PATTERN GENERATOR FOR BUILT-IN SELF-TEST

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I. INTRODUCTION

Built-in self-test (BIST) techniques can effectively reduce the difficulty and complexity of VLSI testing, by introducing on-chip test hardware into the circuit-under-test (CUT). In conventional BIST architectures, the linear feedback shift register (LFSR) is commonly used in the test pattern generators (TPGs) and output response analyzers. A major drawback of these architectures is that the pseudorandom patterns generated by the LFSR lead to significantly high switching activities in the CUT [1], which can cause excessive power dissipation. They can also damage the circuit and reduce product yield and lifetime [2], [3]. In addition, the LFSR usually needs to generate very long pseudorandom sequences in order to achieve the target fault coverage in nanometer technology.

A. Prior Work

Several advanced BIST techniques have been studied and applied. The first class is the LFSR tuning. Girard *et al.* analyzed the impact of an LFSR's polynomial and seed selection on the CUT's switching activity, and proposed a method to select the LFSR seed for energy reduction [4]. The second class is low-power TPGs. One approach is to design low-transition TPGs. Wang and Gupta used two LFSRs of different speeds to



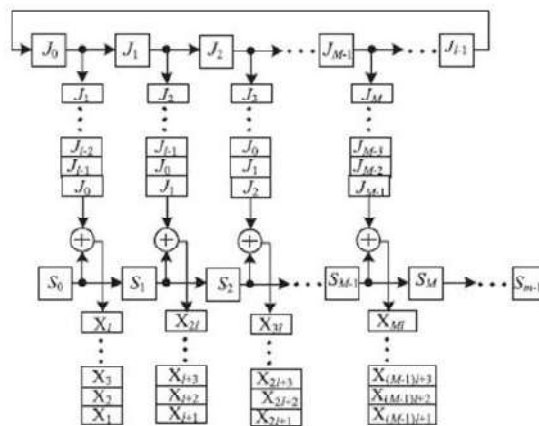
control those inputs that have elevated transition densities [5]. Corno *et al.* provided a low power TPG based on the cellular automata to reduce the test power in combinational circuits [6]. Another approach focuses on modifying LFSRs. The scheme in [7] reduces the power in the CUT in general and clock tree in particular. In [8], a low-power BIST for data path architecture is proposed, which is circuit dependent. However, this dependency implies that nondetecting subsequences must be determined for each circuit test sequence. Bonhomme *et al.* [9] used a clock gating technique where two non overlapping clocks control the odd and even scan cells of the scan chain so that the shift power dissipation is reduced by a factor of two. The ring generator [10] can generate a single-input change (SIC) sequence which can effectively reduce test power. The third approach aims to reduce the dynamic power dissipation during scan shift through gating of the outputs of a portion of the scan cells. Bhunia *et al.* [11] inserted blocking logic into the stimulus path of the scan flip-flops to prevent the propagation of the scan ripple effect to logic gates. The need for transistors insertion, however, makes it difficult to use with standard cell libraries that do not have power-gated cells. In [12], the efficient selection of the most suitable subset of scan cells for gating along with their gating values is studied. The third class makes use of the prevention of pseudorandom patterns that do not have new fault detecting abilities [13]–[15]. These architectures apply the minimum number of test vectors required to attain the target fault coverage and therefore reduce the power. However, these methods have high area overhead, need to be customized for the CUT, and start with a specific seed. Gerstendorfer *et al.* also proposed to filter out nondetecting patterns using gate-based blocking logics [16], which, however, add significant delay in the signal propagation path from the scan flip-flop to logic. Several low-power approaches have also been proposed for scan-



based BIST. The architecture in [17] modifies scan-path structures, and lets the CUT inputs remain unchanged during a shift operation. Using multiple scan chains with many scan enable (SE) inputs to activate one scan chain at a time, the TPG proposed in [18] can reduce average power consumption during scan-based tests and the peak power in the CUT. In [19], a pseudorandom BIST scheme was proposed to reduce switching activities in scan chains. Other approaches include LT-LFSR , a low-transition random TPG and the weighted LFSR . The TPG can reduce the transitions in the scan inputs by assigning the same value to most neighboring bits in the scan chain. power reduction is achieved by increasing the correlation between consecutive test patterns. The weighted LFSR decreases energy consumption and increases fault coverage by adding weights to tune the pseudorandom vectors for various probabilities.

