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A STUDY OF PROMOTING SOCIAL ENTREPRENEURIAL SKILLS TO ATTAIN SUSTAINABLE DEVELOPMENT

Marceline Fernandes
Santosh Kulkarni

ABSTRACT

We are in the era where we look for sustainable development, where in we focus for equitable development especially on the three pillars of environmental stewardship, economic growth and social inclusion. This focus aims at meeting the needs of current times with the consideration of the needs of the future generations. Social entrepreneurship is one of the major ways which can contribute to sustainable development. Gaining specialized knowledge and skills in a particular field is the focus of young generation but the use of such skills and knowledge at various levels and in different capacities should be known. Social Entrepreneurship is one of the important area which need be in focus so that young minds are motivated and they can contribute and make a mark and contribute largely to sustainable development and to our nation. A practical based awareness and learning needs to be added to the curriculum of students right from 12th grade to Post graduation will create a profound positive impact on the young minds. This paper is an attempt to study to understand the desires and the level of Social entrepreneurial skills prevailing among students. The researcher has collected the data to test the awareness and willingness among the post graduate students towards social entrepreneurship. The level of awareness and the importance of social entrepreneurship were found to be very minimal. The need to motivate and create awareness among the students to imbibe social concern was felt. The researcher aims at suggesting a mandate general course for all students irrespective of their stream from class 12th to Post Graduation based on social entrepreneurial skills.

Key words: Social entrepreneurship, Sustainable development, Skills, practical based learning.

Introduction:

Today, our world faces massive problems of poverty, unemployment, unrest, shortage of water, global warming, overcrowding and so on which needs to be attacked and solved successfully. We cannot hold responsible solely the ruling government, and the various associations and unions and the trust formed for working at various levels for the growth and to uplift people of the countries. It is high time that we the common people should take this self-responsibility to get involved to solve this problem and contribute to social, economic and environmental good. This will help in solving this massive problem to a large extent and encourage responsible living. The government has been taking various initiatives in this regard. Encouraging social entrepreneurship will be very prominent and largely help in solving the social, economic and environmental problems at a greater extent in our country. This paper studies the impact of promoting social entrepreneurial skills among the students to

promote social entrepreneurship in the country that could help in attaining sustainable development.

Literature review:

As we now tend to understand that social entrepreneurs facilitate a durable and bottom up social change, for which we may pose questions like, how do the social entrepreneurs go about it? What personality traits are essential? What kind of leadership should be involved? Mohammad Yunis who pioneered Micro credit has developed a visionary new dimension for capitalism which he calls social business. In this age of financial constraints and political problems we cannot leave government alone to tackle the social, economic and the eventual increasing environmental problems. Peter Drucker (Gendron, 1966, pg. 37) The Social Entrepreneur empowers the performance capacity of the society largely. Social entrepreneurs have the creativity and zeal to turn the obstacles into

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opportunities and find innovative solutions in the most unfavorable situations (see Bornstein 2004; Elkington and Hartigan 2008) A collaborative and diligent economic system with greater involvement of public and private individuals is essential. At Echoing Green, it is called as “work on purpose.” “Working for a cause” is a top career objective above making a huge sum of money as per the national poll from the higher Education Research Institute at UCLA. But at the same time it has to be noted that the performance indicators are different and more complex than a traditional enterprises

On the other hand, the United Nations decade for Education for sustainable development 2005, laid the foundation to reform and mobilize education at all levels right from school to universities to promote sustainable development. In the sustainable Development and Social Entrepreneurship session of the Yale Young Global Scholars program, the students develop the practical and adaptive tools of an entrepreneur the aid innovative solutions considering the wide array of problems of environment, economic and contemporary social problems. Thus, Social Entrepreneurship is accepted as a new type of entrepreneurship emerging around the world, based on a social wealth creation instead of merely generating economic wealth as its main objective

The nonprofit sector has gain more importance as a major service provider after 1980s in USA. Similarly in Britain, social entrepreneurial activities are more frequent as compared to commercial activities. Further, with better economic and political integration at the EU level, social enterprise and social economy have gained a good boost. Social ventures like Grameen Danone Foods, Vinoba Bhavé’s Bhoodan Movement, Dr. Varghese Kurien – Milk Revolution are very successful and motivates everyone. In Indian senior with above 200 million who are facing poverty, social entrepreneurship is an excellent career opportunity which will help in employment creation and majorly to empower local communities. Today we witness that the major reason for the rise in social entrepreneurship as a career path, is that Millennial and other young people are seeking meaning in their lives and work which is more important to leading a good life.

Relevance of the Study-

At the college level: The study will contribute in inculcating an attitude of being socially responsible to contribute to solve the social, economic and environmental good with a exiting career option which otherwise is ignored or unknown.

At the university level: The study will help to design a curriculum which could better link to the output of students, to meet economic, social and environmental good.

At the local National: The study would also aid in to help our nations objective to meet the level of self-sufficiency and boost the drive of “The Make in India” an initiative by the government to promote entrepreneurship and social entrepreneurship in the country thereby promoting sustainable development.

Statement of the problem: It has been a general tendency among the young generation that they have to seek graduation and post graduation to settle down seeking jobs to work at clerical, supervisory or managerial level. A poor attitude is observed among the young generation in general that they need to create a mark by the way of self-employment. There is a immense need to make the youth realize that, they are the strength and vibrant force of our nation. Their potentials and creativity need to be channelized in such a manner that get an inner drive and direct their energy to access their very own importance to contribute so to join hands in giving a better livelihood to the poor and marginalized and at the same time enjoy a content living.

Objectives of Study

1. To assess the career preferences among the students
2. To study the attitude of students towards sustainable development
3. To study the attitude of students towards Social Entrepreneurship
4. To promote Social Entrepreneurship as a carrier option among students

Hypothesis

Hypothesis 1: H₀: There is low awareness towards sustainable development and social entrepreneurship

Hypothesis 2: H₀: Social Entrepreneurship is not a favored career option

Working definitions:

Sustainable Development: Aiming for the development to meet the needs of our present taking into consideration the three basic aspects of environmental stewardship, economic development and social inclusion. All this development is planned and undertaken without compromising the needs of our future generation to meet their needs.

Social Entrepreneurship: Social entrepreneurship is an initiative to take up a business venture where monetary and social returns can be combined as returns on their investment. The approach is largely for transformational benefit to the society at large especially the weaker and marginalized.

Students: Students pursuing T.Y.B.Com, M.Com. MSC – Computer Science at Indira College of Commerce and Science were based for the research under study.

Practical based learning: A study based on learning and training on sample projects, realistic demonstrations, role-play, field trips etc.

Research methodology:

Primary Data: The data was collected from the T. Y.B.Com, M.Com. MSC – Computer Science by the way of a structured questionnaire.

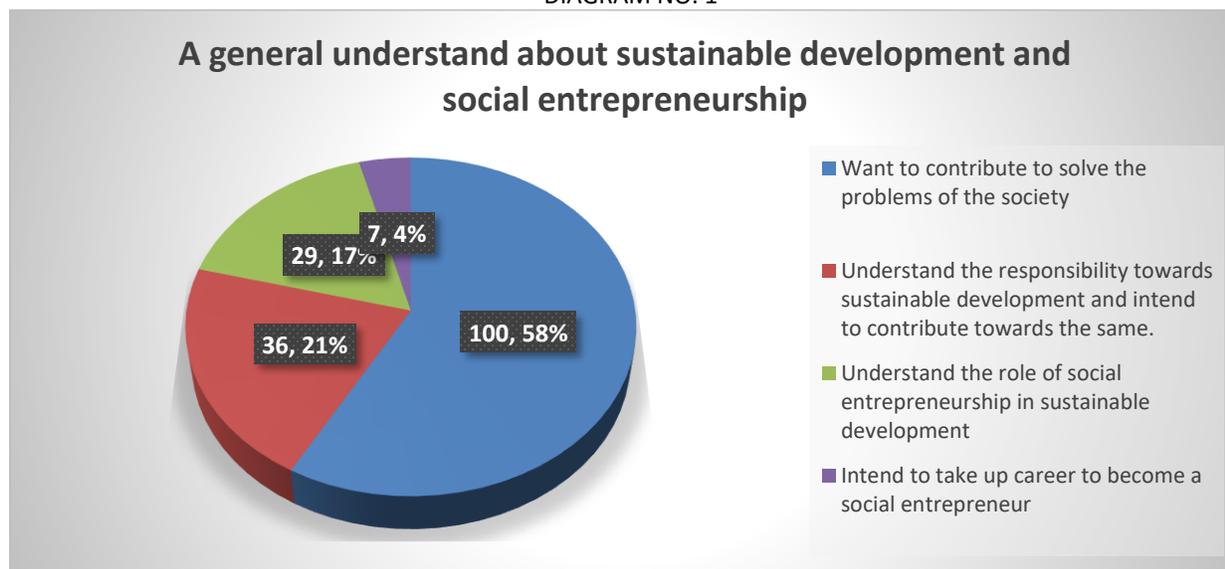
Sample size: 100 students

Analysis of data:

Table 1:

A general understand about sustainable development and social entrepreneurship	% of students
Want to contribute to solve the problems of the society	100
Understand the responsibility towards sustainable development and intend to contribute towards the same.	36
Understand the role of social entrepreneurship in sustainable development	29
Intend to take up career to become a social entrepreneur	7

DIAGRAM NO. 1



The above diagram depicts that all 100 percent students intend to do social good, but only 36% of the students understand about sustainable development and its importance. Further only 29 % students

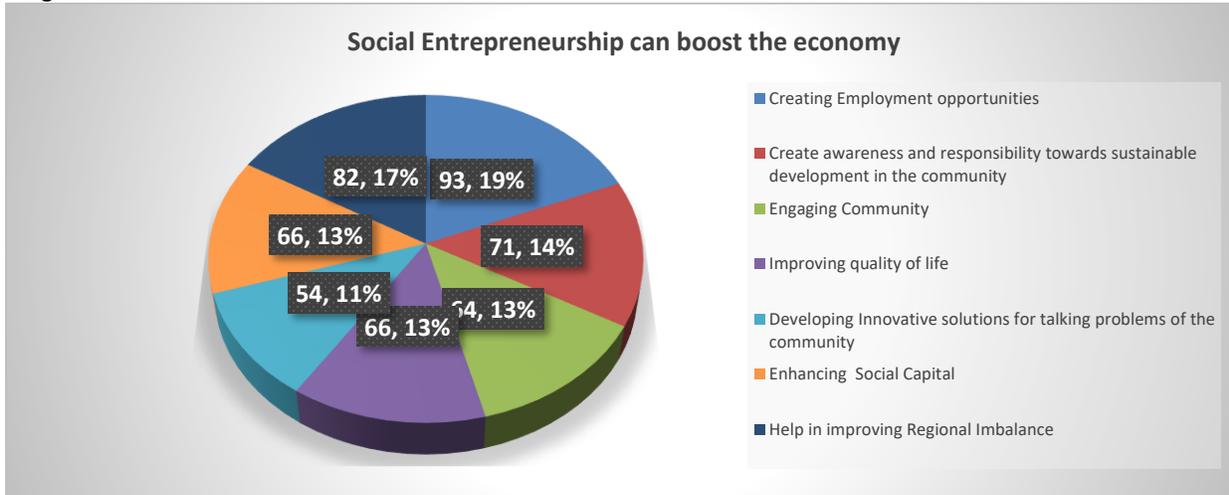
understand the role of social entrepreneurship in promoting sustainable development but only 7% of the students intend to contribute by becoming social entrepreneurs.

TABLE NO.2 Comparative analysis of student’s analysis as Social Entrepreneurship boosting growth of the economy

Social Entrepreneurship can boost the economy by	% of agreement of the students
Creating Employment opportunities	93
Create awareness and responsibility towards sustainable development in the community	71

Engaging Community	64
Improving quality of life	66
Developing Innovative solutions for talking problems of the community	54
Enhancing Social Capital	66
Help in improving Regional Imbalance	82

Diagram 2



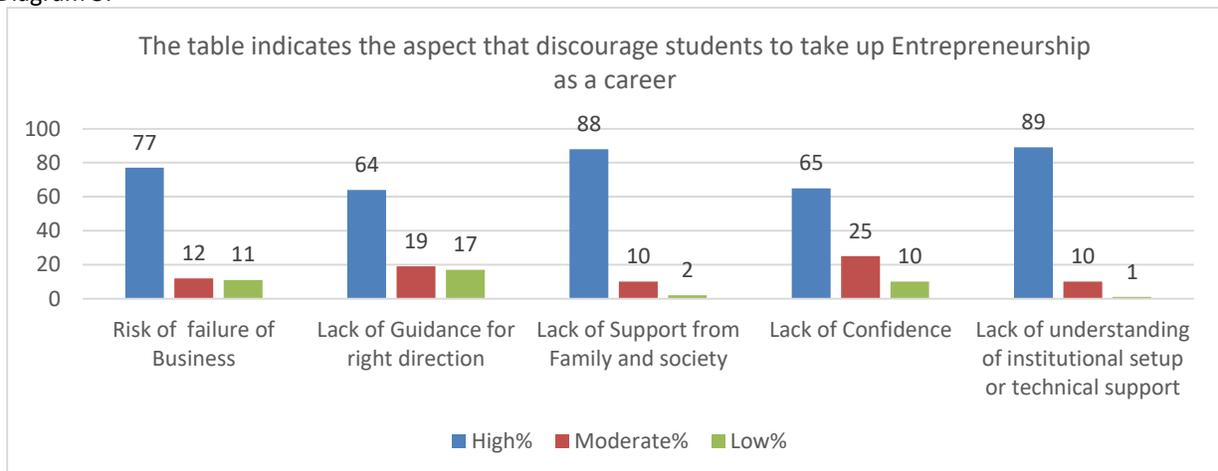
Comparative analysis of student’s attitude or belief that Social Entrepreneurship can boost the economy. The above analysis indicates that a very high percentage of students agree to the fact that Social

Entrepreneurship can help the economy to attain growth in above areas and thereby boost the economy.

Table 3: The table indicates the aspect that discourage students to take up Entrepreneurship as a career

Sr. No.	Factors	High%	Moderate%	Low%
1	Risk of failure of Business	77	12	11
2	Lack of Guidance for right direction	64	19	17
3	Lack of Support from Family and society	88	10	2
4	Lack of Confidence	65	25	10
5	Lack of understanding of institutional setup or technical support	89	10	1

Diagram 3:



The comparative levels of the factors that discourage students to take up Entrepreneurship as a career

The diagram clearly shows that, there are several factors that discourage students for taking up social entrepreneurship as a career option.

Table 4

Sl. No	Particulars	% agreement of students
1	Existing curriculum does not directly and largely promote or motivate towards Entrepreneurship	76%
2	The openness for social entrepreneurship for a compulsory subject.	89 %
3	Willingness to receive counseling, training and knowledge by new curriculum about social entrepreneurship	78%
4	If adequate and timely guidance, skills and help is provided then the willingness to take up entrepreneurship	29%

The above findings indicated that as the existing curriculum is less focused in promoting social entrepreneurship and a higher percentage of students show willingness to learn about social entrepreneurship. Also 29% students show willingness to take up social entrepreneurship as a career if they receive necessary guidance, technical help and motivation which is higher as compared to the existing which is only 9% .

The Finding and Conclusion:

1. The analysis indicates that there is a low career preference towards self-employment and subsequently towards social entrepreneurship and this is majorly because they have no knowledge, guidance and skills about social entrepreneurship. Thus findings of the study indicate that social entrepreneurship is not a preferred career among the students.
2. An indifferent attitude is observed to some extent toward sustainable development due to lack of creation of adequate awareness.
3. They have a very high level of willingness to contribute to the society and at the same time more than 1/3 of them are eager to gain knowledge and guidance on social entrepreneurship.
4. The study clearly indicates that there is good scope to impart deeper knowledge and training to the students irrespective of the stream of study.

The following can the subject details

Part I

Sr. No.	Topic	Credits
I	Introduction to Sustainable development	4
	Role and Importance of sustainable development	
	Problems in growth	

With these findings both the null hypothesis can be accepted.

Limitations of the study:

1. The study is analyzed on the data collected from students from few streams ue to time constraints of the researcher.
2. The data was collect only from the students and if other stakes were included

Scope for further study-The scope of the study may be widened by conducting relevant research on the following areas

The relevance of promoting sustainable development and social entrepreneurship for a all courses right from 11th grade to post graduation and other technical courses

The case studies of existing social entrepreneurs and its impact on sustainable development can be studied.

