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Editorial.....

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

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

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

Dr.K.Victor Babu
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AN ANALYSIS ON THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND OBESITY IN NEWZEALAND

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Abstract

This critical literature review addresses the role of socioeconomic status (SES) in the development of obesity. Recent years have witnessed dramatic escalations in the prevalence of obesity, particularly in countries such as New Zealand and Australia (Venn et al., 2007). There is a wealth of literature documenting the various causes of obesity but also a tendency for such studies to follow a unilateral approach to their understandings of the phenomenon. This review focuses specifically on the under-examined connections between SES and obesity. Five peer-reviewed articles are selected and examined to establish the crucial role that SES plays in the development of obesity. Three quantitative and two qualitative research articles are considered. All the articles considered here focus on the relationship between SES and the prevalence of obesity in New Zealand. It is found that, while all identified this relationship, the studies also suffer from a lack of objectivity.

Review

Obesity

All research articles selected in this review agree that obesity is a health condition in which the body has accumulated excess body fat, which is harmful ('Obesity and overweight', 2017). According to the World Health Organization (WHO) and the National Institutes of Health (NIH), being 'overweight' means having a Body Mass Index (BMI) between 25.0 and 29.9 kg/m², while 'obesity' describes having a BMI greater than 30.0 kg/m² (Nguyen & El-Serag, 2010). The etiology of obesity is multifactorial and complex, and the risk factors that link obesity and SES are physical activity, nutrition and certain psychosocial factors like self-esteem and body image (Gearhart Jr, Gruber & Vanata, 2008).

Studies focusing on obesity can be classified into two main groups: 1) those examining childhood obesity, and 2) those targeting adult obesity. There is also a third, intermediate category of studies that examine the link between adult and childhood obesity. In such studies, childhood obesity is regarded as one of the causes of being overweight in adulthood. One such study was conducted by Venn et al. (2007), who followed students in Australian schools from childhood to adulthood in. Venn et al. pursued a quantitative approach in studying the link between obesity in adulthood. The participants' heights and weights were measured and self-reported at follow-ups.



The validity of the self-reported data was checked in the participants with B MI Indices . To avoid biases, the study used the international standard definitions of obesity and overweight as determined by BMI. The strength of this study resides in its sample size, as the researchers performed national sampling .However, the results suffer from a lack of objectivity, because the subjects were supposed to self-report their height and weight. Further, given that there was little focus on the influence of socio-economic factors on how childhood obesity could influence being overweight in adulthood, it is imperative to reconsider the issue from a more holistic perspective (Venn, et al., 2007). Although most studies identify two life stages of obesity – childhood and adulthood – most research considers the causes obesity to be the same in both childhood and adulthood, and assumes that SES plays the same role at both stages. Two of the selected articles concentrated on childhood obesity, and the other three examined obesity in general.

Of key interest is the article published by Walton, Signal, and Thomson (2009). The researchers aimed to establish a link between household economic resources and childhood nutrition, arguing that obesity is an outcome of poor nutrition. Arguably, the researchers indirectly attempted to associate obesity and household economic resources. Based on a qualitative research model that employed a narrative view of the literature, the researchers investigated childhood nutrition within household settings. Their model identifies financial hindrances as the primary obstacle to households' ability to consume and purchase healthy food. The model was significantly and explicitly informed by complexity theory and systems theory. Complexity theory concentrates on the study of sophisticated systems, which, in this case, refers to a collection of objects or processes regarded to be of interest.

When being obese or overweight in childhood is viewed as a social phenomenon that arises from a wider social system, a qualitative model is appropriate. The only limitation linked to Walton et al.'s (2009) research model in identifying the economic determinants of childhood obesity is a lack of objectivity, which is a common, perhaps even inherent issue with qualitative studies. The overall findings of the research showed that the socioeconomic factors influencing childhood obesity include cost of food, food purchasing practices, type of food available in the community, economic resources available in the house and the time available for cooking and shopping. Of these determinants, the cost of food has also been cited by other researchers (Gearhart Jr et al., 2008; Salmon, Timperio, Cleland & Venn, 2005).

Similar to Gearhart Jr et al., Carter and Swinburn (2004) also examine the issue of childhood obesity in light of socioeconomic factors. However, unlike Gearhart Jr et al., Carter and Swinburn use a quantitative research model. They report that childhood obesity is high among children in New Zealand, with incidence of obesity ranging from approximately 20% to 30%, depending on ethnic group, age and income – all crucial socioeconomic factors. Rather than targeting society in general, Carter and Swinburn focused their research on primary schools, which provide a social environment in which children interact with one another and engage with other obesogenic variables, such as



physical activity. The findings indicated that foods associated with obesity were cheaper than the healthier foods. Some of the foods included pies, hot chips, filled rolls, and soft drinks. These findings are considerably more objective than those of previous studies because they rely on quantitative research models; however, their use of purpose sampling to select the primary schools that they investigated makes the research findings slightly subjective, because researchers were capable of influencing the areas being studied. The researchers defended their use of this sampling method by pointing out that the schools were purposefully selected to provide a range of school type. The researchers also asked the schools to provide their attitudes and perceptions about the nutritional value of the food provided to their children, which further compromises its objectivity, as the respondents would be biased with regards to their own organizations.

Socioeconomic Status

The term 'socioeconomic' describes the intersection of social and economic factors. Given this, it is imperative to assess how the extant pieces of literature on obesity examine these variables both independently and dependently. The economic factors include, but are not limited to: the level of income, poverty index, price of goods (inflation), and the level of unemployment. The social factors include, but are not limited to people's individual characteristics, such as gender, level of education, friends and communities, housing, access to health facilities, physical activity and personal behaviours, such as drinking and smoking.

Salmon et al. (2005) offered an in-depth analysis of the socioeconomic factors through a quantitative (positivist) research approach. In the view of health care psychologists, positivism conforms to the idea that only factual knowledge acquired through observation and measurement is trustworthy. Salmon et al.'s study therefore offered an objective evaluation of the relevant socioeconomic variables. They studied the trends in children's physical activity and weight status in both high and low SES areas of Melbourne from 1985 to 2001.

By examining the active transport used by children during this period, Salmon and his colleagues were capable of establishing a connection between obesity and physical activity. Tucker-Seeley, Subramanian, Li, and Sorensen, (2009) described that Physical activity as a socioeconomic variable and is affected by physical and financial accessibility to recreational centres and parks. In their research, Salmon, Timperio, Cleland and Venn (2005) used cross-sectional survey data to measure the height and weight of children aged 9 to 13, from both low and high socioeconomic classes. Their results showed that there were increases in overweightness and obesity among children attending schools in high SES. These researchers concluded that decreases in active school transport took place at the same time as increases in obesity among all children and reported inverse relationship between SES and physical activity inverse relationships between SES and physical activity inverse relationships between SES and physical activity.



A positive reading of Salmon et al.'s research is that the assumptions of objectivism are valid. Objectivism maintains epistemological presumptions, which influenced this research. In essence, these assumptions specify that there is an external world distinct from human consciousness, and that it is possible to determine objective truth (in this case, about the children) in this world through the use of appropriate logic and techniques. Quantitative data, such as the children's height and weight, was gathered without subjective influence of the children themselves. The study's use of the Australian Bureau of Statistics Socioeconomic Index of Relative Disadvantage to distinguish low SES areas from high SES areas further reduces the potentially corrupting influence of subjective selection methods. The study's findings that SES and obesity are highly related are therefore considered to be valid.

Salmon et al.'s findings were further supported by a secondary research conducted in the US by Gearhart Jr et al. (2008), who argued that physical activity, which is significantly related to SES, influences obesity. This argument, though widely proven, is an assumption made by the researcher. The researchers interpret Salmon et al.'s findings under this assumption, and arrive at the conclusion that SES plays a considerable role in causing obesity. According to Gearhart Jr et al., individuals belonging to a higher level of SES tend to engage in multiple recreational activities, while individuals from lower levels of SES regularly face social and ecological barriers to physical activity, presumably due to the high cost of recreational activities, poor access to parks and recreational facilities, lack of time and lack of social support for exercise, among other factors. Secondary studies are inherently subjective in the sense that their conclusions are an interpretation of the results of other researchers. Two shortcomings of Gearhart Jr et al.'s work are that it failed to consider the cost of the physical activities as the main variable, and treated activities themselves as socioeconomic factors.

Conclusion

These studies establish a clear association between low socioeconomic status (SES) and obesity. This holds true even though the aetiology of obesity is complex and multifactorial, and the studies vary significantly in theories, methodologies, and epistemologies. Irrespective of these differences, all studies confirm this relationship. However, the majority of the selected studies depend on the perceptions of the participants, and this somewhat compromises their strength as evidence of the relationship. Socioeconomic factors (such as income, race, etc.) can largely be quantitatively measured, and BMI, the basis for determining whether someone is overweight or obese, certainly is a quantitative measure. Given that there are physical as well as socially defined variables that influence obesity, it is difficult to find a fully objective study.



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IDEOLOGIES ON PERSONALITY DISORDERS IN AYURVEDA

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Abstract

Personality is the way of thinking, feeling and behaving that makes a person different from other people. An individual's personality is influenced by experiences, environment (surroundings, life situations) and inherited characteristics. A person's personality typically stays the same over time. A personality disorder is a way of thinking, feeling and behaving that deviates from the expectations of the culture, causes distress or problems functioning, and lasts over time. These when encountered early are easier to reform than when fully manifested. Understanding such a concept in Ayurveda is possible only through the collective information among the *Samhita* and not otherwise as most of the personality disorders don't find direct mention and should be clinically correlated with various concepts of the *Manas* and *Shareera*. Few of the probable causes, its relevant conditions and their treatment are discussed here.

Keywords: Personality Disorders, *ManoBhavas*, *Unmada*, *Alpa Satwa*, *Graha*

Introduction

Personality is defined as a deeply ingrained pattern of behavior that includes modes of perception, relating to and thinking about oneself and the surrounding environment. Personality traits are normal, prominent aspects of personality. Personality disorders result when these personality traits become abnormal i.e., become inflexible and maladaptive and cause significant social or occupational impairment or significant subjective distress. Although personality disorders are usually recognizable by early adolescence, they are not typically diagnosed before adult life. Personality disorders are common and chronic. Approximately 50% of psychiatric patients have personality disorder. It is also a predisposing factor for other disorders. Often, more than one symptoms of personality disorder are present in one person. Most of the persons have various defense mechanisms to their rescue.

Defense Mechanisms

Defense mechanisms are unconscious psychological mechanism that reduce anxiety arising from unaccepted or potentially harmful stimuli. Defense mechanisms mediate between an individual's wishes, needs, and effects on the one hand, and both internalized object relations and external reality on the other². It may result in healthy or unhealthy consequences depending on the circumstances and frequency with which it is used. The major defense mechanisms are

1. Denial



-
2. Repression
 3. Projection
 4. Displacement
 5. Regression
 6. Rationalization
 7. Sublimation
 8. Reaction formation

Types of Personality Disorders

According to DSM-IV-TR criteria¹, the personality disorders and traits are coded and divided into three clusters – A,B and C of which:

- * The odd and eccentric features are termed as **Paranoid, Schizoid and Schizotypal**
- * The dramatic, emotional and erratic features are termed as **Antisocial, Histrionic, Narcissistic and Borderline**.
- * The anxious and fearful features are termed as **Anxious, Dependant and Obsessive Compulsive**.

*

In cluster A, **Paranoid personality disorder** is characterized by paranoid delusions, pervasive, long-standing suspiciousness and generalized mistrust of others. **Schizoid personality disorder** is characterized by lack of interest in social relationships, tendency toward solitary or sheltered lifestyle, secretiveness, emotional coldness, detachment and apathy. **Schizotypal personality disorder** is characterized by severe social anxiety, thought disorder, paranoid ideation, derealization, transient psychosis and often unconventional beliefs.

In cluster B, **Antisocial personality disorder** is characterized by long-term pattern of disregard or violation of other's rights. A low moral sense or conscience is often apparent, as well as a history of crime, legal problems, or impulsive and aggressive behavior. **Histrionic personality disorder** is characterized by a pattern of excessive attention-seeking behaviors, usually beginning in early adulthood, including inappropriate seduction and an excessive need for approval. **Narcissistic personality disorder** is characterized by long-term pattern of exaggerated feelings of self-importance, an excessive need for admiration and a lack of empathy toward other people. **Borderline personality disorder** also known as **Emotionally unstable personality disorder** is characterized by long-term pattern of unstable relationships, distorted sense of self and strong emotional reactions.

In cluster C, **Avoidant personality disorder** is characterized by avoidance of feared stimuli with a pattern of severe social anxiety, social inhibition, feelings of inadequacy and inferiority, extreme sensitivity to negative evaluation and rejection and avoidance of social interaction despite a strong desire for intimacy. **Dependent**



personality disorder is characterized by a pervasive psychological dependence on other people. **Obsessive-compulsive personality disorder** is characterized by excessive concern with orderliness, perfectionism, attention to details, mental and interpersonal control and a need for control over one's environment which interferes with flexibility, openness to experience and efficiency as well as interpersonal relationships.

Habit and Impulsive Disorders

In 1992, the World Health Organization (WHO) described habit and impulse disorders as characterized by repeated acts that have no clear rational motivation, generally harm the person's own interests and those of other people and are associated with impulses the person experiences as uncontrollable³. Disorders such as Pathological gambling, Pyromania, Kleptomania, Trichotillomania and Intermittent explosive disorder. These are characterised by impulsive behavior which the patient cannot resist or control. There may be feelings of release of tension by doing the act and a feeling of guilt after the act is over.

Pathological gambling is characterized by two or more episodes of gambling per year which have no profitable outcome, but are continued despite personal distress and interference with personal functioning in daily living. Pyromania is characterized by two or more acts of fire-setting without an apparent motive. There is an intense urge to set fire to objects. Kleptomania is characterized by two or more thefts in which there is stealing without apparent motive of personal gain or gain for another person. Trichotillomania is characterized by noticeable hair loss caused by person's persistent and recurrent failure to resist impulses to pull out hair.

Other conditions include:

- * Due to brain damage
- * Following catastrophic or excessive prolonged stress or
- * Following a severe psychiatric illness, in people with no personality disorder

Treatment

- * Behaviour therapy
- * Cognitive behavior therapy
- * Individual psychotherapy
- * Pharmacotherapy

Understanding in Ayurveda

Though the exact co-relation can be contravertial, the scattered references can be put together to bring about a possible ideology. The basic understanding of personality disorders begins with the underlying concepts of *Mano Bhavas*, *Manasika Gunas* along with its *Karmas*, *Grahas* and *Unmada*. *Rajas* and *Tamas* are the *Manasika Doshas* and its *Vikaras* include *Kama*, *Krodha*, *Lobha*, *Moha*, *Irshyamana*, *Mada*, *Shoka*, *Chittodwega*, *Bhaya* and *Harsha*⁴.

SusrutaSamhitha defines these terms in detail⁵ as:

Kama as the inclination towards a particular woman, sound, attachment to one's kin and the like. *Krodha* as anger or the tendency to inflict harm on others. *Lobha* as desire. *Moha* as confusion about truth and it is due to 3 factors – ignorance, doubtful perception and false perception. *Irsyamana* as jealousy. *Shoka* as the emotion on losing a son. *Bhaya* as fear. *Harsa* as feeling of pleasure without any apparent cause or by finding fault with others.

Probable Causes

Charaka Samhita defines 3 types of diseases⁶ namely *Nija Rog* caused by *Doshas*; *Agantuja Rog* caused by *Bhuta*, *Visha*, *Vayu*, *Agni* and *Manasika Rog* caused by the association of disagreeable things and dissociation with the agreeable. In *Chakrapani* commentary, it is also interpreted as the inter alia caused by the loss of agreeable things. This could be the start of understanding various psychic manifestations in *Ayurveda*.

The general causes of *Doshic* vitiation are due to the *Asatmya Indriyarthasamyoga*, *Pragnyaparadha* and *Parinama*⁷. *Susruta Samhita* opines that the *Doshas* get aggravated and adopt abnormal pathways leading to mental derangement⁸. It is also mentioned that on long term, the *Manasika Vikaras* and *Sareerika Vikaras* can get combined with each other⁹.

Susruta Samhita also mentions that *Grahas* afflict for the sake of *Himsa* (violence), *Archana/Satkara* (worship), *Vihara* (pleasure)¹⁰ whereas *Charaka Samhita* states the cause for *Unmada* as *Himsa*, *Rati* and *Archana*¹¹.

Considering the broad purview of *Unmada* and its characteristics, we can assume that due to the perversion of *Mano*, *Buddhi*, *Samnyanyana* and *Smriti*, the other features like *Bhakti*, *Sheela*, *Chesta* and *Achara Vibhrama* are affected¹², one of them resulting in Personality disorders.

Considerations

- 1) *Charaka Samhita* in *Sutra Sthana* quotes the prime requirements for a happy life¹³ to be free from *Shareerika* and *Manasika Vyadhis*, endowed with *Bala*, good knowledge, helpful in nature, obedient, well-wishers of all creatures, control over *Adharaneeya Vegas* etc can lead a **Happy life**
- 2) The general meaning of the term *Unmada* which stands for *Samudbra* or perversion of intellect, mind and memory can also be interpreted here¹⁴.
- 3) *Manasika Dukha* is one among the inevitable factors to be considered. The causes for it are stated as being threatened, loss of wealth/relatives and overtly desirous of copulating with the beloved. These affect the mind and produces unmada. The remedy is suggested at removing the cause of grief¹⁵.

- 4) Considering that not everyone is easily prone/affected, it is safe to suggest the importance of *AlpaSatwain* in the manifestation of *ManasikaVyadhi*. Those who cannot tolerate even the mild pain and those susceptible to fear, grief, greed, delusion and ego can be considered here. When they encounter unpleasant experiences, they tend to fall victim to depression, pallor, fainting, madness, giddiness or such events and maybe even death¹⁶.
- 5) Since *Bhutas* are known as *Grahas* also, the physician should try to understand them by studying *Bhutaivdya*¹⁷.
- 6) *Attavabhinivesha* is where the various causes lead to *Vridhdhi* of *Rajas* and *Tamas*. This on further vitiation leads to the *Avarana* of *Manas* and *Hrudaya*. In those who are *Mooda* and *AlpaCheta*, it leads to the perversion of *Buddhi* and *Manas*¹⁸.
- 7) The *AganthujaUnmada* are caused by the improper observance of *Niyama* in present life and improper conduct in past life. These lead to the seizure by the *Daiva*, *Rsis*, *Gandharvas*, *Pisacas*, *Yaksas*, *Raksas* and *Pitrs*¹⁹.

Chikitsa

1. The first aim of any treatment is avoiding the causative factor i.e., *NidanaParivarjana* which is opined along with *Daivavyapasraya*, *Yuktivyapasraya* and *SatwawajayaChikitsa* in *caraka samhitha*²⁰.
2. General *UnmadaChikitsa* includes *Snehana*, *Swedana*, *Vamana*, *Virechana*, *Asthapana* and *Anuvasana*. *Basti*, *Shamana*, *Nasya*, *Dhoomapana*, *Anjana*, *Abhyanga*, *Pradeha*, *Pariseka*, *Anulepana*, *Vadha*, *Bandana*, *Avarodhana*, *Trasana*, *Vismapana*, *Vismarana*, *Apatarpana* and *Siravyadha*²².
3. *AgantuChikitsa*. Of the *unmada* is caused by the possession of evil spirits desirous of pleasure or worship, the physician should ascertain the nature of the possession through the intentions and behavior of the patient and treat him by the administration of appropriate mantras and medicines along with the requisite presents and sacrifices²¹. The patient suffering from *AgantuUnmada* should be given *SarpiPana* along with *MantradhyaPrayogas*. Tying up the patient and confinement are also mentioned. Residing in a lonely house is described as one of the *Nidana* for *Unmada*. But residing in the same lonely house is prescribed as treatment also because of the specific nature of the disease²³.
4. *NaishtikaChikitsa*²⁴- absolute eradication of miseries is obtained by the elimination of desires. Desire is the root.
5. *Sadvritta*²⁵
6. *AcaraRasayana*²⁶

Conclusion²⁷:

Classical interpretation highlights the fact that neither the gods/gandharvas/pishacas/rakshasa can afflict a person who himself is free from misdeeds. Therefore, it is essential to hold ourselves responsible for our activities. Acknowledgement and trying to do better can go a long way in improving the mental



status of the individual. Also, prayers and resorting to the wholesome regimens act as antidotes for the same.

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FEMINIST PERSPECTIVES IN METAPHYSICS

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ABSTRACT

Feminist metaphysical speculations with its emphasis on concrete notions of objectivity transform the transcendental milieu, which had shrouded ontological inquiries. Modern philosophy, right from Cartesian period, have adopted an 'epistemological detour' for the conduct of metaphysical inquiry. The dominance of 'metaphysics of presence' influenced inquiries into the basic structure of reality, nature of being, concept of space and time, concept of cause and the practicability of Universals and particulars. This paper analyses how feminist perspective explores process method in metaphysical ruminations and provokes essentialism versus anti essentialism debates in the arena of metaphysics along with revisiting the concept of self.

Keywords: Ontology, Process method, Essentialism, Dualism, Self, Subjectivity

METAPHYSICS: AN INTRODUCTION

Metaphysics has been defined as the "knowledge that goes beyond the possibility of experience, and so beyond nature or the given phenomenal appearance of things, in order to give information about that by which, in some sense or other, this experience or nature is conditioned, or in popular language, about that which is hidden behind nature and renders nature possible"(Taylor 8).

Continental philosophers from Nietzsche to Derrida had questioned metaphysics for its naive ontological connection between knowledge and reality conceived as thing-in-itself, independent of human practices. But even the existential philosophy which claims to give primary to individual existence and existential experience seems to be lenient towards abstract metaphysics. It is clear from Heidegger's definition of metaphysics as the "attempt to think", *das sciende im Ganzen*, an expression which may be translated as the existent altogether' or 'the being of beings'. It views the totality of beings, not as a sum of individual things, but from the standpoint of "being qua being" (Rosen 98). However, Beauvoir employs existentialism to reconcile the subjective and objective, the absolute and the relative, the temporal and the historical aspects of reality.

FEMINIST PERSPECTIVES ON METAPHYSICS

Feminist perspective in metaphysics places itself against the unwarranted abstraction and transcendentalism promoted by traditional metaphysicians. The underlying dualism got



challenged and attempts were made to scrutinize the dichotomies of self- other, spirit-matter, mind-body and active-passive. Feminist intentions are evident when Simone-de-Beauvoir in her essay titled *Litterature et metaphysique* explains metaphysics as “not a system, but an attitude adopted by a human being, who, in her totality, encounter the totality of the world” (Tidd 84).

Linda Alcoff, a prominent feminist thinker, points out that by rejecting the metaphysics of transcendent, things -in -themselves and the ‘noumena’, what is being rejected is a specific ontology of truth and particular tradition in the history of metaphysics. It is not at all a denial of metaphysics itself. Derrida’s analysis of language, Foucauldian conception of power and the post-structuralist critique of humanist theories of the subject implies the new dimensions of metaphysics. It was the attempt to reason through ontological issues that cannot be decided empirically.

The logical analysis developed by Russell and the early Wittgenstein has the distinct metaphysical goal of delineating the logical structure of the world. Metaphysics underwent dramatic transformation along with the methodical shift of language analysis. Revisionary metaphysics gave way to what Strawson called “descriptive metaphysics”. He says – “Descriptive metaphysics is content to describe the actual structure of thought about the world. Revisionary metaphysics is concerned to produce a better structure” (Strawson 9). Linguistic or semantic analysis, which got initiated in mid-century, turned to be prominent tool in addressing metaphysical questions, especially to provide conceptual analysis of basic ontological concepts through subtle reflection on ordinary language. The post-Quinean metaphysical debates never demands direct access to reality or certainty in order to make legitimate ontological claims.

Feminist metaphysics concentrates mostly on essentialist/anti-essentialist debates as well the notions of subjectivity and personal identity. The Aporematic approach and process method finds the favour of feminist metaphysicians. Sally Haslanger, a prominent feminist metaphysician, assigns the name ‘aporematic’ to the metaphysical approach endorsed by the contemporary Anglo-American tradition. In Aporematic approach, one begins inquiry by asking a question and looking for answers. Theorizing starts with a particular puzzle, or contradiction in the answers, either in one’s beliefs on the question or more generally in the claims made on a specific area. These puzzles or tensions are to be resolved so as to achieve a broadly consistent set of beliefs, permitting it to be evaluated according to plausibility. The results are subject to revision. This view prevents metaphysics from being a foundational project. Haslanger hails aporematic metaphysics as immanent because the questions and proposed answers emerge within our thinking in response to theoretical and practical demands. In her article ‘Feminism in metaphysics: Negotiating the Natural’, Haslanger says that “on an aporematic approach , making justified claims about the world does not require direct access to it, and metaphysics makes no claim to authority over other forms of inquiry, it is perfectly consistent with, and is infact required by this approach that our metaphysical inquiry should be responsive to a broad range of experience as well as theoretical



pressures from other domains, including normative inquiry in epistemology and moral theory” (Fricker 114).

The process method can be traced back to the pre-socratic philosopher, Heraclitus. Later it came to be associated with thinkers like Alfred North Whitehead, the English thinker, continental philosophers like Friedrich Nietzsche, Martin Heidegger and Gilles Deleuze. The centrality of substance has been defied by these philosophers in their approach to metaphysics. The process method lacks strict tenets. It is a style of metaphysical inquiry that emphasizes events rather than substance. In standard Metaphysics, onus is on substance, essence, fixity, persistence, identity and continuity. The process method seeks change, event, novelty, activity and fluidity. The ‘process’ thought centers around the idea that “life has an indeterminate quality and that the freedom of creativity is therefore present at every moment, within the becoming of every new event” (Daniel 157). The human subject is not to be treated as remaining the same always. The subject, as pointed out by ‘Anne Daniell, successively “happens” as an ongoing process of creation. It continually goes through the evolutions and revolutions of relationship. This shows that novelty is produced through the creative interactions of relationships. Among feminist thinkers, Julia Kristeva is viewed as belonging to the metaphysical tradition of process philosophy. Her outlook is radically different from the “substance ontology” of Cartesian metaphysics. Process philosophers insist that what things are in influx. Everything is changing and not persisting. Kristeva views the self as a fluid, mobile, subject in process. Rejecting the mind-body dualism, she move beyond the dichotomies of psyche and soma or mind and body. She attempts to point out the way in which bodily energies permeate our signifying practices and assert that mind and body can never ever be separated.

ESSENTIALISM VERSUS ANTI – ESSENTIALISM

Essentialism is the metaphysical view that objects and natural entities have some essential properties and some accidental ones. It promotes the notion that one has or can be primarily defined by a central characteristic or core feature shared with all other “within’ a category. Teresa de Lauretis, a prominent feminist thinker, define essence as “absolute being, substance in the metaphysical sense, the reality underlying phenomena. That which constitutes the being of a thing, that by which it is what it is.... objective character intrinsic nature as a thing in itself.” (Daniell 116). Essentialistic /constructionist binarism has been much debated. Aristotle held essentialism as the belief in true essence. Essence, which is constitutive of a person or thing, is irreducible and unchanging. In Feminist theory, essentialism can be located in appeals to a pure female essence, outside the boundaries of the social order. It emerges as a discourse which presumes upon the unity of its object of inquiry even while it attempts to demonstrate the differences within this imprecise category.

Essentialism appears in two forms – universalism or generic essentialism and individual essentialism. Universalism holds that members of the same group, for instance,



“woman”, have the similar nature. Individualism essentialism insists that each individual ‘womanness’ is part of her ‘particular’ nature in the form of a natural or biological or essential property. Both these forms of essentialism fails to catch the attention of feminists. Universalism is rejected on the ground that it overlooks particular concrete situations and features. Individual Essentialism is discarded as it promotes the bias of fixed biological nature.

Constructionism is the philosophic refutation of essentialism. It portrays essence as a historical construction. They are concerned with systems of representations, social and material practices laws of discourse and ideological effects. Above all, constructionists gives primacy to the production and organization of difference. They refuse to accept the precedence of any essential or natural givens in the process of social determination. Social constructionist view of feminism hold that that the varying social systems is responsible for all forms of oppression. They interrogate the intricate and interlinking processes which combine to produce ‘natural’ or ‘given’ objects. The systems of representations, social as well material practices, laws of discourses and ideological effects are at stake.

The relation between the social and the natural further distinguished between essentialism and constructionism. In essentialism, the natural provides the raw material. It gives a definite starting point for the social and legal practices. What is meant is that the natural is repressed by the social. In constructionism, the natural is itself posited as a construction of the social. That means the natural is produced by the social. Diana Fuss, feminist thinker, in her article ‘The Risk of Essence’, briefs up the strength and weakness of essentialism and constructionism. It is pointed out that Essentialist arguments usually make recourse to an ontology which falls out of the sphere of cultural influence and historic change. For instance, ‘Man’ and ‘woman’ are assumed to be ontologically stable objects, coherent signs which extract their coherency from their predictability. But the comprehension of what is meant by ‘man’ and ‘woman’ necessitates an understanding of historical production of these categories from classical Greek period through Renaissance French to contemporary post modernist times. Hence these categories cannot remain stable or universal. Essentialist arguments theorise history as “an unbroken continuum that transports, across cultures and through time, categories such as ‘man’ and woman’ without in any way defining or indeed constituting them” (Quires. Kemp 252). The essentialist consider the body as occupying a pure, pre-social and pre-discursive space, whereas the constructionist view body as composed of a network of effects continually subject to socio-political determination.

However, there are thinkers in the stream of feminism who favours essentialism. Naomi Zack and Martha Nussbaum, prominent feminist thinkers, retain ‘essences’ and argue that essences are essential. Nussbaum declares herself as a Universalist and essentialist. She is of the view that essentialism focus on what is common to all, rather than on differences and looks upon some capabilities and functions as more central to human life than others. The strategy is to focus on a common set of capacities and functions.



The emphasis is on 'central human capabilities' which can never be reduced to biology, theology or metaphysics. This version is treated as compatible with an account of capabilities that is normative, tentative and open ended. It is a continuous sort of experiential and historical truth and allows that the capacities put forth are differently constructed by different societies. Nussbaum explains metaphysical realism as the view that there is some determinate way the world is, apart from the interpretive workings of the cognitive faculties of living beings.

Gayathri Chakravorty Spivak, renowned Marxian feminist suggests a strategic use of essentialism. Strategic Essentialism implies an essentialism that did not attribute any essence in the ontological or real sense, but it merely employs positive ideas for the sake of political action. Spivak make use of it as a certain alibi to essentialism, and asks to think of it as entailing present critique, a continuous recognition of the dangers of that which is beneficial. Ngai-Lingsum, a feminist writer point out that 'Spivak's retaining of the concept of essentialism serves as provisional interventionist strategy' (Ahmed 137). Spivak holds that female identity is generated and regulated in relation to particular contexts and power axis. What it means is that the focus is on the necessity of maintaining or sticking to differences as "proceeding from an awareness of one's own power and not in the sense of proliferating multiplicity for its own sake"(Nicholson 318).

THE CONCEPT OF SELF

The feminist concept of self ,designate a being who is fully aware of own intentions, capable of acting as an autonomous being in the world, guided by reason and intellect . Many theories of self has been suggested by feminist thinkers. One such theory is the Aspect theory of self, propounded by Ann Ferguson. In it, conscious selfhood is treated as a continuous process in which both unique individual priorities and social constraints vie with each other in defining self-identity. The self is having very many aspects and some of these are in conflict with each other. The variety of aspects ensures that self cannot be determined universally. The aspects of self develop by participating in social practices that insist on certain skills and values. According to Ferguson, "one's sense of self and one's core values may change at different times and different contexts" (Garry 102). The aspect theory conceives the self as an existential process in which incongruities and lack of power are due to participation in conflicting social practices.

Discussions on self –other relationship were also made in the realm of feminist metaphysics. Caroline Whitbeck, one of the prominent feminist thinkers propose what she terms 'a feminist ontology'. Rejecting the model of dualistic oppositions, she forwards a model based on the relation of differentiation. This self-other relationship is grounded in analogies between two beings. this way of 'mutual realization' She points out that the opposition of self and other denies the existence of the other to a greater or lesser degree or to make any existing other into the self resulting in solipsism. In the case of self –other relation, the character of the self does not uniquely define the



character of the other by opposition to it. There can be umpteen variety of ways of which others may be similar or dissimilar. It is not at all a dyadic relation. According to Beck,” the relation is not fundamentally dyadic at all and is better expressed as a self-others relation, because relationships, past and present realized and sought, are constitutive of the self, and so the actions of a person reflect the more or less successful attempt to respond to the whole configuration of relationships” (Garry 62). Relation among analogous beings never gives room for struggle to dominate or annihilate the other. It generates a multifactorial interactive model of almost all aspects of reality. The bodies, intellects, emotions, souls, characters and configurations of relationships are to be understood only in relation to one another. As there is no assumed opposition between the self and other, there remains no need to interpret the other as mere material for the self’s designs. The person is treated as a relational and historical being. The realization of the self can be achieved only in and through relationships and practices.

Judith Butler, influenced by Hegelian master-slave metaphor, develops her own view on self-other relation. The self-consciousness overcome the otherness by destroying itself in order to know itself. Butler holds that “self and other are not only intimately related to each other, in fact, they are each other, and it is through their mutual recognition that they bring each other into being.” (Salih 28)

Simone De Beauvoir, with her genuine interests in the possibilities of co-operation and solidarity among persons, gives importance to the positive aspects of the self-other relations. She favours a notion of other as potentially reciprocally equal. That means, the other is a ‘being’ already included in the movement of consciousness towards its own perpetual self-construction. Reciprocity refers to a mode of relating to oneself and to others as both subject and object and as equal freedoms in the freedom. Though subjectivity is a unique experience for each person, Beauvoir points towards the need to be recognised for our unique individuality. The other people must be free beings to act as free subjects so as to escape the contingency of accidental fact of our existence.

CONCLUSION

Feminist ways have remoulded metaphysical inquiries. The aporetic approach which permits revision of beliefs with the progress of inquiry is favoured by feminist metaphysicians for its anti-foundational stance. They unmask or demythologize certain aspects of our ordinary and philosophical thinking. Where ordinarily we take ourselves to be dealing with an ontology of substances, natural things, intrinsic properties, we’re in fact dealing with an ontology of social things, relations, and non-substantive and often normative kinds. Much debate is there between feminists on whether essentialism is to be accepted or not. Those who argue against essentialism prefer social constructionism. Those who favour it insist on the determinate nature of world. Then there is suggestion of strategic use of essentialism from Gayatri Chakravorty Spivak, according to which the ‘essence’ can be strategically employed for positive political action. The traditional notion of metaphysics as a non-perspectival value free view of reality results in latent



dogmatism.. Feminism focuses on concrete notion of objectivity. The self is looked upon as an autonomous being placed in the world. Subjectivity is suggested as a replacement to the traditional concept of self. Even personal identity is explored through subjectivity which in turn is defined by experience.

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AN ANALYSIS OF THE EFFECTS OF OTAS ON TRAVEL AGENTS IN HOTEL ROOM BOOKINGS

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Abstract

This research activity was conducted to compare various factors of comparison which online channels are providing over the traditional mediums in booking a hotel room. If we look at the glance of the history of hotel bookings, then we would be able to understand that the hotel room reservations were either made directly (telephoning the property/face-to-face) or via a travel agent. Over the past decade, a large offer of booking channels has emerged. Nowadays, hotel distribution channels for transient bookings are grouped into five major categories such as Central Reservation System, Direct Bookings (walk-ins, telephone), Global Distribution System, Hotel's website, and OTAs (Online Travel Agents). With new booking channels rising, conventional channels are slowly however steadily losing market share; whereas new channels, notably those who permit bookings via online channels like OTAs, GDS, and Brand's portal are becoming popular. The DIY (Do-it-Yourself) approach has been introduced in the market due to these OTAs and other online distribution systems. Though there are many advantages to booking through these mediums, today's customer is well aware of threats that could arise by using these platforms. The hotels receive almost 40% - 45% of the occupancy through the Online Travel Agents and the hotel's portal, and the remaining through the offline travel agents. Thus, the study has proved that OTAs and online channels are the most popular and efficient way of booking a hotel room for the customers

.Key Words – Travel Agents, OTA, Room Booking.

Introduction

A travel agent may be an individual /firm or corporation which is commonly known as a travel agency. An agency means the office of travel agent or organization where all travel goods and services are assembled and coordinated for the smooth conduct of travel agency business. Technically, a travel agent is an owner or manager of an agency, but other employees are responsible for advising tourists and selling packages tours/individual components of travel products.

A Travel agent is a person who has full knowledge of tourist products – destinations, modes of travel, climate, accommodation, and other areas of the service



sector. He acts on the behalf of product providers/principles and in return gets a commission.

OTA stands for Online Travel Agency. OTAs are online companies whose websites allow consumers to book various travel related services directly via the Internet. They are the 3rd party agents reselling trips, hotels, cars, flights, vacation packages, etc. provided/organised by others. Travel shopping via online agencies has become very popular nowadays, especially, in the last minute segment and also because of the frequent usage of smartphones. Today, consumers are on-the-go and the advantage of a booking engine and the reservation solutions provided by the OTAs is that it offers instant payment and booking confirmation.

Literature Review

In his research, **“From Travel Agents to OTAs”** Timothy Webb has stated the evolution of consumer booking behaviour i.e. travel booking has changed substantially over the past two decades. The traditional approach of utilizing travel agents and booking ahead has evolved into a fast-paced, last-minute booking environment. This evolution has had substantial effects on revenue management (RM) in the areas of forecasting, pricing, and online travel agency inventory allocations. These changes have made understanding the consumer booking process a requirement for success.

As the introduction of the Internet, the tourism and hospitality industry has witnessed sea changes into the trends of booking as well as consumer behaviour. The researcher found that these online travel agents (OTAs) have positively captured the market and the minds of the consumer as it provides last minute, quick, and efficient booking systems. It was also observed during the research activity that many hotels have blocked their rooms for such OTAs, giving them a more profitable business.

Steve Olenski mentioned in his blog, **“Are OTAs really killing Travel Agencies”** that online booking is easier and leaves travellers spoiled for choice. From aggregators like Kayak.com, which merely assembles inventory from other websites, to travel sites like Flights.com most travellers agree that online booking is just more efficient and cheaper. The blog on the Andaman Holiday’s website stated that with everything becoming a DIY (do-it-yourself), why are people still choosing the traditional offline medium for their travel booking? The answer lies simply in one word – trust. A local agent has a clear edge when it comes to providing a good vacation deal and more importantly a better service. The most important of it all is the human factor – a face, a real person who takes full responsibility for crafting a personalized vacation.



In case of Hotels, the art of revenue management and smart distribution has become the secret weapon of every hotel. Caroline Strachan continues in her blog, Hotels have worked out how to release and hold their inventory of rooms based on factors like day of the week, citywide events and onsite meetings. This enables them to fluctuate the price of their bedrooms; a bedroom that hasn't been slept in is a waste, just as out-of-date food is to a supermarket. OTAs spend billions of dollars a year in advertising to win over leisure traffic, for which OTAs charge hotels high commissions. The OTAs tell hotels, "Pay us more commission, and we'll do the advertising for you." However, OTAs are luring business travellers with "lower" rates by distributing and making their rates bookable via travel management company/online booking tool channels.

Significance of the study

Online Travel Agents are gaining popularity in the market. The trend of booking a room through a travel agent has shifted to a DIY (do-it-yourself) approach where customers have gained access to book their travel plans on their own. Hence, this study will help the new entrants as well as potential players in the market in the form of travel agencies to sustain in the market with the help of research. It will help the travel agencies in determining the ways to survive in such cut-throat competition.

My main objective of this research is to identify the most effective source of room booking from the customer's point of view. The key elements to be explored from this research activity are the concept of OTAs, the role of travel agent in the hotel room booking, advantages & disadvantages of room booking from both sources i.e. OTAs and the travel agencies.

Objectives –

In order to streamline the present study, related to the Hospitality & Tourism industry in the Pune, the following objectives have been formed:

1. To study the concept of Online Travel Agents (OTAs)
2. To study the concept of Travel Agent & its role in hotel room bookings.
3. To identify the most effective source for room booking from a customer's point of view.

Hypothesis

Booking a room through an OTAs is the most effective source to book a room.



Scope & Limitations of the study

The participants of this research were the customers, travel agents, and hotels. The total sample of 10 questionnaires was designed for the travel agents and 10 responses are recorded by personally visiting their offices (response rate 100%). Hotels were targeted for a sample of 10 and achieved 05 hotels (50% response rate) have filled the questionnaire. For customers, the sample was designed for 50 questionnaires and received 45. The response rate is 90%. Thus, we believe that the answers can be considered reliable. The study is limited to budgeted hotels in the vicinity of Pune City and does not have any relevance to any other types of Hotels in any other locations elsewhere.

1. The travel agents selected for the study are from Pune City only, and does not have any relevance to any other location elsewhere.
2. The Study is limited to the period from August 2019 to November 2019 only. The findings of this research may not apply to any other period even for the same area and the same type of hotels/services.
3. Secondary sources of data are usually of limited worth for research purposes because of the error incompleteness in basic data. The secondary data which is shared by the researcher may or may not be reliable.
4. The sample size is too small as compared to the population of budgeted hotels, travel agents, and even the customers in the selected area. However, a researcher being an individual is capable of handling limited data.

Research Methodology

1. Approach – Quantitative
2. Type of research – Analytical
3. Sample – Travel Agents, Hotels (Budgeted Category) and Customers.
4. Method of Sampling – Purposive – Judgemental
5. Data collection – Present paper is based on secondary data and primary data.
Following are the sources of collection of data:
 - a. Websites
 - b. Travel Market Report
 - c. Various previously published research papers.
 - d. Questionnaires
 - i. Travel Agents – 10
 - ii. Hotels – 05
 - iii. Customers – 45



Role of Online Travel Agents –

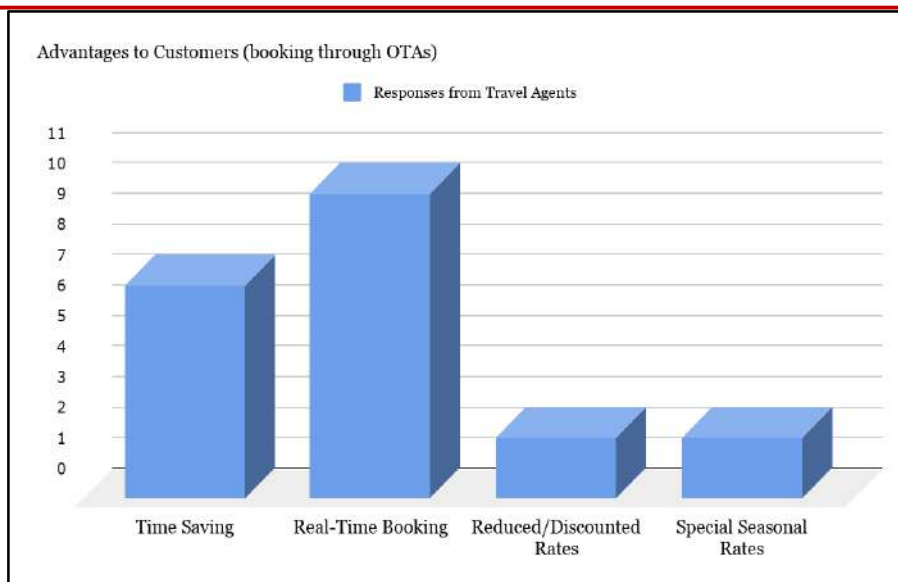
OTAs provide a high level of customer service through mobile applications, responsive websites, email campaigns, and even social media platforms. It has multiple channels of customer outreach to not only promote and offer new products and services but solicit feedback from customers which can be used to alter products and services offered. OTAs that leverage direct communication channels such as mobile chat applications and social media platforms can engage with customers on a one-on-one basis. This level of customer relations management gives travellers the personalized booking experience they desire with increased speed and convenience. OTAs are essentially available on a 24/7 basis, travellers have nearly unlimited access to their bookings. This makes it quick, easy, and simple for travellers to adjust bookings based on cancellations or errors - flight delays, misplaced reservations, overbookings, and more.

Role of Travel Agents (Offline) –

Whatever the size of a travel agency, it has to provide necessary travel information to tourists. A travel agency must give up-to-date, accurate, and timely information regarding destinations, modes of travel, accommodation, sight-seeing, shopping, immigration, passport, visa, customs clearance and procedure, health and security rules, and about various permits required to travel in a particular area, etc. Airline ticketing and reservation is a major source of revenue. Travel agencies perform a function of airline ticketing and reservation on behalf of various airlines. Travel agencies prepare tour packages and sell them to tourists. The costing and pricing of tour packages depend to a large extent on the ability of the travel agent as to how effectively he can negotiate with the principal suppliers. A travel agency consistently makes linkage with the accommodation sector, transport sector and other entertainment organizations to reserve rooms, and seats in the cultural programmes and transportation. Travel insurance protects the travellers against the personal as well as baggage losses resulting from a wide range of travel-related happenings and problems, again performed by the Travel Agents. Approved travel agency authorized by the government body provides currency exchange services to tourists.

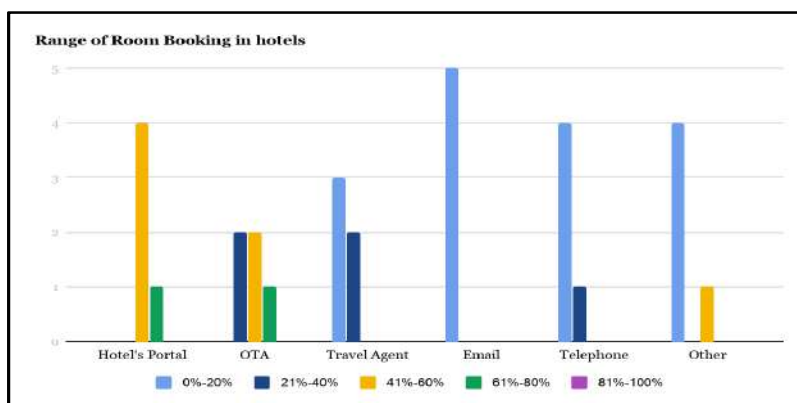
Data Analysis

In the study, the travel agents (offline) have agreed that booking through an OTA reduces the time as the customer may book a room in the hotel which is convenient to him/her on board or from anywhere using the internet. Also, some of them have stated discounted rates or reduced rates than that of market rate is being offered by the OTAs because of which customers prefer to book through these channels.



Considering this, there is still one advantage of booking through a Travel Agent and that is the human touch. Travel Agents are considering the needs and requirements of the customer. The travel agent is well aware of customer demands, likes, and dislikes, hence the rooms booked through them are more suitable to the needs of the customer. The OTAs are providing what they have for the customers and hence, it may not suit the requirements of the guest who is on the journey of various tourism activities.

Many hotels in the targeted area of research activity have partnership with the OTAs, with **“MakeMyTrip”** being the most trending partner with the hotels followed by **TripAdvisor&Trivago**.

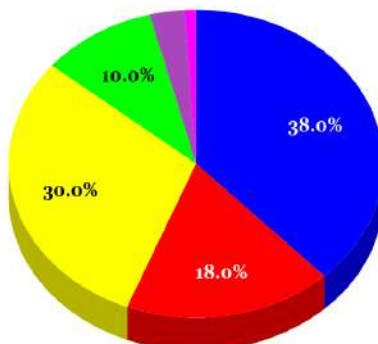


There are mixed responses about the OTAs through which hotels get room bookings. According to the Hotels, 40% - 45% room bookings are through these OTAs, while 45% - 50% from their web portal and remaining from the travel agents, emails, telephone, and other sources. Hence, from the data, OTAs are the second largest contributor to the hotels' room bookings.

For the customers, OTAs are becoming a more favourable way to book a room in their preferred hotel. Booking through an OTA is easier to search and book, it provides real-time booking as mentioned earlier. The location of the hotel room is more convenient to the customer while booking through an OTA as it provides various filters for location, amenities, services, etc. and also the refund is assured in case of cancellation.

Advantages to book through OTA

● Easy to Search & Book ● Convenient Location ● Appropriate Filters ● Real-Time Booking
● Others (refund, discounts & hotel reviews) ● None



Images of hotel rooms are uploaded on the site of an OTA which helps determine the room booking and very importantly the experience of guests who have stayed in the hotel is provided in the form of review which also provides the authenticity of the details. These are the few advantages that customers get by booking through an OTA.

Besides these advantages, the customers have strongly agreed that the threats of these easy and efficient booking channels always disappoint them. Hidden charges, terms & conditions are the most dissatisfying threats which customers majorly face during their booking cycle. Charges such as convenience fees, reservation fees, tax on the online payments are few examples of the Hidden Charges which OTAs apply on the room bookings and which has to be borne by the customers availing the services. Terms & Conditions are very rigid and difficult to interpret which results in an unhappy



customer. Fraudulent offers posted on the websites & apps of the OTAs always mislead the customer and in many cases, the customers are over-charged due to such false offers. The cleanliness shown in the pictures of the hotel room may not be observed by the hotel which is also the reason for the unhappy customers.

Taking into consideration the advantages and the disadvantages, the advantages supersede over disadvantages due to the long listing characteristics of the OTAs. As it facilitates direct communication and contact with the service provider, it is the most favourable channel to book a hotel room from a customer point of view. OTAs allow customers to book a hotel room across the globe, convenient to him/her. A 24/7 support team of an OTA makes the customer confident about his/her stay and assures assistance during the stay of the customer. It eliminates the dependence on the third party for room booking and promotes DIY (do-it-yourself) approach towards the tourism industry.

Findings & Suggestions

Findings

❖ Major Findings

1. The travel agencies are using hotel's websites and/or portals to book a room on the behalf of the guests.
2. The travel agents in the sample have clearly stated that there is a negative impact on the business of the travel industry – mainly travel agents due to the introduction of these online travel agents.
3. All the travel agents have confirmed that the benefits stated in the questionnaire can be availed if a customer books a room in the hotel through them.
4. The travel agents have also confirmed that OTAs are providing Real-time Booking and it saves time of the consumer.
5. Hotels are receiving room reservations through various channels such as OTAs, travel agents, company's own portal, email, etc.
6. 50% - 60% of room bookings are received from the OTAs while through the travel agents, hotels are receiving 20% - 30% occupancy.
7. 84% of the samples have stated that they book hotel room through an OTA.
8. About 40% of the samples have booked hotel room more than twice till date. 23% of the samples have booked room in the hotel more than seven times and 15 % of the total respondents book hotel room, every time, using OTAs.
9. 'In case the room has been booked through a travel agent then assured booking and discounted rates can be achieved' state 58% respondents of the total sample.
10. Dependability, lack of flexibility, and high mark-ups are some major disadvantages listed by the sample.
11. More than 75% of the samples have stated that OTA is much easier to book over a traditional booking.
12. There are many advantages listed by the sample in case of booking a room through an OTA. Easy to search and book, convenient location, appropriate filters, real-time booking are few to list.



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13. In case of OTAs, hidden charges, lack of clearly expressed terms & conditions, fraudulent offers are some of the disadvantages.

❖ **Minor Findings**

1. Most of the travel agents have a contract with the hotel; hence they book the room over an email.
2. All the travel agents are aware of Online Travel Agents and agreed that the introduction of these OTAs have impacted on the business of the travel agents.
3. Many of the hotels are dealing with the local travel agents as well as the online travel agents simultaneously.
4. Makemytrip is popular among the customers and has covered almost 65% market share.
5. People or the potential customers are travelling majorly for leisure purposes.
6. The hotel staff has confirmed that the average room bookings are received through an OTA.

Suggestions

This research activity was conducted keeping in mind the three different aspects or concerns of the room booking. Hence, the suggestions are classified in these three aspects –

❖ **Travel Agents –**

1. The travel agents can contract with the hotels for room rates. These contracted rates are much cheaper than the market rates hence can improve the net margins of the firm.
2. Travel agents can act as an OTA by introducing technological advancement into the operations.
3. To win the competition, travel agents can create various strategies to attract the customers and can add value to the service touch-points.
4. One of the major advantages that the travel agency has is the personal touch. This can be used to lower the impact of the OTAs on the potential customers in the market.
5. Differentiation factors should be highlighted while dealing with the customers. Thus, creating a value in the eyes of the customer.

❖ **Hotels –**

1. The hotel can use various strategies to attract the guests directly to the hotel using hotel's portal.
2. Recording guest history, behavioural patterns, trends in the market can help the hotel to tap an opportunity.
3. Increasing the room occupancy by receiving room bookings through the hotel's web portal will automatically reduce the occupancy of rooms through the travel agents or the OTAs. Hence, reducing the high commission rates.