III.PROPOSED ARCHITECTURE

MSIC pattern for scan chains:

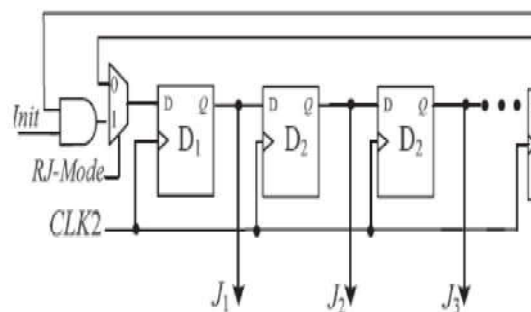


Assume there are m primary inputs (PIs) and M scan chains in a full scan design, and each scan chain has l scan cells. Fig. 1(a) shows the symbolic simulation for one generated pattern. The vector generated by an m -bit LFSR with the primitive polynomial can be expressed as $S(t) =$



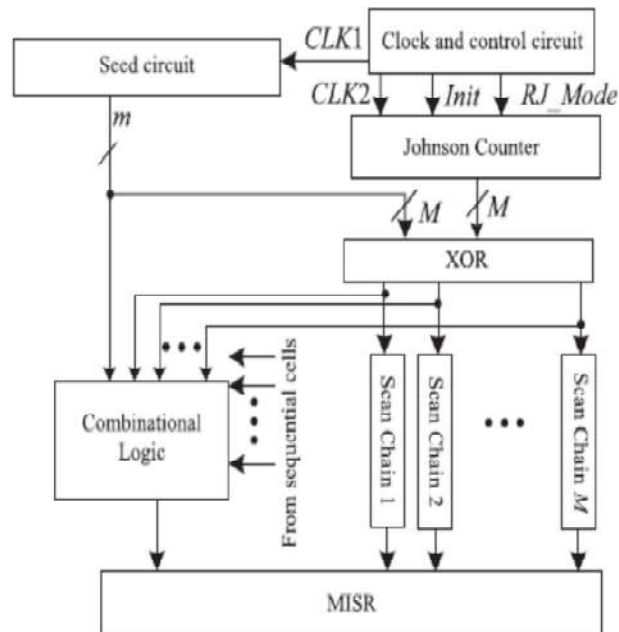
$S_0(t)S_1(t)S_2(t), \dots, S_{m-1}(t)$ (hereinafter referred to as the seed), and the vector generated by an l -bit Johnson counter can be expressed as $J(t) = J_0(t)J_1(t)J_2(t), \dots, J_{l-1}(t)$. In the first clock cycle, $J = J_0, J_1, J_2, \dots, J_{l-1}$ will bit-XOR with $S = S_0, S_1, S_2, \dots, S_{m-1}$, and the results $X_1, X_2, \dots, X_{(M-1)l+1}$ will be shifted into M scan chains, respectively. In the second clock cycle, $J = J_0, J_1, J_2, \dots, J_{l-1}$ will be circularly shifted as $J = J_{l-1}, J_0, J_1, \dots, J_{l-2}$, which will also bit-XOR with the seed $S = S_0, S_1, S_2, \dots, S_{m-1}$. The resulting $X_2, X_3, \dots, X_{(M-1)l+2}$ will be shifted into M scan chains, respectively. After l clocks, each scan chain will be fully loaded with a unique Johnson codeword, and seed $S_0, S_1, S_2, \dots, S_{m-1}$ will be applied to m PIs. According to the different scenarios of scan length, this project develops two kinds of SIC generators to generate Johnson vectors and Johnson codewords, i.e., the reconfigurable Johnson counter and the scalable SIC counter.