Suggestion: A credit based general subject is proposed which can be introduced to various streams. Specifically it can be introduced at the part I(16 credits) at graduation level and part II(12 credits) at Post graduation level in the final year. The subject should be inclusive of field trips, educational tours and interaction with local social entrepreneurs to motivate the students

	Rural scenario and current problems in the economy- media dark areas	
	Inclusive growth	
II	Entrepreneurship meaning, need and importance	4
	Resource organization and Value Creation	
	Entrepreneurial mindset, overcoming Myths about entrepreneurship	
	Principles of Business Management- Leadership, Dynamics of Motivation risk bearing,	
	communication and team work	
III	Sociology and Economics of Social Work.	4
	Introduction to Social Entrepreneurship, and Dimensions	
	Social entrepreneurship ideas and social enterprise business plans	
	Developing Social Enterprise	
	Measuring Social Value	
IV	Entrepreneurial case studies	4
	Local and international level social entrepreneurs and their success stories	

Part II

Sl. No.	Topic	Credits
I	Current problems in the economy-and Global scenario	4
	Macro level Problems and challenges	
	Legal and Regulatory frame work National & International	
	Business Plans and feasibility studies	
II	Social Entrepreneurship importance and dimensions	4
	E- Business Environment and global Social Environment Scenario	
III	Support organizations and Institutions-training and guidance	
	National , State and Local Level Entrepreneurial Support Institutions	
	Role of Banks and financial institutions	
	Private donations, Venture Philanthropy and Government Subsidies	
	Social enterprise marketing Strategies	
IV	Biographical Study of Social Entrepreneurs	4

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their financial requirements. Micro financing has been successful in taking institutionalized credit to the doorstep of poor and have made them economically and socially sound.

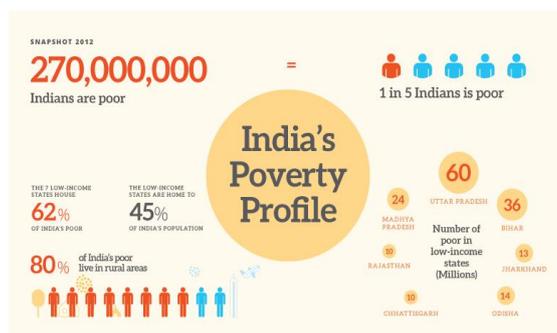
- ❑ **Poverty Alleviation:**-Due to micro finance poor people get employment. It also helps them to improve their entrepreneurial skills and encourage them to exploit business opportunities. Employment increases income level which in turn reduces poverty.
- ❑ **Women Empowerment:**- Normally more than 50% of SHGs are formed by women. Now they have greater access to financial and economical resources. It is a step towards greater security for women. Thus microfinance empowers poor women economically and socially.
- ❑ **Economic Growth:**-Finance plays a key role in stimulating sustainable economic growth. Due to microfinance, production of goods and services increases which increases GDP and contributes to economic growth of the country.
- ❑ **Development of Skills:**-Micro financing has been a boon to potential rural entrepreneurs. SHGs encourage its members to set up business units jointly or individually. They receive training from supporting institutions and learn leadership qualities. Thus micro finance is indirectly responsible for development of skills.
- ❑ **Mutual Help and Co-operation:**-Microfinance promotes mutual help and co-operation among members. The collective effort of

group promotes economic interest and helps in achieving socioeconomic transition.

- ❑ **Mobilisation of Savings:**-Microfinance develops saving habits among people. Now poor people with meagre income can also save and are bankable. The financial resources generated through savings and micro credit obtained from banks are utilised to provide loans and advances to its members. Thus microfinance helps in mobilisation of savings.
- ❑ **Social Welfare:**- With employment generation the level of income of people increases. They may go for better education, health, family welfare etc. Thus micro finance leads to social welfare or betterment of society.

Poverty:

Poverty is the deprivation of food, shelter, money and clothing that occurs when people cannot satisfy their basic needs. Poverty can be understood simply as a lack of money, or more broadly in terms of barriers to everyday life. It refers to a situation where a person is unable meet the basic necessities of life. Absolute poverty or destitution refers to the state of severe deprivation of basic human needs, which commonly includes food, water, sanitation, clothing, shelter, health care, education and information. The amount of income a person or family needs to purchase an absolute amount of the basic necessities of life. These basic necessities are identified in terms of calories of food, BTUs of energy, square feet of living space, etc.



Research Utilization:

- ❑ **Research utilization** is the process of synthesizing, disseminating, and using **research**-generated knowledge to make an impact on or change in the existing nursing practice. The **research utilization** process was developed years ago to address the problems of using **research** findings in practice.

Need of the study:

- ❑ The need of microfinance arises because the rural India requires sources of finance for

poverty alleviation, procurement of agricultural and farms input.

- ❑ Micro finance is a programme to support the poor rural people to pay its debt and maintain social and economic status in the villages. •
- ❑ As we know that India is agriculture based economy so microfinance may be a tools to empower the farmers and rural peoples to make agriculture profitable.
- ❑ So the researchers are interested to find out the scopes of microfinance in rural India. This

research paper is highlighting a picture rural India as a profitable segment for microfinance institutions.

Objective of the study:

1. To study the importance and role of microfinance in poverty Reduction & Research Utilization.
2. To understand the concept of microfinance, evolution and delivery models of microfinance in India.
3. To examine the role and importance of microfinance in India.
4. To examine the current status and growth of microfinance in India

Literature Review:

K. Vishwanatha (2018) from his literature review, we can believe that microfinance's raison d'être is a positive, human-centered At least, that purported reason justifies support for microfinance as a development proposition. But if microfinancing cannot benefit the generality its clients, it has no basis in development. The best way to reduce poverty for low income earners is to focus on raising their productive capacity – not the consumption capacity – of the poor. Microfinance can become an important conduit for improving the lot of low income earners, operating in a large-size informal economy.

Vipin Kumar (2015) : The economic development of any country is severely influenced by the availability of financial services. Microfinance is the form of a broad range of financial services such as deposits, loans, payment services, money transfers, insurance, savings, micro-credit etc. to the poor and low income individuals. A well developed financial system promotes investment opportunities in an economy. Therefore it is necessary that govt. of India have to focus on extending financial services to both rural and urban to ensure sustainable and inclusive growth.

Rahmat, Megananda and Achmad Maulana (2006) : conducted a study on The Impact of Microfinance to Micro and Small Enterprise's Performance and the Improvement of Their Business Opportunity. Results of this study find several interesting issues, such as Microfinance has positive impact to

improvement of MSE's Performance Indicated by sales, the difference of regional characteristic of MSE is also play role in determining its business scale, Since doubling amount of loan has negative impact to the performance, it's very Important to allocate the loan to the productive activities, such as investment, in the way to improve the business opportunity

Rajesh Kumar Shastri (2009): Creating self-employment opportunities is one way of attacking poverty and solving the problems of unemployment. There are over 24 crore people below the poverty line in our country. The Scheme of Micro-finance has been found as an effective instrument for lifting the poor above the level of poverty by providing them increased self-employment opportunities and making them credit worthy.

RESEARCH METHODOLOGY:

This is a descriptive research paper based on secondary data. Data have been collected through books, various websites, magazines, newspapers, and publications of recent research papers available in different websites, Research Articles, Research Journals, E-Journals, RBI Report, and Report of NABARD etc. Research papers of: Vipin Kumar(2015) , Rahmat, Megananda and Achmad Maulana (2006) , Rajesh Kumar Shastri (2009)

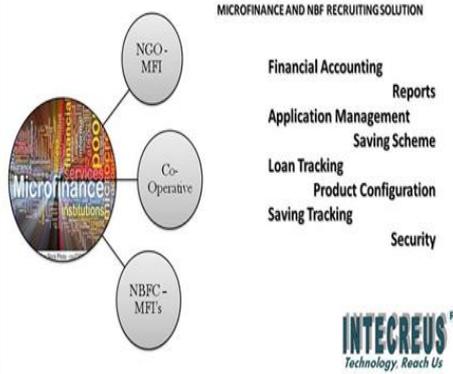
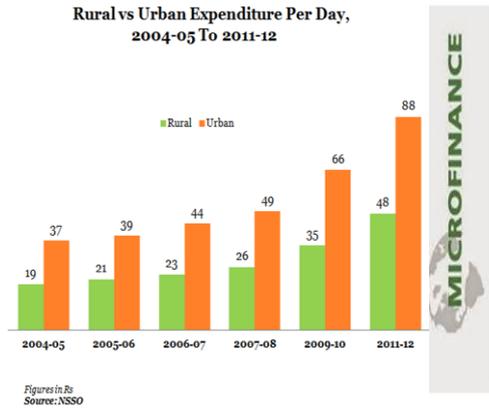
RESEARCH DESIGN:

This is an exploratory research design.

RESULT AND DISCUSSION:

Microfinance is considered to be an adequate tool for financing small scale activities/technological applications in the rural areas because of the following features.

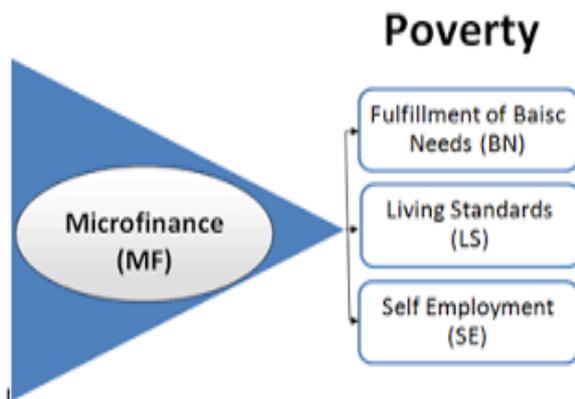
- (a) Provide credit for investment in small scale activities chosen by the poor people.
- (b) Empower the poor to build self confidence that I can do something.
- (c) Can pay for itself with the interest earned.
- (d) Allow to develop opportunities for self employment to the underserved people.
- (e) Have the broadest utility and the least cost per beneficiary.



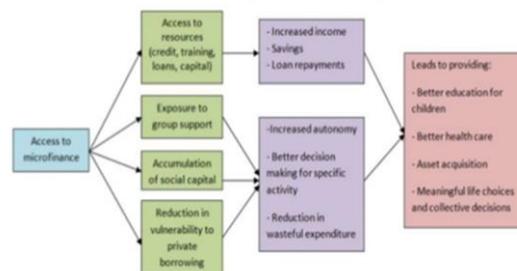
CONCLUSION:

Microcredit and microfinance have received extensive recognition as a strategy for poverty reduction and for economic empowerment. Microfinance is a way for fighting poverty, particularly in rural areas, where most of the world’s poorest people live rural development and poverty reduction are commonly related to the issue of rural employment. Rural households livelihood strategies comprise several options, including farming and non-farm activities, local self-employment and wage employment, and migration. Microfinance has proven to be an effective and powerful tool for rural development and poverty reduction. Like many other development tools, it has sufficiently penetrated

the poorer strata of society. The poorest form the vast majority of those without access to primary health care and basic education; similarly, they are the majority of those without access to microfinance. Microfinance is one of the ways of building the capacities of the poor and developing them to self-employment activities by providing financial services like credit, savings and insurance. To provide micro-finance and other support services, MFIs should be able to sustain themselves for a long period. There are so many schemes for the development of poor In India. Creating self employment opportunities through micro finance is one way of attacking poverty and solving the problems of unemployment.



How Microfinance helps in Poverty Alleviation



Source: Systematic review of quantitative evidence on the impact of microfinance on the poor in South Asia. 2015

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ATMOSPHERIC WATER GENERATOR

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ABSTRACT

The next world war is supposed to be for the drinking water. Decades ago we can't imagine a situation of paying money for drinking water, but now it's a reality. If the situation goes like this, in the near future we will be compelled to find alternative solutions for the potable water. The water in its pure form of vapour is available in the atmospheric air itself. Technologies are to be developed to extract water from atmosphere with less cost. With this work we are trying to develop an innovative machine to produce the potable water from the atmosphere and is named Atmospheric Water Generator (AWG). The easiest way of separating out water from the air is by condensation. For this the air is to be cooled below the dew point temperature by the refrigeration techniques which is going to be very costly and energy consuming. Another method is based on pressurization which is difficult to achieve. Here we are introducing a new technology called wet desiccation method for separating the water out of atmospheric air. In this method a desiccant will absorb the water vapour present in the air while passing over it to form a salt solution. Which in turn on heating will give the water vapour alone in its purest form and is then naturally condensed in the atmospheric condition to get potable water. Here Calcium Chloride (CaCl₂) is used as the desiccant.

Introduction

Atmospheric water generator (AWG) separates out the moisture from air to produce the potable water. In atmospheric water generator water vapour in the air is condensed either by cooling the air below its dew point, exposing the air to desiccants, or pressurizing the air. In the present work wet desiccation method is used to extract the water with brine solution as the desiccant. Wet Desiccation is a method of extracting water from air through absorption. One form of wet desiccant water generation involves the use of salt in a concentrated brine solution to absorb the ambient humidity. These systems then extract the water from the solution and purify them for consumption. This process is run by passing humid air over a flowing brine solution (we have selected calcium chloride, CaCl₂). AWGs are useful where pure drinking water is difficult or impossible to obtain, because there is almost always a small amount of water in the air that can be extracted.

The extraction of atmospheric water may not be completely free of cost, because significant input of energy is required to drive some AWG processes. Certain traditional AWG methods are completely passive, relying on natural temperature differences and requiring no external energy source, but the amount of water produced will be very less. In the present scenario of scarcity of water cost of production for potable water is not going to be a major issue. Our aim is to design and develop an innovative system for obtaining clean drinking water from air, focusing on improvements in the energy requirement.

Working Principle

The system considered here works on the principle of wet desiccation. Wet desiccation is a process where a brine solution is exposed to humid air in order to absorb water vapour from that air. The solution is then sent into a regenerator where the

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water vapour is extracted from the solution. A primary advantage to this approach is that the desiccant accomplishes the most difficult part of dehumidification, extracting the water from the air, without a direct expenditure of energy. In the desiccation process there are several different salts

that will work in the brine solution. Lithium bromide (LiBr), lithium chloride (LiCl), and calcium chloride (CaCl₂) are all common salts used in this process. Comparing several factors like corrosion, cost, and safety Calcium Chloride has been selected as the desiccant for the present work.

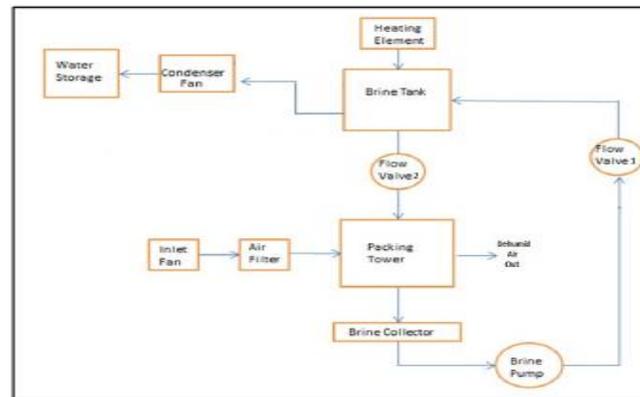


Fig 1. Block diagram of Experimental Setup

The atmospheric air from the blower is passed through an air filter and is allowed to pass through the packing tower. Within the packing tower the desiccant will be stored in its solid form in different chambers. The design of this component greatly affects the efficiency of the entire AWG. Its function is to maximize the surface area of contact between the brine and the air, this allows them to interact more and increase the absorption. Therefore the more tightly the tower is packed, the greater the contact surface area, the more humidity is absorbed out of the air flow through the system. While air is passed over the desiccant it absorbs its humidity to form a brine solution which in turn is collected in a brine tank kept below the packing tower. A brine pump is used to pump the brine solution to the brine tank. Sensors are used to operate the brine pump based on the level of brine solution accumulated in the brine collector. Electric heaters are provided in the brine tank to vaporise and separate the moisture from the brine solution which in turn is allowed to pass to the condenser where it is condensed naturally and is collected in a water storage tank. The solid brine which remains in the brine tank now is again fed to the packing tower through solenoid valve 2. The cycle is repeated.

Experimental Set Up

Aim of our project is to produce at least three liters of water in a day by operating the blower for six hour duration. From the psychometric chart, for

a known relative humidity and dry bulb temperature for our location we can find the relative humidity and it will give an idea about how much water vapour will be there in a unit mass of air passing through the blower. Hence to accomplish the air of 3 liters of water within six hours we got a flow rate of air as 0.01 Kg/s. The chemical reaction for the absorption of moisture by the desiccant is $\text{CaCl}_2 + 2\text{H}_2\text{O} \rightarrow \text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ (Dehydrate). From the molecular mass consideration for absorbing three litres of water around 9.2 Kg of Calcium Chloride is required. This much quantity of desiccant is tightly packed in six different chambers within the packing tower. From considering the density of Calcium Chloride and fixing the width and height we can find the length of the chambers within the packing tower. The individual chambers are arranged in zigzag manner in opposite direction for maximum air exposure within packing tower. The brine solution formed is now pumped to the brine tank where electric heater is used to separate water content in the form of vapour. From the consideration of sensible heat and latent heat of the brine solution the capacity of the heater required can be calculated. For the present work a direct contact resistance heater of 2500 Watt is required. The vapour generated now is passed through a condenser coil where it is condensed naturally. Using the heat transfer equation for natural convection we can design the condenser coil.