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4. Based on the location of the property, the type of the customer can be identified and the potential customers can be targeted.

❖ **Customers**

1. There are times when the OTAs are charging high rates; hence, comparing both, i.e. the travel agent's prices and the OTA's pricing will help to select the best alternative.
2. Negotiations at the front desk while registration may also be beneficial as chances of getting direct discounts by the hotel increases at the time of registration.
3. The terms & conditions given on the OTA's portal need to be carefully understood and then only accepted or rejected.
4. While booking through an OTA, the cancellation fees need to be carefully checked.
5. Offers showing high discounts need to be carefully examined.

The above field data have revealed that the introduction of OTAs in the market have negatively impacted on the business of the travel agents (offline). The travel agents and the customers both have unanimously agreed that real-time booking and time saving are the key features of the OTAs which make them the most effective way of booking hotel rooms. Therefore, the hypothesis has been proved.

Travel agents (offline) may have a contract with the hotels for room rates (which are generally lower than the market rate) which help attract customers. They can also act as an OTA by advancing the organisational technology & systems. Sometimes the OTAs charge higher rates than the travel agents; hence customers should compare both and then choose the appropriate. Offers showing high discounts need to be carefully examined & confirmed by the OTAs support staff to reduce frauds.

Conclusion

During this research, it has occurred to the researcher that the customer is the focal point of any service. Today's customer is very conscious, educated, and is using the best possible resources to acquire information about a particular product. They are aware of online travel VSagents, their benefits, and threats as well. Online Travel Agents have a great impact on the travel agencies as most of the customers are using such channels to book their hotel rooms. Travel agencies need to use various strategies to attract customers back to the travel agency. They should be able to differentiate between the firm's products and services and competitor's products and services. Hence, travel agents must create value for each transaction with the customer to retain them.



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DEVELOPMENT AND TRYOUT OF E-CONTENT ON GANDHIJEE'S EDUCATIONAL CONTRIBUTION

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Abstract

The purpose of this research was to develop the E-content on Gandhijee's Educational contribution and tryout it on trainees of Education College. The researcher read the books which were published by Navjivan Publication on Gandhijee to collect the information regarding educational thoughts of Gandhijee, than E-content was prepared. It was tryout on 98 trainees who were the students of Education College where the researcher has been teaching for many years. This experiment was conducted in the college. Pre test was given in the first session to check the previous knowledge, than the E-content which was developed the researcher was given to the study. The researcher was the facilitator during 11 sessions. The post test was given in the last session to know the learning outcomes. It was experimental research. Single group pre-test post-test design was implemented. The average score of pre test was 18.40 and the average score of post test was 43.12. It was found that there was significance difference between the result of pre-test and post-test. It clearly indicated that E-content which was develop on Gandhijee's Educational Contribution was effective.

Key Words: E-content, Educational Contribution, Gandhijee

Introduction

Gandhijee's educational contribution is very important for the teacher trainees. The researcher has been teaching Gandhijee's educational contribution for many years in College of Teacher Education. Every year, many trainees demand learning material on Gandhijee's educational contribution in E-content form, so it was decided to prepare and try out E-content on it. This work was the result of systematic effort on that direction.

Objectives:

1. To develop the E-content on Gandhijee's educational contribution for B.Ed. trainees.
2. To tryout the E-content of Gandhijee's educational contribution.



Hypothesis:

There will be no significance difference between mean score of teacher trainees achievement on pre-test and post-test.

Review of Literature

The Research work which was done on Gandhian Philosophy and Self learning was reviewed to give the final touch to this study. Subramanyam(1958), Upadhyay(1964), Kuzhandawelu(1965), Dave(1966), Lalitha(1967), Sen(1973), Jain(1976), Upadhyay(1980), Vaidh(1985), Rao(1988), Kadiya(1988), Dvivedi(1991), Kaur(1992), Mahalingam(1992) and Gandhi(1993) worked on Educational thinking of Mahatma Gandhi. These all 15 researches were philosophical research and content analysis technique was used among these works. They were helpful to understand the Ghandhijee's educational contribution.

The researcher reviewed another 09 research reports Puwar(1999), Parmar(2010), Panchal(2007), Tandel(2009), Desai(2005), Patel(2006), Vansiya(2011), Patel(2011) and Jambusia(2009) to understand experimental work which were based on self learning material.

Research Design:

It was experimental research work and single group pre-test post-test experimental design was implemented to tryout the E-content which was on Gandhijee's Educational contribution.

Sample:

Ninety eight B.Ed. trainees of the academic year: 2016-17 from V.T.ChoksiSarvajanic College of Education, Surat was selected for sample.

Tools:

1. E-content

E-content was developed on Gandhijee's educational contribution which were divided in 11 sub topics- 1.Meaning of education, 2.Objective of Education, 3.Teaching methods, 4.Syllabus and curriculum, 5.Co-education, 6.Teacher, 7.Student, 8.Teacher student relationship, 9.Dicipline and 10.Examination System, 11.Educational Experiments. Text, images, audio, videos, animation were used in E-content. It was self made tool.



2. Test

- a. The teacher made test which were used in pre test and post test was developed to know the trainees' achievement score on educational contribution of Mahatma Gandhijee.
- b. There were 25 multiple choice questions which contained 25 marks and 5 essay type questions which also contained 25 marks. The test which was developed to know the trainees' achievement score on educational contribution of Mahatma Gandhijee. It was used in pre test and post test. It's time was one hour.

Research Design

Session	Session	Time
1	Pre-Test	1 hr.
2	E-content on Gandhijee's Meaning of Education	1 hr.
3	E-content on Purpose and objectives of Education according to Gandhijee	1 hr.
4	E-content on Syllabus and Curriculum according to Gandhijee	1 hr.
5	E-content on Teaching methods according to Gandhijee	1 hr.
6	E-content on Gandhijee's thoughts on women education	1 hr.
7	E-content on Gandhijee's thoughts on co-education	1 hr.
8	E-content on Gandhijee's thoughts on Teacher	1 hr.
9	E-content on Gandhijee's thoughts on Students	1 hr.
10	E-content on Gandhijee's thoughts on Teacher-student relationship	1 hr.
11	E-content on Gandhijee's thoughts on Evaluation	1 hr.
12	E-content on Gandhijee's formal educational experiments	1 hr.
13	Post Test	1 hr.

Data Collection:

The teacher made test on educational contribution was given to the trainees in the first session as a pre-test and in the last session as a post test. The trainees responses were recorded in answer sheets which were examined properly and mark sheets were developed. The research data was collected in this way.

Data Analysis:

The collected research data was in numerical form, so it was statistically analysed. Mean, Standard Deviation and T-test statistical technique were used for data analysis.

	Number of trainees	Mean	S.D.	T-test
Pre- Test	98	18.40	6.89	Significant at 0.01 level $24.12 > 2.58$
Post- Test	98	43.12	5.47	

The teachers' trainees mean score in pre test was 18.40. It indicated that trainees were little bit aware about Gandhijee's educational contribution . The mean score of post test



was 43.12. It reflected that trainees knowledge was 24.72 marks (48.44%) increased after try out of E-content. The mean score of post test is 48.44 % higher than pre test. So it can be said that the E-content which was developed on Gandhijee's educational contribution was effective.

Discussion:

This study proved that the E-content which was developed on Gandhijee's educational contribution was effective. This study will helpful to those teachers who are interested in developing E-content. E-content was not compare with another self learning material. The result may be different if it was compared with other self learning material. The sample was purposive and the research design was single group pre testpost test design. It has some limitation. Its findings cannot generalize. This study will be helpful to those who want to work further in this field.

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STUDIES ON MYCOTOXINS OF RAISINS

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Abstract:

In the present study the mycotoxins of raisins were determined, using TLC plates of Chromatographic separation, and it is aimed to know the fungal toxins associated with raisins samples collected from fields and market in Bijapur District. Among all mycotoxins, aflatoxins have attracted greater attention all over the world. Raisins are derived from a grape (*V.vinifera* L), over annunciated with species of *Aspergillus*, *Fusarium*, *Penicillium*, *Mucor*, *Yeast*, *Rhizopus*. Etc, That these fungi are responsible for contamination, spoilage and produce aflatoxins. In the present study the species of *Aspergillus* are pathogenic microbes associated with raisins regardless of their source, and are capable of producing enzymes and toxins and established themselves. Toxigenic fungi have adverse effects on man and animals health, mycotoxins produced aflatoxins other fungi differ from each other. Aflatoxins are produced by noted fungi and originally recognized to be produced by *Aspergillus flavus*, and hence their name Aflatoxin, but now it is known to be produced by other species of *Aspergillus* consuming raisins associated with fungi leading to food poisoning and hepatic disorders. Proper method of processing, dehydration, use of resistant variety may reduce fungal contamination.

Keywords: Raisins, Aflatoxin, *Aspergillus*, Mycotoxins, TLC, Hepatic disorder

Introduction:

Raisins are dried forms of grapes (*Vitis vinifera* L). Grape is one of the important crops next to Citrus and is grown as cash crop and thus gaining importance in Indian Horticulture. Grape is among the oldest plant on this planet (Shanmugavelu, 2003) and is possibly as old as mankind. Grape is grown in three distinct agro climatic zones in India, mainly in the states of Karnataka, Andhra Pradesh, Tamil Nadu, Maharashtra, Rajasthan, Haryana, Punjab, and some parts of Uttar Pradesh. (Anonymous. 1984:)

Grapes belong to the Vitaceae family, a climbing vine. The total area covered under grapes cultivation in India is about 12,050 hectares with an annual production of 20,37,020 tones (Shanmugavelu, 2003). The Northern Karnataka accounts for 50% of the total area under grape production. It is estimated that (34,000 hectares), present India's production is about 6 lakh tones from an area under cultivation of 60,000 hectares. Karnataka is in second position for grape production in the country. In the recent times



grape has emerged an important fruit item of export from India .It is exported to countries of Europe, Africa, America and UAE and other various countries of the World (Anonymous, 1984: Belli and et al 2004:).

The most common varieties Viz .Thomson seedless , Tas-A-Ganesh ,Arab –E-Shahii and Sonaka are being grown , however the area under seedless varieties are more compare to other type.Grape is also marketed through organizations and by cultivar in its fresh form. Raisin is second most important product of grape .Most raisins produced is from varieties such as Thomson seedless, Black Corinth and Fiesta. Raisins are rich in carbohydrates, Protein, Phosphorus, Calcium, Iron, nicotinic acid Vitamin, A, C, and B12, Minerals and fiber. Raisins are widely used by many people throughout the world and are used in various food items as it adds flavor and nutrition.

Raisins:

Raisins are processed dry fruit and are the most important product of grapes. The term “raisins” is derived from French literature meaning ‘ driedgrapes’.Most of good quality grapes are used for the production of raisins. Different types of raisins can be recognized based on their method of production. In the present investigation the toxigenic fungal flora of raisin has been studied and for which viticulture fields were selected from Bijapur district.During the period from Jan -2017-Dec-2017.

Generally grapes selected for raisins production have surface dry, non-oily, non sticky and they do not cake in storage. Bunches of berries are carefully collected in trays at the time of their maturity. Meanwhile a shed prepared nearby the vine yard for the processing the raisins.

During the process from

grapes to raisins fungi and bacterial contamination generally occurs in fields and storage are colonized easily. The fungi including *Aspergillus niger*, *A.flavus* , *A. ochraceous* and species of *Mucor*, *Fusarium* , *Rhizopus*, *Penicillium*, Yeast etc., are common and Bacteria like *Bacillus* and *Cocci* type are predominant.(Battilani.et al 2003:)

Mycotoxins:

The term mycotoxin was first used in 1960s, to explain the toxin associated with contaminated pea nuts. This mycotoxin was later identified as *Aspergillus flavus*, toxin aflatoxin B1, and are natural product produced by fungi. Mycotoxins are metabolic intermediates, most mycotoxin are produced by fungi viz., species of *Aspergillus*, *Penicillium*, and *Fusarium* .The source of fungi is mainly fields (Ahmed and Probenbrock. 2015.: Bannet and Klich. 2003: Patten. 1981). The fungi may produce different mycotoxins by several types of fungus. The mycotoxigenic potential depends on species and strains of fungus, source, and environmental factors specially temperature and humidity.



Materials and Methods:

Aflatoxins consists of a group of chemically and structurally similar secondary metabolites and highly oxygenated heterocyclic dihydro difuranomites found to a substitute Coumarin molecule and could be separated chromatographically into distinct compounds as B1 (Blue) and G1 (Green). The molecular formula of *Aflatoxin* type B1 is $C_{17}H_{12}O_6$ and G1 is $C_{17}H_{12}O_7$. The derivatives of these are referred as B2, G2, M1 and M2 respectively, after their ingestion which has an effects the human health. There are several methods to detect and estimation of aflatoxins, however, a simple and the most effective method of separation of aflotoxins is TLC (Thin Layer chromatography) method and is followed. The extracts of aflatoxins from culture filtrates of *Aspergillus* species were done by using the pure cultures isolated from raisins (filtrate and moist blotter method). The much concentration has been given to species of *Aspergillus*, *A.niger*, *A.flavus*, *A.ochraceous* and *A.fumigatus* in particular other than saprophytic fungi. The fungal spectra were determined using filtrate culture. The filtrate of soaked raisins collected from fields is used as inoculum on Potato Dextrose Agar medium. The standard methods were followed in preparation of medium, sterilization of glass wares, inoculation and incubation. (Tuete.J.1969) Observations were made on Fifth day after incubation. Identifications was done based on the available literature. (Alexopolous and Mims.1979; Barnett and Hunter.1972), and recorded species of *Aspergillus* are more dominant. These cultures are used in estimation of mycotoxins from raisins.

From pure cultures of *Aspergillus*, 50 ml of cell free culture filtrate was extracted with double the volume of chloroform in a separating funnel. The chloroform extracts were collected and concentration to dryness by heating in a hot water bath. Then the residue was dissolved in 5 ml of chloroform (culture extract), from which 0.1 ml was loaded on TLC plates for chromatographic separation of aflatoxins.

Chromatographic separation of Aflatoxins:

Preparation of Thin Layer Chromatography (TLC) Plates.

About 60g of silica gel was placed in a Stoppard flask containing 100 ml of sterilized distilled water. The contents of the flask were shaken vigorously for one minute and poured into an applicator. 20x20 mm size glass plates were immediately coated with a layer of slurry on a one side (0.25 mm thick). The coated plates were kept in dust free atmosphere until the gel gets settled and then they were warmed in a hot air oven at about 110°C for 1 hour for activation. After cooling the plates were kept under dust free chamber.

In sub-dued light 0.1 ml (100 ml) standard aflotoxins solution were spotted on the TLC plates from to higher concentrations (standard aflatoxns were brought from the private diagnostic centre, Hyderabad) 0.1 or 0.5 ml (50 to 100 µl) of sample extracted aflotoxin



solution and with this 0.1 ml of culture filtrate solution were spotted separately on TLC plated coated with silica gel with the help of micro pipette. Such prepared TLC plates were kept in acetone: chloroform (10:90v/v) solvent for 20 min.

Results and Discussions:

About 14 cm separation was found to be enough to separate Aflatoxin from the sample. The TLC plates were observed under UV light for fluorescence after drying and their ratio front (Rf) values were recorded, TLC plates were separately observed and ratio from values are measured accurately. The Rf values of sample-1 (*A. flavus*) give 12.8 cm, sample-2 (*A. niger*) 11.8 cm sample-3 (*A. fumigatus*) 11.6 cm. The standard aflatoxin given 13 cm. the length of samples. The standard solution was taken from the point of loading on the TLC plate. However there are still standard methods available to determine the mycotoxins from different substrates, TLC method was employed according to our limitations in the present study (Plate.1)

Aflatoxins are secondary metabolites, which are injurious to human health. Many workers in India and abroad were worked on aflatoxin production from agricultural field to storage conditions in different parts of the country. Aflatoxin of *A. flavus* are known to cause Cancer (Rati and Ramalingum. 1979) which is found in Turkey fowls was resulted due to consumption of aflatoxin contaminated feeds and the disease symptoms included.

- i) Rapid deterioration in the condition of birds
- ii) Subcutaneous hemorrhages leading to death.

The liver of dead birds were pale, fatty and showing extensive necrosis and biliary proliferations, other than these symptoms aflatoxin affected kidney, adrenal glands, lungs, skin, etc. Aflatoxin B1 is known to cause mutagenicity through chromosomal aberration and DNA breakage in plants and animal cells (Tournars and Katsoundas, 2005; Sage et al., 2004).

Studies at National Institute of Nutrition, Hyderabad have reported toxic effects of aflatoxin in monkey, shows the fatty liver and death. A study was undertaken by the CFTRI, Mysore, indicated that there is a relationship between aflatoxin content of food grains (rice) and liver enlargements in children of rural community (Battilani et al 2003). A disease is prevalent exclusively in India, the children who accidentally consumed aflatoxin contaminated ground nut developed hepatic lesions and some time leads to liver cancer. The seasonal occurrences of fungal spectra were determined. The different fungal species like *Aspergillus*, *Cladosporium*, *Rhizopus*, *Alternaria*, *Trichoderma*, *Penicilium*, *Curvularia*, *Yeast* etc., are common during throughout the year. However their concentration is more during rainy seasons followed by winter and summer season. During summer *Aspergillus niger* and *A. flavus* are dominant species (Table-2)



Conclusion:

Mycotoxins of Raisins have more effective on possible health complications in man than that to Indian childhood cirrhosis (ICC). A disease prevalent in India children who consumed aflatoxin contaminated ground nuts, and raisins, developed hepatic disorder and may it leads to liver cirrhosis. The seasonal occurrence of fungal pathogens were determined and different fungal species viz., *Aspergillus*, *Cladosporium*, Yeast, *Penicillium*, *Rhizopus*, are common during throughout the year. (Jain 1997: Kallurmath and Rajsab. 2000: Krishnamoorthy and Vithal.1984) However fungal concentrations are more during rainy season followed by winter and summer season. Amongst the isolated fungi *A.flavus*, *A.niger*, *Penicillium*, and yeast (*Saccharomysisspp*) are more dominant and are easily contaminates the raisins, (John and Hocking. 1985.:Duggar. 2005: Johanson and et al 1959) if they are consumed as a raw, associate fungi causes effects on human health like food poisoning, hepatic impaired, also reported in WHO in its case study.

The raisins from field or market have no doubt that they are associated with aflatoxin producing strains, poor dehydrated and low graded raisins have much contributed more concentration of fungal flora and are responsible for producing mycotoxin specially aflatoxin. To minimize the disease incidence, the raisins should be dehydrated under critical point of water potential and should have 15% moisture. Care to be taken to select good quality, properly dehydrated, graded raisins with disease free raisins for the routine use, which returns greater value to grape grower.

Acknowledgement

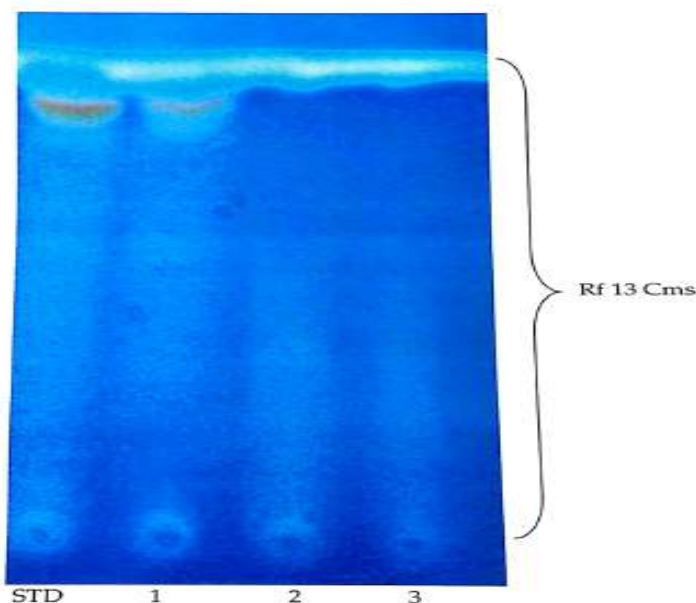
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Plate – 1 : TLC plate of Aflatoxin





**Table -01. Fungal pathogens isolated from raisins collected b in Bijapur
(Cultured on PDA medium, with standard procedure)**

SL No	Name of Fugal Pathogens	Summer	Rainy	Winter
01	<i>Aspergillus Niger.</i>	+++	+++	+++
02	<i>Aspergillus flavus.</i>	+++	++	+++
03	<i>Cladosporium sps.</i>	+	+++	++
04	<i>Rhizopus sps.</i>	++	+++	++
05	<i>Alternaria sps.</i>	++	+++	++
06	<i>Trichoderma sps.</i>	+	+++	++
07	<i>Penicillium sps.</i>	+	+++	+
08	<i>Curvulariasps.</i>	+	+++	++
09	<i>Saccharomyces sps.</i>	++	+++	++
10	<i>Fusarium sps.</i>	++	+++	++

Indications: + ; 40% incident, ++ ;60 incidents , +++; 90% incident

Table -2 .Fungal pathogens and their sources of Mycotoxins

SL NO	Name of fungi	Mycotoxins	Food	Toxicity
01	<i>Aspergillus flavus.</i>	Aflatoxins	Ground nut Raisin Been Maize	Hepatotoxic and Carcinogenic
02	<i>Aspergillus sps.</i>	Ochrotoxins	Maize.wheat ground nut	Hepatocarcinogenic and gastric irritation
03	<i>Penicillium sps.</i>	Potulins	Processed fruits	Neurotoxin
04	<i>Fusarium sps.</i>	Trichothecenes	Many Grains	Skin disease and affect the protein synthesis
05	<i>Mucor and Rhizopus sps</i>	-	Processed Food	Allergic disorders



ANALYSIS OF EDUCATIONAL INSTITUTION QUALITY GROWTH RATE IN ACADEMICS

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ABSTRACT:

In last few years several educational institutes are started and number of different courses also increased while many of them are in self finance mode. For smooth running of academic sessions it is important to have good student's strength. Students admit into the institutions based on quality of institutions. So, it is important to improve the quality for every educational institution, one of the factors to measure the positive growth rate of institution is improvement in the admitted student's growth rate with respect to academics. This paper proposes the use of data analysis techniques to analyse the admitted student's quality growth rate in educational institution. The results of analysis gives clear idea about whether a particular educational institution gaining the positive growth rate or negative growth rate in the consequent years.

Keywords :: Academic Performance, Clustering, Data Analysis, K-Means Algorithm

INTRODUCTION

Nowadays everywhere educational institutions are growing in large numbers and most of the educational institutions are self-financed, for smooth running of the institutions good number of admissions are required. Due to the sudden rise of such institutions student admission system has been affected. For the sustainability of the educational institution good quality students with respect to academics need to admit. To get admitted the good quality students into an educational institution, every educational institution need to maintain the quality. To decide particular institution is a quality institution or not we need to consider many factors. In this paper basically to analyze the quality of an educational institution we considered a single aspect that is weather an individual educational institution is recording a positive growth rate or negative growth rage in the continuous years.

To decide whether an educational institution recorded a positive growth rate or not in the current academic compared to the previous academic year need to consider many factors like

- ➔ Quality of the students admitted with respect to academics.
- ➔ Number of Placements provided and average basic pay
- ➔ Other participations in non-academics.

As we listed above there may be many number of factors effects to decide whether an educational institution recorded a positive growth rate or not in continuous two academic years.

In this paper to analyze the growth rate of educational institution we considered the one of the main factor that is admitted student's quality with respect to academics. To analyze the quality of the admitted students here we mainly considered two factors.

- Previous educational academics record

- Common Entrance Test(CET) Ranks

To analyze the previous educational academics record and Common Entrance Test (CET) Ranks we used general statics methods and the K-Mean Clustering algorithm.

METHODOLOGY

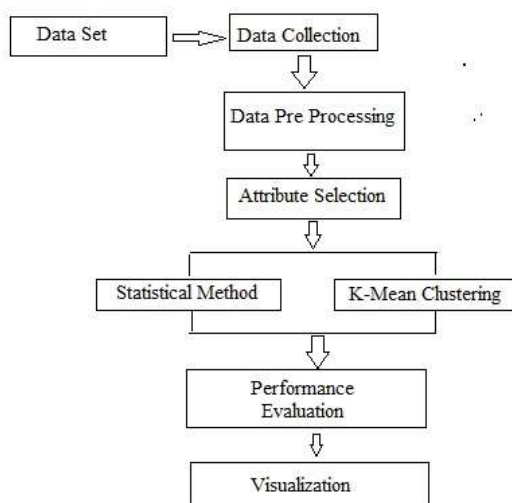


Fig 1. Architecture Diagram

We are considered two aspects to analyze the quality of admitted student's i.e. 1). Previous educational academics record. 2). Common Entrance Test (CET) Ranks. For this analysis the dataset we collected from a local private educational institution, which is of the admission details of the previous four academic years(i.e.2015-16,2016-17,2017-18,2018-19).

Analysis of the aspects educational academics and CET ranks are with two methods i.e. 1. General Statistical Methods. 2. K-Mean Clustering Algorithm.

General Statistical Method:

General statistical method applied for both the aspects, academic analysis and CET ranks analysis, for the academics analysis here we considered the previous qualified

education cumulative grade point average (CGPA) before admitted into the educational institution. For analyzing the total institution admission quality here we considered the trimmed mean of the all the admitted students.

In order to smooth the results and to get more realistic results trimmed mean is used. Trimmed mean is a method of averaging the values that removes a small selected percentage of small values and large values before calculating the mean values. This trimmed means helps in removing the influence of outliers data values that may affect the traditional mean. For the analysis of the CET ranks median values gives the more accurate results than the mean values.

K-Mean Clustering:

K-means is a typical clustering algorithm in data mining and which is widely used for clustering large set of datas. In 1967, MacQueen firstly proposed the k-means algorithm, it was one of the most simple, non-supervised learning algorithms, which was applied to solve the problem of the well-known cluster. It is a partitioning clustering algorithm, this method is to classify the given date objects into k different clusters through the iterative, converging to a local minimum. So the results of generated clusters are compact and independent. The algorithm consists of two separate phases. The first phase selects k centers randomly, where the value k is fixed in advance. The next phase is to take each data object to the nearest center. Euclidean distance is generally considered to determine the distance between each data object and the cluster centers. When all the data objects are included in some clusters, the first step is completed and an early grouping is done. Recalculating the average of the early formed clusters. This iterative process continues repeatedly until the criterion function becomes the minimum.

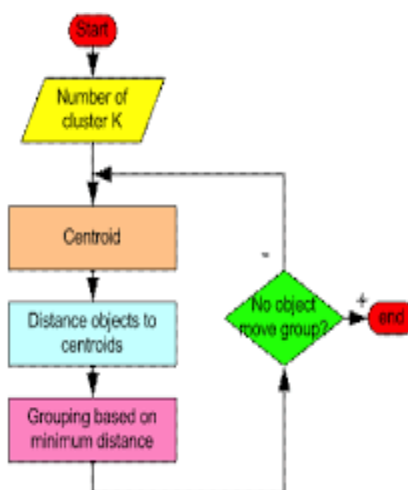


Fig 2.Working flow of K-means clustering model

RESULTS AND DISCUSSION

→ Statistical Method For Analysis of Previous Educational Academics Record Department wise

Firstly we tried to analyze the previous educational academic records of the admitted students, for this analysis general statistical methods are used. Before applying general statistical method to the data variable the main problem is data uncertainty.

The data uncertainty here we have is for some of the students who studied in local educational board results are in the form of percentage like some 67%, and for some students who studied in the national board like Central Board of Secondary Education (CBSE) results are in the form of CGPA like some 6.7. Here we need to convert this data variable as a single format. To this data uncertainty all the percentages are converted as CGPA. After removing the data uncertainty department wise applied the trimmed mean for the data variable CGPA. Here we considered two departments from the institution for the analysis i.e. Computer Science and Engineering (CSE) Electronics and Communication Engineering (ECE) and considered four continuous academic years' data, academic years are 2015-16, 2016-17, 2017-18 and 2018-19.

After applying trimmed mean, department wise mean values are as shown in the Table 1. In the academic year 2015-16 mean values of both the departments CSE and ECE are respectively 8.30, 8.49. From the Table 1 it is observed that department CSE recorded a negative growth rate from the academic year 2016-17 to 2017-18, similarly department ECE recorded a negative growth rate from the academic year 2015-16 to 2016-17. From the below Table 1 it is clear that even though in the starting academic year (2015-16) ECE has greater mean values in the last academic year (2018-19) CSE recorded greater mean value than ECE, from this analysis we can conclude as the department of CSE has good positive growth rate than ECE in the last four academic years. Finally in both the departments recorded a positive growth rate from the academic year 2015-16 to 2018-19 and department CSE trimmed mean value changes from 8.30 to 8.94, department ECE trimmed mean value changes from 8.49 to 8.75 mean differences of department CSE and ECE are 0.64 and 0.26 comparatively department CSE recorded double growth rate compared to ECE. Visual representation of the trimmed mean values of both the departments is as shown in the below Fig 3 bar graph.

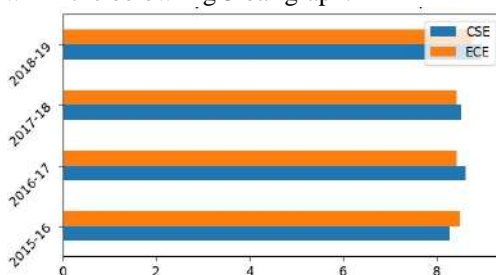


Fig 3. Admission Academics Quality growth rate in different Departments.

	2015-	2016-	2017-	2018-19
CSE	8.30	8.62	8.52	8.94
ECE	8.49	8.41	8.47	8.75

Table 1. Admission Academics Quality growth rate in different Departments.

➔ Statistical Method for Analysis of Common Entrance Test Ranks Department wise.

In the analysis of department wise Common Entrance Test (CET) ranks, the main problem is null values. These null data values here we are getting because of different admissions process, in general admission process into an educational institution is of two types first one is through CET ranks, fills seventy percentage of seats and second method is through previous qualification merit base, fills remaining thirty percentage. Some of the students filled by second method may not have CET rank because of that it creates a null values on the place of CET rank for that particular student. To avoid this null data values problem all the null values are replaced with the maximum range value of CET ranks in that particular year. In the general statistical method median values are used to analyze the CET ranks. Department wise median CET values of four (2015-16, 2016-17, 2017-18, 2018-19) academic years are as shown in the table 2.

From the Table 2 the median CET rank of the department CSE in the academic year 2015-16 is 60052 and in the academic year 2018-19 is 52868, similarly department of ECE median CET ranks in the academic year 2015-16 is 55598 and in the academic year 2018-19 is 62508. From these values department of CSE recorded a positive growth rate in last four academic years as median CET ranks are decreased and department of ECE recorded a negative growth rate as CET ranks are increasing. Visual representation of the above analysis is as show in the Fig 4 bar chat.

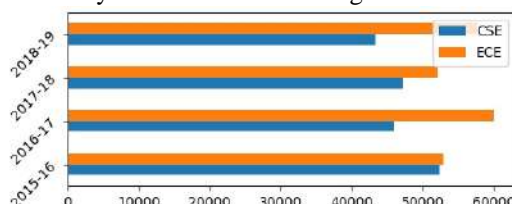


Fig 4. CET Ranks Quality growth rate in different Departments.

	2015-	2016-	2017-	2018-19
CSE	60052	49506	53082	52868
ECE	55598	63656	62436	62508

Table 2. CET Ranks Quality growth rate in different Departments.

→ Statistical Method For Analysis of overall Institution Quality Growth Rate

Over all institutional statistical method analysis is as shown in the Table 4 for CGPA and Table 3 is for CET ranks and visual representation of CGPA is as show in Fig 5, CET ranks is as shown in Fig 6. Trimmed mean values of the overall institution for four academic years 2015-16, 2016-17, 2017-18 and 2018-19 are respectively 8.35, 8.52, 8.50, 8.85, except in the academic years 2016-17 to 2017-18 in all the continuous years recorded a positive growth rate and when we observe past four academic years it recorded overall positive growth rate. When we observed mean CET ranks data in the academic year 2015-16 is 57825 and in the academic year 2018-19 is 57688, there is very less decrement in the mean CET ranks, that means it recorded a very minute growth rate.

Finally From the overall analysis of CGPA and CET ranks based on general statistical method, there may be a negative growth rate in the intermediate academic years but it recorded a positive growth rate from starting academic year to ending academic year which we considered.

Years	2015-	2016-	2017-	2018-
Ranks	57825	56581	57759	57688

Table 3. CET Ranks Quality growth rate in Institution

Year	2015-	2016-	2017-	2018-
CGPA	8.35	8.52	8.50	8.85

Table 4. Admission Academics Quality growth rate of Institution

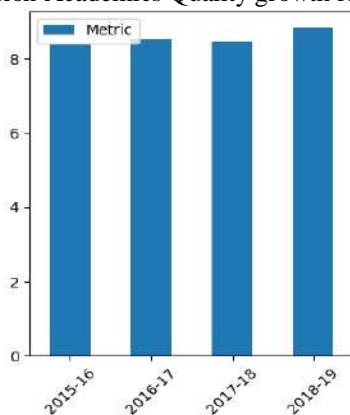


Fig 5. Admission Academics Quality growth rate of Institution

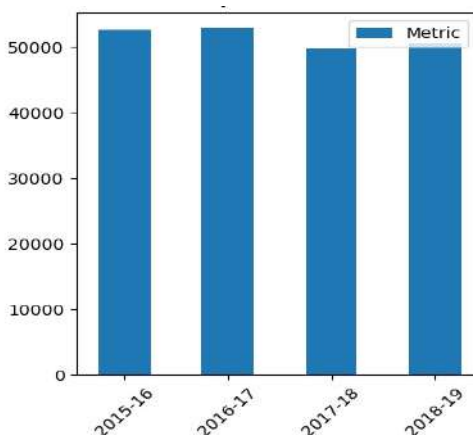


Fig 6. CET Ranks Quality growth rate in Institution.

K-Mean Cluster Analysis

1). Department Wise

CSE				
	2015-	2016-	2017-	2018-
C1	21.05	25.24	23.95	25.21
C2	31.57	17.47	27.08	25.21
C3	20	29.12	11.45	14.78
C4	27.36	28.15	37.50	34.78

Table 5.CSE Department Cluster Analysis

In the second part of quality analysis K-Mean Clustering algorithm is applied. Clustered plots of the department CSE and ECE for the four considered academic years are shown in Fig 7 and Fig 9 respectively and here applied K values as 4 that means total four clusters are formed, four clusters are named as C1, C2, C3 and C4.

From the analysis of these four clusters we can observe that C4 represents the students with maximum CET ranks, as we considered maximum CET rank to replace null data values belongs to those who are filled with previous education academic performance, indirectly we can conclude that C4 represents the students those who are admitted without CET, similarly we can conclude that C1 represents the group of students with very good ranks and C2 and C3 represents group of students with good and average

ranks respectively. Table 5 represents the different clusters values percentage of the CSE department in the four considered academic years from this table values it is clear that from academic year 2015-16 to 2018-19 cluster C1 and C4 values are increased and C2 and C3 values are decreased, that means seats filled with very good ranks and seats filled with non CET students increased and students with good and average CET ranks decreased.

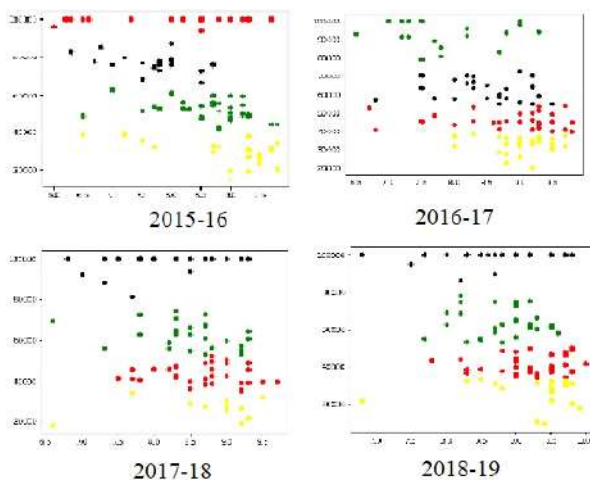


Fig 7.CSE Department Cluster Analysis

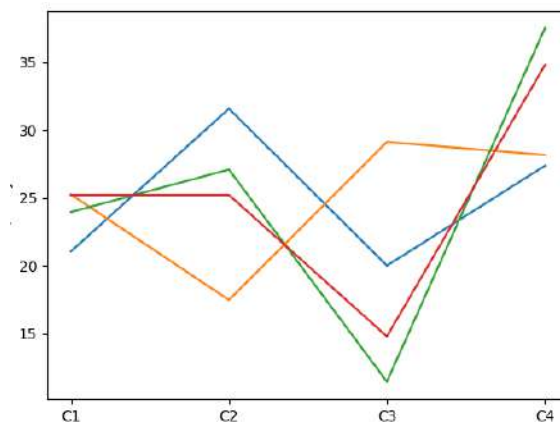


Fig 8.CSE Department Cluster Analysis

Table 6 represents the different clusters values percentage of the ECE department in the four considered academic years from this table values it is clear that from academic year 2015-16 to 2018-19 cluster C1 and C2 values are increased and C3 and C4 values are

decreased, that means seats filled with very good ranks and seats filled with good ranks increased and students filled with average CET ranks and non CET Students decreased.

ECE				
	2015-	2016-	2017-	2018-
C1	18.18	15.47	25.74	34.28
C2	23.35	39.28	25.74	25.71
C3	37.66	29.76	6.93	20.95
C4	20.77	15.47	41.58	19.04

Table 6.ECE Department Cluster Analysis

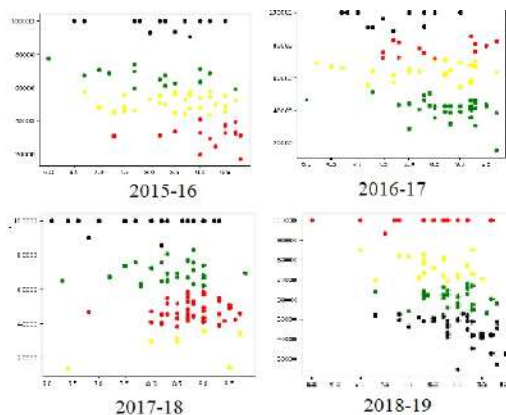


Fig 9.ECE Department Cluster Analysis

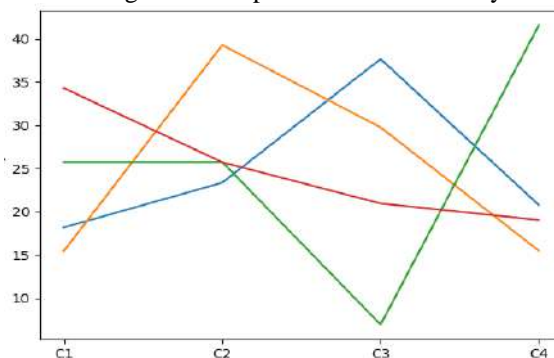


Fig 10.ECE Department Cluster Analysis

2). Complete Institution:

K-Mean cluster based analysis of overall educational institution is as shown in the Fig 11 clustered plot and percentage values of different clusters are as shown in Table 7

from these clustered percentage values we can observe that clusters C1 and C3 are increased and clusters C2 and C4 are decreased, that means students with very good ranks and average ranks increased and students with good ranks and non CET admissions decreased in the total institution. Cluster C1 increases 6.36% and cluster C3 increases 4.7% and cluster C2 decreases 9.35% and cluster C4 decreases 1.69%. As cluster C1 represents students with very good CET ranks, increment in the cluster C1 (6.36%) gives a good sign for institution growth rate but decrement in cluster C2 (9.35%) as it represents students with good CET ranks gives negative sign for institution growth rate, for the sustainability of institution need to focus on increasing cluster C2 percentage and decreasing cluster C3 percentage. Visual representation of the overall institution cluster percentage values is as shown in Fig 12 plot.

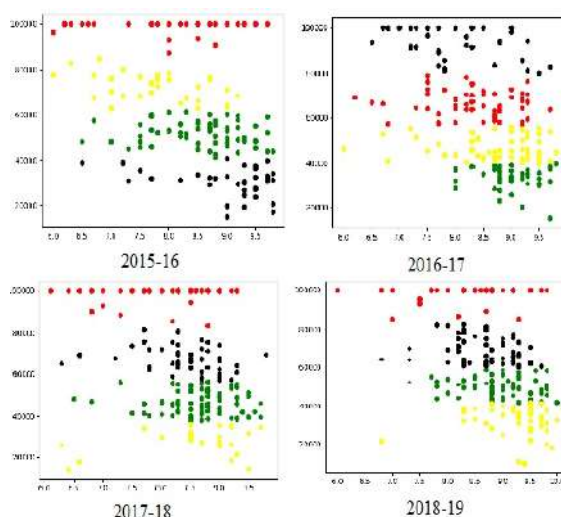


Fig 11. Institution Cluster Analysis

INSTIUTION				
	2015-	2016-	2017-	2018-
C1	20.93	19.78	24.36	27.27
C2	36.62	21.92	40.60	27.27
C3	18.02	30.48	10.65	22.72
C4	24.41	27.80	24.36	22.72

Table 7. Institution Cluster Analysis

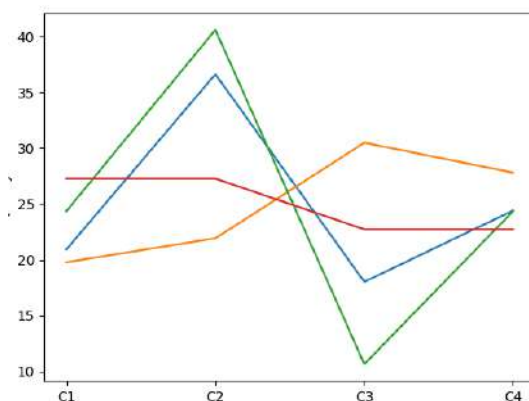


Fig 12. Institution Cluster Analysis

CONCLUSION

As number of educational institutions are growing rapidly for the sustainability of the institutions it is necessary for every institution improving the quality year to year in various aspects, it may be academic or non-academic. For measuring the quality growth rate in different aspects it requires different metrics to measure the quality growth rate. In this paper we proposed some quality metrics analysis based on single aspect admitted students academic performance, in the future we can enhance this analysis based on different aspects which effects the quality growth rate of educational institutions.

ACKNOWLEDGMENT

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EVOLUTION OF DRAVIDIAN TEMPLE ARCHITECTURE IN SOUTH INDIA

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South Indian temple architecture, also called Dravidian Style, architecture invariably employed for Hindu temples in modern Tamil Nadu from the 7th to the 18th century, characterized by its pyramidal, or kuṭina-type, tower. Variant forms are found in Karnataka (formerly Mysore) and Andhra Pradesh states. The South Indian temple consists essentially of a square-chambered sanctuary topped by a superstructure, tower, or spire and an attached pillared porch or hall (maṇḍapa, or maṇṭapam), enclosed by a peristyle of cells within a rectangular court. The external walls of the temple are segmented by pilasters and carry niches housing sculpture. The superstructure or tower above the sanctuary is of the kuṭina type and consists of an arrangement of gradually receding stories in a pyramidal shape. Each story is delineated by a parapet of miniature shrines, square at the corners and rectangular with barrel-vault roofs at the centre. The tower is topped by a dome-shaped cupola and a crowning pot and finial. The origin and evolution of temple architecture has been covered in and around seven regional kingdoms from and

The present study is dealing with temple structure and evolution of structural changes from the beginning. The origin of temple structure has not framed in given period, it's a huge prehistorical continuity. If we start from cave temple its involve cultural, social and religious beliefs reflects.

Keywords: South India, Dravidian, Temple, Structural

The origins of the Dravidian style can be observed in the Gupta period. The earliest extant examples of the developed style are the 7th-century rock-cut shrines at Mahabalipuram and a developed structural temple, the Shore Temple (c. 700), at the same site. The South Indian style is most fully realized in the splendid Br̥hadisvara temple at Thanjavur, built about 1003–10 by Rajaraja the Great, and the great temple at Gangaikōṇḍaḷapuram, built about 1025 by his son Rajendra Cola. Subsequently, the style became increasingly elaborate—the complex of temple buildings enclosed by the court became larger, and a number of successive enclosures, each with its own gateway (Gopura, **Plate – 1**), were added. By the Vijayanagar period (1336–1565) the gopuras had increased in size so that they dominated the much smaller temples inside the enclosures.

Dravidian or Southern style of architecture is Sharply distinguished from the Northern by the fact that its tower or spire is straight-fined and pyramidal in form.



divided into stories by horizontal bands, and sure mounted by either a barrel-roof or a dome derived directly from the ancient wooden architecture. The central shrine originally stood alone. but in later times it Was enclosed in an immense walled court, usually including numerous subsidiary temples, tanks, and sculptured halls or cloisters, The quadrangle is entered by lofty gateways (gopuram), which in later temples overtop the central shrine; and so Spoil the effect Of the architectural composition. But the great temple of Tanjore, its smaller replica Gangaikondapuram. and some of the earlier temples at Conjeeveram (Kanchi) are designed on correct principles, with the central mass dominating the composition. Sometimes there are several quadrangles, one within the other.

The history of the style begins in the seventh century with the Dharmaraja Ratha, the earliest of the rock-cut rathas at Marnallapuram, thirty-five miles south of Madras, commonly known as the Seven Pagodas, which were excavated in the reigns of the Pallava kings of the South during the seventh century gives an Illustration or the Ganesa Ratha (c. A.D. 680), with a ridge roof. Some or the others are crowned by domes.

The next stage in the development of the style is marked by the structural temples at Conjeeveram (Kanchi, the Pallava Capital (Plate - 8), Which became known only a few years ago, and have been described in detail by Mr. A. Rea. Six temples of the Pallava period exist in or close to the town. Inscriptions prove that the two principal edifices. the Kailasanatha and the Vaikunrha Perumal, were erected by the sons of King Rajasimha, great-grandson of Narasimha-varman (A 3). The Muktesvara temple of about the same date, say A.D. 700 to A.D. 750, with a domical roof, is a typical example (**Plate-2**). Further development was affected under the patronage of the powerful Chota kings. Rajaraja and his son Rajendra (985 to 1035). the builders respectively of the Great Temple at Tanjore and its fellow at Gangaikondapuram in the Trichinopoly District.

At this period the shrine was designed on huge proportions. towering above the Subsidiary gateways and pavilions. The gigantic South-Indian temples, with vast quadrangular enclosures and lofty gopuramsovertopping the Central shrine. extend in date from the Sixteenth century to the present day. Fergusson speaks of 'up- wards or thirty great Dravidian temples, or groups or temples, any one of which must have cost as much to build as an English cathedral —some a great deal more'. Several such edifices, at Ramesvaram. Tinnevely, Madura, and other places, are described. The buildings at Madura are of special interest because they can be dated closely, having been erected by Tirumal Naik, a local chieftain, who reigned from 1623 to 1659, gives a general view of the Madura temple a typical example. The corridors or cloisters connected with such temples are of wonderfully large dimensions — those of Ramesvaram. for instance, aggregating nearly feet in length —and are filled with weird, fantastic sculpture. Perhaps the most marvellous of all Dravidian temples is the well-known rock-cut Kailasa temple at Ellora, excavated from a hill-side by a Rashtrakuta king in the eighth



century. In style the Kailasa is a development of the Pallava shrines. but its sculpture is finer than anything produced in the South. At Badami and Pattadakal in the Bijapur District are other shrines or the same type; these are all structural.

The immense ruins of the City of Vijayanagar (**Plate-3**) dating from the fifteenth and sixteenth centuries, surrounding Hampi village in the Bellary District, Madras, present numerous examples of a special local variety of Dravidian architecture. The royal palaces and apartments here show signs of Islamic influence (**Plate – 4**). The temples are purely southern Indian in Style with high gateways and many-pillared pavilions. The style intermediate in both locality and character between the Northern and Southern styles is that which received from Fergusson the inappropriate name of Chalukyan. It is true that the Chalukya Clan supplied one of the leading royal families of the from the middle of the sixth to the middle of the eighth century and again from A.D. 973 to the Muhammadan conquest, but the typical examples of the style are the work of Hoysala, not Chalukya kings; and, if a dynastic designation be given, the style should be named Hoysala rather than Chalukya.

Territorial designations are, however, preferable to dynastic, and if it be practicable to modify Fergusson established nomenclature, the Style may be better described either as that of the Deccan or that of Mysore. in which province the finest specimens occur, at Halebid, the ancient capital. Belur, and many other localities less known to fame.

This style, whatever name be bestowed upon it, is characterized by a richly carved base or plinth, supporting the temple, which is polygonal, star-shaped in plan. and roofed by a low pyramidal tower, surmounted by a vase-like ornament. The temple of Vishnu in the village of Nuggehalli. in the Tiplur Taluk Mysore, as Shown in **Plate – 5**) from an unpublished photograph. gives a good notion of this extraordinarily ornate style. The stellate plan appears clearly in the View of the Somnathpur temple (Plate 120A). The Bclur temple is known to have been erected in A.D. 1117 by a Hoysala king named Bettiga, converted from Jainism to faith in Vishnu. The more magnificent temples at Halebid, the Hoysalesvara and Kedaresvara, are somewhat later in date, and necessarily must have been under construction for many years. Not long ago the disintegrating action of the roots of a banyan tree unfortunately reduced the Kedaresvara to a heap or ruins showing a small portion of the sculptures on the Hoysalesvara temple, will give the reader a faint notion of one of the most marvellous exhibitions of human labour to be found even in the patient East'. 3

The architectural frame Work, it will be observed, is used mainly as a background for the display of an infinity of superb decoration, which leaves no space uncovered and gives the eye no rest.

The Hoysalesvara and several other buildings of its class are twin temples Consisting of two distinct shrines Set side by side and joined together. The beautiful building al



Somnathpur(**Plate – 6**) is a triple temple. A special feature of interest in these Mysore temples is the record of the names of the Kanarese artists. who executed individual statues. At Belur there are twelve such signatures, and at the Hoysalesvara fourteen, all different. Eight signatures on the Somnathpur temple have been noted, among them that Of Mallitamma, who executed forty Images

Certain temples near the Tungabhadra river situated in the western part of the Bellary District, Madras, Wedged in between Mysore territory on the south and the Nizam's Dominions on the north, form the subject of an excellent monograph by Mr. Rea. entitled Chalukyan Architecture. The title is so far justified that the buildings were erected to the order of Chalukya kings in the twelfth century, But the style is a modification of the Dravidian or Southern, not of the Deccan or Mysore style called Chalukyan by Mr. Fergusson. The plans are rectangular, nor star-shaped, and the towers are distinctly Dravidian in design. The buildings, as Mr. Rea correctly observes, 'exhibit a preponderance of Dravidian forms. They might best be described as an embodiment of Chalukyan details engrafted on a Dravidian building.' Although the statues, individually regarded. are not of high merit, and present much of the grotesqueness of commonplace Hindu sculpture, the ornament, considered as a whole, is superb. It is Impossible, we are assured. to describe the exquisite finish of the greenstone or hornblende pillars, or to exaggerate the marvellous intricacy and artistic finish of the decoration in even the minutest details.

The ornament is generally completely undercut, and is sometimes attached to the solid masonry by the most slender of stalks, producing the effect of an incrustation of foliage on the wall. Both the intricate geometrical patterns of the ceilings and the foliated work covering every other part of the building exhibit the greatest possible exuberance of varied forms boldly designed and executed with consummate mastery or technical details, no chased work in gold or silver could possibly be finer and the patterns to this day are copied by goldsmiths, who take casts and moulds from them, although unable to reproduce the sharpness and finish of the originals. Opinions may differ as to the propriety of employing such jewellers work as architectural decoration, but concerning the beauty of the result and the high standard of executive skill no two opinions are possible. The annexed plan of a ceiling in the Suryanarayanawami temple at Magala (**Plate - 7**) may Suffice to give some notion of the exquisite carving characteristic of the Bellary variety of the Dravidian style, as favoured by Chalukya Kings.

The evolution of south Indian architecture style had been made different stages. The major dynasties in south India had great patterns for beautiful styles and features, in every stage some of the other feature had been added to enhance massive growth of structural changes. At the end of the discussion it concludes that the south India temples structure has great diversity in terms of adaptation of neighbouring ideas and styles.