Reconfigurable Johnson Counter:

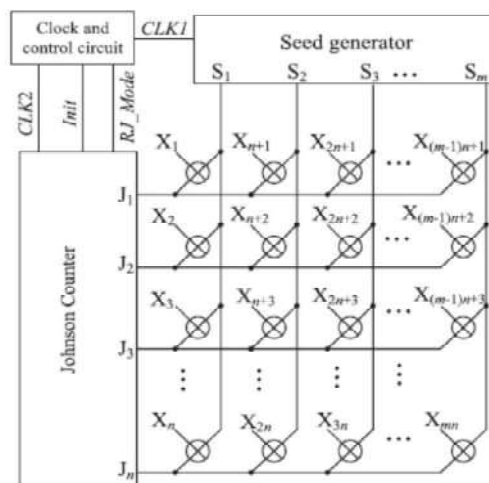


Initialization: When RJ_Mode is set to 1 and $Init$ is set to logic 0, the reconfigurable Johnson counter will be initialized to all zero states by clocking $CLK2$ more than 1 times. Circular shift register mode: When RJ_Mode and $Init$ are set to logic 1, each stage of the Johnson counter will output a Johnson codeword by clocking $CLK2$ 1 times. Normal mode: When RJ_Mode is set to logic 0, the reconfigurable Johnson counter will generate $2l$ unique SIC vectors by clocking $CLK2$ $2l$ times.

Test Per Clock Scheme



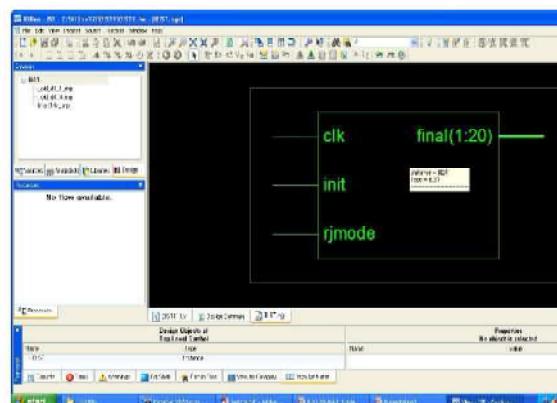
Test Per scan Scheme



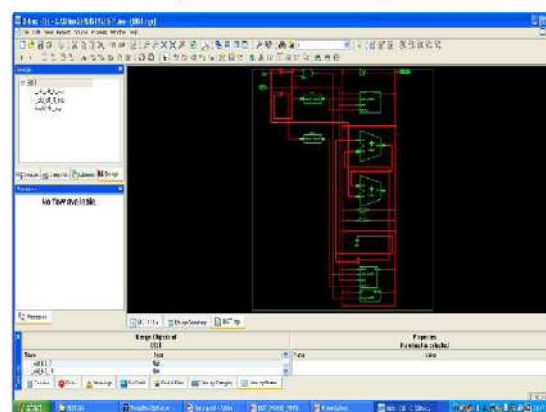
III. SIMULATION RESULTS

The proposed architecture is designed using verilog HDL, simulated using modelsim software and synthesized using Xilinx project navigator. The RTL schematic view is illustrated in fig and its technology schematic view is displayed in fig

IC Designed View:



RTL Schematic:

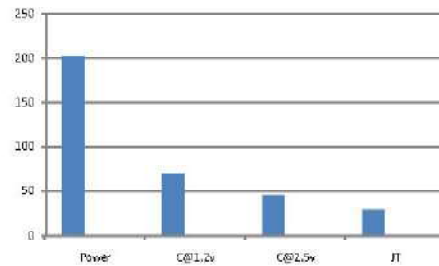


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Evaluation Parameters	Results
Power Consumption	203.27mW
Quiescent Current at 1.2v	69.4mA
Quiescent Current at 2.5v	45mA
Junction Temperature	29.99
Latency	8.251ms



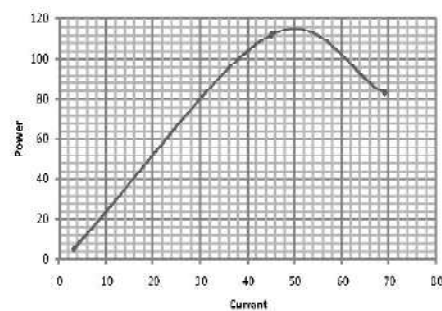
Performance Analysis Graph:



Results on Current and Power:

Current Readings (mA)	Power Readings (mW)
69.4	83.27
45	112.5
3	7.5

Performance Analysis Graph:



CONCLUSION

This paper has proposed a low-power test pattern generation method that could be easily implemented by hardware. It also developed a theory to express a sequence generated by linear sequential architectures, and extracted a class of SIC sequences named MSIC. Analysis results showed that an MSIC sequence had the favorable features of uniform distribution, low input transition density, and low dependency relationship between the test length and the TPG's initial states. Combined with the proposed reconfigurable Johnson counter or scalable SIC counter, the MSIC-TPG can be easily implemented, and is flexible to test-per-clock schemes and test-per-scan schemes. For a test-per-clock scheme, the MSIC-TPG applies SIC sequences to the CUT with the SRAM like grid. For a test-per-scan



scheme, the MSIC-TPG converts an SIC vector to low transition vectors for all scan chains. Experimental results and analysis results demonstrate that the MSIC-TPG is scalable to

scan length, and has negligible impact on the test overhead.

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AN ETHNOGRAPHIC PROFILE OF THE KOYA OF ANDHRA PRADESH

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The Koya is one of the numerically dominant tribal communities inhabiting the forest areas of East and West Godavari, Khammam, Warangal and Adilabad districts. The total population of the Koya in Andhra Pradesh is 5,68,019 (Census, 2001). Constituting 11.13% to the total tribal population of Andhra Pradesh. Generally they call themselves 'Koya Dora' or 'Dorala Sattam' (Lord group). According to Grigson, "the Koyas are a Teluguised off-shoot of the Gonds or Maria Gonds and speak a fundamentally distinct dialect strongly influenced in infection and vocabulary by Telugu" (Grigson, W.V.1947). In their dialect they call themselves as 'koitur'. They claim that they were descendants of the Pandavas mentioned in the epic, Mahabharata, especially Bhima, "when the pandava brothers were in exile, Bhima went hunting in the jungle and met a wild woman of the woods and subsequently got married. The fruit of the union was the Koya people" (Thurston, 1909).

The Koyas are generally medium in nature. The Koya men wear loin cloth, 'gochi' which is a piece of cloth. The old men wear dothi and shirt. Now a days the tribal youth wear pants and shirts. The Koya women



wear sari and blouse and tribal girls wear petticoat, blouse, and voni, a piece of cloth as a breast-wear like other non-tribals.

Their staple food is Jowar, ragi and rice. They are non vegetarians. They eat both pork and beef. They take alcoholic drinks, local arrack and jeelugu kallu.

The Koya community is divided into many endogamous sub divisions. Aiyappan has mentioned the following sub-groups or sub-divisions.

1. Gutta Koya or Racha Koya
2. Gommu Koya or Dora Chattam
3. Kammara Koya – blacksmith
4. Musara Koya – Brass worker
5. Gampa Koya – basket maker
6. Oddi Koya – priest
7. Pettadi Koya – beggar
8. Doli Koya – Mala (musicians)
9. Kaka Koya – Kapu
10. Matwa Koya - golla
11. Lingh Koya – saivities.

Aiyappan (1948) opined that serial number 8 to 11 are not real Koyas but non tribals claim as Koya tribe.

The sub groups mentioned are overlapping and misleading “Generally Racha Koyas and Gutta Koyas are two district sub-divisions. The Racha Koyas live in plain areas and Gutta Koyas live on hill tops. The



nomenclature Dorala Chattam is referred to all Koyas and not a particular sub group of Gommu Koyas. Gommu means river banks and Koyas living on river banks are called Gommu Koyas. Linga Koya is a separate group who professes saivism and wears 'Lingam' in their neck. They are pure vegetarians" (O.S.V.D.Prasad, Mohan Rao and Chandra Raju,2008). In social hierarchy, Racha Koya claim that they are superior than the other groups. Now-a-days, all subgroups claim Racha Koyas.