Fig 2. Experimental Setup

4. Results and discussion:

The experiments were conducted on the set up for duration of six hour starting from 2 PM to night 8 PM. The humidity ratio for the day selected is 60%. During the experiment the brine solution got collected in the tank is 6 liters and on vaporization we were able to separate more than 3 liters of pure water successfully. The quantity of water generated greatly depends on the humidity ratio. More water can be generated from air with a higher humidity ratio. The cost per litter of water produced is high but the set up will be highly useful where there is a high scarcity for water. Since for separation of moisture from air using desiccant does not need any energy hence the only energy consumption is for heater and blower.

5. Conclusion:

The design and fabrication of the Atmospheric Water Generator has been done successfully. The performance test is conducted on the same which gave 3 liters of potable water within 6 hours which meets our design requirement. Presently the cost per litter will be high but in near future the situation will be worst and availability of pure water is going to be a miracle. So Atmospheric Water Generators are going to have its importance in near future.

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CREATIVITY AND INNOVATION: HUMAN RESOURCE PRACTICES AT WORKPLACE

Bhagyashree N. Deshpande

ABSTRACT

In the globalization era, to compete and sustain in a long run, a business establishment must be creative and foster the culture of creativity by tapping the competency of human resources. Many of the researchers have suggested that creativity makes an important contribution to organizational effectiveness for the long-term survival of organizations. Encouraging and fostering creativity is a strategic choice of every successful organization. In an organizational set up, it's the HUMAN RESOURCE system which plays crucial role in facilitating and communicating the goals of creativity to the human resources and the means to achieve the organizational goals.

Key Words: Creativity, Innovation, Organizational Culture, Human Resource Management

Introduction :

“Creativity” and “innovation” play an important role of in long-term development and sustainability of organizations. It is very difficult to manage firms because they demand different product architectures, change the economics of the industry, destroy existing firm competences, create new value networks in which to compete and require technology investments with highly uncertain outcomes. In the recent years, the notion of best practices in human resource management (Human Resource Management) has received a lot of attention. It has been suggested that a set of best Human Resource (Human Resource) practices can enhance a firm's performance and effectiveness. The high-commitment organizations, who follow the best practices of Human Resource management (Human Resource Management) that fosters and supports the creation and maintenance of an internal labour market and a high level skills base. Now-a-days, high level skills are required for innovation. Flexibility enables creativity, empowerment and change vital for the exploration that fuels innovation. Control, on the other hand, provides discipline, focusing innovation initiatives, for instance, on achieving long-

term goals, leveraging core competencies, and meeting budgets. we believe that best Human Resource practices provides by helping employees to improve skills and knowledge, jobs values, competencies, activities and assignments, which are needed to be creative in their jobs. In response to the increasing demand of research in this filed, based on reviewing the available literature.

Creativity and Innovation: The Meaning

Many studies have recognized the importance of innovation and creativity in developing the organization's competence, and both of the concepts have been defined in various ways for understanding in academics. “The intentional introduction and application of ideas, processes, products or procedures which are new and benefit to the job, the work team or the organization”.

Through Some researcher make a distinction between creativity and innovation, with the former referring to the invention of an idea and the latter referring to that idea's application, or regarding the former as one simply part of the latter, generally, the two terms are often used interchangeably in most relevant research.

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Table: Definition of Creativity and innovation

Author(s)	Definition
Amabile (1996)	"The quality of products or responses judged to be creative by appropriate observers, and . . . the process by which something so judged is produced"
Csikszentmihalyi (1996)	"Any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one". Domain consists of a set of symbolic rules and procedures.
Ford (1995)	"A context-specific, subjective judgment of the novelty and value of an outcome of an individual's or a collective's behaviour" .
Woodman (1993)	"The creation of a valuable, useful new product, service, idea, procedure, or process by individuals working within a complex social organization" .
Boden (1991)	Psychological creativity has to do with idea generation at a personal level, Historical creativity has to do with ideas that are "fundamentally novel with respect to the whole of human history"
Amabile (1996)	While creativity refers to the production of novel and useful ideas in any domain, innovation is defined as the successful implementation of creative ideas within an organization
Scott (1994)	Innovation include several process, such as problem recognition , idea generation, idea completing and prototype production

Existing literature shows that it can broadly be defined as "the adoption of an idea or behavior, whether a system, policy, program, device, process, product or service, that is new to the adopting organization"

The Concepts of Creativity and innovation are closely related and overlapping, but they are not interchangeable. Creativity and innovation have often been studied in isolation by researchers using different methodologies and models. Creativity refers to the production of novel and useful ideas in any domain; innovation is defined as the successful implementation of creative ideas within an organization. Creativity is important in and of it and can be conceptualized as a necessary precondition required for innovation. Creativity is the seed of innovation.

Role of Human Resource and Organizational culture of innovation

Organization culture is a valuable resource for companies; it has a key role to play in the HR and firm performance. The strength of organizational climate is an important mediator between HRM system and creative performance. They argued that a strong climate affects how individuals share a common interpretation of what behaviors are expected and rewarded, and hence a situation is created for higher organizational effectiveness.

Innovation culture is an important link between intelligences and innovation outcomes there is a need to develop a technology-based culture in order to

create competitive advantage in technology-intensive industries. It was found that only with a shared culture that is oriented towards innovation can a firm be competitive in new product development. Such an innovation culture involves taking risks, worker last participation, creativity, and shared responsibility. An Human Resource system that can foster this type of culture must possess a predisposition towards constant learning, teamwork, a considerable degree of work autonomy, and an inclination towards technological innovation.

Human Resources practices provide information and shape the behaviors of employees; they become the means of creating certain organizational culture. Developing a culture that emphasizes innovation and entrepreneurship could be an important target for the Human Resource system. A strong Human Resource system can develop shared meanings in promotion of collective responses that are consistent with firm strategies, and hence the formation of organizational climate. Human Resources system that consciously aims at altering employees' schemes towards innovation would lead to an innovative culture. It follows that organizational culture would be an intervening factor between Human Resource system and the firm's innovation performance.

Human Resources system with an orientation towards innovation plays a salient role in creating the necessary culture that promotes innovation, Organizational culture, in turn, is expected to have a significant and direct impact on firm performance. Thus, it was confirmed that organizational culture

plays a mediation role between Human Resource system and firm's innovation outcomes. Conceptually, it was verified that an Human Resource system which emphasizes training, performance-based reward, and team development is critical for creating a developmental culture.

The human resource system for innovation:

a) Training and outcomes:

Training aims to improve employee's current work skills and behavior and helps the organization to reach its goal. Training is the process of altering employees' behavior, attitudes and knowledge in a way that increases the probability of individual and organizational goal attainment. The focus on employee training can enhance employees' knowledge and skills that are critical to new product development. It also facilitates learning in organizations. Training also enhances the knowledge management systems of firms.

b) Performance-based reward:

Rewarding individuals for their contribution to the organization is widely used by corporations. Rewards can be either extrinsic or intrinsic. Extrinsic rewards are things such as pay increases, bonuses and shares and stock options. Intrinsic rewards are those that are based on internal feelings of accomplishment by the recipient. It provides a kind of motivation for creativity and innovation, and hence reinforces innovative. It was found that in a high-performance work system, which has an emphasis on pay for performance and gain-sharing, is critical for the financial performance of firms in several Asian countries.

Human Resource system with performance-linked rewards has impacts on firm performance, mediated by employees' skills, attitudes, and behaviors. Hence, the link between performance-based Human Resource system and firm performance is generally supported in the literature.

Various compensation packages are designed to reward total quality management and employee involvement, which are the focuses of many innovation-oriented firms

c) Team development:

Human Resource leaders must emphasize team-based work redesign so that firms can become more innovative, several technology based studies have revealed that teamwork plays an important part in eliciting innovation. Some studies have highlighted the role of training and the development of leadership in cross-functional teams. Creativity and innovation in work groups is dependent on how these

work groups are led and managed. In sum, training activities tailored to developing leadership in cross-functional teams are necessary to create an appropriate work culture. It is expected that team development with the above focuses is a necessary component of an innovation-oriented Human Resource system. Human Resource Management policies that "can identify, develop, evaluate, and reward the work behavior that is consistent with the firm's innovation goals". Human Resource Management has studied the relationship between Human Resource Management and innovation mainly from a contingent perspective. Conclusions of the different literatures about which Human Resource Management practices foster innovation are presented below.

d) Job Design

Job design, literature argues that companies should allow employees to have spare time for developing new ideas and design jobs for working with ambiguity and tolerance. The use of teams is important because the development of innovations is too complex to be achieved by individual employees.

e) Attractive pay packages

Innovative companies through the design of attractive compensation packages attract the best skilled employees. Some authors have found a positive relationship between innovation and employee wages level. It is suggested that firms should offer incentives. The proper compensation strategy must be adopted for an innovative firm.

f) Staffing

Staffing is considered another key Human Resource Management practice for innovation. The use of external sources of recruitment. The selection of people based on their skills and fit to organizational culture that provide employment security. That will allow companies to obtain self-confident, risk adoption and involved employees that favour innovation.

Human Resource practices and motivational factors for innovation :

Intrinsic motivation is a key driver of creativity. In fact extrinsic interventions such as rewards and evaluations appear to adversely affect innovation motivation because they appear to redirect attention from "experimenting" to following rules or technicalities of performing a specific task. In order to be creative, individuals need freedom to take risks, play with ideas and expand the range of considerations from which solutions may emerge.

1. Challenging individuals

It appears that it is not the individual who lacks creative potential but it is the organizational expectations that exert a primary debilitating effect upon the individual's inclination to innovate. Human Resource system can help in building the required climate for it.

2. Multiple Career advancement & Opportunities

Human Resource system should follow the scheme and reward the individual who is more creative with promotion and career advancements. More opportunities of promotion to be given for the creative employees.

3. Skills and knowledge

Creativity is affected by relevant skills such as expertise, technical skills, talent etc. However such domain-related skills can have both positive as well as negative consequences. It can be said that innovation is enhanced by organic structures.

4. Leadership and empowerment

Empowering people to innovate is one of the most effective ways for leaders to mobilize the energies of people to be creative.

5. More Action friendly rather than bureaucratic response

Human Resource practices must ensure that there are no bureaucratic bottlenecks which suffocate attempts at innovation.

6. Providing a balanced autonomy to the employees

Autonomy is defined as having control over means as well as the ends of one's work. This concept appears to be one of central importance. There are two types of autonomy:

- a) strategic autonomy: the freedom to set one's own agenda;
- b) operational autonomy

7. Goal orientations

Individuals may also have different goal orientations. Focusing and practices of workplace spirituality helps the employees to align their personal goal with the organizational goals.

8. Cognition and Values of employees

Values are guiding principles of individuals' lives; they provide directions for action, and they serve as standards for judging and justifying action. To take a fine-tuned look at whether need for cognition is particularly relevant for idea generation or idea implementation.

9. Job complexity

It is seen that when a job

- (a) is identifiable,
- (b) provides opportunities for the jobholder to learn and use a variety of skills,

(c) has significant implications for others

(d) provides autonomy and feedback, the job is said to have high levels of complexity.

10. Performance Appraisal and Feedback

A right kind of appraisal and feedback processes in a an organizational system helps employees to show positive attitudes and behaviors at workplace, which is an important variable for creativity at work.

Other Human Resource Practices can enhance Creativity at workplace are:

- Innovation-based oriented training and role modeling;
- Challenging tasks and proper job pressure;
- Job enrichment and job rotation;
- Challenging goals;
- Exploratory learning;
- Participation of decision making;
- Diversified team work;
- Support from the boss

Conclusion:

1. To build a sustainable organization, it is vitally important to understand the importance of innovation.
2. This will be the energy of renewal and the drive to a successful future.
3. It's truly revealed that employees and managers need to incorporate best suitable Human Resource practices in workplace as it helps the employees to contribute more by enabling them to understand the big picture and the organization benefits as a whole.
4. We have come to an understanding that integration of best Human Resource practices at workplace is a measure weapon to unlock the creative and innovative behavior, as it helps in capitalizing their resources, skills and knowledge towards establishment of a better perspective for the humanity at large.

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When exposed to a reward stimulus, your brain responds by increasing a release of the neurotransmitter dopamine that is well known for its role in movement, motivation and pleasure.

Bring it on! Your teams will magically come up with creative ways of improving the workplace, fostering imagination and solving problems. Increasing one's imagination creates possibilities and can enable a person to pursue and accomplish many great goals.

Creativity also increases curiosity that drives the desire to learn. It opens up the mind to unexplored paths. Can you imagine a workplace now without encouraged creativity?

Start solving your problems by encouraging creativity

If creativity is fueled by passion, then you need to focus on honing individual talents in order to express creativity and have your employees reach their fullest potential. A lack of such action is how employees become disengaged from any organization. They don't feel valued because the organization is not using their talents and strengths; they become bored and always feel tired.

If you want happy, productive and prized members in your team, you need to start igniting their creativity to get them motivated.

Here are some examples to get started:

1. **Creative environment:** first, create an environment that encourages creativity. You could decorate one area of your office with some nice, bright colors and designate that area to your employees, giving your team some sense of ownership
2. **Work hard, play harder:** allow your team to play. You can have colored markers, flip charts, Lego, play dough, paint, music and anything that sparks the creative process during brainstorm sessions
3. **Brainstorming:** set a fortnightly meeting where you can brainstorm and work on a problem or project. This gives your team the right intention before entering your meeting
4. **Goal board:** create a board where you have goals or strategies that your company is striving for and each week you can focus on one goal or problem to solve or work on
5. **Homework and teamwork:** you may give your team some pre-work where you have one agenda for the meeting and they all have to come into this meeting with one suggestion or solution to your goal or problem

6. **Reward creativity:** of course, this followed with a reward for the best suggestion or solution that your team is all agreed upon. This is just as important as the implementation of the suggestion or idea

7. **Establish engaging rewards:** incentive could be movie tickets, a bottle of wine, a Thai massage, a voucher or money. You could even go a step further and have a board to acknowledge and encourage creative thinking

Workplace:

The workplace is the location at which an employee provides work for an employer. That seems like a simple enough explanation, but it can become a bit more complex, especially in today's knowledge economy.

The workplace is located in a variety of settings including offices, manufacturing facilities or factories, stores, farms, out-of-doors, and in any other location where work is performed.

A **workplace** is a location where someone works for his or her employer, a place of employment. Such a place can range from a home office to a large office building or factory. For industrialized societies, the workplace is one of the most important social spaces other than the home, constituting "a central concept for several entities: the worker and his/her family, the employing organization, the customers of the organization, and the society as a whole". The development of new communication technologies have led to the development of the virtual workplace, a workplace that is not located in any one physical space.

What can management gain from creativity in the workplace?

Developing a creative culture takes time and it begins with management, being more open-minded and less judgmental to the suggestions of their team. Patience is a virtue; you need to allow time for your team members to develop their creativity in the organization and to put their ideas together to find optimum solutions.

Most leaders are expected to think creatively and come up with innovative solutions to organizational problems. However, by cultivating and utilizing the creative abilities of your team, it is likely to produce an even more prosperous selection of creative ideas and solutions to organizational problems.

Do you know why? We all think differently. A diverse group collectively possesses knowledge and a variety of perspectives; this goes back to why two heads are better than one.

The benefits of creativity in the workplace are countless; here are just a few examples of the amazing results you will experience:

- Increased engagement
- Increased interaction
- Increased staff morale
- Increased passion
- Increased motivation
- Increased problem solving
- Increased productivity
- Increased team bonding and collaboration

Creativity and its importance in business points to four main creative strengths that can be taught

Fluency: Coming up with more than one idea along the same topic or theme. Simple exercises where employees are encouraged to come up with multiple uses for a single ordinary object are a great way to encourage this skill.

Flexibility: The same as above, but with creating multiple ideas across topics and themes that may or may not be similar. This can help employees link together possible ideas.

Elaboration: Being able to add more details, viewpoints, and perspectives to existing information. See if your employees can describe an experience using all of their senses.

Originality: Coming up with ideas that are unique and out of the ordinary. Try holding semi-regular brainstorms with your staff and encouraging them to put down all of their ideas, not just the ones that they're already certain will work. Creativity is essential for any organization if you want to keep your business moving forward.