Plate – 1; Gopuram



Plate – 2 : Muktheswara Temple



Plate – 3; Sculptured relief from Vijayanagara A & B



Plate – 4; The royal palaces and apartments here show
signs Of Islamic influence



Plate – 5; The temple of Vishnu in the village of Nuggahalli in the Tiplur Taluk Mysore



Plate – 6; The beautiful building at Somnathpur is a triple temple



Plate – 7 ; The annexed plan of a ceiling in the Survanaraswami temple at Masala

EVOLUTION OF PALLAVAN ORDER

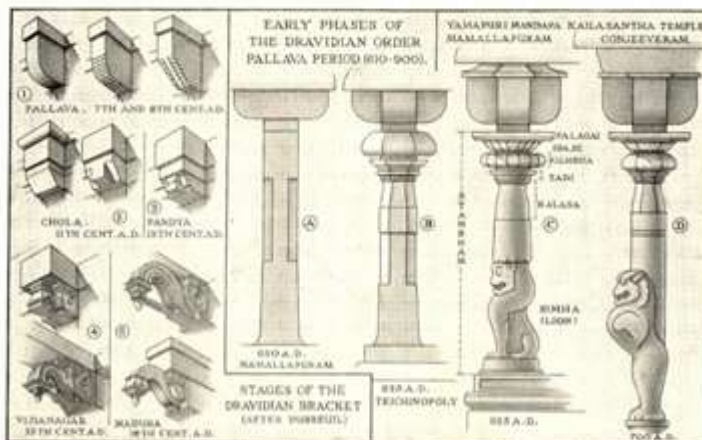


Plate – 8; Pallava Capital

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FAMILY SIZE AND ITS EFFECT ON DIET: AN ASSESSMENT OF NUTRITIONAL STATUS OF TRIBAL YOUTH TO INITIATE BEHAVIORAL CHANGE IN FOOD HABITS

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ABSTRACT

Malnutrition is a major health concern in India, especially in the tribal areas. The dietary pattern would differ from other Indian regions due to inaccessibility to food and/or the nutrients that one should consume daily. It is an untouched region in terms of nutritional status, nutritional interventions and nutritional awareness. Hence, the study aims to evaluate their existing nutritional status using dietary diversity scores, anthropometry assessment of the tribal youth and conduct counselling sessions to enforce the importance of nutrition among them. 50 participants belonging to tribal areas of Maharashtra volunteered in the study. Selection was done using purposive sampling technique. Dietary diversity was calculated using 24-hr dietary recall method and anthropometry assessment was conducted using body composition analyser, InBody120. Nutrition counselling sessions were conducted for all. The age group of the participants was 17-20 years with 20 males and 30 females. A significant positive correlation was noted between number of members living in the household and Individual Dietary Diversity Score (IDDS), ($R = 0.033$, $p = 0.323$) whereas a negative trend was observed where a decrease in dietary diversity was observed among the participants with higher education level ($R = -0.122$, $p = 0.43$). Tribal youth will shape the future for the area and targeting them will improve the nutritional status of the community as a whole.

Key words: Tribal youth, Individual Dietary Diversity Score, Nutritional status

1. INTRODUCTION

8.6 percent of the population of India belongs to the tribal.^[1] According to a recent report of UNICEF, tribal communities of India continue to be the most underprivileged groups in the country in terms of nutrition. They traditionally lead an indigenous and diverse lifestyle. The people there are highly susceptible to undernutrition which is a prevalent health problem. At a younger age, tribal children are more prone to be undernourished due to the lack of the awareness among the parents, like importance of breast feeding, proper nutritious food intake, immunization, care during sickness, clean drinking water, sanitation practices, etc. Assessment of nutritional status is very



significant as it recognizes malnutrition as a potential cause of morbidity and mortality.^[2]

As per existing dietary guidelines, dietary variety is a characteristic of healthy diets. A dietary diversity score is an index of food-variety intake that has been developed to assess the entire diet consumed. This score can be calculated for an individual or a household. Both the scores depend upon food availability and nutrient intake of various food groups which makes it an important component of nutritional outcome.

Table 1: Difference between Individual Dietary Diversity Score (IDDS) and Household Dietary Diversity Score (HDDS).^[3]

Sr. No.	Individual Dietary Diversity Score (IDDS)	Household Dietary Diversity Score (HDDS)
1.	It includes 9 food groups.	It includes 12 food groups.
2.	Individual Dietary Diversity measures the quality of one's dietary intake over a period of time.	Household Dietary Diversity measures the economical accessibility to food by a household.
3.	This includes only the individual who is answering the questionnaire. It's individual based and an independent survey.	This includes all the members living in that particular household to be surveyed on.
4.	In Individual Dietary Diversity, all the food consumed by the person ie- at home and outside, has to be considered.	It includes only the food that is cooked and consumed at home. No outside food is considered in this score.

Studies conducted on Dietary Diversity Scores reveal having association with nutritional status on young children and adolescents. A study using linear regression models to determine the association of dietary diversity and food security as well as individual calorie intake revealed a positive association between these variables. It was concluded that household diversity depends on the caloric availability.^[4] Another study conducted in West Africa concluded that Household Food Insecurity Access Scale (HFIAS) and Individual Dietary Diversity Score (IDDS) were informative indicators for urban food insecurity as well for evaluation and monitoring household dietary diversity.^[5] A study conducted on obese adults above 20 years old presented that dietary diversity scores are useful parameters for evaluating nutrient intakes in obese adults. The researchers of a study concluded that 24-hour dietary recall was a good measure for assessing the association between Individual Dietary Diversity scores, and nutritional status in adults.^[6] However, very few studies of this association have been conducted in tribal regions of India.

Tribal regions of India have a completely different dietary pattern as compared to the urban or rural areas of India. The tribal region does not have access to all the nutrients that one should consume daily. Hence a nutritional intervention is essential in these areas to eradicate malnutrition and overnutrition. It is still considered an untouched region in terms of assessment of nutritional status, conduction of nutritional



interventions and awareness. Hence keeping the statistics and current scenario of the tribal population of India in mind, this study was undertaken.

2. METHODOLOGY

The study was conducted in tribal areas of Karajgaon, Palghar district, Maharashtra. A questionnaire was developed to assess the socio-demographic and dietary habits (including 24-hr diet recall) of the participant. Questions pertaining to household demography, standard of living, dietary habits and cooking techniques were included to understand their diet. The findings were used to calculate the individual (participant) using FAO Guidelines, 2006.^[3] Based on their recall, nutrients were calculated using Indian Food Composition Table (IFCT), 2017^[7] and evaluated against RDA (Recommended Dietary Allowance). Height was evaluated using a measuring tape and InBody120 was used to measure the body composition of the participant. The result sheet was evaluated and explained to the participants. The subjects were then counselled individually on their dietary pattern, improving health status, modification of their lifestyle, awareness on prevention of diseases and maintaining a healthy nutritional status.

Then all these variables i.e.- (Individual Dietary Diversity Score, Body composition, Nutritional status) were correlated with each other to determine any significant association between them.

3. RESULTS

Socio-demographic data:

50 individuals participated in the study for determining Individual Dietary Diversity Scores. Out of which 20 were males and 30 were females. The mean age of the subjects were 17-20 years.

49% of the study population completed their secondary education and 18.4% having finished higher education as well. (Figure 1) The tribal youth did favor education with only 4.1% with complete primary education. On an average, 3 members were living in a house with 3-4 members (24% of the total participants) in a house. (Figure 2)

Anthropometric data:

Anthropometric assessment was conducted for all the participants. This included a complete body composition analysis of each participant using InBody 120 body composition analyser.

According to Body Mass Index (BMI) of the participants (Figure 3), no participant was belonging to pre-obese, obese class 1 and obese class 2 categories. 36 participants were underweight whereas only 11 participants had a normal nutritional status; 3 participants were observed to be overweight.

Greater number of boys (7.1%) were observed to be overweight as compared to girls (5.6%) falling under the same category. The maximum value of BMI was observed to be 25.5kg/m^2 and the minimum value was seen to be 13.3kg/m^2 Average BMI of the participants was found to be

$17.87\text{kg/m}^2 \pm 2.41$

Figure 4 is a graphical representation of Percent Body Fat (PBF) of all the participants. It was observed that a greater number of girls had a higher percent body fat level (36.1%) than boys (14.3%).



The assessment of Waist to Hip Ratio (WHR) conducted on all the participants showed that 92% of the participants have a normal waist to hip ratio whereas 8% have high levels of waist to hip ratio. It was also observed that greater number of girls (8.3%) had a higher waist to hip ratio value than boys of that category (7.1%). The mean waist to hip ratio value was found to be 0.78 ± 0.04 (Figure 5)

Figure 6 represents the percent of Visceral Fat Level (VFL) of all the participants. It was observed that only 1 girl had a high level of visceral fat. Rest of the girls and all the boys had normal levels of visceral fat

Skeletal muscle mass index (SMI) was calculated by dividing the limb skeletal muscle mass (kg) by the square of the height (m^2), and low muscle mass was defined as $SMI < 7.0 \text{ kg/m}^2$ in men and

$< 5.7 \text{ kg/m}^2$ in women. Only 1 girl and boy had a low skeletal muscles mass index. Rest of the participants had normal levels of skeletal muscle mass index. (Figure 7)

Dietary intake data:

Due to different RDA values for girls and boys (2500kcal/day for boys and 2200kcal/day for girls), the average nutrient intake is distributed according to their gender. Table 2 explains the average caloric and macronutrients intake of boys belonging to the age group 17-20 years per day. Intake of calories is moderate. Protein intake was lower than RDA whereas carbohydrate and total fat intake was higher than RDA.

Unlike the boys, the girls had a higher calorie intake compared to their RDA value (ie-2200kcal/day). According to Table 3, the average intake of macronutrients for all girls, carbohydrate and total fat were observed to be higher than their respective RDA values however, the average protein intake seemed to be lower than the RDA value.

Table 4 discusses the average intake of micronutrients compared with the RDA and World Health Organisation (WHO) guidelines for boys and girls respectively. [8] Poor intake of iron, calcium, zinc, vitamin A, vitamin D, and potassium was observed across all participants. Moderate intake of Vitamin C, Folic acid and magnesium was noted among boys. Poor intake of vitamin C was noted among girls however, moderate intake of folic acid and magnesium was noted. The average consumption of sodium by girls were more than the boys. High intake of sodium was noted mostly coming from high sodium containing foods like pickles, chips, fried food, biscuits, packaged snacks.

Table 5 explains the daily consumption of each food group belonging to Individual Dietary Diversity Score (IDDS) by all the participants. It was observed that all the participants consumed foods belonging to cereals, roots tubers. The second highest consumed food group was dark green leafy vegetables, foods cooked in oil, followed by pulses, milk and milk products. Only 6 participants consumed other fruits and vegetables. 12 participants consumed meat, fish and other seafood products. 14 participants consumed egg. The least consumed food group by the participants was vitamin A rich foods.

Table 6 shows the frequency of participants for their respective Individual Dietary Diversity Scores (IDDS). It was observed that the maximum number of participants had a poor score of 4 out of 9. Only 3 participants had a good score of 7 out of 9. Whereas, 7 participants had a very poor score of 3 out of 9.



Table 7 displays a significant positive correlation between number of members living in the household and Individual Dietary Diversity Score (IDDS), ($R = 0.033$, $p = 0.323$). Hence proving a big family has a positive effect on dietary diversity with increased intake of food groups in the diet.

Unlike family size, education level of the participant is reported to have negative association with the individual's dietary diversity score (Table 8). This could also stream from lack of time to cook a diverse meal due to their further education or increased focus on career. However, due to small sample size, further analysis is limited.

4. DISCUSSION

Based on the anthropometric assessment, the overall nutritional status of the participants was poor. According to the assessment of Body Mass Index, 36 participants were found to be in the underweight category and 3 fell under the overweight category. Only 11 participants had a normal Body Mass Index. The average Skeletal Muscle Mass Index (SMI) of all the participants was found to be normal except for one girl and boy who had low levels of skeletal muscle mass index (i.e., $<5.7\text{kg/m}^2$ for females and $<7.0\text{kg/m}^2$ for males). 46 participants had normal values of Waist to Hip Ratio (WHR). Only one girl had a high level of visceral fat. Rest of the girls and all the boys had normal visceral fat levels. Percent Body Fat was observed to be higher in girls than boys. This could be due to puberty as there is maximum physical growth seen during this age group of (17-20) years.

After assessing the Individual Dietary Diversity Scores, it was observed that all the participants did not have a good dietary diversity score. The minimum dietary score was seen to be 2 which indicates a very poor dietary diversity score. The maximum score was observed to be 7 which is a good dietary diversity score. The subjects who scored 7 and above had a good nutritional status as diverse foods were being consumed by them daily. Whereas the subjects who had a score of less than 7 showed a poor nutritional status as they were not consuming diverse food groups in their daily diet. Poor intake of vitamins and minerals were observed in this percentage of subjects as compared to subjects who had a good dietary diversity score. The average dietary diversity score was observed to be 4 which is an indicator of poor dietary diversity score which meant poor nutritional status. 21 participants had a dietary diversity score of 4 out of 9.

The participants need to consume more diverse food groups due to their poor nutritional status. They mainly need to consume rich sources of vitamin A, C, iron, zinc, magnesium. All the participants should especially consume vitamin D rich sources since there was no intake of it. Less amount of fatty foods and outside food should be consumed. More awareness needs to be given to people living in tribal areas. Since the average dietary score is 4 out of 9 which is a poor score.

The average dietary diversity score for individuals was 4 out of 9. Most of the participants were found to be underweight. Larger family size was found to influence their dietary diversity as an individual ($p = 0.323$). Whereas, higher education level caused a low dietary diversity score among the participants ($p = 0.30$).

No significant correlation was seen in some of the socio-demographic parameters like age and gender of the individual or their anthropometric parameters such as Visceral Fat Level (VFL), Percent Body Fat (PBF), Waist-Hip Ratio (WHR).

5. CONCLUSION:

Participants from the study were found to be well-educated with most of them completing their secondary level education. Many of them had families ranging from nuclear to joint families.

Larger family size was found to influence their dietary diversity as an individual. Whereas, higher education level caused a low dietary diversity score among the participants.

Although the participants closely met the macronutrient requirements as per RDA, they lack micronutrients such as Vitamin A, C, D, iron, magnesium, zinc and iron in their diet.

6. FIGURES AND TABLES:

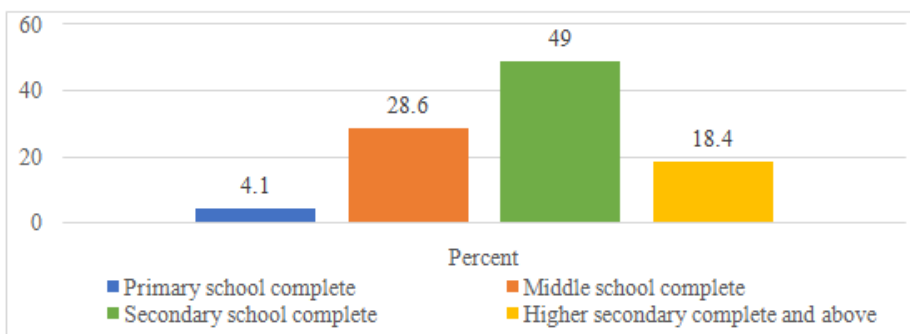


Figure 1: Education level of the subjects

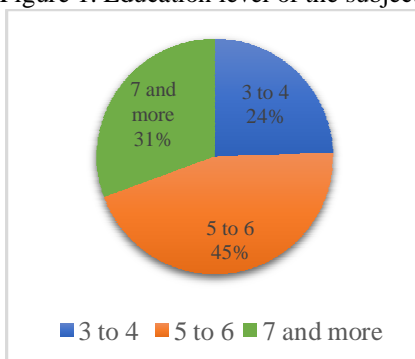


Figure 2: Number of persons living in a house

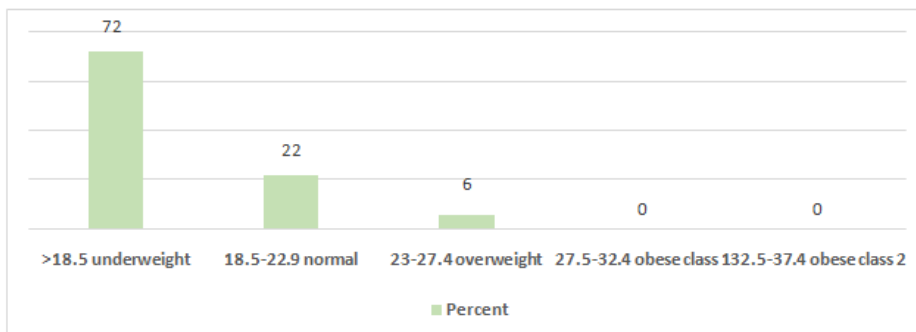


Figure 3: Body Mass Index of all the participants

Figure 4: Percent Body Fat (PBF) of all the participants

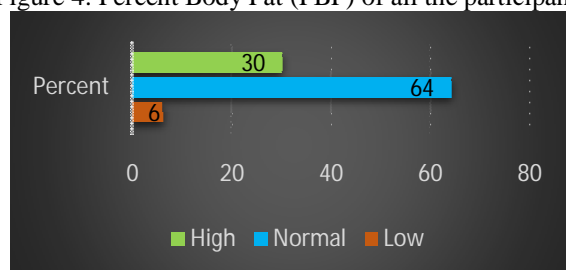


Figure 5: Waist to Hip Ratio (WHR) of all the participants

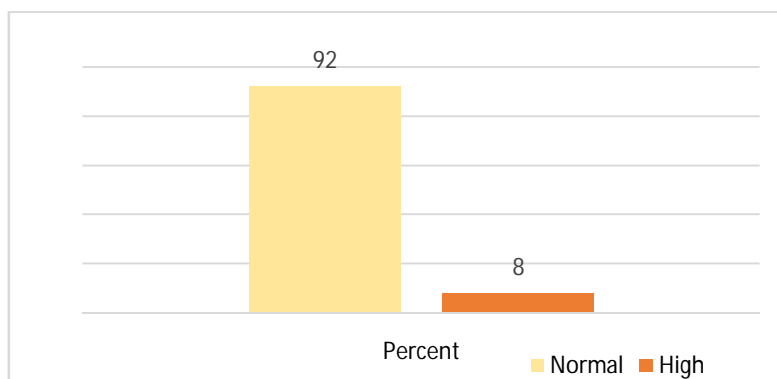


Figure 6: Visceral Fat Level (VFL) of all the participants

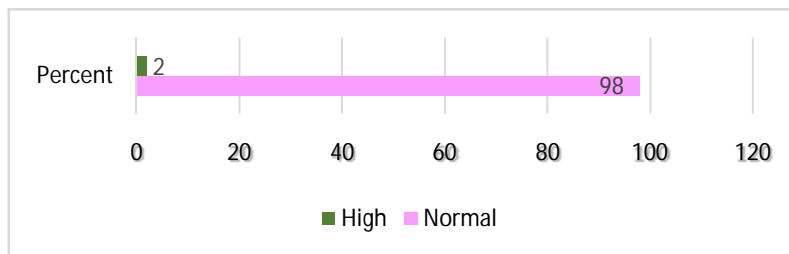


Figure 7: Skeletal Muscle Mass Index (SMI) of all the participants

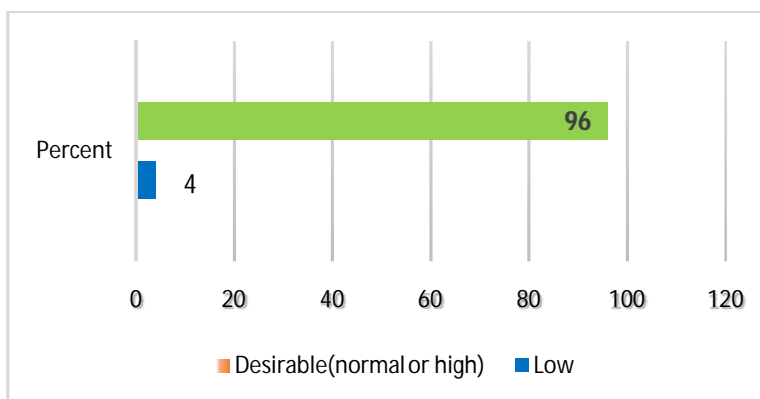


Table 2: Average caloric and macronutrient values daily consumed by boys

Nutrient	RDA	Mean Intake (N=20)	Percent Distribution of Macronutrients
Energy (kcal)	2500	2203.4	
Protein (g)	45	40.8	7%
Carbohydrate (g)	225	279.4	51%
Total Fat (g)	30	65	27%

Table 3: Average caloric and macronutrients intake of girls per day

Nutrient	RDA	Mean Intake (N=30)	Percent Distribution of Macronutrients
Energy (kcal)	2200	2326.2	
Protein (g)	44	40.0	7%
Carbohydrate (g)	225	274.1	47%
Total Fat (g)	25	45	17%



Table 4: Average micronutrient intake consumed daily by participants of age group 17-20 years

Nutrient	RDA for Male	Mean Intake per day (Male) (N=20)	RDA for Female	Mean Intake per day (Female) (N=30)
Iron (mg)	12	5.3	15	8.28
Calcium (mg)	1200	345.4	1200	349.6
Zinc (mg)	15	2.7	12	3.3
Vitamin A (mcg)	1000	765.5	1000	616.5
Vitamin D (mcg)	10	0	10	0
Vitamin C (mg)	50	27.9	60	16.6
Folic acid (mcg)	50	33.4	180	131.5
Potassium (mg)	4700	1678.4	4700	2037.3
Magnesium (mg)	195	185.5	235	139.7
Sodium (mg)	2300	3398.3	2300	4232.1

Source: Adolescent Nutrition, WHO 2006: ^[8]

Table 5: Daily consumption of various food groups by all the participants

Sr.no .	Food groups belonging to Individual Dietary Diversity	Frequency of subjects consuming each food group	Percent
1.	Grains, roots, tubers	50	100
2.	Vitamin A rich plant foods	2	4
3.	Other Fruits and vegetables	6	12
4.	Dark green leafy vegetables	50	100
5.	Meat, fish, seafood	12	24
6.	Egg	14	28
7.	Pulses	48	96
8.	Milk and milk products	46	92
9.	Foods in oil	49	98
	Total	N= 50	100

Table 6: Frequency of participants for their respective Individual Dietary Diversity Scores:

	Individual Dietary Diversity Scores (IDDS)	Frequency	Percent
	3	7	14
	4	21	42
	5	9	18
	6	10	20
	7	3	6
Total	(out of) 9	N= 50	100

The scores have been calculated based on (FAO) Food and Agriculture Organisation, (2010). Guidelines for measuring Individual and Household Dietary Diversity. ^[3]



Table 7: Correlation of number of members living in a household with Individual Dietary Diversity Score (IDDS)

No. of the members living in a household	Individual Dietary Diversity Score
Pearson Correlation	.323*
Sig. (2-tailed)	.033
N	50
*. Correlation is significant at the 0.05 level (2-tailed).	

Table 8: Correlation of education level of the individual with Individual Dietary Diversity Score (IDDS)

Education level of the individual	Individual Dietary Diversity Score
Pearson Correlation	-.122
Sig. (2-tailed)	.429
N	50
*. Correlation is significant at the 0.05 level (2-tailed).	

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SOME REFLECT ON FOLK ARTS OF ODISHA – CHALLENGES AND PROSPECTS

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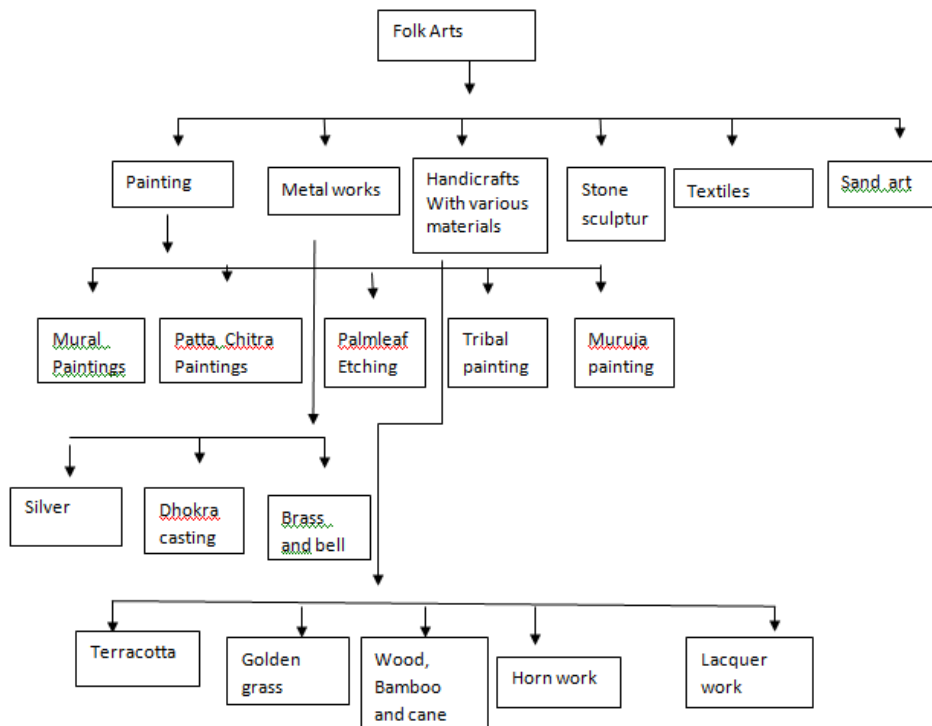
Introduction

The arts is the beginning of the historical evidence of human civilization. Since the evolution of human being on the earth, probably then men tried to express his thought, emotion, feelings through various art form which was initially start in the paleolithic age in the painting on the rock caves. The art is one of the sources of history, Odisha had large evidence of art history particularly tangible cultural heritage. The art speaks the social, cultural, economic of the civilization. Odisha has a significant historical evidences from the very beginning. The art is also differed region wise, it depend on the available material sources, environment, geography and the habitation of the society. Accordingly the art form is come out. The land Odisha is located at strategic location that probably has helps on the cultural development. Odisha is connecting to northern India and South India which it visible on its art forms. Land was inhabited by various races, such as tribals, Dravidian, and Aryan particularly. Odisha is confluence place of various race and culture, which we have found in its culture. Because of various race coming into the land, the culturally or in the art also we have found different in odisha. According to the locality the art form is evolved. In this paper we shall highlighted on the tangible Art Heritage of Odisha in general and folk art in particular.

Odishan art and craft is signifying the product of a long historical process. It is the product of spiritual, philosophical and the human dimensions have merged to yield the finest effects of a cultured and civilized life. This art and crafts made the state a land of rich and diverse artistic achievements. The cultural heritage of Odisha is reflected in its vibrant art forms. There are distinct tradition of art we can divided into two parts, the tangible art includes painting, architecture, sculptures, handicrafts, and intangible art forms includes music and dance. Due to these art forms Odisha has boast in its cultural heritage.

Folk art forms are those which are not so much in keeping with “Sastras” and are of an evolved art form. Folk art is generally understood into two categories i.e., high art and other art. The high art is made by professionals and other art is not. Most often other art referred to as folk art. Folk arts are generally produced by the artist who did not receive any formal artistic education. Art folk art are produced by native to an indigenous culture where there is no such technologies are used such as high art e.g. mask making in Odisha. Folk arts are numerous in numbers and it varying according to the local tradition of the perspective ethnic or geographic region¹. It is not made by an artist having formal education, no training have been imparted in the tradition of their

culture. It is native to an indigenous culture. This Odishan tangible folk art may be classified into 6 groups such as:



Folk art encompasses art produced from indigenous culture or by peasant or other laboring trade's people. It is utilitarian and decorative rather than atheistic. The nature of folk art is specific to its particular culture. It is difficult to describe for its varied geographical and temporal prevalence. Some terms that overlap with folk art is tribal art, primitive art and so on. The folk artist traditionally learn skills and techniques through apperentships in informal community settings, it is one type of community education. Folk art is the creation of mind. The folk arts generally used materials easily available in the locality.

Painting

Odisha has long tradition of painting since pre-historic times. It is overshadowed by the temple art and architecture. There are amny prehistoric paintings found in Odisha like Gunahandi and Jogimath in Kalahandi district, Manikmada and Usha Kothi in Sundargargh district and Ulapgargh and Bikramkhol in Sambalpur district. in the historical period, there were paintings on the walls of Udayagiri and Khandagiri caves,



now all has vanished. Some scholars like Sadasiva Pradhan belief that it was the prehistoric painting which is attested to Hatigumpha inscription of king Kharavela which refers to paintings (*likhitani*)². Odishan painting covered wider field and consist of Mural painting, Patta chitra painting, palmleaf Etching, tribal paintings and Muruja (Jhota).

Mural painting: The earliest mural painting in Odisha found at Sitabhanji³ in Keonjhar district. it is painted on a ceiling of a rock known as 'Ravana Chhaya'. It is high order painted on the rock. This painting is compared with the Ajanta painting of the Gupta period. It shows horse trotting in front of an with a dressed women at the back. The limbs and the movements of the animals are skillfully depicted and the victory procession is lively. The treatment of anatomy and physiognomy, imagination and composition convey the high degree of perfection attained by Odishan painters⁴. We did not find any evidences that the existence of painting in the early temples from 9 to 12th century A.D. Tow painting at Jaganntha temple of 12 to 16th century on Buddha vijaya and Kanchi vijaya. The scholars believe that the technique and process of these painting were different style. Their composition, colours and finishing were influenced by the later south Indian School to certain extents⁵. Later Medieval period many monasteries and temples were built at Puri and the Chitrakaras were engaged to paint their walls on Hindu mythological subjects. Later on the Rajas of different Garjat States constructed Jaganntha temples in their state and engaged *Chitrakaras* of Puri to pain on mythological subjects. In the southern Odisha a prominent mural paintings of late medieval period is worth mentioning. In the Biranchi Narayana temple at Buguda, the outer walls are covered with mural paintings depicts the scene of Rama and Krishna leela. In the temple of Dharakot palace is also painted with murals miniature in characters on the walls⁶.

Pattachitra : One of the traditional painting in Odisha is known as *Pattachitra* which is dated back to 12th century A.D. The traditional artists of these painting are known as *Chitrakaras*. It is created on the special paper hand-made from tamarind seeds and color used are natural extracted from fruits and flowers. The colors are mixed in powdered shells from the ocean and the paste is used to make paintings⁷⁻⁸. It expresses some of the religious and mythological aspects of Odia culture, focusing on the Hindu epics in general, the Mahabharata and the Ramayana, and the Jaganatha cult in particular. The school of painting was has been kept alive throughout the centuries by the artists. It is the most popular term of art being done to present times being patronized by pilgrims who came to Puri and take these paintings as momentous. Raghurajpur artists village in Puri is highly renowned for this art form.

Similar to Patta paintings, there are painting on playing cards in Orissa known as Ganjapa. These are different from the playing cards of other regions in form and decoration⁹. These are circular paintings 1.2-2 cm in diameter, used as palying cards in earlier times. They were first adopted by royal or aristocratic families but later became very popular among rural people.it usually consists of 96 cards, some times 108 or 112. They were classified into three categories on the basis of their subjects such as Ramayana cards, Dasavatara cards and Krishna leela cards¹⁰.



Palmleaf Etching: palmleaf Etching is another form of painting, it is one of the most ancient craft forms not only in Odisha but also whole country. It is dating back to medieval Odisha. The birth of this art form, marks the beginning of the dissemination of written words and is therefore, closely intertwined with the literary traditions of the country¹¹. The palm leaf inscriptions and paintings are available in several states in India. It is Odisha where the crafts reached perfection and great excellence. This tradition continues even today and thrives among the handicraft artisans of the state particularly in the districts of Puri and Cuttack. The Odishan manuscript illustration presents the figures on the classical tradition and the outline drawings are full of vitality and grace. The chief technique of manuscript painting are the delicacy of line, brilliance of colors and minuteness of decorative detail. The Odisha state museum at Bhubaneswar Raghunath Library at Puri and many other places preserve this types of palm leaf illustrations. Artistically most important among them are 'Gita Govinda' of Jayadeva, 'Dasapoi' of Diga Bhanja and 'Chitrakavya Bandhodaya' of Upendra Bhanja, Bidagdha Madhaba of Rupa Goswamy, Amaru Sataka of Amaruka and Ushavilasa of Sishu Sankar Das. The themes of these manuscripts are mostly the love episodes of Radha and Krishna as well as other mythical and legendary incidents.

The manuscripts contain human figures, beautiful facades, floral decorations, miniature drawings of garden, birds and animals. They are in bright colours on large palmleaves and excellent for the beauty of the letters of the text as well as illustrations. The floral patterns and borders of these manuscripts reveal great taste and elegance. These types of works are continued by the hereditary artists upto the present day in Odisha¹².

Tribal paintings: Odisha is inhabited by rich tribal culture, more than 62 type of tribals communities are living, Savara (saura) are one of the oldest tribes in India. The Savara tribe had one of most attractive mural painting which mostly art is painted on the walls of this tribal groups. The painting is mostly based on religious and ceremonial themes known as *IDITAL*¹³ (wall painting). Varrier Elwin had first study the saura pictograms. It is mostly found in Rayagada, Gajapati and Koraput district of Odisha. Sauras painting make extensive use of symbolically pregnant that reflect the quotation tasks of the people, horses, elephants, sun, moon and the trees of life are periodic motifs in these paintings. The paintings are conspicuous for their elegance, charm, aesthetic and ritualistic association. In fact these pictograms are their literature and philosophy. The picture is basically painted on the walls as per the situation or the function in the society. Each icon or *idital* conveys a separate message. It gives the details of pictograms reflect real everyday life¹⁴⁻¹⁵.

Jhoti, Chita, Muruja painting: Odishan culture is bound up with various social and religious activities. In the month of Margasira, women folk worship the goddess Lakshmi. It is harvesting season when the grain is thrashed and stored. During this auspicious occasion, the mud walls and floors are decorated with murals in white rice paste or *pithau*. They are called it jhoti or chita and are drawn not merely with the intention of decorating the house, but to establish a relationship between the mystical and the material, thus being highly symbolical and meaningful. Throughout the year, the village women perform several rituals for the fulfillment of their desires. To draw a jhoti or chita, the fingers are dipped into the rice paste and made to trace out intricate patterns



on the floors or walls. Sometimes a kind of brush is prepared from a twig to one end of which a small piece of cloth is attached. This is dipped into the white rice paste to draw the patterns on the wall. Muruja is drawn on the floors with powders of different hues. Indigenous methods are used to get colour powders¹⁶.

Metal works: Metal craft is one of the prominent work in Odishan cultures. Various artisans were engaged in its practice as in its close links with the daily lives of the state. The crafts is practiced by the certain class of people known as *Kansari*, broadly described as metal smiths while a particular variety, *dhokra*, is practiced mainly by *sithulias*. The largest concentration of metal industries is *Kantilo* and *Balakati* in *Puri* district although a substantial number of metal industries are found in *Cuttack*, *Ganjam* and *Sambalpur* districts.

The product of handicraft can be broadly classified into three groups such as the items produced through process of beating, locally known as *pifa*, secondly the groups who produced by casting and third group is include the residual items. These can also be broadly subdivided into two groups in terms of raw materials used, this is brass and bell metal, the former being an alloy of copper and zinc and the latter of copper and tin¹⁷.

The workshop is called *sala* or shed which consists of platform with block of stone for the floor on which the beating is done, a heating furnace or *bhati*, a raised verandah with a local lathe for polishing. Tools used at *sala* are hammers and anvils, pincers, hand drills, files and scrapers. As per the casting there are two groups that one is brass casting and *dhokra* casting. Besides the brass and bell, *dhokra* casting, the silver handicraft (filigree) is most prominent folk art of Odisha.

Silver works: Among the metal works the silver filigree, locally called *tarakasi* is the finest the queen among the Odishan handicrafts. It is localized in *Cuttack* town and a few villages in *Cuttack* district. silver filigree work has been an important export item of Odisha from ancient times. Silver filigree of *Cuttack* gold smith is a pride of Odishan craftsmanship¹⁸.

Brass and bell: Brass and Bell metal are the two earliest known alloys. Bell metal ware occupies a pride place in Odishan history. The artisan who are known as *kansari*. They are propagating ancient and modern method of manufacturing utensils and decorative items which are traditional shape. They are used in temples and houses for religious purposes. This art crafts were manufactured in *Ganjam*, *Cuttack*, *Khurda*, *Dhenkanal*, *Jajpur* and *Sambalpur*¹⁹.

Dhokra casting: It is an alloy of brass, nickel and zinc which emanates antique look. It was made by a caste known as *sithulia*. It has two type one is hollow method and dense method. It is practiced over 4000 years. It thus a very old form of craft that is still practiced in some parts of Odisha²⁰. This craft is practiced mainly at *Adakata* in *Nayagarh*, *Sadeibareni* in *Dhenkanal*, *Kuliana* in *Mayurbhanj*, *Jhigidi* in *Rayagada* and *Narasighapur* in *Cuttack* district²¹.

Handicrafts: There are various type of handicrafts are made in Odisha it is more attractive manners for the decorating the houses. It is made of various articles like Applique works, earth, horns works, wood work, lacquer work, paper mache are generally very popular in Odisha.



Applique works: Like pattachitra, applique was also originated as a temple art. The artisans of pipili have their mastery in appliqué art. Like other art and handicraft, the root of appliqué form intertwined with rituals and traditions of lord Jagannath. The appliqué is used for various rituals and procession of deities like *Chhati*, *Tarasa* and *Chandua*. The appliqué is covered on the three rathas during *rathiyatra*. Various type of appliqués like giant size umbrellas for festival occasions²². Garden umbrellas in sprawling lawns. Besides this heart shaped fans, big and small canopies and wall-hangings from the appliqué works.

Horn works: The horn work is one of the distinct art of Odisha. It is outstanding showcases of outstanding fashion design. This work is particularly found in at Paralakhemundi located in the southern Odisha in the Gajapati. The horn article of Paralakhemundi shows the rich cultural heritage of the place. Various showcases were made such as cumbis, pen stands, cigar pipes, various decorative figures. It is attractive article form a memorable memento for the near and dear ones at home²³.

Golden grass and cane works: Kaincha a rich yellowish variety of grass is grown generally in swampy areas during rainy season. This grass is very good durability and flexibility to woven. It is mostly woven by women folk to make a wide range of products like baskets, set of curio box, table mats, coasters and hats etc. It is produced particularly at Jajang and Barua of Kedrapara, Gadamadhapur of Jajpur, Japanga of Sundargarh and Puri district. cane is used for weaving baskets and several items of furniture²⁴.

Lacquer work: Lacquer is the refuse of an insect gathered by the tribal in the forests. The tribals are made the cane boxes and terracotta figures, it is mixed with colour. After several coats of lacquer have sealed the core, the surface is decorated with motifs borrowed from nature, geometric patterns and religious symbols²⁵.

Paper mache: The craft is creatively practiced by craftsmen from all over Odisha. It is made off paper, waste cloth and different kind of natural fibers are soaked and beaten into pulp, than mixed with a variety of seeds and gums for strength and as protection from termites. Special clays and bio-wastes are added for body and reinforcement²⁶.

Terracotta & Pottery : The making pottery is the beginning of civilization terracotta and pottery is one of the approved craft most in every district. there are more than 10,000 terracotta artisans in the state who were producing traditional, decorative and utility terracotta based items. The important seat of terracotta crafts in Odisha are at Sonepur, Barapalli, Haldharpur, Nuagaon, Lunukua and Kusumi etc²⁷.

Textiles work: The textile production is one of the important folk product since the historic age. Odisha had good quality of silk and cotton yarns producer. The Ikat, which is glorious woven blurry edged, gemcoloured was very famous traditions. These works are support for the maritime trade with eastern Asia in the ancient times with Bali, java, Sumatra. The is one of the indigenous natural process by the Odishan people. Particularly, it is more prominent in the Sambalpur with double-ikat designs and gold embroidered one from Sonepur. The Bomkai ikats have motifs drawn from the Sakti cult²⁸.

Cane and bamboo craft: Basket making from cane and bamboo was one of the since ancient days. There are a number of articles made from cane and bamboo such as



furniture, fruit basket, tray, light stand, candle stand etc. It has manufactured most of the hilly areas, because it is available in the forest. By acquiring skill decorative items are manufactured at Rangimunda of Sundargarh, Kalahandi, Sundarkumpa of Kandhamal, Basudevpur of Bhadrak, Deogaon of Dhenkanal, Tikiri, Bisam Cuttack in Rayagada, Laxmipur, Baipariguda in Koraput district²⁹.

Stone works: Stone carving was Odisha's ancient art. It is oldest forms of Odia art which is practiced in different part of state. As an evidence from innumerable archaeological monuments, rock cut sculptures, caves and temples is available throughout state. The art of carving in stone reached in zenith of excellence perfection through centuries of disciplined efforts of generations of artisans³⁰.

Sand art: The vast sea shore of Odisha made the people to utilize the sands. From the sands, a beautiful art has been come out. The sand art is one of the significant art of Odisha which is worldly famous. For the fact, the state also hosts an International Sand Art Festival³¹.

Discussion: The land Odisha taking a significant role in the field of art and craft. It has extensive of raw materials, which enrich the capacity of civilization. With using its resources, the people can be prosper, but the impact of globalizations, it has hamper the indigenous art of the civilization. Gradually, the art and crafts has declining among the youth, they move towards the modern world which will be endangered the techniques comes from fore father. Was it enough for us that everything of the past kept in the museum is solution or provide it encourage among the youth to keep the tradition of the past and alive the practices. Due to modernizations everything is made off machines, no one thing about the hand made materials. Because the hand made is time taking and expensive. But the machine made is very chief and very clean. So no one think about the pros per of this folk art and crafts.

Conclusion: Odisha is rich of folk art and culture. Each and every part of state is known for its art. Since the ancient days, Odisha has always take its distinct place in India. Because of these art forms it was so rich in the past. The availability of resources make Odisha rich in the past, but gradually it was decline because the people have quite left out their capability, as well as the political disintegration make the state weak. The museum has taking important role to understand the past. It is greater challenge for the people to take care of the indigenous art of the region through which the people can get livelihood.

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MERGERS AND ACQUISITIONS IN INDIAN CORPORATE SECTOR: A CRITICAL REVIEW OF LITERATURE

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ABSTRACT

Merger and acquisition become the practice in corporate sector in general and banking sector in particular. Literatures relating to M&A are developed over the period as the business attaining maturity over the passing of the time. The concept of cost, demand, sustainability, survival growth, profitability etc. are the some of the important factors pushing the sectors to adopt the strategy of merger, acquisition, amalgamation, takeover etc. Small is beautiful is not a suitable strategy in this days of competition. The liberalised economic policies have exposed India industry to several situations. Time is evident of various economic activities that have grown over a period of time which led to various forms of business organizations. With the advent of time in order to achieve faster growth in a corporate business, the companies started to explore and exploit various means of business activities, mergers and acquisitions were one of such alternatives. Mergers and Acquisitions have been going on for a long time and the mergers of many big corporations have taken place and it has become a normal phenomenon in the modern corporate economy. It has become a universal practice in the corporate world. The present study is undertaken to study the development of literature over the period and scope for further research in this emerging area of study.

KEY Words: Mergers and Acquisitions, Review of Literature, Amalgamation, Takeovers, Corporate Sector

1.0 INTRODUCTION

The world is in a state of flux, being influenced by the forces of globalization and fast technological changes and as a consequence firms are facing intense competition. To face the challenges and explore the opportunities, firms are going for inorganic growth through various strategic alternatives like mergers and acquisitions (M&A), strategic alliances, joint ventures etc. The M&A are arguably the most popular strategy among firms who seek to establish a competitive advantage over their rivals. There are various reasons behind firms going for mergers and acquisitions. The M&A deals are common not only in the developed countries but also have become more apparent in the developing countries. In the pre-liberalization period, in India, the phenomenon recorded and upsurge in the wake of liberalization measures resulting into lessening the government controls, regulations and restrictions whereupon the corporate houses got freedom to expand, diversify and modernize the operations by resorting to mergers, takeover etc. With increasing competition and the economy heading towards



globalization, mergers, acquisitions are expected to occur at a much larger scale than any time in the past and have played a major role in achieving the competitive edge in the dynamic market environment.

2.0 SIGNIFICANCE OF THE STUDY

More than ever, today mergers and acquisitions is an area of immense research potentials to both academicians and practicing managers for over three decades. Economic globalization has created a sense of urgency among companies resulting in an acute significance of examining the effect of corporate restructuring and change initiatives on the organizational performances. Studies on M&A in India suggest a wider framework for understanding the implications of merger from varied perceptions. There have been numerous studies on mergers and acquisitions abroad, in the last four decades. An extensive review of literature has been carried out in order to enhance the present level of understanding in the area of mergers and acquisitions, gain insight into the success or failure of mergers and formulate the problem for further research in this area.

4.0 OBJECTIVE OF THE STUDY

- (a) To study the trends and development of literature over the period.
- (b) To find the research gap in the areas of M&A for further study.

5.0 RESEARCH METHODOLOGY

Data collection is a component of research in all fields of study including physical and social sciences, humanities, and business. While methods vary by discipline, the emphasis on ensuring accurate and honest collection remains the same. The study is based on secondary data. Secondary data is collected from journals, magazines, annual reports of different banks, articles, research thesis, publications, and internet resources.

6.0 LITERATURE REVIEW

Subrahmanyam (1982) analyzes the conceptual issues in productivity measurement and approach to interbank and inter-temporal productivity comparisons. Tools used are nonparametric index number approach, a parametric production function approach and Las Payers & Divisia index. He feels that production function approach may be more advantageous as it can handle problems arising due to inseparability of inputs and outputs, non-constant return to scales. **Varghese (1983)** analyzed the profits and profitability of Commercial Banks in India. **Ojha (1987)** in his paper discussed the productivity and profitability of public sector banks in India. After studying various indicators of profitability and productivity the conclusion was drawn that with the increase in productivity not much change was witnessed in the profitability of banks, whereas Indian banks showed very low productivity and profitability, when compared with International banks. It was suggested that more broader and multi-dimensional approach needs to be adopted to enhance productivity and profitability. **Chawla (1988)** in his study examined the policy making and management practices in relation to affect deployment of funds in banks in the context of rapidly changing environment.



Researcher focused on the objectives and strategies of fund management. Study was based on detailed structured interviews with head of funds and investment departments conducted on 26 Indian banks both from both public private sectors. The study revealed that there were major systematic deficiencies in the fund management system of banks. It was also revealed that gaps in planning, coordination and control systems also need to be filled for better management in banks.

Amandeep (1991) in her thesis titled, “Profits and Profitability of Indian Nationalized Banks” examined that banks play an important role in development of the economy and effect the socio-economic transformation. It was found that profitability of banks is dependent on two factors i.e. spread and burden. Some of the other factors which are considered as the determinants of profitability were priority sector lending, geographical expansion, increase in expenses, credit policy and deposit composition etc. Further, it was revealed that in order to increase the level of income banks need to adequately charge on non-fund services such as consultancy, factoring services and merchant banking. **Kaushik (1995)** in his thesis titled, “Social objectives and profitability of Indian banks,” attempted to study the effect of social responsibility on profitability of Indian Banking Industry. Various statistical techniques like ratio analysis, annual growth rates, regression analysis, and correlation analysis were used to study the implication of social obligations on bank’s profitability. Further, profitability of Indian banks was measured using various methods like percentage of working funds, total business and total deposits, whereas productively was judged by calculating loans per employee, deposits per employee, total business per employee, deposits per branch, loans per branch and total business per branch. It was concluded that social factors are not responsible for any change in profitability of the Indian commercial banks. **Hassan (1997)** in a study on “The Experience of the Grameen Bank (GB) of Bangladesh in Community Development” discussed the role which Grameen Banks played to fight against financial exclusion. It was indicated that extremely poor people who do not possess any collateral can get small loans from GBs only if they form group of five people. Under this scheme each member of group gets individual loan, however they are mutually responsible for all five credits. It was found that mostly women from rural poor groups borrow this loan from GB’s and lending money to women has largely enhanced recoverability for GB’s loans. **Salma (1998)** studied technological reforms in the banking sector. The emphasis on technology as the key factor for improving performance and increasing productivity in banks had been well demonstrated through illustrations. It was found that most of the Indian banks, largely private ones, were speeding up to connect their nationwide branches. **Das, Abhimanyu (1999)** Profitability in public sector banks – A Decomposition model, have tried to make all attempt to compare the interbank performance of public sector banks during the reforms., period. This study was carried out for a period of three years, i.e. 1992, 1995 and 1998. Das in his paper found a certain convergence-taking place in the performance of the public sector banks during the years of study. He further found that there is growing emphasis on other income and a peculiar tendency to go for risk-free rather than risky loans. **PrashantaAthma (2000)**, in his Ph D research submitted at Osmania University Hyderabad, “Performance of Public Sector Banks – A Case Study of State Bank of



Hyderabad, made an attempt to evaluate the performance of Public Sector Commercial Banks with special emphasis on State Bank of Hyderabad. The period of the study for evaluation of performance is from 1980 to 1993-94, a little more than a decade. In this study, Athma outlined the Growth and Progress of Commercial Banking in India and analyzed the trends in deposits, various components of profits of SBH, examined the trends in Asset structure, evaluated the level of customer satisfaction and compared the performance of SBH with other PSBs, Associate Banks of SBI and SBI.

Rahman and Limmack (2004) concluded that the components of operating cash flow indicate that improvement in post-acquisition performance is driven both by an increase in asset productivity and a higher level of operating cash flow generated per unit of sales. **Vanitha and Selvam (2007)** found that the liquidity measures viz., current ratio, quick ratio, net working capital ratio, and diversion of short-term funds have not influenced the acquiring firms in the post-merger period. **Azhagaiah and Sathishkumar (2011)** concluded that there has been a significant increase in current ratio and quick ratio of acquiring firms after merger. **Bertrand and Betschinger (2011)** found that the Russian acquirers suffer from the inability to leverage value due to limited M&A experience and capability, especially when making cross border acquisitions. The cited literature provides an overview of the impact of M&A on the Liquidity (L) of acquiring manufacturing firms in the post-merger period. Previous studies, have mostly, attempted to study the short-run impact, say, three years prior to the merger and after the merger period. With these evidence and background, an attempt has been made in the present study, to study the impact of M&A on the L of acquiring manufacturing firms in India in the long-run, i.e., five years prior to the merger year and five years after the merger year. **Singh and Tondon (2012)** compared the financial performance of SBI and ICICI bank using the secondary data from year 2007-08 to 2011-12. Researcher judged the financial performance of banks using the technique of ratio analysis. Statistical tools like mean and compound growth rate (CGR) were calculated to analyze the trends in profitability of banks. The study concluded that SBI showed good performance and was financially sounder than ICICI Bank but in context of deposits and expenditure ICICI Bank had better organizational efficiency than SBI. Further it was also revealed from the study that banking customer have more trust on the public sector banks as compared to private sector banks. **Gupta et.al, (2013)** compared the customers' perception of service quality of public and private banks of Delhi and NCR using SERVQUAL method. The questionnaire consisting of 22 statements in 5 key dimensions namely tangibles, reliability, responsiveness, assurance and empathy was circulated among 200 respondents using simple random sampling technique. The researcher used the percentage method to analyze the data. Study revealed that private banks have satisfied their customers with good services and they had successfully implemented tangible factors like modern equipments, infrastructural facilities, quality of materials used etc. Further it was explored that most of the respondents felt that the employees of private banks were very keen to satisfy their customers whereas on other hand customers of nationalized banks felt that the employees were least bothered about their customers. **Muhammad Ahmed and Zahid Ahmed (2014)**, analysed the post-merger financial performance of the acquiring banks in Pakistan during the period 2006-



2010. The study has found that the financial performance of merging banks improved in the post-merger period but insignificantly. Post-merger profitability improved insignificantly, liquidity significantly, capital leverage insignificantly while as assets quality parameter showed a significant deterioration. **Joash and Njangiru (2015)** by using the data from 2000 to 2014, come to the conclusion that the merger remains positive for Kenyan banks. After the merger, the Return on investment & earning per share have increased significantly. **Zhu and Zhu (2016)** with an effective increase in the integration of global economies, acquisition and merger strategies are becoming widely common in China to gain competitive advantages and to help in increasing the shareholder's interests in the banking sector. As new challenges and opportunities are getting integrated with the banking industry, merger and acquisition strategies are proving significant importance in improving the business sales and growth of the banking sector in China. In response to the increasing global competition and significant technological advancements all over the world, the findings of the study revealed that acquiring the banking firms that has over-valued stocks can provide significant shareholder value in case the over-valued stocks are successfully utilised as currency for achieving the key targets and goals behind the acquisition **Subhashree and Kannappan and Johan (2018)** have stated that the overall operations of banking organisations can be enhanced with the adoption of merger and acquisition strategy. The merger and acquisition play a significant role in the banking sector, as it helps to improve the level of financial gains. It is analysed from the study that the main reason behind the M&A in the banking sector is to enhance the economies of scale. Merger and acquisition are highly beneficial for banking organisations because with the adoption of M&A, the banking organisation can enhance their level of growth and development in the market and will be able to minimise the management related risks and it also reduces the expenses level.