According to Murthy (1981:215) "The Koyas are internally stratified into a number of caste like endogamous sub-groups. The sub-groups are formed mainly on the basis of occupation. They may be graded hierarchically as follows":

S.No.	Name of the Sub-Tribe or Group	Occupation
1.	Lingadhari Koya	Priests
2.	Koya Doralu	Agriculturists-cum-Ruling class
3.	Koya Musara	Brass Workers
4.	Koya Kammara	Blacksmiths
5.	Koya Dolies	Untouchable – Artisans
6.	Koya Pottidis	Untouchable - Beggars

The Koya community is divided into the following phratries and clans. The phratries of the Koyas are called 'gatta'. The phratry structure of Koyas are divided into mudavagatta, nalugava gatta, idavagatta, Aravagatta and yedavagatta. These divisions are exogamous and regulate marital alliances. Each phratry is again divided into a number of clans with gods and goddesses (K.Mohan Rao, 1993). The Koya clan structure is also based on totemic species. The following are:

Murram – Tortoise

Turram – a kind of cat

Kurasam – a kind of wild goat



Meda – tortoise.

The Koyas families are patrilineal and patrilocal. Nuclear families are more common among the Koyas.

The first delivery takes place at the expectant mothers' parents house. Generally a mid-wife or manthrasani' conducts the delivery. As soon as the child is born, the mid wife cuts the umbilical cord with a crude knife. Afterwards the mother and baby are given bath. During this period, generally the pollution lasts for 11 days. On the 11th day she is given a ceremonial bath. They observe tonsure ceremony which is performed after the completion of one year. During this ceremony the maternal uncle plays a vital role. At this time, he first cuts the hair of the child. During the period of first menstruation, the girl is asked to sit on the mat made up of palm leaves. The girl is not allowed to move freely in the house. She is asked to sit at the corner of the hut. On the eleventh day, she is given a ceremonial bath. The parents of that girl arrange a non vegetarian feast on that day.

Marriage takes place after the girl attains puberty. The common modes of acquiring mates among the Koyas are marriage by negotiations, marriage by elopement, marriage by capture and marriage by service. Among all these types, marriage by negotiation is the common in recent times. In marriage by negotiation, the initiation is always from the grooms' parents. A few village elders and the parents of the bridegroom visit the house of the bride. Afterwards, they fix the marriage date. On that day, the parents of the groom presents a saree and a blouse with areca nuts and leaves. They fix the marriage date on an auspicious day. On the marriage day, both the couple are given a ceremonial bath. The groom ties 'thali'



around the neck of the bride. The relatives sprinkle talambralu (rice mixed with turmeric).

Divorce among the Koya is a very simple. It is oral and conventional but not legal. It may be initiated from either husband or wife. Widow-remarriage (marumanuvu) is allowed among the Koyas. Monogamy is the general norm among the Koyas. It is reported that levirate system is in vogue.

Generally, the Koyas cremate the dead. They bury the dead in case of children or pregnant women. They observe death pollution for seven days. The dead body is given a bath with new clothes. The body is carried on a cot to the burial ground. His clan members only carry the corpse. After reaching the burial ground, the corpse is removed of all the belongings. The people who accompanied corpse take bath. They observe china dinam on 11th day and pedda karma on 21st day.

Most of them are settled agriculturists. A few families are depending on 'podu' or shifting cultivation. In addition, some of them are agricultural labourers. They depend on collection and sale of Non-Timber Forest Produces (NTFP) like soap nuts, tamarind, gum, Broom sticks, different types of nuts and beedi leaves. At present, they are growing cash crops like ground nut. They grow crops like jowar, ragi, sama (minor millet) black gram and paddy in wet lands. They cultivate brinjal, tomato, pumpkin etc in their backyards. They also grow chillies, tobacco, maize etc. According to 2001 census, the total number of workers among the Koyas are 3,16,574 constituting 55.73% and non-works are 2,51,445 constituting 44.27% to the total Koya population.

The traditional village panchayat of Koya has a headman 'poyi' who is assisted by pinapedda and a messenger, vyapar. This panchayat



settles the disputes like divorce, inter-community marriages, theft, elopement etc. Now a days, few members are elected as panchayat members, panchayat president etc.

