

Platinum 2022

A Peer Reviewed National Multidisciplinary Journal

**On the occasion of 87th Birth
Anniversary of
Prin. Sir Dr. M. S. Gosavi
Secretary and Director General – GES Nashik**

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गोएसोचे अध्यक्ष प्राचार्य एस. बी. पंडीत यांचा सत्कार करताना श्री. राजेश भोसले व शांतिलाल जैन व प्राचार्य डॉ. श्रीनिवास जोशी



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Gokhale Education Society's
Arts, Commerce and Science College
Shreewardhan Dist:-Raigad 402110

• **MISSION** •

To cater the educational needs and uplift to Economically weaker, and downtrodden Students.

• **GOALS** •

- To make efforts to get higher education for the rural community.
- To prepare the students resourceful for facing the global challenges.
- To build up a good and responsible citizen.
- To organize various programmes for the holistic development of the students.

• **OBJECTIVES** •

- To provide need based courses of University of Mumbai for the students.
- To organise training camps for improving the skill and enhance Quality Education through innovative teaching - learning methods.
- To provide maximum infrastructure facilities and recourses for the student for their Bright Career

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The Master of Teacher of the Millennium.
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Message



Gokhale Education Society today is a lead and quality educational Enterprise in India, established on 19th February 1918. It has completed 104 years of its meaningful existence and has today more than 140 units spread over three Zones Mumbai, Nashik and Palghar. Today Gokhale Education Society is contributing for quality education at all levels.

Established on 15th June 1998, Shreewardhan's Arts, Commerce & Science College is a proud member of Gokhale Education Family and is imparting quality services in the field of education. It has been playing an active role in economic, social & cultural development especially of rural students. This is the only multi faculty College giving co-education at Shreewardhan and catering to educational needs of rural students very meaningfully. Its Junior College was established in year 2000; Science Wing was started in the year 2000, Commerce Wing was started in the year 2001. Further College is conducting variety of Co curricular and extra-curricular activities like organising educational tours, academic exhibitions & competitions etc. to encourage the students to develop their personality and make them self sufficient.

It gives me immense pleasure to congratulate the Principal and all stakeholders of the College for 22 years meaningful contribution that College is giving in the field of education.

I am very happy that Shreewardhan's Arts, Commerce & Science College is publishing National Level Multidisciplinary Peer Reviewed Research Journal on the occasion of 87th Birthday of Honourable Sir Dr. M.S.Gosavi. I congratulate Editorial team, all staff members and Research Scholars for their contribution for this Journal. I wish all the best to the College for its future endeavours. Wishing the college all success!

God bless you all!

- Dr. Mrs. Dipti Deshpande

Director (HR), Gokhale Education Society and
Principal, SMRK-BK-AK Mahila Mahavidyalaya, Nashik.

Editor's Desk

It is my immense pleasure to publish this Platinum A Peer Reviewed Multidisciplinary National Level Research journal having ISSN/ISBN, on the Occasion 87th Birth Anniversary of Gokhale Education Society Nashik. I feel proud to state that this edition will fulfill the wide space and needs of Researchers from Various disciplines from all over Maharashtra and outside too. I assure that this issue will show the richness and quality of Research excellence.

Hon. Sir Dr.M.S.Gosavi saheb always says that the change is the only constant thing in the world. Education develops the holistic personality of Learners at all levels. The intellectual strength of upcoming smart new generation must be converted into marketable commodities. And employability in education is very important which makes students capable of doing their Best. Higher Education must enable the learner to lead, to create, to develop and to represent their own new ideas and perception by way of Research. For this issue Secretary and Director General of Gokhale Education Society - Hon. Prin. Dr. Sir M.S.Gosavi and President Hon. Prin. S. B. Pandit Saheb Blessed us a lot. Our H.R.Director, Dynamic and Innovative Personality Hon.Prin.Dr.Deepti Deshpande always encourage and appreciate such type of constructive, innovative and glorious ideas. I hearty thankful to all dignitaries for encouraging and positive support.

In this issue, varieties of Research Papers from all streams and domain have been incorporated on which researchers have articulated. Their scholar opinions and expressions and put across their study findings which have really made this volume impact making and profound.

I would like to mention that the Research Papers published in this issue are scrutinized and reviewed by the experts in respective fields, teachers and research scholars. Since efforts are taken by the teachers of Junior and Senior College. I appeal all teachers for enjoying this platform. I extremely thanks to my colleagues, paper writers and research scholars. I welcome also the expectations and suggestions from the learned personalities from all streams for next issue.

- Prin. Dr. Shrinivas V. Joshi

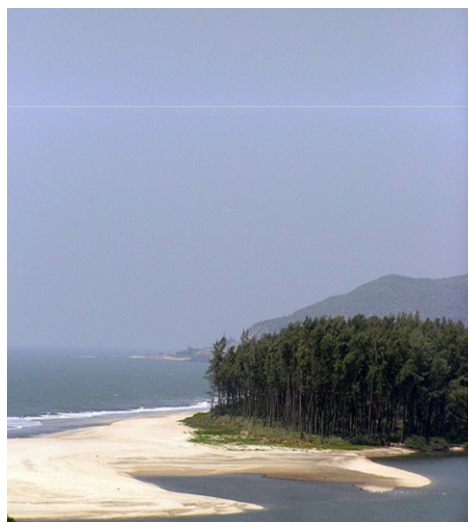
Gratitude

It's with great pride, privilege & enthusiasm we are releasing this Multidisciplinary National level Journal Platinum 2022. I, with great anticipation invite you to read this issue which has touched wide areas & corners of research from various disciplines within the boundary of Nation. Any accomplishment requires the efforts of many people and this work is not different. This issue is the result of continuous boosting, appreciation & innovative ideas of Hon. Prin. Dr. Mrs. Deepti Deshpande, H. R. Director of G. E. Society-Nashik, focus on research work and commitment and dedication of teaching & non teaching staff members of the college. This work is synergistic product of many minds. Enormous efforts have taken in development of this interdisciplinary journal having ISSN/ISBN & I believe that the efforts will be reflected in this edition. I am grateful for the research scholars who have contributed for the development of this issue.

I am extremely proud of our Editorial Board members & find myself fortunate to work with leashed, talented persons with disciplinary background. A variety of Research Papers, Articles from various domains have been compiled which would make this volume Rich. I am very much thankful to all the authors who have contributed their research work in this journal & also appeal all teachers & researchers to enjoy this platform.

- Dr. Kalyani S. Nazare
Co-ordinator, NAAC







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Mental Health - Role of Education

- Prin. S. B. Pandit

Emeritus Professor

Chairman, Gokhale Education Society Nashik - 5.

Mental ill health is due to tensions Marguerite, a French writer in his book 'Alexis', writes "Tension lessness is complete happiness."

The desire of sensual pleasures and those remaining unsatiated, creates unhappiness because the body and mind remain unsatisfied.

Sensual pleasures have no end and the desires are also unsatisfied.

Man is engrossed to get them satiated throughout the life, but remains thirsty.

The modern innovations and technological development offer an ease to satiate them but have failed to find out the means where by these desires are not created and repeated, and finally make man so fully satisfied that he will never demand and desire them.

The technological development dragged the men and women making them just the machines and killing the existence of "human being in them", over powered by tensions a man is in search or mental peace of mind. But he is unable to get it hence he is mentally not healthy. The unsatiated sensual desires and the technological development both make the greatest impact on the mental health of a man But both of them cannot be blamed Because the man is not wise and bold enough to face their impact. He is to be educated in this respect

Body is a product of mind The state of our body is a reflection of the state of our mind. So one should cultivate the mental strength to face bravely anything in one's life.

It is one's mental strength that is most important. The sufferings of "Sita in Ashok tika of Ravan and her response to those sufferings (Response - Ability) indicates how "Sita" has cultivated her "mental strength to face bravely all sufferings

Even Jesus suffered on the cross for the sins of others but exhibited tolerance because of his mental strength. Such minds are called "Ignited minds Dr. A. P. J. Abdul Kalam when he was president of India visited "Indo-American cancer Institute of Hydrabad.

He enquired from Prof. Dr. Kakarale Subbarao "How those cancer patients bear the sufferings induced

by cancer?" Dr. Prof. Kakarata replied that we might genetically inherit certain traits which make US vulnerable to cancer

But how he responds to it depends largely on his immune system"

Research into how the mind can influence the immune Response System has given rise to new field called "Psycho-Neuro Immunology".

Various immune systems related to diseases, including Aids and cancer can be tackled to an extent with the power of thought" acknowledge the medical experts.

Paramhansa Yogananda suggests three basic methods of "healing"

- Physical
- Mental and
- Spiritual

They are different aspects of the same divine principle of Healing.

God is the sole creator of everything and he works through Physical, Mental and Spiritual laws. Each of these laws gives result when practiced rightly.

"While Doctors cure, only the mind can heal and faith can restore health.

The discipline of medicine appreciates that mind can play a major role. "Auto-Suggestion is a powerful vedantic tool"

"Say to your self by the grace of God, I am becoming better and better, day by day, in every way.

Think constantly, I am the spirit, the Atman, which is independent and the mind, which is diseaseless.

Chronic diseases might even be cured if one repeats the above said formula mentally several times daily and meditates accordingly. Some times one has to wait patiently for results.

POWER OF THOUGHT

Various immune systems related to different diseases can be tackled by the power of thought, has been accepted by the medical experts.

Our thoughts are of two types,

- Preyas
- Shreyas

Preyas thoughts are related to our sensual desires.

Shreyas thoughts are much above sensual desires.

They drag the mind out of sensual pleasures and lead towards ethical and spiritual ways.

A man always, day and night is engrossed in thinking of satiating his sensual pleasures and devote all his energy and efforts to achieve satisfaction, is a different one than an another man who rises above that, and devotes to attain spiritual pleasures.

We are a reflection of the state of our thoughts

- Thoughts are always transformed into words
- The words are transformed into actions.
- The actions are transformed into habit
- The habit is transformed into character.
- The character is transformed into personality
- And the personality expressed thus makes the man known to the world
- We can interact with (God) or universe through our thoughts with the help of science.
- It all starts with the help of "Photon."
- Photon a packet of energy of a given wave-length.
- Albert Einstein said that "Energy and matter are the
- All matter is comprised of Energy
- Light is a small particle of energy.
- Energy in its purest form is carried by photons of light
- We are all made up of constrained light.
- Energy makes up matter.
- Electrons are a form of matter.
- So electrons are made up of Energy that is photons.
- The formation of matter in reality is the result of

Brain-waves

Thoughts = Energy

Energy matter

Thoughts matter

Thoughts are the language of universe (God) the universe does not judge, it simply returns what we are, projecting with our Brain waves.

- These waves can be measured.
- They are present in our consciousness
- Therefore they are to be managed as under –

One should be aware of one's thinking

The need is to eliminate idle and negative thinking.

One should deploy the potent mental power in the right direction.

Use heart head managing thoughts, be by reasoning Head.

There is need to control the mind. Let it not wonder.

Therefore we should

- Think Rightly
- Speak Rightly
- Behave Rightly

In Upnishadas Rishies say "My speech must have a foundation of my mind and my mind must found my speech."

Because the clarity of mind will bring the all mighty near to me.

The Upnishadas hint at the balanced mind and equitable thinking. The thinking must be reflected in the speech as well as in the action. The speech and action must aimat truth. So we must walk the Truth the truth is not there do not speak and do not act. Passions sometimes over power our thinking. They need to be cultured and transformed into compassion

PASSIONS AND COMPASSIONS

Passions affect our, thinking, speaking and behaviour. Passions are state of biological fever. They are very hot and need to be transformed into compassion

When possessed by passions, you are possessed by biological unconscious energies

You are longer your own master you are just a slave Compassin in you have trance dented biology and physiology. You are no more a slave You are master You function consciously. You are totally bee

Therefore some energy that becomes passion is required to be transformed into compassion

Passion	Compassion
Passion is Lust	Compassion is love
Passion is desire	Compassion is desire less ness
Passion is greed	Compassion is sharing
Passion wants to use the other as a means	Compassion respects the other as an end unto him self/ her self
Passion keeps you tethered to earth to mud and you never become a lotus.	Compassion makes you Lotus

Therefore right thinking, right speaking and right behavior se you above muddy world of desires, greed and anger

ROLE OF EDUCATION IN MAINTAINING MENTAL HEALTH

Various thoughts passes by in our mind When the mind is under stress is rather difficult to drag it out of stress

- Stress in constraining
- Impelling force or effort.
- And causes demand upon our energy

- It does not only affect our mind but also the health of our body
- It is caused by different situations taking place around us. For the detachment from situations and thoughts, a strong mind is needed.

Our system of education focuses on the brain-head but lacks in culturing the mind. For a strong mind culturing of mind is a necessity.

Mahatma Gandhi, Rabindranath Tagore emphasized upon the three aspects of culturing in education. Those are:

Culturing the Head Brain

- Culturing the Heart-mind
- Culturing the hand-Skills to earn lively hood.
- It is highly impossible from the present system of education to evolve any effective role to
- Cultivate.
- Maintain
- And build a strong mental health

Albert Einstein confesses that "science can denature plutonium but it cannot denature Human Mind."

The most astounding discoveries will come when scientists turn towards exploring the Human Mind and Nature of self in the laboratory of man.

- The disturbed mind and the stress on it is a result of Human Problems.
- Most of the problems are created because of "set of thought pattern" That needs to be changed.
- If our thoughts become less coloured.
- Less spiated with the fewer attributes in other words betres free Some protect
- Inner peace of mind and tranquility demande detachment from
- The detachment means

Detachment from the awareness of problems

- The awareness causes stress
- Detachment from the station that causes stress
- In other wards we should think that we are not in the situation but we are only witnessing it as a third party
- The culturing of mind in this way is only possible by Yoga - Yogas are the means of De-stressing
- Yogas strengthens the mind and the power of concentration distressing and respiratory efficiency

Control on mind and the control on thoughts can only be attained through "yoga The Yoga-sutra of Patanjali advocates Eight fold pathi Ashtanga Yoga

- Yama (Self restraint)
- Niyama (Regulating the life moral values observance)
- Asans (Postures of bodily restuiness)

- Pranayam (breath contro)
- Pratyahar (withdrawal of senses)
- Dharane (Faxing the mind on the Supreme)
- Dhyana (absorption of self)
- Samadhi (Liberation of soul)

The eight branches are closely related to every human life. Yoga categories human life into three strata.

1. Physical

- Is composed of Nerves, Flesh and bones and Trillions of cells.
- The biological machine is attuned to a strict natural discipline To maintain it in harmony regular practice of Yoga, Asanas and Pranayam along with Yogic Diet is a must.

2. Psychic

- The mind forms the second stratum of the self. The mind is controlled by Yama and Niyam

3. Spiritual

- The ultimate stratum is the spiritual one, extremely important in Yoga, that has realization of the "Self as its motto. Hence the education in yoga is essential for Mental Health

CONCLUSION

Vedant says "Human problems cannot be solved by mere Intellectual Energy"

- For that purpose "stud of Inner world" is necessary.
- According to Vedant Three streams of Energy Viz.
- Physical Science
- Science of values
- Science of Spirituality
- Must be synergies for Human upliftment.

Vedant considers

Scienc of values as a link between physical sciences And the science of spirituality

UPNISHADAS

The Shetasvatara Upnishad cautious us "men may succeed in rolling up space like a "piece of leather".

Yet they will not experience the "end of their sorrows", without realizing "The Luminous Divine Viz (The Self within them)

THE CHHANDOGYA UPNISHAD

Adds to the view of describing "you are that (Tattwamasi) so search for that. Dr. Radhakrishnan supports the same view by saying.

"The Aim of education is creating an ability in Human being" (to know one self)



Cyber Crime Education

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Cyber Crime is not new for the readers, Electronic gadgets (either wireless or wired), whenever are used to harm public and business organization are called cyber crimes. It may be done in the form of a virus attack, Phishing attack, Spoofing, Identify Theft or any of the tricks to misguide the victim. There is significant and worth investigation by criminologists because victims of Cyber-Crimes are increasing more quickly than cyber police can detect, arrest and prosecute. With the advent of the Internet, people have changed the way in which they communicate or interact with others, shop. These changes in organization's have increased the probability of being any kind of cyber threat.

That Consumer awareness of Phishing, a burning cyber crime is high, and most consumers take appropriate action upon receiving suspicious email. More than half of consumers immediately delete email purporting to be from their banks asking for personal information.

Wilcox N.A., Regan T.M. (2002) studied identity theft, a type of cyber crime, which violates the individual victim and wreaks huge financial losses on the commercial victim. However, the crime of using false identifiers and false identification documents transcends identity theft, as it includes not only the identity thief, but also the drug trafficker, the alien smuggler and the terrorist. One who commits this crime of identity fraud needs to be culled out and prevented innovative and effective solutions.

It is investigated that computer related crime is growing rapidly, but we are unable to measure with any precision its incidence and impact. More accurate measurements would be instructive to government and the private sector, to properly size prevention and investigation efforts. The study recommended in this paper established terms of reference and a metrics measurement process that would facilitate allocation of appropriate resources to preventing and responding to computer-related crime.

Conway M. investigated that cyber crime may be used to support terrorism and such activities ought not to be classed as cyber terrorism. Although hackers have demonstrated that they are willing to crash computer

networks to cause functional paralysis and even significant financial loss, this propensity for expensive mischief is not sufficient evidence that they would be willing to jeopardize lives or even kill for a political cause. Organized crime groups view the Net as a tool, not a target because many such organizations employ the Internet – and the public telecommunications network generally – as a vehicle for intelligence gathering, fraud, extortion, and theft.

Need for Cyber Crime Education (CCE) :

With the advancement in Information Technology and growing need of MISs, there is a tremendous growth in the facilities endowed with banks, insurance companies; FMCG and e-commerce companies. Cyber Crime awareness has to be addressed at all levels, from the individual user to an organization. Mobile life, covering maximum of the dealings accessible online has granted the probability of being victimized by hackers, intruders and phishers. Of course, network administrators are coming with advanced technology and generating secure channels for data transmission. In spite of these security measures (either at software or hardware end), credit card frauds, ATM frauds have become common now a days. Why so ?

Many studies have been carried out on cyber crime issues viz., Identify Theft, Hacking, Phishing, Fishing, Pharming etc., but no any study suggests a specific measure to get rid of these threats. The researches recommend taking precautions while using computer networks (either internet) to over come cyber attacks. Education has always been supposed to enlighten the people's mind and aware the masses, whenever the problems viz. environment's threat and like come across.

Mobile Lift :

The emergence of the Internet has brought dramatic changes in the living patterns of the masses all over the globe. The traditional payment, where the clumsy and expensive way to handle coins and notes is being replaced by efficient electronic payments initiated by various types of plastic cards, a tantalizing prospect for

the twenty-first century. These business activities include electronic fund transfer (EFT), supply chain management (SCM), e-Marketing, online marketing, online transaction processing, electronic data interchange (EDI) and automated data management among others. Everybody is in hurry due to sky-scraping competition in every sphere of life causing people to use payment technologies, which are more convenient and less time consuming.

Active Cyber Criminals :

Due to unexpected growth in cyber crimes in society, information system security has become the greatest challenge for MIS experts. Security is the main concern of the organizations in the present scenario of information and data, where every transaction is on transmission lines visible to cyber criminals directly or indirectly. It is more dangerous when the data is about the money and the financial information. For so many companies and even individuals, the secrecy of information about the financial and their accounts and so many things like this, is highly important. If they lose a small amount of data, they may lose their all things. The growth of the Internet as a medium of transaction has made possible an economic transformation in which commerce is becoming electronic. Engineers and technocrats are endeavoring to block up the loopholes through an assortment of software and hardware practices, viz., SSL Certificates, SET Protocols, Pretty Good Privacy, Kerberos, Digital Signatures, Electronic Wallets, MeChip and so on. In spite of implementing such potential security tools and techniques, cyber criminals trap the security measures and create vulnerabilities for the organization and its stakeholders due to some weak spots within the system using some tricks viz.,

1. Impersonation
2. Hoaxing
3. Cyber Defamation
4. Cyber stalking
5. Identify Theft
6. Denial of Service Attack

Online Transactions :

In the current age of information and Communication Technology every job has become online from banks to restaurants and education to crime. Sky-scraping competition in corporate world compelled every business organization to become technology savvy as people have needed for hi-tech services at their doorsteps within moments. Every moment, managers are trying to facilitate their customers in an effective way to live their business. Financial Institutions cover not only banking sector as Central Bank (Reserve Bank of India), Commercial Banks, Credit Rating Agencies, Credit Reporting and Debt

Collection, Financial authorities, Insurance Companies, Merchant Banks and Venture Capitalists but also cover insurance sector with some companies, viz., NSDL, BSE, NSE, IRDA, NEDFI, UTI, NABARD etc. Banks and insurance companies are facilitating their customers with electronic services at their portals and outlets to retain their customers.