7.0 RESEARCH GAP

Mergers and acquisition in Indian corporate sector plays an important role in the stability and growth of the economy. The present survey of related literature indicates that, even a good number of studies have been conducted to analyse the Mergers and acquisition of the corporate sector in India; there is also a perceptible gap, which needs further study. As the changes taking place in the corporate sector is very fast, innovative and dynamic; a rapid change of world economic order takes place in this era of globalisation, liberalisation and privatisation. The technology also changes at the same pace. This resulted in a drastic change in the corporate structure of the Indian corporate sector. After a thorough study of previous research relating to merger and acquisition in Indian corporate sector it was found that researchers have focused on different aspects of the merger and acquisition but for the present sample and period of study are not covered in any previous. Hence, there is a lot of scope for empirical study on merger and acquisition in the corporate sector of India.

8.0 CONCLUSION

The process of merger and acquisition is found highly effective for the organisational growth and development in the contemporary business environment. Most of the



organisations adopt the strategy of the merger for increasing their business sustainability and profitability in the competitive business environment. Another effective strategy is an acquisition in which a strong organisation acquires the potential start-ups, small organisations, and innovating organisations in order to reduce the level of competition and for gaining competitive advantage in the market. With the adoption of the merger and acquisition strategy, an organisation can improve its overall efficiency and operations that further enable an organisation to serve effectively to its customers.

It has been analysed that different organisations are facing stiff competition in the market and The organisations operating in the banking sector can able to minimise their expenses and enrich their working efficiency by merging or acquiring another organisation. In a similar context, in India, the role of merger and acquisition is increasing in the banking sector for enriching the business performance, and it is helping the banking organisation in minimising the operational risk and enables them to serve better to the customers.

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AN INSIGHT INTO THE SUPER-AGEING SOCIETY OF JAPAN

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Abstract:

With improvement in health conditions and medical care services along with improved living conditions brought about by economic developments etc, there has been co-related growth of the super-ageing society in Japan. Happiness index remains another contributing factor to this growth. There has been an unprecedented growth of longer life expectancies of the elderly people and Japan as of now has roughly above over a quarter of about 128 million people who are older than 64 years of age. As such, Japan will have to bear the brunt of its consequences, namely the social, medical and economic challenges to manage this huge population. Japan has indeed done it, successfully. So much so that in future this Japanese ways of addressing the challenges of the rapidly increasing elderly society can be a role model for many other countries of the world. This paper is a humble endeavor to discuss and highlight some of the measures that the Japan government has taken to take care of this super-ageing society as was deliberated in the University of Tokyo in July, 2019 amidst a group of educationists comprising also from Assam in a lecture programme. It can be hoped that India and for that matter many other countries too can learn a lot from Japan about facing the challenges of the super-ageing society. The paper is a result of the deliberations which took place in the said University on the topic “Super-Ageing Society in Japan” the data being collected basically from the presentations in the said lecture programme.

Key-words: Japan, Super-Ageing Society, Challenges, Dementia

Introduction:

A group of educationalists of Assam had visited The University of Tokyo in the month of July, 2019 to attend a lecture programme on the topic “Super Ageing Society” in Japan. The writer was fortunate to be a member of that group. The programme was organised at the Graduate School of Frontier Science, University of Tokyo. Prof. Taku Furukawa of the Graduate School of Frontier Science delivered his lecture as resource person in these academic sessions. It is worth mentioning that the University of Tokyo currently ranks 23rd in the World University Ranking 2019 with a score of 85.3. Tokyo University is not only the highest ranked university in Asia but also ranked 21st in the World Ranking according to the Academic Ranking of the World Universities. Japan has a thriving academic scene with 86 National Universities, 90 public Universities and 604 Private Universities. National Universities in Japan are recognised to be in higher position in higher education in comparison to the Private or Public Universities.



Discussion:

The concept of the “Super Ageing Society” is an interesting one. A society where more than one in five of the population is 65 years or older in age is referred to as “Super Ageing Society”.

At present only three countries – Germany, Italy and Japan meet the requisite norms of a “Super Ageing Society.” According to the World Health Organisation (WHO), the ageing rate is the proportion of a society’s population which comprises of people aged 65 years or more. If the ageing rate exceeds 7 percent, it becomes an “Ageing Society”, if the rate surpasses 14 percent, it becomes an “aged society” and if it exceeds 21 percent it becomes “Super Ageing Society”.

Japan, at present, has an ageing rate of 26 percent and hence, it is categorised as a “Super Ageing Society” This is the highest percentage in the world and absolutely unprecedented. Several factors, specially the improvement in medical care, have contributed to the increase in the longevity of people which consequently has led to the trend of rapid ageing. Japan, with its long history as the world’s most aged society has adopted several policies and legislations to meet such challenges.

The statistics put forwarded by “World Population Prospects 2019” shows that by 2020 Japan with 25.5 percent people above 65 years will occupy the highest position followed by Germany with 21 percent, France with 20 Percent, Sweden with 20 percent, USA with 15 percent, Korea with 15 percent, China with 10 percent and India with 5.2 percent population respectively. This population report predicts that Indian population will touch 25 percent only in 2090.

The world is leading to a super ageing society. At present two thirds of the people above 65 years live in developed countries. In 2050 almost 80 percent of the people above 65 years will be in the developing countries.

France took 157 years to increase its population of above 65 years old people from 7 percent to 21 percent. In contrast, Japan took only 37 years to increase the population of 65 years and above to grow from 7 percent to 21 percent.

In The Annual Report on Ageing Society 2018, Japanese Cabinet Office shows the population of different age groups among 1 million people in Japan. The annual report indicates that in 1950 only one percent population in Japan was in the age group 65-74 years and 30 percent population in the age group 0-14 years. But the scenario has changed rapidly, leading the country to a Super ageing Society. This report also reveals that in 2020, 16 percent of population is in the age group of 75 years and above, 17 percent of population is in the age group of 65-74 years. Unfortunately the population in the age group 0-14 years has decreased to 16 percent which is a serious concern for the demographic structure.



Japan's population of elderly group of 75 years and above is rising by an average of 30,000 every month. In Japan many retired and senior citizens are in good health and they lead active lives. The Keio University economist Keichiro Kobayashi has talked of a "Heavily burdened age society" in near future. The rapid growing of ageing society in Japan is likely to be a permanent burden on the economy due to slow down of consumption and more government expenditure for nursing and care of elderly people. The Japanese Government has introduced long term care insurance system in 2000 with the basic concept of supporting independent, user oriented social insurance system.

The long term care insurance is a plan to cover all elderly people over the age of 65 years depending upon their needs and care. This insurance scheme is Comprehensive Social Care Policy with the object of reducing the burden of care of families. Supporting the elderly people in Japan is becoming a heavy burden for the government every passing year. The White Paper 2017 prepared by the Ministry of Health, Labour and Welfare, Government of Japan shows the tremendous pressure on the government budget for the welfare, medical and pension of elderly people of Japan. In 2015 it was JPY 115 Trillion which is 29.57 percent of total national income. The Japanese Government also introduced Community Based Integrated Care System Model (CBICM) with the aim to provide health care, home, nursing and livelihood support for the elderly people. Ageing in place with community support is also a comprehensive system with the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income or ability level. The Report of Sports Agency, Physical Fitness Test 2018 Government of Japan also indicates that the physical fitness of the people has improved significantly in the country.

The growth of demand for caregivers in Japan is increasing in high pace but the growth of actual caregivers is slowing down due to decreasing number of Japanese workforce. The Report of the Ministry of Health, Labour and Welfare, Seventh Long-Term Care Insurance System Plan indicates the number of Caregivers since 2016 to 2025. As per this Report, in 2016 the total number of caregivers was 1.90 million and the demand of caregiver will be 2.16 million for 2020 and 2.45 million for 2025. In The Annual Report on Ageing Society 2018, Japanese Cabinet Office also mentions that supporting elderly people is also becoming a heavy burden. In 1950 the number of working age people against one 65 years and above person was 12.1; in 1995 it was 4.9 people and in 2020 it is only 2 people. So decreasing number of working age people for elderly citizen is considered a serious problem in the country. Another problem is that many of elderly are frail and suffer from dementia. One in five Japanese aged 65 years or elder is predicted to suffer from dementia. A Study of the Ministry of Health Labour and Welfare of the Government of Japan shows that about 2 percent of people in their late 65 years and about the 5 percent of those people in their early 70 years suffer from dementia. But it is severe in the elderly group of 70 years and above where the figure stands at around 10 percent. As Japan's elderly people suffer from dementia, the economy is likely to slow down. Takata Corporation of Japan recently estimates that by



2035 up to 150 trillion yen of securities will be in the hands of people with dementia. If money stops flowing, the financial side of the economy stops growing.

Conclusion:

The Japanese style of welfare state concept has long been known for its widespread respect for its seriousness and its obligation to care for them. The responsibility for the family members in taking care of their elderly people is also well known in their respective societies. But the demographic structure of society has changed with the rapid changes of technology as well as individual life style. Bank and financial Institutions are giving services to the elderly citizen to hand over their financial securities and assets to their family members. Evolution of design in social system and personal life plan is necessary in this emerging situation. The Government of Japan is trying to make the best of the situations with the help of technology.

Japan, with its long history as the world's most aged society has rich experience adopting policies and legislation to meet such challenges. The Japan model of Super Ageing Society will be certainly helpful to the developed and developing countries in the coming days to meet the challenges of super aged people of their respective countries.

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COVID-19: A SHATTERED DREAM WITH A HOPE TO NEW NORMAL

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Abstract

The bolt comes from the blue: all of a sudden India had the first case of covid-19 in the month of Jan 2020, three people from Kerala who returned from Wuhan. At Prinaton University, a webinar was held in the 2nd week of April 2020, economics noble laureate A. Deaton said, "Countries with strong Administration and health systems could enforce social spacing, comprehensive testing, isolation and treatment. But in poor countries with weak administrative and medical capacity, shutdowns would not check the disease. Social distancing was impossible in densely populated urban slums, crowded bazaars and huts, where several people slept. Virus testing capacity weak, so detection, isolation and treatment were highly incomplete and the disease would spread during shutdowns".¹ Although Prof. Deaton has not named India, but really we were not prepared for this. An economic activity is concerned with activities that secure survival to man. The physical survival gets extended according to technological base is broad enough. Traditional economic theory assumes that individuals and other economic agents behave rationally-optimum allocation of resources such as to obtain the least cost combination of factors, max satisfaction to the consumer etc. But behavioural economics is the study of how people make choices in the real world-particularly when there are uncertainties like natural disasters, Amphan, Nisarga, pollution, entering of a swarm of locust and pandemic like covid-19 and the consequences there of. In such situations study of human behaviour has its multidimensional approach. This research paper is an outcome of this behavioral approach.

Keywords: - Logical and rational behaviour to a Stage where actual human beings act illogically and irrationally (over purchase of goods and services, what will happen tomorrow, uncertainty, fear psychosis, change in behaviour...)

Introduction

The physiocrats conceived of an ideal order of things, a perfect arrangement of institutions guided by the law of nature which they called the natural order. The order was providential and God in His mercy had created it for the benefit and happiness of mankind. Natural order was sacred, universal and unchangeable. Nature is very kind to us but we have not paid due attention to environment risks for sustainable base for economic prosperity. Covid-19 has certainly opened everyone's eyes to possibilities that can positively impact the climate agenda. Clean, breathable air and the reality of a work-from-home culture are obviously ones. For manufactures, shorter supply chains

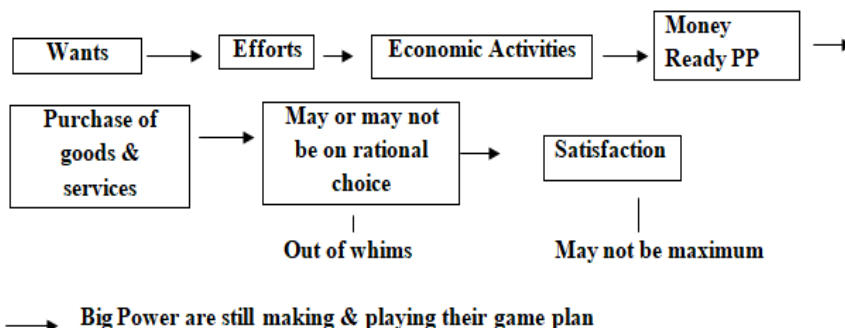
with its lower scope 3 green house gas emissions will become a business community imperative. The similarity between covid-19 and the climate crisis-both in terms of their disruptive impacts on human lives and the economy and their response that emphasizes science and the need to build resilience-can also benefit the climate agenda.²

Recovery must take into account the climate crisis actors such as think tanks and advocacy groups should work to ensure the momentum is maintained. Many big cities are already mired in a deep water crisis or heading towards it. Mindless exploitation of ground water has almost exhausted, what could have been used as an alternative in times of crisis. Both Amphan and Nisarga are trailers of what the future is going to look like because of climate crisis. There is no substitute of water. India is clearly in the stage of community transmission. It will also strain the health infrastructure. As per official data, there are 1.2 billion people mobile phone users in India, but only 350 million have smart phones. The remaining 900 million are feature phone users. 115 million people have downloaded the Arogya Setu App till now, which is mandatory for those taking special trains, arriving from abroad by the repatriation flight or taking domestic flights.³

India's economy grew at 4.2 % (2019- 20) the lowest in 11 years as against 6.1% (2018-19). Prior to the pandemic, the unemployment rate touched its highest watermark in 45 years. Industrial growth suffered as did the key sectors of the economy (manufacturing, construction, trade, hotels, transportation and communication and financial services). A fastest growing economy has been shattered. Our social Institutions, social attitudes and values are changing. Now people are in stress, they are feeling uncertainty, hopeless, worry about future, loneliness, emotional disturbance. These are the behavioral changes due to covid-19. The assumption of certainty is not valid due to four factors:-

1. Outcome is uncertain (investment may or may not bring the stipulated rate of return).
2. Return on real investment is again uncertain.
3. Lack of information (there is a question mark on the right information being supplied)
4. No scientific fore-casting or prediction is possible.

Choices are being made on our own whims. Many a time purchase are made, but one regrets later. But still the fundamental theorem of economics has not lost its validity.





Literature Review

India is facing the most serious public health economic and humanitarian challenge in its independent history. This has led to a range of both immediate and far-reaching decisions by the government. Migrant workers across the country are heading back home and are largely subject to what can only be termed as rather arbitrary orders of the central government India is now opening up (unlock from 1-6-2020 but this is expected to increase the number of cases). There has been no institutional accountability (parliament when bills are presented discussed and then passed- in Lok Sabha, then in Rajya Sabha after that clearance from the president of India). India is set to cross 4 lakh cases on May 18 and the doubling rate has gone down. If this persists, it means india could cross a million cases by the first week of July 2020 and may witness close to 30,000 deaths by that time. The country has now substantially opened up which all experts agree could lead to a sharp increase in cases. Thus, we need testing, equipments and laboratories EUSA based antibody testing kits, capacity to produce PPE kits with their success stories, more beds, oxygen support ICU, ventilators and above all a well coordinated public health management system all over the country.

One is reminded of Malthusian Theory of population. He was first to develop smashing emphasis. He wanted to prove that “the poor are themselves responsible for their poverty”. He believed that passion cannot be controlled. Population grows in G. P [1, 2, 4, 8.....] and rises unchecked. It has a tendency to double it in every 25 years. Supply of food grains grows in AP (1, 2, 3, 4.....) due to law of diminishing returns in agriculture. Rate of growth of population out strips the growth of food grains. He advocated preventive checks otherwise positive checks shall set in motion equibalancing population growth. According to him “The laws of nature are essentially punitive, Natural evil is the instrument by which God warns us from any mode of conduct which is not suited owe being.”⁴

Corona virus disease, the climate crisis, developing severe typical cyclonic storm (Amphan, Nisarga, land fall in Raigarddistt. etc. are the warning bells of what the future is going to look. According to the estimates of the United Nations Population Fund, 141 million births were recorded worldwide of which 27.2 were in India. India will beat the centre of a baby boom triggered by the covid-19 outbreak, which has prompted lockdowns across the world and confined residents indoors, according to a report by the United Nations. According to a report released by Unicef on 7th May 2020- ‘An estimated 116 million babies will be born under the shadow of the covid-19 Pandemic- New mothers and newborns will be greeted by harsh realities.’⁵

Research Gap

Labour force participation rate is very low and a number of persons are losing their job along with a fear of job loss to those, who are in employment. Following are the priorities:

1. Providing quality Health care to all (Particularly to those who are not socially secured)
2. Fight against poverty, hunger, malnutrition, over exploitation of natural resources and creating job opportunities.
3. Empowering people for a behavioural change (they are not used to)

India is headed into first recession in four decades with GDP growth rate tipped to drop into negative territory in fiscal year 2020-21 (-6.8 % GDP growth estimate for 2020-21).⁶ Economist are of the view that the situation is worse than the great depression of thirties, when Keynes came on the scene with his ideas of compensatory spending and Pump- Priming (in the form of a fiscal stimulus) to correct the deficiency in aggregate demand and thus established him as a father of macro-economics. Classical economists believed the position of full- employment as a normal situation in the economy. All those who are willing to work, qualified to work, able to work get the work at current wage rate without any delay.

1.	Classical economist assume that there is only one function of money that is the medium of exchange (Quantity theory of money) $PT = MV$ or $M = IPY$	According to Keynes demand for money is due to three motives- transactive and precautionary both being functions of Y and the third one speculative motive mainly function of rate of int. $M = IPY + L(r)$
2.	Volume of income is a function of vol of employment in the economy (micro concept) $Y = Y(N)$	Keynes agrees- but his analysis is macroeconomic analysis. $Y = Y(N)$
3.	$\frac{dY}{dN} = N \left[\frac{W}{P} \right]$ Rate of change in vol. of employment is an inverse function of real wage rate and real wage rate could be reduced through a wage cut (Pigou formula).	Keynes agrees but according to him vol of employment could not be increased via wage cut because wages are not only cost but source of demand also. Hence he was in favor of increase in supply of money.
4.	Saving and investment both are functions of rate of interest $S = S(r)$ $i = i(r)$	According to Keynes aggregate savings are mainly function of income $S = S(Y)$ and rate of interest. Investment is a function of expected rate of profit and rate of interest.
5.	Whatever is earned is automatically spent on consumption- there is no leakage in the flow of income and expenditure.	Whatever is earned is not spent on consumption. As income increases consumption also increases but not so much as income. $0 \leq MPC \leq 1$ $MPC = \frac{\Delta C}{\Delta Y}$
6.	Saving is both private as well as a social virtue.	According to Keynes savings is a private virtue but a social vice
7.	Automatic Adjustment.	No automatic adjustment, Keynes recommended a fiscal stimulus so that there could be PP in the hands of unemployed. $\Delta Y = K \Delta I$ $K = \frac{\Delta Y}{\Delta I} = \frac{1}{1 - MPC}$ Multiplier is a path breaking contribution of Keynes.

Objectives

There are three objectives of this paper

1. To study the impact of covid-19 on social behaviour
2. To analyze the impact of covid-19 on Indian economy
3. To examine the effect of covid-19 on mental health



Research Methodology

This paper is an outcome of the experiences faced by the authors during the lockdown, when our dears and nears were ringing the door bell and we were not inviting them and nor do they were expecting. Notes were being exchanged along with masks and face shields on our faces. The Indian value of “Atithi Devo Bhava” has undergone a change for which still we are not prepared. According to the annual report card of the Global Health status (Released by WHO on May 13, 2020) - “It is disappointing to see India among the bottom of all countries in the context of healthy life expectancy which is now primarily driven by non-communicable diseases such as diabetes, cancer, heart and lung disease and stroke” Dr Anoop Mishra (Chairman Fortis Centre of Diabetes, Obesity and Cholesterol, New Delhi).⁷ Enough material is being supplied by a number of organizations and government agencies. Centre of Monitoring Indian Economy is doing a creditable role in supplying authentic data apart from WHO, RBI, United Nations etc. Daily news papers are carrying a lot of information. This paper is based on secondary data supplied by these sources. Simple statistical tools have also been used to draw conclusion and inferences.

Objective 1- (Social Behaviour) - The toughest thing during these days is not having physical contact with people. There have been online teaching, online examination, a number of webinars etc. where we have enjoyed live chats but nothing replaces having the persons in front of you. Indians are very much attached to social traditions and that is why they keep their family roots intact by observing all social obligations and cultural values.

Our value system has built up a social network of friends and family members. A person's social status is judged by attending social functions. The term values refer to motivations of human behaviour towards particular ends. All human beings in society want self-esteem in the form of self interest, dignity, honour and recognition. Gone are the days, when a person was judged on the basis of his birth place, family background, caste, creed, region etc. There are a number of persons, who have led revolutionary movements for a change for the better. Now every person expects that due respect should be given on the basis of attributes and the quality services rendered to the cause of society.

A person's social status is judged on the basis of the following indicators-

1. How many invitation cards are exchanged and the response rate for attending these functions.
2. How many VIPs make their presence.
3. How many persons visit hospitals in case of serious illness of a family member and how many persons come forward to donate blood in case of need.
4. How many dishes are served during social function.
5. How many persons take part in funeral processions and make it a point to send condolence messages.
6. How much amount is being spent on the parties, the venue, the decoration, the gifts etc.

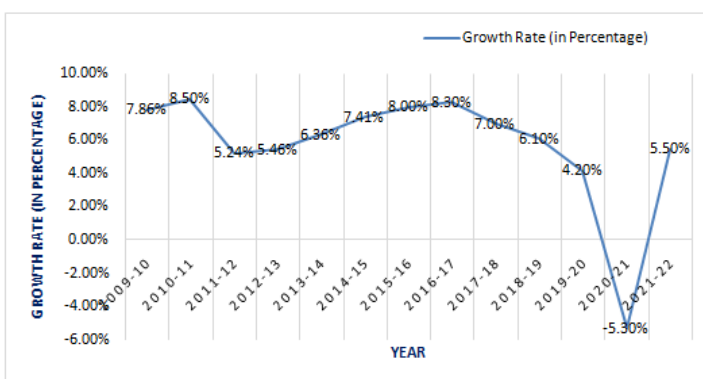
Coronavirus and frequent lockdown are bringing a compulsive big change in the social behaviour of all persons if only 50 members are allowed to attend a marriage ceremony, closed relatives and friends are even left out. Similarly only 20 persons are

allowed to attend the cremation/ burial etc. Doctors prescriptions are available online on the basis of various test reports of the patients surgeries are being postponed. Senior citizens are not meeting their friends in a park and notes are not being exchanged. Most of them are computer-illiterate. Telephonic formalities are being observed and expectations are subsiding because we are used to Physical presence.

Objective- 2 (Economic Aspect)

India became the fastest growing economy by achieving a growth rate of 8% in 2015-16 and 8.17% in 2016-17 at constant prices (2011-12) and this figure gave a confidence to make an Indian economy of 5 trillion dollar by 2024-25. Economic growth is a multidimensional concept and is reflected in people's better standard of living, better food, clothing and housing, improved education, sanitation, medical facilities, better means of transport and communication (information technology, reduction in level of poverty, hunger, unemployment and inequalities in distribution of economic and social power, increase in productivity with advancement of science and technology, carrying out innovation through research in different fields, promotion of human skills, improvement in production functions, participation of less advantageous section of the society in decision making, empowerment of the needy section of the society, social welfare and social security (inclusive growth), sustainable growth (conservation of natural resources), focus on air, water and waste management etc.

It is the climate crisis, which cuts across all sectors and has an impact on everyday life. Climate crisis is making cyclones stronger and more destructive by increasing sea surface temperature and rainfall during the storm; raising sea levels, which increase the distance that a storm & surge can reach, and allowing storms to gain strength quickly. The graph given below highlight the trends in growth rate at constant prices during the period of 11 years from 2009 to 2021-22 [estimated]



IMF'S Prediction on 25-6-2020



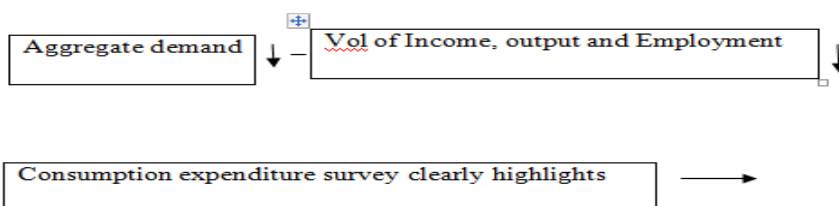
1. lowest in 11 years
2. Q4 (2019-20) growth rate remained at 3.1 % [only seven days of lock down from 25-3-2020 to 31-3-2020]

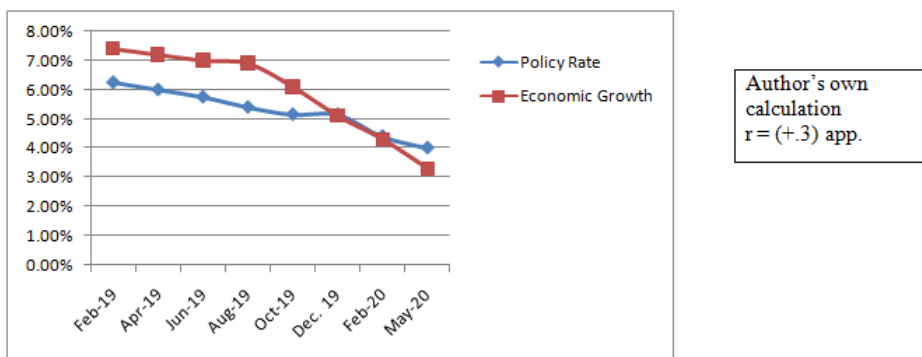
The lockdown is expected to sharply cut GDP growth rate in 2020-21. India is headed into first recession in four decades (because of covid-19) pandemic with GDP growth rate tipped to drop into negative territory in fiscal year. Gross State Domestic Product in 2020-21 loss due to COVID-19 for all states, which is 13.5% of the total GSDP, while the budget estimates pegged the GDP for 2020-21 at rupees 24.9 lakh Crore, the loss in GDP of rupees 30.3 lakh Crore means revised figure is tipped to be rupees 195.6 lakh Crore.⁸ The report estimates the economic loss in Q1 (2020-21) will exceed to 40%. The RBI warned in May 2020 about the slackening of private consumption. Economists have predicted that 25% reduction in the earnings will increase the number of those below the poverty line from 21.9% to 46.3%. Mass migration of hapless victims of lockdown has resulted in a different types of crisis (could be named as a humanitarian crisis). Fiscal deficit during 2019-20 was 4.59 % of GDP.

There has been a declaration phase in Indian economy for four consecutive years (2017-18 onwards). Gross Fixed capital formation (a measure of investment) contracted by 2.8% in 2019-20 (worst performance since 1991-92) Private final consumption expenditure has also gone down from 8.1% in 2017-18 to 5.3% in 2019-20.⁹ India has seen four instances of contraction in GDP since 1951-52 [1957-58, 1965-66, 1972-73 and 1979-80]. The household savings rate has also gone down from 23.6% of GDP in 2011-12 to 18.2% in 2018-19.¹⁰ According to UN chief "Pandemic will cause unimaginable devastation, usher in hunger and famine of historic proportions and lead to a loss of 8.5 trillion dollar in global output-the sharpest contractions since the Great Depression of the 1930s. Sixty million more people have been pushed to extreme poverty upto half the Global workforce is without livelihood."¹¹

India's sovereign credit rating was cut by a notch to the low investment-grade with negative outlook by Moody's investor service, which cited growing risks that Asia's third largest economy will face a prolonged slower growth amid rising debt and persistent stress in part of the financial system. The country's credit rating was downgraded to Baa3 from Baa2.¹² India will continue to face high unemployment rates in the wake of pandemic if the economy is not in revival mode soon. If we do not address growth, there will be a number of issues.

Aggregate demand in the economy = Final consumption expenditure + Govt purchase of goods and services + Gross domestic private investment + Net exports





From the graph above, it is very clear that normally a negative relationship is there between policy rate and rate of economic growth but here this is not happening. Because consumption mainly depends on income (Purchasing Power) and Inv on the expected rate of profit. Tens of millions have lost their job, production has come to a halt and the aggregate demand has reached rock-bottom due to steep fall in exports, investment and consumption demand. India has given a stimulus to the tune of 10% of GDP i.e. Rs. 20 lakh crore to boost liquidity, consumption and investment in the economy. It is important to reach out to those sections of the population that need relief to even survive. The need of the hour was money in hand.

Objective- 3 (Psychological Effect)

Nowadays due to covid-19, human mind set has become very negative, because every where there is negative news- whether on print media, TV on social media. When a person does not work, what will he eat? People are in street, they are facing the problems of uncertainty, hopeless, worry about future, loneliness, emotional disturbance because covid-19 has changed human relationships during these months. Tomorrow what will happen, nobody knows? If job is not there, lives are disrupted, livelihoods are hurtor even destroyed and person stare at an uncertain future for themselves and other family members. This has caused anxiety, fear, stress and trauma. Depression is something that anyone can experience it any point of their life. People suffering from depression might get rude. Irrespective of the pandemic mostly Indians have not prioritized mental well-being except they are worried about their physical well being sometimes, one needs someone to listen to him/her.

United Nation Secretary General Antonio Guterres on 13th May 2020 said- need for government to urgently address mental health Care needs and ask them to include mental health as part of their policy response to the Pandemic. The mental health crisis will stay beyond the pandemic and people across classes and communities will need help.¹³ India ranks poorly in Mental Health Awareness and treatment. Battling social stigma on one hand and lack of mental health has always been important sphere of our lives. It is believed that the root of most issues which are needed to be addressed.



Conclusion

New cases in six countries- Brazil, Russia, India, Peru, Chile and Mexico have seen a drastic surge in the month of April & May 2020. India reported the third highest new cases on June 3, 2020. In the new case curves of the 20 worst hit nations, above-mentioned six nations have upward trajectory, while the other top nations all have dropped. In fact, the health care infrastructure is built over decades. Now three months are over into pandemics run in India and after more than two months of lockdown, no one would accept that the country does not have testing resources physical activity is great for mental health- but this all depends to the condition that one has not lost the job and is able to fulfill all basic needs of the family. The new normal will definitely take some re-adjusting time. When it comes to choose one out of life and living, it is really very difficult to choose one. Both are equally important.

Suggestion

1. Public health system should be well coordinated and well managed with proper backward and forward linkage
2. Focus should be on air, water and waste management. Climate crisis is the overarching challenge.
3. Boost a low carbon economy for jobs, growth and sustainability.
4. Country is first, we all are Indians challenges are to be accepted and opportunities are to be availed.
5. Last but not the least, we must observe norms of planned parenthood.

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**COMMERCIAL WISDOM OF CREDITORS FOR VALUE MAXIMIZATION:
THE SIGNIFICANCE OF MAHARASHTRA SEAMLESS LIMITED VS.
PADMANABHAN VENKATESH & ORS**

Dr. Binoy J. Kattadiyil
ICSI IIP, IPA of IBBI

Introduction

Businesses are the backbone of the economy, and when a business is successful it is due to the knowledge of the its leaders, and when a business fails it leads to insolvency which is then in the hands of the individuals who understand the commercial sector. The role of Insolvency and Bankruptcy Code 2016 in the commercial machinery lies in the latter. Wisdom is referred to the quality of sound experience, knowledge, and good judgement to arrive at a decision; Commercial wisdom is the same presented specifically in the field of economics.

When IBC made the shift from debtor-in-possession to creditor-in-control regime, it gave the creditors of a business their due right of deciding what happens to their investments in the business. The revolutionary legislation, albeit, set a fair system to the effect. Once an application for default is filed against the Corporate Debtor, the Corporate Insolvency Resolution Process (CIRP) guides the formation of a Committee of Creditors (CoC) where the goal is to reach an amicable resolution or opt for liquidation. During the CIRP, the claims by the creditors, the Resolution value, and the Liquidation value are analysed. The resolution is reached by assessing the circumstances and information available which will result in the creditors receiving monetary compensation as close as possible to their admitted claims.

Basic instinct justifies that if the Liquidation value is higher than the Resolution value, the creditors must opt for the former, but an important factor to be put into consideration is the realisable value i.e. the monetary amount the creditors will receive at the end of the resolution or liquidation which is dependent on the time, as the value of the assets tend to fluctuate within the time period it takes to assess them and when they are actually sold. This is where the commercial wisdom of the creditors comes into play, as we will discuss in this article with the case of Maharashtra Seamless Limited. The basic assertion the Liquidation value and the Resolution value should either be equal and if not, opt for the value which is higher is not be determined by the adjudicating authorities or any other parties other than the financial creditors of the Corporate Debtor.

Background of the Case

The Corporate Debtor (CD) is United Seamless Tubular Private Limited with a total debt of INR 1897 crores. The application for default was filed by one of the Financial



Creditors, Indian Bank. The assets of the CD were assessed by three different registered valuers due to substantial difference in valuation. The final valuation was considered the average of the closest two estimations at INR 432 crores. Out of the four Resolution Plans submitted to the Resolution Professional (RP), the plan by Maharashtra Seamless Limited was approved by the CoC with approximately 87% votes.¹ The point of contention was raised by the suspended Board of Directors of the CD, who alleged that the Resolution Plan was approved in contravention to the IBC, and the maximisation of the value of assets of the CD was lost. The NCLT passed an order to re-assess the Liquidation value of the CD.²

An appeal was raised and the NCLAT directed the NCLT to pass the order under Section 31 of the IBC, which is to allow the Resolution Plan to pass if the approval of the CoC has been obtained at their discretion.³ Also, the re-assessment of the Liquidation value was conducted which placed the value of the CD at INR 597.54 crores- a jump of almost INR 170 crores from the agreed Resolution value. The appellate authority also held that the CoC should suggest the Resolution Applicant (RA), Maharashtra Seamless Limited to make changes to the Resolution Plan if necessary, instead of the adjudicating authority.⁴

Consequently, the agreed Resolution Plan value was set at INR 477 crores, and the NCLAT directed the RA to pay INR 120 crores more to compensate the difference between the Resolution Plan value and the Liquidation value. Owing to which, the RA would be allowed to take possession of the CD, otherwise not.

Supreme Court Judgement

The RA appealed to the Supreme Court based on the order passed by the NCLAT. It was contended that the adjudicating authority, NCLAT in this instance, cannot sit in appeal over the commercial wisdom of the CoC in approving a Resolution Plan. Furthermore, the RA applied for withdrawal of the Resolution Plan following depositing INR 477 crores in accordance with the Plan and was subsequently denied access to the assets of the CD.⁵

The Supreme Court addressed the two issues on January 22, 2020. First issue concerned whether the IBC stipulated that the Resolution Plan value should be equal to the Liquidation value. The Apex Court held that the Adjudicating Authority cannot interfere in the decision based on the commercial wisdom of the CoC, as long as the CoC made sure that the business of the CD was kept going as a going concern, the value of the assets have been maximised, and the interest of all stakeholders have been taken care of. The Resolution Plan value does not have to match the Liquidation value under the IBC

¹United Seamless Tubulaar Private Limited IA No. 472-2018 in CP (IB) No. 49-7-HDB-2017

² Ibid

³ Maharashtra Seamless Ltd. Vs. K.K. Lakshminarayana & Ors. CA(AT)(Ins) No. 637 of 2018

⁴ Ibid

⁵ Maharashtra Seamless Limited Vs. Padmanabhan Venkatesh & Ors. Civil Appeal No. 4242 of 2019



or any of the IBBI Regulations,⁶ even if it seems that the difference between the values is inequitable.⁷ Only when the circumstances point to the otherwise of the stated⁸, the Adjudicating Authority should ask the CoC to make amendments to the Resolution Plan which the NCLAT and the Supreme Court did not find. It was stipulated that the role of the Adjudicating Authorities is limited to judicial review, reiterating the late 2019 judgement in the case of Essar Steel India Limited.⁹

On the issue of RA seeking withdrawal from the Resolution Plan via Section 12-A of the IBC 2016, the Supreme Court held that the provision is not applicable to the RA but to applicants who invoke Section 7, 9 and 10 of the Code.¹⁰ The NCLAT order was set aside and the Supreme Court allowed the RA to take possession of the assets of the CD within four weeks of the judgement with the assistance of administrative and law enforcement authorities.¹¹

Decision-Making Process for Value Maximisation

The Judgement in the case of Maharashtra Seamless Limited has a twofold significance. First, in re-establishing the precedent¹² on the role of the Adjudicating Authority. And secondly, on the reliance on the decision-making process of the Creditors of the CD. The Code is designed to promote resolution-seeking among the stakeholders. Of course, the stakeholders would seek a resolution which would allow them a fair return of their admitted claims, but value maximization is not simply about numbers projected by the Registered Valuers during the CIRP. Let us consider the case at hand, the value of the assets of the CD fluctuated immensely during the CIRP as shown in Table 1 below.

Value assessing Entity	Value of the assets (approx.)
Registered Valuer 1 (K. Vijay Bhasker Reddy)	INR 681 crores
Registered Valuer 2 (P.Madhu)	INR 513 crores
Valuer 3 (Duff and Phelps)	INR 352 crores
Final Valuation (via Resolution Professional)	INR 597 crores

Table 1

The mistake a layman would make is to equate the value of the assets of the CD to its Liquidation value. Sure, the Liquidation value of the CD is INR 597 crores at that

⁶ Section 35 of the IBBI (Insolvency Resolution Process for Corporate Persons) Regulations, 2016

⁷ Maharashtra Seamless Limited Vs. Padmanabhan Venkatesh &Ors. Civil Appeal No. 4242 of 2019

⁸ Section 31(1) and Section 30 (2), (4) of the Insolvency and Bankruptcy Code 2016

⁹ Committee of Creditors of Essar Steel India Limited Through Authorised Signatory Vs. Satish Kumar Gupta &Ors. Civil Appeal No. 8766-67 of 2019 and Ors.

¹⁰ Maharashtra Seamless Limited Vs. Padmanabhan Venkatesh &Ors. Civil Appeal No. 4242 of 2019

¹¹ Ibid

¹² Committee of Creditors of Essar Steel India Limited Through Authorised Signatory Vs. Satish Kumar Gupta &Ors. Civil Appeal No. 8766-67 of 2019

particular period of time. But if the value assessment during CIRP via three different valuers result in such drastic monetary differences, then when the CD actually goes into liquidation, say after a year or two of the assessment, the certainty of the final valuation is compromised. The market value of the assets may have dropped or increased significantly than the value at which the CoC decided the CD to undergo liquidation. The realisable value might only be INR 352 crores, as suggested by the Third Valuer, instead of INR 597 crores.

Another aspect in consideration of the Creditors is that Resolution value is generally considered the amount of money an RA offers for a resolution of the CD.¹³ Thus, the Resolution value of INR 477 crores offered by the RA- Maharashtra Seamless Limited is the amount the Claimants will definitely receive at the end of the CIRP, unlike the Liquidation value of the time.

Well-informed decisions are important in economic matters and it is put forward that the more information the Creditors receive, the better decisions they take during an insolvency process. A fantastic explanation of this is laid down by Dr. M.S. Sahoo in his article "The Art of Value Maximisation," which will be used to analyse the decisions of the Creditors within the CoC of the case at hand- Maharashtra Seamless Limited.¹⁴ In Table 2, the Creditors are only aware of the Liquidation and Resolution value, and thus would tend to reject a Resolution Plan put forward by the RA.

Description	Creditor 1	Creditor 2	Creditor 3
Liquidation value	597	597	597
Resolution value	477	477	477
Decision on Resolution Plan	Reject	Reject	Reject

Table 2

In Table 3, the Creditors now compare their claims with the Liquidation and Resolution value and thus make their decisions as follows.

Description	Creditor 1	Creditor 2	Creditor 3
Debt Claims	250	550	650
Liquidation value	597	597	597
Resolution value	477	477	477
Decision	Accept	Reject	Reject

Table 3

It is when the Creditors compare their claims, Liquidation and Resolution value with the realisable value (in Table 4) that the Creditors tend to accept a Resolution value of INR 477 crores to the Liquidation value of INR 597 crores. Thus, it is important to give due

¹³The Art of Value Maximisation in CIRP. IBBI Quarterly Newsletter Jan-Mar 2020

¹⁴ The analysis is different from the what presented in the Article. The instances of Corporate Debtors is replaced with Creditors to study the decision-making process of Creditors in the CoC in the present case.

credit to the Creditors and their ingenuity and commercial wisdom when they make decisions during a CIRP.¹⁵ A deal which satisfies all the stakeholders requires more information than just the comparison of the Liquidation and Resolution value of the assets of the CD.

Description	Creditor 1	Creditor 2	Creditor 3
Debt Claims	250	550	650
Liquidation value	597	597	597
Resolution value	477	477	477
Realisable Value on Liquidation	450	450	450
Decision	Accept	Accept	Accept

Table 4

We also notice that the cases where the CIRPs resulted in resolutions, the realisable value received by the Creditors was 183% of the value they would have received at liquidation.¹⁶ This is highly valuable information because it suggests that the commercial wisdom of Creditors allowed them to sift through information as analysed in Table 4 above. This is testament of the fact that no third party can assess the situation at hand better than the Financial Creditors of the CD during an insolvency process, as long as they are compliant with the rules of the IBC.

Time Period	Total Admitted Claims by FC (INR crores)	Liquidation value (INR crores)	Realisable by FCs (INR crores)	% of their Admitted Claims	% of Liquidation value
Jan-Mar '18	4405	1427	3070	69.70	215.11
Apr-Jun '18	76239.12	18084.36	42885.44	56.25	237.14
Jul-Sept '18	42269.56	9541.80	11079.32	26.21	116.11
Oct-Dec '18	8447.71	2953.97	6958.46	82.37	235.56
Jan-Mar '19	39675.20	6155.97	9568.5	24.11	155.43
Apr-Jun '19	32385.84	6836.19	7151.33	22.08	104.60
Jul-Sept '19	79442.25	14870.43	27159.17	34.18	182.63
Oct-Dec '19	25762.51	2853.32	3513.61	13.63	123.14
Jan-Mar '20	39101.77	19567.67	25063.79	64.10	128.09
Total	384436.67	96349.52	176673.70	45.96	183.37

Table 5¹⁷

¹⁵ Also noted in the case of Bhaskara Agro Agencies Vs. Super Agri Seeds Pvt. Ltd. CA (AT) No. 380-2018 & Shri Ram Residency Pvt. Ltd. Vs. Kuldeep Verma, RP, Jalan Intercontinental Pvt. Ltd. & Ors. CA (AT) No. 202-2018

¹⁶ The Quarterly Newsletter of Insolvency and Bankruptcy Board of India. Jan-March 2020, Vol.14.

¹⁷ The data from October 2016 to December 2017 has not been listed in the table but the amounts have been added in the grand total.



Conclusion

The Judgement of the Supreme Court in the case of Maharashtra Seamless Limited is similar to the judgements that have been reached by other Adjudicating Authorities in different cases¹⁸, including the apex court itself,¹⁹ i.e. the feasibility of the Resolution Plan is best left to the ingenuity of the Creditors. The analysis of the decision-making process of the Creditors of the CD helps us understand how information and long-term thinking and vision are significant for Creditors when considering the feasibility of a Resolution Plan.

There is a counter argument to this commercial wisdom of the CoC which might allow malpractice to seep into the resolution-making process. Although this is a valid argument, the point is to understand that the decision-making process of the CoC is multi-faceted and what might seem like malpractice might actually just be the utilisation of commercial wisdom of the Creditors. And the Adjudicating Authority in its judicial capacity still carries a lot of punch in assessing if the CoC complied with the provisions of the IBC and relevant IBBI Regulations.

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¹⁹ In the case of Committee of Creditors of Essar Steel India Limited Through Authorised Signatory Vs. Satish Kumar Gupta &Ors. Civil Appeal No. 8766-67 of 2019



IMPACT OF LLS INSTRUCTION ON LANGUAGE PROFICIENCY OF ASSAMESE ESL LEARNERS

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Abstract

This study aims to investigate the impact of Strategies Based Instruction (SBI) to enhance reading and writing proficiency of Assamese ESL learners. A total of 20 students from two colleges of Assam, India, participated in the study. The goal of this paper is to examine if LLS instruction enhances experimental groups' ability in answering reading comprehension questions and writing summary and essay in English. There was no significant difference between control and experimental groups in their performance in reading comprehension ability and writing summary and essay before strategy instruction. However, after the LLS instruction an impact was witnessed which is evident from the independent samples t-test. The T values obtained in three types of reading comprehension questions (6.934, 3.216 & 3.639) and writing summary and essay (4.819 & 6.220) are significant ($p=.000$, $.005$ & $.002$; $p<.05$) and ($p=.000$ & $.000$; $p<.05$). The result indicates that there is statistically significant difference in the mean scores of the experimental and control groups in reading and writing proficiency in English after LLS instruction. The experimental group outperformed the control group in the posttest.

Key words: Assamese ESL Learners, LLS Instruction, Reading and Writing Proficiency, SBI

Introduction

In Assam English occupies the prestigious status of a Second Language (SL). Motivation for learning the language is quite favorable because the knowledge of English is a prerequisite for better employment opportunity and social or economic status. There is an ever growing demand for the language in almost every sphere of social life. English is also a compulsory subject in the educational institutions. However, at the undergraduate level, despite learning English for almost twelve years most Assamese ESL learners display below expected level of proficiency in all the four major language skills. In this backdrop this study is carried out to investigate the impact of SBI in enhancing reading and writing proficiency of Assamese ESL learners.

Review of literature

Language Learning Strategies (LLS) is the outcome of the development of cognitivist theory in language learning during 1970s. LLS are 'operations employed by the learner to aid the acquisition, storage, retrieval, and use of information...; specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-



directed, more effective, and more transferable to new situations' (Oxford, 1990:8). Therefore LLS are good indicators of how learners approach tasks or problems encountered during the process of language learning.

It is evident that effectiveness in learning a language depends to a considerable extent on the selection and use of LLS. Explicit knowledge about the characteristics of a language task and appropriate strategies for task completion is the major determiner of effective language learning. Because "appropriate language learning strategies result in improved proficiency and greater self-confidence" (Oxford, 1990:1). LLS capture the process of learning a language. Therefore, LLS instruction helps learners understand their language learning process and exert some control over these processes. Learners become more responsible and autonomous in learning. The effectiveness of language learning can be enhanced if less effective learners are exposed to a repertoire of LLS. A number of studies have proved that LLS instruction have been quite successful in improving reading and writing proficiency. For example, Tang & Moore (1992), Sexton, Harris & Graham (1998), Fuping (2006), Karbalaee & Rajyashree, (2010), Wischgoll (2016), Cer (2019), Feng (2020) etc.

Tang and Moore (1992) conducted a study on investigating the effectiveness of pre-reading activities such as title discussion and vocabulary training in decreasing oral reading errors and increasing reading rate and comprehension across a range of reading levels. In first experiment they examined the effects of these cognitive activities in combination on the reading comprehension of three adult ESL emergent readers. In second experiment they explored the relative effects of this procedure, and a metacognitive strategy for presenting these pre-reading techniques, on the comprehension levels of five adult ESL learners. Results indicated that both cognitive strategy and metacognitive strategies were effective in raising comprehension levels.

Sexton, Harris & Graham (1998) conducted a study where they used The Self-Regulated Strategy Development (SRSD) model to assist six students with learning disabilities (LD) develop a strategy for planning and writing essays, self-regulation of the strategy and the writing process, and positive attributions regarding effort and strategy use. The results indicated that LLS instruction had a positive effect on students' approach to writing, writing performance, and attributions for writing.

Fuping (2006) conducted a study on 76 intermediate EFL students of non-English major who were divided into two groups. One group was a participant of a strategies-based instruction treatment and the other was a comparison group receiving regular language course. Both groups filled out a pre-treatment learning strategy questionnaire and then performed a pre-test and a post-test. The data looked for links between strategy training and proficiency in answering different types of reading comprehension questions. The findings indicated that LLS instruction increased learners' score in main idea and inference questions but not in detailed questions.

Karbalaee and Rajyashree (2010) conducted a study on the effectiveness of Summarization instruction on reading comprehension at undergraduate level. A sample of 63 students majoring English, aged 17-25, were selected from four intact classes in three different colleges in India. The effects of summarization instruction were measured by their performance on two reading comprehension texts. Students' performance on a proficiency test was used to group students into high and low levels



and it functioned as another independent variable in addition to gender. Findings indicated that the explicit instruction was effective in enhancing reading comprehension of Indian students. There was no statistically significant difference between two groups after instruction. It indicated that the lower level learners received more benefit of summarization strategy training than their higher level counterparts

Wischgoll (2016) conducted a research in the high school setting that showed that the acquisition of writing skills could be supported by single-strategy training. It was examined if the development of academic writing skills could also be effectively supported by LLS training. The focus of the study was on the benefit of combined cognitive strategies with and without a metacognitive strategy. Sixty German-speaking psychology undergraduates participated in the study which lasted for three hours. All participants wrote an abstract of an empirical article. The results indicated that learners who received the additional self-monitoring strategy intervention benefited significantly more in terms of acquisition of academic writing skills and the quality of their texts than learners who did not receive this intervention.

Cer (2019) conducted a study to investigate the effect of metacognitive strategies of “knowledge of cognition” and “regulation of cognition,” for improving learners’ writing skills. The study included 44 pupils (21 control, 23 experimental) at a private secondary school. The pupils in the experimental group were instructed in metacognitive strategy-based writing practices, whereas the pupils in the control group were instructed in traditional writing practices. The results revealed positive result of the LLS instruction in improving writing skills.

Feng (2020) presents a small-scale study examining the effects of metacognitive reading strategy instruction on English language learners’ reading comprehension in a Hong Kong international school. The study included 25 primary school (Grade 5) students who learnt English as a second language. Metacognitive instruction was incorporated in the reading lessons. The researcher collected data from notes learners took during reading, post-reading reflection reports, teacher-facilitated group discussions and two types of reading tests. The study revealed that the young learners could articulate several knowledge factors that influenced their reading. In addition, learners reported a better understanding of the nature and demands of reading, a deeper awareness of metacognitive knowledge in improving reading comprehension and increased confidence in handling reading exercises. The learners also showed enhanced reading performance compared to those in a control group without metacognitive intervention. This study highlighted the potential of metacognitive instruction to enhance primary school English learners’ reading literacy.

Hypothesis and Research Questions

Following hypotheses and research questions guided the present research.

H₀1: There is no significant impact of the Language Learning Strategies (LLS) instruction on the Assamese ESL learners’ ability in answering main idea, factual information and inference questions of the reading comprehension test.

Research Questions:

1. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test before LLS training?



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2. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test after LLS training?

H₀2: There is no significant impact of the Language Learning Strategies (LLS) instruction on the Assamese ESL learners' performance in writing summary and essay in English.

Research Questions:

1. Is there any difference between control and experimental groups in their performance in writing summary and essay in English before strategy instruction?
2. Is there any difference between control and experimental groups in their performance in writing summary and essay in English after strategy instruction?

Methodology

This study adopted an experimental design known as 'pre-test - post-test control-group design'. A total of 20 first semester undergraduate Assamese ESL learners from the humanities and allied subjects of Dibrugarh University, Assam participated in the study. The participants had 10 to 12 years of English learning experience at the time of the experiment. The average age of the participants was 19 to 20 years. The learners were pretested before LLS treatment. They were then divided into control group (N=10) and experimental group (N=10). The control group did not receive any special teaching. They received traditional method of teaching. The experimental group received LLS instruction for four weeks on different LLS pertaining to reading and writing in English. After the treatment sessions, the groups were again post tested on the same reading and writing activity questionnaire in order to identify the impact, if any, of the LLS instruction on the experimental group.

The reading and writing activity questionnaire was designed as an instrument to test the participants' proficiency in English. The questionnaire contained a total of 20 multiple choice comprehension questions, 5 each from four passages. Out of the 5 multiple choice comprehension questions, there were 2 main idea questions, 2 factual information questions and 1 inference question. There were four options for each multiple choice comprehension questions and the participants were required to read the passage and mark the correct option. The score for each question was 1. Thus, the highest score was 20. Two passages were selected from previous undergraduate level question papers of the Dibrugarh University and the rest two passages were based on the TOEFL (2005).