Most of the Koyas are Hindus. They worship the lord Bhima, Korra Rajulu, Mamili and Potharaju, Mutyalamma, Adaviraju, etc. They celebrate main festivals are Vijji Panduga (seeds charming festivals) and Kondala Kolupu (festival to appease hill deities), Elavelupu panduga (festival in hour of household deities) and Dade panduga (festival connected with consumption of toddy).

The followings are the religious functionaries among the Koyas (Mohan Rao, 1993).

1. Linga vadde : Idol carrier
2. Jalakapu vadde : Sprinkles water in front of shrines
3. Talapathi : Custodian of ceremonial ornaments of deities.
4. Edamarri : Horn blower
5. Vejju or Kattubot : Medicine man who placates evil spirits.
6. Pujari : Priest

They perform a traditional dance, which is locally called Bison horn dance or Kommu Koya dance. They perform this dance during festivals and rituals.

Relation with other communities:

Because of culture contact with non-tribals, the concept of social hierarchy has emerged in recent times. The Konda Reddis perceives that



they are superior than other tribes. It is observed that they live in symbiosis with the Koyas. Though the Konda Reddi occupies the higher position in social hierarchy, they do not enjoy political superiority in the villages. It is informed that traditionally the Konda Reddis accept raw food and they do not accept cooked food from the Koyas.

There are different development programmes taken up by the ITDAs of East and West Godavari and Khammam districts. Various programs like agriculture, animal husbandry, fisheries, horticulture, education, health etc implemented in the area. In the area the schools are managed by the implemented in the area. In the area the schools are managed by the departments of tribal welfare and Mandal Praja Parishad. The role of N.G.Os has been described in the third and fifth chapters.

Koya Population:

Sl.No.	Year	Male	Female	Total
1.	1961	110185	109961	220146
2	1971	143082	142144	285226
3	1981	180752	179047	359799
4	1991	229523	226973	456496
5	2001	283106	284913	568019

Literacy rates among the Koya:

Sl.No.	Year	Male	Female	Total
1.	1961	4.88	1.04	2.97
2	1971	6.45	1.39	3.93
3	1981	11.86	3.88	7.89
4	1991	25.10	10.45	17.83
5	2001	50.54	33.22	41.85

Source; Census Reports (1961-2001)



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JAWAHARLAL NEHRU'S LIFE AND HIS IDEAS ON SOCIO-ECONOMIC AND POLITICAL DEMOCRACY

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Abstract:

Pandit Jawaharlal Nehru was a highly renowned figure familiar to every Indian and the World wide, he played pre-dominant role in Indian National Movement, under the leadership Indian National Congress for India's self-rule and independency from the clutches of colonial masters of England, during the period from 1930 to 1940, based on his role and his contributions to India's freedom struggle, he became a top most leader of the Country and Party, after Mahatma Gandhi. He assumed the role of India's first Prime Minister from 1947 until 1964, before that to transfer of our Countries Power from British Government to Indians, there is a need of temporary arrangement of Indian Interim Government that organized with all Indian political parties under the Prime Minister ship of Jawaharlal Nehru, the Indian Interim Government form under the leadership of Nehru. He provided a strong base and foundation for perfect growth and development of the Country in the field of economy, science and technology, health, education and stable political systems and Constitutional Institutions.

Keywords; Pandit, Highly, Renowned, Figure, World, Pre-Dominant, Movement, leadership, Self-Rule, Independency, Clutches, Colonial, Masters, England, Contributions, Freedom, Struggle, Interim, Government, Foundation, Constitutional, Institutions.

Introduction;

Jawaharlal Nehru was a builder and great architect of Indian Nation, he dominated the Indian Politics and Indian Political Scene for about four decades and molded the course of Indian history and future of India according to his principles, views and ideology.