Job performance:

Job performance is the assessment of whether an **employee** has done their **job** well. It's an individual evaluation—one measured based on a single person's effort. Your human resource department will usually manage the assessment, but **job performance** is a hugely important process to the entire company's success.

Job performance assesses whether a person performs a job well. Job performance, studied academically as part of industrial and organizational psychology, also forms a part of human resources management.

Performance is an important criterion for organizational outcomes and success

Need of the study:

1. There are numerous organizations that have designed a cool, funky, creative environment for their employees to help them relax and spark creative thinking to get their projects moving forward.

2. Some organizations go as far as having regular brainstorming sessions when working on a project to allow employees to contribute and build on a project. This creates immense engagement as their team members have a say and they are involved in the creative process.

3. Just by supporting open-mindedness, setting up an inspirational environment and offering the right rewards, you can get the creative juices of your team members flowing like never before.

Objective of the study:

1. To study and understand about creativity and the performance of the organization.
2. To analyze the impact of creativity at workplace and performance of the job of employee.

LIMITATIONS OF THE STUDY:

Lack of motivation and lack of trust: This is an essential factor in the development of cultural partnerships. If the motivation for participation in a working group and subsequent ideas of no confidence this will continue.

Lack of confidence in our work group, including cultural barriers in this field, often due to failure of teamwork and employee participation in trust, your lost. Perhaps the major factor in the formation of processing the idea of a lack of motivation and confidence of senior managers to be employee involvement.

Lack of acceptance and tolerance of criticism in the conflict: If manager's attempt to consensus critical mass is achieved without the constructive criticism of the principles of creative thinking is critical of the lack of acceptance and tolerance of a system of odds tastes innovation will lead to active and participatory management.

Conservatism and authoritarian management

LITERATURE REVIEW:

Employee's creativity - Creativity can be explained as production of new ideas; a creative employee is one who can come up with new suggestions/ideas for the services to be constructed, the flood of the communication and understanding it in the same way which would affect the work done by the employee during his working hour (Amabile, 1988). Creativity is explained as a design in which the employee make

such innovative construction in which the work related problems are resolved in rightful manner with step by step process, some explain it as the ability of the individuals how they can develop useful solution to meet the challenges and overcome the problem them self individually (Amabile, 1988; Young, 1994). A creative employee is one who has the ability to be aware of the organization and must be sensitive so that he can tackle the problem, he must have sharp mind so he is able to remember his task for long time, and he must be adaptive, it is because due to Globalization there is rapid change in the technology as well the culture so a creative employee would be one who is able to adapt all the changes before time, in this way he would be termed as creative (Evans, 1991). It has been long observed that employee's creativity is mostly seen by the large organization and team. Creativity is mostly involved in the generation of change in product, due to working in team the employee are constantly engaged in learning new knowledge, skills which are the necessary requirements needed by the organization from the employee so they can achieve timely goals (Amabile, 1988, 1996).

Creativity can be explained as introducing new techniques by individual or group of people in organization for achieving the maximum potential of human labor which will result in achieving goals effectively, due to innovation and globalization if a firm wants to compete with its competitor they must hire creative employee who are extroverts, feeling easy to work in groups. Employees with proactive

personalities are the one which are mostly admired to make constructive change (Zhou and George 2001). Employee's creativity can be most commonly be referred to an individual who has new ideas for his work & working style, he must be flexible in order to work in team rather than individually completing a project, a creative employee is one who has better skills of understanding and is adaptable in order if new technology is introduced in the firm so he should be able to use it in no time, all these values indicate employees are empowered so they can complete the task as they are feeling comfortable all these characteristics would help in getting to know new opportunities, use of advance technology all these changes are part of everyday life (Runco, 2004). Creativity is adapted by the individual to do production with new ideas. The creativity may depend on the employee or situation; an employee may want to be in contact at highest or lowest level although he or she has great potential. Employee may use all of his/her capabilities, skill knowledge in effort to produce creative outcomes (Drazin et al., 1999).

RESEARCH METHODOLOGY:

Primary data was collected in the form of responses of the respondents to close ended questions, likert scale formulated in a structured way into the questionnaire.

Collection of data: Primary

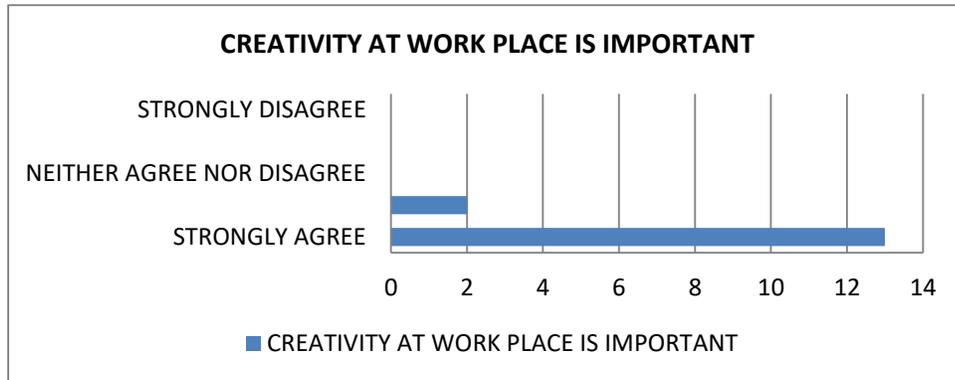
Population of the study: 1 Organization of employees
Sample Size: 15

Data Analysis:

MS-Excel was used for data analysis.

Question 1

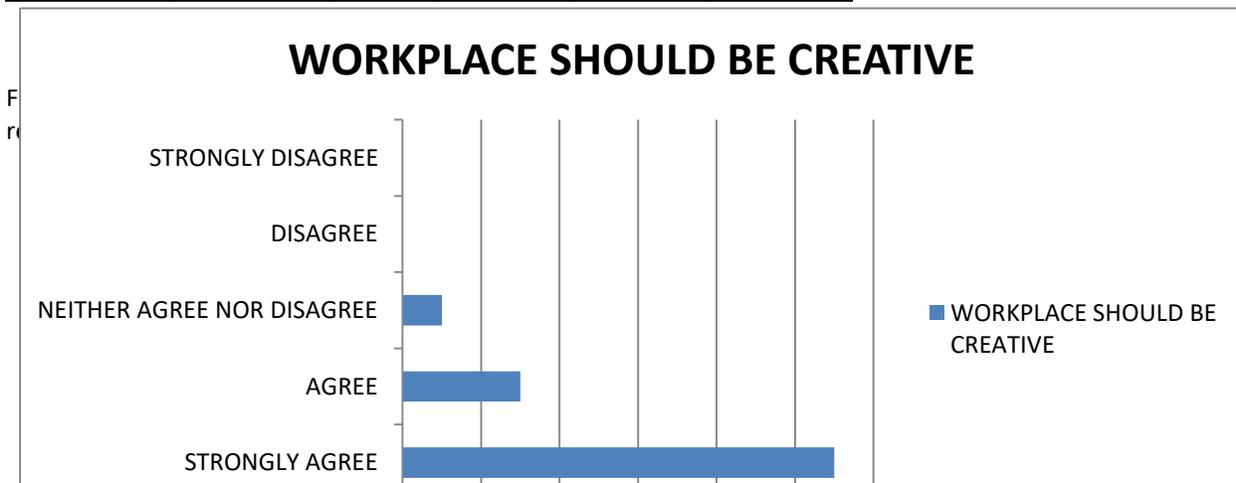
	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
CREATIVITY AT WORK PLACE IS IMPORTANT	13	2	0	0	0



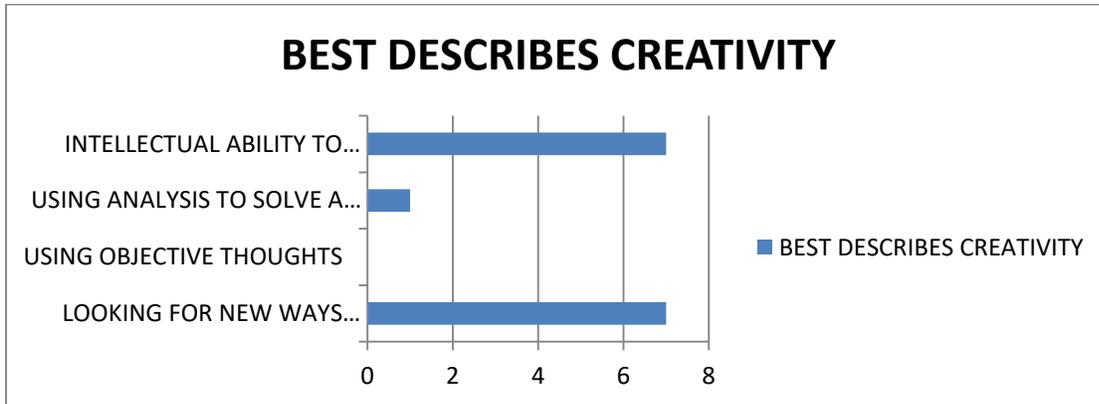
From the above table it was observed that 13 respondents strongly agree with the statement and 2 respondent agreed with the statement

QUESTION 2

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
WORKPLACE SHOULD BE CREATIVE	11	3	1	0	0



	LOOKING FOR NEW WAYS TO SOLVE PROBLEM	USING OBJECTIVE THOUGHTS	USING ANALYSIS TO SOLVE A PROBLEM	INTELLECTUAL ABILITY TO MAKE INNOVATIONS
BEST DESCRIBES CREATIVITY	7	0	1	7



From the above table it was observed that 7 respondents BEST described that the creativity is looking for new ways to solve problem. 1 respondent described creativity as using analysis to solve a

problem. Remaining 7 respondents described creativity as using intellectual ability to make innovations

QUESTION 4

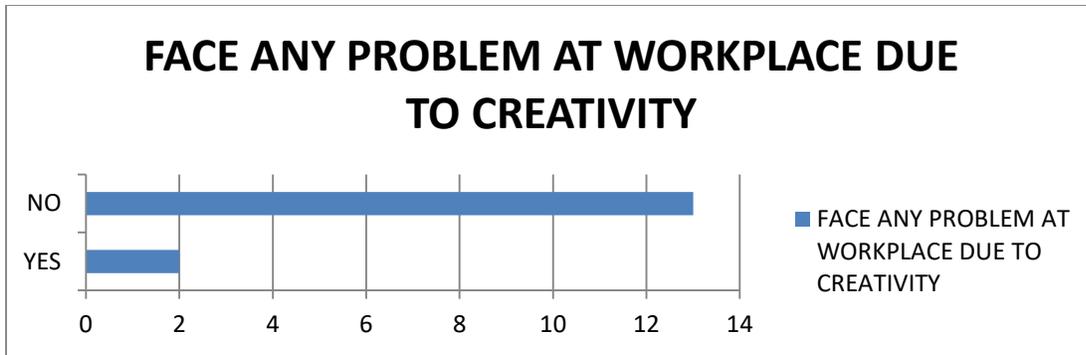
	YES	NO
ACTIVITIES RELATED TO CREATIVITY AT WORK PLACE	13	2

From the above table we found that 13 respondents responded yes to the statement that they have

activities related to creativity at their workplace and 2 respondents denied to the statement.

QUESTION 5

	YES	NO
FACE ANY PROBLEM AT WORKPLACE DUE TO CREATIVITY	2	13



From the above table it was observed that 13 respondents informed that they did not face any problem at workplace due to creativity and 2 respondents faced problem due to creativity at their workplace.

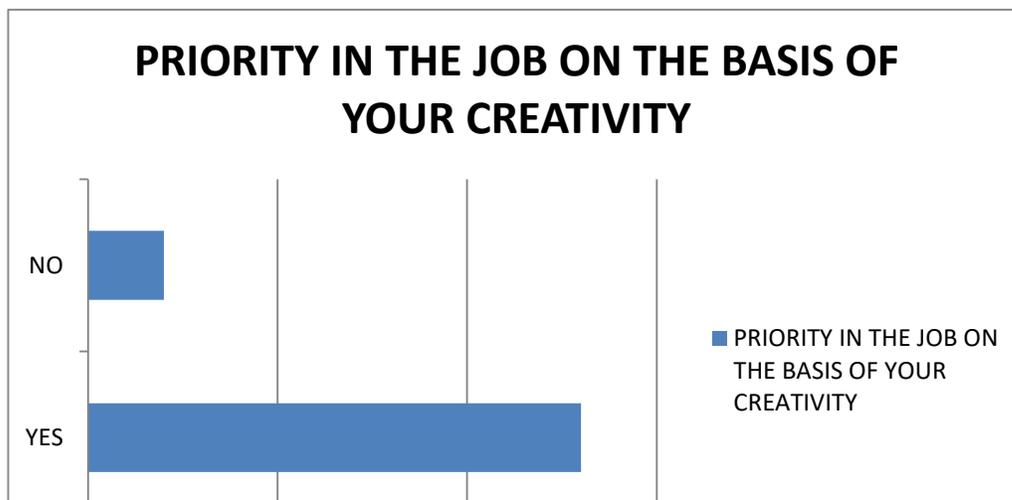
QUESTION 6

	YES	NO
CREATIVITY USEFUL FOR TEAM BUILDING	15	0

From the collected data it has been observed that all 15 respondents answered YES that the creativity is useful in team building

QUESTION 7

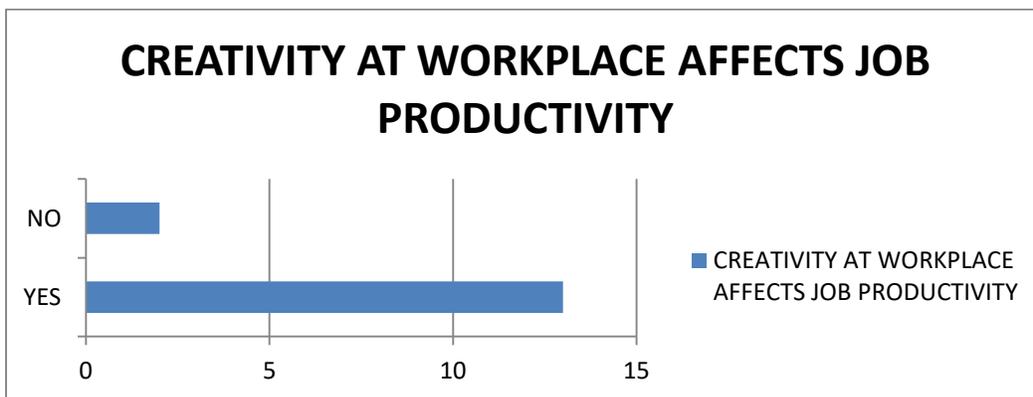
	YES	NO
PRIORITY IN THE JOB ON THE BASIS OF YOUR CREATIVITY	13	2



From the above table it was found that 11 respondents responded YES with the statement saying that they got priority in the job on the basis of their creativity and 4 respondent NO with the statement saying that they did not get any priority on the basis of their creativity at workplace.

QUESTION 8

	YES	NO
CREATIVITY AT WORKPLACE AFFECTS JOB PRODUCTIVITY	13	2

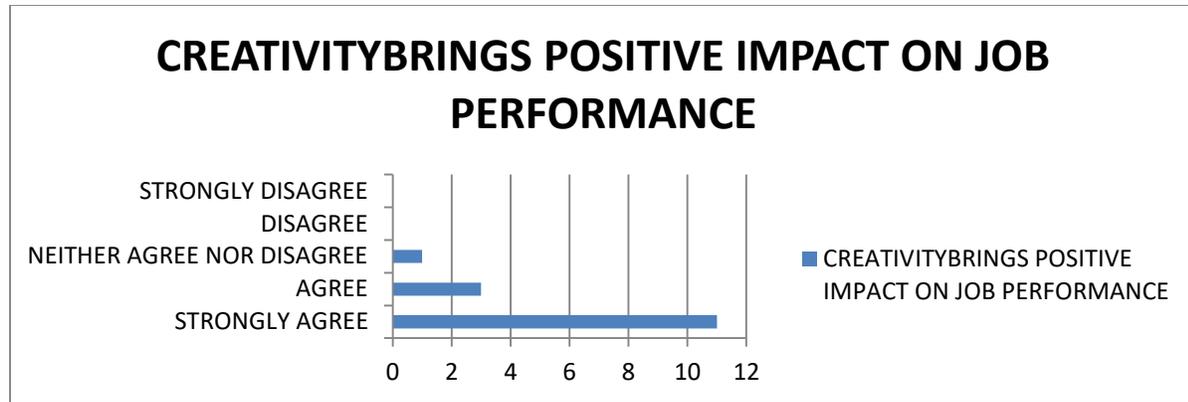


From the collected data and above table it has been observed that 13 respondents responded YES to the question that creativity at workplace affects the job productivity and 2 respondents responded NO stating

that productivity at workplace is not affected by creativity.