Learners' proficiency in writing skill was assessed with the help of two summary writing activities and an essay writing activity incorporated in the reading and writing activity questionnaire. The learners were asked to write summaries of two passages given for the reading comprehension task. Topics for the essay writing activity were selected from TOEFL (2005). These included topics of general interest of learners which help in the assessment of learners' ability for descriptive and argumentative writing. There were four options for the essay writing task. The questionnaire contained space in it for writing the summaries and the essay. The experiment lasted for four weeks comprising of three phases. The first phase was the pre-test, second phase was the LLS instruction and the third phase was the post-test.

Results and Findings

Results for the first null hypothesis:

H₀1: There is no significant impact of the Language Learning Strategies (LLS) instruction on the Assamese ESL learners' ability in answering main idea, factual information and inference questions of the reading comprehension test.

Research Questions:

1. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test before LLS training?
2. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test after LLS training?

Results for the research questions:

1. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test before LLS training?

An independent samples t-test is carried out to investigate the above question.

	Group	N	Mean	Std. Deviation	Std. Error Mean
Main Idea	Experimental Group	10	1.40	.966	.306
	Control Group	10	1.20	1.229	.389
Factual Information	Experimental Group	10	5.80	1.317	.416
	Control Group	10	7.00	1.764	.558
Inference	Experimental Group	10	.90	.876	.277
	Control Group	10	2.10	1.287	.407

Table 1 demonstrates that in the pre-test context, there is no high difference in the mean scores of the experimental and control groups in main idea questions. But, in case of factual information questions and inference questions the mean score of the control group is higher than that of the experimental group.

The Leven's test of equality of variance in Table 2 indicates that the F values (.073, .006 & 2.355) were not significant ($p=.790$, $.938$ & $.142$; $p>.05$). This implies that there was no significant variability in score between the groups in the three types of comprehension questions. In case of main idea and factual information questions, the T values (.405 & 1.724) are not significant ($p=.691$ & $.102$; $p>.05$). On the other hand, for the inference questions, the T value (2.438) was found to be significant ($p=.025$, $p>.05$). Therefore, it can be concluded that both control and experimental groups answered the main idea and the factual information questions nearly in the same way but there were



differences in answering the inference question. The control group performed significantly better in answering inference questions.

Table 2: T-test of Groups in Answering Reading Comprehension Questions in Pre-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Main Idea	Equal variances assumed	.073	.790	.405	18	.691	.200	.494	-.839	1.239
	Equal variances not assumed			.405	17.048	.691	.200	.494	-.843	1.243
Factual Information	Equal variances assumed	.006	.938	-1.724	18	.102	-1.200	.696	-2.662	.262
	Equal variances not assumed			-1.724	16.653	.103	-1.200	.696	-2.671	.271
Inference	Equal variances assumed	2.355	.142	-2.438	18	.025	-1.200	.492	-2.234	-.166
	Equal variances not assumed			-2.438	15.864	.027	-1.200	.492	-2.244	-.156

2. Is there any difference between control and experimental groups in answering main idea, factual information and inference questions of the reading comprehension test after LLS training?



An independent samples t-test is carried out to investigate if there is any difference between the experimental and the control groups in answering different types of reading comprehension questions in the post-test context.

Table 3: Mean Scores in Answering Reading Comprehension Questions in Post-test					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Main Idea	Experimental Group	10	3.80	.422	.133
	Control Group	10	1.30	1.059	.335
Factual Information	Experimental Group	10	9.60	1.265	.400
	Control Group	10	7.60	1.506	.476
Inference	Experimental Group	10	3.10	.994	.314
	Control Group	10	1.50	.972	.307

It can be observed from Table 3 that the mean scores of the experimental group is considerably high than the control group in all the three types of comprehension questions after the LLS treatment.

The Leven's test of homogeneity in Table 4 states that the F values ($F=.346$ & $.099$) are not significant ($p=.564$ & $.757$; $p>.05$) in case of factual information and inference questions. This shows that there is not much variability in mean scores of the two groups in these two types of questions. However, the F value ($F=5.693$) of main idea question is significant ($p=.028$, $p<.05$) which indicates that the variability in mean scores of the two groups is not same in case of main idea questions. The T values obtained (6.934 , 3.216 & 3.639) are significant ($p=.000$, $.005$ & $.002$; $p<.05$) in all the three types of questions.

The result indicates that there is statistically significant difference in the mean scores of the experimental and control groups in answering three types of comprehension questions after LLS instruction. The experimental group outperformed the control group in all the three types of questions in the posttest. In other words, we can reject the null hypothesis and state that there is significant impact of the LLS instruction on the Assamese ESL learners' ability in answering main idea, factual information and inference questions of the reading comprehension test.



Table 4: T-test of Groups in Answering Reading Comprehension Questions in Post-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Main Idea	Equal variances assumed	5.693	.028	6.934	18	.000	2.500	.361	1.743	3.257
	Equal variances not assumed			6.934	11.782	.000	2.500	.361	1.713	3.287
Factual Information	Equal variances assumed	.346	.564	3.216	18	.005	2.000	.622	.694	3.306
	Equal variances not assumed			3.216	17.480	.005	2.000	.622	.691	3.309
Inference	Equal variances assumed	.099	.757	3.639	18	.002	1.600	.440	.676	2.524
	Equal variances not assumed			3.639	17.990	.002	1.600	.440	.676	2.524



Results for the second null hypothesis:

H₀2: There is no significant impact of the Language Learning Strategies (LLS) instruction on the Assamese ESL learners' performance in writing summary and essay in English.

Research Questions:

3. Is there any difference between control and experimental groups in their performance in writing summary and essay in English before strategy instruction?
4. Is there any difference between control and experimental groups in their performance in writing summary and essay in English after strategy instruction?

Results for the research questions:

1. Is there any difference between control and experimental groups in their performance in writing summary and essay in English before strategy instruction?

Table 5 indicates that the difference of the two groups in summary and essay writing is not very high. However, in order to know if the differences are statistically significant it is necessary to look into the results of the t-test shown in Table 6.

	Group	N	Mean	Std. Deviation	Std. Error Mean
Summary writing	Experimental Group	10	3.90	.994	.314
	Control Group	10	3.20	.919	.291
Essay Writing	Experimental Group	10	2.10	.876	.277
	Control Group	10	2.00	1.155	.365

The Leven's test for equality of variances states that the F values (.070 & 1.899) are not significant ($p=.794$ & $.185$; $p>.05$). Therefore, there is not much variability in the mean scores of the two groups. The T values obtained (1.635 & .218) are not significant ($p=.119$ & $.830$; $p>.05$). It indicates that the difference in the mean scores of the two groups in writing summary and essay was not statistically significant before LLS treatment.



Table 6: T-test of Groups in Summary and Essay Writing in Pre-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Summary writing	Equal variances assumed	.070	.794	1.635	18	.119	.700	.428	-.200	1.600
	Equal variances not assumed			1.635	17.889	.120	.700	.428	-.200	1.600
Essay writing	Equal variances assumed	1.899	.185	.218	18	.830	.100	.458	-.863	1.063
	Equal variances not assumed			.218	16.778	.830	.100	.458	-.868	1.068

2. Is there any difference between control and experimental groups in their performance in writing summary and essay in English after strategy instruction?

An independent samples t-test is carried out to investigate if there is any difference between control and experimental groups in their performance in writing summary and essay in English after strategy instruction.

Table 7: Mean Scores of the Groups in Summary and Essay Writing in Post-test

	Group	N	Mean	Std. Deviation	Std. Error Mean
Summary writing	Experimental Group	10	6.30	1.160	.367
	Control Group	10	3.70	1.252	.396
Essay writing	Experimental Group	10	4.50	.527	.167
	Control Group	10	2.10	1.101	.348

Table 7 states that there is considerable difference in the mean scores of the experimental and control groups in writing summary and essay in the post-test context.

The Leven's test for equality of variances in Table 8 states that the F value (.127) of summary writing is not significant ($p=.683$, $p>.05$). But in case of essay writing, the F value (6.517) is significant ($p=.020$, $p<.05$). On the other hand, the obtained T values (4.819 & 6.220) in both the cases are significant ($p=.000$ & $.000$; $p<.05$). This implies that the mean scores in summary and essay writing of the experimental and control groups differ statistically significantly after the LLS treatment. The strategies instruction improved the summary and essay writing ability of the experimental group to a considerable extent. They outperformed the control group in the post-test context though there was no significant difference between the two groups before the LLS instruction. In other words, the null hypothesis can be rejected and it can be stated that there is significant impact of the LLS instruction on the Assamese ESL learners' performance in writing summary and essay in English.

Table 8: T-test of Groups in Summary and Essay Writing in Post-test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Summary writing	Equal variances assumed	.172	.683	4.819	18	.000	2.600	.540	1.466	3.734
	Equal variances not assumed			4.819	17.896	.000	2.600	.540	1.466	3.734
Essay writing	Equal variances assumed	6.517	.020	6.220	18	.000	2.400	.386	1.589	3.211
	Equal variances not assumed			6.220	12.922	.000	2.400	.386	1.566	3.234

Discussion

The findings of the statistical analysis revealed that before the LLS instruction there was no significant difference in answering the reading comprehension questions and writing summary and essay in English. But after the LLS instruction there was statistically significant difference in the mean scores of the experimental and control groups. The



experimental group outperformed the control group. Therefore, it can be easily inferred that the impact of LLS instruction was positive in improving the reading and writing proficiency of Assamese ESL learners. This confirms the findings of previous studies in SL and FL contexts such as Tang & Moore (1992), Sexton, Harris & Graham (1998), Fuping (2006), Karbalaeei & Rajyashree, (2010), Wischgoll (2016), Cer (2019), Feng (2020) etc.

Conclusion

The present study proves that LLS are teachable its instruction can increase learner autonomy by enabling learners to control their own learning. The members of the experimental group outperformed the control group both in reading comprehension and writing ability after receiving strategy instruction. The study recommends that the curriculum planners and policy makers should integrate SBI in the educational system from early stages of ESL learning. It is essential that the textbooks should provide scope, opportunity and necessary information for providing exclusive and integrated strategies instruction in the schools and colleges. The training of teachers to carry out strategies based instruction is also necessary.

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CHALLENGES FACED BY THE TRIBAL PEOPLE IN TRIPURA AFTER MERGER WITH INDIAN UNION AND THEIR QUEST FOR AUTONOMY

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Abstract

Tripura is the third smallest state in India after Goa and Sikkim. The state is situated in the North-East corner of India. The *Tripuri* dynasty ruled this ancient kingdom for several centuries and at last handed over the administration of the kingdom to the government of India in 1949. The transformation of the monarchy into the present democratic State as part of the Indian Union lead in substantial and unsettling social, economic and political changes, embedding comprehensive infirmities in society. The Tribal people of Tripura entered into an ever new kind of situation after merger of the princely kingdom Tripura with the newly independent country India. The term '*Tiprasa*' is used by native tribal people of Tripura, which means 'Son of Tripura', who are originated in Princely Tripura. The tribal people had faced certain challenges in the changing political phenomenon. The Partition and Tripura's merger with the Indian Union opened the scope of Bengali Hindu migration from East Pakistan, which changed the demography of the erstwhile princely state forever. Though, there were Bengali inhabitants in princely Tripura and they were subjects of the *Tripuri* king. But, after partition, 6,09,998 (Six Lakh Nine Thousand Nine Hundred Ninety-nine) displaced people came to Tripura from East Pakistan during 15th August, 1947 to 24th March, 1971. A tremendous pressure of excessive population was faced by the native tribal people of the state. Influx of Lakhs of Bengali Hindu displaced people, rehabilitation of many Bengali peoples in the interior places in eastern Tripura, encroachment of lands meant for plough cultivation for the tribal people, dereservation of some parts of tribal land, outnumbering of the tribal population by the Bengali Hindu population, fear of the loss of land, language, and local autonomy, money-lending by some Bengali merchants, etc. account for the rise and growth of quest for their autonomy.

Key words: Tribal, Bengali Hindu, Migrants, Displaced, Autonomy.

Introduction

Tripura is the third smallest state in India after Goa and Sikkim. The state is situated in the North-East corner of India. It is surrounded by Bangladesh on three sides. The *Tripuri* dynasty ruled this ancient kingdom for several centuries and at last handed over the administration of the kingdom to the government of India in 1949. After the merger with Indian Union, Tripura went through different stages of political and administrative change to get the status of a full-fledged statehood of independent India.

Changing political and administrative status of Tripura State

At the time of Indian independence in August 1947, India was divided into two sets of territories, the first, being the territories of 'British India', were under the direct



control of the India Office in London and the Governor General of India; and the second, being the "Princely states", the territories over which the British Government had imperality, but, they were under the control of their hereditary rulers. In addition, there were several colonial enclaves controlled by France and Portugal. The integration of these territories into Indian Dominion had been created by the Indian Independence Act 1947 by the British Parliament. Immediately after independence, the rulers of almost all of the princely states acceded to India under monitoring of *Sardar Vallabhbhai Patel* and *V. P. Menon*.

In the Year 1947, *Maharaja Bir Bikram Kishor Manikya* was the king of Hill Tripura and a *Zamindar* of the plain land (*ChaklaRoshnabad*) of Tripura. The *Zamindari* area is made up of four compact blocks: one on Sylhet district, two in Tipera district and one in Noakhali district of undivided Bengal (*J. G.Cumming*). The foresighted king, *Maharaja Bir Bikram* opted for joining the federation of India. But, The *Maharaja* of Tripura expired of brief illness suddenly on 17th may, 1947, and on the same date, according to the convention of the Royal family, the *Maharani Kanchan Prava Devi* took over the charge of administration of the State and the *Zamindari* of plain land of Tripura, on behalf of her minor son, *Kirit Bikram Kishore Deb Barman*.

The king's decision was executed by the Regent *MaharaniKanchanprabha Devi*. On 13 August 1947, the *Maharani* of Tripura and Lord Mountbatten (the last Viceroy of British India and the first Governor General of independent India) signed the "**Instrument of Accession**" for joining the federation of India. During June 1947 to 15 August 1947, 562 among 565 Native States (popularly known as Princely States) ruled by native princes signed the "Instrument of Accession". According to the document, native princes were to continue to rule their native states independently except on the matters related to defence, external affairs and communication; but, the native princes had to give assurance to hand over the power to elected public representatives gradually. The mission and vision of the framers of the new Constitution of India envisaged a tremendous task so that a slow but steady process of territorial integration, administrative reorganisation, economic development and democratisation may coalesce and synchronise.

Tripura entered into a new political era. A four-member Council of Regency headed by *Maharani Kanchan Prava Devi*, took over the administration of the state on 8th August 1947.

Due to anti-state and anti-Indian activities of a pro-Pakistani group for annexing Tripura to Pakistan, the Tripura state passed through a period of chaos. Conspiracy for annexing Tripura to Pakistan was designed both inside and outside Tripura, immediately before and after independence of India. In Tripura, the Anjuman-e-Islamia was active behind the conspiracy. Besides, reports from East Pakistan began to come in that 'Ansar Bahini' (a Pakistani Islam Organisation) was getting ready to attack Tripura. But, there was no force of the India Government present in the State at that time.

In the absolutely crucial situation, the Tripura Rajya Praja Mandal launched a strong resistance movement against the conspiracy. The Tripura State Congress also started hectic activities to prevent the conspiracy of annexing Tripura to East Pakistan. At that critical situation, the award of the Bengal Boundary Commission put Tripura State into troubles. It cut off the state from the mainland of the Country. The regent



Maharani immediately reported the matter to *Sardar* Patel, Home Minister, New Delhi. *Sardar* Patel wrote a letter on 21st August 1947 to Akbar Hydari, Governor of Assam regarding the position of Tripura State. In his letter *Sardar* Patel wrote that 'as per Award of the Boundary Commission, the Chittagong Hill Tracts went to 'East Bengal' which put Tripura 'in a position of great difficulty'. He also added that 'to the north it will have Sylhet, to the West and South East Bengal. There is a small portion of frontier conterminous with Assam and I understand that communication with Tripura State would be possible through this area, in these circumstances; we feel that the interests of Tripura state should be watched with vigilance by us and the State and its *Maharani* should be assured of all protection.

I feel that the best way to do so would be through you and would like to know, before we finalise agreement, whether you have any idea on this subject'.¹

In order to deal with the chaotic situation as prevailing in Tripura, the Government of India took some steps towards reformation of the Administration of Tripura. As a measure to reform the Administration of Tripura, the Government of India abolished the office of the Chief Minister of Tripura State. In its place the office the *Dewan* was introduced and A.B. Chatterjee was appointed to the office of *Dewan* of Tripura. He joined in his office on 20th December 1947. After his assuming the office, the Council of Regency was dissolved on 12th January 1948. But *Maharani* Kanchan Prabha Devi was allowed to continue to remain as the sole Regent of Kirit Bikram Kishore Deb Barman. She continued in the position till 15th October 1949 when the accession of the Tripura State to the Indian Union was accomplished.²

With this, an era of *Dewanirule* started in Tripura with no sign of reformation reflecting democratization of administration as earlier promised. The *Dewani* administration posted police and military in the hill areas to maintain law and order, but the police and military started a reign of terror leading to a tyranny on the tribal people.

Tripura was integrated with India on 15th October, 1949. The Chief Commissioner took over the reign of administration from the Regent *Maharani*, Kanchan Prava Devi. Tripura was incorporated as a Part-C State in the Union of India in 1950. It came to be administered by a Chief Commissioner under the direct control of the Union Government. The State was turned into a centrally administered area. After the first general election in 1952, an Advisory Council was formed with three advisors. In accordance with the provisions of the Act of 1951, one Council of Advisors was constituted on 14th April 1953 to aid and advise the Chief Commissioner. Three non-official persons from the public, namely Sachindralal Singh, Sukhamay Sengupta and Thakur Jitendra Dev Barman were taken in the Council.³ Their function was only to advice the Chief Commissioner on 19 subjects of administration distributed among them. They were appointed by an order of the President of India in April, 1953.

Tripura was turned into a Union Territory by the States Reorganisation Act, 1956. According to the provisions of the Territorial Council Act, passed by the Parliament in 1956, Tripura Territorial Council was formed with 32 members, of whom 30 were elected by the local people and 2 were nominated by the President of India. The Council began to function from 15 August 1957. The next changes come into effect in 1963, when the Union Territories Act was passed. It provided Tripura with its first Legislative Assembly and a Council of Ministers. The number of elected members in

the Assembly remained unchanged. The Assembly could pass laws on all the State and Concurrent subjects. This arrangement continued to exist up to the 21 January 1972, the date on which Tripura attained full-fledged Statehood under the North-Eastern Areas (Reorganisation) Act passed on 30th December 1971.

Challenges faced by the tribal people of Tripura after merger with India:

The transformation of the monarchy into the present democratic State as part of the Indian Union lead in substantial and unsettling social, economic and political changes, embedding comprehensive infirmities in society. The tribal people of Tripura entered into an ever new kind of situation after merger of the princely kingdom Tripura with the newly independent country India. The term '*Tiprasa*' is used by native tribal people of Tripura, which means 'Son of Tripura', who are originated in Princely Tripura. The tribal people had faced certain challenges in the changing political phenomenon.

1. Migration of displaced people from East Pakistan and decreasing tribal population:

The Partition and Tripura's merger with the Indian Union opened the scope of Bengali Hindu migration from East Pakistan, which changed the demography of the erstwhile princely state forever.

This Bengali migration had started gathering momentum from the beginning of the twentieth century. In Hill Tipperah (present Tripura State), since the end of the nineteenth century, Bengalis accounted for more than 40 percent of the population and the tribal people were ahead as a majority. Even, perhaps in the normal course of migration, the tribal people may have become a minority, but the Partition speeded up the process and reduced them into a minority within a quarter-century after 1947.

Table 1

Population of Tripura

Year	Total Population	Decadal Change	Density	Tribal Population	percentage of tribal population to total population
1901	1,73,325	-	17	91,679	52.89
1911	2,29,613	32.47	21	1,11,303	48.47
1921	3,04,437	32.59	29	1,71,610	56.36
1931	3,82,450	25.63	36	1,92,240	50.26
1941	5,31,010	34.14	49	2,56,991	48.39
1951	6,39,028	25.87	62	2,37,953	37.23
1961	11,42,005	76.86	109	3,60,070	31.52
1971	15,56,342	36.28	149	4,50,544	28.94
1981	20,53,058	31.92	196	5,83,960	28.44
1991	27,57,205	34.30	263	8,53,345	30.94
2001	31,91,168	16.03	304	9,93,426	31.13
2011	36,71,032	14.8	350	11,66,813	31.78

Source: Census India Reports

The above figures indicate that the total population within a century has increased more than twenty times. The decadal growth rate shows fluctuations. The



influx of the Bengali Hindus from East Pakistan is responsible for the high rate of increase of population during 1961 to 1971 census. During the period, besides the Bengalis, many tribal families also have emigrated from East Pakistan, particularly from the Chattagong Hill Tracts. Another important feature that is evident in the table is that within the same period whereas the population has increased 20 times, the tribal population has increased only about 10 times. The table also shows a gradual decrease in the percentage of the tribal to the non-tribal population. Their percentage was above 50 till 1931. The figures are recording a decline since 1951 and the cause of this phenomenon lies in the immigration of the plains people. Though both the tribal and the non-tribal are increasing, the latter show a faster rate of growth, because their increase is accelerated by immigration.

The Bengali Hindus in Tripura were of two kinds: some of them had been leaving in Tripura in last few centuries. It is mentioned in the *Rajmala* (the official Chronicle of Tripura), that *Maharaja Ratna Pha* (c. 1325-1350) invited ten thousand *Nabasak* artisans (barber, blacksmith, betel-leaf grower, cowherd, confectioner, gardener, oilman, potter and weaver) from Bengal and settled them in Tripura, to utilize their potentials for prosperity of the kingdom. *Maharaja Dhnya Manikya* and *Maharaja Vijay Manikya* had a large contingent of Bengali soldiers (Laskar).⁴

Another group were citizens of Meghna Valley (*Chakla Roshnabad*). The *Chakla Roshnabad* was part of the kingdom of Tripura. The estate comprised of the part of Sylhet, Tippera (British occupied) and Noakhali districts of undivided Bengal. After defeat of *Maharaja Dharma Manikya* (Second) by Mir Habib, the *Chakla Roshnabad* area was converted into *Zamindari Estate* of Tripura king. Under a conspiracy of Jagat Ram, the displeased nephew of *Maharaja Dharma Manikya* (Second), Mir Habib, the *Dewan* of Nawab Nazim of Dacca defeated *Maharaja Dharma Manikya* (Second). Jagat Ram rose to the *Gadi* (Throne) as Jagat Manikya (1732-33) upon the condition of paying large portion of the revenue to the Nawab Nazim, the whole country in the plain quietly submitted and thus the province of Tripura which from the time immemorial had been an independent kingdom became annexed to the Mugal Empire.⁵ The date of this conquest is variously given from 1726 to 1739. It was probably 1732. From 1733 the conquered country was called "*Roshnabad*" (the country of light, that is, of the east; in other words, the orient of the Mugal Empire) by Suja-ud-daula, the Bengal Governor (J. G. Cumming: Survey and Settlement of the *Chakla Roshnabad* Estate in the District of Tippera and Noakhali 1892-99). The term *Chakla* refers to an area of military jurisdiction (W.W. Hunter: A Statistical Account of Bengal, V- VI). In 1782, the British took direct possession of the territory. The *Zamindari* and the state have been considered by both the Mughals and the British as an entire whole, but both receive revenue for the *Zamindari* only.⁶ The *Maharaja* of Tripura continued to be the king of Hill Tripura and *Zamindar* of Plain Tripura (*Chakla Roshnabad*).

Most of the *Maharaja's* subjects of his *Zamindari Estate- Chakla-Roshnabad*, which went to East Pakistan (after demarcation by Boundary Commission), choose to come over to their *Maharaja's* State i.e. Tripura State of independent India, after Partition. There were tahsils, offices, schools, dispensaries, tanks and temples built by the kings of Tripura. The Bengali Hindus of the Meghna Valley were subjects of the kings of Tripura; many Bengali Hindus of Meghna Valley defended Tripura on behalf



of the Tripuri kings; they used to pay revenue. But, to their utter surprise, they became refugees and foreigners after 1947; some of them fled to West Bengal; many of them took refuge in Hill Tripura; and some of them have been precariously living there even today. Exchange of lands between some Muslim families of Tripura and the Hindu families of the *Chakla-Roshnabad* is another significant dimension of the demographic situation of the region. The Bengali exiles of *Chakla-Roshnabad* have over years, boosted the economy of Hill Tripura, spiced its culture, built up schools, set up business establishments, launched daily newspapers, and libraries, and established hotels and restaurants, and intensified politics.

After partition, 6,09,998 (Six Lakh Nine Thousand Nine Hundred Ninety-nine) displaced people came to Tripura from East Pakistan during 15th August, 1947 to 24th March, 1971.⁷ A tremendous pressure of excessive population was faced by the indigenous people of the state. A lurking fear of being a minority community developed among the tribal people with the influx of large number of Bengali Hindu migrants in Tripura.

2. Rehabilitation of migrant people in tribal reserved areas:

To tackle the overburden of population in Tripura, the Government of India adopted different rehabilitation measures. Some of the measures are the colony scheme, type scheme, proto type scheme, land purchase scheme etc. About 75 colonies were set up accordingly in Tripura for rehabilitation of migrant people from East Pakistan.

The common tribal people began to lose their cultivable land in the plain areas after coming into contact with the displaced people, who were possessed of an advanced mode of production. As a result, they were gradually displaced from their original position. The tribal people had good reasons to feel that they were being reduced to 'foreigners in their own land'. Maharaja Bir Bikram Manikya, created a 'Tribal Reserve' in the year 1931 with an area measuring 28, 490 hectares, and as this area was considered inadequate, the total area reserved was raised to 5, 05, 053 hectares in 1941.⁸ The Bengali peasants illegally entered into the reserved lands. This act of encroachment affected the interests of the tribal communities. In 1948, the Regent Maharani's *Dewan*, A.B. Chatterji threw open 300 sq. miles of this reserved for settlement of migrant people, vide order no. 325 dated 10th Aswin, 1358 Tripura Era or 1948 AD. Later, more of these areas were opened up for refugee settlement.⁹

The Congress government of Tripura also allowed and promoted thousands of Bengali migrants into core tribal areas earmarked by King Bir Bikram Manikya Bahadur as a Tribal Reserve for political gain. Hundreds of Bengali migrant settlements started springing up in the hills, often bearing names like 'Atharacard' (Eighteen Cards) or 'Baiscard' (Twenty-two Cards) after the number of card-holding migrant families. The operation of these schemes accelerated the process of large-scale loss of tribal lands. Not only that by an unwise decision dated, 28 February, 1974, the government of Tripura abrogated the reserved lands. This decision directly added insult to injury.

3. Marginalization in share of political power:

The end of Monarchy and the introduction of Indian style of ballot-box democracy left the tribal people facing the threat of impending marginalisation in share of political power. The end of princely rule, a sense of insecurity and being orphaned, was



developed among tribal peoples. Their demographic majority was tenuous, the influx from East Pakistan seemed endless, and the administration of the state from Delhi seemed to depend almost wholly on the Bengali-dominated bureaucracy. After forty five years of end of monarchy, Tripura got its first and only tribal Chief Minister Dasarath Deb (DasarathDebbarma and popularly known as “Raja Dasarath” in the hills of Tripura) in 1993. The tribal extremism could have been checked, if, Dasarath Deb hold the chair of the first Chief Minister of the democratic state of Tripura.

4. Non-recognition of Kok-Borok Language:

The official languages of British India were English, Urdu and Hindi. In the Princely state Tripura, there were 19 tribes and some non-tribal population. Different tribe used different languages for communication. But, Kok-borok is the most popular language, as the Tripuri tribe is the biggest in population among different tribal communities and their mother language is Kok-borok. The Indian Constitution adopted in 1950 envisaged that English would be phased out in favour of Hindi, over a fifteen-year period, but gave Parliament, the power to provide for the continued use of English even thereafter by law. English and Hindi continue to be used today at the central level and in some states as official languages.

The Article 343(1) of the Indian Constitution specifically mentions that, "*The official language of the Union shall be Hindi in Devanagari script. The form of numerals to be used for the official purposes of the Union shall be the international form of Indian numerals.* The business in Indian parliament can only be transacted in Hindi or in English. English is allowed to be used in official purposes such as parliamentary proceedings, judiciary, communications between the Central Government and a State Government.

States within India have the liberty and powers to specify their own official language(s) through legislation. In addition to the official languages, the constitution recognises 22 regional languages, which includes Hindi but not English, as *scheduled languages*. States can specify their own official language(s) through legislation. The section of the Constitution of India dealing with official languages therefore includes detailed provisions which deal not just with the languages used for the official purposes of the union, but also with the languages that are to be used for the official purposes of each state and union territory in the country, and the languages that are to be used for communication between the union and the states.

Since long ‘Bengali’ language had been used by the kings of Tripura in copper plate inscription, coin, seal, script, order, emblem etc. Although the rulers of Tripura adopted Bengali as their official language, the tribal people had their own dialects. Among these dialects, Kok-borok is the mother language of the majority of the tribal people. It has no written alphabet.

After merger of Tripura with Indian union, the mother language of tribal people of Tripura ‘Kok-borok’ was ignored by the state government. The Congress government of Tripura passed ‘Tripura Official Language Act, 1964’, in which ‘Bengali’ was declared as official languages of the state. At this stage no initiative had been taken for progress of Kok-borok language. A fear of losing cultural identification attacked the minds of tribal people.



5. Economic exploitation and deprivation:

Tripura had a stagnant, semi-feudal and subsistence economy in the pre-independence period. But, the princely state was free from economic stresses and strains at that time. The reasons are not far to seek. With a small population and still smaller economic aspirations, it did not experience the strangling hold of the severe limitations of resources. There was neither the pressure of population on land, nor the pressure of unemployment on the social structure and economic potential. Tripura was self-sufficient in food, and did not feel the need for industrial enterprise. Before 1949, it was all quiet on the economic front in Tripura despite a very backward economy.

Most of the indigenous people were agriculturists prior to merger of Tripura with Indian Union. They followed a system of cultivation known as '*Jhoom*' (shifting cultivation). The method of *Jhoom* cultivation has few stages: Jungles were cut down and cleared in the month of December and set fire in the month of March; after the first fall of rain, drop seeds began into holes. The paddy is gathered generally in September, cotton is picked in November and December. The crop grown by the people in the hills on their *Jhoom* land were rice, cotton, chillies and vegetables. After two years of cultivation *Jhoom*, cultivators begin to move in search of new land for *Jhooming* as the hilly land become unfertile. The hills near the villages have, therefore, to be *Jhoomed* every two/three years, the consequences of which are short crops and money landing from *Mahajans*. *Jhoom* cultivation which is now regarded as a wasteful and uneconomic method, did not create problem in the past. The population was then small and there was abundance of virgin land. But with the growth of population and for other reasons, *Jhoom* cultivation affected the economic condition of the people.

Within the strip of land bordering on the Hills, distinguished as the plains of Tripura (*ChaklaRoshnabad*), the inhabitants (mostly Bengali) led a settled life, and were on a social level with the people of the plains in the neighbouring districts of Bengal. They followed plough cultivation. Rice was the main crop grown in any considerable quantity. The people in the hills were very poor and improvident. A good season meant with them merely of pigs to eat, and plenty of spirits to drink; a bad season was next door to starvation. The economic condition of the people cultivating by the plough in the plains were better than those of the people in the hills.

The non-Tribal population, most of which entered into this State from erstwhile East Pakistan in the reign of *Maharaja*, got mixed up with the tribal population so quickly and so extensively that it was difficult to find pockets' where one might find only tribal people. Tribal people seemed to have become poorer and poorer after losing their '*Jhoom*' land and losing their customary minor forest produce income. With increased population, their condition had worsened and many of them had passed on from marginal farmers to landless agricultural labourers. *Jhoom* cultivators had to exchange their produce at a distress price and this led to the exploitation of the poor tribes. They were also plagued with squeezing by moneylenders, and captivity of advance payments by dishonest greedy Bengali *Mahazans* of plain area.

6. Low rate of literacy in comparison to non-tribal people:

One of the basic characters of backwardness of the tribal people is low rate of literacy and education in comparison to others. The following table shows the literacy rate of Tribal and Non-tribal people of Tripura.

Table No. 2
Literacy Rate Comparison in between Tribal and Non-Tribal people

Census Year	Total Literacy %	Non-Tribal Literacy %	Tribal Literacy %	Gap
1961	20.24	-	10.01	-
1971	30.98	-	15.03	-
1981	42.12	-	23.07	-
1991	60.44	69.11	40.37	28.74
2001	73.20	76.80	56.50	20.30
2011	87.22	90.85	79.05	11.80

Source: Census India Reports

The above table shows, literacy percentage among the Scheduled Tribe people is low and there still exists a wide gap between the tribal and non-tribal people. In 1961, it was 10.01 per cent, in 2011 it increased to 79.05 percent which is much lower compared to total literacy rate of 90.85 percent in the State. Lack of literacy among tribal people has been identified as a major development problem. Like literacy rate, tribal people are lacking in education also.

Quest for autonomy of indigenous people of Tripura

The tribal movement did not rise as a result of a single factor, and its rise and growth spread over a long period of time. The decline of the Raj in 1949, the demise of *Maharaja* Bir Bikram Kishor Manikya Bahadur on 17.5.1947, influx of thousands of Bengali Hindu displaced people, rehabilitation of many Bengali peoples in the interior places in eastern Tripura, encroachment of lands meant for plough cultivation for the tribal people, dereservation of some parts of tribal land, outnumbering of the tribal population by the Bengali Hindu population, fear of the loss of land, language, and local autonomy, money-lending by some Bengali merchants, etc. account for the rise and growth of movement for autonomy. In this movement, a group of Bengali Communists supported the cause of the tribal peasants.

The quest for autonomy of tribal people revolved on three principal demands- land, language and self-government i. e. Protection of tribal lands, recognition of Kok-Borok as a second state language and installation of a Tribal Autonomous Council in Tripura.

Some ethno-centric tribal organizations came into being from 1946, with a view to protect the tribal interest in the territory with the rise of non-tribal population in Tripura. "Bir Bikram Tripur Sangha" (1946) was formed by Durjay Kishore Dev Varman, the step-brother of *Maharaja* Bir Bikram Kishor Manikya, with the main aim



to resist the influx of 'refugees' into Tripura. The next tribal political union was the Seng-Krak (1947), a secret and militant tribal organisation. Its leaders were strongly against the influx of the refugees. It called for a showdown of the Tribals against the Bengali-refugees. But, in 1949, the organization was declared outlawed for its violent activities, when A.B. Chatterjee assumed the office of the Chief Commissioner of Tripura. Some other organisations like, 'Paharia Union', 'Adivasi Samity', 'Adivasi Sangha' were formed during 1951 to 1953. The organisations stood more or less for the tribal interest.

The Tripura Rajya Mukti Parishad (commonly known as GMP), came into being in May 1948, with the motto to protect the tribal people in the hills from all sorts of exploitation. The conditions of tribal people in hilly areas of the state were very crucial. They were already plagued with squeezing by moneylenders, and captivity of advance payments by dishonest greedy Bengali *Mahazans* of plain area. Moreover, the *Dewani* Administration in Tripura deployed military forces in the hill and the forces started oppressions to tribal people in an added enthusiasm. The GMP always put emphasis on a struggle of the tribal people in co-operation with the democratic-minded people of the non-tribal communities.

There was a lack of cooperation and coordination among these organizations. So in the interest of stronger tribal organization, these were combined together (except GMP) and formed a bigger organization named 'Adivasi Sangsad'. It undertook the campaigning for inclusion of tribal people in the administration of the state at an increased rate. In doing so, it took an anti-Bengali and anti-migrant stand. The organization demanded for –(a) a Tribal Regional Council in Tripura; (b) declaring Tripura as an Autonomous District; (c) merger of Tripura with Assam; (d) filling the gazetted posts by the non-Bengalis only.

The 'Tripura Upajati Juba Samity' (TUJS) was organised by a younger section of the tribal population in Tripura in 1967. It intensively put forward the following four demands: 1) Restoration of Tribal lands transferred to the non-tribals since 1960; 2) Formation of a Tribal Autonomous District Council in Tripura; 3) Reservation of government jobs for the tribals; 4) Recognition of Kok-borok as an official language and medium of instruction and adoption of Roman Script for Kok-Borok. Since 1967 the TUJS had been carrying on actions in the tribal cause. On 11 July 1968, around 324 male and female tribal people observed a continuous hunger strike. On 11 March 1970, the TUJS again observed a 24-hour hunger strike in different parts of Tripura. Many rallies and representations were submitted on different occasions to the Government of India demanding fulfilment of the tribal-demands by the TUJS.

Considering the gravity of the situation the *Dhebar Commission* recommended that Tribal Development Blokes might be set up as an experimental measure in the tribal compact areas, and if the measure failed to bring about any material improvement among the tribal people, measures under Schedule-V might be tried.¹¹ Thereafter the Administrative Reforms Commission set up under the Chairmanship of K. Hanumanthiya, examined this issue and suggested that some compact tribal areas in Tripura might be specified and Tribal Councils set up there along with delegation of well-defined administrative powers.¹²



On the contrary, the State Government abrogated the already existing 'Tribal reserve Area', constituted by the *Maharaja* of Tripura, by promulgating an Ordinance on 28th February 1974. Such action of the Tripura Govt. seriously injured the tribal sentiment. The tribal autonomy movement thereafter assumed a new dimension.¹³

An all-party convention was convened at Agartala on 7th April 1974, in order to register a strong note of protest against the ordinance of the 28th February, 1974, and to intensify movement. The convention was attended by Tripura Rajya Upajati Gana Mukti Parishad led by CPI(M), TUJS, Tribal Students Federation, Tribal Youth Federation and Tripura Upajati Karmachari Samity. The Convention adopted a 'Four-Point Charter of Demands' and also an Action Programme. Those demands were:

1. Revocation of the Ordinance and preservation of the tribal compact area and introduction of an Autonomous District Council therein.
2. Restoration of tribal lands transferred to the non-tribals after 1960.
3. Recognition of 'Kok-Borok' as the second state language.
4. Introduction of 'Kok-Borok' as the medium of instruction at the primary stage.

A 'Joint Action Committee' was formed from the convention to steer the movement. It included two representatives from each of the organizations which attended the All-Party tribal convention.

A programme of mass demonstrations before the Block Development Offices in the state was held on 30th April 1974, under the banner of Joint Action Committee.¹⁴ Tribal and non-tribal people organized mass rallies and meetings. A 12-hours 'Tripura Bandh' was observed in May, 1974.

The united tribal movement did not continue for long. On the question of participation of the non-tribals in the movement of tribal demands, a rift occurred. The TUJS was not agreed to organize any movement on tribal cause with the support and cooperation of the non-tribals. But this line of thinking was not acceptable to others especially the Tripura Rajya Upajati Gana Mukti Parishad. As a result the 'Joint Action Committee' became defunct after its meeting held on 5th June 1974. From that day onwards the tribal movement for autonomy continued on two different ideological lines.

A younger group of TUJS formed a secret organisation in July 1978, named Tripura National Volunteers (TNV) Force. It adopted a dangerous line of action programme which was anti-democratic by nature. In the first phase block-deputations all over Tripura were held on 21st May 1980 and in the second phase 'Bazar Boycott' from the 1st to 7th June 1980 were included in the action programme for deportation of the 'foreigners'.

The TNV committed the heinous act of violence and wrote the darkest chapter of Tripura's history- indiscriminate killing of non-tribal people in June 1980. The madness caused officially a loss over 1300 lives, left 20,000 houses gutted, destroyed over 5 crores worth of grains and crops and made refugees of 1/5th of the Tripura population.¹⁵

The Gana Mukti Parishad continued its movement. The Bengalis also rallied in a greater number to the support of the tribal people. The CPI (M) Party in Tripura took up the tribal issues politically. As a result, the movement of the tribals for autonomy assumed the character of a mass movement.



The CPI (M), as the biggest partner of the Left Front put weightage to the tribal autonomy in Tripura by making it an issue in the state Assembly Election of 1977, and assured the tribal people that if voted to office, it would take up the issue.

After a massive victory in the Assembly Election 1977, the Left Front Government in Tripura decided to set up a Tribal Autonomous District Council. Its original plan was the introduction of an Autonomous District Council under the Sixth Schedule to the Constitution. But the Janata Government at the Centre led by Murarji Desai did not approve it. As a result, the Left Front government in Tripura introduced in the Legislative Assembly 'The Tripura Tribal Areas Autonomous District Council Bill, 1979' under Fifth Schedule to the Constitution of India. It was passed unanimously in the House with two third of its members being the non-tribal. The Bill, passed in the Tripura Legislative Assembly on 23 March 1979, was assented to by the President of India on 20 July 1979.¹⁶

On 18th January 1982, The Tribal Areas Autonomous District Council (ADC) under the Fifth Schedule to the Constitution of India came into being and thus facilitating for the first time a tribal self government in Tripura. It allowed an elected Council of 28-members to direct tribal life in a compact area comprising of 164 revenue villages and 47 Tehsils.

Introduction of ADC under the Fifth Schedule to the Constitution of India did not satisfy the aspirations of the Tribal people, who were demanding for an ADC under the Sixth Schedule to the Constitution of India. The Left Front government also wanted it in the hill areas of Tripura. The Tripura Legislative Assembly adopted unanimous resolutions twice- the first time on 10th March 1978, and the second time on 16th December 1983, recommending to and requesting the Central Government to agree to the demand of the democratic people of Tripura regarding introduction of the Sixth Schedule to the Constitution of India in the tribal areas of Tripura.

As a result of persistent struggle, the Central Government introduced a Bill in Parliament proposing an amendment to the Constitution for introducing the Sixth Schedule of the Constitution, in the Tribal areas of Tripura, on April 1984. The Bill was passed and paved the way for greater autonomy for the tribal people of Tripura.

On 1st April, 1985 the ADC in term of the Sixth Schedule was introduced replacing the 39 months old ADC under the Fifth Schedule. It was provided for a 30-member Council with 28 members being elected and 2 nominated and 8-member Executive Council including the Chairman, elected by the Council, to dispose of the matters falling within the purview of the District Council.

Under the Sixth Schedule, the first election to ADC was held on 30th June 1985 and the oath-taking ceremony of the members took place on 19th July 1985. Thus, the long-awaited aspirations of the tribal people of Tripura for Self-Government were fulfilled.

The Tripuris' mother-tongue has also been recognised by the Left Front government in Tripura by amending the 'Tripura Official Language Act, 1964 in May 1979.¹⁷ Now along-with Bengali, Kok-borok is also an official language in Tripura; Kok-borok has been introduced as the medium of instruction up to primary level; the language has been taught in schools of Tripura from the primary level to the higher secondary stage; a certificate course in Kok-borok started from 1994 at Tripura



University and a post graduate diploma in Kok-borok has started in 2001 in the Tripura University. Kok-borok was introduced in the Bachelor of Arts (BA) degree in the colleges affiliated to the Tripura University from the year 2012, and a Masters of Arts (M.A.) degree in Kok-borok was started by Tripura University from the year 2015; a Tribal Language Cell is created to function in the matter of designing and preparing lesson materials for the school-going tribal children.

Thus, three principal demands of land, language and local autonomy of the tribal people are fulfilled; the job-quota for the tribal people in state government services is strictly protected according to the Constitutional provisions.

The tribal people of Tripura got the right of self-government after long years of merger of the native state with the Indian Union. The ADC is not a government in itself. But, the *Tiprasa* people got scope to associate themselves with the policy making and policy implementation process of the government as the ADC can undertake development programme for the people of ADC area.

The Twipraland Movement

The legacy of anti-Bengali influx in Tripura on the one hand, and inter-party and intra-party rivalry on the other, combined to reinforce an attitude, a demand, an ethnic movement for the state of *Twipraland*. There are a few determined groups of politicians and intellectuals, willing to seize power, and capable of expressing and articulating the opinions of the masses and youths. On the demand of declaring the whole geographical area of TTAADC (7132.56 Sq. Km. out of the total area of 10491.69 Sq. km of the State) as a separate state '*Twipraland*' for *Tiprasa* (tribal) people of the state, the Indigenous Peoples Front of Tripura (IPFT), a newly formed political party started movement.

Chronology of events:

9.6.1997- Formation of Indigenous Peoples Front of Tripura (IPFT) through the merger of Tripura Hill People's Party (THPP) and Tripura Tribal National Conference (TTNC).
2000- IPFT contested election to the TTAADC and came out victorious in 18 seats.
2000- Tripura National Volunteers (TNV) joined IPFT.
2001- Tripura Upajati Juba Samity (TUJS) merged with IPFT.
August, 2009- IPFT submitted memorandum to the Union Home Minister for separate Twipraland.
November, 2009- IPFT submitted memorandum to the Union Home Minister.
October, 2010- IPFT sent memorandum to the Union Home Ministry.
March, 2011- IPFT sent memorandum to the Union Home Ministry.
June, 2011- IPFT sent memorandum to the Union Home Ministry.
December, 2011- IPFT sent memorandum to the Union Home Ministry.
October, 2012- IPFT sent memorandum to the Union Home Ministry.
August, 2013- IPFT sent memorandum to the Union Home Ministry.
23 August, 2013- A big rally was organised by IPFT at Agartala.
10-13 December, 2013- 72 hours hunger strike in New Delhi by IPFT.
13 December, 2013 IPFT hold a meeting with officials of Union Home Ministry.
2nd June, 2014- Formation of Telengana State out of Andhra Pradesh inspired IPFT to demand separate *Twipraland*.



13 September 2014- In the By-Election to the Tripura Legislative Assembly, in the Manu Constituency, IPFT got 3018 votes and Indigenous Nationalist Party of *Twipra* (INPT), who demands for more power to TTAADC rather separate *Twipraland*, got 432 votes.

23 August, 2014- A massive rally was organised by IPFT at Agartala.

10 April, 2015- Again a big rally was organised by IPFT at Agartala.

23 August 2015- A big rally was organised by IPFT at Agartala to register the demand.

22 June 2016 barricaded the national highway no 44 on demand of separate *Twipraland*.

23 August 2016- A big rally was organised by IPFT at Agartala on demand of *Twipraland* and the peaceful rally were turned into a chaotic situation within a few minutes. The rally crushed and attack and reactive attack took place and some people of either side-tribal & non tribal got serious injury. This unpleasant incident influenced the socio-political situation of the whole state for long days.

On 10th July 2017, the IPFT started barricade the national highway-44 for uncertain period till the central government accept the demand of separate *Twipraland*. With the intervention of the state government, the barricade was withdrawn peacefully without any assurance from the central government, on 19th July 2017.

In election to the Tripura Legislative Assembly 2018 in, the IPFT contested nine seats in alliance with Bharatiya Janta Party (BJP) and won eight seats; BJP won Thirty six seats and formed coalition government. The IPFT Chief is presently the chair of the Deputy Chief Minister of Tripura. In Lok sabha election 2019, both allied parties, BJP and IPFT contested separately in both Loksabha seats of Tripura. But, both seats were won by BJP. The IPFT is still continue to demand separate *Twipraland*.

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STUDY OF PERFORMANCE PRESSURE ON STUDENTS IN THE HARRY POTTER SERIES

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Abstract

Life is full of opportunities. if one door is close hundreds are open, it depends on the approach of a person towards life. Positive attitude motivates and paves the path of success for the students but so many times performance pressure pushes them back and affects their psychology. In some cases, students are not able to handle their failure and commit suicide. Performance pressure exists in every sector of society including cinema, education, jobs, almost everywhere and when the people are not able to handle it they suffer from acute depression. Nothing is more precious than life still parents ignore the psychological condition of their children and build performance pressure on their kids to prove their upbringing best in front of society. Even in the current day scenario, board exams in Indian society is no less than nightmare for the students where they have to perform well to prove their worth, otherwise they are considered as good for nothing by the society. The present paper is an attempt to shows the pros and cons of the stress on the performance of the students and an attempt to analyse how we can help the students to grow in the best way by providing them right guidance, freedom, and motivation.

Key words: Pressure, Choices, Freedom, Performance, Expectations And Development.

No one can abnegate the importance of education in life. It is a pivotal part of life. It makes us socially, physically, emotionally, and mentally compatible. The main aim of education is not only to develop academic performance but also focus on the all-round development of the students. During the ancient times, wealth was the symbol of social status but during the medieval era, when the middle class came into power at that time academic achievements became the symbol of status. For parents, academic achievements became more important than anything else and this pressure of parents, relatives, and peers produce stress among the children and influence their performance. Parents try to fulfill their own dreams through their children that create an unconscious performance pressure on their kids and when their children are not able to fulfill these expectations, they suffer from depression. Students become so much image-conscious that if they are not able to perform well in exams, some of them commit suicide. Depression is not always perceptible; some of the depressed people may even fabricate ecstatic things, like the current Bollywood actress Deepika Padukone and famous British writer J.K Rowling, and successfully overcome their depression. However, there



are so many movies and novels including *Three Idiots*, focus on the importance of knowledge and interest of the students rather than academic achievements. The negative attitude of society, peer pressure, and parent's expectations break the confidence of the pupils and they feel that there is nothing more left for them in this world. The main function of education is to enhance one's logical powers and teaches them how to survive in adverse situations by following the path of morality. But sometimes, high expectations of parents and peer groups affect one's performance. In past few decades, academic pressure has increased in the form of exams, assignments, projects by which a student has to go through. Due to lots of expectations and lack of guidance children feel lost in the sea and are left directionless. The present paper focuses on the effects of performance pressure on the future of students.

Anxiety at a moderate level works in extremely positive way and works as reinforcement but in higher amount causes stress that can destruct the entire future of a child. Harry Potter emerges as a hero in the series but at the beginning of the novel, Harry is introduced as a below-average student in the British education system. He is an orphan child and never receives any familial love. His existence doesn't matter for his own relatives. They have no expectations from Harry and their ultimate aim is to prove him useless. The emptiness of love can be trace in *Harry Potter and the Philosopher's Stone*, when Harry is standing in front of the Mirror of Erised, and envisages his father and mother's reflection. But when Harry goes in Hogwarts and his teachers show their expectations he feels special. The Education system of Hogwarts is not only focussed on the academic achievements but also provides multiple opportunities to grow. Harry appears as a marvellous seeker due to his flying skills and becomes one of the most popular students. Their Prof. McGonagall discovers Harry's interest in flying and provides him an opportunity for becoming a saviour in the Quidditch team of Gryffindor. He is a student of average intelligence but due to his performance in the Quidditch match, he accomplishes fame. His extraordinary performance in the Quidditch team and his inner innocence with strong determination make him teacher's favourite. However, sports are an integral part of the education system because it keeps students mentally, physically, and socially strong and develops a fighting spirit among them. In case of Harry, it works as icing on the cake and transforms him so well that it helps him to fight against Dark Lord. Tom Riddle is one of the most intelligent students in Hogwarts' history. Through memory, Readers come to know that Riddle spends his childhood in an orphanage and Prof. Dumbledore takes Tom Riddle along with him due to his extraordinary powers. It is his desire for ultimate power and immortality that transforms him in a villainous character but Readers cannot ignore his extra-ordinary intelligence. He is so intelligent that he manipulates Prof. Slughorn and gets information about the production of Horcrux through black magic which is tabooed in wizardry world but he successfully splits his spirit in seven parts and creates seven Horcrux. In contrast, Ronald Weasley belongs to the magical family. One of his brothers is the head boy of Gryffindor house and his twin brothers -George and Fred- are intelligent boys and enjoy a status in Hogwarts. In these circumstances, Ron who is an average student, neither able to achieve a place in Quidditch team nor able to perform well in academics,



his loneliness can be trace so clearly. He, again and again, consoles himself by saying that he is the most popular student while students are admiring Harry. Ron knows this fact very well, but this consolation reflects his desire to create an important position in his family and among his friends. His yearn appears clearly when he sees his reflection in the Mirror of Erised and imagines himself as the head boy. It also represents how misfit he feels himself in his family. He always appears as an under-confident student who feels solace with his friends. Expectations are good if they are in a controlled manner but when expectations are too high, which creates performance pressure on the students, and when they are unable to fulfill these expectations, they feel absurd and frustrated. In the case of Harry, teachers expect him to follow the path of morality and guide him in all the situations. But in case Ron, his own expectations to generate an important place in his family and his parent's expectations to perform well never allow him to grow well in any area.