- E-Ticketing to facilitate the customers to book the bus, air and railway tickets online.
- E-Tax enables customers to pay TDS, Income tax, Indirect tax, Corporation tax, wealth tax, Estate Duty and Fringe Benefits tax online through NSDL site where customer can select an online challan based on the tax s/he wishes to pay.
- E-Donation facilitates the customers to donate money to charitable and religious institutions online through their bank account.
- Gone are the days the customer had to depend on long queues to shop goods. Shopping malls are now available online and bills are paid through E-Payment by either Credit or Debit Cards. Telephone Bills, Electricity Bills, Recharge of Cell Phones can be paid online through E-Payment within moments.
- Fund Transfer enable the customers to relocate the money within your account in the same name. Transaction rights would play a major role.
- Third Party transfer to transfer the funds with third parties with secure identity.
- New Account Opening to open new accounts on internet.
- Demat / Account Statement to catch the daily transactions as well as account status.
- Share trading has become the business for investors, which has only become possible through corporate IT networks via E-Auctions.

Lack of Technical Control

Newsrooms are full with ATM frauds, Credit Card frauds and many such accidents, due to loopholes existing in the system. Why do most people still like to do their businesses in traditional form as before ? These people prefer to touch the documents and money in hand and doing the process manually to electronically. They believe in every dealing and business, physically rather than virtually. There are many people even in this digital era, who are not agreed and accept the all new technologies. The job is very hard to pursue and to make these people eager to do in this way and accept the technologies. People are always not certain and assured to the technologies

because of poor technical control causing malfunctions, frauds and unavailability of devices in the time of need.

This live case shows mind set of a cyber criminal that s/he might target any citizen either an IT professional or Non IT Professional. People usually make use of internet without taking precautions as they do not know that a single click of mouse might be dangerous if destination like having some Malware or Spyware. Most of the internet users not having the knowledge of-

1. Cyber criminals and their ideology
2. Cyber threats
3. Web browser's security policy and its usage
4. Pop up windows and its mechanism
5. Firewall and Antivirus software usage
6. E-Mail mechanism
7. Security toolbars
8. Password policy and Virtual Keyboards
9. SSL Certificates
10. Universal Resource Locators

In broad terms, the functions of the higher education institutes in the modern world may be said to be:

- To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth, and to interpret old knowledge and beliefs in the light of new needs and discoveries.
- To provide society with competent men and women trained in agriculture, arts, medicine, science and technology and various other professions, who will also be cultivated individuals imbued with a sense of social purpose.

- To strive to promote equality and social justice and to reduce social and cultural differences through diffusion of education.
- To foster in the students and through them in society generally, the attitudes and values needed for developing the good life in individuals and society.

Cyber Crime Education can make an appropriate contribution to modernization of the traditional curriculum especially in Professional Programs in the field of Information Technology, Management, Pharmacy, Law, Engineering, Education, Agriculture and various like fields. It will create awareness among the students who are supposed as nation builders to serve the nation in various walks of life. In such environments, education gets top priority so as to have a richer and fuller life in material terms by its progressive utilization as well as to cultivate a practical approach in the individuals for solving social and economic problems in an ideal way. Knowledge is power by which things are done said Socrates.

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Education : New Trends and Challenges

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Introduction :-

Management is basically a facilitating function which makes possible the achievement of common goals. It concerns with creating an environment in which all the resources can be put to their optimum use. A manager's function is to plan, organize, direct and control the efforts of its group members in a way that organizational objectives are achieved effectively and efficiently. To perform these functions he is supposed to possess certain basic managerial skills. It is an established fact that managerial skills can be acquired through conscious efforts and education has an important role to play in this process. Management as a discipline though does not have a very long history, but the subject has grown rich when it is considered from the point of view of conceptualization of its philosophical base. Various thinkers have given management thoughts and suggested models over the times, which forms the theoretical base of the subject. However, of all the management thoughts the situational theory holds a much convincing logic according to which it is the situation or the environmental forces that determine the types of decisions and leadership styles that may suit at that point of time.

Management has an important role to play in all types of human efforts. It is the management function that makes difference in the performance of any organization and achievement of its common goals. Management is a universal phenomenon. If US is world power today it is simply because of the reason that they are able to manage their affairs properly. India falls in the category of developing nations in spite of being rich in terms of availability of human and other natural resources, leadership must be held responsible for it. In organizational functioning things always move from the top and for every success or failure, the leadership should get the credit. This principle applies to all types of human activities at micro and macro levels. Today no organization can fail due to lack of capital. If it fails it would be due to lack of proper understanding of the things and poor management. The importance of management in business

has further increased during recent times because the scale of operations have gone high, labour has become more specialized markets became competitive and an efficient and effective handling of things became need of the day. To successfully face the competitive markets, it requires developing a proper vision by understanding the situation and then adopting a suitable style of management that can ensure optimum use of human and other material resources.

Increasing economic integration will have several important implications for management education. Global trend is impossible to examine management education without knowing about the environment in which it is embedded. It is a big world, though, and any attempts to select and defend the most important trends are predestined for criticism. Surely, we will exclude trends that others view as crucial. Or we will do injustice by only scratching the surface of complicated trends or knotty issues. Some may question our approach to organizing these trends, which cover a broad range of subjects that are inextricably linked. Management education has entered a period of profound transition driven by globalization, technology, demographics, and pressing social imperatives. Because management education is an investment in the future of business, it's importance to understand the challenges, opportunities, potential risks and rewards associated with this transition. Therefore, this report was created as a resource for leaders in the global management education community as well as business and government leaders, policy makers, and others who want or need to understand the global issues and challenges facing the complex, dynamic world of management education. For these leaders, we seek to provide a foundation for constructive dialogue, mutually beneficial collaboration, and investments in the future of management education.

The winds have strengthened. Economies of the world have become increasingly integrated. Barriers to the flow of goods, services, capital, and labor have never been fewer. The ties that bind our economies together have

never been mightier. This trend captures, in one broad sweep, a number of subtler dynamics that will be described more carefully below. And economic integration, which is often blamed for driving wealth divergences within and across countries and contributing to environmental degradation, has led to new ways of thinking about responsibility and sustainability. In this section, we are particularly concerned with economic integration, which deserves special attention at the outset because of its broad impact on business and business education.

Significance of the Study :-

Increasing economic integration will have several important implications for management education. We delay comments on some of these implications until later in the report, when related trends – such as advances in technology, implications for supply chains, growth in the services sector, and student mobility are discussed. For now, we devote attention to just two important implications: the increased demand for management education and the need for greater emphasis on global perspectives in education and skills development. Integration and job growth in market economies will increase the demand for management education, as previous experience has shown that skilled, better educated workers have the most to gain from globalization. Indirectly, we believe that employment volatility due to market dynamics in open economies will drive demand for continuing management education.

It is also appropriate to think about these demand increases as driven by market imperatives and purposeful investment, rather than just as a consequence of globalization. Education and training are key drivers of economic competitiveness. Countries must invest in developing human capital, creating new knowledge, and spurring innovation – all crucial roles for higher education general. Management education, in particular, is viewed as essential because in market economies, management and entrepreneurial talent create, finance, and grow the demand for knowledge and innovation.

Culture Full Management Education :-

The need for global perspectives does not, however, imply that from economic integration will evolve a singular model or perspective for business and management. Globalization means that business and management must be understood in the context of local history, politics, and culture. Therefore management education should not be “culture free,” but “culture full” Global education isn’t only about transcending borders; it is also about crossing them. Indeed, although the borders of today may be thinner than those of yesterday, today there are 21 percent more independent countries than in 1980 and, thus, there are more borders to cross in a global environment.

Considerable economic activity takes place at

much smaller micro-enterprise levels in much of the developing world. Individuals, families and cooperatives involved in various economic activities from selling fish to handicrafts. While there is no need for a formal MBA for micro-enterprises, certainly there is considerable need for knowledge of sound business practices The IIMs could form strategic collaborations with the business schools in the rural areas, in the small cities, and those focused on women and other such groups; and offer various forms of support to these local institutions.

Emerging trends in business and education suggest that business schools in developing and transitioning regions must be more engaged in the global community to share best practices and to facilitate collaboration. Similarly, business schools must meet the challenge to deliver management education and knowledge that is relevant in both global and local settings.

Implications for Management Education :-

Shifts in age distribution of the population will significantly impact management education, particularly in the areas of demand management, program development, and business schools staffing, which will be discussed below. All else being equal, countries with growing younger populations will experience rising demand for business education. The risk in these countries is that bulging youth populations will overwhelm educational infrastructures. In aging economies, the strategic challenge is to discover ways to import students and retain graduates to accommodate work force needs. Although these implications sound simple and unambiguous, we should point out that demand for business education is also a function of other factors such as secondary level conditions, and that sometimes the impact of demographics is more subtle. For example, younger populations are associated with faster productivity growth and, as a result, indirectly increase demand for educated workforces. Business school programmer and curricula development will be affected by changing demographics. Economies will experience shifts in consumption patterns, resulting in opportunities for new business school programs.

Objectives :-

- 1) To analyse the functions of education for development of human skills.
- 2) To explain the significance of education and culture.
- 3) To study the implications of management education.
- 4) To focus the fact of global challenges in education.

Research Methodology :-

Education is a voracious user of information and communication technologies. The need for course management systems, online education administrative functions, research databases and collaborations, digital libraries, marketing, mobile learning support and the like is testing the infrastructure, financial, and staffing limits of educational institutions. State-of-the-art information technology is not inexpensive to acquire and maintain. But, information technology also offers the most promise to address the challenges of meeting growing demand for management education-especially among working professionals in need of continuous education-despite looming faculty shortages and other limits to physical infrastructure.

Leadership from Both Business and Business Schools :-

It isn't uncommon in the world of management education to debate whether it's business or business schools that led the way when it comes to new ideas, approaches, or practices. The answer should be both. Fundamental shifts in strategy, new and improving practices, and the like must be driven quickly into business and management curricula. Yet, rigorous and independent business and management insights that abstract from the experience of any single company and integrate theory across multiple disciplines are needed to enhance business and management practice. Social responsibility is a prime example of the need for complementary leadership from both business and business schools. Business schools must respond to, and lead efforts to develop socially responsible and sustainable business.

Management Education : Career Success and Efficient Conduct of Business :-

If management school is a reliable training ground for efficient conduct of business, then the salary and position that a management graduate holds in an organization should be related with his management qualification, other things being equal. Similarly, an entrepreneur with management degree should do better in his business as compared to an entrepreneur without management degree. But, this generally does not happen as not only management education but numerous other factors contribute towards ensuring the other success of a manager, and at times contribution of other factors is actually more. Higher business schools grades and CGPA rarely have any effect as mere possession of the same can't ensure an individual's business expertise. It has been seen that some of the most successful businessmen and managers never possessed any management qualification. Mintzberg and Lampel (200) noted that of the four CEOs, people most often named

when asked who had accomplished great things none had a business school degree. Further, a lot of concern is being voiced about capability of management research and education as is being offered in the classrooms to improve ability of managers to conduct business efficiently.

Global Challenges in Management Education :-

Developments in management education the context of accelerating global economic integration, expected demographic trends, advances in information and communication technology, growth in global sourcing of services, and emerging priorities related to social responsibility, governance, and sustainability. We assimilate and prioritize what we have learned to describe five pressing challenges for management education in schools of business worldwide. This list is not exhaustive, and the challenges are not mutually exclusive. The challenges are expressed in broad terms, so we encourage readers to consider how each may be experienced differentially depending on country, region, or environment.

Growth :-

All the indicators point to continuing increases in the demand for management education. Driven by demographics, economic trends, business expectations, and initiatives that expand access to higher education, future demands will come not only from traditional college-age populations, but also from working professionals who need to retool and reinvigorate their careers. Growth is, of course, a better scenario than decline or stagnation. Similarly, government financial support for business education hasn't kept pace with growing demands, leaving some business schools to seek higher tuitions and new financial sources to complete internationally. Limited decision-making autonomy at these schools not only makes tuition increases unlikely, but also constrains their ability to respond to emerging curricula needs with innovative programs. For all of these reasons, it appears unlikely that business schools throughout the world can support continuing demand growth without significant changes in the way they assure quality, organize faculties, and finance and govern their programs.

Balancing Global Aspirations and Local Needs :-

A recurring theme has been tensions between global aspirations-of countries, schools, faculties, and students-and pressing local needs. These tensions are revealed on many dimensions: curricula, strategy, and collaboration, for example. Further economic integration calls for strengthening our curricula emphasis on global perspectives, but we cannot ignore unique histories,

politics, and culture. The powerful forces of globalization, advances in information and communication technology, and further liberalization of services trade, will not only demand more from management education, but also enable us to achieve local and regional goals and objectives. For example, international alliances and exchanges of faculties and students create opportunities to build banks of localized case studies, which can be shared worldwide through electronic channels. Expanding global footprints of individual schools give rise not only to globally graduates, but also represent an investment in local economies.

Quality Assurance :-

However, as management education grows and students, graduates, and faculties become more mobile, we must be increasingly concerned about the maintenance and assurance of quality. The standards cover the full breadth of quality dimensions: mission, strategy, faculty, students, staff, curricula, educational outcomes, and research. The standards define quality and, because they are linked to the mission of the school, they are designed to ensure that quality depends implicitly on whether the promises of schools and expectations of students and employers are met. The standards allow for a wide range of promises, as long as they are communicated accurately and delivered sufficiently. Transparency is important for our working definition of quality. If quality is about delivering on the promise of the school's mission and meeting expectations, then it is important to ensure that accurate data and information about the institution are available to the public. Appropriately so, accreditations have tended to focus on institutional improvement, while national systems are often regulatory or administrative in nature.

Sustaining Scholarship :-

The challenge of recruiting and retaining qualified staff would already be alarming to business school leaders, for it will take many years of sustained investment to bring doctoral production to the levels required. However, a greater sense of urgency arises when we consider the challenge in light of the growing demand for management education, rising costs, lack of quality assurance, and the integral role that management education and talent play in fostering innovation. Together, these concerns send a clear message that the challenge of sustaining scholarship should be a top priority for business and government leaders.

Aligning with the Future Needs of Organizations

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By examining global economic and business trends,

we have attempted to isolate the emerging needs of organizations around the globe. The point here is not that the needs of organization have changed over time: they have and always will. What's new is that the pace of change has been accelerating. Recent criticisms have exacerbated this challenge. Targeting MBA programs, for example, some critics claim that business schools have become overly academic and, as a result, less relevant to business. Others have claimed that the content of what schools teach does not currently match the requirements of business.

Two obstacles make this challenge particularly difficult to overcome. First, there are few substantial industry-level collaborations between businesses and business schools to discuss, debate, and jointly-define the future of management and management education. Second, we have seen that decision-making autonomy has, in some cases around the globe, been only slowly delegated to the institutions that deliver management education. Moreover, funding formulas and other factors such as rankings have created limited incentives to change – much less change quickly-in response to emerging needs. Management education is, by no means, facing a “perfect storm”. The challenges are not insurmountable. But management education leaders must be proactive. The recommendations that, if implemented, hold great potential for helping business schools and the people, organizations, and societies they serve to navigate the difficult terrain ahead.

Recommendations / Suggestions :-

Business schools cannot overcome the above challenges on their own. Solutions will require collective approaches and, most importantly, the support and engagement of the business and societal stakeholders of business schools. In this section, we offer five recommendations to leaders in management education, management education associations, policy makers, and corporate leaders. Embedded in the recommendations are ideas for how business and government leaders can invest in the future of business by supporting initiatives to advance management education worldwide.

Advocate for quality assurance globally and locally :
The growing demand for management education as well as number and types of providers, increasing fragmentation of degree programs, intensifying competition, globalization of education, and increasing student and faculty mobility have made quality more important to a wide range of business school stakeholders. Our main concern here is to ensure that the public, students, and employers, in particular, understand and can act on the variety of quality indicators that are already available. The challenge is for business school and association leaders to work together

to solidity and communicate the role of accreditation in assuring quality worldwide. To accomplish this, we put forth two recommendations.

We recommend exploring collaborative international efforts to improve public understanding of business accreditation, especially what differentiates these accreditations from institutional accreditation and other forms of authorization. By increasing the public's knowledge about accreditation, prospective students and employers will be better equipped to identify and engage schools that are more likely to deliver on their promises.

To more broadly assure quality worldwide, existing global accrediting organizations should continue to serve as a model for the development of more viable and complementary country-specific or regional accreditations. However, for many reasons, the vast majority of business schools are unable to attain this accreditation. By continuing to serve as models to the state or regional quality agencies to which these schools are accountable, existing global accrediting organizations can promote a consistent underlying philosophy for business accreditation. To be clear, these recommendations do not suggest merging standards and processes. The existence of many different international and regional accreditations is seen as a benefit, because it supports diversity and offers choices for business schools and programs.

Invest in mechanisms to engage business and government leaders in envisioning future organization and societal needs : An increasingly dynamic business Environment characterized by accelerating change, intensifying global competition, shifting strategic foundations, and evolving managerial skill sets. For business schools, this means that it will be more important, yet more difficult, to lead or stay abreast of changes and to react quickly and innovatively. Historically, individual business schools has taken the lead in working closely with business organizations. In the future, it will also be essential to develop industry- level dialogues regarding the future needs and expectations of organization and societies. Global and regional associations of business schools, for example, can create effective ways of working with business and government leaders to peer into the future.

Facilitate and encourage investment in doctoral degree education and other infrastructure development: Like other organizations in today's knowledge-based environment, business schools' most critical asset is intellectual talent. Yet, we have not been investing enough globally to develop the quantity and quality of future generations of business faculty. If not addressed, worsening shortages of doctoral faculty will hamper our ability to support growing demand for quality management education, to understand and

project the changing expectations of organizations, and to continue to assist in achieving social and economic development goals. The ability to meet each of these challenges is firmly grounded in research and scholarly approaches to management education.

Together, the whole business school community can play a role in raising public awareness about the issue and engaging business and governments in developing solutions. The business schools community must convince business leaders and policy makers of the dire consequences of not investing in the future of quality management education through doctoral education. Quality will suffer otherwise, as will the ability of business schools to advance management theory and practice through research. As a result, organizations and economies will not perform to their fullest potential in the knowledge-driven, global business environment of the future.

Create an international clearinghouse for data and information related to business schools and management education structures, trends, and practices : First, we recommend that members of the management education community collaborate to collect and maintain comparable country-level data about the number and types of institutions offering business degree programs, total enrollment and graduates by degree level, and faculty counts, as well as qualitative information about the structure of higher and management education and reports about major issues and challenges. The primary goal of this repository is to provide structure to macro-level information, support efforts to track trends, identify emerging issues and challenges, and advance management education.

Second, we recommend that organizations of business schools collaborate to collect and maintain comparable school-level data about mission, programs, faculty, and students. The rising challenge of quality assurance can be met only by promoting greater transparency and credibility in the information available about business schools and their promises. It is essential that this database be global because of the expected growth in management education in various parts of the world for which information is not readily available, our concerns about quality among programs, and the increasing mobility of students and faculties.

To conclude, it may be said that management education in new economy requires a fresh look and new vision by considering various dynamics of managerial practices in modern organizations. Industry today needs smart organizations and smart leadership to manage these organizations. Here is the challenge that lies before management educators and the profession. All the emerging issues need to be properly attended to so as to

produce required managerial talent to the country who can help bring excellence in modern organizations and the dream of India becoming a world power turns into a reality.

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Communication of Chemistry (Organic): by Using Micro - Techinques at Plus Two & Plus Three Levels

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ABSTRACT:

INTRODUCTION:

Micro teaching the new idea is recently developed in America. The central idea at the core of this new concept is to think hard and do something about it before you land as a teacher into the classroom, proceed step by step in the context of our objectives; and develop one idea or skill at a time.

Micro-teaching is therefore, nothing but a scaled down teaching encounter, where the complexities of the real classroom situations have been reduced to the bare minimum but at the same time, unlike the teaching practice at the level of feedback greatly, enhanced, According to Meir and N. L. Gage : the Micro class comprising of four or five students group, taught them more effectively and used regular reaching in class room as well as practical in laboratory at plus two and plus three levels as follows.

PRE-TEST:

Investigator has selected Forty students of XI Sci. XII Sci, B.Sc. Part I, B.Sc. Part II and Twenty students from B.Sc. Part III students are required to take reactions, diagrams, and related theory. Each. students are adequately prepared to appear for the test. Investigator has not taught this group. It is taught by other Teachers and have given one month time for students and conducted test according to the fixed examination program and assessed the papers and by with the help of their marks. Statistical calculation, Mean deviation, standard deviation, standard score are applied for the results.

COURSES							
	I	II	III	IV	V	TOTAL	MEAN
Mean Deviation $\bar{\sigma}$	0.3125	3.6533	-8.8250	10.7100	0	3.8480	0.7696
Standard Deviation	2.4606	4.6397	3.9261	4.1781	4.0447	19.2440	3.8498
Standard Score T°	69.3042	50.4849	68.2750	62.7370	67.7890	318.5991	63.7198

POST-TEST

Investigator has selected twenty students of each course of XI Sci, XII Sci., B.Sc. Part I, B.Sc. Part II and B.S.C. Part III who had scored highest, marks in the pre-test. Two groups, each group contains ten students one group taught by using Traditional method this group is called controlled group and for another group taught

by using MICRO-TECHNOLOGUES: this group is called Experimental group using same syllabus of pre-test. Teaching was done three months for both groups. The examination program was fixed one month in advance. In due period students undergo repetition, discussion and conducted the examination. The duration of examination as like pre-test. Assessed the papers. By the help of their marks, statistical calculation, Mean deviation, standard deviation standard score, Testing hypothesis and ANOVA MODEL ONE is applied for the result.