He in the forefront of Indian National Movement for India's Independency, next only to Gandhiji, when India attained its Independency he served as the Prime Minister of India from 1947 to 1964 [before this formation of the Interim Government of India also known as the Provisional Government of India formed on 2nd September 1946 from the newly elected Constituent Assembly of India to prepare the Constitution, under the Prime Minister ship Jawaharlal Nehru, had task of assisting the transition of British India to Independent India, it remained in place until 15th August 1947, the date of the independence of British India, and creation of the dominions of India and Pakistan] he earned utmost confidence of Indians and in turn Nehru also served them with sincere devotion and affection.

He played a very key role in the making of the Indian Constitution and he introduced a historical 'Objective Resolution' to the Constitution Assembly on December 13, 1946, it established the



fundamental philosophy and guided the drafting of the Indian Constitution and later transformed into the Preamble of the Constitution of India, the Objective Resolution has been approved by the Constituent Assembly on January 22, 1947.

Life Sketch of Jawaharlal Nehru;

Jawaharlal Nehru was born at Allahabad on 14th November 1889, his parents were Motilal Nehru and Swarua Rani, Kashmiri Brahmin family, who migrated to Allahabad in the 18th century, Jawaharlal Nehru was their only son and Vijaya Lakshmi Pandit and Krishna Nehru Hutheesing were their daughters.

Nehru completed his early education at home in Allahabad with private tutors, at the age of fifteen, he went to England and joined in the famous Harrow school where he studied for two years, later he took admission in the Cambridge University, where he studied for three years and completed his Degree in Tripos in Natural Sciences. He return to India in 1912 and joined the Bar.

However, he found that the atmosphere at Bar was not intellectually stimulating and also his legal practice was not roaring, for eight years Nehru remained a member of the Bar. He married Kamala Nehru in 1916 and their only daughter Indira Gandhi was born on 1917. He participated the Bankipore Congress session in 1912 as a delegate, and selected as a secretary of the Home Rule League.

Jawaharlal Nehru first time, he met with M.K. Gandhi at Lucknow Congress annual session on 26th December 1916, these two people who defined the Indian national Movement, and thus, the moral template of the independent India. He became the General Secretary of All India Congress Committee in 1923, he toured, England, Belgium, Italy, Switzerland, Germany, and Russia in 1926, he also participate tenth anniversary celebrations of the Socialist Revolution at Moscow in 1927.

Jawaharlal Nehru served as the Secretary of Motilal Nehru Committee this Committee was headed by his father Motilal Nehru, for Constitutional Reforms in India, the Committee other members are Ali Imam, Tej Bahadur Sapru, Mangal Singh, M S. Aney, Subhas Chandra Bose, Shuaib Qureshi and G R. Pradhan, the draft constitution prepared by the committee was called the Nehru Committee Report or Nehru Report.

Jawaharlal Nehru presided over the India National Congress Session held at Lahore in 1929, and adopted a historical resolution on 'Poorna Swaraj' means 'Complete Freedom'. Nehru was one of the indomitable fighter of India's freedom who pioneered the ideals of Complete Independence, Constituent Assembly, and Democratic Socialism, he made great sacrifices and suffered imprisonment several times, in the cause of India's freedom. Gandhi gave him a pre-eminent place among his followers and lieutenants.

Influences on Jawaharlal Nehru,

Jawaharlal Nehru, during his student days, he stayed nearly seven years in England, he imbibed the traditions of British humanist liberalism, he was influenced by the writings of Western thinkers like G B. Shaw, J. S. Mill, Gladstone and Betrand Russel. Nehru was not a political philosopher



in the sense in which this appellation is applied to Hobbes or Rousseau, but certainly he was man also influenced by his father Motilal Nehru and Mahatma Gandhi. In the language of psychoanalysis, Jawaharlal Nehru was a son of his father, if Gandhi was the son of his mother. Motilal Nehru's spirit of independence and courage as well as his spirit of Aristocratic pride had been inherited by Jawaharlal Nehru.

Jawaharlal Nehru's deep, absolute and firm attachment and loving respect for his father and the capacity to take risks that characterized Motilal Nehru had deeply influenced.