Another example of incredible performance that free from expectations is set by Hermione Granger. She is the most intelligent student in her batch. Her performance is free from higher expectations because her parents are happy that their daughter is selected in Hogwarts. Hermione's parents give her liberty to choose her career and support her. Because of her ordinary family background she has to face discrimination by few students and teachers. When Prof Snape asks questions from Harry again and again and he is not able to answer a single question, Hermione is the only student who knows all the answers but every time, he ignores her:

He ignored Hermione's hand.

'Let's try again. Potter, where would you look if I told you to find me a bezore?'

Hermione stretched her hand as high into the air as it would go without her

Leaving her seat, but Harry didn't have the faintest idea what a bezore was.

... At this Hermione stood up, her hand stretching towards the dragon Ceiling

He ignores Hermione.

(Harry Potter and the Philosopher's Stone, 147.)

Due to her extraordinary abilities, she gets admission at Hogwarts and every time she proves her abilities. It is not wrong to say that without Hermione's help, Harry would not find all the Horcrux and couldn't destroy them. It is due to her active mind that in each and every problem they find hidden solutions. However, she faces discrimination by the pureblood students like Draco Malfoy, but never leaves hope. She is not only an intelligent girl but brave too. Later, when power is dominated by Dark Lord in the wizardry world she is very well aware that she will be hanged if caught by the ministry but she shows her courage and goes in the magic of ministry along with Harry and Ron in search of Horcrux. Neville Longbottom, master of Herbology, is also a victim of Dark Lord as his parents are murdered mercilessly by Voldemort. Neville shows his extraordinary performance in Herbology. So many students create fun on Neville due to his stammering and under-confident behaviour. But at last, when Hogwartians think that Harry is dead and they have lost this fight but Neville Longbottom shows courage to speak against Dark Lord without any fear and refuses to submit. He kills Nagini and



proves his courage and transforms into a hero. It is his knowledge of herbs that helps Harry to sustain in the Triwizard competition. Lilly Potter is also from muggles family. Her parents feel proud of her selection at Hogwarts school of Witchcraft. She becomes the part of Gryffindor house and performs so well that she becomes a part of the Slughorn literary group. Sirius Black belongs to the pureblood family but due to the superiority complex among his family members and due to their pressure of performance, he runs away from his family. He stays with James Potter and chooses Gryffindor. It is due to his choice that he emerges as a sub hero in the series and fights for Order of Phoenix while his family members support Voldemort and believe that the magical world is the place for pureblood only. Sirius Black boldly rejects this ideology and chooses the correct path. It also represents how choices and peer groups can modify a person's personality.

The impact of burden of expectations to support evil can be trace in Draco Malfoy's character. He appears as a complex character but he is a very good seeker of Slytherin Quidditch Team. He belongs to a pureblood family and so feels proud of it. So many times, one can see his good side but he chooses the wrong things because he is left with no other choice. He is manipulated by his own parents to serve the Dark Lord because Malfoy's are the strong believer that the wizardry world purely belongs to them only and they are the only superior race that can dominate others. This ideology can compare with Hitler's ideology and the execution of muggles and mixed race can be compared with the execution of the millions of Jews, slaves, and homosexuals in Holocaust camps. Draco Malfoy never wants to kill Prof. Dumbledore but he has to because he chooses the evil side. He never gets time to think about what he can do best due to his inner jealousy and his parent's wrong teachings that create an urge in him to prove the best by hook or by crook. However, J.K Rowling by establishing Hogwarts tries to convey a message how children can develop multiple skills and can grow in the best manner. In Hogwarts, teachers focus is on practical learning; all students live together and develop harmonious relationships. Teachers appear as guides and motivators for students and focus on all-round development. The concept of Hogwarts education system seems borrowed from the ancient Indian education system where the main aim of teachers' was to develop practical knowledge, moral ideas, and all-round development in the students. In Hogwarts, students are not only judged by academic performances, but they can flourish their other skills too. They do not produce engineers or doctors like the modern education system but a student who performs well in a single subject receives equal importance. It does not mean that expectations always create depression so many times, it proves as medicine. In the case of Harry, expectations work in the positive way. Harry, at the beginning of the series, appears as an under-confident boy who is living a simple life without any expectations. He feels lonely but when he comes at Hogwarts and receives love, care, and also receives expectations by his teachers, he excels his powers in an excellent way and emerges as a hero. In order to fulfill Dumbledore's expectations, he is ready to sacrifice his life. He never submits his courage against evil.

Education is the most important part of life that makes us morally, physically, and socially compatible. But People must understand that everyone has certain unique qualities which in words of Aristotle called eudaimonia and one must search this in their



children and should motivate them to follow their dreams. Albert Einstein, one of the greatest scientists, was not a good student during his childhood and expelled from school. When his mother came to know the reality, she explained this situation to her son in an extremely positive manner. She narrates that he is an extraordinary student and school wants him to study in a better school. The result is in front of the world. It also presents that motivation and faith have magical powers that can transform the entire life of a student. There are so many people who are famous in different areas so instead of putting the pressure of expectations on the children, one must show his support and love to them. At the time of failure, one must console the students and try to develop a positive approach among them. Failure is not a bad thing but it makes one's learn how to succeed. People must ensure to their children that they are with them for their betterment and their children are their real treasure, precious than anything else. A positive approach works throughout life and makes kids confident.

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RELATIONSHIP OF ECONOMIC AND POLITICAL FACTORS WITH LEARNING POVERTY- STUDY OF FIVE SAARC¹ COUNTRIES

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Abstract

The ability to read is a foundation for future learnings without which students often fail to thrive later in school or when they join the workforce. They end up acquiring neither the human capital required to progress in their careers and economies once they leave school, nor the skills for a better family life. This paper examines the relationship of learning poverty indicators across five SAARC countries with GDP, GDP growth rate, per capita income, adult literacy rate, national poverty headcount ratios and indicators of political institutions. The Ordinary least Square Method is employed to examine this relationship between learning poverty indicators and the various variables of interest. The R^2 values from the OLS method are highest for adult literacy rates and political stability followed by national poverty headcount ratios and per capita incomes. Surprisingly, GDP and growth rates as well voice and accountability do not show higher R^2 values. This points to the need for focused interventions to increase adult literacy rates and poverty alleviation measures as well regime and policy consistency. This result corroborates with the existing literature on human development which has shown how economic growth on its own is not enough to alleviate learning poverty.

Keywords

Learning Poverty, Education, South Asia, political stability, accountability, economics of education, developing countries, politics and education, economy and education, human capital, human capital formation, poverty alleviation

JEL Codes

I24, I25, O15, O53 The ability to read is a foundation for future learnings without which students often fail to thrive later in school or when they join the workforce. They end up acquiring neither the human capital required to progress in their careers and economies once they leave school, nor the skills for a better family life. This paper examines the relationship of learning poverty indicators across five SAARC countries with GDP, GDP growth rate, per capita income, adult literacy rate, national poverty headcount ratios and indicators of political institutions. The R^2 values from the OLS method are highest for adult literacy rates and political stability followed by national poverty headcount ratios and per capita incomes. Surprisingly, GDP and growth rates as well voice and accountability do not show higher R^2 values. This points to the need for focused interventions to increase adult literacy rates and poverty alleviation measures as well regime and policy consistency. This result corroborates with the existing literature on human development which has shown how economic growth on its own is not enough to alleviate learning poverty.

¹ The South Asian Association for Regional Cooperation (SAARC) was established 8 December 1985 in Dhaka, Bangladesh and comprises of eight Member States: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The objectives of the Association is promote the welfare of the peoples of South Asia and to improve their quality of life among others.



This paper is divided into 5 sections. Section I is on the State of Learning in South Asia and Section II is on Understanding Learning Poverty. Section III is on the Data on Learning Poverty Indicators, Economic Indicators and Political Indicators. Section IV is on Data Analysis and finally Section V is on Conclusions and Recommendations.

Section 1. Introduction- State of Learning in South Asia

South Asia has a staggering number of children in the category of out-of-school children and youths. It has an unbelievable 93 million out of school children, adolescents and youth with 12.5 million at primary level (six to nine years) and 64 million at the secondary level (10 to 14 years), UIS 2019. These concerns are more striking when these millions of children who are completing primary education will be deficient in mastering foundational literacy and numeracy. The UNICEF target for South Asia is by 2021, 10 million previously out-of-school girls and boys be enrolled and learning in pre-primary, primary and secondary schools.

South Asia comprises of India, Pakistan, Bangladesh, Afghanistan, Sri Lanka, Nepal, Bhutan and Maldives. Besides sharing a history of colonization by the British Empire also share national borders and deep cultural and social history. This region has been marked by sporadic conflicts and ethnic tensions. These countries post- independence were characterized by rampant poverty, illiteracy and malnutrition.

South Asia is home to 1.82 billion people who constitute 23.5 per cent of the world population. This is also one of the poorest regions of the world after Sub Saharan Africa with per capita incomes of \$1923. South Asia's primary net enrollment rate (NER) rose from 89.0 percent in 2010 to 92 percent in 2018, closer to that of regions such as Latin America and the Caribbean (95.0 percent) and East Asia and the Pacific (96 percent). According to UNICEF progress report for 2018-21, only 69 per cent of children have access to early childhood education in South Asia.

For the world to meet its SDG 4 targets, current rates of education are far too slow. At the current rate of improvement, in 2030, about 43 per cent of children will still be learning-poor. The World Bank Brief on Learning Poverty (2019a) points out that even if countries are able to lower their learning poverty at a swift pace, still the target of ending it by 2030 will not be met. Education SDGs have interlinkages with other SDGs on eliminating poverty, hunger and creating equality of opportunities.

According to same brief by World Bank (2019a), even being in school is no guarantee that the children will be able to read proficiently besides the 260 million children, who are even going to school. The brief names it the "leading edge of a learning crisis" that threatens countries' efforts to build human capital and achieve the Sustainable Development Goals (SDGs)."

The learning crisis includes both kinds of deficits- quality and quantity of schooling which then becomes a major component of the human capital deficit. Inability to read leads to a deficit of human capital formation² which has repercussions on economic growth, sustainable development and poverty reduction. It is very well documented that poor education outcomes have a huge implication on future prosperity because human capital has been recognized as the most important contributor of wealth globally. As countries get richer, the component of human increases as a country. The difference between poor and rich countries is stark- while human capital makes up 41 per cent of wealth; in high-income Organization for

² The Human Capital Project is raising awareness of the costs of inaction. The average Human Capital Index (HCI) score across countries is 0.56; this means that by the age of 18, a child born today will be only 56 percent as productive as a child would be under the benchmark of a complete education and full health. (WB, 2019)



Economic Co-operation and Development (OECD) countries, human capital makes up over 70 per cent of wealth.

Amber Gove and Anna Wetterberg (2011) state, "In the aggregate, reading and learning achievement are central to economic productivity and growth." In their recent research, Hanushek and Woessman (2009) reveal that it is learning rather than years of schooling that contributes to a country's economic growth: in fact they found a 10 percent increase in the share of students reaching basic literacy translates into an annual growth rate of 0.3 percentage points higher than it would otherwise be for that country. The phenomenon of educational poverty tends to perpetuate through a vicious cycle, passing from generation to generation and, using Amartya Sen (1989) and Martha Nussbaum's (2011) capabilities theory, depriving children and adolescents of the opportunities to know, to be, to live together and to do. In 2018, Paul Romer shared the Nobel Prize in Economics and the Royal Swedish Academy of Sciences stated that he had shown "how knowledge can function as a driver of long-term economic growth.

Human capital formation is an important component of economic growth. As Mincer (1981) has pointed out, "The contribution of human capital theory to economics does not lie in a reformulation of economic theory, but in pushing back the boundaries of economics beyond the sphere of market transactions." He identifies two areas where the role of human capital is significant – (1) From a macroeconomic perspective, the social stock of human capital and its growth are central to the process of economic growth. (2) From a microeconomic angle, differences in individual human capital stocks and in their growth can explain much of the observed variation in the wage structure and in the personal distribution of income.

Section 2. Understanding Learning Poverty

In 2019c, the World Bank introduced the concept of learning Poverty which draws on new data developed in coordination with the UNESCO Institute for Statistics. Learning Poverty essentially means being unable to read and understand a simple text by age 10. This concept includes both schooling and learning indicators. The measure looks at the share of children who haven't achieved minimum reading proficiency (as measured in schools) and is then adjusted by the proportion of children who are out of school (and are assumed not able to read proficiently).

Using a database developed with UNESCO Institute of Statistics, the World Bank press release on learning poverty (2019b) points out that 53 percent of children in low- and middle-income countries cannot read and understand a simple story by the end of primary school and it goes up to 80 percent in poor countries. This will jeopardize all other global educational goals and other related sustainable development goals. Hooper (2000) illustrates this using results from the Progress in International Reading Literacy Study (PIRLS)³ which finds decline in fourth graders' and their parents' reading attitudes from 2001 through 2016 in most countries.

The difficulties in reading results in children lagging behind their peers. Mullis et al (2007) find this may hinder them in the transition from learning to read to reading to learn, which starts, on average, around the fourth year of schooling. According to Lembke and Foegen (2009), this may affect academic development in other subjects as well.

³PIRLS, the Progress in International Reading Literacy Study, is one of the core studies of IEA. Directed by the TIMSS and PIRLS International Study Center at Boston College and conducted every five years since 2001. PIRLS is recognized as the global standard for assessing trends in reading achievement at the fourth grade. PIRLS provides internationally comparative data on how well children read and offers policy-relevant information for improving learning and teaching. PIRLS provides trends and international comparisons of fourth grade students' reading achievement and students' competencies in relation to goals and standards for reading education. system and helps to identify areas for improvement. <https://www.iea.nl/studies/iea/pirls>

The Human Capital Index (HCI) quantifies the contribution of health and education to the productivity of a country's next generation of workers, based on evidence from micro-econometric empirical studies. Variations in the Human Capital Index, which is used to track countries' progress in health, education, and survival, can be predominantly explained by differences in educational outcomes.

Complementing the HCI is the World Bank's Human Capital Project (HCP) which aims both to advance measurement and research and to enhance country engagement on the topic of human capital. "The new target of halving Learning Poverty by 2030 aligns with the Human Capital Project's efforts at building the political commitment for accelerating investment in people." (World Bank, 2019c)

Age ten is accepted by policymakers and researchers in this area as an inflexion point when children are expected to be in fourth grade and when many children finish mastering the mechanism of basic reading in high-performing systems (World Bank, open data sources). Studies like IEAS (2016) points out that in many countries, third grade students are "reading to learn" more and have finished the intensive phase of "learning to read" that constitutes "early grade reading."

For calculation purposes, Learning Poverty is [as measured by the World Bank (2019c)] the weighted average of the share of the population below the minimum proficiency level, adjusted by the out-of-school population.

$$LP = [(BMP) \times (1 - OOS)] + [1 \times (OOS)]$$

where

LP = Learning poverty

BMP = Share of children at the end of primary who read at below the minimum proficiency level⁴,

OOS = Out-of-school children, as a share of children of primary school age, and in which all OOS are regarded as being below the minimum proficiency level

The report further lays out that how learning poverty calculations use data from both cross-national and national large-scale assessments that are judged as being of sufficient quality in terms of design, implementation, comparability, timeliness, frequency, documentation, and access. The actual measurement of learning poverty is based on cross-national or national assessments that are administered in grades four, five or six and therefore at ages between 10 and about 14.

Section 3. Factors affecting Learning Poverty

Strong achievement differences exist that are associated with students' background characteristics, such as race/ethnicity, gender, rural/urban residence status, or immigration/migration status instead of with student ability and effort. Socio economic status (SES) background is one of the critical variables in education research which is common among countries that explains a significant amount of variance in students' achievement scores (Broer, 2019).

The disadvantages created by Socioeconomic background can be potentially compensated by School characteristics. Klieme, Pauli and Reusser (2009) identify these characteristics such as clarity of instruction, cognitive activation, classroom management, and a supportive climate while Thapa, Cohen, Guffey, and Higgins-D'Alessandro (2013) add a safe and orderly school climate as additional ones.

⁴As defined by the Global Alliance to Monitor Learning (GAML) in the context of the SDG 4.1.1 monitoring



Nilson et al (2016) find in their study that there was a clear distinction between highly-developed and developing countries where school characteristics differed in their relationship to educational equity in these two groups. In many highly-developed countries, family background was found less important and school characteristics were consequently related to greater equity. Thus, achievement gaps related to family background need to be addressed if countries are concerned with equity. This distinction indicates that the more highly developed countries have better capacity to compensate and ameliorate the effect of SES on student achievement.

Social economic status and early learning activities are linked to each other. Meinck et al (2018) find that early learning activities can mitigate social inequalities. Better educated parents tend to support their child's development with greater frequency and intensity than parents with financial and educational limitations.

The importance of teachers in the academic performance of their students is firmly established in the academic literature as illustrated by Rivkin, Hanushek and Kain (2005). S. Polikoff and Zhou (2015) find that students' in-school reading activities are directly affected by teachers' instruction, which is itself directly influenced by instructional policies such as school, district, state, regional, or national curriculum policies.

Parents' involvement in their children's education matters with research suggesting that students whose parents take an active role in their school activities are more likely to attend school regularly, achieve higher grades and test scores, and continue their education beyond high school Henderson and Mapp (2002); OECD (2012). Level of parental education also has a positive association with level of parental involvement in school with parents with lower education levels are likely to participate less in school and vice versa.

Stephens et al (2015) found that it is more common for girls than boys to enjoy reading and read frequently, among those children whose parents have positive attitudes and behaviors. The most consistent predictor for students who succeed educationally against the odds and are considered "academically resilient," is students' high educational aspirations appear.

For both boys and girls, feeling safe in school seemed to be positively related to academic achievement in many countries. TIMSS (2015). Katschnig and Hastedt (2017) find that student perceptions of safety at school may vary by gender, or across different groups of students (such as immigrant versus non-immigrant students), or by school setting (urban or rural).

Political institutions organize social, economic and political life (Vollmer and Zeigler, 2009). The authors work find that living in a democratic system positively affects human development measured by life expectancy and literacy rates even controlling for GDP, in Sen's (1999) words- fulfilling a constructive and instrumental role giving people the opportunity to express, to form and aggregate their preferences and thus to steer public action in an efficient and effective manner. Thus, democratic regimes in comparison to autocratic ones are expected to lead to higher redistribution and thus higher public expenditures as well as reflect the needs of the society more than in autocracies. Moreover, it is believed that democratic control mechanisms will assure the implementation of policies so that a high degree of compliance with laws, directives and orders is reached. However, the authors note that the performance of democracies will vary according to specific circumstances. They find that democracies quantitatively and qualitatively perform better than autocracies in terms of redistribution which they define in their work as the public provision of goods and services.

Ivic and Pesikan (2012) look at education reforms in Serbia and the unstable political situation. They find that constant attempts to introduce the necessary innovation in education in Serbia (e.g., standards of student achievement, standards for the evaluation of teachers, standards of textbook quality, the professional promotion of teachers, etc.) is very difficult for many reasons, including: the lack of political support; the inertia of the education system; the negative influence of sociocultural and economic variables; some of the measures are



not well executed professionally (e.g., standards of textbook quality); sometimes mechanisms for the implementation of measures are not ensured (e.g., the professional promotion of teachers), etc. Lack of a conceptual theoretical framework and the arrival of a new political structure since 2005 are attributed for these problems.

Section 4- The Data on Learning Poverty- SAARC Region

Due to significant progress in measuring learning and establishing comparability, the new Learning Poverty indicator covers four-fifths of the target population. Even in low- and middle-income countries, eighty percent of children are given at least one learning assessment at the end of primary, carried out in the past eight years, that is of sufficient quality to be used for SDG monitoring. This coverage of learning poverty in fact surpasses that of global monetary poverty indicator when it was first launched.

The data on Learning Poverty is available for five SAARC countries- India, Pakistan, Bangladesh, Sri Lanka and Afghanistan. Hence, this paper will look at data on these 5 countries so as to relate them to the available data on learning Poverty.

Table 1 shows the figures for learning poverty for all and then gender wise for all the five SAARC countries. These indicators related to learning poverty have been calculated for both girls and boys separately as well, although this gender breakup is not available for most of the selected SAARC countries.

The Global Alliance to Monitor Learning (GAML) has defined a Minimum Proficiency Level (MPL) for reading at the end of primary which serves as the basis for determining shares of students with at least minimum reading proficiency and for comparing levels across various kinds of assessments in various countries. The core concept of MPL is as follows, “Students independently and fluently read simple, short narrative and expository texts. They locate explicitly-stated information. They interpret and give some explanations about the key ideas in these texts. They provide simple, personal opinions or judgements about the information, events and characters in a text” (2019).

These assessments miss out of-school children, therefore the calculated proficiency rate are discounted by the share of children who are not enrolled in school, thus combining quality and quantity measures of schooling. Out-of-school primary-age children are counted as learning-poor for two reasons: (1) empirically, they are very unlikely to read proficiently; and (2) from a human rights perspective, the Learning Poverty measure should signal that all children should be both in school and learning to read, and that the absence of either one is a form of poverty. (World Bank, 2019c)

The World Bank site on defines Human Capital Index or HCI as a measure of amount of human capital that a child born today can expect to attain by age 18. The HCI illustrates the productivity of the next generation of workers compared to a benchmark of complete education and full health and is constructed for 157 countries. The HCI index is made up of five components: the probability of survival to age five, a child’s expected years of schooling, harmonized test scores as a measure of quality of learning, adult survival rate (fraction of 15-year olds that will survive to age 60), and the proportion of children who are not stunted.

According to a Filmer et al, recent research shows, students in different countries who have completed the same number of years of school often have vastly different learning outcomes. The authors have come up with a new summary measure ‘Learning-Adjusted Years of Schooling (LAYS)’ that combines quantity and quality of schooling into a single easy-to-understand metric of progress. The cross-country comparisons which this measure produces are amenable to different ways of adjusting for learning (for example, by using different international assessments or different summary learning indicators). The working paper argues that (1) LAYS improves on the standard metric, because it is a better predictor of important outcomes, and it



improves incentives for policymakers; and (2) its qualities of simplicity and transparency make it a good summary measure of education.

$$\text{LAYS}_c = S_c \times R_c^n$$

or

$$\text{LAYS} = \text{Average years of schooling} \times \text{Test scores (Crawford et al, 2019)}$$

where ,

S_c is a measure of the average years of schooling acquired by a relevant cohort of the population of country c , and

R_c^n is a measure of learning for a relevant cohort of students in country c , relative to a numeraire (or benchmark) country n . A simple way to define R_c^n is to use the highest-scoring country in a given year as the numeraire (meaning that R_c^n will be less than 1, for all countries other than the top performer), although this numeraire could be established in other ways.

The measure of relative learning as:

$$R_c^n = L_c / L_n$$

R is the measure of average learning-per-year in countries c and n respectively. L can be understood of as a measure of the learning “productivity” of schooling in each country, and R is productivity in country c relative to that in country n . The authors clarify that LAYS can be straightforwardly interpreted as an index equal to the product of two elements, average years of schooling and a particular measure of learning relative to a numeraire.

Table 1 gives the data on Learning Poverty on the 5 SAARC countries. Indicators like learning poverty, below minimum proficiency and out of school, for all, are highest in Afghanistan at 93.4, 87 and 49.6, respectively and lowest in Sri Lanka at 15, 14 and 0.9, respectively. Human capital index and learning adjusted years of schooling are also highest in Sri Lanka at 0.6 and 8.3, respectively and lowest in Afghanistan at 0.39 and 4.9, respectively.

Learning Poverty in these SAARC countries is higher for boys than for girls. This result is a composition of two effects. First, the share of Out-of-School children is higher for boys than for girls (except in Sri Lanka where it is the same). And second, boys are less likely to achieve minimum proficiency at the end of primary school than girls (Learning Poverty Brief, 2019a).

Table 2 shows the wide variation in GDP and annual GDP growth rates across the five countries. Bangladesh has the highest growth rate followed by India while India has the highest GDP followed by Pakistan. On the other hand, per capita GDP is highest for Sri Lanka at \$4102 and lowest for Afghanistan and Bangladesh at \$520.

National poverty headcount ratio is the percentage of the population living below the national poverty lines where national estimates are based on population-weighted subgroup estimates from household surveys. National poverty headcount ratio calculated at national poverty lines varies from 4 per cent in Sri Lanka to per cent for Afghanistan.

Adult literacy rates defined as the percentage of the population aged 15 years and over who cannot both read and write with understanding a short simple statement on his/her everyday life. This is highest for Sri Lanka at 92 per cent and again lowest for Afghanistan at 43 per cent.

It is interesting to note that a country which is neither the top ranked in GDP or GDP growth rate among the selected 5 SAARC countries has the highest adult literacy rate and the lowest poverty headcount rate. On the other hand, Afghanistan which has faced continuous armed conflict and instability over decades now is the lowest performing on all the selected indicators.



Political Institutions affect education directly and indirectly through number of channels which in turn affect government policies for making decisions regarding poverty reduction and quality education. The government has a very vital role increasing education by their public spending in education.

Table 3 shows the data on various governance indicators where the estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance for each of the indicators.

The indicator on Voice and Accountability reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media with India having the strongest in this group at 0.35 and Afghanistan the lowest at -0.99.

Indicator on Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism shows Sri Lanka having the strongest with -0.18 while Afghanistan with the lowest at -2.75.

Political Effectiveness reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies where India has the highest at 0.28 and Afghanistan the lowest at -1.46.

Regulatory Quality reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development with Sri Lanka at -0.5 and Afghanistan at -1.13.

Rule of Law reflects the extent of perception to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence with both India and Sri Lanka are at 0.03 and Afghanistan is at -1.67.

Control of Corruption reflects the extent of perception to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests with India at -0.19 and Afghanistan at -1.50.

Section 5- Findings and Inferences

The literature presented in Section 3 illustrate that many variables impact learning poverty. Some of these micro variables are student, parent and school characteristics. It is also hypothesized that national incomes, income growth rate, income per person, literacy rates, poverty rates and political institutions are some of the macro variables impacting learning poverty outcomes. In this section, the relationship between learning poverty outcomes and selected economic and political institutions variables have been explored for the five SAARC countries using Ordinary Least Squares (OLS) methodology.

The coefficient of determination⁵, R^2 from OLS is used to analyze how much differences in one variable can be explained by a difference in a second variable. Table 4 gives the R^2 values from the OLS between indicators of learning poverty and economic and political institutions.

Neither GDP (one per cent for Learning Poverty and 0 for Below Minimum Proficiency) nor GDP growth rates (three per cent for both) show significant R^2 with any of the learning poverty indicators. The R^2 between per capita incomes and learning poverty indicators

⁵ R-squared gives the percentage variation in y explained by x-variables. The range is 0 to 1 (i.e. 0 per cent to 100 per cent of the variation in y can be explained by the x-variables).



are stronger than GDP and growth rate (75 per cent for Learning poverty and 79 per cent for Below Minimum Proficiency). This can be because of the huge populations in the selected five SAARC countries as well as the unequal economic growth that has taken place there. It may also be that in the initial phases of GDP growth, younger children also join the workforce because of enhanced economic opportunities as well as the scope to help the present occupations of their parents. This is indicated by the comparatively lower value for OOS at 18 per cent for per capita incomes.

Among the indicators for political institutions, political stability is the most significant. This indicates that certainty and consistency in policies, and administration are very important for educational outcomes rather than forum for redressals and opinions. Kahn (1997) shows that how a government whose decision makers reflect the finite horizon of their constituents would choose policies that affect accumulation of knowledge. He uses coups and revolutions as indicators of political instability. One of the ways through which farsighted policymakers implement an efficient policy is to enact a law that is difficult to undo, which would be difficult to achieve in an environment of political instability. The analysis of Nir and Kafe (2013) show that as far as educational quality is concerned, political stability plays a far more significant role compared to countries' economic circumstances evident in the GDP per capita.

For all Learning Poverty, adult literacy rate and political stability are the most important explanatory variables at 95 per cent and 91 per cent, respectively. For Below Minimum Proficiency, adult literacy rate at 93 per cent and 88 per cent poverty headcount ratio are significant. Regulatory Quality at 61 per cent and Rule of Law at 58 per cent are the most important variables for Out of School. For Human Capital Index and LAYS, adult literacy rate and political stability have R squares at 82 per cent.

Barring R^2 for out of school children, adult literacy rate is the most significant social variables impacting all the learning poverty variables. The next variable is political stability. A third variable is poverty headcount ratio. This indicates a vicious cycle- a less literate population, frequent changes in governments and widespread poverty has a bigger impact on the population being more 'learning poor', more below minimum proficient in learning, having a lower human capital index and lesser scores on learning adjusted years in school.

The linkage of adult literacy and poverty headcount ratios with learning poverty indicators is obvious. The literature review in Section 2 clearly mentions that family characteristics and socio economic status are key variables in influencing Learning Poverty outcomes. The linkage between political stability and learning poverty is an interesting outcome and can be explained in terms of the planning horizon of the education policymakers and derailment due to frequent regime changes.

Section 6: Conclusions and Recommendations

The ability to read is a big enabler. It not only facilitates learning as a child progresses through school but also creates awareness and knowledge about the world around. Reading is also one of the cheapest and easiest sources of information- pamphlets, billboards, newspapers, books, magazines, websites and notices. Lacking such a fundamental skill such as reading is often an impediment to other kinds of learning as well.

This paper shows that adult literacy rate and political stability of institutions show maximum explanation of the variations in learning poverty outcomes. This is followed by the poverty headcount ratios calculated at national poverty lines. The link between school education outcomes and adult literacy is obvious. As the literature on this suggests, both parent and family characteristics play a critical role in education outcomes of children. This takes place through parental education level, parental involvement and reading habits, early education development, teacher engagement and favorable school environment and pedagogy.



The link between educational outcomes and poverty headcount ratios is straight forward. Poverty leads to loss of incomes which makes it harder for families to send children to school. Also children are often pulled out from school to work outside in order to supplement family incomes. Girls are often made to do household work and look after younger siblings in order to free the adults for earning outside. Poverty also makes it difficult to allocate resources to schools and offer adequate salaries to teachers and staff. For example, lack of a hygienic and safe toilet for girls in the school compound is a big deterrent for families to send their girl child to schools. Toilet construction and maintenance requires a sustained flow of resources besides supply of water. South Asia still remained the region with the second largest grouping of the global poor whose share of the global poor has increased from 27.3 per cent to 33.4 per cent between 1990-2013, despite the number of poor people in South Asia falling by 248.8 million (World Bank, PovcalNet).

An interesting result is the strong explanation of variation in Learning Poverty Outcomes by the 'Political Stability'. Nir and Kafle (2013) show that political stability which fosters continuity seems to be essential to enable professional considerations to dominate educational processes and allow educators to conduct pedagogical programs from start to finish. World Bank (2004) among others point out that the government plays a major role in financing education, establishing educational objectives, developing a national curriculum, managing teachers, setting student evaluation standards and governing aspects of the education process. Alesina, Ozler, Roubini, and Swagel's (1996) find that political instability reduces growth, and that the occurrence of a government change increases the likelihood of subsequent changes, suggesting that political instability tends to be persistent over time.

The lack of variations in GDP, GDP growth rate and per capita incomes on learning poverty outcomes is not surprising. It supports studies that have proved wrong the notion that economic growth in itself can take care of education. The poverty and inequality levels as well as overall education attainment of the people are very important determinants.

It is worthwhile to note that it is political stability among all the political institutions indicators that has the maximum relationship with learning poverty indicators. One would have expected, Voice and Accountability, Rule of Law, Control of Corruption, Regulatory Quality or Government Efficiency to show the maximum impact. Although the R^2 for all the political institutions indicators have been higher than GDP, GDP growth rate or per capita incomes, among them political stability is the one which stands out. Stability of political institutions ensures consistency of policies. It also brings in incentives since it leads to a long term horizon of planning and resource allocation for both education reforms and other indicators of human development.

This may mean that in South Asia, consistency and predictability of rules and policies are more important because it would be uniform and reliable over a longer horizon. Frequent regime changes inflict far greater damages to education reforms and investments than the kind of regime. It must be noted that out of the five South Asian countries selected for this study, four of them barring Afghanistan, have been democracies albeit with variations.

There are remain major gaps in data coverage so a full understanding of the process of learning, the reasons for the learning gaps and possible ways to plug them are only partially understood. One difference is in geographic coverage by income level where virtually all children in high-income countries are in educational systems with such monitoring, while only one-third of those living in low-income countries are.

There is difference in recency of data where in high-income countries, 70 per cent of these assessments took place in the last four years, but in low- and middle-income countries, the figure is only 35 per cent. Data comparability, which is one of the huge impediments to fully capturing any kind of educational change— both within and across countries, as well as over time— also poses a significant challenge. The pre and post reform data



comparability as well as lack of baseline studies are significant challenges. Moreover, some cross-national assessment programs make significant changes in their scales between rounds or even have design instruments suited only for cross-national comparison within rounds, which results in an inability to monitor progress over time.

This study uses data from the World Bank. While this is a good starting location, there is a lot of scope in evaluating additional sources of data to add depth to the analysis. How do each of the indicators tie to (say) levels of infrastructure e.g. roads, access to clean water, number of schools per million people, availability of power and so on. We have not explored the nature of investment either – is public-private partnership an influencer or are private schools very different from public ones? Additionally even for the indicators referenced here, we have evaluated the impact at the country level – the analysis should be extended to the regional level to bring in additional factors that might be relevant. For instance is there an urban-rural divide? Are regional and local executive and judicial branches of government catalysts or do they have no impact? Even within the same country, is there a difference between the top three cities from other tier one and tier two ones? Finally, on the nature of the analysis, we have looked at very simple measures of correlation. A thorough analysis that looks at many variables, perhaps through a detailed supervised learning analysis is recommended.

The UNICEF Progress Report on South Asia (2018-21) recommends a multi-sectoral approach involving both structural and systemic changes to reduce the number of out-of-school children in South Asia. It also requires attitudes and behaviour to change. In South Asia, more girls than boys who will never go to school which leads to the highest incidents of child marriage and child labour in the world. Majority of classroom learning is characterized by teacher-centred rote and often pupils are also victims of corporal punishment and discrimination. There is also the problem of inadequate care for children below the age of five years depriving them of the nurturing they need to achieve their full development potential which then impacts school enrolment, full participants and retention. Only a quarter of students leave school with the secondary skills they need and this creates a skill gap in the economy which impedes economic growth with wider social and political repercussions.

Studies have shown (Sandoval- Hernandez et al., 2013 among others) that multiple factors contribute to student learning. While economic growth leads to a general improvement in living standards and increase in economic opportunities for the population, the real push for lowering of poverty and having governments that are stable overtime. The vicious cycle thus resulting can lead to outcomes that can ameliorate the learning crisis engulfing South Asia.

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Tables
Table 1- Data on Learning Poverty for 5 SAARC Countries for 2018

COUNTRIES	INDIA			PAKISTAN			SRI LANKA			BANGLADESH			AFGHANISTAN		
Indicators and Components	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All
Learning Poverty	56.3	53.7	55	NA	NA	75	NA	NA	15	NA	NA	57	NA	NA	93.4
Below Minimum Proficiency	55	53	54	NA	NA	65	NA	NA	14	NA	NA	55	NA	NA	87
Out-of-School	2.9	1.6	2.3	21.7	33.3	27	0.9	0.9	0.9	7.9	1.7	4.9	NA	NA	49.6
Human Capital Index	0.43	0.45	0.4	0.39	0.38	0.4	NA	NA	0.6	0.46	0.49	0.5	0.4	0.36	0.39
Learning-Adjusted Years of Schooling	5.6	5.9	5.8	5.1	4.4	4.8	NA	NA	8.3	6.2	6.7	6.5	5.3	3.8	4.9

Source (Learning Poverty): <https://datacatalog.worldbank.org/dataset/learning-poverty/resource/9d5a45af-f7d4-404b-ae7b-8bf56d105d71#{}>

Table 2: Selected Indicators for 5 SAARC Nations (year for which data has been collected is in parenthesis)

Indicators	India	Pakistan	Sri Lanka	Bangladesh	Afghanistan
GDP (current USD) ¹	2.78 trillion (2018)	3.15 billion (2018)	88.9 billion (2018)	2.7 billion (2018)	1.94 million (2018)
GDP growth rate (annual %) ²	6.81 (2018)	5.83 (2018)	3.21 (2018)	7.86 (2018)	1.03 (2018)
GDP Per capita (USD) ³	2009 (2018)	1482 (2018)	4102 (2018)	520 (2018)	520 (2018)
Adult Literacy rate ⁴	74 (2018)	59 (2017)	91.9 (2017)	73.9 (2018)	43 (2018)
Poverty Headcount Ratio at national poverty lines (% of population) ⁵	25.7 (2011)	24.3 (2015)	4.1 (2016)	24.3 (2016)	54.5 (2016)

Source¹: World Development Indicators

<https://databank.worldbank.org/indicator/NY.GDP.MKTP.CD/1ff4a498/Popular-Indicators>

Source²: World Development Indicators <https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.MKTP.KD.ZG>

Source³: World Development Indicators

<https://databank.worldbank.org/indicator/NY.GDP.PCAP.CD/1ff4a498/Popular-Indicators>

Source⁴: World Development Indicators (<https://databank.worldbank.org/reports.aspx?source=2&series=SL.POV.NAHC>)

Source⁵: World Development Indicators (<https://databank.worldbank.org/reports.aspx?source=2&series=SL.POV.NAHC>)

Table 3- Data on Governance Indicator for 5 SAARC Nations for 2018

Country/Territory	India	Pakistan	Sri Lanka	Bangladesh	Afghanistan
Estimate of Voice and Accountability	0.38	-0.80	0.01	-0.73	-0.99
Estimate of Political Stability and Absence of Violence/Terrorism	-0.96	-2.27	-0.18	-1.03	-2.75
Estimate of Government Effectiveness	0.28	-0.63	-0.24	-0.75	-1.46
Estimate of Regulatory Quality	-0.18	-0.64	-0.15	-0.83	-1.13
Estimate of Rule of Law	0.03	-0.67	0.03	-0.64	-1.67
Estimate of Control of Corruption	-0.19	-0.79	-0.34	-0.91	-1.50

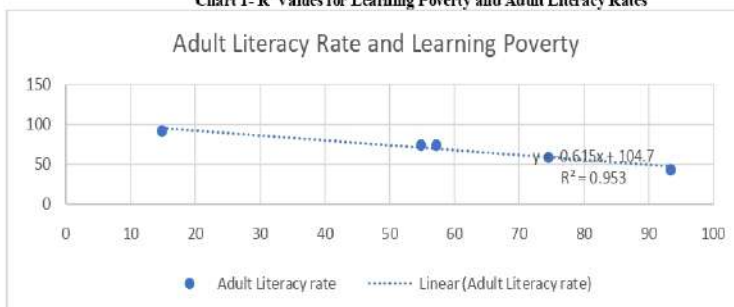
Source: Database on Political Institutions (DPI) <http://siteresources.worldbank.org/INTRES/Resources/469232-1107449512766/DPI2012.xls>

Table 4- Coefficients of Determination between Learning Poverty Indicators and Variables of Economic and Political Institutions

Learning Poverty Indicators→	Learning Poverty	Below Minimum Proficiency	Out of School	Human Capital Index	Learning Adjusted Years of School
Economic and Political Institutions Indicators↓					
GDP	1%	0%	56%	0%	0%
GDP Growth Rate	3%	3%	29%	0%	0%
Per Capita Income	75%	79%	18%	59%	58%
Literacy Rate	95%	93%	17%	82%	81%
Poverty Headcount Ratio for National Poverty Lines	84%	88%	26%	63%	61%
Voice and Accountability	48%	43%	51%	27%	27%
Political Stability	91%	85%	13%	82%	82%
Government Efficiency	43%	41%	78%	18%	18%
Regulatory Quality	67%	66%	61%	38%	37%
Rule of Law	71%	70%	58%	42%	41%

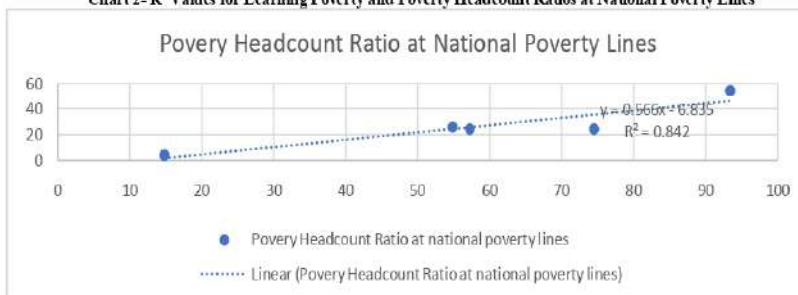
Charts

Chart 1- R² Values for Learning Poverty and Adult Literacy Rates



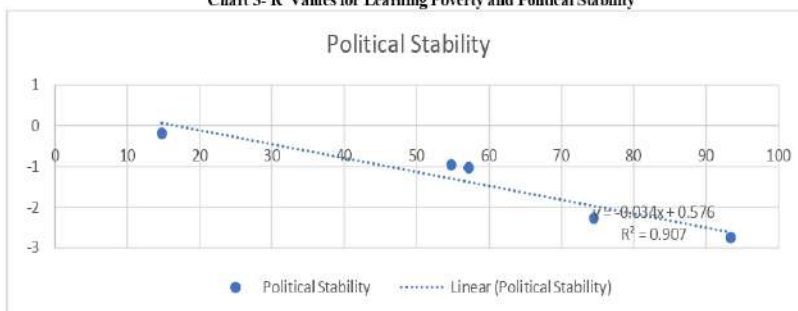
Source: Table 4

Chart 2- R² Values for Learning Poverty and Poverty Headcount Ratios at National Poverty Lines



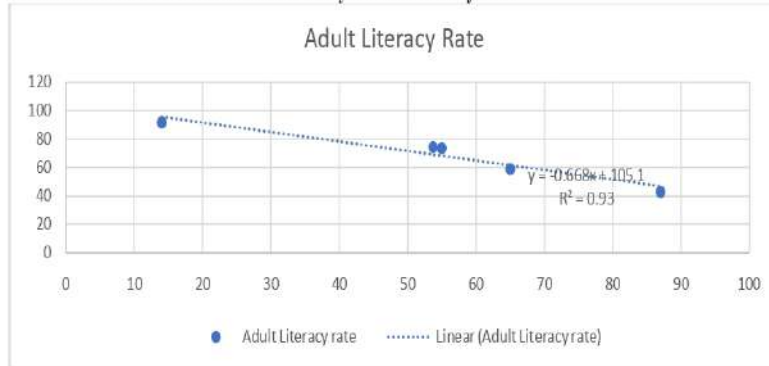
Source: Table 4

Chart 3- R² Values for Learning Poverty and Political Stability



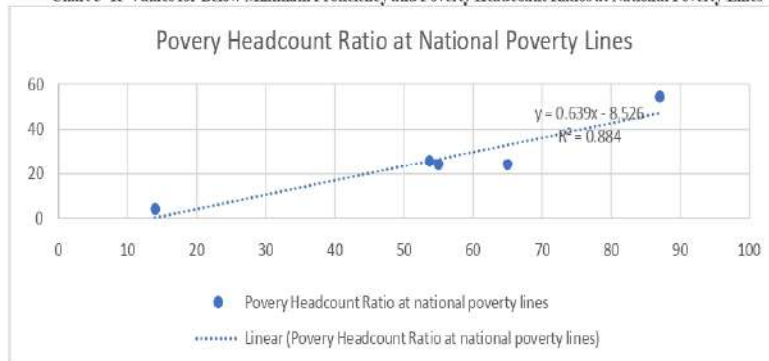
Source: Table 4

Chart 4- R² Values for Below Minimum Proficiency and Adult Literacy Rate



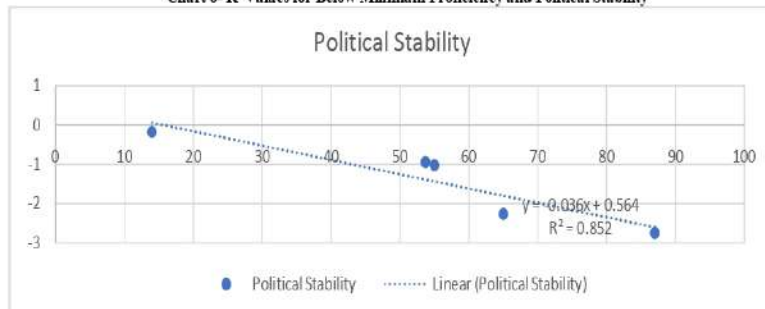
Source: Table 4

Chart 5- R² Values for Below Minimum Proficiency and Poverty Headcount Ratios at National Poverty Lines



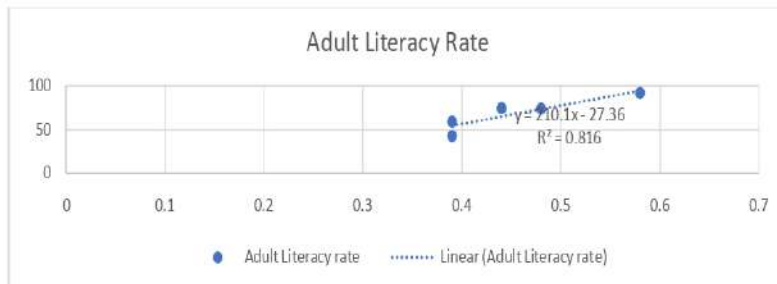
Source: Table 5

Chart 6- R² Values for Below Minimum Proficiency and Political Stability



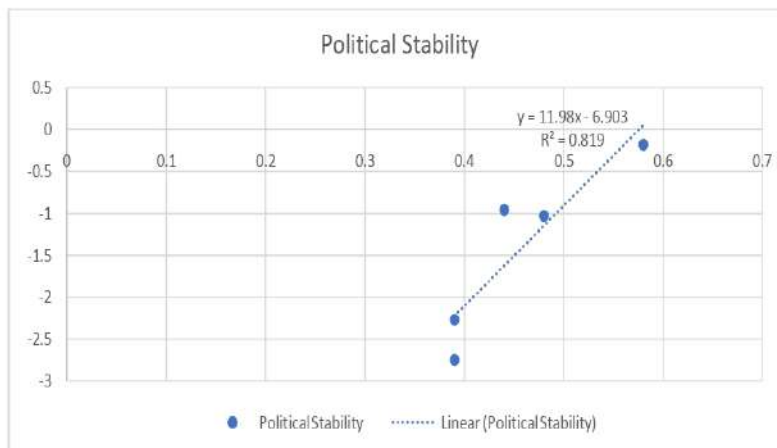
Source: Table 4

Chart 7- R^2 Values for Human Capital Index and Adult Literacy Rate



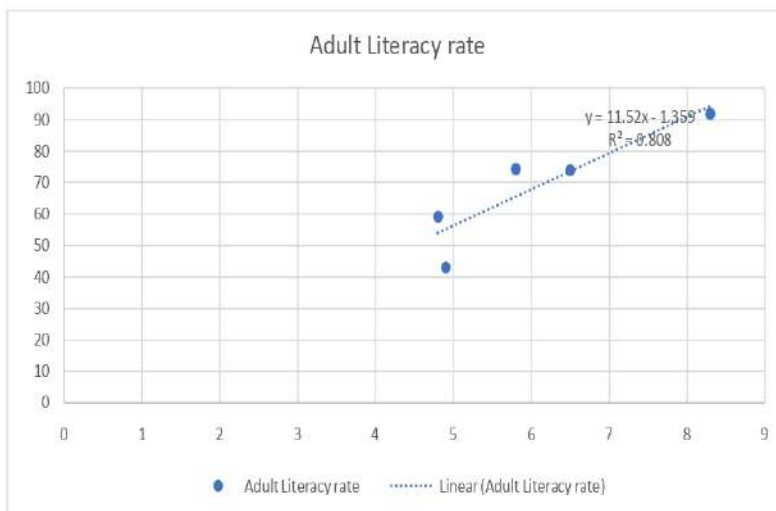
Source: Table 4

Chart 8- R^2 Values for Human Capital Index and Political Stability



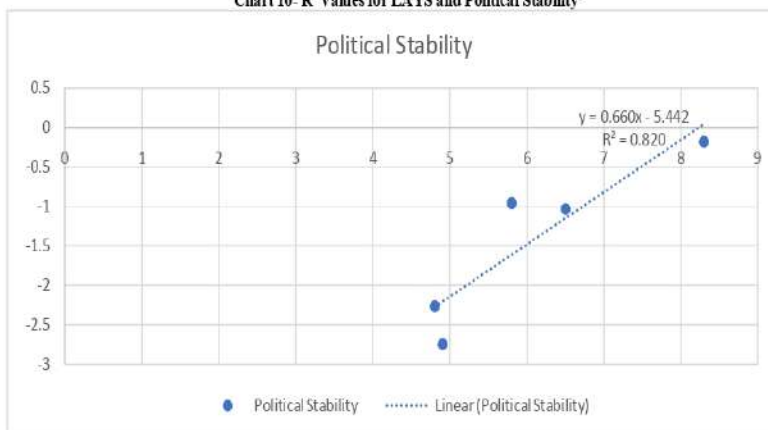
Source: Table 4

Chart 9- R² Values for LAYS and Adult Literacy Rate



Source: Table 4

Chart 10- R² Values for LAYS and Political Stability



Source: Table 4



THE MONOPOLY OF 'TECHNOCRATS' AND 'EXPERTS' IN INDIAN POLICY-MAKING: AN APPRAISAL OF LOWERSUBANSIRI DAM PROJECT IN NE INDIA

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Abstract

This paper looks into the effects of technocratic monopoly in Indian policymaking and tries to locate the problem of lesser public participation in decision making process. Indian policymaking has been a major platform for the technocrats, economists and experts since her embark on post-independence socio-economic development. As a matter of fact, the common people have a lesser say in decision making process. Indian policy discourse has witnessed a major shift in 1990s owing to her economic transformation that urged for an open policymaking procedure incorporating multiple actors- civil society organisations, pressure groups and various NGOs. However, it is often seen that the technocratic expertise leads to the exclusion, marginalisation of the common people, the local public and the target people. This paper is an attempt to realise the effects of technocratic solution to a social problem with special mention of Lower Subansiri Dam project. The public uproar that immediately followed the construction decision compelled the government to arrange the expert's vigilance on the issue; but again, the government is seen as being categorical in manipulating the expert's reports. Primarily drawn on the existing literatures, the paper tries to assess the policymaking process in India at large by locating the issue of Northeast mega-dam at centre.

1.Introduction:

The policy discourse in India has always been a fundamental space for the technocrats and experts since her inception as an independent homeland. The grab of expertise however resulted in lesser public participation in policymaking process. As the need for specialised expertise grows in response to increasing complexity in a particular sector, demand for knowledge from policymakers and the call for policy advice of 'experts' also increases. A related implication is that technical expertise often entails the monopoly of a single profession, such as lawyers or economists, leading to the establishment of a clear hierarchy of knowledge.ⁱ This is often reinforced by closed knowledge communities, missing out the local knowledge and experiences. While recognition of the importance of rigorous evidence is welcome, an emphasis on a narrowly defined set of expertise can also be potentially harmful. It risks overlooking important cross-sectoral linkages and missing out on potential synergies derived from insights based on a broader array of multi- or trans-disciplinary knowledge inputs.ⁱⁱ Claims made on the basis of technical data are presented as 'objective evidence'



and, hence, are more difficult to contest. Here, an attempt has been made to assess the technocratic solution to the societal problems, to study the humanist aspect of the mega-dam project in NE India.

2. Objectives & Methodology:

The primary objective of the paper is to assess the Indian policymaking process and the monopoly of technocrats and experts in the realm of policymaking. The marginalization of local public voices at the site of mega-dam project out of the politics of expertise, the role of the State in mitigating the apprehension from the minds of local people has also been addressed in the paper while the existing literatures are the primary sources of the paper.

3. Indian policy-making: a paradise for experts and technocrats

The dawn of independence brought new hopes, new dreams and aspirations within the new leadership to get rid of year-long impoverishment, underdevelopment and social exclusion. The triumph of science and technology had touched this part of the world too and India identified herself with the performance of the West. Nehru was further impressed by the treads that Soviet Russia had made through judicious planning and the rational use of resources, and he envisioned India quickly attaining the levels of economic development achieved by Western nations through industrialization and modernization. To pursue such goals, the services and advice of experts and technocrats became very necessary. As Khilnani rightly points out, Nehru's intention was to establish the superior rationality of scientists and economists in policymaking.ⁱⁱⁱ The result was that the public and its representatives had little say in wider deliberations about India's future. This lack of participation was justified by the argument that the economic strategy demanded technical evaluation of alternative policies and determination of choices on scientific grounds.^{iv} The debates were confined to the knowledgeable and the technicality of arguments restricted widespread participation, thereby leaving a scope for marginalisation of voices of the target population and the local-public.