A.) CONTROLLED GROUP:

COURSES							
	I	II	III	IV	V	TOTAL	MEAN
Mean Deviation $\bar{\sigma}$	0.0875	0.009	0	0	-1.75	1.745	0.3315
Standard Deviation	2.1564	2.5990	2.5377	2.8722	0.9980	11.1535	2.2307
Standard Score T°	61.623	66.158	61.7336	65.6670	59.9860	335.1680	67.0336

B.) EXPERIMENTAL GROUP:

COURSES							
	I	II	III	IV	V	TOTAL	MEAN
Mean Deviation $\bar{\sigma}$	0	1	0.26	0	-3.28	2.02	0.404
Standard Deviation	2.1564	2.5990	2.5377	2.8722	0.9986	11.1535	2.2307
Standard Score T°	61.6230	66.1580	61.7336	65.667	59.9860	335.1680	67.0336

Micro-Communication Technique is more effective than the Traditional method in classroom Teaching of Chemistry (Organic) at plus Two and plus Three levels.

TESTING HYPOTHESIS

Let Us take the. hypothesis that, there is no difference in the marks Obtained in Traditional and Communication Techniques are not useful.

COURSES							
	I	II	III	IV	V	TOTAL	MEAN
Mean Deviation $\bar{\sigma}$	5	4.5	2.9	9.3	14	44.75	8.95
Standard Deviation	3.4641	14.2777	5.7542	7.1732	6.2982	36.9674	7.3034
No of Participants ⁶	10	10	10	10	10	50	10

1) Formula

$$t = \frac{\bar{d}}{\bar{\sigma}}$$

$$t = \frac{8.95}{6}$$

$$8.95 / 6 = 1.4916$$

$$t = 3.8281$$

$$\begin{aligned}
 \text{ii) } df &= v = (n - 1) \\
 &= (10 - 1) \\
 &= 9 \\
 V &= t_{0.05} = 2.228 \text{ at } 5\% \text{ level}
 \end{aligned}$$

$$F = 120.05 \div 11.26625 = 10.6557$$

The table value is less than the calculated value. Therefore the hypothesis is rejected. Hence communication through MICRO-TECHNIQUES has been useful.

Degree of freedom for greater variance $V_1 = 120.05$
 Degree of freedom for smaller variance $V_2 = 11.26625$
 The table values are $V_1 = 1$ & $V_2 = 2$ at 5% level ($F_{0.05} = 18.51$ Table value).

Note Course
 I XI Science Chemistry (Organic) II XII Science Chemistry (Organic) III B. Sc. P. I Chemistry (Organic) IV B. Sc. P. II Chemistry (Organic) V B. Sc. P. III Chemistry (Organic)

The calculated value of $F = 10.6557$ is less than table value and hence the difference in the mean value of the sample is not significance. i.e. the (Sample II) could have come from the same universe.

Investigator is concluding that; the result of TESTING HYPOTHESIS AND ANOVA ONE WAY MODEL is 'given same results: Hence communication through Micro technique is more significant in the Chemistry (Organic) theory in the classroom than traditional Teaching method in classroom teaching.

ANOVA'S MODEL ONE

Courses	Means	Various means	Squares Of deviations between varieties	Squares of deviations between varieties
XI Sci.	12.1	X1 = 11.8	2(11.8 - 16.7)² = 1.05125	(12.1 - 11.8)² = 0.09
XII Sci.	11.55			(11.5 - 11.8)² = 0.0625
13.Sc.1	19.1	X2 = 21.6	3(21.6 - 16.07)² = 72.03	(19.1 - 21.6)² = 6.25
B.Sc.,II	20.3			(19.1 - 21.6)² = 6.25
B.Sc. III	25.4			(25.4 - 21.6)² = 14.44
			120.05	22.5325

ANOVA MODEL ONE

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B.Sc.,II	20.3			(19.1 - 21.6)² = 6.25
B.Sc. III	25.4			(25.4 - 21.6)² = 14.44
			120.05	22.5325



Preparing HEIs for Implementing the National Education Policy: NEP-2020

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“If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime educate people.”- Chinese proverb

The National Education Policy 2020 document, describes the NEP as a new and forward-looking vision for India’s HEI system. It highlights the extremely important role of higher education in realizing and promoting the vision of the Constitution regarding a democratic, just, socially conscious, cultured and humane nation. The citizens must uphold the values of liberty, equality and fraternity, and justice for all. Higher education should help to achieve sustainable livelihoods and economic development of the nation. The policy promotes the inter- disciplinary approach and the cafeteria approach wherein the learners will be able to study one or more specializations at a deeper level. It focuses on the outcome based teaching methodology. Hence, a set of skills and values have been identified as outcomes of every programme at every stage of learning. These have been defined from the preschool stage to the higher education. The Draft National Qualifications Framework (NHEQF) has specified in detail types of qualifications and nomenclature, graduate attributes with learning outcome descriptors, credit requirements, and credit transfer. The changes to be introduced in the education system foresee a more vibrant, socially engaged, cooperative Indian community and a cultured, innovative, progressive, and a prosperous nation.

The document has highlighted some of the major problems faced by the current Higher Education system.

- A severely fragmented higher educational ecosystem
- Less emphasis on the development of cognitive skills and learning outcomes
- A rigid separation of disciplines, with early specialisation and streaming of students into narrow areas of study
- Limited access particularly in socio-economically disadvantaged areas, with few

HEIs that teach in local languages

- Limited teacher and institutional autonomy
- Inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders
- Lesser emphasis on research at most universities and colleges, and lack of competitive peer-reviewed research funding across disciplines
- Suboptimal governance and leadership of HEIs
- An ineffective regulatory system
- Large affiliating universities resulting in low standards of undergraduate education

The new policy is an attempt to overhaul and reenergize the current educational system by introducing the following key changes:

- Moving towards multidisciplinary universities and colleges, with more HEIs across India that offer medium of instruction in local/Indian languages
- Moving towards a more multidisciplinary undergraduate education
- Moving towards faculty and institutional autonomy
- Revamping curriculum, pedagogy, assessment, and student support
- Reaffirming the integrity of faculty and institutional leadership positions
- Establishment of a National Research Foundation
- Governance of HEIs by independent boards having academic and administrative autonomy
- “Light but tight” regulation by a single regulator for higher education
- Increased access, equity, and inclusion

Every higher education institution is required to prepare an action plan in the light of the major problems enlisted in the document and the key changes expected for solving the problems. The major challenge, which

one foresees, is not in comprehending the elements of the policy but in actually implementing the policy. The changes necessary to be implemented will have to address three major areas:

Firstly, academic inputs in multidisciplinary areas in the form of curricula and skills training to meet the predetermined outcomes- The institutions will have to provide for a variety of subjects taught in the regional languages, in which the students are interested and allow a number of combinations. The required number of faculty will have to be made available and various resources will be required.

Secondly, the institutions will have to reconsider the evaluation methodology and bring forth innovative techniques of evaluation and assessment. The Draft NHEQF specifies the outcomes under the following heads: Inculcating constitutional, humanistic, ethical and moral values, Application of knowledge and skills, Generic Learning Outcomes, Employment ready skills and entrepreneurship skills and mindset. The major challenge therefore is to frame syllabuses that fulfill these expectations and develop assessment techniques that can examine learners' knowledge and skills.

Thirdly, the specific challenges faced by individual institutions are related to locality, availability of resources, infrastructure, financial support, rules and regulations governing the services of the faculty, number of students, number of programmes and courses, which could be made available to the learners. The slow waning of the University affiliation system will mean that the institutions will be responsible for designing the courses, evaluation and grant of certificates. Every institution therefore will have to develop itself into a mini university or become part of a larger cluster of colleges under the leadership of a college identified as a best achiever within the district. This will pose some problems related to logistics too.

The higher education institutions will have to answer the following points on a priority basis to prepare them for implementing NEP:

- 1) It will be necessary to revise the vision, mission, goals, objectives and plan of the institution to transform itself into a holistic multidisciplinary institution. How will the institution modify these to align them with the objectives of the NEP?
- 2) How is the institution going to develop multi disciplinary courses- integrate humanities and science with STEM (Science, Technology, Engineering, and Mathematics)? Courses with various combinations will have to be designed.
- 3) How will the institution frame flexible

curriculum and arrange for multiple entry and exits at the end of 1st, 2nd and 3rd year?

- 4) What are the institutional plans for engaging in multidisciplinary research leading to solutions for society's most pressing issues and challenges?
- 5) What are the initiatives taken by the institution for the Academic Bank of Credit such as registering the institution under ABC and enable credit transfer etc?
- 6) What are the measures taken by the institution for developing and strengthening the vocational and soft skills of the learners to fulfill the expectations of the National Skills Qualifications Framework?
- 7) Have provisions been made for students to take at least one vocational course before graduating?
- 8) Is the Institution-Industry connect, helpful in bridging the gap between academic output and industry requirements?
- 9) Does the institution plan and conduct skill mapping for students? How?
- 10) Are skilling courses planned and offered to students either through online or distance platforms or off line mode?

These are some questions to be asked in order to prepare the institution to adopt the NEP. Before planning the skill-based courses, it is necessary to understand the needs of the future decades and plan accordingly.

The future skill sets necessary will be in the following key areas that have recently come up:

- Data Analytics
- Research and Development
- Artificial intelligence
- Concept design (Hardware and Software)
- Robotics
- Others (Cognitive technologies, VR, Artificial/Augmented Intelligence)

(India Skills Report 2018 p.38)

We are required to take up initiatives for skilling students. If employability has to be a major program outcome for all Higher Education programs it is essential that we pay attention to

- 1) The knowledge and understanding the student receives in the course of learning
- 2) Key skills such as Communication, Information Technology, Team work, Initiative, Lifelong learning, Analytical, Motivation and Balance. We can enlist at least 65 attributes akin to the 64 arts suggested in the Indian Education system.

- 3) Developing cognitive skills such as understanding of methodologies, systems and the ability for critical thinking
- 4) Making efforts to embed employability skills into each level of graduate curriculum
- 5) Linkages between educational institutions and employers
- 6) Our syllabuses will have to be revamped; our textbooks will have to be rewritten in order to stand up to the challenge of the near future.
- 7) A skills curriculum in which the required skills are highlighted needs to be designed. These will have to be progressively given to students and a mechanism for progression from level 5 to level 10 must be set up.
- 8) A mechanism to ensure that every student is exposed to the skill area has to be determined.
- 9) A formal mechanism for assessment of the skills will have to be designed.
- 10) Problem- based, project-based learning will have to be encouraged.
- 11) The students must also adopt attitudinal changes in learning how to learn.
- 12) Students must learn how to access, adopt, adapt, assess new learning, be able to comprehend,

collaborate, co-ordinate, and compete with global competitors.

We all agree that Indian Higher Education system requires to be improved. However, we must be careful and refrain from blindly copying systems because they were successful elsewhere. With the help of the provisions of the NEO 2020, we must develop an indigenous system best suited for our situation.

We have to 'do' something because to put it in the words of Eloise Greenfield

It takes more than a wish to catch a fish!

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Online Assessment and the Tools for Effective Implementation

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Sangamner,(Ahemadnagar)

Introduction:

There are various techniques and tools used for accessing online in an e-learning environment. To perform e-assessment using these techniques, there are tools available. Some of the tools are developed by individual organizations for their own purpose while others are public platforms which can be used by anyone. Most of the learning management systems (LMS) use e-assessment tools. This article focuses primarily on the e-assessment tools of various types used in education domain with their URLs provided after every tool for ready reference. Every e- Assessment tool is explained with their use in detail which will helpful for all faculty teachers and educators from primary to higher education.

Socrative

Socrative is one of the top-rated assessment tools for teachers according to hundreds of online reviews by educators and professional reviewers alike. It's an interactive digital tool that lets you quiz, grade, and assess on the fly; "at the speed of learning." Teachers can choose from quick questions for instant feedback, class counts to see who's logged in or full quizzes for deeper understanding. This versatile tool lets you create polls and activities and shuffle questions, with or without student names attached. Quizzes are graded in real-time, and you can store them for re-use with other groups. It works on smartphones, tablets, laptops, and other devices on MS Windows, Android, and iOS. It's 100% free for students, and it's simple, flexible, and aligns well with Common Core.

URL: <https://www.socrative.com/>

Google Forms

The best reason to use Google Forms as an online assessment tool for education? Ease of use. Google Forms is a go-to among teachers because it's quick and simple to create and automatically grade quizzes even if it's your first time using the tool. Create multiple-choice quizzes or short-answer quizzes, and make an easy answer key with point assignments for each question.

Google makes it easy for students to answer questions by clicking a drop-down, typing a fast text answer, or posting a short YouTube video. Teachers can view graphs and summaries of frequently missed answers for a quick bird's-eye view of the class as a whole.

URL: <https://www.google.com/forms/about/>

Mentimeter

Pro reviewers and teachers score Mentimeter sky-high among assessment tools used in the classroom. It comes pre-loaded with education templates for the classroom like a listening skills assessment, icebreakers, formative assessments, post-lecture surveys, and polls. Create quizzes and tests, manage student expectations, engage students, and even run a teacher training workshop. Mentimeter gives everyone a voice, but it also has a neat feature to mute extra-loud students.

It's free to use and lets you create and host live quizzes either from its templates or from scratch. Pro versions for schools and universities add unlimited question slides per presentation, exports, unlimited quizzes, and support for a few dollars a month. The interface is 101-level simple, with tech support to smooth the bumps.

URL:<https://www.mentimeter.com/>

Poll Everywhere

Don't trust assessment tools for teachers that try to control your every move? Give quizzes, take attendance, and gauge understanding your own way with Poll Everywhere. It integrates with Google apps like Google Slides or MS PowerPoint and Keynote; as you prefer. It's used by more than 75% of all Fortune 500 companies and by 300,000+ educators around the world. It also works on iOS and Android phones and tablets.

Get a snapshot of where students are struggling by creating questions as word clouds, open student responses, or with multiple-choice options. Then let students answer with their phones, laptops, or tablets. Teachers can get real-time feedback in their question slides without calling on specific individuals to roll out assessment as an integrated

part of a larger lecture. This is a great way to give students a voice in steering the direction of live lesson plans.

URL: <https://www.polleverywhere.com/>

Kahoot

Students love Kahoot's game-based approach to learning and assessment. Teachers can choose from more than 40 million ready-to-go learning games or create their own in minutes. Host games live or as assignments. Students can even create their own "kahoot's" to share with classmates, creating an interactive experience. Create a quiz game in minutes, import questions from spreadsheets, and search their 500-million item question bank.

Want to add drawings from iOS or combine several mini-kahoot's into a larger assessment? Kahoot can do that, and it can insert YouTube videos into your questions. Students can plan the assessment games by themselves or as a team, and teachers can add multiple choice or true/false questions to the games. The games are timed and scored, with point scales set up by the teacher. Plus, you can download basic reports in spreadsheets.

URL: <https://kahoot.it/>

Quizlet

Quizlet is a digital learning tool that can be used by students, parents, and teachers. The site contains over 100 million sets of study materials created by other users that range in topics from Landmark Supreme Court Cases to Structures of the Heart and the entire site is available in English, Spanish, and German, however, Quizlet supports many international languages/keyboards for those wanting to input text from a wide array of languages. These study sets are free to use, or users can create their own, so the possibilities are limitless! Quizlet takes information and converts it into flashcards, quizzes, and games so that users can study the same information in a variety of forms. And users aren't constrained to using just text – images and audio are easy to include in study materials. Best of all – study materials can be shared with students, classmates, parents, and teachers.

URL: <https://quizlet.com/>

Testmoz

You can quickly create questions, move them around, copy them, import questions from your other tests, change question types, and move questions into pools. The test is autosaved while you're working on it, so you don't have to worry about losing your changes. You can also undo and redo your changes, just in case you make a mistake. You can mark questions as ungraded, you can shuffle the questions for each test taker, you can shuffle the answer choices, and you can show an explanation for any question.

You can even import questions from a properly formatted Excel file. Testmoz is powerful, and more features are being added all the time.

In this Covid 19, Pandemic situation assessment and evaluation of Students learning has become a major issue. The Testmoz website can be used to conduct online tests and Examinations. The benefits of using this website for conducting online assessment and evaluation are as follows:

- Online Test papers and Question papers can be created by the Testmoz website.
- Online assessment and evaluation can be conducted by this website.
- The students' answers can be analyzed automatically and manually by this website.
- No registration is required on the Testmoz website to create an online test paper/question paper and to conduct an online assessment and evaluation via this paper.
- All types of Questions; Multiple Choice, Fill in the Blanks, Matching, True/False, Short answer type, and long answer type questions can be placed in the online test paper/question paper generated by Testmoz.
- This online Test paper/Question paper can be created in any language and also students can type (with the help of a keyboard) their answers in any language.
- The maximum time limit can be set to conduct this online test/question paper.
- This online test paper/question paper can be conducted easily by sharing the URL of the test paper/Question paper among the students.
- Students also require no registration on the Testmoz website to attempt this online test/question paper.
- Students can also attempt this online test paper/question paper with the help of his/her mobile phone.
- In results, Start time and End time, Average time is taken by an individual student is reflected.
- Along with time information, correct responses, incorrect responses and Average Scores (in percentage), and total scores of an individual student are also reflected in results.
- Besides this, the overall result of a class can be downloaded either in the form of question-wise marks or question-wise responses.

So, it can be concluded that using Testmoz in online assessments and evaluations is an effective tool or technique nowadays

URL: <https://testmoz.com/>

Quizziz

Quizziz is a student engagement platform that allows teachers to conduct interactive lessons and quizzes with their students. The app is designed to help you participate in group activities and study on your own. To create and host quizzes for others, please create a free account at www.quizziz.com. Find free quizzes on mathematics, English, science, history, geography, languages, and general knowledge topics.

Students can join by going to joinmyquiz.com and entering the game code and their name. A Live Game requires you to click Start to begin the game. You need at least 1 player to start a Live Game. You don't need to wait until everyone has joined to start a game, and players can join even after the game has started.

URL: <https://quizziz.com/>

Myquiz

MyQuiz is a cloud-based platform specifically designed to accommodate medium to large venues using gamification to attract many players. ... myQuiz is an Event Engagement Digital cloud Platform that entertains thousands of participants at various venues. The platform supports multiplayer mode as well as single-player mode. The speaker enters his questions on the MyQuiz.org website and obtains a unique code for his game. The speaker starts the game, participants see the questions on their mobile devices; The speaker presets the amount of time to answer the question.

URL : <https://myquiz.org/>

Slido.com

Simply use your smartphone, computer, or other device and speak up. If your event uses QR code, just scan it with your phone to join. In this article: Join the Slido event.

Join Slido event

Open slido.com in your browser.

Type in the event code (without the #) to the Enter event code box.

Wait to be redirected to the event.

This is how a typical Slido quiz is run: Create your quiz questions. Edit your quiz. Activate the quiz to let your participants join. To begin, launch your video conference app (such as Zoom, WebEx, MS Teams or Google Meet) and start sharing your screen. Afterward, open the Present mode of your Slido event from Admin, so that your remote audience can see Slido displayed during the meeting.

URL: <https://www.sli.do/>

Microsoft Form

Microsoft Forms (formerly Office Forms) is an online survey creator, part of Office 365. Released by Microsoft in June 2016, Forms allows users to create surveys and quizzes with automatic marking. The data can be exported to Microsoft Excel. In 2019, Microsoft released a preview of Forms Pro which gives users the ability to export data into a Power BI dashboard. Due to recent phishing attacks utilizing Microsoft 365,[5] Microsoft uses algorithms to automatically detect and block phishing attempts with Microsoft Forms.[6] Also, Microsoft advises Forms users not to submit personal information, such as passwords, in a form or survey and also places a similar advisory underneath the "Submit" button in every form created with Forms, warning users not to give out their password.

With Microsoft Forms, you can create a form, such as a survey or a quiz, invite others to respond to it using almost any web browser or mobile device, see real-time results as they're submitted, use built-in analytics to evaluate responses, and export results to Excel for additional analysis or grading.

How to get it done

Sign in to Microsoft Forms with your Microsoft 365 work credentials.

Under My Forms, select New Form.

Enter a name for your form.

Select Add Question to add a new question to a form.

URL: <https://forms.office.com/>

Classkick

Classkick lets teachers create and share assignments, monitor students, and give feedback in real-time as students work from iPad devices or computers. Teachers can create rosters via class code, manual entry, or Google Classroom. Upon sign-up, teachers have the option to learn the features through a guided tour of videos and sample assignments. From there, they can search and modify others' assignments or use the Add Assignment option to create their own lesson from an existing file or from scratch. Each assignment consists of a series of individual slides, which appear on the dashboard. Teachers can add images from the device's camera roll, key in text, add files, draw, paste in a web link, or record audio on each slide.