Nehru's ideas on Socio-Economic and Political Democracy

Nehru gave a broad meaning to Democracy in his own words; "I would say that democracy is not only political, not only economic but something of the mind, as everything ultimately is something of the mind, it involves equality of opportunity to all people, as far as possible, in the political and economic domain. It involves the freedom of tolerance of others and even others opinions when they differ from yours, it involves a certain inequalities search for the truth and for, let us say, the thing and as it change it may be that its domain will became wider and wider. Ultimately, it is a mental approach applied to our political and economic problems,"

Nehru's Concept of Democracy can be analyzed in three perspectives

Nehru's Social Democracy

Nehru said that democracy meant not only freedom but also discipline, he stated that, 'self-discipline of the community' not imposed discipline, should be surely one of the definitions of democracy 'this self-discipline' in politics, according to him, is faithfulness to peaceful and democratic procedures, to him, democracy is a social affairs meant 'a higher standard of human being' 'tolerance and peaceful methods are its distinguishing features. The very essence of democratic state is its functioning in an atmosphere of peace. Problems, however difficulties, are solved by peaceful methods by discussion, negotiation, conciliation and persuasion, a decision once taken is accepted even by those who may not like it, if this basic conception of democracy is not accepted, then the democracy cannot function.

Nehru's Economic Democracy

Jawaharlal opined that 'democracy means equality and democracy can flourish only in an equalitarian society,' he gradually realized that within the framework of the 19th century democracy political power had become monopoly of the upper class; far from granting some measures of economic equality, formal democracy did not even produce true political equality. He felt that the machinery of democracy had been exploited to maintain a class run government which existed to further its own interest. He saw an essential contradiction between capitalism and democracy and thus for him the capitalist system itself constituted the most serious problem confronting to democracy.



Nehru's Political Democracy

Nehru's ideas on political democracy found his expression in the Constitution of India which emphasized freedom thought, expression, belief, faith, worship, association, action, and universal adult franchise, his initial enthusiasm about Marxist ideology seemed to have dissolved by 1949. Communism, Nehru asserted, for all its triumphs in many fields crushes the free spirit of man. He declared regarding former U.S.S.R. 'India cannot follow such a policy. It ultimately hampers the progress of the Nation by restricting the creative faculties of the common man'.

According to Nehru, Democracy is a centered on Representative Government with Popular Sovereignty, he pointed out that these ideas are by no means foreign to Indian tradition. He discovered them in Arthasasthra and in other works of ancient Indian literature, the democratic institutions that were that were discovered by him were such that there was common method of function, in social life, in Local Government, trade guilds, religious assemblies, etc., caste with all its evils kept up the democratic habit in each group, there used to be an elaborate procedure, elections and debate. Regarding the representative democracy, Nehru gave more importance to the methods of election and to the quality of the people elected to the representative bodies, he commented that the democratic state must take the risk of even choosing wrong people by the right method and hope for the best

Though he recognized the evils of disciplined political parties which would destroy the democratic spirit of the individual, he acknowledged the necessity of having disciplined political parties for efficient Government. He regarded the formation of different political parties as a natural outcome, in a democratic set up, he argued it is desirable that every opportunity should be given for the development of ideas and the education of the public in them. Thus his ideas pertaining to political democracy centre on the principle of popular sovereignty, election, majority rule, and responsible political parties. Nehru's thinking no democratic state exist without these elements.

Conclusion

Jawaharlal Nehru was great Indian political leader, he is the leader of the Indian National Movement, and great intellectual, he moulded the course of Indian history according to his political ideology, he was in the forefront of National freedom struggle, next only to Gandhiji, he was the topmost leader of India from 1946 to 1964 till his death. He is the designer, architect and builder of present status of India, he introduced planned economy, mixed economic policies and given great support for the establishment of public sector companies all major iron and steel companies under the government control, he want to implement the system of democratic socialism through that India can transformed in to a socialist pattern of society without any bloodshed, he devoted his whole life to the practice of rather than to the theory, he was perhaps the foremost interpreter of liberal democracy in Asia, when he was alive and at the helm of affairs, the Western observers felt that the future of democracy in India would depend in a large measures on the degree to which Nehru could succeed in interpreting, applying and adopting democratic ideas to the political life of the people.



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