4. The Lower Subansiri Dam Project: Confrontations and Contestations: The Discussion

On December 3, 2019 the Supreme Court dismissed a public petition challenging an order passed by National Green Tribunal (NGT) and offered green signal for the resumption of the construction of the Lower Subansiri Dam project straddled across the twin states of Assam and Arunachal Pradesh, putting an end to the year-long mass protests and legal struggle. The contentious LSHP was stuck for the last eight years owing to a mass resistance over a few sensitive issues such as, environmental impact assessment, confiscation of forest land and the effects on the downstream communities. The project that was a part of mainland India's endeavour to turn the North-eastern



region into 'India's future powerhouse'^vby generating massive hydel power, started in the year 2005 at the site near Gerukamukh-foothills of Arunachal Pradesh under NHPC, immediately faced stiff resistance and mass demonstration. The 2000KW mega-dam project created disquiet among the downstream communities because of its devastating consequences for the livelihood of the communities that depend on them. The violation of environmental laws such as constructing mega-dam in a zone that is prone to seismic activity, getting clearance for the use of forest land apprehended the people of Assam and AP. One of the expressed as "the primary reason the movement started was because the environmental impact assessment of the project was done shoddily without any concerns about the impact downstream."^{vi}Soon these concerns caught the eyes of Civil Society Organisations in Assam primarily All Assam Students Union (AASU) and AxomJatityatabadi Yuba Chatra Parishad (AJYCP) along with several environmental NGOs, standing against NHPC.

The protests in Assam gained momentum 2011 onwards when two influential state-wide organisations, the All Assam Students Union (AASU) and the Krishak Mukti Sangram Samiti (KMSS)-led by Akhil Gogoi got associated with the protest. The anti-dam activists set up roadblock to prevent the shipment of machinery and the NHPC finally had to stop the construction out of persistent protests.

The peoples' resistance compelled the government to reconsider and revisit its earlier decisions. As a result, in December 2006, an expert committee was constituted to study the downstream impact of the dam. The expert group was constituted with 8 academics – professors of civil engineering, environmental science, geography, geology, life sciences and zoology – at three of Assam's most prestigious academic institutions: Gauhati University, Dibrugarh University and the Indian Institute of Technology in Guwahati. The expert group submitted its report in June 2010. It confirmed that the fears expressed about the dam's safety and adverse impact on downstream communities were not unreasonable.

The report recommended that the dam be redesigned: its height reduced and other changes made to increase the river flow and help flood moderation, but changes that would cut into its power producing capacity and profitability. Subsequently, in April, 2011, NHPC constituted a Joint Steering Committee to study the project-feasibility. Meanwhile, the project became a subject of litigation in 2013 when Assam Public Works approached NGT challenging the expert's comments and reports. However, in July 31, the NGT dismissed the petition to reconstitute the committee and in December 03, 2019, the Supreme Court offered green-signal to NHPC by dismissing a petition to reconsider the decision of the tribunal and ordered the concerned authority to resume its work, in a bid to booster India's electricity capacity.^{vii}

5.The "Politics of Expertise", the conflict of interests among the Experts: Observations and Interpretations

The gap between the lived experiences of the local-public and knowledge of the scientists and technologists stands in the way of a just policymaking, where the grab of



expertise led to the exclusion of the local people. However, one can see the gap amongst the expert's comments and reports on the feasibility of the project. The controversy over expert's comments showed the conflict of interests and the political overtones. The geologists and civil engineers who teach in some of the region's best-known academic institutions and are members of the expert group showed their conflict of interest from the experts representing the Centre. They commented, "The experts from IIT-Rourkee [which has India's premier Department of Earthquake Engineering] have not seen the earthquake-induced landslides of 1950...when hundreds and thousands of trees floating downstream had nearly covered the Brahmaputra river. They have not seen that extraordinary spectacle. How can they say what a future disaster on the Subansiri might bring? If despite what we know from real life, we get seduced by what experts from Rourkee might say (about dam safety) even God Almighty may not be able to save the people of Assam." ^{viii}

The Sanjib Baruah has expressed it better how the government was categorical in terms of manipulating experts reports and comments through "politics of expertise". He observed, the Assam government's ministers, while maintaining a supportive stance towards the notion of modifying the dam's design, were careful not to support the protesters' demand that work on the Lower Subansiri project be suspended. At the same time, they tried to slowly disassociate themselves from the recommendations of the expert group's report.^{ix}In April, 2011, NHPC constituted a Joint Steering Committee to suggest feasible and practical solutions to the stalemate which came up with a plan to mitigate the downstream impact amounting to Rs 470 crore- a recommendation that the NHPC was only happy to accept.^xIn 2013, the public approached National Green Tribunal (NGT), filed a petition against the recommendations of both the Joint Steering Committee and Expert group Committee. The NGT in the year 2015 allowed NHPC to carry out repair and maintenance work that were not related to the main project for the safety and protection of the people of the locality. Meanwhile, to satisfy and to negotiate with the agitators, the ministry of power appointed a Project Oversight Committee to examine the project and its various aspects. However, the committee that was constituted of eight members, four from Assam and four representing the Centre, had a fraction within and submitted contradictory reports.

The experts from Assam were critical of the representatives of the Centre that was reporting in favour of the project. The experts from Assam expressed discontent as the members representing GoI were not ready to redesign the project, undermining the safety and security of the downstream communities. ^{xi}Finally, in November, 2017 one more committee was formed to examine the whole matter and reports of the various committees constituted. The committee gave its verdict in favour of the project, proving the apprehension of the public right. Subsequently, the NGT dismissed the petition to reconstitute the committee on July 31 and on December 3, the NHPC received a green-signal from the Supreme court to resume its work.



6.Conclusion

In brief, the discussion discloses the “politics of expertise” in Lower Subansiri Dam project, the manipulation with the expert’s comments, the conflict of interests and political overtones of the expert’s comments and reports, the objectivity and rationality behind the expert’s reports and their classification. The mainland India’s political economy of hydropower development in Northeast India and her endeavour to turn the region into “India’s future powerhouse” have been critical while it comes to the humanist aspect of the mega-dam. In conclusion, an important policy question can be placed, “At what scale and in what manner can hydropower be produced in the region as a part of larger development ethos which respects the ecological, social, and political context of the region?”^{xii} Both the central and state governments will need to go beyond existing technocratic institutions in the water and power sector to find the answer to this question and the people who actually inhabit these river valleys will need to be at the steering wheel of the process to find the answer.^{xiii} With the approval of the country’s Apex body, the project has been under operation at present; but, the controversy and conflict of interests among the technocrats and experts over the feasibility of the project interrogates the efficacy of technocratic monopoly, the knowledge of the scientists and experts in Indian policymaking at large and leaves future of the mega-dam, the lives of the downstream communities and their livelihoods at stake.

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- ⁱⁱⁱKhilnani, S. (2004). *Idea of India*, Penguin India. p. 81.
- ^{iv} Chatterjee, P. (1997). *Development Planning and the Indian State*, in P. Chatterjee (ed.). *State and Politics in India*, New Delhi: OUP, p. 274.
- ^v Sharma, C. (2012). Dam, ‘Development’ and Popular Resistance in Northeast India. *Sociological Bulletin*, 67 (3), 317-333.
- ^{vi}Saikia, A. (2019). ‘Subanisiri dam will produce costly power and won’t control Assam floods. Why is it still being built? Scroll.in, Dec. 09.
- ^{vii}Ibid.
- ^{viii} Baruah, S. (2012). ‘Whose River Is It Anyway? Political Economy of Hydropower in the eastern Himalayas’. *EPW*. Vol. XLVII. No. 29.
- ^{ix}Ibid. p. 46.
- ^xSaikia, A. (2019). ‘Subanisiri dam will produce costly power and won’t control Assam floods. Why is it still being built? Scroll.in, Dec. 09.
- ^{xi}ibid
- ^{xii}Vagholikar, N., & Das, P. J. (2010). *Damming northeast India*. Pune/Guwahati: Kalpavriksh, Aaranyak and Action Aid India.
- ^{xiii}Ibid. p. 368.



MULTI SYSTEM INFLAMMATORY SYNDROME (MIS) AN IMPRESSION OF COVID – 19

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ABSTRACT

MIS- C is a condition where different body parts can be inflamed , including the vital organs , even though the cause is unknown but children with this syndrome had the virus that also result in corona virus Covid -19 and this can be serious and even deadly , but most of the children who were diagnosed with this condition will get better with efficient medical care

The association between these two diseases is not very well clear, hence early identification and proper measures advised by CDC can treat the children effectively

KEY WORDS – Myocardial Dysfunction, Pericarditis, Valvulitis, Procalcitonin

INTRODUCTION

Children seem to have mostly been spared from serious Covid- 19 symptoms, but now new reports suggest that a rare and potentially fatal inflammatory disease linked to the novel corona virus is affecting the small children

The case of what's being called as (MIS-C) , formerly referred to as Pediatric Multi – Symptom Inflammatory Syndrome or PMIS ,have been reported in parts of the U.S and Europe some children have experienced organ failure have been report for new risk¹

HISTORY

As of 15 May 2020, more than 4 million confirmed cases of Covid-19 including more than 285, 000 deaths have been reported by WHO. The risk of severe disease and death has been highest in older people and in persons with underlying non communicable diseases (NCD'S), Such as hypertension, cardiac disease, chronic lung disease and cancer.

Limited data describe clinical manifestations of Covid-19 that are generally milder in children compared with adults but also show that some children do require hospitalization and intensive care, relatively few cases of infants confirmed to have Covid - 19 have been reported those who are infected have experienced mild illness. robust evidence associating underlying conditions with severe illness in children is still lacking. among 3455 children with laboratory confirmed Covid - 19 and complete information about underlying conditions 23% had an underlying condition with chronic



lung disease (including asthma), cardiovascular disease and immunosuppression most reported.²

Reports also have described that clusters of children and adolescents requiring admission to intensive care units with a multi system inflammatory condition with some features like those of Kawasaki Disease and Toxic Shock Syndrome

Many cases have reported that these children are also presented with acute illness accompanied by Hyper Inflammatory Syndrome, leading to Multi Organ Failure and Shock. few studies have stated the hypothesis that this syndrome may be related to Covid - 19 based on initial laboratory testing showing positive serology in majority of patients. children have been treated with anti - inflammatory treatment, including prenatal immunoglobulin and steroids

What is multi system inflammatory condition in children (MIS-C)

In children **Multi system inflammatory syndrome (MIS-C)** is a serious condition in which some of the body parts such as the Heart Blood Vessels, Kidneys, Digestive System, Brain, Skin, Or Eyes become inflamed, inflammation typically includes swelling, often with redness and pain

Many but not all children with MIS-C test negative for a current infection with the virus Covid- 19 yet evidence indicate that many of these children were infected with the Covid-19 in the past as shown by positive antibody test which mend the children immune system developed blood proteins (Antibodies) that fight the Covid-19 virus some times this blood test is the only indication that the child was ever infected .

Some children with MIS-C are currently infected with the virus usually confirmed by detection of the virus on a swab taken from the back of the nose or throat.³

The WHO has developed a preliminary case definition and case report form for multi system inflammatory disorder in children and adolescent. The preliminary case definition reflects the clinical and laboratory features observed in children reported to date and serves to identify suspected or confirmed case both for the purpose of providing treatment for provisional reporting and surveillance

The case definition will be revised as more data become available

PRELIMINARY CASE DEFINITION INCLUDES

Children and adolescents 0-19 years of age with fever > 3 days and two of the following

1. Rash or bilateral non purulent conjunctivitis or mucocutaneous inflammation signs (oral, hands or feet)
2. Hypotension or shock
3. Features of myocardial dysfunction, pericarditis, valvulitis or coronary abnormalities (including ECHO findings or elevated troponin/NT – pro BNP)
4. Evidence of coagulopathy (by PT/PTT. Elevated d- Dimers)
5. Acute gastrointestinal problems (Diarrheal, vomiting, or abdominal pain)
6. Elevated markers of inflammation such as ESR, C- Reactive protein, or procalcitonin



7. No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes
8. Evidence of Covid - 19 (RT- PCR, Antigen test or serology positive) or likely contact with patients with Covid - 19

SIGNS AND SYMORINS OF MISC -C

Signs and symptoms of **MIS-C** includes those below, though not all children have the same symptoms

1. Fever that last for 24 hours or longer
2. Vomiting
3. Diarrhea
4. Pain in the stomach
5. Skin rashes
6. Tired eyes
7. Redness or swelling of the lips and tongue
8. Feeling unusually tired ‘
9. Redness or swelling of hands or feet

EMERGENCY WARNING SIGNS OF MIS-C INCLUDE

1. Inability to wake up or stay awake
2. Difficulty in breathing
3. Chest pain or pressure that does not go away
4. New confusion
5. Bluish lips or face
6. Severe stomach pain

TREATMENT OF MIS-C

Firstly, if the child shows any of the emergency warning signs listed above or is severely sick with othersigns and symptoms immediate medical care must be sought. Most of the children needs to be treated in a hospital and some need treatment in a pediatric intensive careunit. ⁴

Treatmentusuallyinvolves different types of therapies that target the immune system and reduce the inflammation .depending on the child’s symptoms and condition he or she may receive any inflammatory drugs and othermedicationsto reduce inflammation in the affected vital organs such as heart or kidney and protect then from permanentdamage

MIS-Cis not contagious but there is a chance that the child could have an active infection with the Covid-19 virus or another type of contagious infection, so that hospital might use infectioncontrolmeasures while caring for the child

PREVENTIVE MEASURES AGAINST MIS -C

The best way to pervert the child from getting MIS- C is to take cation to avoid exposure to the Covid – 19 virus and teach the child how to do the same And follow the guidelines issued by countryCDCguidelines⁵



- ⊙ **KEEPS HANDS CLEAN:** Wash hands often with soap and water for at least 20 seconds, if soap and water are not available, use a hand sanitizer that contains at least 60% alcohol
- ⊙ **AVOID PEOPLE WHO ARE SICK:** Avoid people who are coughing, sneezing, or coughing other signs and symptoms that indicate they might be sick and contagious
- ⊙ **PRACTICE SOCIAL DISTANCING:** This means that the children should stay at least 6 feet (2 meters) away from other people when outside of the home
- ⊙ **WEAR CLOTH FACE MASKS:** In public distancing when it is difficult to practice social distancing, both you and your child – if he or she is age 2 years or older should wear face masks that cover the nose and mouth
- ⊙ **CLEAN AND DISINFECT HIGH TOUCH SURFACES EVERY DAY** - This includes areas of home such as Doorknobs, Light Switches, Remotes, Handles, Countertops, Tables, Chairs Desks, Keyboards, Faucets, Sinks and Toilets
- ⊙ **WASH CLOTHING AND OTHER ITEMS AS NEEDED** - Follow manufacturer's instructions using the appropriate water setting on washing machine, remember to include washable plush toys

If all the attention on MIS-C drives data collection, the enigmatic disease could end up being better understood and treated as well

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DESIGN, ANALYSIS, MANUFACTURING AND TESTING OF PLASTIC COMPOUND BRAKE MASTER CYLINDER

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Abstract

The research encompasses the construction of the compound Master Cylinder (MC) intending to make the product lightweight and cost-effective. Considering the various features and functions of the master cylinder, the compound shell type (two-layer) structure is to be worked upon. Its inner layer is used to facilitate the smooth piston movement and outer layer to provide the pressure holding strength. Based on the market research and industry knowledge, aluminium (of thin cross-section) is selected as inner shell and for the outer body, 30% glass-filled nylon [3,4] is chosen to fulfil the desired role of replacing the aluminium casing. This is followed by process selection to keep the product easy to manufacture and cost-effective. Static analysis of the compound master cylinder designed for an All-Terrain Vehicle (ATV) is carried out to verify the compound layer strength to hold the already measured brake line pressure of an ATV. A prototype is further developed and tested.

Keywords: Brakes, Custom, Master cylinder, plastic injection molding, reduced cost and weight.

Introduction

Master Cylinder is the primary brake actuating device and is the heart of the brake system in automobiles. It has to bear high fluid pressure and hold it without any leakage. Currently, it is being manufactured with aluminium alloys as the base component. In this research, an alternate solution has been introduced for this component using a compound structure to achieve a lighter weight [1] and cost-effectiveness. It is the study of an alternate built structure which comprises of aluminium along with a polymer [2] which leads to the achievement of the desired properties without compromising on the strength. The designed master cylinder is expected to be used for high performance and reliability.

Material and Methods

Material Selection[5]: For evaluating various materials commonly available, extensive market research is carried out and a rating system is incorporated to compare the potential materials. This system involves parameters like density, cost, melting point, strength, ease of machining and wear resistance as the bases.

[6] By evaluation of common thermoplastics [7,8] and by comparing them with the aluminium used in conventional design, it has been decided that 30% Glass-filled nylon is the best alternative.[9,10]

The disadvantage of glass-filled nylon is that it is brittle compared to standard nylon and can also accelerate wear of tools due to its abrasive nature.

Material	Aluminium A380	Delrin (Polyacetal)	Polypropylene	30% glass filled Nylon
Density (g/cc)	2.7	1.42	0.9	1.32
Tensile Yield Strength (MPa)	160	71	31	130
Cost (₹/kg)	240	160	100	190
Melting Point (°C)	660	178	160	221

Machinability rating	50	11	12	32
Wear and corrosion resistance	Less corrosion resistance compared to other Al die-cast alloys	Excellent wear and abrasion resistance in wet and dry conditions	Relatively poor wear resistance but high chemical resistance.	Good wear resistance and creep resistance

Table 1: Properties of Material

Material	Density Weightage: 5	Strength Weightage: 5	Cost Weightage :3	Melting Point Weightage :2	Ease of Machining Weightage: 2	Wear resistance Weightage: 1	Total Score (weightage *score)
Aluminium	1	5	1	1	5	5	50
Delrin (Polyacetal)	3	1	3	4	1	3	46
Polypropylene	5	1	5	5	1	1	62
30%Glass filled Nylon	4	4	2	3	3	3	68

5 → Excellent, 4 → < Very good, 3 → < Good, 2 → < Average, 1 → Below Average

Table 2: Decision Matrix of Material

Manufacturing method selection:

Developing a production scheme provides a blueprint for parameter variation and batch production. Evaluation and selection of the proper manufacturing method can be done on parameters such as initial cost, per part cost, lead time or accuracy.

Common methods used for producing parts out of plastic (thermoplastic) are:

Injection Molding: In this manufacturing method, a permanent mould of die steel is made to produce the part rapidly. It is mainly carried out in four stages: clamping, injection, cooling and ejection^[1]. Thin walled plastics having a wide variety of applications are produced in the same manner.

High dimensional accuracy, low per-part manufacturing time and cost are the major advantages. The sole disadvantage of this process is that it requires a proper die to be created which is expensive. Thus, the initial investment is high.

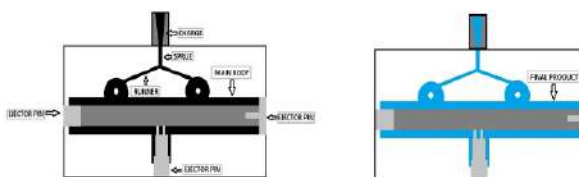


Figure 1: Injection Molding

3-D Printing: In this method, the thermoplastics are heated to a level that it is plastic enough to be easily extruded out of a thin nozzle and the shape of the part is made by stacking the plastic layer by layer. This process has a disadvantage of being extremely slow. Cost per part is very high.

Machining: This process is fast and needs no prior mould manufacturing. It allows for variation with ease, but since the process involves removing material in the form of chips, it results in a lot of wastage thereby increasing the material cost. Moreover, the process is not viable for mass production as specialized CNC machines are required to manufacture complex parts.

Method	Initial Cost	Per Piece Cost	Lead Time	Accuracy	Total
Injection Molding	0	5	5	5	15
3D Printing	5	0	0	4	9
Machining	5	0	2	5	12

Table 3: Decision Matrix for Manufacturing

By comparison, it can be concluded that injection molding is the best solution for the production of the master cylinder as it reduces the overall cost of the product and allows us to have a very low lead time, i.e. we can make hundreds of master cylinders in a day very easily on just one machine which cannot be achieved by the current speed of 3D printing and machining.

Manufacturing Steps

The manufacturing process consists of the following steps:

- Design and manufacturing of die for molding.
- Manufacturing and machining of the aluminium sleeve and insert of the required diameter and length on the lathe.
- Surface grinding of the sleeve and press-fitting of the insert.
- Injection molding of 30% glass-filled nylon onto the sleeve-insert assembly using the die.
- Drills of 0.5 mm thickness for the Serial and Compensating ports.
- Cutting the groove in the sleeve for the circlip and threads inside the insert for connecting the brake line.

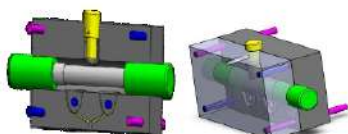


Figure 2: CAD model of Die

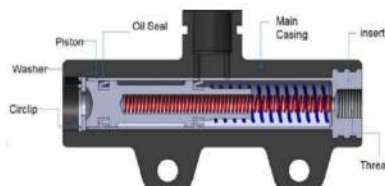


Figure 3: CAD model of 30% glass-filled MC along with its various parts

Calculations

[14] The clamping force of them can be calculated using simple braking formulae once the torque on the wheels and the effective radius of the disc are known. Now, by pre-deciding the calliper piston area, the bore diameter of the

master cylinder can be formulated by calculating the pressure in the brake lines and the pedal force applied.

$$R_{\text{effective}} = (2/3) * [(R^3 - r^3) / (R^2 - r^2)]$$

Where;

R = radius of disc = 4 inches

r = radius of disc – caliper piston radius

$$= 4 - (1.12/2) = 3.44 \text{ inches}$$

$$R_{\text{effective}} = (2/3) * [((4)^3 - (3.44)^3) / ((4)^2 - (3.44)^2)]$$

$$= 3.73 \text{ inches} = 0.0947 \text{ m}$$

Equation 1: Effective radius of disc

$$A_{\text{caliper}} = 2 * (\text{Piston Area})$$

$$= 2 * (0.99)$$

$$= 1.98 \text{ inch}^2 = 1.27 * 10^{-3} \text{ m}^2$$

Equation 2: Area of caliper

$$T_{\text{Wheels}} = [\text{Engine Torque} * \text{C.V.T ratio} * \text{Gearbox ratio} * \eta_{\text{cvt}}]$$

$$T_{\text{Wheels}} = (19.6 * 3.75 * 7.72 * 0.85)$$

$$= 482.307 \text{ Nm}$$

Equation 3: Torque on wheels

$$F_{\text{Clamping}} = T_{\text{Wheels}} / (R_{\text{effective}} * \mu_p)$$

$$= 482.307 / (0.0947 * 0.45)$$

Equation 4: Clamping Force

$$F_{\text{Clamping}} = 11317.78 \text{ N}$$

$$P_{\text{Line}} = F_{\text{Clamping}} / A_{\text{caliper}}$$

$$= 11317.78 / 1.27 * 10^{-3}$$

$$= 8,911,634.19 \text{ Pa}$$

$$= 8.91 \text{ Mpa}$$

Equation 5: Line Pressure

$$A_{\text{mc}} = (F_p * \text{Pedal Ratio}) / P_{\text{Line}}$$

$$= (300 * 5.5) / 8.91$$

$$= 185.19 \text{ mm}^2$$

Equation 6: Area of Master Cylinder
 [Pedal Ratio – 5.5]

$$D_{\text{MC}} = 2 * \sqrt{(A_{\text{mc}} / \pi)}$$

$$= 2 * \sqrt{(185.19 / 3.1416)}$$

$$= 15.36 \text{ mm} = 16 \text{ mm}$$

Assessment of Outer diameter:

To evaluate the outer diameter and stress values when the inner diameter is known, the Thick Cylinder Equation [12,13] is used. These include Axial stress (σ_a), Radial stress (σ_r) and Hoop stress (σ_c). These are evaluated for the conventional design and the proposed design of 30% glass-filled nylon are compared.

Thick Cylinder Stress Equation:

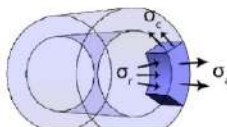


Figure 4: Stresses In thick Cylinder

Stress in Axial direction: The stress in the axial direction at a point in the tube or cylinder wall can be expressed as:

$$\sigma_a = ((P_i * r_i^2) - (P_o * r_o^2)) / (r_o^2 - r_i^2)$$

Equation 7: Axial Stress

Where;

σ_a = stress in axial direction (MPa, psi)
 P_i = internal pressure in the tube or cylinder (MPa, psi)
 P_o = external pressure in the tube or cylinder (MPa, psi)
 r_i = internal radius of tube or cylinder (mm, inches)
 r_o = external radius of tube or cylinder (mm, inches)

Stress in Circumferential direction (Hoop Stress): The stress in a circumferential direction at a point in the tube or cylinder can be expressed as:

$$\sigma_c = [((P_i * r_i^2) - (P_o * r_o^2)) / (r_o^2 - r_i^2)] - [r_i^2 r_o^2 (P_o - P_i) / (r^2 (r_o^2 - r_i^2))]$$

Equation 8: Circumferential stress

Where;

σ_c = stress in a circumferential direction (MPa, psi)
 r = radius to point in the tube or cylinder wall (mm, inches) ($r_i < r < r_o$)
Maximum stress is when $r=r_i$ (internal radius of tube or cylinder)

Stress in Radial direction: The stress in a radial direction at a point in the tube or cylinder can be expressed as:

$$\sigma_r = [((P_i * r_i^2) - (P_o * r_o^2)) / (r_o^2 - r_i^2)] + [r_i^2 r_o^2 (P_o - P_i) / (r^2 (r_o^2 - r_i^2))]$$

Equation 9: Radial stress

Where;

σ_r = stress in a circumferential direction (MPa, psi)
 r = radius to point in the tube or cylinder wall (mm, inches) ($r_i < r < r_o$)
Maximum stress is when $r=r_o$ (external radius of tube or cylinder)

Boundary Condition:

Maximum Operating pressure which a master cylinder has to face is generally taken as 13.78 MPa^[14] (and usually applied pressure is 8MPa). The pressure has been accounted to be 15MPa and the calculations have taken into account the entire internal body of the master cylinder and not just the small chamber formed by the piston, thereby ensuring higher reliability of the design.

So internal Pressure is taken as – 15MPa

External Pressure is taken as – 0MPa

Geometric Parameters:

Parameters of the proposed design and its comparison to conventional models.

- Inner Diameter – Ranges Between 12.7 to 20.63
- Outer Diameter for Conventional is 25.4 mm
- Outer diameter for Proposed is 30 mm
- Wall thickness of Aluminium insert is 0.5mm

Calculations for OD:

All the calculations have been performed based on one set of parameters. The results for other sizes have been presented in graphical and numerical form.

The calculation for the design of aluminium insert is done using equations 3,4 and 5.

Materials: 30% Glass Filled Nylon 6 (Yield 130 MPa Aluminium, Yield 160 MPa)

Outer diameter: OD₁ = 30 mm, Radius r_o = 15mm

Considering, Inner Diameter $ID_2 = 16$ mm, radius $r_i = 8$ mm
Insert wall thickness: $t = 0.5$ mm
Inner diameter of Plastic $ID_1 = ID_2 + 2*t$

Equation 10: ID of Plastic Portion

$$= 16 + (2 * 0.5) = 17 \text{ mm}$$

Outer diameter of insert $OD_2 =$ Inner diameter of Aluminium

Internal Pressure $P_i = 15$ MPa

External Pressure $P_o = 0$ MPa

$$\begin{aligned} \text{Axial Stress (plastic): } \sigma_a &= ((P_i * r_i^2) - (P_o * r_o^2)) / (r_o^2 - r_i^2) \\ &= (15 * 8.5^2 - 0) / (15^2 - 8.5^2) \\ &= 7.09 \text{ MPa} \end{aligned}$$

$$\begin{aligned} \text{Hoop Stress (Plastic): } \sigma_c &= [((P_i * r_i^2) - (P_o * r_o^2)) / (r_o^2 - r_i^2)] - [r_i^2 * r_o^2 * (P_o - P_i) / (r^2 * (r_o^2 - r_i^2))] \\ &= [(15 * 8.5^2 - 0) / (15^2 - 8.5^2)] - [8.5^2 * 15^2 * (0 - 15) / 8.5^2 * (15^2 - 8.5^2)] \end{aligned}$$

Note – Since Hoop stress max at internal surface $r=r_i$

$$\sigma_c = 29.2 \text{ MPa}$$

Radial stress $\sigma_r =$ internal pressure = 15 MPa

Note: Principal stresses will be equal to above stress as all of them are either tensile or compressive stresses. There is no shear stress. Since hoop stress is greater everywhere on the radius, the FOS is obtained using tensile stress.

So max stress = 29.2 MPa, therefore $FOS = 130/29.2 = 4.45$

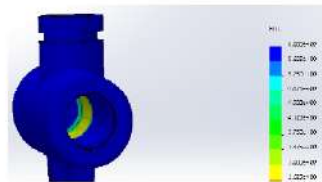


Figure 5: Simulation results on Solidworks

Spring Calculation:

Spring is placed inside Master Cylinder to ensure that the piston returns to its ideal position when the brakes are released. This spring has to do work against the vacuum which will develop inside the master cylinder by the return action of the piston. Apart from that, the spring has to do work to push the pedal back.

To ensure the spring works smoothly, pretension force is set to be 50% extra of what vacuum force will resist.

Diameter = 16mm

$$\begin{aligned} \text{Area} &= (\pi * \text{dia}^2) / 4 = (3.1416 * 16^2) / 4 \\ &= 201.6 \text{ mm}^2 \end{aligned}$$

Pressure difference = $(1 - 0) \text{ atm} = 0.1 \text{ MPa}$

$$\begin{aligned} \text{Force Required} &= \text{Pressure diff.} * \text{Area} = 201.6 * 0.1 \\ &= 20.16 \text{ N} \end{aligned}$$

Using safety Factor of 1.5

$$\begin{aligned} \text{Pretension force} &= \text{f.o.s} * \text{force required} \\ &= 1.5 * 20.16 \\ &= 30.24 \text{ N} \end{aligned}$$

Since one spring is failing to carry all the load, it is divided into two springs. Some constraints from CAD are shown:

Diameter (mm)	Area (mm ²)	Stroke length w/o safety (mm)	Stroke length w/safety 1.5 (mm)
12	113.094	17.50108507	26.2516276
14	153.9335	12.85794005	19.28691008
15	176.7094	11.20069444	16.80104167
16	201.056	9.844360352	14.76654053
18	254.4615	7.778260031	11.66739005
20	314.15	6.300390625	9.450585938

Table 5: Stroke Length Calculations

It is thus observed that different stroke lengths are required for different bore sizes, and hence sufficient stroke length adjustability has been incorporated in the design as per the calculations and practical observation.

Testing and Iterations

- **Iteration 1:** The first MC was made based on the theoretical calculations and the simulation results. It was compact in design, light in weight and had a minimum number of steps in its manufacturing stage. However, erosion of aluminium piston due to continuous contact with an aluminium sleeve was observed.
- **Iteration 2:** An anodized piston was used in the second MC. Core anodizing (of thickness 25-30 microns) was carried out on the piston to make it wear-resistant. Surface grinding of the sleeve was also performed for smooth piston movement. This solved the chipping problem. However, there was a very less fluid flow to the calliper as enough suction wasn't being created on the inlet side.
- **Iteration 3:** A tapered hole was drilled for the inlet port. The stroke length was also increased. This improved the flow of brake fluid from the master cylinder. However, there was occasional leakage of fluid from the sleeve-insert interface region.
- **Iteration 4:** Final design of the MC with appropriate strength and no leakage. Knurling the insert to the sleeve resolved the leakage issue.



Figure 11: Erosion of Al piston



Figure 12: Drills for ports

Results

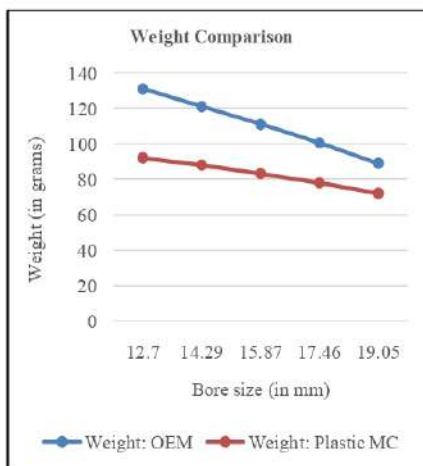


Figure 13: OEM and Plastic MC weight comparison

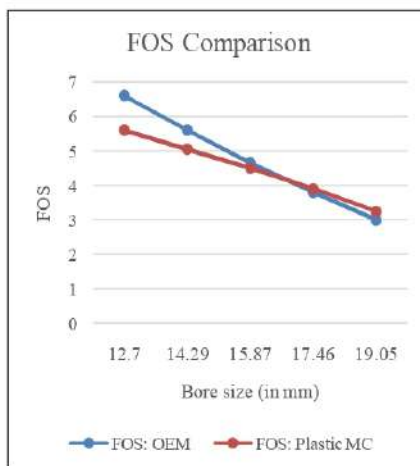


Figure 14: OEM and Plastic MC strength comparison

Cost Evaluation:

- Die Cost - ₹10000
- Injection molding- ₹200 (Material + insert)
- Piston and push rod - ₹100
- Spring and Oil seal - ₹50

Therefore; Fixed cost – ₹10000

Variable cost - ₹350

With the wholesale price of ₹700, break-even occurs at 29 units sold

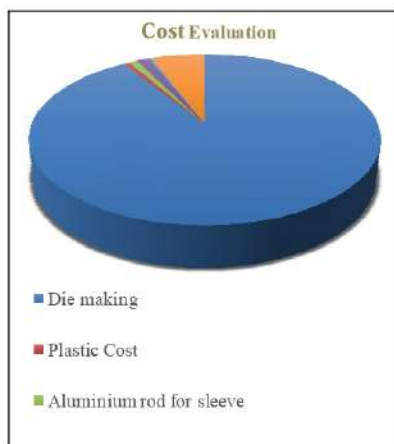


Figure 15: Cost Break-Up

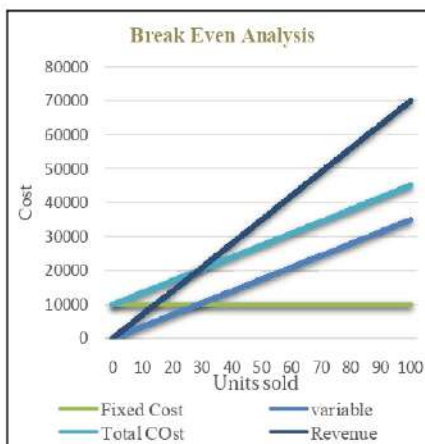


Figure 16: Break Even Analysis

Conclusions

- Weight reduction of 20- 30% is achieved in the final master cylinder without compromising strength and structural integrity.
- Die has shown to have high adjustability for stroke length and inner diameter.
- Cost reduction of 85% is achieved by simplifying the method for mass production.
- Cost evaluation is done showing the break-even at 29 pieces sold.



Figure 17: Final design and assembly

Future Scope

According to reports [16], automotive is going to be the largest end-use industry of glass-filled nylon in the next 5 years and 30% glass-filled nylon is projected to register the highest Compound Annual Growth Rate (CAGR) in the said period. Moreover, injection molding is fast developing as a viable alternate manufacturing process for plastics in general and in production of a variety of components like power tool casings, cooling fans, fluid reservoirs etc. The same approach could also be extended to incorporate the evaluation and design of other components which are using conventional material and methods in the mechanical, electrical and electronics field. Further, there is scope for recycling the single use plastics to procure nylon 6 used in the manufacturing process which will help in control and waste management as well as pollution control.

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ROLE OF CONSTITUTION IN SOCIAL TRANSFORMATION

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Introduction

The constitution of India has been observed as a bulk of Fundamental Principles in the context which state is governing. Thus, it has been regarded as the Supreme Law of the country. It captures Fundamental policies, Practices, Rights, Procedures and Power of the Governing body. Parliamentary supremacy is not imparted by it though, and it conveys Constitutional Supremacy. Thus, in the Indian Constitution, 395 articles have been mentioned in 22 parts.

Moreover, eight schedules have been stated at commencement time. Every Article of the Indian Constitution has a different role regarding the fundamental rights of Citizens and State. According to a report, there will be 104 amendments made by 25th January 2020. Thus, this study will evaluate the significant role of the Indian Constitution that describes the primary principles on which a specific state-supported and based. The primary function of the Constitution is that it defines the procedure in which different Laws are being made. The study describes different roles of the Indian Constitution, including Right to women Act [Article 15(1)]. Though, According to Articles 14-16, 23-24, 19(1)(c) and Article 41-43A are straight focusing on Rights to labor that will be evaluated in this study.

Review of Indian Constitution

The Indian Constitution sets different types of duties regarding the Governing body, and it also makes directives principles regarding the fundamental functions of Indian Citizens. Indian Constitution declares the country Socialist, Sovereign, Secular, Republic, Democratic through ensuring the citizen's liberty, equality, justice, and undertaking to support Fraternity. Eventually, it can be said that the Constitution of India has conveyed the global trend with experience of every citizen throughout the independence struggle¹. Moreover, the Constitution of India in maintaining the liberal democratic system and widened different opportunities for Legislation Interventions. Additionally, there are different areas of the constitution where it performs. Furthermore, it has been observed that the constitution laws must have some types of provisions that have been mentioned below:

¹Profile - Directive Principles Of State Policy - Know India: National Portal Of India' (*Knowindia.gov.in*, 2020)



- Strength of different spheres of Governance Body including, Judiciary, Executive and Legislative.
- Fundamental rights of the citizens and their duties.

Thus, it can be said that the Indian constitution was made through different types of sources. The structure of India is based on four categories such as Justice, Equality, Liberty and Fraternity. These four components allow the Constitution to perform in different states of the country. Furthermore, it has been observed that the Indian constitution is precious and crucial in some dimensions as this is the universal book for the citizens of the country. Primary structure of the Government has been mentioned in the Indian Constitution by which the Governance body governs in the Indian State. Different organs for the Legislation has been developed by the Indian Constitution.

The Preamble

India is a liberal democratic country, and the Constitution of India has a preamble as a soul in it. It means that the Preamble of India is as necessary as the Constitution of the country. Thus, the Preamble of the Indian Constitution has described the principal aim and scope of Indian Political system². Furthermore, it has been observed that the Preamble of the Indian Constitution has made the country secular, Socialist, Democratic, Republic and Sovereign. To manage the integrity and Unity among the citizens, the Preamble of India provides Liberty, Secured Justice and Equality among the citizens³. Although, sometimes it has been regarded that the Preamble of the Constitution functions like a detailed introductory formula that covers the principles, guidance purpose and different philosophy of the Constitution.

The Preamble has different aspects in the Constitution that are as follows:

1. It is mentioned through the Preamble that the way of authority regarding the Constitution points with the citizens of the country.
2. The Preamble has mentioned the country as Democratic republic, Secular, Sovereign and Socialist.
3. The Preamble has mentioned its objectives, including, Liberty, Secure Justice, Equality among the people, and it also supports the process of Fraternity in the country.
4. The adoption date of the Preamble has been mentioned in it⁴. (26th November 1949)

On the other hand, specific keywords have been found under the Preamble of the country. The keywords are Socialist, Secular, and Democratic. Sovereign and Republic.

²The Right To Live With Human Dignity | PUCL' (*Pucl.org*, 2020)

³Craig M. Kauffman and Pamela L. Martin, 'Can Rights Of Nature Make Development More Sustainable? Why Some Ecuadorian Lawsuits Succeed And Others Fail' (2017) 92 World Development.

⁴(*Antitrustinstitute.org*, 2020) <<https://www.antitrustinstitute.org/wp-content/uploads/2018/08/Masterman.pdf>> accessed 18 March 2020.



Socialist

Socialist term was included in the Preamble through the 42nd Amendment. In 1976, when the socialist name was included in the Preamble, then it has been recognized that the goal of socialist has ended by democrat's aspects. It can be mentioned as "Democratic Socialism" that conserves the belief in a specific economy of the country where both Public Sectors and Private sectors co-exist.

Secular

The secular term has been added in "42nd Constitutional Amendment" in the Preamble. This term evaluated the way by which it has been acknowledged that every religion of the country should get proper respect, support and protection from different states.

Democratic

The common term signifies that the Indian Constitution has a structured form that achieves the authority from the inner will of the citizen that is expressed in the period of the election.

Sovereign

The sovereign term has been proclaimed by the Indian Preamble⁵. It means that the country has independent authority, and it allows the country not to be a dominion of different external strengths or power.

Republic

The Republic term mentioned signifies that the upper head of a specific state is selected with the help of citizens. It might be indirectly or sometimes directly⁶. In the country, the president is regarded as the head of each state, and the president can be elected indirectly by the citizens of India.

Uplift of Citizens

The process of rising among the citizens has been observed after the introduction of the elective machine in the Legislation of the Indian Parliament. Until the electoral machine was brought into force, there were only 15% of Indian citizens who were voters, and they knew the exact meaning and significance of voting in the country. The Indian Constitution has made the citizens able to control their own destiny in which direction they want to move. The citizens of India have solemnly been concerned about the structure of the Constitution of India. Moreover, People have faith regarding the Sovereignty, Secularism, Democracy aspects of India. The rise of citizens in the Indian Constitution has been major progress in the country.

Rights of Citizen

According to Article 14 of the Indian Constitution, equality among the people comes before safety, laws and regulation. Moreover, the Constitution of India has provided a few fundamentals to citizens. Right against the race, castes, religions, discrimination, birthplace and sex has been mentioned under Article 15 of the Indian Constitution.

⁵G Bhatia, . *Offend, Shock, Or Disturb: Free Speech Under The Indian Constitution* (2016).

⁶(*Nnigovernance.arizona.edu*, 2020) <<https://nnigovernance.arizona.edu/sites/default/files/resources/SSRN-id3334642.pdf>> accessed 18 March 2020.



Thus, Article 16 has mentioned about the Rights to opportunity and equality in the context of employment. Therefore Fundamental rights among the citizens of the country are essential and crucial for the moral, intellectual and spiritual development of the citizens. Moreover, the fundamental rights of the citizens have been mentioned in Part III from Article 12 to 35. In those Articles, the freedom, acceptance of different cultures and religions are included.

- "Right to Equality" involves equality, and it makes some prohibitions regarding the grounds of race, gender, caste and discrimination. With the help of this article of the Indian Constitution, the opportunity of employment has been increased in different states. Moreover, this article of equality has ended up the rituals of untouchability and titles from the country.
- "Right to Freedom of Religion" mentions the liberty of conscience of an individual in the country. According to this article, an individual can do free profession, propagation of different cultures and religion; an individual can control the affairs of cultures and others.
- "Educational Right" according to this article, everyone has the proper rights to conserve different educational culture script and language. The Indian Constitution has mentioned that every citizen of the country can choose their educational institutions on their own because Article 15-16 has provided them with equality in different sections.

Nature and Quality of Rights

According to this section, it can be said that the rights in India are qualified. The fundamental rights among the citizens of the country are not exact except the untouchability rights. All the rights have been regarded as qualified because they have proper limitations and suitable prohibition and restrictions in a gathered interest of the community and society. While defining the scope and nature of different rights of the citizen, the Indian constitution defines specific limitations of that Right. Educational rights, Freedom Right, Religion freedom and many more the quality and nature of the fundamental Right⁷. This section mentioned the process of recognition that the Indian Rights has a specific character by which the citizens of the country are being governed. In the context of managing quality as an asset, the quality of rights provides the information that quality can be in different forms that can persist, exist and maintained by the Indian Constitution.

Rights to Women

Rights to women in the Indian Constitution mainly involves dignity, freedom, equality and discrimination. Different statutes have been found that the Indian Constitution is governing the Women's Right⁸. Directive Principles, Fundamental Duties, work together to shape the policies and put different ways of safeguards not only to the empowerment of women but also their protection. Women of the country have been given fundamental

⁷(Mati.gov.in, 2020) <http://www.mati.gov.in/docs/Constitution_of_India.pdf> accessed 18 March 2020.

⁸Perry A, 'Mercy And Caprice Under The Indian Constitution' (2017) 1 Indian Law Review Singer, J.W., 2017. Indian Nations and the Constitution. *Me. L. Rev.*, 70, p.199.



rights from the Indian Constitution. Several articles have been evaluated regarding the rights of women in the country.

- ❖ Article 19 gives freedom rights, including both men and women and other genders. This article ensures liberty and freedom of expression, speech, movement, profession and practices. This article is mainly based on the freedom of women by which they can practice and starts different businesses without any inequality and discrimination.
- ❖ Article 21 mentions that no one will be deprived of his or her personal freedom without the procedures of Constitutional laws. Women of the country can seek different types of protection and rights under this article.
- ❖ Article 15(3) indicates that a specific state can exaggerate some provisions for children and women without any obligations and hurdles.
- ❖ Article 39(a) provides the same Right and equality with both men and women to live their lives with zero% of discrimination.

Directive Principles and State Policies

In this section, the Indian Constitution plays a vital role in the rights of the citizens. Directive principles in the Constitution are very crucial as it targets to make the economic and social condition better by which an individual can survive. Industrial democracy and social democracy can be established with the help of a welfare state. Furthermore, In the Indian Constitution Part IV, there are 20 "directive principles of state policy". Most valuable is that these directive principles are being conducted from Article 36 to 51. The Indian Constitution is essential with Directive Policies. Under the Indian Constitution Directive Principle, it consists of different categories that are performing to protect the Right of Indian State⁹. Administrative, Political, Socialistic, Gandhian and economic, legal and justice, environmental, protection of some monuments, security and peace are the primary classification of Directive Principle. It can be said that the Constitution of India is protecting different states with the help of Directive Principles.

Self-Regard and Common Goods

The goods have been observed as the foundational principle is exceptionally close to intertwined through the dignity of human. The term human dignity and the common good have been mentioned as a proper member of the political society that might be personal and sometimes permanent in different characters. Political Rights, Natural Rights, Economic rights are in front of reasons that are being accused after and before trial¹⁰. Article 21 of the Constitution of India has indicated the Right regarding human dignity. In this section, the Constitution plays a crucial role that protects the individual from exploitation. It has been an obligatory duty of the Indian State to keep the several citizens safe from violation of independent rights, especially towards the weaker community of the state. According to the Indian Constitution, the process of Human

⁹G. Nedumaran and Manida M, 'DrAmbedkar: Architect Of The Indian Constitution' [2018] SSRN Electronic Journal.

¹⁰Clive Phillips, 'Future Trends In The Management Of Livestock Production' (2002) 31 Outlook on Agriculture.



Dignity should be inviolable. The state authority should have the duty of protecting and respecting all the citizens and common goods.

Artefact of Laws

There are 1,248 Act in the Indian Constitution that is performed by the Legislation of Indian State. Though, the Constitution of India is based on state laws and Central Laws. In the context of statutes the Personal Laws have been described as the particular law which is based on different groups or individuals. Indian Constitution is maintaining the rules in different states. Moreover, the requirements are being undertaken by the Legislation of the Indian State. Laws of Indian Constitution allows the Governance body to perform on the critical situation of the country. The procedure of justice and opportunities can be purposed with the help of equality among the citizens. A civil code has been provided to the individual regarding the sphere and Artefact of laws. The country might be able to take initiatives to change the method of the judiciary from the ways of the executive.

Economic Sphere

There are several promises that have been mentioned under the economic sphere of the Indian Constitution. A monetary capability and growth of the states will keep the state into its boundary¹¹. Thus, the Indian Constitution protects the individual in terms of Unemployment in the states. Illness, Vintage age, Disability are the different factors that can affect the economic sphere of the Indian Constitution. While protecting the labor in the state, it becomes mandatory for the Indian Constitution to maintain the relationship with them as well. The developers of the Constitution of India were concerned with the methods by which the economy will also be maintained and controlled¹². Most of the time, The Indian State performs economic Unity regarding the maintenance and protection of economic growth of the country. Therefore, it has been observed that the Indian Constitution is performing on the Exchange of Commodities and Goods and also a free movement with the India territory to maintain the Unity of economy in India.

Worker's Right

Right to work has been defined in the Part IV section. Furthermore, it has been mentioned under the "Directive Principle of State Policy". The constitution of India protects the human from working heavily in an organization. If a woman is working in an organization, then the Constitution protects her according to maternity relief¹³. The Right of workers is being maintained by different financial corporations to different workers of a state's organization. In this section of the study, the Right of workers has been evaluated with the help of different articles of the Indian Constitution. Specific labor law has been defined in the constitution that protects the employees or labor from dangerous hazards of the organization. There are some examples of the Indian Act that

¹¹India Needs 'One Health' Policy To Eradicate Zoonotic Diseases' [2014] Nature India.

¹²M. Ramana Reddy, 'Human Rights, Constitutional Safeguards And Tribals In India : Trapped In Labyrinth' (2018) 27 Contemporary Social Sciences

¹³YashGhai, 'Citizenship And Politics In The HKSAR: The Constitutional Framework' (2001) 5 Citizenship Studies.



are performing to deliver better rights to the workers and laborers of the Indian State¹⁴. "Indian Trade Union Act of 1926" and "Trade Disputes Act of 1929" are the Act that is being played by the Indian constitution.

According to the 42nd Amendment Act, a state remains enjoined to indulge different steps through Legislation or different methods. Therefore, the participation of laborers in the organization becomes very important for the Governance body to undertake all his responsibility in the context of "Right to Work " (Article 43A).

Sections for Children and Weaker

The Constitution of India acquires the children as a citizen of the country. Therefore, the Constitution keeps its status high with enacted and introduced different laws regarding the safeguarding of the children. The Indian Constitution was Promulgated in the year of 1950 the emphasis on the rights of Children including directive policies and fundamental rights. Therefore, it has been observed that the Indian Constitution has different specialties regarding the safeguarding and protection of the children who are the center citizens of the country.

- The children have the right to be protected from different hazards of employment under the age of 14. These words are included in Article 24 of the Indian Constitution.
- Under Article 21 A of the Indian Constitution, every child has the Right to elementary educational facilities until 6 to 14 years.
- Under Article 39(e), every child in the country should be protected from getting abused. No one can force them for child labor or the necessity regarding economics.

Therefore, it has been observed that the Indian Constitution is playing a crucial role in maintaining every aspect of Indian Citizens.

Environmental and Agricultural Views

Article 48 of the Indian Constitution deals with the Agricultural section of different states of the country. The Constitution is protecting the Environment evolving the aspects and impacts of nature. "Fundamental law of Asset and land" has been clearly mentioned in the Constitution that protects the agricultural and Environment of the Indian State. Moreover, Articles 48, 49, and 48A are protecting the organizational agriculture and the Environment that is produced from the organization of different states. According to those articles, every state of India should be able to endeavor to keep safe and work on the improvement of Environment. The main factors of Article regarding the agriculture and Environment are to safeguard the wildlife and forest areas of the country.

Conclusion

This study aims to deliver a better concept on the basis of the Indian Constitution and its role in the country. It showed the major development and different rights and equality to workers, women and citizens of the country. The constitution of India is the largest character of the Legal, political system. Thus, this study has given a proper concept of Preamble of India that has been observed as a proper soul of the Indian Constitution.

¹⁴Sayani Paul, 'Are We Doing Enough? Stigma, Discrimination And Human Rights Violations Of People Living With Schizophrenia In India: Implications For Social Work Practice' (2017) 16 Social Work in Mental Health



The Preamble of the Indian Constitution has the different intention of safeguarding human rights, and it ensures justice among all the citizens. Moreover, the Directive Principles and Policies of the state have been evaluated in this assessment. The directive principle of the constitution remains fundamental in the Governance body. A proper vision of the constitution and how it is shielding the Environment and agriculture of the country has been drawn briefly in it. It has been observed in the study that the Constitution is very crucial in the country as it keeps the liberty of every individual safe.

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EDUCATIONAL TECHNOLOGY INPUTS IN THE B.ED. CURRICULUM OF ANDHRA PRADESH UNIVERSITIES

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Abstract

This paper aims at surveying the existing teacher education programmes with respect to educational technology facilities available. This study tries to expose the gap between what exists at present and what is required. The primary objective of the study is to find out the distribution of educational technology inputs and making suggestion for improvement of the application of educational technology inputs in the B.Ed. programme. For this purpose, normative survey method was considered as an appropriate method for the study. Questionnaires were the tools considered to collect data from the respondents as the present study warrants questionnaires as major tools for the data collection.