There are so many ways teachers can use Classkick -- from embedding resources for future review to asking higher-order thinking questions to using text and scribe features to work out math problems. Science lab instructions are easily laid out in step-by-step slides, giving students the opportunity to demonstrate learning at each step. Or go even further and create a virtual research assignment where students can read information and take notes or add links they can reference later. Take advantage

of teachable moments by adding in questions to check for understanding on a slide, or identify students who are struggling and give them assistance without alerting their peers. Alternatively, encourage peer teaching by having early finishers provide help when their classmates ask. Classkick's unique design makes it possible to achieve these goals whether your students are learning virtually or in person.

For all that it offers, Classkick is surprisingly simple to use, with a clean user interface and details that make it especially user-friendly. For example, color-coding of rosters and assignments given to each class or group provides an at-a-glance overview of which students have which assignments and customizable stickers make it a snap for teachers to provide personalized, real-time feedback. Since students and teachers have exactly the same capabilities for writing and importing images and recording audio, it offers a nice way for teachers to differentiate instruction and promote student collaboration without having to worry about the teacher versus student view.

Lots of apps are out there that help teachers go paperless; Classkick's biggest strength is its real-time progress monitoring. While the app doesn't offer instant feedback, it does offer opportunities for almost instant help, making this a tool that truly empowers teachers by allowing them to build positive relationships with their students both in-person and digitally. While it would be a great tool for solo homework, the hand-raising feature makes the app an especially good fit for in-person, virtual, or hybrid classrooms. For teachers with large class sizes, the navigation could make it difficult to stay on top of things, so it's likely a tool that works best with fewer students. Whether kids are working solo or in groups, Classkick is a great way for kids to be able to get attention and support from their teachers and peers when they need it most.

URL: <https://classkick.com/>

Tophat

Top Hat is a student engagement platform that professors use inside and outside of the classroom. Top Hat provides a lecture tool that tracks attendance, asks questions, features interactive slides, and manages classroom discussions. Outside of the classroom, the platform features an InteractiveText platform where professors can adapt, customize, or create content for their courses.

Using Top Hat, professors can engage their students using multiple question types, Discussions, and Tournaments with real-time feedback and Gradebook integration with Canvas, the University of Denver's

Learning Management System.

You can use Top Hat to:

- Run live polls and quizzes to gauge understanding and track participation
 - Take attendance
 - Assign online homework and review material
 - Host interactive discussions and tournaments
 - Obtain anonymous feedback
 - Automate grading
- URL:** <https://tophat.com/>

Piazza

Piazza is a learning management system that allows students to ask questions in a forum-type format. Instructors are able to moderate the discussion, along with endorsing accurate answers. The software was invented by PoojaNath in 2009 in order to speed response times and create a common place where students could engage in discussion outside of the classroom. Utilizing an extensive notification system and a simple layout, the response time on Piazza averages approximately 14 minutes. Instructors also have the ability to allow students to post anonymously, encouraging more in-depth discussion. The word Piazza comes from the Italian word for plaza—a common city square where people can come together to share ideas and knowledge.

Users can publicly (and anonymously, if the head instructor allows it) ask questions, answer questions, and post notes. Each question prompts a collective answer to which any user can contribute and an instructor answer, shown directly below, which can only be edited by instructors. Multiple students are allowed to contribute to each answer like Wikipedia entries, and each answer has a version history that shows what each student wrote. [9] Users are allowed to attach external files to posts, use LaTeX formatting, view a post's edit history, add follow-up questions, and receive email notifications when new content is added. The interface consists of a dynamic list of posts on the left side of the screen, a central panel for viewing and contributing to individual posts, and an upper bar for account control. According to the company's data, the average Piazza question is answered within 14 minutes.

Individual Piazza classes are self-contained and can be locked with an access code. Anyone may create a class, but the head instructor retains full control over the class content, along with administrative abilities such as endorsing good answers and viewing more detailed statistics on class activity.

URL: <https://piazza.com/>

Teachers pay teachers

Teachers Pay Teachers is the go-to platform created

by teachers, for teachers to access the community, content, and tools they need to teach at their best. Founded in 2006, TpT provides a marketplace for teachers to exchange instructional materials and access easy-to-use digital tools. Today, TpT empowers teachers with the world's largest catalog of over 5 million pieces of educator-created content. Our community of more than 7 million educators — including 85% of PreK-12 U.S. teachers — use TpT to save time, support students, and learn from each other.

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Communal Harmony: A Key and the Source of Economic Development

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Abstract

Communal harmony implies mutual understanding, peaceful co-existence, cooperation and coordination among all the constituents of a community. Communal harmony is the prerequisite for any community or country's march to harmonious development –physical, social and environmental.. Harmony is natural, disharmony is man-made. Cost of social disharmony or communal conflicts is enormous which reflects in shocks to economic development.

Sustained economic development cannot be achieved by investment and economic incentives alone. The preconditions for achieving economic development include the establishment of law and order and the rule of law, development of institutions and enhancing their capacity, advancement of learning, a set of values that are conducive to economic growth and many such factors.

This paper tries to look into the connection between economic development and communal harmony. Disharmony, being man-made arises because of reasons related to power which emerged from politics, economics or religious factors, to name few. Here, the focus is to find whether harmony is the cause of development amongst many, or the status of economic underdevelopment results into communal conflicts creating further shocks to economic development itself.

In the first part of the paper, the causal relationship is shown where communal disharmony is hindering the factors of economic development. Whereas, in the second part of the paper it is shown how communal disharmony is also resulted from deficiency of economic prosperity. Hence finally, It is concluded that Communal harmony and economic development go hand in hand

I. Introduction

Communal harmony implies mutual understanding, peaceful co-existence, cooperation and co-ordination among all the constituents of a community. Harmony means proper conformity of the parts to one another and to the whole. Communal harmony is the prerequisite for any community or country's march to harmonious

development –physical, social and environmental. Communal harmony does not only mean an absence of communal tensions, strife and riots. It is something deeper, something emotional too.

India is looked as a nation teaching lessons on communal harmony since ages. Gandhian thoughts have sowed the seeds of integration, expecting to reap communal harmony despite of issues like ethnic, cultural, region wise, communal, linguistic and castewise disparities. None the less disparity created by economic reasons have contributed the maximum disharmony in the nation. The ray of thoughts also have attracted attention to not so strong leadership in the country in the recent past as the reason for prevailing disharmony.

Maximisation of wellbeing is the ultimate objective of development. The country's economic engine cannot fire with all its pistons without all communities feeling that they belong to this nation as equal citizens with equal rights and opportunities. When it comes to Economic development, it has taken place only when cultural, sociological, institutional and technological changes conducive to economic growth have occurred. They not merely influence, but determine the economic variables that are needed for rapid economic growth. Sustained economic development cannot be achieved by investment and economic incentives alone. The preconditions for achieving economic development include the establishment of law and order and the rule of law, development of institutions and enhancing their capacity, advancement of learning, a set of values that are conducive to economic growth, discipline, good work ethics, inventiveness, entrepreneurship, development of skills, infrastructure and proper economic policies. The economic benefits of a united nation are substantial, especially in the long run. The resolution of the ethnic issue and the development of a national consciousness are vital for the full realization of the country's economic potential. In the past the constant distraction of the country by ethnic conflicts that developed into terrorism and then to a costly war of almost thirty years are significant

causes for arresting potential economic development. Peace now offers an opportunity for ethnic reconciliation that is an essential foundation for rapid economic development. Without a durable solution to the ethnic problem the brain drain will continue, foreign investors would be vary of political instability, the educational and skills development of the country would be stifled and the country would be continuously distracted from the tasks of economic development by sporadic issues of communal disharmony. The economic gains of a united nation are not quantifiable: it is intangible but huge. It will strengthen and consolidate efforts for development. The recognition of such benefits should spur the government and people towards the settlement of the ethnic issue expeditiously and with consummate skill.

Conflicts suppressed or transformed cannot ensure a permanent situation of peace and more positive non-violent methods are essential for this purpose. A lot of resources are spent to improve the so called technology which can produce sophisticated weapons which can wipe out life from the earth. Due emphasis should be given for the propagation of the noble culture of non-violence for the secure wellbeing of humanity in the future.

The multi-religious nature of Indian society is being wisely exploited by the vested interests. The principle of secularism, envisaged by the makers of the Indian constitution is endangered due to the rising communal antagonism. Large scale communal violence and fast spreading communal riots can paralyse the nation's economic growth, may weaken the stability and even pose threat to the security of the country. Hence need to check the spread of communal riots

The successful rebuilding of the devastated areas and the reconstruction of economic and social infrastructure are basic requirements. This requires a massive investment that the country's own finances are quite inadequate to mobilise for this purpose.

II. Literature review

Rajeshwari (2005) has shown how communal riots are not caused spontaneously and also that they are rarely caused by religious animosity. They arise due to conflicting political interests, which are often linked to economic interests. Such riots are most of the time provoked due to political interest and played by using economic tools.

Rodrik (1999) proved using econometric technic that Countries experienced the sharpest drops in growth after 1975 were those with divided societies (as measured by indicators of inequality, ethnic fragmentation, and the like) and with weak institutions of conflict management (proxy indicators of the quality of governmental institutions, rule of law, democratic rights.

Institution of economics and peace (2017) gave

positive peace index showing poor performance of nations like Afganistan, Pakistan, Serbia etc. Harmony is taken as one of the ingredient for peace besides acceptance of the Rights of Others, low levels of corruption and free flow of information. Hence, the link between harmonious background and economic development is clearly indicated. According to the Institute's 2014 Global Peace Index, \$9.8 trillion has been spent on violence containment globally, and since 2008, 111 countries have deteriorated in levels of peace while only 51 have increased their peace levels.

As per World Bank (2014) the MDGs' failures show we cannot achieve sustainable development where there is no peace and stability, as conflict and violence are widely recognized as the number one obstacle to achieving them.

III. India's story

According to Institute for economic and peace, when the direct loss was quantified from the violence took place in 2014, it amounted to US\$ 314.7 billion, or US\$ 273/p.p. This was equivalent to 4.7 % of India's GDP (The Hindu: dated 17th June 2015). The country has been ranked 143rd out of 162 nations in global peace index and 5th out of seven countries in south Asia. Scores of most countries in South Asia slipped with only Bhutan, Nepal and Bangladesh registering gains. It is expected that fall in military budget can be taken as one of the proxy for communal harmony which is yet a distant dream for India. In fact, last year, the hike in defence budget was 6.2% compared to allocation in 2016-17. The increase was 9.76% for 2016-17 compared to 2015-16. (Live mint 7th march 2018)

On the other hand the social hostilities index is measured considering factors like crime motivated by religious hatred, mob violence related to religion, using force to prevent religious group from operating, religion-related terrorist groups, harassment of women violating religious dress code, violence over conversion etc. The index ranked India 4th in 198 countries. India ranks 42nd among 198 countries in terms of government restriction on religion.

IV. Research question

This paper intends to check

1. The relationship between communal harmony and economic development.
2. Causality of the mentioned variables
3. Degree of impact of harmony on development and vice versa.

V. Economic consequences of communal disharmony

Political and social stability have impact on economic decisions. The reasons for communal disharmony can be due to religious differences, non-recognition of one's

dignity, violations of rights of a particular group of people in society etc. the result of any such incidence is disturbance in the institutional mechanism. Such disturbances often are expressed violently creating risk of lives and property of citizens. This creates a non-conducive atmosphere for economic progress of a country. Following are some of the factors contributing to economic progress of the country

Diverting foreign direct investment (FDI): As shown by Stanisis(2013) in his study of 25 nations impacted from terrorist attack, the flow have a significant effect on both the size and the probability of investment. If attacks double, the share of FDI in a receiver's GDP decreases by 1.2% of the sample average. The response to any risk either of terrorism or of any other disharmony, the investor would shift the investment to less risky economy. That affects the funding of highly needed infrastructure and other similar projects of development

Destroying/Damaging infrastructure- Biggest one time loss of infrastructure was experience in US by 9/11 attack. Terrorism give rise to communal disharmony and vice versa. Many a times communal disharmony is expressed by masses destructing the modes of transportations or having in-appropriation of the infrastructural assets like bridges, dams ports etc. Such terrorism is a poisonous outcome of communal conflicts experienced between Hindu Muslims in India several times.

Redirecting public investment funds to security: A big proportion of public expenditure is spent on defence expenditure. It is obvious that the expenditure incurred on safety of the citizens of country is indirectly for welfare boosting. However in case of communal disharmony, the money which is saved for the purpose of investment is used for the internal safety measures like police and paramilitary forces. Hence opportunity cost of such expenditure is the sacrifice of few infrastructure projects, which otherwise would have existed. The war is a financial burden, an impediment for investment and crippled several areas of production in the economy.

Limiting trade. The countries facing the communal disharmony are failed to create trust for the investors in their due returns. International trade gets affected as it works with time lag. i.e. today's order is tomorrow's transactions in case of import and exports. e.g. Syria's trade with EU is reducing over years from 12.5€ billions EU imports and 5.3€ billions EU exports in 2014 to 4.9€ billions imports and 3.4€ billions exports in 2017 despite of its dominance on oil supply.

VI. Models on peace and economic development

It is observed that the peace is a pre-requisite for progress. Since the historical time, during agricultural

phase, the plain land was preferred for cultivation as its productivity or efficiency was higher than otherwise and the cost of production would be minimum. Similarly, economic progress also needs to be cost efficient, with not only economic variables but, also with socio-political variables, which are supplementary to economic factors. Today, India being fastest emerging country in the world, with lot of economic potentials, needs to keep a double digit growth rate to attain the goals set for development. However, any disturbance to this growth rate, resulting from economic or other than economic reasons, should be avoided. Communal disharmony is one of the very strong factor in disturbing rate of growth, needed for keeping the economy in motion.

It is observed that the countries which are ranked at top in global peace index are in category of high developed countries. E.g. New Zealand, Portugal, Austria, Denmark, etc. whereas, the countries which are vulnerable to communal disharmony (including terrorism) are in category of less or underdeveloped nations e.g. Nigeria, Syria, Turkey, Libya, Somalia, Afghanistan, Pakistan, Yemen etc.

The mismanagement of the communal issue has been a deep-rooted cause for the country's modest economic development. Without a durable solution to such problems, the brain drain will continue, foreign investors would be wary of political instability, the educational and skills development of the country would be stifled and the country would be continuously distracted from the tasks of economic development by communal disharmony.

Achieving durable reconciliation and building a solid sense of nationhood is neither easy nor possible in a short period of time. What is needed is movement in the correct direction.

The violence at the Jaffna University must be looked at as an opportunity to seriously address the issues of national reconciliation. The economic gains of a united nation should spur the Government and people towards the settlement of the ethnic issue expeditiously and with consummate skill.

VII. Economic development: as a solution for bringing communal harmony.

Economic development is the process by which a nation improves economic, political, and social well-being of its people irrespective of class, caste region and gender. Unfortunately the process of development is not uniform for all. The percolation rate of development differs on the basis of difference in the absorption of economic growth by heterogeneity of groups of people. Higher economic and financial status of any group makes it easier to avail the fruits of development without any hassles. But when the degree of development is above the so called invisible line

of demarcation of inclusion and exclusion of beneficiaries, then exploitation based on any heterogeneity lies outside the mentioned reach. Economic development is usually the focus of federal, state, and local governments to improve standard of living through the creation of jobs, the support of innovation and new ideas, the creation of higher wealth, and the creation of an overall better quality of life. Economic development is often defined by others based on what it is trying to accomplish. Many times these objectives include building or improving infrastructure such as roads, bridges, etc.; improving our education system through new schools; enhancing our public safety through fire and police service; or incentivizing new businesses to open a location in a community.

Economic development often is categorized into the following three major areas: These areas would work, provided there is an absence of the conflicts.

Firstly, Governments working on big economic objectives such as creating jobs or growing an economy. These initiatives can be accomplished through written laws, industries' regulations, and tax incentives or collections for heterogeneous groups of people. Abiding of groups with the above mentioned rules smoothens economic growth.

Secondly, programs that provide infrastructure and services such as bigger highways, community parks, new school programs and facilities, public libraries or swimming pools, new hospitals, and crime prevention initiatives. When there is a hassle free daily routine of people, like availability of water, electricity, health facilities, transportation, and then the chances of conflicts is minimized and economy grows further.

Finally, job creation and business retention through workforce development programs to help people get the needed skills and education they need. This also includes small business development programs that are geared to help entrepreneurs get financing or network with other small businesses.

Development tends to bring following factors which work towards maintenance of peace and harmony in society

Development leads to increased expenditure on Education. Education is expected to make people wiser. The ability to understand and deal with difficult situations becomes easy if people are educated and wiser. There are less chances that educated people will be misguided on the ground of religion or any other related issue.

Availability of employment opportunities- economic development depends on economic expansion of various sections of a country. Such expansion increases many jobs opportunities which absorbs people who would otherwise be idle and create nuisance. Working people have to be bound to their respective jobs and ideally not

to be diverted to disharmonious reasons.

Reduction in poverty- one of the important reason of communal disharmony is existence of poverty. Low or lack of income can divert people to select inappropriate way of earning money. Many young unemployed poor have been diverted to carry terrorist activities in exchange of money. Economic development leads to upliftment of people above poverty level. It is observed that many terrorist countries are unable to bring economic development as they are trapped in terrorism. But if they are able to break the vicious cycle of poverty then they can experience harmony, and further brings economic development.

Development of technology- technology is double edged sword. However, if it is developed constructively, it not only stops disharmony in any forces but also helps to maintain the harmony for long. E.g. Cable camera system fitted in conflict prone areas supplies correct information to concerned authorities. Such system is supported and afforded in economically developed areas.

Supply of basic infrastructure- shortages of supply of infrastructure may lead to conflicts which may turned as community conflicts if not handled wisely. E.g. conflicts arisen from shortage of water, cannot be solved without proper institutional management which is developed with economic progress.

Development of political economy- Poor political economy leads to conflicts but development of political economy makes complacent policy decisions to promote economic growth. The policies like fiscal policy, monetary policy are socio-neutral policies. Helping to maintain social harmony.

VIII. Conclusion

Unity among communities and religious harmony are vital factors for development of the country. Divisions among us will strengthen various hostile forces seeking to deny us our freedom. When all communities rise in unity, the forces hostile to the country will be weakened and development further strengthened. Hence at this juncture of development, there is a vital need to maintain communal harmony.

Trade in goods 2014-2016, € billions

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X. Appendix

Country	social hostilities index
Syria	9.2
Nigeria	9.1
Iraq	8.9
India	8.7
Israel	8.2
Yemen	8.1
Russia	8
Afghanistan	7.9
Palestinian territories	7.4
Pakistan	7.2
Egypt	7.2

Source : <http://ec.europa.eu/trade/policy/countries-and-regions/countries/libya/>

Year	EU imports	EU exports	Balance
2014	12.5	5.3	-7.2
2015	7.5	4.2	-3.4
2016	4.9	3.4	-1.4



“Atmanirbhar Bharat” an Express Way for Sustainable Development

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Abstract-

Hon. Prime Minister of India launched the program of Atmanirbhar Bharat during pandemic and in situation of Chinese threat or aggression. It is also known self-reliance economy. The present article tries to cover the main aspect of schemes its constraints and possible solutions. The main intention of announcement of program and inclusion in budget is to boost the Indian economy with sufficient protection facilitation and concessions to industrial sector mainly for Medium and Small Scale industries to agriculture and service sector. The announcement is not for isolation from world trade and services or from international market but to provide strength to economy. More emphasis is given in present budget for such program. The self-reliance economy was earlier announced by Studied Economist Dr. Manmohan Singh. The position of balance of trade balance of payment exchange rate are depend factors for foreign trade. India is always facing problem of adverse situation in balances. Depended on imports are to be reduced and exports are to be raised is the key in foreign trade.

The opportunities in form of agro based economy large demography dividend ample stock of natural sources like energy water mineral are available. However, the factors like interest cost transport cost and logistic cost is major problem. This challenge is to be accepted and the Atmanirbhar economy must be build.

Introduction- On the background of Covid -19 and China's movement on Indian borders the Prime Minister of India announced the ambitious programme of Atmanirbhar Bharat. It is to free trade for Indian Corporate Sector, simplified Global tender norms in favour of country and many more. The current pandemic put heavy pressure on economy. Reduction if public revenue increase in public expenditure more concessions to poor people and high expectations form general public, delay in Government collection caused difficult situation before Indian Economy. The reduction in Gross Domestic Product bank deposits demand for bank credit also shows negative trend. As per the economists and past experience

the Government can increase the spending to transfer the hands of money from Government to Public. This was done as per the demand by the government. The basic problem of Indian Economy and additional problem due to Covid-19 put heavy pressure on economic system. Employment generation stability of income relief to corporate sector help to famers was need of the hour. On the back ground of the economic condition Government announced the Atmanirbhar Programme.

Objectives of Study

- 1) To mention the highlights of Atmanirbhar Bharat Programme.
- 2) To evaluate the financial provisions made in programme.
- 3) To put lights on essential sector of economy and its demand.

Atamanirbhar Bharat Programme- Government of Indian announced the package on 12 may 2020 as a relief to fight against Covid -19 situations. Economy, Infrastructure, System, Demography and demand are designated five pillars of the programme which aims at Self-reliant India. Economy is important for development. But economy depends on economic system adapted available resources policy adapted for development. Infrastructure is social overhead capital. It is necessary to provide various services to general public. Development of infrastructure will boost economic activities and can speed up the development or accelerate the growth. System is closely related to various services and facilities. It also the administrative procedures adapted by government or any organization. Demography is related to population and nature of age-related classification of population. It is said that India has demographic divided as large percentage of population is young which can contribute in development. Demand which is last but very important pillar of the economy. It is related to willingness to purchase the goods or services backed up by economic power. The increase in demand will change the whole economic cycle in positive direction.