QUESTION 9

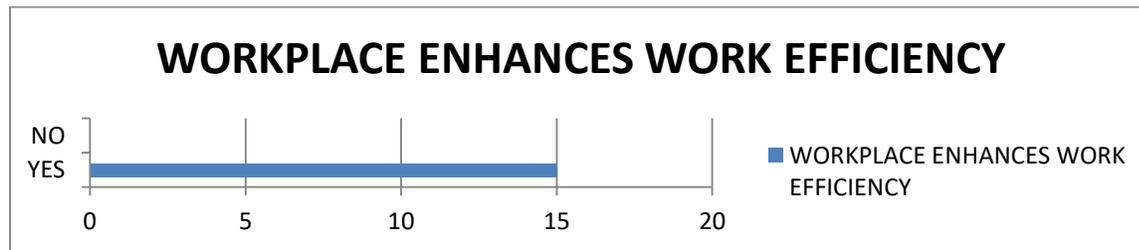
	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
CREATIVITY BRINGS POSITIVE IMPACT ON JOB PERFORMANCE	11	3	1	0	0



From the above table it was observed that 11 respondents were strongly agreed with the statement that creativity brings positive impact on job performance and 3 respondents agreed with the statement and only one respondent neither agreed nor disagreed with the statement.

QUESTION 1

	YES	NO
WORKPLACE ENHANCES WORK EFFICIENCY	15	0



From the collected data and the table all the 15 respondents answered YES to the question that does creativity at workplace enhance work efficiency?

Results and conclusions: the researchers observed that

- Out of 15 respondents 13 respondents thought that creativity at workplace is important.
- Majority of the respondents said that their workplace should be creative.
- 7 respondents described creativity as looking for new ways to solve problem where 7 respondents described creativity as using intellectual ability to make innovations.
- Majority of the respondents informed that they had activities related to creativity at their workplace.
- Majority of the respondents i.e. 13 respondents out of 15 stated that they did not face any problem due to creativity at their workplace.

- All the respondents stated that creativity is useful for team building.
- 4 respondents did not get priority on the basis of creativity on co-employer.
- Majority of the respondents said that creativity at workplace affects job productivity.
- Majority of the respondents strongly agreed the statement that creativity brings positive impact on job performance.
- All the respondents thought that creativity at workplace enhances work efficiency.

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CREATIVITY: THE ESSENCE OF SUCCESS IN ANY ORGANIZATION

Chandrashekhar Aronkar

ABSTRACT

It has been observed that the organization who promotes creativity gets everlasting success. Organizations need to create an environment for creativity. Creativity can be a great asset for any company. It is important for a company to motivate creative people those who have creative ideas which can take organizations to new heights. In this process one thing is very important creativity is not aligned to hierarchy, anyone can have creative ideas and how to explore that and implement that is an art of management and vision of leadership. Similarly creativity in products, process and distribution has a great role; many companies have proved with creative practices they have become market leaders. Present paper tries to highlight how to foster and enhance creativity to become a successful organization.

Introduction:

Creativity has great potential, initially in the form of idea can lead to any miracle but this is possible in any organization to explore the best creative ideas when that organization aims at incorporating creative ideas in their business practices. Of course there is risk factor involved in implementing creative ideas in to action but once it is successful it proves to be the tool for long term success for a company. Creativity comes from employees and therefore creativity needs to be explored and nurtured. Following are some of the steps an organization can think of:

1. Creating environment for creativity:

This is one of the most important aspects for any company, if they want to apply creativity in their business. This comes from top leadership where management is giving freedom to everyone to work and involved them in every matter of the company. More friendly and conducive environment can lead to create a creative environment. One of the leading companies of the world Google has created a very creative environment for their employees and their success is visible. (www.creativecorporateculture.com) company gives free meals, organizes team excursions, offers financial incentives, the opportunity for the staff to attend conferences led by important CEO's, gym classes or even allows dogs in the working place. Last but not least, Google offers a good balance between work life and personal life in order to limit stress, while it arranges the work space in the most pleasant way possible for its employees. However, let's not forget that some enterprise policies or

initiatives expect maximum performance from the employee and, therefore, expect maximum results.

2. Open communication:

In Today's professional and social world employees are not only very competitive but especially young employees are very much open in their communication and they wish to give their frank opinion about the organization. But this is not possible in hierarchical organization where there is no openness in communication and this hampers the growth of an organization. Openness brings success in two ways in one way it makes employee happy and other way transparency of an organization is confirmed. One of the leading corporate Facebook is the best example of open communication, company is known for its openness (www.creativecorporateculture.com) Facebook offers many things to its employees: food, stock-options, open working spaces, laundries on the spot, etc. The social networking corporation encourages teamwork and open communication inside a competitive environment which encourages growth and personal learning.

3. Encouraging Employees to give ideas:

Employees with ideas are very much enthusiastic to apply their ideas in organization. Their happiness is more in their idea getting implemented rather than salary and perks. But this is not possible in traditional organization where the system of senior and junior is very much in existence and their the creative employees get de-motivated and their ideas are not promoted this affects motivation level of

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employee as well as growth of the organization. One of the known IT companies of India (www.rediff.com) Intuit Technology Services offers every employee an opportunity to grow, discover, and expand their personal and professional horizons. Employees are also encouraged to spend 10 per cent of their time – called unstructured time to chase dreams. This can include spending time working on a new product, participating in innovation forums designed to share ideas across the company, or providing the mobility to move to a new job down the hall or on the other side of the globe.

4. Perfect work life balance:

Creativity is something which has nothing to do with targets and it has no time limits. But it is based on individual's abilities. These abilities are best transformed in to success when the employees are happy in their organization. In today's competitive world employee aims at professional satisfaction and also want to have a happy personal life. The role of companies in creating perfect work life balance and ensuring creativity of an employee is very important. Today many companies offer variety of facilities to their employees to have perfect work life balance. (www.entrepreneur.com) the tech giant Cisco has established a fantastic reputation for caring about its employees, in part because of its popular "Human Network" campaign. Founded in 1983 and headquartered in San Jose, Calif., the company is well known for giving its employees flexibility with hours and the power to launch and pursue their own passion projects at work. Cisco is also known for respecting family life and allowing employees more freedom to address familial concerns. The company sometimes even allows fully remote positions for mothers and fathers looking to spend more time with their young children

5. Rewarding creative employees:

Creativity is inherent in employees and employees are very much motivated by recognition and rewards. If any organization which values creative employees would always reward them and accept their contribution in organizational growth. Rewarding creative employees not only boost the morale of the individual but it also inspires other to do creative work. (www.redii.com) Employee Recognition and Reward is the simplest way to improve employee engagement. We have met with many leaders that still struggle to find an efficient way to reward employees. Recognition and Reward is a challenge but what we have learned well here at Redii, is that if you align the recognition with the team's or company values the reward you send to your employees has more than a monetary value. You make them feel that their contribution is impactful and they are moving the game forward. The secret sauce to employee rewards are the organic ingredients: it has to be frequent, and it has to be creative. And don't forget that one in three people leave an organisation because they feel that they are simply not recognised.

Conclusion:

In today's competitive world creativity has become one of the most important aspects of success in any organization. There are two ways creativity can be encouraged in any organization one is to motivate, recognize and reward creative employees and other is to create an environment and work life balance which keeps creative employees happy and productive.

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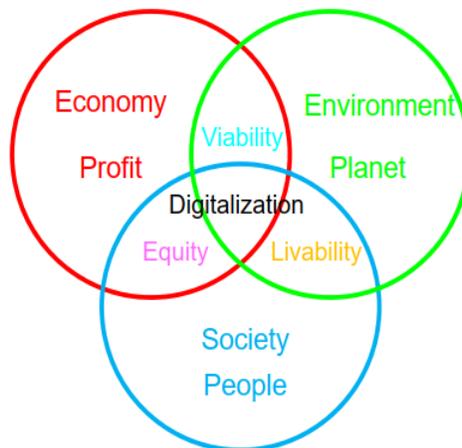
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DIGITAL TRANSFORMATION OF ASSET MANAGEMENT

Subodh Sant
Shyamkant Shrigiriwar

ABSTRACT

For any business or enterprise, we follow triple bottom line concept that insisting people, profit, and environment. After decades of squeezing costs from design and production systems, the users are now recognizing that digitalization of asset management is the key area to balance triple bottom line parameters.



The goal of Asset management No doubt upkeep on 100% OEE but how is the factor as Recent Trends. Corrective maintenance or reactive maintenance will become history in the nearest future. The paramount KPIs ref to New Gen Industry 4.0. The Total changed Perspective can be summed up in the form of New KPIs

- OEE / Up Time of Equipment's
- Life Cycle monitoring
- Minimum Operational cost

- Minimum Harm to Environment
- Utmost reliability
- Competitive Services
- Intelligent & Valuable services rather than maintenance
- OEM Feedback for Product Upgrade
- Real Time monitoring rather than reaction
- Noise Pollution
- Eco Friendly approach
- Eco Brand Image

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- Stricter EHS Norms
- First time right approach

However, this is not simple as there are many challenges and difficulties especially in the aged industries because of limitations in upgradation of parental utilities, process alteration and people mindsets. Also it's a big challenge in new set up about life cycle of Business, Product Obsolesce, Investment, New skill sets & Long vision.

Its very difficult situation & need new thought New way of working with newer Technologies to deal with the situation.

Why is different as Utility management is normally secondary for Business. Manufacturing productivity, customer, quality, warranty etc. remains predominant. But situation is changing dramatically. Each penny becoming important, Each minute becoming important in the competitive world. HVAC, Security Systems , Fire Detection & extinguishing systems, Office Automation , Compressed Air are becoming prime important & business Continuity back bones along with traditional Manufacturing Keys. All these Utilities are energy sensitive & if not addressed in newer way its huge Eco damaging as well.

Overall there is clear-cut need of revolution in Utility management with all together different dimension & Perspective.

Abstract "How & When"

Its as Natural answer to all the questions now a days is Digitalization. The bigger question is how & when. This paper aims digitalization of asset management in sequential phases.

First based on pareto analysis & Value Proposition of all the assets for various Deliverables & KPIs

Digitization of critical assets like Power sub stations, Power Nety working & Distribution, Energy Sensitive Utilities like compressors, UPS, HVAC systems, Security Systems, Fire Systems, Lighting systems etc.

This Paper also interrelates the above case studies with the investment management life cycle process

(business case) and achieving innovative experience like product development, generating demand to sales/customers etc. we also addressed few challenges and mitigations in this digital transformation of asset management. The current research focuses in the following applications

1. Manufacturing units
2. Utility distribution
3. Commercial units.

Whole utility assets, data collection, operations and maintenance totally depend on human intervention for manual checks, periodic inspections, data logs etc where in real time data is always a challenge and depends on local resources.

Local competency is always a challenge during tough times especially where there is crisis of manpower during covid situations.

Determination of unaccounted energy gaps in the system that lead to high CO2 savings and in our Indian environment these small savings contribute to social credits and reduces the risk of global warming.

Veracity of data is a challenge with local resources for conditional monitoring of assets.

Despite of industry 4.0 production, unless the digital transformation of assets have been integrated, we could called it as open loop process and we all aware the drawbacks of open loop in comparison with closed loop system.

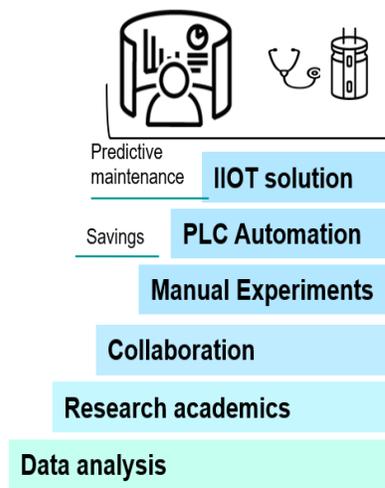
Phased manner of digital transformation:

Based on the pareto analysis one has to prioritize the digital transformation of asset management to start 80% effectiveness in phase -1. The second phase will typically account for 15% effectiveness and this can be subject to less precise digital solutions. The last phase (phase 03) will account for only 5% effectiveness and can be managed with simple monitoring system.

- Digitization of utility equipment's like compressors, UPS, transformers for real time monitoring.
- Increase in power quality by centralized digital system using IIOT enabled devices and PLC's in electrical distribution network.

- Future of HVAC Automation by deploying variable demand flow management through predictive analytics and weather-based control system by defining KPI's.
- Integrated substation conditional monitoring for critical electrical assets like transformers, GIS, MV & LV Panels by using grid block reference architecture.
- Integration of assets at various locations to benchmark savings and energy performance indicators.
- Projection of savings and identification of opportunities for horizontal deployment of these solutions across various sectors.

An experimental data can be taken from history and determined various case studies using simulated architecture and centrally analyzing the data logs. Although innovative technologies are available in the form of internet, social media, SCADA systems etc., the most important feature is to develop outcome based digital strategies that uses these digital technologies (Cloud computing, IIOT devices, Big Data analytics) to create operational efficiency and delivers customized experiences that differentiate ourselves from competitors and facilitates investment management lifecycle.



Following are Few Generic Case Studies which can be applied to Digital Asset management in Industries or Institutions.

1. Digitization of utility equipments – Compressors, UPS

Remote monitoring of centralized air compressor system is possible by integrating compressors, blowers, dryers, air flow, pressure, energy consumption etc by using air manager device, PLC and IIOT device (Called Mind connect Siemens make) and there by achieving warning, maintenance alarms, operational messages, energy management,

analysis and reports for complete air distribution system.

Real time ultrasonic monitoring, Vibration analysis and infrared thermometer are used to anticipate equipment failures and eliminate 50% unexpected failures.

The combination of performance monitoring, predictive & preventive maintenance helps ensure maximum compressed air supply dependability and helps us to identify the perfect time and area that when the system has to be maintained and services. This prevents costly periods of down time, increases

energy efficiency (by real time monitoring key parameters) and allows the compressor system to be precisely matched as per the load through out the entire life of system.

- Increase productivity (~ 20%)
 - Reduce operational cost
 - Maximum availability
2. Future of HVAC Automation

Continuous Pressure & flow monitoring is important for operating a pump efficiently. If we know how to interpret the data, then we can even run the pump for 20 years with very little maintenance. In existing system, there is contrast to most pumps that are run with little consideration to their design or purpose. Most pumps are in the maintenance shop for every 6 months. The reason is because the majority of pumps don't have real time monitoring data and they simply have a analogue gauges installed on them which happens to be entirely useless unless close monitoring happens.

Variable demand Flow Chilled Water System is a optimization strategy that reduces energy consumption and increase power quality Continuous real time monitoring of Flow, temperature, pressure, energy consumption that controlled by the system algorithms independent of load and in a manner that simplifies the system operations using additional vfd's at cooling towers instead of VFD's at chiller equipment.

Patented variable curve logic & Dynamic variable system pressure curve are the system algorithms used for conditional & performance monitoring of equipments. The PLC Controller calculates the optimal variable chiller pressure curve. This controller resets system pressure as pump speed varies along system pressure curve. This optimizes temperature and pressure set points for chilled & condenser water while controlling pump and fan speed to maintain energy balance by varying the water flow through chilled & condenser lines utilizing VFD's on pumps.

- Estimated energy savings of 20% to 30% with rapid investment pay back.

- Reduced long term maintenance and extended equipment life
- Increases COP (Coefficient of performance)
- Improves occupant comfort & health.
- Reduces the system harmonics by avoiding VFDs at 3

3. Improvement of Power Quality.

PLC based Dynamic capacitor banks maintains the optimal value of Power factor by high-speed switching of decentralized capacitor banks at various load centers using PLC's in the electrical circuit instead of conventional APFC relays. Further integration with IIOT architecture provides real time monitoring for predictive maintenance alerts.

PLC is an intelligent part which is responsible for all the control strategies and switching operation of capacitor banks in the system through ladder logic. In this system, Master PLC acts as a closed loop control system which has feedback from the slave PLC that connected with various loads and implements the control action based on the logic for switching ON/OFF of the capacitor banks.

KVAR requirement for switching the capacitors is obtained by the relation:

$$\text{KVAR required} = \text{Load KW} (\tan \phi_1 - \tan \phi_2).$$

Where Load KW & Cos ϕ_1 are available from main metering inputs and ideally $\phi_2 = 0$.

4. Integrated Substation Condition Monitoring

The ISCM solution is a modularized system surveying all relevant substation components and implemented in existing 220kV GIS substation. In the first move, we had considered Transformer, 220kV GIS and MV Panels. This involves sensors for all type of monitored assets (DGA, Temperature, fault current, nitrogen, vacuum, SF6) provided with specific asset knowledge modules (MVC asset guard, TDCM - Transformer Diagnostic & condition monitoring, GIS asset guard) and get hooked up with existing SCADA to have one look and feel single platform central system.