Keywords: Educational Technology Inputs, B.Ed. Programme

Introduction

The general aim of this investigation is to study the educational technology inputs in the B.Ed. curriculum of Andhra Pradesh Universities. The objectives of the study, assumptions of the study, hypotheses formulated, research strategy, instrumentation, sample, data collection procedures are outlined in this paper.

OBJECTIVES OF THE STUDY

The objectives of this study are

1. To identify the educational technology inputs in the B.Ed. curriculum of Andhra Pradesh Universities.
2. To study the distribution of educational technology inputs in various subjects in the B.Ed. curriculum of Universities in Andhra Pradesh.
- 3 To compare the distribution of the educational technology inputs in various subjects in the B.Ed. curriculum of Andhra Pradesh Universities.
4. To study the extent of utilization of the educational technology inputs by the teacher educators in the B Ed curricula of the Universities in Andhra Pradesh.
5. To study whether the teacher educators experience problems while utilizing educational technology in the teaching-learning process.
6. To obtain the suggestions of teacher educators for the effective utilization of the educational technology in the B.Ed. curriculum.

HYPOTHESES OF THE STUDY

The following hypotheses are formulated to give a specific direction to the study:



1. Educational technology inputs are adequately included in the various subjects in the B.Ed. curricula of Andhra Pradesh Universities.
2. The teacher educators of Andhra Pradesh Universities utilize educational technology inputs to a greater extent in their teaching-learning process.
3. There exists university-wise variation in the utilization of educational technology.
4. Teacher educators handling various subjects in the B.Ed. programme of Andhra Pradesh Universities face more problems while utilizing educational technology in their teaching-learning process.
5. There exists university-wise variation among teacher educators in experiencing problems while utilizing educational technology.

RESEARCH STRATEGY

This study aims at surveying the existing teacher education programmes with respect to educational technology facilities available. This study tries to expose the gap between what exists at present and what is required. The primary objective of the study is to find out the distribution of educational technology inputs and making suggestion for improvement of the application of educational technology inputs in the B.Ed. programme. For this purpose, normative survey method was considered as an appropriate method for the study. Questionnaires were the tools considered to collect data from the respondents as the present study warrants questionnaires as major tools for the data collection.

METHOD OF INVESTIGATION

In the present study, survey method was employed for its suitability and accuracy. The normative survey method is known as a scientific method of describing and analyzing the present events and conditions. **Best (1989)** defines the survey method as one that is concerned with the conditions or relationships that exists; practices that prevail; views or attitudes that are held; processes that are going on; effects that are being felt, or trends that are developing. The survey research gives maximum contribution when it originates from a problem existing within the framework of theory and when it is oriented towards the identification of factors and relationships worthy of investigations under controlled conditions. Survey method is concerned with the present attempts to trace the status of phenomenon under investigation. No category of educational research is more widely used than the type known variously as the survey, the normative survey, status and descriptive research.

Surveys are oriented towards the isolation of causative factors. Surveys must do more than merely uncover data, they must interpret, synthesize and integrate these data and point to implications and interrelationships. The survey approach to educational problems is one of the most commonly used approaches. It is followed in studying local as well as state, national and international aspects of education. In the present study, the survey method was considered for studying the existing conditions related to educational technology inputs, application or utilization of educational technology by teacher educators and their views regarding the effective educational technology implementation.



RESEARCH TOOLS

In the present study, questionnaires were the tools to collect data from respondents. The questionnaire is the most effective tool in survey method. According to **Good and Hatt (1952)**, "the word questionnaire refers to a device for securing answers to questions by using a form while the respondent fills in himself.

QUESTIONNAIRE

Questionnaire is a widely used research tool for gathering information.

Questionnaire were considered as appropriate tools because of the reasons stated below :

1. It is the most flexible of tools which possess unique advantages over other kinds of tools in collecting both quantitative and qualitative information.
2. The person administering the questionnaire has an opportunity to establish rapport, to explain the purpose of the study, and to explain the meaning of items that may not be clear (Best, 1993).
3. It is less time consuming and less expensive for its construction and administration.
4. Questionnaire can be sent to respondents through mail.
5. It requires less skill for its construction.
6. It is possible to administer a large number of questionnaire among the respondents at a given time.
7. It helps to focus the respondents on all the significant items relating to the study.
8. Uniform responses can be recorded through questionnaire.
9. The respondents can express their ideas in their own language and version particularly in open ended questionnaires
10. It could be fairly easy for the researcher to tabulate and analyze the data.

FORMS OF QUESTIONNAIRE

In this study, two forms of questionnaires were used. They are closed form and open ended form. The closed form requires a short response or just a check from a list of suggested responses. The open ended form or unrestricted type of items known as free-response or unstructured form calls for a free-response in the respondent's own words. No clues are provided. They provide for greater depth of response and go down into the area of hidden motives that lie behind attitudes, interests, preferences and discussions. These items are objective as the respondents' reveal their own frames of references rather than the researcher's.

TYPES OF QUESTIONNAIRE

In the present study, two types of questionnaires were used. They are (1) Check-List and (2) Rating Scale. The Check-List is a type of questionnaire in the form of a set of categories for the respondent to check. It is used to record the presence or absence of the phenomena under study. Responses to the check list items are thus a matter of fact, not of judgement. This tool has the advantage of systematizing and facilitating the recording of observations and of helping to assure the consideration of all important aspects of the object or act observed. The Check-List is an important tool in gathering facts for educational surveys.

The rating scale is a very useful device in assessing quality specially when quantity is difficult to measure objectively. " Rating is a term applied to expression of opinion or judgement regarding some situation, object or character. Opinions are usually



expressed on a scale of values. Rating techniques are devices by which such judgments may be quantified"(Barr, Davis and Johnson, 1953). Rating scales record judgements or opinions and indicate the degree or amount. Descriptions of different degrees of quality are arranged along a line from high to low.

QUESTIONNAIRES USED

The following questionnaires were used to collect relevant data from the respondents.

1. Educational Technology Input Checklist (ETIC) developed and validated by the investigator.

The steps for the construction of the Educational Technology Input Check - List (ETIC)

Start /

Review of related literature and expert opinion for educational technology dimension identification

Decide the educational technology dimension to be studied

Item Pooling

Decide Criteria for selection of items

Expert opinion

Selection of items for final stage

Stop

2. Educational Technology Utilization Scale (ETUS) developed and validated by the investigator.

3. Educational Technology Problems Scale (ETPS) developed and validated for the study.

4. Teacher Educator Opinionnaire (TEO).

5. Personal Data Sheet (PDS)

While the Educational Technology Input Check-list (ETIC) is the closed form checklist, the Educational Technology Utilization Scale (ETUS), and Educational Technology Problems Scale (ETPS) are closed type rating scales. The Teacher Educator Opinionnaire (TEO) is an open ended questionnaire. The Personal Data Sheet (PDS) aims at collecting biographical data of the teacher educators.

DEVELOPMENT OF EDUCATIONAL TECHNOLOGY INPUT CHECK-LIST (ETIC)

The construction of the Educational Technology Input Checklist (ETIC) was made by the researcher by following different types. Fig.4.1 shows the steps gone through. The above steps could be divided into three important stages. They are as follows:

Step 1. Pre-pilot stage

Step 2. Pilot stage

Step 3, Final stage

PRE-PILOT STAGE

The Pre-pilot stage was primarily concerned with three important aspects: (1) Locating the sources for identifying the dimensions (2) Pooling of items to



identification of educational technology dimensions and (3) Pooling of items under each dimension.

LOCATION OF SOURCES

As a first stage in developing the technology checklist, the following sources were consulted in order to identify the relevant educational technology dimensions and pooling of items

1. Related Books.
2. Encyclopaedia of Education.
3. Survey of Educational Technology.
4. Journals and Periodicals.
5. Reports of different Education Commissions and Committees.
6. Publications of National Institutions
7. Consultation with Experts in the field.

IDENTIFICATION OF DIMENSIONS

The review of literature and expert consultation led to the identification of the following three major dimensions of educational technology.

1. Information Technology
2. Instructional Technology
3. Relative Technology

POOLING OF ITEMS

Once the dimensions were identified, efforts were taken to pool items relevant under each technology dimension. The following sources were helpful in pooling the items:

1. Review of literature.
2. Consultation with educational experts.
3. Consultation with teacher educators.

While developing the technology check-list, the following activities were carried out.

1. Each item was clearly checked for significance and lack of ambiguity.
2. Long sentences were reduced into small and specific ones.
3. Simple words were used to write the sentences.
4. Statements referred to double negatives were avoided.
5. Irrelevant statements were avoided.
6. Annoying and embarrassing items were avoided.

The following table shows the number of items collected under each dimension of educational technology in the pre-pilot stage of the checklist development.

Table .1 ETIC Distribution of items in Pre-pilot stage.

Dimension	Number of items
1. Information Technology	12
2. Instructional Technology	30
3. Relative Technology	12
Total	54

PILOT STAGE

The pilot stage is concerned with refining the items collected in the pre-pilot stage. All the 54 items were sent to jury opinion regarding their suitability and clarity. A



jury council consisting of 12 academic members of various universities was constituted for this purpose. On the basis of the jury council's judgement, some items were modified, some were reworded and some eliminated. At last, a total of 42 items were retained for inclusion in the checklist. The following table shows the distribution of item under each dimension.

Table 2 ETIC: Distribution of items in pilot stage

Dimension	Number of items
1. Information Technology	07
2. Instructional Technology	26
3. Relative Technology	09
Total	42

FINAL STAGE

The final stage is primarily concerned with distribution of items in the checklist under the appropriate technology dimensions. The items were randomly distributed under each dimension.

SCORING OF EDUCATIONAL TECHNOLOGY INPUT CHECK-LIST

The Educational Technology Input Checklist aims at identifying the educational technology inputs distributed in the B.Ed. curricula of Andhra Pradesh Universities. Therefore, no scoring procedure was employed. The responses were checked regarding their availability. Hence, the findings were presented in qualitative terms.

DEVELOPMENT OF EDUCATIONAL TECHNOLOGY UTILIZATION SCALE (ETUS)

The Educational Technology Utilization Scale (ETUS) was developed in the lines of Educational Technology Input Check-list (ETIC).

SCORING OF EDUCATIONAL TECHNOLOGY UTILIZATION SCALE (ETUS)

The Educational Technology Utilization Scale (ETUS) is a Likert type of scale having three anchoring points.

A score of 2 is assigned to 'Frequently used' response.

A score of 1 is assigned to 'Rarely used' response.

A score of 0 is assigned to 'Not yet used' response.

The general formats of the Educational Technology Input Checklist (ETIC) and the Educational Technology Utilization Scale (ETUS) are shown below.

Table 3 Formats of ETIC and ETUS

Dimensions of Educational Technology	Provisions in the syllabi Utilization	
1.Information Technology	I Semester	II semester
i. Not yet used		
ii. Rarely used		
iii. Freq. used		



DEVELOPMENT OF EDUCATIONAL TECHNOLOGY PROBLEMS SCALE (ETPS)

The development of Educational Technology Problem Scale (ETPS) has undergone the stages shown in.

The above stages could be divided into three stages as mentioned below.

1. Pre-pilot stage
2. Pilot stage
3. Final stage

PRE-PILOT STAGE

The pre-pilot stage involved locating the sources for pooling the items and pooling of relevant items.

LOCATION OF SOURCES

While developing the rating scale, the following sources were consulted to pool the appropriate items.

1. Reviewing the relevant literature.
2. Consulting the academic experts.
3. Consulting the teacher educators.

The points that were noted while developing the Educational Technology Input Checklist (ETIC) were kept in mind in developing the Educational Technology Problems Scale (ETPS). A total of 26 items was pooled in the pre-pilot stage.

PILOT STAGE

The pilot stage involved the correction of pooled items on the basis of the opinions of the jury council. For this purpose, a jury council was formed consisting of 5 academic experts. The collected items were presented before jurists with a request to offer their considered opinion regarding the suitability, objectivity, clarity and relevancy of the statements collected from different sources. The expert opinions of the jury council were taken into consideration and on the basis of the remarks and suggestions made by the experts, some items were reworded, some were discarded and some slightly modified. Finally, a total of 20 items was retained for inclusion in the questionnaire.

FINAL STAGE

The twenty items were then randomly distributed in the scale.

SCORING PROCEDURE OF EDUCATIONAL TECHNOLOGY PROBLEMS SCALE (ETPS)

The Educational Technology Problems Scale (ETPS) is a five point scale. The following scoring procedure is adopted.

A score of 4 is assigned to 'Strongly agree' response.

A score of 3 is assigned to 'Agree' response.

A score of 2 is assigned to 'Not yet decided' response.

A score of 1 is assigned to 'Disagree' response.

A score of 0 is assigned to 'Strongly disagree' response.



INTERPRETATION OF SCORES

All the scores were summed up taking into consideration both positive and negative responses. The scoring index shows the position of the respondent in the scale. The general format of the scale is presented below;

DEVELOPMENT OF TEACHER EDUCATOR OPINIONNAIRE (TEO)

The Teacher Educator Opinionnaire is an open form tool which intends to seek the suggestions of the teacher educator in eliminating the problems they experienced in utilizing educational technology and remedial measures. The findings were presented in descriptive terms.

PERSONAL DATA SHEET

The Personal Data Sheet aims at collecting the biographical variables of the teacher educators.

RELIABILITY OF THE TOOLS

Reliability is the consistency with which a tool measures what it measures (Garett, 1979). The reliability could be assessed by the same measure for the same population at more than one point in time. In the present study, the typical test-retest method was employed to evaluate the stability of the measurement.

Test- retest method: - The test-retest method was used to establish the reliability of Educational Technology Utilization Scale (ETUS) and Educational Technology Problems Scale (ETPS). Both the tools were administered to a group of 35 teacher educators working in Telangana state universities. Universities in Telangana and the scores were computed. The same tools were once again administered among the same group after a lapse of one month from the day the first test was administered. Then the scores of the first and second administered were correlated using the product-moment correlation technique. The following table explains the correlation co-efficient arrived at.

Table: Test - retest Reliability co-efficient of ETUS & ETPS

Tool	Product Moment Correlation Co - efficient
1. Educational Technology Utilization Scale (ETUS)	0.824 *
2. Educational Technology ProblemsScale (ETPS)	0.817 *

* Significant at
0.01 level

The correlation co-efficients of ETUS and ETPS were found to be 0.824 and 0.817 respectively and were found to be significant at 0.01 level. Hence, it is concluded that the both the tools are reliable.

VALIDITY OF THE TOOLS

The validity of a test, or of any measuring instrument, depends upon the fidelity with which it measures what it purports to measure (Garett, 1979). In the present study, content validity was established. According to Anastasi (1976), content validity is essentially a systematic examination of the test content to find out whether test covers a representative sample of the behaviour domain to be measured.



Nunnally (1978) maintains that rather than establishing the validity of measures after they are constructed, it is more meaningful that one should ensure the validity of the tool by the plan and procedure of test construction. According to him, there are two major standards for ensuring content validity. They are (1) a representative collection of items and (2) sensible method of test construction. In developing the tools for the present study, the above standard guidelines were followed.

The different procedures were employed in the construction of the tools as outlined in the previous section fulfilled the standards prescribed. In the light of the methodology and the procedure adopted in the developing Educational Technology Input Checklist, Educational Technology Utilization Scale and Educational Technology Problems Scale, it can confidently be said that the three tools have sufficient content validity.

SAMPLING

According to **Sukhia et.al.** (1966), "A good sample of population is the one which, within restriction imposed by its size will reproduce the characteristics of the population with the greatest possible accuracy".

In the present study, the selection of sample was made taking into consideration the nature of the problem selected. The population of the study was the teacher educators working in the 24 training colleges of 7 Universities in Andhra Pradesh. Table 3 shows the distribution of colleges in the parts of Andhra Pradesh. As the total strength of the faculty in the above 24 training colleges was less than 150, it was decided to prefer cluster sampling technique. It was a non-random sampling technique and therefore, all the teacher educators were included in the study. Thus a sample of 95 teacher educators in the colleges of 7 Universities in Andhra Pradesh responded the tool.

The investigator noticed the non-response rate of questionnaires. The following table shows the break-up of the details regarding the distribution of the sample.

Table 3 Selection of Universities and distribution of sample

Sl.No	Name of the University	Respondents
1	Andhra University	28
2.	Sri Venkateswara University	21
3.	Sri Padmavati Mahila Visvavidyalayam	12
4.	Adikavi Nannaya University	11
5	Dr. B. R. Ambedkar University	10
6	Sri Krishnadevaraya University	08
7	Dravidian University	05
	Total	95

DATA COLLECTION

While collecting the data from the respondents, two approaches were employed. They are (1) mailed approach and (2) personal approach.



In the mailed approach, the developed questionnaires were sent to all the teacher training colleges in Andhra Pradesh through mail. After 15 days, reminders were sent to the respondents to speed up the response.

In order to raise the rate of response, personal approach was employed. Teacher educators who failed to respond to the second reminder were contacted in their respective colleges and homes. No time limit was, however, set for responding the questionnaires. The respondents were assured the confidentiality of the data in order to achieve objectivity in the data collection process.

CONCLUSION

In this paper, the detailed methodology adopted for the present study is outlined, The objectives and assumptions of the study, the research strategies and procedures employed, the tools developed and validated, sample and data collection procedures and delimitations of the study are dealt with in greater detail. The next chapter deals with the analysis and interpretation of the collected data.

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- Garett, (1979)
- Anastasi (1976)
- Nunnally (1978)
- Sukhia et.al. (1966)



HISTORY OF SCHEDULED TRIBES IN INDIA

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Abstract

Scheduled Tribes India's Constitution enacted on 26 January 1950, established compensatory benefits for members of India's "scheduled tribes." For centuries, tribes in India had been called "aboriginals," "hill tribes," "forest tribes," "animists," "backward Hindus," "primitive tribes," "backward tribes," and "depressed classes." They generally spoke their own languages, observed their own political and cultural patterns, lived in isolated areas, and were regarded as economically and socially "backward."

Key words : Scheduled Tribe, Hill Tribes, Forest Tribes, Animists, Backward Hindus, Primitive Tribes, Backward Tribes, Depressed Classes, Indian Constitution.

Introduction

In the late nineteenth and early twentieth centuries, Indian and European reformers called on the British government of India to do something to improve the lot of India's most disadvantaged groups. The 1935 Government of India Act announced that certain "degraded" groups in India would have special electoral representation in India's forthcoming elections. In anticipation, in 1936 India's provincial governments prepared lists ("schedules") of local groups meeting the "degraded" criteria. Castes considered to be "degraded" because they suffered ritual disabilities were called scheduled tribes (STs). Tribes considered to be "degraded" were referred to as "backward tribes." The 1941 census recorded 24.5 million tribal's. In 1950, with the enactment of India's Constitution, these "backward tribes" were referred to as scheduled tribes (STs).

Tribes in India's History

Various terms for human groups appeared in the Vedas and post-Vedic materials. These included *jana* (people), *gana* (originally a nomadic group), and *vish* (a tribelike group). Other terms that might have referred to tribal phenomena included *vidatha* (tribal assembly), *rajan* (tribal ruler), and *purohit* (tribal priest who accompanied a *rajan* into cattle raids and other battles, protecting his *rajan* with prayers). Reference was made to the *sattra*, a sacrifice performed by *yajamanas* (sacrificers) to increase the number of sons and amount of wealth of the entire group. Men and women assembled in *sabhas* and *samitis* and discussed various topics, including cattle. Buddhist and Jain texts referred to tribal groups living in the Himalayan foothills, including the Shakya tribe into which Siddhartha Gautama (later the Buddha) was born as son of the *rajan*, and the Jnatrika tribe into which Mahavir, the



founder of Jainism, was born, also son of the *rajan*. Later narratives referred to the Shakyas and Jnatikas as Kshatriyas, warriors in the Hindu four-*varṇa* system. Applicable Sanskrit terms for tribal's included *atavika* (forest dweller), *avanyaka* (native), and *atavibala* (forest troops).

The Dharma Shashtra of Manu described certain tribes as the result of the mixing of the four original *varṇas* (Brahmans, Kshatriyas, Vaishyas, and Shudras) who emerged from the mouth, shoulders, thighs, and feet of the Cosmic Being when the Cosmic Being immolated itself on the funeral pyre. For example, the Pukkakas and Kshattris who lived in mountains and groves and subsisted by killing animals in holes were produced in turn by Brahman males impregnating Shudra females and Shudra males impregnating Kshatriya females. The Ugras, who also subsisted by killing animals in holes, were ferocious in manner, and delighted in cruelty, were produced by Kshatriya males impregnating Shudra females. The *Artha Shashtra* (Treatise on material gain) attributed to Kautilya (Chanakya) described how a wild tribe could obstruct a prince's movement and how a prince should use one army of wild tribes to attack another army of wild tribes. The Mauryan emperor Ashoka (3rd century B.C.) referred to the dangers posed in his empire by the forest tribes and to his desire to reform them through compassion rather than violence.

Tribes and forest dwellers appeared in the Mahabharata and Ramayan. An epics as well as in Puranic legends and folktales visitors to India also described tribes and forest dwellers. In 1666 M. de Thevenot, a well-educated Frenchman who traveled in Gujarat, described a tribe of Kolies, with no fixed habitation, who migrated from village to village picking and cleaning cotton. In 1676 another Frenchman, Jean Baptiste Tavernier, published a journal in which he described four North Indian tribes of Manari, nomadic tent-living caravaners. Each tribe numbered about a hundred thousand and had its own priests, portable serpent icon, and forehead marks or necklaces applied by priests. Each tribe specialized in the transportation of one kind of product: wheat, rice, pulse (legumes), or salt. Quarrels that interfered with trade occurred so often that the emperor Aurangzeb summoned the chiefs of the wheat and salt caravans and paid them generously—for the benefit of the common good as well as their own interests—not to quarrel.

Tribal People in India

Tribal peoples constitute 8.6 per cent of India's total population, about 104 million people according to the 2011 census. This is the largest population of the tribal people in the world. One concentration lives in a belt along the Himalayas stretching through Jammu and Kashmir, Himachal Pradesh, and Uttar Pradesh in the west, to Assam, Meghalaya, Tripura, Arunachal Pradesh, Mizoram, Manipur, and Nagaland in the northeast. Another concentration lives in the hilly areas of central India (Madhya Pradesh, Orissa, and, to a lesser extent, Andhra Pradesh); in this belt, which is bounded by the Narmada River to the north and the Godavari River to the southeast, tribal peoples occupy the slopes of the region's mountains. Other tribal's, the Santals, live in



Bihar and West Bengal. There are smaller numbers of tribal people in Karnataka, Tamil Nadu, and Kerala, in western India in Gujarat and Rajasthan, and in the union territories of Lakshadweep and the Andaman and Nicobar Islands.

The extent to which a state's population is tribal varies considerably. In the northeastern states of Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland, upward of 90 per cent of the population is tribal. However, in the remaining northeast states of Assam, Manipur, Sikkim, and Tripura, tribal peoples form between 20 and 30 per cent of the population. The largest tribes are found in central India, although the tribal population there accounts for only around 10 per cent of the region's total population. Major concentrations of tribal people live in Maharashtra, Orissa, and West Bengal. In the south, about 1 per cent of the populations of Kerala and Tamil Nadu are tribal, whereas about 6 per cent in Andhra Pradesh and Karnataka are members of tribes.

Tribal people in India are called *adivasi*. Adivasi is an umbrella term for a heterogeneous set of ethnic and tribal groups considered the aboriginal population of India. Although terms such as *atavika*, *vanavasi* ("forest dwellers"), or *girijan* ("hill people") are also used for the tribes of India, *adivasi* carries the specific meaning of being the original and autochthonous inhabitants of a given region and was specifically coined for that purpose in the 1930s. Over time, unlike the terms "aborigines" or "tribes", the word "adivasi" has developed a connotation of past autonomy which was disrupted during the British colonial period in India and has not been restored. They generally live outside the mainstream of Indian Hindu and Muslim society. Most ordinary Indians know little about them.

There are some 573 communities recognized by the government as Scheduled Tribes and therefore eligible to receive special benefits and to compete for reserved seats in legislatures and schools. They range in size from the Gonds and the Santals to only eighteen Chaimals in the Andaman Islands. Central Indian states have the country's largest tribes, and, taken as a whole, roughly 75 per cent of the total tribal population live there.

Tribes and the British

The British East India Company developed a policy for dealing with tribal's shortly after it acquired control of the Rajmahal Hills in Assam. To reduce potential resistance, the company paid tribal leaders to provide protection to the company's mail runners and to report any violent outbreaks in their territory. In 1782 the company turned over the administration of justice in the Rajmahal Hills to the hereditary tribal leaders, eventually converting the Rajmahal Hills tract into a rent-free government estate managed by tribal leaders.

In 1871 and 1872, following the military events of 1857 and the transfer of power from the East India Company to the British crown, the British recorded their first all-India census. "Tribes" were generally considered identifiable because they lived in



isolated areas, maintained their own subsistence economies, spoke their own languages, did not use Brahman priests, observed their own religious, cultural, and political customs, and differed from the majority of the populations in physical appearance or dress. Exceptions to these identifying features, however, were frequent.

British authorities differed in their opinions regarding the policies they should implement in territories occupied primarily by tribal groups. They wanted the tribes in these territories to be peaceful, which meant restraining the "criminal tribes." They also wanted to protect tribal groups from rapacious outside traders, moneylenders, and landlords. In 1874, shortly after the British government of India completed its first census, it passed the Scheduled Districts Act, declaring that certain tracts of land in Assam, Bengal, the central provinces, and other areas were "scheduled" for possible exclusion from rules applying to the rest of British India. In fact, in those tracts, laws could be enacted to protect the tribal's from invasive outsiders. The Government of India Act of 1919 empowered the governor-general to declare any tract of land in India to be a Backward Tract. Furthermore, some of the Backward Tracts were to be "Wholly Excluded Areas", and other tracts were subject to "Modified Exclusion," with the governor-general in council or the governor in council deciding which British-India laws did or did not apply to those areas.

Prior to the 1931 census, India's tribal's were listed as "Animists" rather than "Hindus." Because of the permeability of both categories, it was difficult for census takers to make clear distinctions. The 1941 census abandoned the "Animists" category and referred to people of "tribal origin." This enabled the inclusion of Christians and Muslims of "tribal origin," swelling the census numbers and making it difficult to compare the 1931 and 1941 census figures. The Government of India Act of 1935 called for the first time for representatives of "backward tribes" in provincial assemblies. During the next few years, virtually every province in British India generated its list of "backward tribes," including the names of tribes living in the "Excluded" and "Partially Excluded" areas.

Scheduled Tribes after India's Independence

India's Constitution called for equality of status and opportunity for all citizens. In an effort to improve the socioeconomic conditions of the scheduled castes and tribes, the government of India initiated a policy of affirmative action called "protective discrimination" or "compensatory discrimination." Article 15(4) declared that the state could make "special provision" for the advancement of STs. Articles 330 and 331 reserved seats in the national Parliament and the state assemblies for members of STs. the percentages of seats in the legislative bodies were to match as nearly as possible the proportion of STs living in the represented territory. Article 325 declared that all voters—not just STs—could participate in the election of candidates for the ST reserved seats. Article 335 reserved jobs in the central and state governments for members of the STs.



To address the guarantees in Article 16 of equal rights for all Indian citizens, the Constitution stipulated that these reservations of legislative seats and government jobs for STs would end after ten years. Over subsequent decades, Parliament periodically amended the Constitution to extend the ST reservations another ten years. State governments introduced their own "compensatory discrimination" provisions for scholarships, admissions to colleges and professional schools, low-interest loans, and other benefits. The recipients of these benefits were members of the groups named on the government lists of STs. In 1960 the government of India published an all-India list of 225 STs. In 1976 the government of India published an amended state-by-state list of 510 STs, showing that certain tribes were "scheduled" in some locations but not in neighboring locations, and certain tribes were called by a variety of different names. When designations were unclear, India's Constitution assigned to Parliament and the president the final decisions regarding a group's "scheduled" or "nonscheduled" status. According to the published lists, STs about 7.5 per cent of India's population,

The Indian Constitution's fifth schedule, in conjunction with Article 244(1), provided for the administration and control of scheduled areas and STs in parts of India other than Assam. The Constitution's sixth schedule, in conjunction with Article 244(2), provided for the administration of autonomous tribal areas in Assam. The president of India had the authority to declare which areas were or were not scheduled. In most cases, the authority for administering the designated areas rested with the local governor and the central government. The local governor could decide which legislative enactments in the Republic of India applied to the scheduled area under the governor's control. In the most autonomous regions, local councils were authorized to assign and collect taxes, regulate forms of shifting cultivation, manage unreserved forests, deal with inheritance, marriage, and social customs, administer justice, and control money lending and trading with non-tribals. During the decades after independence, tribe-inhabited territories north, east, and south of Assam became states within the Republic of India. These included Nagaland, Manipur, Meghalaya, Arunachal Pradesh, and Mizoram.

At the beginning of the twenty-first century, India's largest tribes included the Gonds, Santals, Bhils, Oraons, Khonds, Mundas, Bhuiyas, Hos, Savaras, Kols, Korkus, Malers, and Baigas. Although more than one-third of the STs lived in scheduled areas, the majority lived in parliamentary constituencies where they formed a majority of the population. Chhattisgarh and Jharkhand, two new states formed by redrawing India's state boundaries in 2000, contained concentrations of scheduled tribes. India's scheduled-caste policies have aimed to reduce the socioeconomic differences between SCs and the rest of India's population. In addition, they have sought to preserve some degree of cultural distinctiveness for the STs by granting them considerable autonomy in designated scheduled and tribal areas.

Conclusion

The so called "tribal belt" embraces central and northeast India, which extends across the center of India from Pakistan in the west to Bangladesh and Myanmar in the



east. The belt is home to 81 million indigenous people, whose ancestors may have inhabited India before Aryan invaders, the ancestors of Hindus, arrived around 1500 B.C. The tribal belt is one of India's most impoverished regions. Many tribal's traditionally lived off the forest. But the forest is shrinking and they have been forced to try and cultivate fields. But where they live land is often in short supply and not enough to go around. In some cases tribal's are prevented from chopping trees here and there while loggers and miners work illegally or bribe politicians to gain access to resources. Details about the demography of India's tribal people are lacking. Most national census doesn't gather information on a tribe by tribe basis. In some cases researchers have to go back to British data collected on the early 1930s and extrapolate from that. While few tribes are in danger of extinction, they are being challenged by the encroachment of other groups on their territory and threats from modernization, Westernization, secularization and Christian missionaries.

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पाणिनीयसन्धिसूत्रेषु दार्शनिकचिन्तनम्

ड. दिलीपकुमारपण्डा

सहयोग्यध्यापकः

संस्कृतविभागः

घाटालरबीन्द्रशतवार्षिकी महाविद्यालयः

घाटालः, पश्चिममेदिनीपुरः

पश्चिमवङ्गः

भारतवर्षः

भूमिका

संस्कृतसाहित्यजगति बहुनक्षत्रखचिते व्याकरणाकाशे महामतिः पाणिनिः एव एक उज्ज्वलज्योतिष्मान् आदित्यः यः आनुमानिकः ६०० खृष्टीयपूर्वाब्दे अस्मिन् पृथिव्यामाविर्भूतोऽभवत् । परन्तु आश्वविषयः, तस्य आविर्भावात् बहुपूर्वमेव (आनुमानिकः १२०० खृष्टीयपूर्वाब्दे) ऋग्वेदः परिपूर्णः भूत्वापि विना पाणिनिं कस्यापि अस्य महाज्योतिष्कस्य ऋग्वेदस्य शिक्षाग्रन्थरचनायां धृष्टता नासीत् । “पाणिनीयशिक्षा” इति ग्रन्थः (ऋग्वेदस्य शिक्षाग्रन्थः) रचनान्तरं वयं पाणिनिं केवलमेकं विख्यातवैयाकरणरूपेण जानामः । एतत् स्वीकार्यं यत्, तत्सदृशः त्रुटिहीनवैज्ञानिकदृष्टियुक्तः वैयाकरणः कोऽपि अद्यावधि नास्ति । अपि च अस्य एकविंशशतकस्य उन्नयनशीले विश्वे किमपि उत्कृष्टगवेषणालवधज्ञानमपि तस्य लेखन्याः चिह्नं न सम्मार्जितुं समर्थमस्ति । एतत्सत्त्वेऽपि तं केवलमात्रं वैयाकरणरूपेण न पश्येत्, यतः तस्य सूत्रेषु दार्शनिकतायाः यत् चिह्नं सुस्पष्टं तेन पाणिनि एकः प्रसिद्धः दार्शनिकरूपेण परिचीयते । अस्मिन् प्रबन्धे अष्टाध्याय्याः सूत्रेषु पाणिन्याः दार्शनिकचिन्तनस्य किञ्चित् दिग्दर्शनं मया कृतम् ।

सूत्रव्याख्या

पाणिनेः अष्टाध्याय्याः प्रथमाध्यायस्य चतुर्थपादस्य नवाधिकशतसंख्यकसूत्रमस्ति – “परः सन्निकर्षः संहिता” इति । अस्य सूत्रस्य व्याख्यायामुच्यते – “वर्णानाम् अतिशयितः सन्निधिः संहितासंज्ञः स्यात्” इति । अर्थात् वर्णानाम् आत्यन्तसन्निधानं (एकीकरणम्) संहितासंज्ञेति अभिधीयते । अत्र “ सन्धि” इति शब्दस्य प्रतिशब्दः संहिता, यस्यार्थः मिलनं मिलितरूपम्वा । अतः कस्य मिलनं सन्धिः वा भवतीति प्रश्ने वर्णानां ध्वनिनां वा इत्युत्तरमस्ति । अपि च कदा सन्धिर्भवतीति प्रश्ने अत्यन्तसामीप्यमेव उत्तरम् । अत्र सामीप्यशब्देन – “अर्धमात्राधिककालव्यवधानराहित्यम्” बोध्यम् । अतः सिद्धान्तं भवेत्, शब्दस्थितयोः वर्णद्वयोर्मध्ये अर्धमात्रायाः व्यवधानं स्वाभाविकं, परन्तु यदि केनापि कारणेन वर्णद्वयोर्मध्ये व्यवधानमर्धमात्रातः न्यूनमस्ति तर्हि तत्र सन्दिर्भवति ।

यथा – विद्या शब्दस्य अन्तर्गतः आ-कारः, आलयः शब्दस्य च आ-कारयोर्मध्ये अर्धमात्रायाः व्यवधानं पदद्वयस्य क्रमान्वयिकोच्चारणकाले स्वल्पसमयो भवति, तदा विद्यालय इति पदं निष्पन्नं भवति ।

“परः सन्निकर्षः संहिता” इति सूत्रे “सन्निकर्षः” इति पदमेकमस्ति यत्तु दर्शनस्य पदम् । दर्शने “सन्निकर्षः” शब्दस्यार्थः सम्बन्धः । अधुना ज्ञातविषयः अनेन सन्निकर्षेण सह व्याकरणे प्रयुक्तस्य सन्निकर्षस्य सादृश्यमस्ति न वा ? कथं वा पाणिनिना दार्शनिकशब्दः प्रयुक्तः ? दार्शनिकोक्तसन्निकर्षेण वर्णद्वयस्य ध्वनिद्वयस्य वा मेलनं सम्भवति न वा ? ईदृशालोचनायाः प्रागेव दार्शनिकानां प्रयुक्तस्य सन्निकर्षेति शब्दस्य आलोचनं कर्तव्यम् ।

दर्शने सन्निकर्षेति शब्देन विषयेन सह विभिन्नप्रकारेण इन्द्रियसामीप्यं बोध्यते । लौकिके ईदृशं इन्द्रियसामीप्यं षट्प्रकारकं, तद् यथा –संयोगः, संयुक्तसमवायः, संयुक्त-समवेत-समवायः, समवायः, समवेत-समवायः, विशेषणविशेष्यभावश्चेति । एभिः षट्सन्निकर्षैः सह व्याकरणस्य वर्णद्वयोर्मध्ये ध्वनिद्वयोर्मध्ये वा सन्निकर्षस्य प्रभूतसादृश्यमस्ति । यथा –दर्शने प्रारम्भिकसन्निकर्षत्रयं अन्तिमश्च चाक्षुशप्रत्यक्षेण भवति, समवायादिसन्निकर्षत्रयं च श्रवणेन्द्रियेण भवति, तथैव व्याकरणेऽपि वर्णैः सह सन्निकर्षः चाक्षुषप्रत्यक्षेण, ध्वनिभिश्च सह सन्निकर्षः श्रवणेन्द्रियेण सह भवति । क्रमान्वयेन व्याकरणस्य सन्धौ दर्शनस्य प्रागुक्तसन्निकर्षाः कथं संगच्छन्ते तदेव आलोचनीयम् ।

क) **संयोगसन्निकर्षः** = विषयेन सह इन्द्रियाणां प्रत्यक्षरूपेण योगः सामीप्यं वा संयोगसन्निकर्षः इत्युच्यते दर्शने । अनेन सन्निकर्षेण अवयवानां प्रत्यक्षं भवति । यथा –चक्षुरिन्द्रियेण पटप्रत्यक्षं, अर्थात् पटावयवप्रत्यक्षम् । अयं सन्निकर्षः सन्धौ अपि दृश्यते । व्याकरणे विद्या + आलयः इति स्थिते विद्येति शब्दस्यान्तिमवर्णेन आ-कारेण सह आलयेति शब्दस्य आदिवर्णस्य आ-कारस्य सन्धिर्भवति । स्मर्तव्यं यत्, अवयवरूपवर्णैः एव अवयवीरूपः शब्दः गठितो भवति, वर्णश्च सर्वदैव प्रत्यक्षयोग्यो भवति । अत्र यथा विद्येति शब्दस्य आ-कारः तस्य अवयवः तद्रूपः आलयेति शब्दस्यापि आ-कारः तस्य अवयवः । अतः विद्येति शब्दस्य अन्तिमावयवेन आ-वर्णेन सह आलयेति शब्दस्य आद्यवयवस्य आ-वर्णस्य सन्धौ संयोगसन्निकर्षः भवति चक्षुरिन्द्रियेण तयोः अवयवप्रत्यक्षत्वात् पटवयवप्रत्यक्षवत् । अपि च वर्णद्वयेन यदा सन्धिर्भवति तदा स वर्णः प्रत्यक्षयोग्यो भवेत् । अतः चक्षुरिन्द्रियेण पटावयवप्रत्यक्षे यथा संयोगसन्निकर्षः भवति तद्वत् चक्षुरिन्द्रियेण शब्दावयवानां प्रत्यक्षीकरणात् यः सन्धिर्जायते सोऽपि संयोगसन्निकर्षेणैव ।

ख) **संयुक्तसमवायसन्निकर्षः** = चक्षुषा विषयस्य रूपेण सह यः सन्निकर्षः स संयुक्तसमवायसन्निकर्षः । अत्र लक्षणीयं यत्, विषयेन सह तस्य रूपस्य सम्बन्धः समवायः । अनेन कारणेन चक्षुरिन्द्रियेण सह रूपस्य सन्निकर्षः संयुक्तसमवायः । सन्धौ अपि तद्वत् दृश्यते । यथा –विद्यालयः इति सन्धौ अयं सन्निकर्षः भवति । यतः विद्याशब्दे पञ्चवर्णाः यथा परस्परेण सह समवायसम्बन्धे अस्ति तद्वत् आलयशब्देऽपि षट्वर्णाः । घटेन सह तस्य रूपस्य यथा सम्वायसम्बन्धः, तद्वत् विद्यारूपशब्देन आलयरूपशब्देन वा सह तस्य वर्णानां सम्बन्धः समवायः । पार्थक्यमिदं यत्, घटेन सह तस्य रूपस्य समवायसम्बन्धः गुण-गुणीतिसम्बन्धत्वात्, परन्तु शब्देन सह तस्य वर्णानां समवायसम्बन्धः अवयव-अवयवीतिसम्बन्धत्वात् । अतः चक्षुरिन्द्रियेण यथा प्रथमे घटप्रत्यक्षं भवति तदनन्तरं तद्वतरूपं, सन्धौ अपि प्रथमे चक्षुरिन्द्रियेण शब्दस्वरूपः, तदनन्तरं वर्णस्वरूपः प्रत्यक्षं भवति । घटेन सह

चक्षुषा सन्निकर्षः यथा संयोगः, सन्धौ शब्देन सह अपि चक्षुषा सन्निकर्षः सन्निकर्षः संयोगः । चक्षुषा घटस्थितरूपेण सह यथा संयोगसमवायसन्निकर्षः घटे स्थितस्य रूपस्य समवायत्वात्, तथैव चक्षुषा शब्दस्थितवर्णः सह अपि संयोगसमवायसन्निकर्षः शब्दे स्थितानां वर्णानां समवायत्वात् । अतः उक्तवर्णद्वयस्य वर्णद्वयस्य मिलने यदा सन्धौ आ-कारस्य उत्पत्तिर्भवति दीर्घत्वात्, तदा सन्धिकार्यात् पूर्वं संयुक्तसमवायसन्निकर्षेण आ-कारद्वयं यथा चक्षुषा दृश्यते, तथैव सन्धिकार्यात् परमपि एकस्य आ-कारस्य दर्शनं भवति संयुक्तसमवायसन्निकर्षेणैव अवयवत्वात् ।

ग) **संयुक्तसमवेतसमवायसन्निकर्षः** = विषयेन सह यस्य समवायसम्बन्धः, तेन सह च यस्य समवायसम्बन्धः, तेन सह चक्षुरिन्द्रियेण अयं सन्निकर्षः भवति । यथा घटरूपविषयेण सह तस्य रूपस्य समवायसम्बन्धः, घटरूपेण च सह रूपत्वजात्याः अपि समवायसम्बन्धः । अतः घटस्य रूपत्वजात्या सह चक्षुरिन्द्रियस्य सन्निकर्षः संयुक्तसमवेतसमवायः । स्मर्तव्यं यत्, शब्दे यथा शब्दत्वजातिरस्ति तथैव शब्दे स्थिते वर्णे अपि वर्णत्वमस्ति । अतः सन्धिकार्यं यदा वर्णद्वयोर्मध्ये सन्धिर्भवति, तदा वर्णत्वजातिद्वयोर्मध्येऽपि सन्धिर्भवति । अतः अस्मिन् सन्धिकार्ये प्रथमतः शब्देन सह चक्षुषा संयोगसन्निकर्षः, तदनन्तरं शब्देस्थिताभ्यां वर्णभ्यां सह चक्षुषा संयुक्तसमवायसन्निकर्षः, तदन्तरञ्च वर्णे स्थितेन वर्णत्वेन सह चक्षुषा स्युक्तसमवायसन्निकर्षः भवति दर्शनस्य सन्निकर्षवत् । सन्ध्युत्पन्नवर्णस्थितजात्या सह अपि एतादृशसन्निकर्षः भवति ।

घ) **समवायसन्निकर्षः** = समवायसम्बन्धे यः विषयाश्रितः, तेन सह श्रवणेन्द्रियस्य सम्बन्धः सः समवायसन्निकर्षः । यथा- श्रवणेन्द्रियरूपाकाशे शब्दोत्पन्नं भवति इति सर्वैः स्वीकृतम् । शब्दस्तु आकाशस्य गुणः । अतः आकाशेन सह अस्य सम्बन्धः समवायः । अतः श्रवणेन्द्रियेण सह शब्दप्रत्यक्षे समवायसम्बन्धः भवति । अनुरूपभावेन विद्याशब्दस्थितः अन्तिमाकारध्वनिः आलयशब्दस्थितश्च प्रथमाकारध्वनिः श्रवणेन्द्रियेण यदा श्रुतः भवति तदा श्रवणेन्द्रियेण उक्तध्वनिप्रत्यक्षे समवायसन्निकर्षः भवति श्रवणेन्द्रियरूपाकाशेन सह ध्वनेः समवायसम्बन्धत्वात् । अपि च विद्यालयेति शब्दस्य सन्धिजाताकारध्वनिः यदा श्रुतः भवति तदा समवायसन्निकर्षः भवति, आ-ध्वनिना सह श्रवणेन्द्रियस्य समवायसम्बन्धत्वात् ।

ङ) **समवेतसमवायसन्निकर्षः** = समवायसम्बन्धेन यो विषयाश्रितः तस्य जात्या सह श्रवणेन्द्रियस्य यः सन्निकर्षः, सः समवेतसमवायसन्निकर्षः । यथा – श्रवणेन्द्रियेण शब्दत्वजातिप्रत्यक्षे समवेतसमवायसन्निकर्षः भवति ।

उच्चारितः विद्या + आलयः = विद्यालयः इति ध्वनिः श्रवणेन्द्रियेण श्रुतः प्रत्यक्षं वा भवति । ध्वनौ अस्ति ध्वनित्वजातिः । अतः श्रवणेन्द्रियेण ध्वनिप्रत्यक्षे ध्वनित्वजातिरपि प्रत्यक्षं भवति । विद्याशब्दस्थितस्य आ-ध्वनेः ध्वनित्वजातिः यथा श्रवणेन्द्रियेण प्रत्यक्षं भवति तथैव आलयेति ध्वनेः श्रावणप्रत्यक्षेऽपि भवति । अतः ध्वनिद्वयोर्मध्ये सन्धिकाले समवेतसमवायसन्निकर्षेणैव सन्धिर्भवति इति प्रमाणितम् ।

च) विशेषणविशेष्यभावसन्निकर्षः = चक्षुरिन्द्रियेण कस्यचिद् द्रव्यस्य अभावप्रत्यक्षे विशेषणविशेष्यभावः सन्निकर्षः भवति । यथा –घटाभाववद् भूतलम्, अत्र चक्षुर्भूयां भूतले घटाभावप्रत्यक्षे अयं सन्निकर्षः भवति । सन्धौ अपि एतद् दृश्यं दृश्यते । यथा –विद्या + आलयः = विद्यालयः इति पदं भवति । अत्र विद्याशब्दस्थितेन आ-कारेण सह आलयशब्दस्थितस्य आ-कारस्य मिलनात् विद्यालयशब्दस्थितः आ-कारः उत्पन्नः भवति । परन्तु आ-कारद्वयस्य मिलनेन एकस्य आ-कारस्योत्पत्तिर्भवति । अतः अत्र एकस्य आ-कारस्य अभावः दृश्यते । अयं अभावः एव विशेषणविशेष्यभावः यत्र एकाकारभाववत् विद्यालयः इति अनुभूतिः भवति ।

अतः अस्मादालोचनात् स्पष्टतः एव उपलब्धिः भवति यत् पाणिनिना “परः सन्निकर्षः संहिता” इति सूत्रे सन्निकर्षः इति पदेन दर्शनस्य षट्प्रकारैः लौकिकसन्निकर्षैः सह व्याकरणसन्धेः एकः गभीरः सम्बन्धः बोध्यते । सन्धौ च एषा षट्प्रकाराणां सन्निकर्षाणामुपस्थितिरपि सुस्पष्टा । प्रायेण सर्वत्रैव इमे षट्सन्निकर्षाः सन्धिना सह केनापि प्रकारेण युक्ताः । यदि तन्न भवति तर्हि सूत्रे सामीप्यादि शब्देन कोऽपि दोषः न अभवत् । अनेन प्रकारेण सूत्रस्य अक्षरसंख्यापि ह्रासा अभवत् वैयाकरणाञ्च तदेव उद्देश्यम् । अतः उच्यते सन्निकर्षपदस्य प्रयोगे पाणिनिमुनेः सुदृढस्य अभिज्ञस्य च दार्शनिकभावनायाः परिचयः स्फुटितो भवति ।

अपि च अचसन्धेः अपरैकं सूत्रम् – “लोपः शाकल्यस्य” (८/३/१९) । शाकल्यः मुनेः लोपविधायकं सूत्रमिदम् यस्यार्थः विषये दीक्षितेनोक्तम् – “अवर्णपूर्वयोः पदान्तयोः यवयोर्वा लोपः अशि परे” । अनन्तरं तेनोक्तम् – “पूर्वत्रासिद्धम् इति लोपशास्त्रस्यासिद्धत्वान्न स्वरसन्धिः” इति । अदर्शनमिति विषये काशिकारेणोक्तम् – “अदर्शनम् अश्रबनम् अनुच्चारणम् अनुपलब्धिः अभावः वर्णविनाशः इत्यनर्थान्तरम्” इति ।

अत्रापि भारतीयदर्शनस्य प्रतिविम्बं परिलक्ष्यते । कथम् ? पश्यन्तु अत्र य-कारस्य ब-कारस्य च लोपो भवति । अत्र सन्देहः जायते कः लोपः ? उत्तरे वक्तव्यं यत्, – “अदर्शनं लोपः” इति । नास्ति दर्शनं यस्य तत् अदर्शनम् । अर्थात् यस्य वर्णस्य लोपः भवति स न दृश्यते । प्रथमतः अत्र दर्शनस्य प्रतिफलनमस्ति । वैशेषिकदर्शने “अभावः” इति नामकः एकः पदार्थः अस्ति । यस्य संज्ञाविषये उक्तम् – “निषेधाभिलापकः प्रत्ययगम्यत्वम् अभावत्वम्” इति । निषेधः – निषेधार्थकः नञादिशब्दः अभिलापकः यस्य स प्रत्ययः, तेन गम्यत्वं वेद्यत्वम् अभावत्वम् ।

अर्थात् निषेधवाचकः नञादिशब्देन उल्लिखितस्य ज्ञानस्य विषयः यः भवति स अभावः । अतः यथा लोपे निषेधवाचकः नञ् शब्दस्य प्रयोगः अस्ति अत्रापि तद्वत् । अपि च अभावे पदार्थस्य दर्शनं न भवति लोपे अपि वर्णस्य दर्शनं न भवति लोपात् । परन्तु यदि लोपः अभावस्वरूपः भवति तर्हि चतुर्विधेष्वभावेषु कस्मिन्नभावे तस्यान्तर्भूक्तिर्भविष्यति ? इत्यस्मिन्विषये अलोचनायाः प्राग्भागे चतुर्विधस्य अभावस्य सामान्यालोचनं कर्तव्यम् ।

क) प्रागभावः = अस्याभावस्य लक्षणं – “अनादिः सान्तः” इति अर्थात् यस्याभावस्य आदिः नास्ति परन्तु अन्तः अस्ति । अयमभावः प्रतियोगिसमवायिकारणवृत्तिः स्वप्रतियोगिविनाशश्च ।



ख) ध्वंसाभावः = अस्याभावस्य लक्षणं –“सादिरनन्तः” इति अर्थात् यस्याभावस्य आदिरस्ति परन्तु सः अनन्तः ।अयमभावः अपि प्रतियोगिसमवायिकारणवृत्तिः परन्तु प्रतियोगिजन्यः ।अत्र पश्यन्तु ध्वंसाभावः अनन्तः अर्थात् ध्वंसस्य पुनः ध्वंसः न भवति यतः तत् द्रव्यं पुनः न उत्पद्यते ।

ग) अत्यन्ताभावः = अस्याभावस्य लक्षणं –“त्रैकालिकसंसर्गावच्छिन्नप्रतियोगितानिरूपकः अभावः” इति अर्थात् कालत्रये एव यस्य द्रव्यस्य अभावः दृश्यते ।

घ) अन्योन्याभावः = अस्याभावस्य लक्षणं –“तादात्म्यसम्बन्धावच्छिन्नप्रतियोगिताकः अभावः” अर्थात् यः अभावः स्वप्रतियोगिनः तादात्म्यविरोधिः भवति ।

अनन्तरं लक्ष्यणीयं उक्तेषु चतुर्विधेष्वभावेषु व्याकरणस्य लोपः कीदृशः अभावः । दीक्षितेन मन्तव्यं कृतम् –लोपादनन्तरं पुनः सन्धिर्न भवति । किमर्थं पुनः सन्धिर्न भवति ? यतः लोपादनन्तरं सः वर्णः न पुनरागच्छति पूर्वत्रासिद्धत्वात् ।वर्णे पुनरागमने सति अवश्यमेव सन्धिर्भवेत् । उक्तेषु अभावेषु पश्यन्तु केवलं ध्वंसाभावः एव सकृद् ध्वंसे सति न पुनरागच्छति कारणसामग्र्यभावात् । यदि ध्वंसप्राप्तं द्रव्यं पुनरागच्छति तर्हि अयमभावः अनन्तः न भवति ।अतः लोपः शाकल्यस्य इति सूत्रे लोपः ध्वंसाभावः एव ।एतदर्थं काशिकाकरेण अदर्शनस्य व्याख्यायाम् “अभावः” इति पदं सन्निविष्टम् कृतम् ।

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