The announcement is not new for economy. Dr.

Manmohan Singh the former Prime Minister and renowned economist were also consistently emphasizing the policy of self-reliant India. The problems like adverse balance of trade and balance of payment sever competition at International market, non-utilization of local technologies and sources can be dealt with policy of self-reliant.

Highlights of Programme-

- The total amount is announced as Rs. 20 lakhs Corers which is equal to 10% of GDP of the country.
- The borrowings limit of state governments increased from 3% to 55 of Gross Domestic Product for 2020-21 which will help to supply of additional 4.48 lakhs corers to various state governments.
- Universalization of Ration card as One Nation One Card.
- Privatization of Public Sector Undertakings.
- Power distribution to Urban Local bodies for revenue generation.
- Collateral Free Automatic Loans to Medium Small Micro Enterprises up to Rs 3 Lakhs Corers. Unit can borrow up to 20% of there outstanding loan as on February 2020-21.
- Banks can provide debt to stressed MSME which will convert into capital of the unit.
- Street Vendors to get Rs.10000/-
- Expediting payment dues to MSME in 45 days.
- No global tenders for Rs.200 Corers to facilitate MSME for expansion of business.
- 2.5 Corers farmers will get financial benefit through Kisan Credit card as government will provide 2 Lakhs Corers.
- Agri-Infra Fund of Rs 1 Lakh Corer is created.
- Provision for emergency working capital for farmers, the provision of Rs. 30000 corers is made and NABARD will give financial support for the scheme.
- The Pradhan Mantri MatsyaSampadaYogana is announced to help to Fishermen for worth Rs. 20000 Corers.
- Animal Husbandry Infrastructure Development Fund of Rs. 15000 Corers will be set up.
- Amendments to the Essential Commodities Act which gives more powers to central and State Government to regulate there prices and supply of commodities like edible oil, cereals, seeds, pulses sugarcane and its product and rice paddy.
- Introduction of Agriculture marketing reforms by which famers will get choice to sell the product at remunerative prices, barrier free interstate trade and facility of e-trading.

- Affordable Rental Housing Complexes for migrant workers and urban poor will be provided with support of Pradhan Mantri Awas Yojana.
- Public Private Partnership method for airports.
- Foreign Direct Investment in defense manufacturing will increase from 49% to 74%.
- Rs. 50000 corers will be spend on infrastructure for coal evacuation.
- MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) will get additional funds by Rs. 40000 corers which will in total 101500 corers.

Evaluation of financial provisions –

Various sectors of economy were considered for financial provisions. It includes additional funding to various state governments to the tune of Rs. 4.28lakhs corers. The state government can handle the present pandemic situation and can use it for social and health sector. The state governments are always facing the problems like borrowings limit, shortage of funds and delay in getting funds this provision can help to them. The provision of Rs 10000 to street vendors is good on account of survival in pandemic and increase in government spending. The agriculture can get advantage of Kisan card and can be benefited to the extent of Rs. 2 lakhs Corers. The agri. infrastructure can be used for irrigation facilities as well as fertilizers industries. Rural economy can be strength with help of Animal husbandry Fund and increase in MGREGS allocation.

The privatization of airports can boost the travel services and private investment can be boost which will generate benefits like increase in employment, increase in per capita income reduction in government spending and quality air travelling. Increase in FDI in defense manufacturing can boost manufacturing sector in near future. It will also help to generate employment opportunities. India can export defense products in more number. As coal is basic natural source for energy the infrastructure fund of Rs. 50000 corers will facilitate coal evacuation.

Other credit and commercial provisions- Apart from financial benefits by setting various funds various credit and commercial provisions are made to develop various sector of Indian economy. The Cash Reserve Ratio was reduced which will bring Rs. 137000 corers in market to face liquidity crunch. The Marginal Standing Facility was increased for the banks. This will help to banking sector. For housing Sector Credit Linked Subsidy Scheme for Middle Income Group was extended up to one year which will bring additional Rs.50000 cores in housing sector.

In short infrastructure, agriculture, power, medium small scale industries, migrant workers privatization, and liquidity in market are some essentials aspects are cover in package of Atmanirbhar Bharat.

Demand of some important sectors. The demand of some sectors like health care, infrastructure, airports, ports energy and housing is more in number. Some examples are as below.

In case of infrastructure the projects are slow in progress. The demand is ever increasing. Though the privatization model is adapted it is administratively and politically difficult to implement. The urban infrastructure project like smart cities shows following status.

SMART CITIES MISSION

Table No. 1

S.NO	PARTICULARS	DETAIL NUMBER AND RUPEES
01	Total Cities	100
02	Total Projects	5151
03	Cost of Total Projects	205018 Corers
04	Tendered Projects	2748
05	Incomplete Projects	2403
06	Cost of Tendered Projects	104964 Corers
07	Completed Projects	2031
08	Cost of Completed Projects	62295

Source – MOUD and B. Line Feb 2019

INDIA,S TRADE DEFICIT WITH ASEAN AND OTHER FIVE COUNTRIES –CHINA JAPAN SOUTH KOREA AUSTRALIA AND NEW ZEALAND .(Billion dollar)

Table No. 2

S.NO.	YEAR	EXPORT	IMPORT	TRADE DEFICIT
01	2013-14	70.3	124.7	-54.4
02	2014-15	56.8	139.6	-82.8
03	2015-16	45.9	134.0	-88.1
04	2016-17	52.5	135.9	-83.4
05	2017-18	61.1	165.5	-104.4
06	2018-19	67.7	172.9	-105.2

ISSUE OF TRADE DEFICIT

Table No. 3

YEAR	IMPORT	EXPORT	DEFICIT
2014-15	56.8	134.6	-82.8
2015-16	45.9	134	-88.1
2016-17	52.5	135.9	-83.4
2017-18	61.1	165,5	-104.04
2018-19	67.7	172.9	-105.2

AGRICULTURE STATISTICS OF INDIA

Table No. 4

Details/ Year	2010- 11	2011- 12	2012- 13	2013- 14	2014 15	2015 16	2016 17	2017- 18	2018-19
Food Grains	224	259.	257	264	252	251	275	285	283
In tones									
Growth Rate	8.79	6.4	1.49	5.57	0.22	0.65	6.27	4.98	2.92

Agri. Statistics, Economic Survey Govt. of India

Findings and Conclusion

I recent budget 2022-23 is digital Indian budget with Atmaribhar Based. Including Infrastructure Programme Capital Expenditure more provided for and joining of rivers. It may be incline of it. But still I am worrying on education and health sector but it is my personal opinion.

Findings-

- 1) Such Schemes are n line of Smart Indian Self Reliance India Green Revolution and Localization of Indian capacities of Economic Installation with quality of Global Standards
- 2) The AtmarnirbharNharat is Fund based programme with always in need of funds or own finds for government. But It is declared on Covid Background. It is criticized as mere announcements rather than practical one.
- 3) Smart City Projects Shining India JNNURM schemes and so many popular projects are either incomplete or closed or declared stalled or change reorganize due to lack of funds.
- 4) Political economy plays more important role in country than the real economics. Change in Government and state government policies are important in this regard.

Source – As mention in foot note
Document of Atmnirbhar Bharat
Budget Document 2022-23



Morality : Heart of a Good Teacher

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Principal

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I) INTRODUCTION :

Third edition defines Morale is a mental condition with respect to cheerfulness, confidence and zeal'. Moral is defined as 'a composite of feelings, attitudes, and sentiments that contribute to general feelings of satisfactions. In this connection morale is understood as one's attitude towards accomplishing his work rather than emotions he displays during work, which in turn affects organizational and individual objectives. Y.K. Bhushan, defines moral as it is an expression of attitudes which the members of an organisation develop and adopt towards the organization, its members, its purposes and its leaders.

So, morale is the summation of feeling of employees as a group towards various aspects of their work, the company, working conditions, fellow workers, supervisors and so on. If the attitude of employees towards all these aspects is more positive, morale of the group is said to be high, otherwise, it is low. According to Date Yoder, high morale is likely to be associated with superior motivation and accomplishment and low morale with frustration, discouragement and lack of drive.

Though, the teacher is highly qualified, experienced, satisfied with the career and talented in teaching and other academic work, unless he/she is actually involved and committed to his/her job, all the said qualification, experience and talents is a mere useless. This commitment is voluntary and automatic one. It means, one cannot compel a teacher to be committed to his/her job. It should be automatically created by both internal and external motivators. The commitment, interest towards job, aim to deliver the best, positive attitude towards job and institution is nothing but 'morale'. If he/she does not have high morale he/she may not be able to put in all his/her efforts in attaining the objective of any educational system. It is the duty of the people around the teachers to provide them the environment which will boost up their morale. The people around them are, their family members, per group, administrators, students and the society like media, parents of the students and the general public.

NCTE states, "A teacher in the technological age

must have commitment to the learner, commitment to the society, commitment to the profession, commitment to achieve excellence and commitment to basic human values. Thus, a teacher should be equipped with modern competence to work effectively to cater to the needs of information-seeking society, to prove himself or herself as a knowledge worker.

II) SCOPE OF THE STUDY :

The process of redefining and developing the crucial role of the teacher in student learning is one where the teacher provides coaching and scaffolding support as a central and important pedagogical element, and as an alternative to didactic forms of teaching. Some of the roles identified are:

- The Process Facilitator : Concerned with facilitating the range of online activities that are supportive of student learning.
- The Advisor-Counsellor : Works with learners on an individual or private basis, offering advice or counselling to help them get the most out of their engagement with the course.
- The Assessor : Concerned with providing grades, feedback, and validation of learners' work.
- The Researcher : Concerned with engagement in production of new knowledge of relevance to the content areas being taught.
- The Content-Facilitator : Concerned directly with facilitating the learner growing understanding of course content.
- The Technologist : Concerned with making, or helping to make technological choices that improve the environment available to learners.
- The Designer : Concerned with designing worthwhile online learning tasks.

Education is a powerful and fundamental force in the life of man which is instrumental in shaping the destiny of the individual and the further mankind. In spite of the fact that technological advancements have made

headway in the process of teaching-learning, it has not been found possible to replace the teacher. If teachers acquire professional competencies and commitment, then high quality learning can be achieved by bringing about positive changes in the cognitive, affective and psychomotor areas of human development of their pupils. In the context of the present day school realities, aims and objectives of education, a teacher is expected to perform various roles. Therefore, teachers should be competent to handle various roles and the teacher training ought to be relevant to the demands of a teacher's job. In the field of education teachers should equip themselves to perform their professional duties meaningfully. Competencies are the key in today's teacher performance. The teaching profession demands teachers to be innovative in their attitudes, flexible in their approach, always updating themselves with their subject knowledge.

III) OBJECTIVES OF THE STUDY :

- 1) To boost up the approaches of the employees.
- 2) To create emotional attachment of individual's acceptance of goal.
- 3) To develop the feelings of happiness and betterment of job – related attitudes.
- 4) To acquire professional competencies and commitment.
- 5) To adopt technological advancement in teaching and learning.

IV) RESEARCH METHODOLOGY :

Researcher has especially collected a studious and update data from primary source and secondary. The discussion and interviews with eminent personalities of education field, principals and experienced professors has focused certain psychologied, philosophical and rather practical views. Besides the essential information is collected through the references newly published by the eminent authors.

Approaches to Morale

There are various approaches to boost up the morale of the employees, some of which are discussed here.

Psychological Approach

Ralph Currier Davis has defined morale as, mental condition which leads individual and groups willingly to subordinate their personal objectives temporarily and within reason, to further the company service objectives. Mee, holds the view that good morale is the mental attitude of the individuals, or of the group, which enables an employee to realize that maximum satisfaction of his drives coincides with the fulfillment of the objectives

with those of the company, and subordinates his desires to those of the company. Flippo, has described morale "As a mental conditions or attitude of individuals and groups which determines their willingness to co-operate. Further he states that good morale is evidence by employee enthusiasm, voluntary conformance with regulation and orders, and willingness to co-operate with others in the accomplishment of an organization's objectives. Poor morale is evidence by surliness, insubordination, a feeling of discouragement and dislike of the job, company and associates."

Huneryager and Hockmann, define morale as a synthesis of an employee's diverse reactions to, and feelings for, his job, his working conditions, his superiors, his organization, his fellow workers, and his pay and so on. Yoder, states that "morale is a feeling, somewhat related to esprit the corps, enthusiasm or zeal. For a group of workers, morale, according to a popular usage of the word, refers, to the overall tone, climate or atmosphere or work, perhaps vaguely sensed by the members. If workers appear to feel enthusiastic and optimistic about group activities, if they have a sense of mission about their job, if they are friendly with each other, they are described as having a good or high morale. If they seem to be dissatisfied, irritate, cranky, critical, restless and pessimistic, they are described as having poor or low morale. 'Theo Haimann (1976) says: "It is a state of mind and emotions affecting the attitude and willingness to work which, in turn, affected individual and organizational objectives."

Social Approach

According to Kornhauser. Morale as it operates in the industry may be considered as tendency of employees to work together enthusiastically for a common purpose. According to Stagner (1958). Morale must always be defined in terms of an individual – group relationship, it is an index of the extent to which the individual perceives a probability of satisfying his own motives through co-operation with the group. Obviously, there is no such phenomenon as morale; in general, the state of individual's morale must be gauged relative to some specific group, such as his company, his informal work group or his union. An high morale exists when the individual perceives himself as a member of a group and perceives a high probability of achieving both individual and group goals through a course of action. Viteles (1962), viewed about morale as an attitude of satisfaction with the desire to continue in and willingnes to strike for the goals of a particular group or organization. Watson (1962), describes group morale as including a positive goal, a sense of togetherness among team members, an awareness of danger and sureness of improvement and progress.

Classical Approach

Gordon Allport, the famous psychologist, provides a basic understanding of morale. According to him, morale like health and sanity has to do with the background conditions of living. It is found on the fringe rather than in focus of consciousness. It has to do with individual effort in a group endeavour.

V) FINDINGS :

Education is basically a social process by which knowledge is transferred to students through the intermediaries, the teachers. It can be attained through formal and non-formal systems of education. The quality of its citizen depends, not only exclusively but also in a crucial measure upon the quality of their education, the quality of their education depends more upon the quality of teachers. Only competent teachers can materialize policies and plans of education in the classroom at gross root level. The teacher play vital role in teaching – learning process upon whose competency and efficiency the standard of education depends. A competent teacher is amongst the foremost factors contributing to the educational improvements at all levels.

The teacher competencies related to instructional planning and implementation, between the teachers who have trained through distance mode as well as conventional system. Further, it is also concluded that there is no significant difference in the teacher competencies related to instructional planning and implementation, between teachers who have trained and untrained.

- a) Classroom management : The study reveals that there is a significant difference in the teacher competencies related to classroom management, of teachers who have trained through distance mode as well as conventional system. Further, it is also concluded that there is a significant difference in the teacher competencies related to classroom management, of teachers trained and the untrained.
- b) Assessment and evaluation : The study found that there is no significant difference in the teacher competencies related to assessment

and evaluation, between the teachers who have trained through distance mode as well as conventional system. Further, it is also concluded that there is no significant difference in the teacher competencies related to assessment and evaluation, between the teachers trained and untrained.

- c) Interpersonal relations : The study found that there is no significant difference in the teacher competencies related to interpersonal relations, between the teachers who have trained through distance mode as well as conventional system. Further, it is also concluded that there is a significant difference in the teacher competencies related to interpersonal relations of the teachers trained and untrained.
- d) Teachers' character : The study found that there is no significant difference in the teacher competencies related to teachers' characteristics, of those who have trained through distance mode as well as conventional system. Further, it is also concluded that there is a significant difference in the teacher competencies related to teachers' characteristics of the trained and untrained.
- e) Impact of Training Programme on Teacher Competencies
It is concluded that there is a significant difference in the teacher competencies of the trained and untrained teachers, not only in classroom performance but also guiding and counseling the child to overcome study related problems.

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Education for Woman Empowerment : A Need of Today



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Introduction :-

Empowerment is a term widely used in the context of development, particularly women's development. The empowerment approach was first clearly activated in 1985 by Development Alternatives with Women for a New Era (DWAN). In the mid 1980's, the term empowerment became popular in the field of development, especially with reference to women. 'Power' is the key word of the term 'Empowerment' which means control over material assets, intellectual resources and ideology. The material assets over which control can be established may be of any type-physical (land, water and forests), human (people's bodies, labour and skills), financial such as (money and access to money). Knowledge, information, ideas can be included in intellectual resources (Halder, 2010).

The core element of empowerment is power. The prefix 'em' is attached to the noun 'Power' to create a verb (empower). According to Webster's New World Dictionary (1982) this prefix is used to form a verb meaning "to make, make into or like, cause to be". Thus "to empower" is to make or cause power. Hence, the noun 'empowerment' refers to the process by which power is gained developed, seized, facilitated or given.

Empowerment broadly refers to the expansion of freedom of choice and action to shape one's life. It implies control over resources and decisions. The meaning is more significant in context of the marginalized people whose freedom is severely denied or curtailed by their voicelessness and powerlessness in relation to the state, community, household, educational institutions or markets. Empowerment develops participation of weak marginalized and excluded sections in the process of development. It has the capacity of creating new dimensions of lives of marginalized and excluded groups to set access to different social development paradigms. Thus, empowerment is the expansion of resources, capabilities, abilities, choices, and decision making of people to participate in, negotiate with influence, control, and held accountable institution that affect their life.

Empowerment in the context of education as human rights minimally touches upon educational access, retention and success of some marginalized people who find no access to education for satisfying their needs and aspirations and who do not discover any meaning of educational achievement that is rendered by schooling.

Therefore, Empowerment stands for acquiring the power to think, to speak, to act freely to exercise choice, to raise voice and to be able to take a decision. This is equally true for both man and women. Empowerment is a process of awareness and capacity building leading to greater participation, to greater decision making power and control, and to transformative action. Empowerment, in a nutshell, is a way of defining, challenging and overcoming barriers in one's life through which an individual increases his or her ability to shape his or her life and environment.

Significance of the Study :-

Women Empowerment : A Concept :

Woman Empowerment is a global issue. This concept of women empowerment appears to be the outcome of several important critiques, discussion, dialogues and debates generated by the woman movement throughout the world, especially in the third world countries (feminist). To empower women, literally speaking is to give power to women. 'Power' here does not mean a mode of domination over others, but an exposure of inner strength and confidence to face life, the right to determine one's choice in life, the ability to influence the society and social change, a share in decision making and capacity-building for the sake of national development.

Empowerment, in its simplest form, is manifestation of redistribution of power that challenges patriarchal ideology and the male dominance. It is a process that enables women to gain access to and control of material as well as information resource. It is both process and result of the process. Empowerment is an active process enabling women to realize their full identity and power in all spheres of life (UNDP, 1994). Empowerment is defined as a process which enables individuals or groups to

change balance of power in social, economic and political relations in society. The goals of women empowerment are to challenge patriarchal ideology to transform the structures and institutions that reinforce and perpetuate gender discrimination and social inequality and to enable poor women to gain access to and control of, both material and informational resources.

According to Trishna Goswami (Kundu), 2010, women empowerment addresses the following separate but interdependent component of women's position. These are :

- a) The extent of exposure to the outside world.
- b) The extent of interaction with outside world and in particular, the extent of economic interaction.
- c) The level of autonomy in decision-making within and outside the household.
- d) The power and relationships in society interwoven with gender, class, race, ethnicity, age, culture and history.

At a workshop of Pacific Women entitled 'Women, Development and Empowerment (1987)', Venessa Griffen spoke about what empowerment means to her : To me, the word simply means, adding to women's power.... To me power means :

- having control, organizing further control
- having a say and being listened to.
- Being able to define and create from women's perspective.
- Being able to influence social choices and decisions affecting the whole society (not just areas of society accepted as a women's place).
- Being organized and respected equal citizens and human being with a contribution to make.

Stromquist (1995) has identified four clear components of empowerment. They are cognitive, psychological, economic and political. According to him...

- The cognitive component refers to women's understanding of their conditions of subordination and the causes of such conditions at both micro and macro levels of society.
- The psychological component includes the development of feelings that women can act at personal and social levels to improve their condition as well as the formation of the belief that they can succeed in their change efforts.
- The economic component of empowerment requires that women be able to engage in a productive activity that will allow them some degree of financial autonomy, no matter how

small and hard to obtain at the beginning.

- The political component of empowerment entails the ability to analyze the surrounding environment in political and social terms; it also means the ability to organize and mobilize for social change.

The National Policy of Education (1986) has laid a Programme of Action for its implementation. This Programme of Action spells out the meaning of women empowerment by saying "women become empowered through collective reflection and decision making". The programme of Action, 1992 has clearly declared the following parameters of empowerment, namely:

- Building a positive self image and self confidence.
- Developing ability to think critically.
- Building up group cohesion and fostering decision making and action.
- Ensuring equal participation in the process of bringing about social change.
- Encouraging group action in order to bring about change in the society.
- Providing for economic independence.