Benefits & value addition of ISCM:

- ISCM contributes to the prediction of failures and offers possibility of safe use of assets especially at higher loading conditions.
- Lower operating costs due to better planned maintenance and avoidance of damage.
- Minimize the downtime through the integrated planning and scheduling of repairs.
- Maximize component life & equipment performance by controlled threshold throughput.
- Reduced life cycle costs.
- Avoiding geographical constraints to access live parameters

5. Challenges faced in establishing IIOT

- Technical challenges – Product variants, communication methods, IP Convergence, connectivity challenges & identification of data mining points,
- Cybersecurity Challenges – Data acquisition, unveiled fire proxy settings, Cloud transferring, minimizing latency.
- Generating return on investment for IIOT implementation.
- Setup of dual communication with each device
- Set up of IIOT platform using corporate IT network
- Data analytics.

Still we are in the learning curve of transformation where continuous improvement process is always recommended therefore with enormous veracity of data, there is necessity to have pool of experts centrally monitoring the dashboards to keep update

to the management at regular intervals and to guide the ground staff as & when required.

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NEW TRENDS IN SOCIAL NETWORKING SITE (SNS) AND THEIR IMPACT ON INTERPERSONAL RELATIONSHIP

Sarita .M. Samson

Introduction:

During the last decade, we have witnessed a vast change in the media landscape. A change, not only due to technological innovation in mediation devices themselves, but also in the ways users have chosen to socially domesticate them, and consequently, how they have built new mediation processes (Cardoso, 2008).

Social communication:

A social networking service is an online service, platform, or site that focuses on building and reflecting of social networks or social relations among people, who, for example, share interests and/or activities. A social network service essentially consists of a representation of each user (often a profile), his/her social links, and a variety of additional services. Most social network services are web based and provide means for users to interact over the Internet, such as e-mail and instant messaging.

Online social networks such as Friendster, MySpace, or the Face book have experienced exponential growth in membership in recent years. These networks offer attractive means for interaction and communication, but also raise privacy and security concerns.

Statement of the Problem:

This study aimed on determining the Influence of Social Networking Sites to the interpersonal relationship of the students.

Objective: 1. Impact of social networking site (SNS) on interpersonal relationship.
2. To understand and to know the advantages and disadvantages of social networking site.

Methodology: This paper is based on primary and secondary data both.

Conclusion: The report is about how the use of social networking sites (SNS) by adults is related to people's overall social networks. The findings suggests that there is little validity to concerns that people who use SNS experience smaller social networks, less closeness, or are exposed to less diversity. We did find

that people who are already likely to have large overall social networks – those with more years of education – gravitate to specific SNS platforms, such as LinkedIn and Twitter. The size of their overall networks is no larger (or smaller) than what we would expect given their existing characteristics and propensities.

Introduction:

The term social communication refers to using the so-called social media. However there is no standardised definition yet recognised. Generally communication requires a social nexus of at least two entities in a technical or just social relation. Recent publications adopt the term for discussing the informal communication in open societies.

Other definition of social communication may be for a field of study that primarily explores the ways information can be perceived, transmitted and understood, and the impact those ways will have on a society. Thus, the study of Social Communication is more politically and socially involved than the study of Communication.

Social Networks have undergone a dramatic growth in recent years. Such networks provide an extremely suitable space to instantly share multimedia information between individuals and their neighbours in the social graph. Social networks provide a powerful reflection of the structure and dynamics of the society of the 21st century and the interaction of the Internet generation with both technology and other people. Indeed, the dramatic growth of social multimedia and user generated content is revolutionising all phases of the content value chain including production, processing, distribution and consumption. It also originated and brought to the multimedia sector a new underestimated and now critical aspect of science and technology: social interaction and networking. The importance of this new rapidly evolving research field is clearly evidenced by the many associated emerging technologies and applications including online content sharing services and communities, multimedia communication over the Internet, social multimedia

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care and security applications. It has generated a new research area called social multimedia computing, in which well-established computing and multimedia networking technologies are brought together with emerging social media research.

- I. **Modern means of network:** There are many modern means of communication network is Facebook, Myspace, Twitter, Orkut, etc

Statement of the Problem

This study aimed on determining the Influence of Social Networking Sites to the interpersonal relationship of the people.

Social impacts

Web based social networking services make it possible to connect people who share interests and activities across political, economic, and geographic borders. Through e-mail and instant messaging, online communities are created where a gift economy and reciprocal altruism are encouraged through cooperation. Information is particularly suited to gift economy, as information is a non-rival good and can be gifted at practically no cost.

Facebook and other social networking tools are increasingly the object of scholarly research. Scholars in many fields have begun to investigate the impact of social networking sites, investigating how such sites may play into issues of identity, privacy, social capital, youth culture, and education.

Several websites are beginning to tap into the power of the social networking model for philanthropy. Such models provide a means for connecting otherwise fragmented industries and small organizations without the resources to reach a broader audience with interested users. Social networks are providing a different way for individuals to communicate digitally. These communities of hypertexts allow for the sharing of information and ideas, an old concept placed in a digital environment.

Emerging trends in social networking

Social networking is the grouping of individuals into specific groups, like small rural communities or a neighbourhood subdivision, if you will. Although social networking is possible in person, especially in the workplace, universities, and high schools, it is most popular online. This is because unlike most high schools, colleges, or workplaces, the internet is filled with millions of individuals who are looking to meet other people, to gather and share first-hand

information and experiences about cooking, golfing, gardening, developing friendships or professional alliances, finding employment, business-to-business marketing and even groups sharing information about the end of the Mayan calendar and the Great Shift to arrive December 21-2012. The topics and interests are as varied and rich as the story of our world.

When it comes to online social networking, websites are commonly used. These websites are known as social sites. Social networking websites function like an online community of internet users. Depending on the website in question, many of these online community members share common interests in hobbies, religion, or politics. Once you are granted access to a social networking website you can begin to socialize. This socialization may include reading the profile pages of other members and possibly even contacting them.

The friends that you can make are just one of the many benefits to social networking online. Another one of those benefits includes diversity because the internet gives individuals from all around the world access to social networking sites. This means that although you are in the United States, you could develop an online friendship with someone in Denmark or India. Not only will you make new friends, but you just might learn a thing or two about new cultures or new languages and learning is always a good thing.

As mentioned, social networking often involves grouping specific individuals or organizations together. While there are a number of social networking websites that focus on particular interests, there are others that do not. The websites without a main focus are often referred to as "traditional" social networking websites and usually have open memberships. This means that anyone can become a member, no matter what their hobbies, beliefs, or views are. However, once you are inside this online community, you can begin to create your own network of friends and eliminate members that do not share common interests or goals.

Once you are well informed and comfortable with your findings, you can begin your search from hundreds of networking communities to join. This can easily be done by performing a standard internet search. Your search will likely return a number of results, including MySpace, Friend Wise, FriendFinder, Yahoo! 360, Facebook, Orkut, and Classmates.

The number of those using social networking sites has nearly doubled since 2008 and the population of SNS users has gotten older.

In this Pew Internet sample, 79% of American adults said they used the internet and nearly half of adults

(47%), or 59% of internet users, say they use at least one of SNS. This is close to double the 26% of adults (34% of internet users) who used a SNS in 2008. Among other things, this means the average age of adult-SNS users has shifted from 33 in 2008 to 38 in 2010. Over half of all adult SNS users are now over the age of 35. Some 56% of SNS users now are female.

Facebook dominates the SNS space in this survey: 92% of SNS users are on Facebook; 29% use MySpace, 18% used LinkedIn and 13% use Twitter.

There is considerable variance in the way people use various social networking sites: 52% of Facebook users and 33% of Twitter users engage with the platform daily, while only 7% of MySpace and 6% of LinkedIn users do the same.

On Facebook on an average day:

- 15% of Face book users update their own status.
- 22% comment on another's post or status.
- 20% comment on another user's photos.
- 26% "Like" another user's content.
- 10% send another user a private message

Research Literature

One respondent said that he/she considered those friends as a strong tie. Through social networking sites like face book, the user tends to maintain his weak interpersonal relationship with his online friends because of an easy communication. He can use private messaging, chat rooms, and other method of communicating provided by the website. On the other hand, a strong interpersonal relationship with his offline friends needs time and effort to be maintained. Distance between two users that can change an offline relationship into online relationship is also a reason why an individual uses SNSs. Nearly two-thirds (65%) of respondents said the majority of their friends have a Facebook account, which suggests that many students use the site to stay in touch with their offline friends. Keeping in touch with friends remains the primary reason for site usage across both years in school and gender. Furthermore, approximately one-third (31%) of respondents with friends who do not have a Facebook account say they would be closer to those friends if they were on the site, and 87% of respondents said they had never experienced negative consequences in their offline relationships due to content in their Facebook profiles, which suggests that most respondents benefit from using the site. With the use of private messaging and chat rooms of this site, students can communicate and maintain a healthy

relationship with their friends from far places with ease that takes only a few seconds to complete it.

Social Networking Sites also have negative effects in offline relationships. Some things found in the site can lead to misinterpretation for some people. Because of online messaging or comments that are visible to everyone in the friends list of a user, an offline relationship can be affected or destroyed due to fights that will happen.

Advantages of SNS:

Social media extends your reach.

Business owners should ask themselves--How many people am I reaching, offline, in a typical work week? SM allows you to connect with a lot more people and potential customers than you normally could.

Investigations

Social networking services are increasingly being used in legal and criminal investigations. Information posted on sites such as MySpace and Facebook has been used by police (forensic profiling), probation, and university officials to prosecute users of said sites. In some situations, content posted on MySpace has been used in court.

Social media competes with offline relationships.

A common mistake made by people using social media is that they start confusing digital intimacy with true intimacy. As mentioned above, SM gives us the ability to easily connect with large numbers of people.

Disadvantages SNS:

Privacy concerns

Privacy concerns with social networking services have been raised growing concerns amongst users on the dangers of giving out too much personal information and the threat of sexual predators. Users of these services also need to be aware of data theft or viruses. However, large services, such as MySpace and Net log, often work with law enforcement to try to prevent such incidents.

Potential for misuse

The relative freedom afforded by social networking services has caused concern regarding the potential of its misuse by individual patrons. In October 2006, a fake Myspace profile created in the name of Josh Evans by Lori Janine Drew led to the suicide of Megan Meier.

Risk for child safety

Citizens and governments have been concerned by a misuse by child and teenagers of social networking services, particularly in relation to online sexual predators. A certain number of actions have been

engaged by governments to better understand the problem and find some solutions.

Trolling

A common misuse of social networking sites such as Facebook is that it is occasionally used to emotionally abuse individuals. Such actions are often referred to as trolling. It is not rare for confrontations in the real world to be translated online.

Online bullying

Online bullying, also called cyber-bullying, is a relatively common occurrence and it can often result in emotional trauma for the victim. Depending on the networking outlet, up to 39% of users admit to being “cyber-bullied”.

Interpersonal communication

Interpersonal communication has been a growing issue as more and more people have turned to social networking as a means of communication. Many teens and social networking users may be harming their interpersonal communication by using sites such as Facebook and MySpace.

Excessive use

The excessive amount of time that people spend on social networking sites has led researchers to debate the establishment of Internet addiction as an actual clinical disorder. Social networking can also affect the extent to which a person feels lonely.

Impact of social networking site (SNS) on interpersonal relationship.

There has been a great deal of speculation about the impact of social networking sites (SNS) on users' lives. Some fear that SNS use might diminish human relationships and contact, perhaps increasing social isolation.

Interpersonal relationship of youth with their friends, teachers, and parents. This happens if a student or a person knows well how to use a social networking site. Youths are always updated with the status of their close friends, teachers, or even their parents that are added in their friends list in the social networking sites that they are using. It will also be easier for the user to know when will be the birthday of his/her friends and so he/she can greet them easily, even if they are apart and also, with less time and effort.

Children, aside from developing a stronger interpersonal relationship, in contrast, tend to develop a weaker interpersonal relationship with their friends, teachers, and parents. This is due to too much dependency of students to the internet and computer as a medium of communication with their friends,

teachers, and parents. Sometimes, children can only tell what they want to other people whenever they are chatting, or when they post comments on the wall of a person's account or profile. If they do this over and over again, this develops into a habit and be used to it until the time comes that they just depend on the internet and computer on telling what they want. Through this, a person can't express his emotions that results to an unhealthy relationship with other people. There are also times that social networking sites don't have any effect on the interpersonal relationship of a student or a person with other people.

Example, a jealous boyfriend saw a comment from a mysterious boy posted on the wall of his girlfriend that says intimate words, because of this, the relationship between the girl and his boyfriend can be broken. Another negative effect is, because of posting comments on the wall of a user became much easier, it will also be effortless for other people to spread rumours and gossips that can destroy a life of an individual.

As a larger percentage of communication moves into the digital arena, we will see a general weakening of ties between people. This weakening will be less pervasive among a person's closest circle of friends and more obvious among lesser friends, as digital communication will become the primary mode of communication in these relationships.

“Another recent example is a student of IIM-Bangalore committed suicide in her hostel room on Monday i.e. 19/09/2011 afternoon after reportedly reading her boyfriend's announcement on a social networking site of their break up”.

One person lost his job because of face book.

Because of social networking site people doesn't want to meet anybody now a days.. they just greet other on SNS ..Children don't want to go out and play because slowly slowly they are getting addicted to this. And this starting affecting their health and mind.

Challenges:

Communities' discovery and analysis in large scale online and offline social networks.

As social networks will continue to evolve, discovering communities and constructing specific social graphs from large scale social networks will continue to be a dynamic research challenge.

Security by means of Social Networks Analysis

The information extracted from Social Networks proved to be a useful tool towards security. One example of an application related to security is the

Analysis of terrorism [20], as for instance, the Analysis of the 9-11 Terrorist Network.

Social and Ethical Issues in a Networked World

As in every small or large community, online social communities face also critical social and ethical issues that need special care and delicate handling. Sharing of personal information, protection of child exploitation and many other problems have to be studied and answered appropriately.

Searching blogs, tweets, and other social media

Searching in blogs, tweets and other social media is still an open issue since posts are very small in size but frequent, with little contextual information and sometimes extremely temporal. Moreover, different users have different needs when it comes to the consumption of social media. Real time search has to balance between quality, authority, relevance and timeliness of the content.

Traffic prediction for dimensioning media applications

Investigation of how to exploit knowledge of social network relationships to predict how media consumption may be correlated between groups of users. This information can be used to dimension media servers and network resources to avoid congestion and improve QoE.

Social, mobile, pervasive content sharing and live media distribution

Since users act as presumes, content sharing and distribution needs will continue to increase. Mobile phones, digital cameras and other pervasive devices produce huge amounts of data that users want to distribute if possible in real time.

Spam, opinions and adversarial interactions in social media

Spam detection and advertisement detection are research challenges that need extra attention from the research community. Since users and data production increase, spam (irrelevant information) and advertisements will continue growing.

Conclusion

The report is about how the use of social networking sites (SNS) by adults is related to people's overall social networks. The findings suggests that there is little validity to concerns that people who use SNS experience smaller social networks, less closeness, or are exposed to less diversity. We did find that people who are already likely to have large overall social networks – those with more years of education – gravitate to specific SNS platforms, such as LinkedIn and

Twitter. The size of their overall networks is no larger (or smaller) than what we would expect given their existing characteristics and propensities.

However, total network size may not be as important as other factors – such as intimacy. Now Indian has more close social ties than they did two years ago. And they are less socially isolated. We found that the frequent use of Facebook is associated with having more overall close ties.

In addition, we found that only a small fraction of Facebook friends are people whom users have never met or met only once. We find many outcomes associated with SNS use that cannot be explained by the demographic characteristics of those who uses these services.

Social networking site is like a coin that has double side both though are many advantage of using social networking site but disadvantages are also there. Especially youth because of SNS they feel lonelier because they have stopped going out and maintain their relationship with friends and loved ones. SNS affecting their interpersonal relationship with parents also. As we have mention in above because of social networking site people are indulging in wrong habits, they are committing suicide, people are losing their job because of non-using these site in a proper manner. Which affecting individually psychological and mentally too.

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SOCIAL MEDIA MARKETING: PLATFORM & ITS IMPACT

Preeti Prabhakaran

ABSTRACT

Today, we are in 21st century and people do not find time to come & interact with each other. Social media helps in connecting themselves with social networking sites through which now people can stay far and yet remain connected. It helps to develop the business promotional activities and creates an awareness among brands with less budget. It increases the site popularity to run a reputed business on the internet. In 2019, it is estimated that there will be around 258.27 million social network users in India, up from close to 168 million in 2016. The most popular social networks in India were YouTube and Facebook, followed by social app WhatsApp. Facebook is projected to reach close to 319 million users in India by 2021. Social media is a vital element for the online business. It is used as a branding tool and to increase sales tracking and add exposure. Social media is highly accessible and scalable to the public which means the social media has a lot of users and offers plenty of opportunities for companies because social media is easy to access. It is a type of communication that takes place outside of in-person meetings, phone calls etc. This research paper emphasizes on the strategies which can take this viral marketing mode beyond the normal social media at present. As a result it can also help in building your community strong enough to make your marketing effective & initiative buying.