Women Empowerment can be viewed as a continuum of several interrelation and mutually reinforcing components:

- Awareness building about women's situation, discrimination and rights and opportunities as a step towards gender equality. Collective awareness building provides a sense of group identity and the power of working as a group.
- Capacity building and skills development, especially the ability to plan, make decisions organize, manage and carry out activities to deal with people and institutions in the world around them.
- Participation and greater control and decision making power in the home, community and society.
- Action to bring about greater equality between men and women.

Objectives :-

- 1) To study the woman empowerment, in detail.
- 2) To develop the woman perspective towards woman empowerment.
- 3) To implement the constitutional provisions for the awareness of woman empowerment.

Interpretation of Data :-

Understanding empowerment for the women is a complex issue with varying interpretation in different social, natural and cultural contents. However, some common indicators of women empowerment across all nations can be expressed as participation in crucial decision making progress at the level of the individual woman and her household and work place, the community and organizational levels, at the national level and if possible in international level.

Women Empowerment is a process of social change. It is synonymous with the achievement of equality and equal mildness in society. It will enable women to maintain stronger functioning position. It enable autonomy and control over their lives. The empower women became agents of their own development, able to exercise choice to set their own agenda and be strong enough to challenge and change their subordinate position in the society. Empowerment is self esteemed and collective mobilization for challenging basic power relation like social injustice and mobilization of resources. It is self-governance, self-sufficiency and self-maintenance.

In a broader sense, empowerment of a woman means two things- liberty from her subordination in the family and release from her sub-alternate in the society. It represents three types of freedom – freedom from ignorance, freedom from exploitation and freedom from inequality and injustice. Empowerment has become the key solution to many social problems like high population growth rate, environmental degradation and low status of women.

Constitutional Provisions, Special Laws and National Policies in Support of Women Empowerment:

Women as an independent group constitute 48.46% of the country's total population as per the 2011 Census. The importance of women as a important human resource was recognised by the Constitution of India which not only accorded equality to women but also empowered the State to adopt measures of positive discrimination in their favour. A number of Articles of the Constitution specially reiterated the commitment of the constitution towards the socio economic development of women and upholding their political right and participation decision making. Among them some may be noted.

In Pursuance of the constitutional provisions, the Government has also enacted specific laws to safeguard the interests of women and for upgradation of their status. Some of them may be noted here :

- The Hindu Marriage Act, 1955 which prohibits polygamy, polyandry and child marriage and concedes equal rights to women to divorce and to remarry.
- The Hindu succession Act, 1956 which

provides for women the right to parental property.

- The Hindu Adoption and Maintenance Act, 1956 which gives a childless woman the right to adopt a child and to claim maintenance from the husband if she is divorced by him.
- The Special Marriage Act, 1954 which provides rights to women on par with men for inter caste marriage, love marriage and registered marriage. The Act has also fixed the minimum age of marriage at 21 for males and 18 for females.
- The Dowry Prohibition Act, 1961 which declares the taking of dowry an unlawful activity and thereby prevents the exploitation of women.
- Equal Remuneration Act, 1976 which provides payment of remuneration equal with men for work of equal value.
- The Suppression of Immoral Traffic of Women and Girls Act, 1956 which gives protection to women from being kidnapped and being compelled to become prostitutes.
- The Medical Termination of Pregnancy Act, 1971 which legalizes abortion conceding the right of a woman to go for abortion on the ground of physical and mental health.
- The Criminal Law Amendment Act, 1983 which seeks to stop various types of crimes against women.
- The Family Court Act, 1984, which seeks to provide justice to women who get involved in family disputes.
- The Indecent Representation of Women (Prohibition) Act, 1986 which prohibits the vulgar presentation of women in the media such as – newspapers, cinema, T.V., etc.
- The 73rd and 74th Constitution Amendment Acts, 1993 which empower women and seek to secure greater participation of women at all the levels of the Panchayat System.
- The pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 which regulates investigation for sex determination of foetus.
- The protection of Women from Domestic Violence Act, 2005 provides for more effective protection of the rights of women guaranteed under the Constitution who are victims of violence of any kind occurring within the family and for matters connected therewith or incidental thereto.

The goal of this Policy is to bring about the advancement, development and empowerment of women. The Policy will be widely disseminated so as to encourage active participation of all stakeholders for achieving its goals. Specifically, the objectives of this Policy include –

- Creating an environment, through positive and social policies for full development of women to enable them to realize their full potential.
- The de-jure and de-facto enjoyment of all human rights and fundamental freedom by women on equal basis with men in all spheres – political, economic, social, cultural and civil.
- Equal access to participation and decision making of women in social, political and economic life of the nation.
- Equal access to women to health care, quality education at all levels, career and vocational guidance, employment, equal remuneration, occupational health and safety, social security and public office etc.
- Strengthening legal systems aimed at elimination of all forms of discrimination against women.
- Changing social attitudes and community practices by active participation and involvement of both men and women.
- Mainstreaming a gender, perspective in the development process.
- Elimination of discrimination and all forms of violence against women and the girl child; and
- Building and strengthening partnerships with civil society, particularly women's organizations.

The above mentioned laudable objectives of women empowerment have been highlighted to examine various policy perspectives so they can be implemented in reality.

Education is a potent tool in the emancipation and empowerment of women.

Empowerment of women means equipping women to be economically independent, self-reliant, and having a positive esteem to enable them to face any difficult situation. The empowered women should be able to participate in the process of decision making and development activities. Education plays the most crucial role in empowering women; It is education that provides knowledge, awareness in regard to social, civic, political, economic and environmental issues and skills for securing employment and means of livelihoods. Education will leverage women's skills and knowledge, and make effective use of the latest information technology tools

to find better ways to serve their country and the people. Underlying the importance of women's education in national life, the report of the University Education Commission (1948-49), says –

“There cannot be an educated people without educated women. If general education is to be limited to men or women, that opportunity should be given to women, for then, it would most surely be passed on to the next generation.”

Education at all levels is an impetus to social development and the education of half of the population inevitably stands out as a major problem. Ensuring equal rights to education will enable women to enrich and develop themselves, and in the process, achieve true equality in terms of economic, political and social participation. And wherever women are denied the right to equal participation with men in national affairs, a great human resource is lost. Ensuring equal access to education is fundamental to promoting the status of women for the good of both the individual and that of the nation.

Factors Facilitating Empowerment of Women :-

A big nation like India which consists of more than 50 crores women cannot afford to ignore the role of women in the national development. It is in this context the process of empowerment of women has assumed importance.

Women cannot be empowered in a magical manner. It is not an automatic or a spontaneous process but requires deliberate and consistent efforts. It is through the combined and co-ordinated efforts of the Government, NGOs people and the women the task can be fulfilled. Women cannot be effectively empowered by statutory provisions or governmental efforts alone. “Women are empowered through – women emancipation movement, education, communication, media, political parties and general awakening.”

Various socio-economic and political factors facilitate the empowerment of women. Some factors facilitating empowerment of women may be noted here :

- Acknowledging Women's Rights : Society should recognise that like men, women are also entitled to equal rights.
- Freedom to Take Decisions and Make Choices : Women should have freedom to decide whether to marry or not to marry; and after marriage, the freedom to decide as to how many children that they should have, and so on.
- Access to Education and Employment : Women can become stronger only with educational and economic power. Mere expectations cannot help. Conditions must be created in such a

way that women get easy access to education and later on become employed. Sufficient economic freedom is a must for women to lessen their dependence on men.

- Opportunities for Political Participation : If women's voice is to carry more weight they must be given political power. They must be free to take part in the administrative process.

Conclusion :-

To conclude the present analysis it may be said that empowerment is a continuous process for realizing the ideals of equality, human liberation and freedom for all. Women empowerment, thus implies equality of opportunity and equity between the genders and age groups, strengthening of life chances, collective participation in different spheres of life-cultural, social, political, economic, development process, decision making etc. in order to promote women's empowerment, it is necessary to create an environment that will allow women to participate in educational programmes and share the benefits. It must be therefore emphasized that while

there is a need to set up specific education programmes for women, there is also a necessity to develop forms of education that will sensitize people towards gender discrimination and will raise their acceptance of women's promotion. The educational and other policies for women empowerment should be implemented reality for empowering women in India.

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National Education Policy 2020: A Concern For Higher Education

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Abstract

Change in the existing education policies has become a common phenomenon all over the world, because countries in the world including India are redefining their education policies. Now days, it is much needed to keep education system intact with the changing scenario in the world. It has been realised that well defined and future oriented education policy at all the levels is essential for social and economic progress of a nation. In order to fulfil the demands of a modern competitive world, restructuring the education system is of utmost importance. It is of a great significance from the point of view of development of country's human resources. Recently the Government of India announced its National Education Policy 2020 (NEP 2020), which aims to transform our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. It is a welcome and ambitious re-imagination of India's education system into a modern, progressive, and equitable one. In the policy, there is a concern for school education, college education, university education, and vocational as well as technical education. The policy has adopted holistic approach towards the education system. No doubt, it will bring about a paradigm shift India's education system, but its successful execution requires a dramatic simplification of decision-making structures, strengthening implementation mechanism, and re-prioritization of budgetary resources in months and years to come.

This conceptual and descriptive research paper mainly deals with the new education policy (NEP 2020) and its concern for Higher Education (HE). The authors intend to discuss about the policy with respect to the emergence, vision, and thrust areas; the concern for higher education along with key highlights, key impact areas and opportunities to the stakeholders.

Keywords: National Education Policy 2020 (NEP 2020), Quality Education, Education System, Higher Education, Concern for Higher Education.

1. Introduction: At present the entire world is undergoing rapid changes in the knowledge landscape. With

various dramatic scientific and technological advances, the need for a skilled workforce with multidisciplinary abilities across the sciences, social sciences, humanities and art, will be increasingly in greater demand as our country - India is moving towards developed nation as well as among the three largest economies in the world. Indeed, with the quickly changing employment landscape the need for suitable manpower with great creativity and innovativeness is ever increasing. In this scenario education must build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment. It is to be noted that the gap between the current state of learning outcomes and what is required in future must be bridged through undertaking major reforms that brings about high quality, equity, and integrity into the system, from Early Childhood Care and Education (ECCE) to Higher Education (HE). The aim must be for our country to have an education system with equitable access to the high quality education for all learners regardless of social or economic background. The Global Education Development agenda reflected in the 2030 i.e. Agenda for Sustainable Development (SD), adopted by our country in the year 2015, which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Such a dreamy goal will require the entire education system to be reconfigured and restructured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development (SD) can be achieved. It is rightly predicted that India will be the third largest economy in the world by the end of next decade with estimated GDP of ten trillion dollars. And it is evident that the ten trillion economies will be driven by knowledge resources and not by the natural resources of the country.

In this context our country has adopted the National Education Policy 2020 (NEP 2020). The new policy envisions an India centred education system that contributes directly to transforming the nation sustainably into an equitable and vibrant knowledge society, by providing

high quality education to all. In fact, it is the first education policy of the 21st century, which aims to address the many growing developmental imperatives of our country. This Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, while building upon India's traditions and value systems. The policy lays an emphasis on the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities, both the foundational capacities of literacy and numeracy and higher-order cognitive capacities, such as critical thinking and problem solving, but also social, ethical, and emotional capacities and dispositions. It is to be noted that the rich heritage of ancient and eternal Indian knowledge and thoughts has remained a guiding light for this policy. The pursuit of knowledge (Jnan), wisdom (Pragyaa), and truth (Satya) was always considered in Indian thoughts and philosophy as the highest human goal. The aim of education in ancient India was not just the acquisition of knowledge as preparation for life in this world, or life beyond schooling, but for the complete realization and liberation of the self.

Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, NEP 2020 is aligned to the 2030 Agenda for Sustainable Development (SD) and aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary, suited to 21st century needs and aimed at bringing out the unique capabilities of each learner. Basically, quality education is of fundamental importance for achieving full human potential, developing an equitable and just society and promoting national development. And universal high quality education is the key to India's continued ascent and leadership on the global platform in terms of economic growth, social justice and equality; scientific and technological advancement; national integration and preservation of culture as well. The new policy is designed keeping all this in mind and is the right stepping in this regard.

2. Objectives of the Study: The objectives of writing this research paper on National Education Policy 2020 (NEP 2020) are:

1. To discuss the emergence of NEP 2020.
2. To state the vision, thrust areas of the policy.
3. To bring out its concern for higher education and key highlights.
4. To highlight the key impact areas and opportunities to the stakeholders.

3. Methodology of the Study: The work is of desk research based on reliable and relevant secondary data. The methodology consists of a conceptual and descriptive discussion on to the emergence of the policy; highlighting the vision, thrust areas, and key highlights; bringing out its concern for higher education; and highlighting the impact areas and opportunities for the stakeholders. The government documents, reports, press releases as well as research papers and articles have been referred and reviewed thoroughly in order to get better insight into the subject matter.

4. Emergence of the Policy: Our country's - India's first Education Policy was introduced in the year 1986. After thirty-four years, the National Education Policy 2020 (NEP 2020) for India has been updated, revised, approved and finally introduced on 29th July, 2020. NEP 2020 thus replaces the National Policy on Education of 1986. The policy signifies a huge milestone for India's Education system, which will certainly make India an attractive destination for higher education world-wide. It aims to transform education system, keeping the learner at the centre. It is built on the recommendations of Education Commission (1964- 66) and Justice J. S. Verma Commission (2012) as well as the previous versions of the policy i.e. National Policy on Education 1986, modified in 1992, Right of Children to Free and Compulsory Education Act, 2009 and Right of Persons with Disabilities Act, 2016. Basically, in January 2015, the committee headed by former Cabinet Secretary Shri. T. S. R. Subramanian started consultation process for the New Education Policy. Based on the committee report, in June 2017, the draft NEP was submitted in 2019 by a panel led by former Indian Space Research Organisation (ISRO) Chairman Dr. Krishnaswamy Kasturirangan. The Draft New Education Policy (DNEP) 2019 was later released by Ministry of Human Resource Development (MHRD), followed by a number of public consultations. Thereafter, the Ministry undertook a rigorous consultation process in formulating the draft policy, and over two lakh suggestions were received during the formal consultation process. The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. It aims to gradually transforming India's education system by 2021. Shortly after the release of the policy, the government clarified that no one will be forced to study any particular language and that the medium of instruction will not be shifted from English to any regional language. The language policy in NEP 2020 provides a broad guideline and is advisory in nature; and it is up to the states, institutions, and schools to decide on the implementation. The policy unequivocally endorses and envisions a substantial increase in public

investment in education by both the Central government and all State Governments. It is expected that the Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest (Sawant, R. G. and Sankpal, U. B., 2021).

5. What is a NEP 2020? The National Education Policy 2020 (NEP 2020) will bring in ambitious and dramatic change that could transform education system in the country. It will bring about revolutionary changes in the education system of India.

Vision of the Policy: NEP 2020 aims at building a global best education system based on Indian thoughts, rooted in Indian ethos, and aligned with certain principles, and thereby transforming our country - India into a global knowledge superpower.

Thrust Areas of the Policy: NEP 2020 is necessarily addressing the crippling challenges that have affected the Indian Education System for over last few decades, which seems to be somewhat out-dated in the existing scenario. Certain thrust areas of the policy are:

- In Primary Education, poor literacy and numeracy outcomes: Several reports shows that 50% children lack basic numeracy i.e. the ability to understand and work with numbers and literacy despites spending five years in school. So, the policy basically looks at this foundational learning as a core area and aims at developing multiple skills and abilities among the students.
- In Middle and Secondary Education, high dropout levels, curriculum inconsistency: Dropout rates at the secondary level in several states have increased over the past three years according to the ministry's data. There are multiple reasons behind drop out such as poverty, poor health and distance from school. Moreover, large variations in dropout rates exist across states, gender, ethnicity and class. Even the Gross Enrolment Ratio (GER) is also decreasing considerably as the data indicates that a significant proportion of enrolled students are dropping out after Grade 5 and especially after Grade 8. Therefore, minimising dropout rate and increasing GER, particularly at middle and secondary education level is also a thrust area of the policy.
- In Higher Education, a lack of multi-disciplinary approach and flexibility with regards to subject choice, assessment as well as a skill-gap: Dropout rate is also increasing in higher education institutions. At the same time Gross Enrolment Ratio (GER) is decreasing

and remained about less than half of that is in middle and secondary education. It means many students are not enrolling in higher education. Hence, the policy mainly focuses on to minimising dropout rate and increasing GER in higher education institutions.

Moreover, overall thrust areas for NEP 2020 include childhood care, curriculum design, language/medium of instruction, teacher training, teacher appraisal, assessment pattern and evaluation and exam format. A new assessment centre called, PARAKH i.e. Performance, Assessment, Review and Analysis of Knowledge of Holistic Development is proposed to determine the standards for education.

- Lastly, issues with regulation, recruitment of teachers and the absence of common standards and norms for universities are the additional areas in this new policy (MHRD, 2019). Moreover, the policy brings about some creative and innovation changes as follows:
- New architecture: A new vision and architecture for higher education has been envisaged with large, well-resourced, vibrant multidisciplinary institutions. The current 800 universities and 40,000 colleges will be consolidated into about 15,000 excellent institutions.
- Liberal education: A broad-based liberal arts education at the undergraduate level for integrated, rigorous exposure to science, arts, humanities, mathematics and professional fields will be put in place. This would have imaginative and flexible curricular structures, creative combinations of study, integration of vocational education and multiple entry/exit points.
- Governance: Institutional governance will be based on autonomy - academic, administrative and financial. Each higher education institution will be governed by an Independent Board. The policy strives to create a fine balance ensuring „minimal government and maximum governance“ in the HEIs.
- Regulation: Regulation will be „light but tight“ to ensure financial probity and public-spiritedness - standard setting, funding, accreditation, and regulation will be conducted by independent bodies to eliminate conflicts of interest (Aithal, P. S. and Aithal, S., 2020).

Key Highlights of the Policy: NEP 2020 is a positive re-imagining of India's existing education regime. It has some very impressive and appreciable propositions. The policy envisions a model of holistic learning that is integrated, engaging and immersive. Scientific temper and evidence-based thinking will be inculcated alongside aesthetics and art.

1. The NEP brings about a range of changes in the system of higher education aiming to improve it with the goal of creation of greater opportunities for individual employment. The key highlights from the new policy aim at:

- Creating a Higher Education System (HES) consisting large, multidisciplinary universities and colleges, with at least one in or near every district, and more Higher Education Institutions across India which offer their programmes in local/Indian languages.
- Shifting from a rigid Higher Education curriculum to multidisciplinary undergraduate education.
- Offering faculty and institutional autonomy.
- Revamping the curriculum, pedagogy, assessment, and student support for enhanced student experiences.
- Reaffirming the integrity of faculty and institutional leadership positions through merit- appointments and career progression based on teaching, research, and service.
- Establishing National Research Foundation (NRF) to fund brightest, peer-reviewed research and to actively seed research in universities and colleges.
- Improved Governance of Higher Education Institutions (HEIs) by high qualified independent boards having academic and administrative autonomy.
- „Light but tight“ regulation by a single regulator for higher education.
- Giving increased access, equity, and inclusion through a range of measures such as offering scholarships by private/ philanthropic universities for disadvantaged and underprivileged students.
- Giving access to education to all learners (disadvantage/ learners with special needs) through online education, and Open Distance Learning (ODL).

2. A goal of the NEP is to increase the Gross Enrolment Ratio in higher education, including vocational education to 50% by 2035 from 26.3% as of 2018.

3. NEP will replace the fragmented nature of India's existing higher education system and instead bring together Higher Education Institutions (HEIs) into large multidisciplinary universities, colleges, and HEIs clusters/ knowledge hubs. The policy states that over time, single-stream HEIs will be phased out over time.

4. For now, while the NEP states that a system of granting graded autonomy based on accreditation will be adopted for colleges, eventually, the aim is to transform them into an autonomous degree-granting college, or a constituent college of a university.

5. New and existing HEIs will evolve into three distinct categories:

- Research Universities (RUs)
- Teaching Universities (TUs)
- Autonomous Degree Granting Colleges (ACs)

(British Council, UK, 2020), (India Education Diary, 2020).

Key Impact Areas and Opportunities: In fact, National Education Policy (NEP 2020) is a huge stride in the right education. It mainly focuses on to the holistic development of students by ensuring access, relevance, equity, quality and strong foundational learning. The policy offers numerous benefits for education sector stakeholders. It envisages creating synergies in the curriculum across childhood care and education to school and the higher education segments. Major focus area of the policy is quality improvement in the learning outcomes. Another focus area is bringing assessment reforms, which remained much awaited change. Most importantly, the policy is expected to put India on the track to attain goals of 2030 agenda for sustainable development by promoting lifelong learning opportunity for all in the next decade to come.

Key Impact Areas	Opportunities to Stakeholders
<ul style="list-style-type: none"> Quality of universities and colleges through large-scale consolidation Institutional restructuring and consolidation Focus on multi-disciplinary education Accessible and inclusive higher education system Enhanced equity and inclusion Improving equity and access through ODL and online programmes Quality and well incentivised faculty Addressing faculty shortage and quality Catalysing research through NRF Promoting excellence through internationalisation Internationalisation reforms Accountability and transparency for governance Improved governance, efficiency and accountability 	<ul style="list-style-type: none"> State Governments Better outcome monitoring and resource sharing Improved budgetary efficiency enhancing educational outcomes HEIs Ease of starting and operating HEIs through clear demarcation of roles and responsibilities Increased academic and administrative autonomy Opportunities of expansion and for increasing enrolments in terms of ODL and online programmes Development of own vocational courses by HEIs Enhanced opportunities for private HEIs Faculty Better service environment for faculty Career advancement for faculty Minimal career gap and continuous learning for trainers through use of technology platforms Rationalisation teaching duties and greater opportunity to faculty to design curricular and pedagogical approaches Students More opportunities to enter higher education system

It is rightly said that, “Higher Education (HE) is an important aspect of Education System (ES) in deciding the economy, social status, technology adoption, and healthy human behaviour in every country”. The policy essentially aims at quality of Higher Education Institutions (HEIs) and positioning India as a global education hub. The focus is on providing flexible curriculum through an inter-disciplinary approach, creating multiple exit points in what would be a four year undergraduate programme catalysing research, improving faculty support and increasing internationalisation. It has some key impact areas and also offers some opportunities. They are:

Table 1: Key Impact Areas and Opportunities to Stakeholders

	Greater flexibility for course choices Digitally stored credits for future reference Hands-on learning and practical exposure Improved transparency by HEIs
	Reduced pressure on students through single common entrance examination
	Greater exposure to Indian students through exchange programmes

	Industry and other service providers Collaboration opportunity to industrial players in block chain, AI and predictive analytics System-wide ICT transformation leads to potential for private participation Opportunity for financial services and technology players Opportunity for industry multifaceted participation Opportunity for private sector to come ahead as expert in operation of National Education Technology Forum (NETF)
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Source: National Education Policy 2020 (MHRD), Impact of National Education Policy and Opportunities for Stakeholders (KPMG)

Thus, in the light of the above, certain key points of NEP 2020 in respect to higher education can be derived as follows:

- The policy envisages for a new vision and architecture for higher education with large, well-resourced, vibrant multi-disciplinary institutions leading towards excellence.
- The policy provides for a broad-based liberal education through comprehensive but flexible curricular structures, creative combinations of study, integration of vocational education and multiple entry as well as exit points.
- The policy facilitates for voluntary and self-directed governance as institutional governance will be based on autonomy in terms of academic, administrative and financial.
- The policy seeks to ensure good regulation, as regulation will be light but tight, as the regulation will be in the hands of independent bodies to eliminate conflicts of interest.

Although, the policy document consists of and provides for certain guiding principles for its smooth implementation, there are some obstacles such as acceptance to the flexible model of higher education, acceptance to concept of multi-disciplinary institutions, need for greater public funding, need for rich digital infrastructure and the like, which cannot be neglected. Successful execution of the policy calls for adopting the principle guidelines given in the policy document, dramatic simplification of decision-making structures, re-prioritization of budgetary resources, automation and mechanisation in the system, change in the view point, and planned as well as systematic implementation of the

new policy in months and years to come.

7. Concluding Remarks: Considering the global and Indian scenario, National Education Policy 2020 (NEP 2020) is a welcome step and ambitious re-imagining of India's education system into a modern, progressive and equitable one. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, NEP 2020 is aligned to the 2030 Agenda for Sustainable Development (SD). It wants to transform our country - India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multi-disciplinary, suited to 21st century needs. The policy calls for a large-scale implementation of a magnitude never before attempted anywhere in the world. The actual transformations will start from the academic year 2021-22 and will continue until the year 2030, where the first level of transformation is expected to be visible. The mission is aspirational but the successful implementation depends upon how well implementers understand the challenges and try to overcome it. It requires a great deal of acceptance, commitment, optimism, change in attitude, and mindset. No doubt, the Government of India took a giant leap forward by announcing its new education policy i.e. the National Education Policy 2020 (NEP 2020), almost three decades after the last major revision was made to the policy in 1986. Even, the drafting committee of NEP 2020 has made a great attempt to design the policy that considers diverse viewpoints, global best practices in education, field experiences and stakeholders' feedback. The task is challenging but the implementation roadmap will decide if this will truly foster an all-inclusive education that makes learners industry and future ready.

The authors want to convey a message that the policy has come at the right time and the objective is very noble. But, there lies a world of difference between laying down a policy on paper and following it in spirit. The success of NEP 2020 and the pace of its implementation depend on how successfully the government, universities and schools etc. can overcome the practical challenges, which arise from time to time. Besides the actions undertaken by various authorities and bodies, there is a need of timelines and a plan for review, the policy is required to be implemented in its spirit and intent, through coherence in planning and synergy across all authorities and bodies involved in education (MHRD, 2020). To realize the dream, all those concerned must show commitment, involvement and overcome substantial execution challenges in a sustained manner for years and decades to come. Lastly, to say, "National Education Policy (NEP 2020) brings in ambitious changes that could transform the education system. But the key to success is good implementation

and execution".

8. Acknowledgements: The authors of this research paper express their deep sense of gratitude to all the resources both individual as well as institutional in the subject area, which helped a lot to get a deep insight in the subject matter.

9. References: The government documents, press releases, research reports, research papers and articles, etc. have been referred by the authors. The resources thus used as a reference guide are duly acknowledged here under.

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Assessment of Allelopathic Potential of *Cassia Tora* Linn. on Seedling Growth and Biomass of Fenugreek

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Abstract

An attempt has been made to study the allelopathic impact of *Cassia tora* (L.) on the germination, seedling growth, dry biomass, of fenugreek. The aqueous extracts had a significant retardatory effect on seed germination of Fenugreek which varied with the different concentrations used. Root length and shoot length of fenugreek plant were decreased significantly when plants were exposed to increasing aqueous concentrations (1.0, 2.0, 4.0 and 8.0%). Reduction in dry biomass was also noticed. A conclusion can be drawn from the observations that *Cassia tora* might possess allelochemicals that causes the suppressive ability. There are evidences of allelopathic effects of *Cassia tora* in the literature.

Key words: *Cassia*, allelopathic, fenugreek, extract

Introduction:

Cassia tora Linn. (Family: Leguminosae) is well known plant widely distributed in India and other tropical countries. It is an annual under shrub and grows in wild wasteland. It is a plant with medicinal value and has been reported to show allelopathic potential causing biological suppression on crops. Phytotoxic chemical interactions such as allelopathy between invasive plants and native plants have been reported to play an important role in the invasion.

Weeds in croplands resulted in economic loss, increasing cost of production and reduce quality of crops (Bhuler et al., 1998). Ahmed et al. (2007) reported weeds also reduce the soil fertility by absorbing nutrients particularly nitrogen. Allelopathy is a natural phenomenon by which plants produced and released allelochemicals which can stimulate or inhibit plant germination and growth and permit the development of crops with low phytotoxic residue amounts in water and soil, thus facilitating wastewater treatment and recycling (Macias et al., 2003). Singh et al. (2006) referred to allelopathy as any direct or indirect effect of plant on other plants through the release of chemicals and play an important role in many agro- ecosystems (Kohli et al., 2001). The allelochemicals are released from the leaves, flowers,

seeds, stems and roots of living or decomposing materials (Weston, 1996; Inderjit, 1996; Kruse et al., 2000 and Bertin et al., (2003) through the process of volatilization, leaching, root exudation and decay of plant residues (Chon et al., 2006), although the efficacy and specificity of many allelochemicals are limited (Bhadoria, 2011).

Allelopathy is described as both beneficial and deleterious biochemical interaction between plant and weeds, and/or plant and microorganisms through the production of chemical compounds that escape into the environment and subsequently influence the growth and development of neighbouring plants. The present laboratory experimental study was conducted to evaluate the allelopathic effect of *Cassia tora* (L.) on vegetable *Trigonella foenum-graecum* (L.) Aqueous extracts of *Cassia* at 1.0, 2.0, 4.0 and 8.0% concentrations were applied to determine their effect on seed germination, seedling growth, dry biomass, of test plants under laboratory conditions.

Materials and methods:

Collection of plant materials: The *C. tora* was collected from the various place in Alibag taluka of Raigad district (18° 38' 24" North, 72° 52' 48" East) where it was growing abundantly. The plants were uprooted at maturity. They were washed thoroughly with distilled water and airdried at room temperature. The aerial portions were separated, chopped into 1 cm long pieces, and ground into fine powder with mortar and pestle. An aqueous extract was prepared by dissolving 5 g powder in 100 mL of distilled water (5 % w/v) at room temperature for 24 hr with occasional shaking. The mixture was filtered through two layers of muslin cloth and centrifuged for 20 min to remove particulate material and the purified extract was adjusted to pH 6.8 with 1 M HCl. Different concentrations (1.0, 2.0, 4.0 and 8.0%) were prepared from the stock solution. The aqueous extracts were individually bottled, tagged, and it was stored in refrigerator to maintain the efficacy of extracts. A control solution with distilled water was also used.

Germination in Petri dishes: For growth studies, seeds

of fenugreek were procured from a standard agricultural seed seller. Seeds of each test plants were first surface sterilized with 2% sodium hypochlorite solution for 2 min and washed thoroughly with distilled water. Sets of autoclaved Petri dishes were prepared, each containing a single layer of Whatman No. 1 filter paper and 5 mL of test extract for each concentration (1.0, 2.0, 4.0 and 8.0%) The Petri dishes treated with distilled water were taken as a control and considered to be set 0. 5 replicates of each concentration were prepared randomly at room temperature. Dishes were place under fluorescent light during the night. The petri dishes were observed on 15th day after sowing to record various parameters.

Determination of germination percentage, root length, shoot length, dry biomass: Number of germinated seeds were counted daily according to the Association of Official Seed Analysts (AOSA) method (AOSA, 1990). The seeds were considered as germinated when the radical size was 2 mm. Fifteen (15) days after sowing, germination percentage was calculated using the formula:

Germination percentage = (germinated seed/total seed × 100). It was followed by seedling root length (cm), shoot length (cm) and dry weight (mg) determination. The root and shoot length were measured by using a meter scale; while, the dry weight was measured with the help of four digital balance.

Statistical analysis: Using standard procedures of statistical data analysis (including the software Bio Stat 2009, the effects of different concentrations of *C. tora* on growth of fenugreek were correlated with the rate of germination, root length, shoot length, and dry weight . Figures 1 to 4 show change in these parameters (the bars represent the standard deviation of measurement)

Results:

Germination: The germination percentage (GP) of test plant was significantly affected by the increase in concentration of *C. tora* aqueous extract (CSAE) (Figure 1). In control and 1.0 % CSAE, GP values were 100 and 98%. The percentage was reduced to 67% at 2 % and 60.6% at 4% CSAE concentration levels and to 32% at 8% CSAE concentration. Generally, GP of fenugreek seeds varied with CSAE concentrations (Figure 1).

Seedling growth: The results of plumule length (PL) of fenugreek imply that allelopathic substances affect negatively the seedling stage (Figure 2). PL was significantly reduced at different concentrations of treatments given. The value of PL was 15.50 cm at control level, but reduced to 10.20 cm at 1.0 % CSAE concentration. The retardatory allelopathic action was recorded in 2, 4 and 8% CSAE concentrations, which significantly reduced PL. Allelopathic effect of CSAE concentration on PL of *C. tora* is given in Figure 2. A

slight difference was observed among radicle length (Figure 2). The control value was 11.00 cm. Elevated CSAE concentrations had significant retardatory effect on radical growth. At 1.0 % CSAE concentration, it was 10.00 cm. Upon applying highest CSAE concentration (8%), it was reduced to 4.50 cm.

Dry biomass: Decrease in biomass was also observed with increasing percentage of aqueous extract *Cassia tora*. It was very much affected by CSAE at 8 % concentration, the percentage reduction observed was 34% over the control (Figure 3).

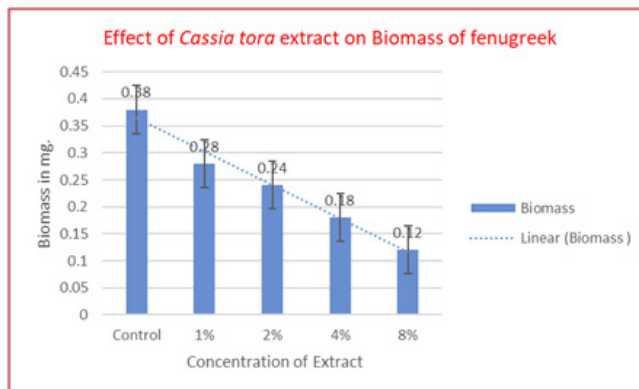
Discussion:

Treatment by aqueous extract resulted in delayed germination and low germination rate of the fenugreek. Through delayed germination, lowered seed germination rate and reduced seedling growth, reduced root-shoot ratio, the treatments lowered dry matter. The inhibitory effects were increased with increasing concentrations. This study shows that different concentrations of leachate showed distinct allelopathic inhibitory effects of *Cassia tora* as a weed species; lower concentrations (1 and 2 %) showed weak inhibitory or even positive effects, whereas higher concentrations (4 and 8 %) showed stronger inhibitory effects. Therefore, considering that the plant allelochemicals could have beneficial or inhibitory effect, in order to control.

Observations and results obtained in the experiment is matching with the findings made by some of the earlier workers. As observed in many studies (Hong et al., 2003; 2004; Mulatu et al., 2011; Lungu et al., 2011; Shapla et al., 2011), allelochemicals extracted from *Melia* (extracted with ethanol and water) inhibited germination and growth of receiver plants are in line with the observations made here. Similar observation was also concluded by Bogatek and Gniazdowska (2007) and Javed (2011) in radish germination inhibition due to the result of induction of oxidative stress. In general, the negative effect increased with the concentration of the extract and biological activities of receiver plants to allelochemicals which are known to be concentration dependent as noticed by Zhang et al. (2007), Singh et al. (2006) and Peng et al. (2004), which also is in line with this study. The root length decreased as the concentration of extract increased and the greatest inhibition was observed at 8 % concentration. As root membranes are a primary site of action for phenolics. Root growth is characterized by high metabolic rates and, for this reason, roots are highly susceptible to environmental stresses such as allelochemicals in soils (Cruz-Ortega et al., 1998). Similarly, Baerson et al. (2005) reported that BOA impaired root system development, resulting in reduced root lengths and a complete absence of lateral root formation.

The dry mass reduction is also reported in the study of Terzi and Kocacaliskan (2010), where the elongation and DW of barley and wheat seedlings were reported to be reduced by the walnut allelochemicals juglone (5-hydroxy-1, 4-naphthoquinone) in a similar pattern.

Conclusion: The allelopathic effect from aqueous extracts *Cassia tora* showed a significant retardatory effect on all the above mentioned parameters of fenugreek. Hence, the allelochemicals extracted from aqueous extract of *Cassia tora* may create a negative impact on the crop plants and vegetables like fenugreek. On the other hand it can be employed for the natural control of the some of the weeds in the agricultural land avoiding the use of chemical herbicides. There is need for further study to be carried out on identifying the inhibiting allelochemicals in the plants investigated. By delaying germination, lowering the germination rate of the weeds and inhibiting seedling growth, leachate from *Cassia tora* could provide an effective way of controlling the weeds.



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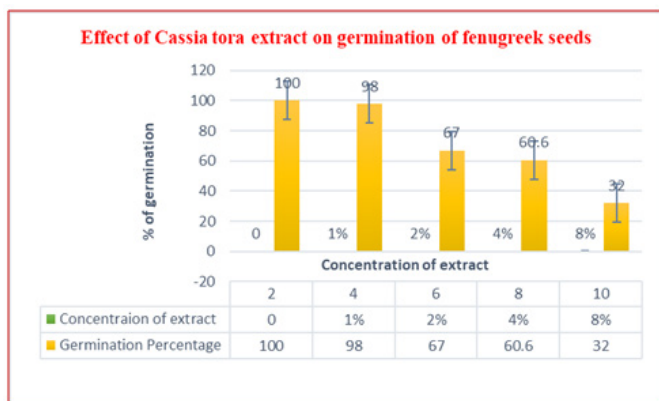


Fig. 1.

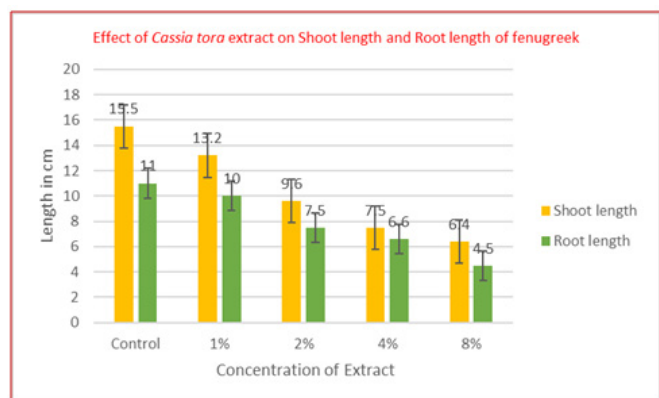


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Checklist of Sedges of Sindhudurg District, Maharashtra

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Abstract:

During field survey for floristic work on sedges of Konkan region of Sindhudurg district (Maharashtra) and the consultation of relevant literature of sedges revealed total 102 taxa belonging to 11 genera of sedges are reported from Sindhudurg district of Maharashtra. Total 8 endemic species are reported from the study area. Present study provided the detailed checklist of sedges for Sindhudurg district with its correct name, synonyms, (if any).

Key Words: Enumeration, Cyperaceae, Konkan, Sindhudurg District.

Introduction:

Sindhudurg district is spread over an area of around 5,207 sq. kms. and divided into 8 tehsils for administrative purpose. The district is surrounded by the Arabian Sea on the West, Goa state and the Belgaum District (Karnataka state) on the South and the Ratnagiri district on the North and Ghats region and Kolhapur district on the East of Sindhudurg district. Sindhudurg being a coastal district, the climate is generally moist and humid and the temperature variations during the day and throughout the seasons are not large.

Cyperaceae is a large family comprising of 109 genera and about 5,500 species distributed throughout the world (Govaerts, et al., 2015). The family in India is represented by 39 genera and about 580 species (Karthikeyan et al., 1989; Prasad & Singh, 2002). The family Cyperaceae occupies 3rd position in the sequence of dominance in monocots. Total 20 genera of family Cyperaceae are reported from Maharashtra state; out of these, three genera have unisexual flowers i.e., *Carex*, *Diplacrum*, *Scleria* while remaining 17 genera have bisexual flowers.

Sedges may be found growing in almost all environments; many are associated with wetlands or with poor soils. The knowledge about the uses of Sedges available at present is scanty. This is probably due to inadequate information on primary data of Cyperaceae. Present study provided checklist of 102 taxa of sedges

from Ratnagiri district of Maharashtra.

General Characters of Sedges (Family Cyperaceae Juss.):

Stem often 3-angled; Leaves usually 3-ranked containing silica bodies, rarely distichous or polystichous, usually sheathing at base; Glumes Present; Flower in spikelet of cyme; Flower subtended by a single bract; Lodicules absent; Perianth represented by bristles, scales or absent; Ovary superior with single ovule; Fruit is nut and seeds are endospermic.

Review of Literature:

C. B. Clarke (1883, 1884) was the first one to do extensive study of Indian Cyperaceae, whose work is included in J. D. Hooker's Flora of British India. A total number of 449 species coming under 28 genera are enumerated in this flora. He also described new genera and species of Cyperaceae (1908). Most of the species reported by Cooke (1908) in Flora of the Presidency of Bombay. The late Prof. E. Govindarajalu (1966-1998), Indian Cyperologists who devoted more than 30 years in studying the sedges of country and described many new species of Cyperaceae. Excellent worked on Cyperaceae of North East India by Rao & Verma (1982). Vartak (1982) worked on multifarious uses of sedges from Western India. Prasad & Singh (2002) had done outstanding work on sedges of Karnataka state. Recently Wadoodkhan (2015) had done excellent work on Cyperaceae of Western Ghats, West Coast and Maharashtra; he has reported total 404 taxa belonging to 16 genera. Cook C. D. K. (1996) also work done excellent on Cyperaceae in his book Aquatic and Wetland Plants of India. Some genera of Cyperaceae have been recently revised by taxonomist e.g. the tribe Rhynchosporae (Dey & Prasanna, 2010) reported 4 genera and 11 species for India. The genus *Scleria* revised for peninsular India and reported 21 species (Wadoodkhan et al., 2007). Recently work on the taxonomic revision of the genus *Eleocharis* R. Br. in India is done (Chandore, 2016).

Result and discussion:

Total 102 taxa belonging to 11 genera of sedges are reported from Sindhudurg district of Maharashtra. Species of the genus *Cyperus* L. contributes 50 percent (51 taxa out of 102 taxa) and species of *Fimbristylis* Vahl contributes more than 22 percent (23 taxa out of 102 taxa) of the total taxa found in the study region thus indicating their dominance. Out of 102 taxa of sedges eight species are endemic viz. *Cyperus diaphanus* Schrad, *Cyperus malabaricus* (C.B.Clarke) T.Cooke, *Eleocharis konkanensis* Chandore, Borude, Kambale & S.R.Yadav, *Eleocharis lankana* subsp. *mohamadii* Wad.Khan, *Eleocharis neglecta* Borude, Chandore, Gholave, & S. R. Yadav, *Fimbristylis lawiana* (Boeckeler) J.Kern, *Fuirena trilobites* C.B.Clarke and *Scleria stocksiana* Boeckeler.