Keywords: Social Media, LinkedIn, Twitter, Facebook, Instagram, Social Advertising.

INTRODUCTION:

Social media marketing is about building a conversation with clients and consumers. It is something that takes place online. It is a type of communication; it is unlike any other technology in history it has created a modern day renaissance for several reasons which are broken here. Social media is a shift in how people discover, read and share news, information and content. Unfortunately many small businesses struggle to use social media and have no strategy going into it. Social media marketing refers to the process of gaining website traffic or attention through social media sites. Social media marketing programs usually center on efforts to create content that attracts attention and encourages readers to share it with their social networks. A corporate message spreads from user to user and presumably resonates because it appears to come from a trusted, third-party source, as opposed to the brand or company itself. Hence, this form of marketing is driven by word-of-mouth, meaning it results in earned media rather than paid media. Social media has become a platform that is easily accessible to anyone with internet access. Increased communication for organizations fosters brand awareness and often, improved customer service. Additionally, social media serves as a relatively inexpensive

platform for organizations to implement marketing campaigns.

Objectives:

- 1) To know the impact of social media in marketing.
- 2) To analyze the common mistakes that the companies are making through social media.

Methodology:

The research paper is conceptual in nature; the information is collected from secondary data sources. The following networking sites: Twitter, Facebook, LinkedIn, and Other Medias.

Social Media Platforms:

Social Media Marketing is having a tremendous impact on business and market as business growth and performance are taking place at an astronomical rate. Social media helps in developing business tactics. Social media platforms like Facebook, Twitter, LinkedIn etc., show an opportunity for businesses to grab the attention of the customers while simultaneously building a brand image. These social networks allow businesses to use tactics to build and create brand profiles like fan pages, contests etc. Through Social media marketing, one can figure out the likes and preferences of customers as well as the latest trends adopted by the public. Social media marketing helps a brand/company to build a

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Social networking websites allow individuals to

interact with one another and build relationships. When products or companies join those sites, people can interact with the product or company. That interaction feels personal to users because of their previous experiences with social networking site interactions. Social networking sites like Twitter, Facebook, Google Plus, YouTube, Pinterest and blogs allow individual followers to “retweet” or “repost” comments made by the product being promoted. By repeating the message, all of the users connections are able to see the message, therefore reaching more people. Social networking sites act as word of mouth.

Through social networking sites, products/companies can have conversations and interactions with individual followers. This personal interaction can instill a feeling of loyalty into followers and potential customers. Also, by choosing whom to follow on these sites, products can reach a very narrow target audience.

Some of the major social media platforms are:

- **Facebook** is a popular free social networking site on which registered can create profiles, upload photos and videos, send messages and keep in touch with friends, family, and colleagues. People can also create Facebook pages related to businesses, brands, and services. There are 2.07 billion monthly active Facebook users with an increase of 16% increase year over year.
- **Twitter** is a famous social networking website that allows registered members to write their messages through short posts called tweets. There are 330 million active Twitter users.
- **LinkedIn** is a social networking site designed for the business community, professionals, managers etc. LinkedIn has 467 million members connected. Basically, this site allows the registered member to connect and make a network of people they know and trust professionally.
- **Instagram** is a fast-growing social media platform that allows users to share their images, stories and promote their business. Instagram has 800 billion monthly active users. Instagram is used by many brands to promote their products, target their audience and drive real social value.

Social Media Marketing Using Twitter

- It focuses on brand promotions.
- Filling up the pages with quick techniques and tips.
- We can post a product, link etc... and ask for opinion and reviews.
- Create an awareness and necessity of new product
- Create a banner about products, organisations etc.

- We can post promotional codes for products such as discount coupons etc.
- Build a relationship with the customer and create trust worthiness among them.

Social Media Marketing Using Facebook

- Create advertisement about the new and existing and upcoming products.
- We can create page for products, organisations etc...
- We can create events like recent activities, upcoming events.
- It provide classified add services.
- We can upload photos; post links that directly to the sites.
- We can send offers, promotional codes discount coupons to the member groups etc.

Linked In:

- We can create group and make others to follows us.
- Ask for ad vice.
- Improve your connect ability.
- We can create professional networks ask for reviews.

Social media has countless benefits some of them are:

• **Improved Customer Insights**

Businesses get a better understanding of their customers by allowing them to share their insights, knowing that the brand is listening. Social media allows them to see what potential customer's opinions are and network with them as well.

• **Better Customer Service**

Social media allows businesses to respond to customer grievances, questions, and concerns almost instantly. Customers want to be assured that, if they have a problem they will receive assistance at the earliest possible time.

• **Cost Efficient**

When a business is running on a fixed marketing budget, social media is the most cost-efficient way to market and promote the business. Websites like Facebook, Twitter, Pinterest etc., allow any business to share their content for no cost at all. Hence Social media is an affordable advertising platform.

• **Connectivity**

Businesses will always be connecting with the customers in terms of changing preferences, lifestyles, and resources and adapt to the changing interest of the consumers.

• **Establishing Brand Awareness**

Through social media, it is possible to increase brand awareness among customers as businesses can create awareness by building company image.

• **Sales**

Increased exposure through social media drives traffic to the company. This, in turn, converts potential customers to actual customers.

Five Pillar Models that Teaches How To Use Social Media to Make Success

PILLAR 1 Social media

PILLAR 2 Common mistakes companies make with social media.

PILLAR 3 Different ways companies use social media.

PILLAR 4 How a frame with for developing a social media strategy.

PILLAR 5 How to measure return on investment.

This is about building a conversation with your clients and consumers there is a common mistakes that most of the companies will do it not using the social media tools and not controlling the message. Following different ways some companies use is to reach potential employees, to reach end consumers and there should be developing strategy like public relations, brand awareness, social networking sites etc... Once your strategy is said it's time to execute by either building a team or hiring outside consultants to implements. This is the most important part of social media marketing that most important that you get it right.

Common Mistakes Companies Make with Social Media

- **Not Developing A Social Media Strategy** because it is the hottest trend in marketing company assume that all there have to do set up a twitter account and a Facebook an page. This is equal of pulling random magazines out of off. It requires a well thought out marketing strategy plan.

- **Perfecting a Social Media Strategy** even though a social media is important. But reserve your company name on various social media sites is of at most importance. It takes more time to build social media accounts. It is not a quick way to make more sales in fact. Social media actually adds cycle times to the sales process.

Mistakes with Social Media Tools

- **Not Using the Tools Correctly** It takes long time to build credibility. Especially as a company because individuals are thought to be vary of anything that looks like marketing or spamming. Unfortunately it only takes one to do damage to a company's reputations.

- **Not Using Tools At All** Every tool holds opportunities for companies. Companies must be willing to experiment. So don't tell them set the tone or build equity without having your own presence.

Mistakes with Messaging

- **Not Controlling The Message** Company should be careful about trying to exercise too much control over the message. Companies often site "CONTROL OVER THE MESSAGE" As a reason not to participate in social media. But the behind truth is the companies have lost control of the message whether they participate or not.

- **Abusing Permission** it is one of the worst mistakes a company can make with messaging. For example: collected e-mails from various blogs and sending weekly newsletters. While this seems harmless. None of bloggers signed up for the companies e-mails. The company may lose the credibility and damage relationships.

Conclusion

Social platforms each have an ecosystem of their own. Creating a basic social media presence is easy enough, getting your community to actually do something is more difficult. Make sure your site is included in local business directories in order to help ensure that consumers find you when they need you. Customizing messages across sites help the message spread but it keeps users from receiving multiple identical communications. By giving exclusive coupons to your social community, you're rewarding and reminding them that you is not only a brand to engage with, but also to buy from. Taking advantage of these strategies can help you build your community, make your marketing more effective, and incentivize buying.

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THE EFFECT OF NEW LAUNCH OF ELECTRONIC/HYBRID CARS ON CONSUMERS AND MANUFACTURERS: AN EMPIRICAL STUDY IN AUTOMOBILE INDUSTRY IN PUNE

Deepali Garge
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Rohit Dhande
Smrutirekha Dash

ABSTRACT

The Indian auto industry became the 4th largest in the world with sales increasing 9.5 per cent year-on-year to 4.02 million units (excluding two wheelers) in 2017. It was the 7th largest manufacturer of commercial vehicles in 2017. The marketers have to work hard to establish awareness in the minds of the customers for the hybrid cars in the Indian market. The current research was carried out to understand the demand for hybrid cars in the Indian market. For the descriptive-analytical study, the sample size was 50. Data were collected by a valid and reliable questionnaire, consisting demographic information and questions about concept of hybrid cars, understanding how the various companies predict the demand of hybrid cars. In which we found that 56.14% of the people know about the concept of hybrid cars. It was also found that 66.66% of people say that fuel car is much better than hybrid car. The findings indicated that the marketers need to create awareness about the benefits of the hybrid cars in the consumers mind and also when the company launches the hybrid car the marketers has to focus on their promotional strategies.

Keywords: Hybrid cars, customer choice & awareness, market players

Introduction to the Automobile Industry in India

The Indian vehicle industry turned into the fourth biggest on the planet with deals expanding 9.5 percent year-on-year to 4.02 million units (excluding two wheelers) in 2017. It was the seventh biggest maker of business vehicles in 2017. The Two Wheelers section rules the market as far as volume inferable from a developing white collar class and a youthful populace. India is additionally a noticeable auto exporter and has solid fare development desires for the not so distant future. Vehicle sends out became 26.56 percent amid April-July 2018. What's more, a few activities by the Government of India and the real vehicle players in the Indian market are required to make India a pioneer in the bike and four-wheeler showcase on the planet by 2020. Residential car generation expanded at 7.08 percent CAGR between FY13-18 with 29.07 million vehicles produced in the nation in FY18. By and large local cars deals expanded at 7.01 percent CAGR between FY13-18 with 24.97 million vehicles getting sold in FY18.

- Two driving excess vehicle producers, BMW and Mercedes-Benz recorded their best-ever half

yearly arrangements in India in the midst of January-June 2018. Offers of BMW grew 13 percent year-on-year to 5,171 units and offers of Mercedes-Benz wound up 12.4 percent year-on-year to 7,171 units. To oversee developing interest, a few automobile creators have begun putting vigorously in different fragments of the business amid the most recent couple of months. The business has pulled in Foreign Direct Investment (FDI) worth US\$ 19.29 billion amid the period April 2000 to June 2018, as indicated by information discharged by Department of Industrial Policy and Promotion (DIPP).

- A portion of the ongoing/arranged speculations and advancements in the car part in India are as per the following: Ashok Leyland has planned a capital expenditure of Rs 1,000 crore (US\$ 155.20 million) to launch 20-25 new models across various commercial vehicle categories in 2018-19.
- Mahindra and Mahindra (M and M) is intending to make an extra venture of Rs 500 crore (US\$

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- 77.23 million) for extending the limit with regards to electric vehicles in its plant in Chakan.
- Hyundai is wanting to put US\$ 1 billion in India by 2020. SAIC Motor has likewise reported to put US\$ 310 million in India.
- Mercedes Benz has expanded the assembling limit of its Chakan Plant to 20,000 units for each year, most astounding for any extravagance vehicle producing in India.
- .
- The government plans to make India as an overall gathering Center and a R&D focus.
- Under NAT Rip, the Government of India is planning to set up R&D centers at a total cost of US\$ 388.5 million to enable the business to keep pace with overall measures
- The Ministry of Heavy Industries, Government of India has shortlisted 11 urban networks in the country for introduction of electric vehicles (EVs) in their open transport systems under the FAME (Faster Adoption and Manufacturing of (Hybrid) and Electric Vehicles in India) plot. The governing body will in like manner set up agonizing Center for new organizations working in electric vehicles space.
- The vehicle business is reinforced by various components, for instance, availability of skilled work expecting practically no exertion, fiery R&D centers and simplicity steel age. The business similarly gives remarkable opportunities to wander and quick and underhanded work to capable and incompetent work.



- Rise in Middle class income and young population may result in strong growth
- India is expected to become a leader in shared mobility by 2030 providing opportunities for electric and autonomous vehicles.
- Shifting focus towards electric cars can also provide opportunities in the sector
- FDI inflow in the automobile sector stood 19.29 billion between April 2000-June 2018
- India also has a significant cost advantage that attracts investment in the sector
- The government aims to develop India as a global manufacturing centre. The government also came up with reforms like GST to boost the growth of the sector

Literature Review

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- Adoption and Manufacturing of (Hybrid &) Electric Vehicles.
2. Shourya Harwani (2016) in Autocar Professional expressed that India to be among top 5 markets for hybrids and EVs by 2023. A recent study by research agency JATO Dynamics claims that, India is likely to play a key role because it may emerge as the fifth largest markets for Alternative Fuel Vehicles (AFVs) in coming 5 years.
 3. R Srikanth, Role of electric mobility in a sustainable, and energy-secure future for India, CURRENT SCIENCE, Vol. 114, No. 4, 25 February 2018, expressed the need of hybrid cars in India. To give strength to his statement he also given data of 2016, where India was the world's third largest oil consumer with 4.8% of the total crude oil consumption, while holding only 0.3% of the world's proven oil reserves. This is alarming stage for India to look forward for EVs.(Electronic Vehicles)
 - i. Hyundai haven't lunch hybrid car yet in Indian market.
 - ii. Problem they will face regarding hybrid cars are –
 1. Hybrid car going to be a costly product for Indian market.
 2. Manufacturer has a doubt that whether people of Indian market going to accept hybrid car or not.
 3. Availability of electricity is another issue in India which is a big problem for hybrid car.
 4. Indian people want more average from cars. So that also going to be problem for marketer.
 - c) When surveyed Renault Regarding Hybrid Car
 - i. Renault have not planned to launch hybrid car yet.
 - ii. According to the manager of Renault, Pune Mr. Ganesh Iyer "Propelling Hybrid vehicle in India will hamper their image reliability". There is need of provision of charging points. If customer suffer any kind of problem regarding usage of the vehicle or availability of road side assistance they are going to blame the manufacturer and that will spoil the brand name of company.

Research Methodology

The findings are mainly focused with the medium sector brands. The survey was conducted for the customers and the managers of various companies respectively:

- a) When surveyed Maruti Suzuki about the Hybrid car. Maruti Suzuki has three new petrol/diesel hybrid cars in India. They are the all-new Ertiga, and the Ciaz.
 - i. The Maruti Ertiga is relied upon to make its Indian presentation by this year's family car, while the Ciaz is a business class car. These cars are available in both petrol/hybrid and diesel/hybrid.
 - ii. Mostly Maruti Suzuki sells the diesel/hybrid cars
 - iii. Though hybrid car is basically the concept of fuel efficiency but Maruti Suzuki markets its car as a performance-based car that is giving more performance when compared to the usage of fuel.
- b) When surveyed Hyundai regarding hybrid car

Tata as a major player in automobile sector in India, the plans and visions for the future of hybrid cars are:

- They are focusing to introduce the hybridization system in the commercial vehicles such as Ace, Magic, Super Ace.
- Simultaneously they are also focusing to introduce the hybridization in the passenger vehicle
- The association is needing to develop a 320 volts battery with an extent of at least 300 kilometers which will pass on faster expanding pace, capability, including speedy charging.
- The organization told the speculators that they expect the business vehicle market to develop by lower twofold digit development in the following two years and expect the traveler vehicle market to develop by 8% CAGR till 2023 to cross 5 million.

Hybrid cars in the Automobile Industry

The world is moving towards electric vehicles & Hybrid vehicles. India needs an obvious approach. In any case, for a country that still meets 75% of its capacity needs by expending oil based well, many battle that it will simply move the sullyng off city boulevards to its hinterlands, where that control is made.

A cleaner area moreover has distinctive accomplices like the administrations of urban headway, control and even condition. This has incited various voices passing on different messages. In addition, instead of a sensible command, what the business has expected to go up against is discussion or longing remarks.

For the present, most in the business are starting at now tolerating that there will be no unequivocal methodology for electric vehicles any more, in spite of the way that distinctive clerics will drive it through action. One of the fundamental goals for the organization to lessen the oil import bill by changing towards electric convenience moreover fell by the wayside when people comprehended that as opposed to oil imports, we may a little while later be held detainee by China for battery imports.

The load on R&D is simply getting gigantic which demands higher segments with endeavor required for all advances — BS VI, half and parts, electric nearby gathering prosperity or Corporate Average Fuel Economy norms that will be maintained in the coming three to five years. With expanding competition and a triumph extent of just two in every 10 new models exhibited in the market, rate of return and sensibility are totally serious challenges ahead for vehicle makers. "This change can't happen with no planning as additional exceptional advances expect time to create. In this manner, we acknowledge, both diesel and oil will expect a noteworthy activity and will remain a bit of the course of action.

It isn't generally the cost of unrefined materials which is the purpose behind the high assessing for batteries. Or maybe, it is the non-openness of rich wellsprings of the focal parts in a battery cell advancement: lithium, manganese and cobalt; the principal being high need.

Beginning at now, if India is to engage quick use of electric vehicles so as to 'save the Earth', Lithium must

be outside made in incredible entireties basically like oil based commodities. In any case, mutt vehicles have any sort of impact since they require a tad of both. In the long run, there should be a not too bad congruity between the freedom of electric vehicles and the supply of supporting structure.

The Indian government is doing its best to check the creating issues related to vehicular outpourings while creators are endeavoring their best to return incredible mileage figures in their things. In spite of the way that each electric thing, for instance, the Mahindra e2o are open accessible, in any case they cost more than an indistinguishable ICE vehicle. Preferably, the current and future hybrid vehicles in India could have any sort of impact.

Analysis & Results:

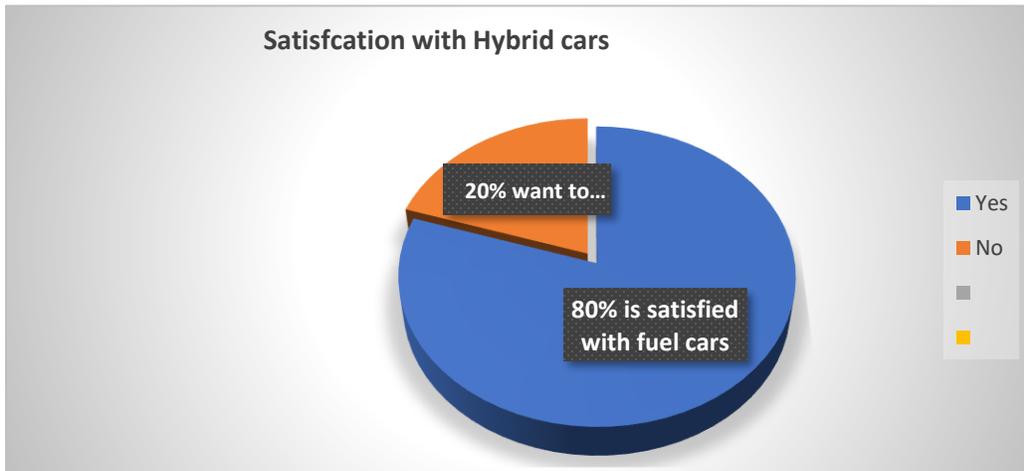
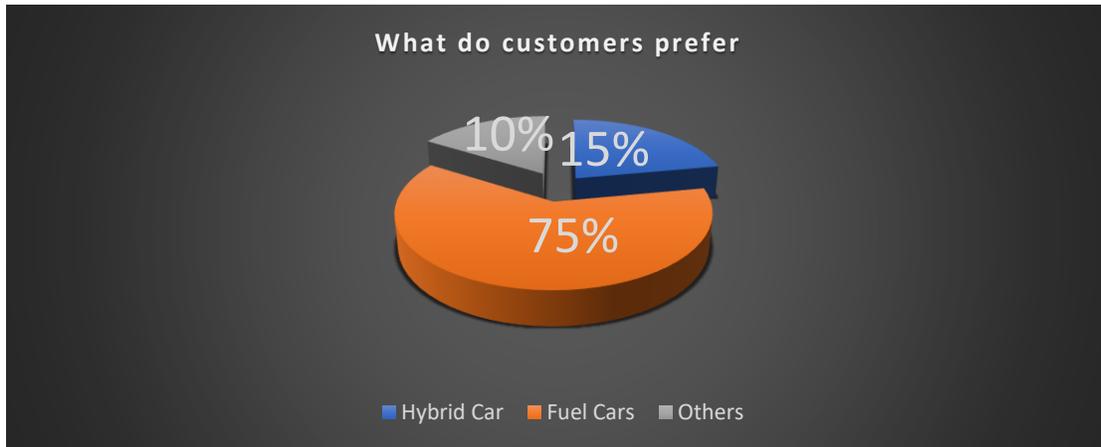
It is a good sign that 72% of the consumers know or have heard about the concept of hybrid cars. But looking at the findings we see that 80% of the consumers are actually satisfied with the fuel cars, which shows that the consumers are not aware about the benefits of hybrid cars and also the benefit that this concept will affect the environment. Most important when the people think about hybrid cars they assume that the prices of the hybrid cars are quiet high and the people cannot afford it. A country where this technology or concept is in an evolutionary phase, the marketers need to create an awareness because 72% of the consumers prefer fuel cars over hybrid cars. This awareness can bring a change in the country and take this country one step closer to become a green society.

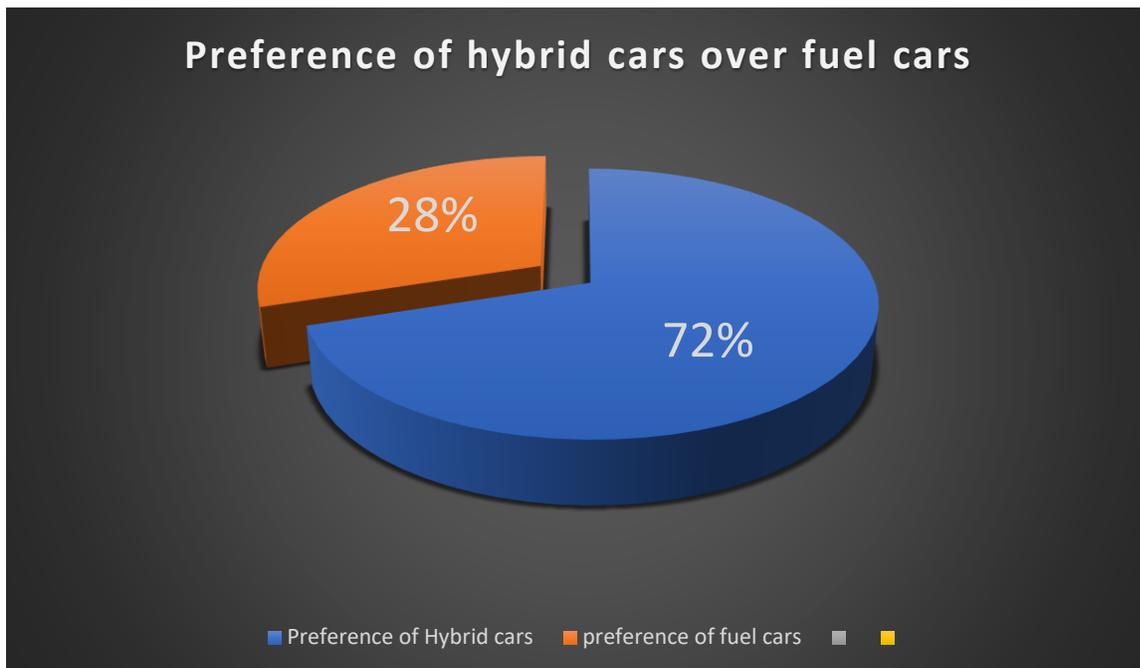
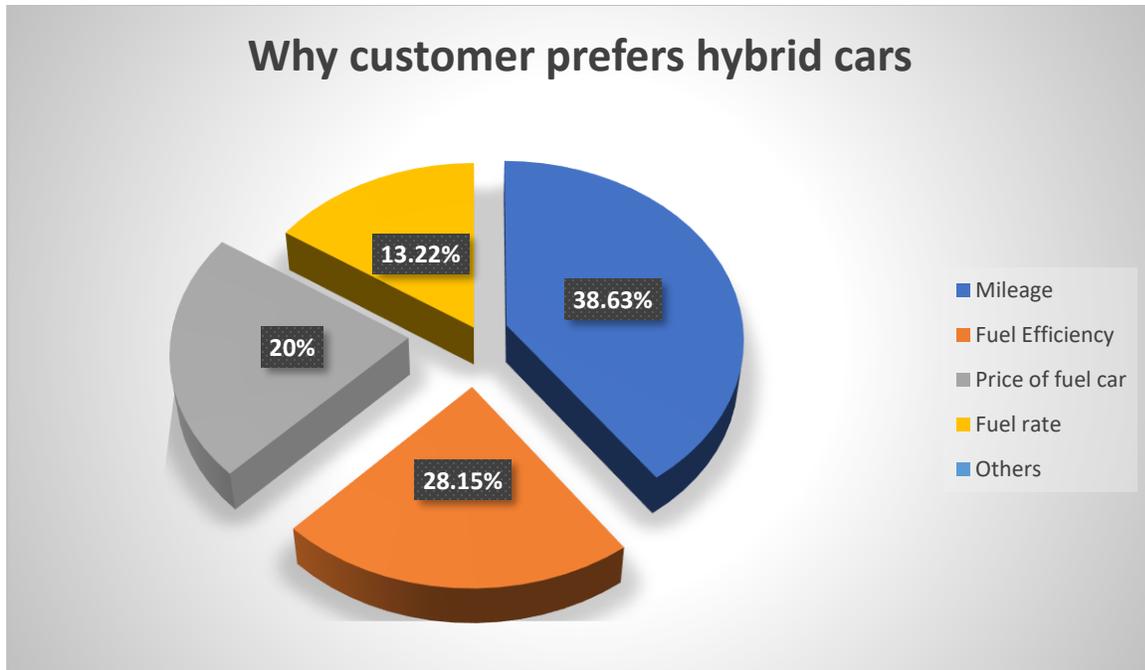
Also from the findings we can see that 36% of people prefer hybrid car because it gives good mileage, since the hybrid concept is the concept is combination of fuel and electric, so hybrid cars have the capability of using less fuel and give good mileage. The next preference is given to the price of the car that is 20% which has created a block or a barrier in the minds of the consumers. The least preference is given to the fuel rate that is 14%.

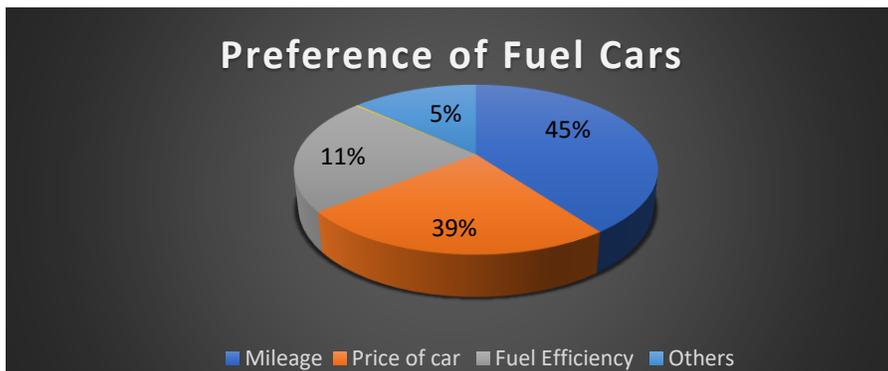
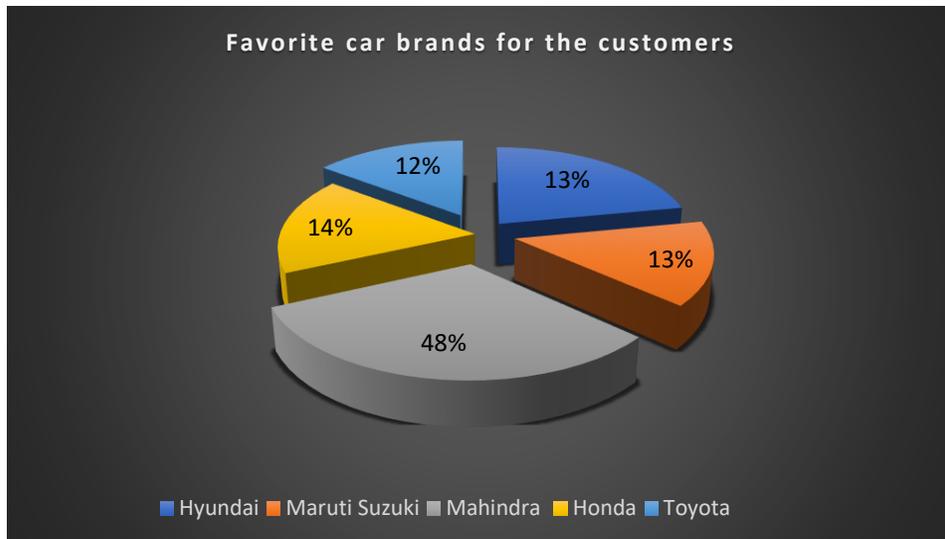
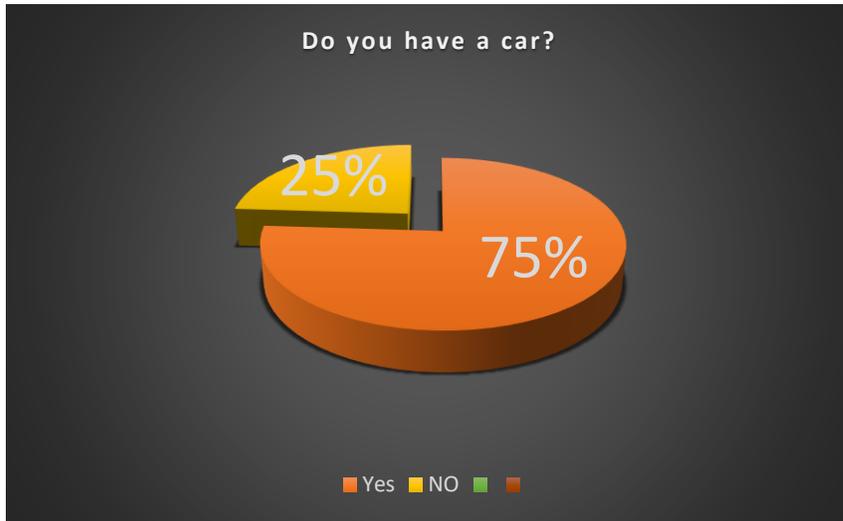
Why do people prefer fuel cars is again the same preference goes to the Mileage that is 36% because every company wants to value its car as a good mileage car, and as a country like India in every 20-25 kms we find a petrol station across India so people find it easy to fill up the gas in their cars rather than hybrid cars. 38.63% of the people look for mileage

when buying a fuel-based car. 36.17% of the people who know the concept about hybrid cars look out for the price when buying a hybrid car.

Given the findings there is significant negative understanding of the concept of hybrid cars in India.







Conclusion

The discoveries demonstrated that there is need to make mindfulness about the advantages of the hybrid autos in the buyers mind and furthermore when the organization dispatches the hybrid auto the advertisers needs to centre on their limited time methodologies.

Given the discoveries there is noteworthy negative comprehension of the idea of hybrid autos in India, it is important to for the organizations when propelling a hybrid auto in India to assemble an auto as per the streets and condition of the nation.

Altogether, 56.14% of the general population think about the idea of hybrid cars. It was additionally discovered that 66.66% of individuals say that fuel auto is greatly improved than hybrid auto. 38.63% of the general population search for mileage when purchasing a fuel-based auto. 36.17% of the general population who know the idea about hybrid cars pay special mind to the cost when purchasing a hybrid auto.

A transportation framework dependent on hybrid technology could be, in the midterm, considerably more maintainable than a transportation framework dependent on full electric vehicles according to present study.

Second, if meanwhile the flow electric power creating industry neglects to change to more reasonable



vitality sources and proceeds with the common utilization of petroleum derivatives, such a change would result in considerably more unfavourable ecological outcomes. In this sense, the dispersion of hybrid electric vehicles can be viewed as a middle of the road venture towards the full manageability of both the transportation and electric power frameworks.

The world is moving towards hybrid vehicles and India too needs an obvious arrangement. In any case, for a nation that still meets 75% of its power needs by consuming non-renewable energy source, many contend that it will just move the contamination off city streets to its hinterlands, where that power is created. RC Bhargava, executive, Maruti Suzuki, brings up that dissimilar to other car advances, EV technology is still in the transformative stage and there are a great deal of vulnerabilities concerning cost structures and the development of the environment.

Limitations

- Since the topic is new and upcoming the sample size of the study is limited.
- There is no adequate data or articles found because of the topic being new and fresh.
- There is not much focus on the Private sector, but the Government has highly focused on Regulations regarding hybrid cars and electrical cars in the country.