Table: 1. Checklist of Sedges of Sindhudurg district of Maharashtra

Sr. No.	Botanical Name
1.	<i>Bulbostylis barbata</i> (Rottb.) C.B.Clarke
2.	<i>Carex filicina</i> Nees [<i>Carex glaucina</i> Boeckeler, <i>Carex caricina</i> var. <i>glaucina</i> (Boeckeler) Ghildyal & U.C.Bhattach]
3.	<i>Cyperus pseudokyllingioides</i> Kük. [<i>Courtoisia cyperoides</i> (Roxb.) Nees]
4.	<i>Cyperus alopecuroides</i> Rottb. [<i>Juncellus alopecuroides</i> C.B.Clarke]
5.	<i>Cyperus alulatus</i> J.Kern
6.	<i>Cyperus arenarius</i> Retz.
7.	<i>Cyperus articulatus</i> L.
8.	<i>Cyperus bulbosus</i> Vahl
9.	<i>Cyperus castaneus</i> Willd.
10.	<i>Cyperus compressus</i> L.
11.	<i>Cyperus corymbosus</i> Rottb.
12.	<i>Cyperus cuspidatus</i> Kunth
13.	<i>Cyperus difformis</i> L.
14.	<i>Cyperus digitatus</i> Roxb.
15.	<i>Cyperus distans</i> L.f.
16.	<i>Cyperus dubius</i> Rottb. [<i>Kyllinga triceps</i> Rottb.]
17.	<i>Cyperus exaltatus</i> Retz.
18.	<i>Cyperus haspan</i> L.
19.	<i>Cyperus iria</i> L.
20.	<i>Cyperus leucocephalus</i> Retz. [<i>Sorostachys leucocephalus</i> (Retz.) Lye]
21.	<i>Cyperus macer</i> C.B.Clarke
22.	<i>Cyperus malaccensis</i> Lam.
23.	<i>Cyperus michelianus</i> subsp. <i>pygmaeus</i> (Rottb.) Asch. & Graebn. [<i>Juncellus pygmaeus</i> (Rottb.) C.B.Clarke]
24.	<i>Cyperus nutans</i> Vahl
25.	<i>Cyperus nutans</i> var. <i>eleusinoides</i> (Kunth) Haines [<i>Cyperus eleusinoides</i> Kunth].

26.	<i>Cyperus odoratus</i> L.
27.	<i>Cyperus pangorei</i> Rottb.
28.	<i>Cyperus pilosus</i> Vahl
29.	<i>Cyperus procerus</i> Rottb.
30.	<i>Cyperus pulchellus</i> R.Br. [<i>Sorostachys pulchellus</i> (R.Br.) Lye]
31.	<i>Cyperus rotundus</i> L. [<i>Cyperus tuberosus</i> Rottb.]
32.	<i>Cyperus tenuispica</i> Steud.
33.	<i>Cyperus brevifolius</i> (Rottb.) Hassk. [<i>Kyllinga brevifolia</i> Rottb.]
34.	<i>Cyperus mindorensis</i> (Steud.) Huygh [<i>Kyllinga nemoralis</i>] (J.R.Forst. & G.Forst.) Dandy ex Hutch. & Dalzell
35.	<i>Cyperus tenuifolius</i> (Steud.) Dandy [<i>Kyllinga tenuifolia</i> Steud.]
36.	<i>Cyperus albescens</i> (Steud.) Larridon & Govaerts [<i>Lipocarpha chinensis</i> (Osbeck) J.Kern]
37.	<i>Cyperus compactus</i> Retz. [<i>Mariscus compactus</i> (Retz.) Bold.]
38.	<i>Cyperus cyperinus</i> (Retz.) Valck.Sur. [<i>Mariscus cyperinus</i> (Retz.) Vahl]
39.	<i>Cyperus odoratus</i> L. [<i>Mariscus ferax</i> (Rich.) C.B.Clarke]
40.	<i>Cyperus javanicus</i> Houtt. [<i>Mariscus javanicus</i> (Houtt.) Merr. & F.P.Metcalf]
41.	<i>Cyperus maderaspatanus</i> Willd. [<i>Mariscus maderaspatanus</i> (Willd.) Napper]
42.	<i>Cyperus paniceus</i> (Rottb.) Boeckeler [<i>Mariscus paniceus</i> (Rottb.) Vahl]
43.	<i>Cyperus squarrosus</i> L. [<i>Mariscus squarrosus</i> (L.) C.B.Clarke]
44.	<i>Cyperus pumilus</i> L. [<i>Pycreus pumilus</i> (L.) Nees, <i>Pycreus bolei</i> S.M.Almeida; <i>Pycreus lanceolii</i> S.M.Almeida]
45.	<i>Cyperus diaphanus</i> Schrad. [<i>Pycreus diaphanus</i> (Schrad. ex Roem. & Schult.) S.S.Hooper & T.Koyama]
46.	<i>Cyperus flavescens</i> L. [<i>Pycreus flavescens</i> (L.) P.Beauv. ex Rchb.]
47.	<i>Cyperus flavidus</i> Retz. [<i>Pycreus flavidus</i> (Retz.) T.Koyama, <i>Pycreus globosus</i> Rchb.]
48.	<i>Cyperus macrostachyos</i> Lam. [<i>Pycreus macrostachyos</i> (Lam.) J.Raynal]
49.	<i>Cyperus malabaricus</i> (C.B.Clarke) T.Cooke [<i>Pycreus malabaricus</i> C.B.Clarke]
50.	<i>Cyperus polystachyos</i> Rottb. [<i>Pycreus polystachyos</i> (Rottb.) P.Beauv.]
51.	<i>Cyperus sanguinolentus</i> Vahl [<i>Pycreus sanguinolentus</i> (Vahl) Nees]
52.	<i>Cyperus hyalinus</i> Vahl [<i>Queenslandiella hyalina</i> (Vahl) Ballard]
53.	<i>Cyperus neochinensis</i> (Tang & F.T.Wang) Bauters [<i>Rikliella squarrosa</i> (L.) J.Raynal]
54.	<i>Diplacrum caricinum</i> R.Br.
55.	<i>Eleocharis acutangula</i> (Roxb.) Schult.
56.	<i>Eleocharis atropurpurea</i> (Retz.) J.Presl & C.Presl
57.	<i>Eleocharis dulcis</i> (Burm.f.) Trin. ex Hensch.

58.	<i>Eleocharis geniculata</i> (L.) Roem. & Schult.
59.	<i>Eleocharis retroflexa</i> (Poir.) Urb.
60.	<i>Eleocharis retroflexa</i> subsp. <i>chaetaria</i> (Roem. & Schult.) T.Koyama [<i>Eleocharis chaetaria</i> Roem. & Schult.]
61.	<i>Eleocharis konkanensis</i> Chandore, Borude, Kambale & S.R.Yadav
62.	<i>Eleocharis lankana</i> subsp. <i>mohamadii</i> Wad.Khan
63.	<i>Eleocharis neglecta</i> Borude, Chandore, Gholave, & S. R. Yadav
64.	<i>Fimbristylis acuminata</i> Vahl
65.	<i>Fimbristylis aestivalis</i> (Retz.) Vahl
66.	<i>Fimbristylis aestivalis</i> var. <i>trichopoda</i> J.Kern
67.	<i>Fimbristylis alboviridis</i> C.B.Clarke
68.	<i>Fimbristylis argentea</i> (Rottb.) Vahl
69.	<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani
70.	<i>Fimbristylis cymosa</i> R.Br.
71.	<i>Fimbristylis cinnamometorum</i> (Vahl) Kunth
72.	<i>Fimbristylis dichotoma</i> (L.) Vahl
73.	<i>Fimbristylis dipsacea</i> (Rottb.) C.B.Clarke
74.	<i>Fimbristylis falcata</i> (Vahl) Kunth
75.	<i>Fimbristylis ferruginea</i> (L.) Vahl
76.	<i>Fimbristylis kingii</i> Gamble ex Boeckeler
77.	<i>Fimbristylis lawiana</i> (Boeckeler) J.Kern
78.	<i>Fimbristylis merrillii</i> J.Kern
79.	<i>Fimbristylis microcarya</i> F.Muell.
80.	<i>Fimbristylis polytrichoides</i> (Retz.) Vahl
81.	<i>Fimbristylis quinquangularis</i> Kunth [<i>Fimbristylis miliacea</i> (L.) Vahl]
82.	<i>Fimbristylis pubisquama</i> J.Kern
83.	<i>Fimbristylis schoenoides</i> (Retz.) Vahl
84.	<i>Fimbristylis tenera</i> Schult.
85.	<i>Fimbristylis tetragona</i> R.Br.
86.	<i>Fimbristylis woodrowii</i> C.B.Clarke
87.	<i>Fuirena uncinata</i> (Willd.) Kunth [<i>Fuirena capitata</i> (Burm.f.) T.Koyama]
88.	<i>Fuirena ciliaris</i> (L.) Roxb.
89.	<i>Fuirena trilobites</i> C.B.Clarke
90.	<i>Fuirena umbellata</i> Rottb.
91.	<i>Rhynchospora corymbosa</i> (L.) Britton
92.	<i>Rhynchospora wightiana</i> (Nees) Steud.
93.	<i>Rhynchospora colorata</i> (L.) H.Pfeiff. [<i>Kyllinga colorata</i> (L.) Druce]
94.	<i>Schoenoplectiella articulata</i> (L.) Lye [<i>Schoenoplectus articulatus</i> (L.) Palla]
95.	<i>Schoenoplectiella juncooides</i> (Roxb.) Lye [<i>Schoenoplectus juncooides</i> (Roxb.) Palla]
96.	<i>Schoenoplectiella lateriflora</i> (J.F.Gmel.) Lye [<i>Schoenoplectus lateriflorus</i> (J.F.Gmel.) Lye]
97.	<i>Schoenoplectus litoralis</i> (Schrud.) Palla
98.	<i>Scleria biflora</i> Roxb.

99.	<i>Scleria levis</i> Retz.
100.	<i>Scleria lithosperma</i> (L.) Sw.
101.	<i>Scleria stocksiana</i> Boeckeler
102.	<i>Scleria terrestris</i> (L.) Fasset

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Medicinal Application of *Adhatoda vasica*(L)

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Abstract:

Herbal medicine is still the mainstay of about 75–80% of the world population, mainly in the developing countries, for primary health care because of better cultural acceptability, better compatibility with the human body and lesser side effects.

In Ayurveda *vasica* have great role in cure the specific disease. *Vasica* is popular for its beneficial effects, particularly in bronchitis. *Vasica* herb is used for treating cold, cough, chronic bronchitis and asthma. The decoction of fresh leaves can be used for cure above diseases. *Vasica* leaves, bark, root, fruits and flowers are useful in the removal of intestinal parasites. The decoction of root and bark of *vasica* is also useful to cure cough, cold, chronic bronchitis and asthma. A warm decoction of its leaves is useful in treating scabies and other skin diseases. In acute stages of bronchitis, *vasica* gives unfailing relief, especially where the septum is thick and sticky, it liquefies the septum. In asthma the dried leaves should be smoked. Gulkand which prepared from *vasica* flowers is used to treat tuberculosis. The juice from its leaves should be given in doses of 2 to 4 grams in treating diarrhea and dysentery. A poultice of its leaves can be applied with beneficial results over fresh wounds rheumatic joints and inflammatory swellings. In ancient times leaves decoction with pepper and dried ginger was taken. but, now a day because of modern technology it is possible to searched out its active components likes vasicine, oxyvasicine and vasicinone and alkaloids for expelling sputum from the body.

Key Words: *Adhatoda vasica*, Herbal medicine, traditional uses.

Introduction: The name of *vasica* is based on Sanskrit name. *vasica* is indigenous to India. Its grow all over the India, and lower the Himalaya ranges. *Vasica* also called as Malabar nut tree, through the India. It is tall, with several branches, dense, and an evergreen shrub. Leaves are large and lance-shaped. It has capsular four seed, fruits. The flower are either white or purple in colour. *Adathoda vasica* is a very well know remedy available everywhere

and its especially popular in rural areas.in Ayurveda medicine, Malabar nut has been used for a mulitude of disorders including bronchitis, leprosy, blood disorder, heart troubles, thirst, asthma, fever, vomiting, loss of memory, leukoderma, jaundice, tumours, mouth troubles, sore-eye, gonorrhoea.(Prasad et al.,2011) Acknowledging its medicinal properties, it has been adopted by modern medical practitioners also. A decoction of the leaves of *vasica* may be used to help with cough and other symptoms of cold. In many cases where bronchitis is due to lack of appetite and poor digestion, the juice of *vasica* is mixed with the juice of ginger and honey and given in the early morning on an empty stomach. there soothing action helps irritation in the throat and the expectorant will help loosen phelgem deposit in the airway. A poultice of the leaves of *vasica* may be applied to wounds for their antibacterial and anti-inflammatory properties. The poultice is also helpful in reliving rheumatic symptoms when applied to joints. *Vasica* has been used to control both internal and external bleeding such as ulcer, piles, and bleeding gums. This growth in almost all part of the world and their bark, leave, flowers are used in the medicine. Leaves are used to cure cough and bronchitis. The plant has pungent and astringent test.(Patel and Venkata-Krishna-Bhatt 1984) It is cold in action. It normalizes kapha and pitta and improves the voice. *Vasica* special virtue is stopping bleeding due to the aggravation of pitta, through the mouth, nose genitals, or the urinary systems. This is not to say that it always cures all these diseases but it does give immediate relief. in many of the cough syrups that are available, *vasica* has been used either as a base or as an ingredient. In ancient time the roots of the *vasica* was tied on the back below the navel region and it is said that it produced safe, painless delivery. *Vasica* avaleha, useful in easing all sorts of cough, especially in the case of asthma, and bronchial congestion, is made in the following manner: the juice of 1 seer of *vasica* leaves is boiled with 1/4 seer of white sugar, 4 total pure Ghee, until the mixture is reduced to a jelly form. After cooling 1/4 seer of honey is added and the preparation is mixed thoroughly. Person suffering from

bleeding piles, or diarrhea, and women suffering from menorrhagia can take the juice of *vasica* 2 to 3 times a day to great advantage. Dried and powdered leaves also form a remedy for bronchitis in the dose of 40 grams twice a day.

Methods and Materials:

Preparation of *vasica* juice:

Juice from *A. vasica* leaf was prepared by different methods. Firstly traditional bolus method (modified Put Pak Vidhi)¹² in which 100 g of fresh leaves of *A. vasica* were crushed using mortar and pestle, made into a bolus and it was covered with fresh leaves of *Syzygiumcumini*. It was then covered with a layer (approximately 1½ inch thick) of paste of wheat flour, followed by a layer of clay paste and the ball (bolus) so obtained was dried at room temperature. The dried bolus was subjected to heat in a muffle furnace at 450°. During heating it was checked periodically and when the outer layer of the bolus became red hot and aroma of the wheat flour being baked emanated (it takes approximately 15-20 min of heating), it was taken out. The bolus was opened while hot and the leaf paste was squeezed through 4 folds of muslin cloth to obtain juice. The volume of the juice obtained was measured. This sample was coded as S-1. In the traditional method, the bolus is subjected to *laghu puta* (heat), using cow dung cakes. We modified the method slightly by heating the bolus in a muffle furnace.

The second method employed was steaming, which was carried out using two different methods. In the first method, 100 g of fresh leaves were crushed using mortar and pestle and placed in a steel vessel (without adding any water to the leaves) and heated at 121° (15 lb pressure) for 30 min. The crushed leaves were taken in 4 layers of muslin cloth and squeezed in order to obtain juice out of it. The juice obtained was measured. This sample was coded as S-2. In the second method, 100 g of fresh leaves were crushed using mortar and pestle and 100 ml of distilled water was added to it and it was subjected to heat at 121° (15 lb pressure) for 30 min. The steamed material was taken in a 4-layered muslin cloth and squeezed in order to obtain juice out of it. The juice obtained was measured. This sample was coded as S-3.

Vasica Swarasa (manual) was the third method employed in which, 100 g of fresh leaves were triturated to a fine paste in a stone motor. It was taken in 4 layers of muslin cloth and squeezed by hand to take out the juice. This sample was coded as S-4. The fourth method used was *Vasica Swarasa* (using a grinder). One hundred grams of fresh leaves were ground in a mixer/juicer with 100 ml of water and filtered through 4 layers of muslin cloth and squeezed by hand to take out the juice. This sample was coded as S-5. Finally, the juice was prepared from dry leaf powder¹⁵, where to 100 g of dry leaf powder, 200

ml of water was added and macerated for 24 h at room temperature. The above mixture was taken in 4 layered muslin cloth and squeezed to take out the juice. The juice obtained was measured. This sample was coded as S-6.

Chemical Composition:

The principal constituents of *Vasaca* are its several alkaloids, the chief one being *vasicine* the leaves contain two major alkaloids called *vasicine* and *vasicinone* 2,3. The pharmacological activities of *vasicine* and *vasicinone* are well known. Recent investigation on *vasicine* showed bronchodilators activity comparable to *theophylline*, both in vitro and in vivo (Lahiri and Pradhan 1964) Both the alkaloids in combination showed pronounced bronchodilatory activity. *Vasicine* also exhibits strong respiratory stimulant activity. There has also been a report of thrombopoetic⁴ (platelet-increasing) activity with *vasicine*. The leaves of *vasica* are rich in vitamins C, carotene and an essential oil. A study showed that *Mycobacterium tuberculosis* was inhibited by the essential oil. (at specific conc.) uterine stimulant activity and moderate hypotensive activity of the alkaloids have been observed.

Medicinal Applications of *Adhatoda vasica*

1) Healing Power and Curative Properties:

The leaves, roots and the flowers are extensively used in indigenous medicine as a remedy for cold, cough, bronchitis and asthma.

2) Bronchitis and Asthma:

In acute stages of bronchitis it gives unfailing relief, especially where the sputum is thick and sticky. It liquefies sputum so that it is brought up more easily. For relief in asthma, the dried leaves should be smoked.

3) Tuberculosis:

In Ayurveda, a preparation made from *vasica* flowers, known as *gulkand* is used to treat tuberculosis. A few fresh petals of *vasica* flowers should be bruised and put in a pot of *chill* clay. Some sugar crystals are added and the jar kept in the sun. It should be stirred every morning and evening. The preserve is ready for use in about a month. Even the juice from its leaves is useful in treating tuberculosis. About 30 ml of the juice is taken thrice a day with honey. It relieves the irritable cough by its soothing action on the nerve and by liquefying the sputum, which makes expectoration easier.

4) Coughs

For coughs, 7 leaves of the plant are boiled in water, strained and mixed with 24 grams of honey. This decoction provides relief. Similarly a confection of *vasica* flowers eaten in doses of 12 grams twice daily relieves cough. About 60 grams of flowers and 180 grams of jaggery should be mixed for preparing this confection.

5) Intestinal Worms:

Its leaves, bark, the root-bark, the fruit and flowers are useful in the removal of intestinal parasites. The decoction of its root and bark in doses of 30 grams twice or thrice a day for 3 days can be given for this purpose. The juice of its fresh leaves can also be used in doses of a teaspoon thrice a day for 3 days

6) Diarrhoea and Dysentery :

The juice from its leaves should be given in doses of 2 to 4 grams in treating diarrhoea and dysentery.

7) Skin Diseases:

A poultice of its leaves can be applied with beneficial results over fresh wounds, rheumatic joints and inflammatory swellings. A warm decoction of its leaves is useful in treating scabies and other skin diseases.

Methods for uses and dosages:

The drug *vasica* is often taken in the form of juice extracted from its leaves, mixed with ginger or honey, in doses of 15 to 30. The leaves can be made into a decoction or the dried leaves can be given in powder form in doses of 2 grams. Both the decoction and powder are constituents of many preparations used in the Ayurvedic medicine (Sharma et al., 1992) for various affections of the respiratory tract. (Karthikeyan et al., 2009) The root and the bark have the same medicinal uses as the leaves. A decoction of the bark is given in 30 to 60 ml doses and the powdered root-bark in 0.75 to 2 grams. (Bhat et al., 1978)

Conclusion:

On the basis of my studies I concluded that *Adathoda vasica* traditionally widely used medicinal plants. It shows a wide range of biological activities that help to utilize the medicinal benefits of these plants. Plant is well-known herb in indigenous system of medicine for its beneficial effects, particularly in bronchitis. The leaves of the plant contain the alkaloids, vasicine, which is responsible for the small but persistent bronchodilation, and an essential oil which is chiefly responsible for the expectorant action. Such unci herb supports the bronchial function with bronchodilatory, expectorant and mucolytic properties. (Dorsch and Wagner, 1998) The drug *vasica* comprises the fresh or dried leaves of the plant. It is used as an expectorant and brings quick relief in bronchitis. The leaves and roots contain other alkaloids, vasicinone, vasicinolone and vasicol, which may contribute to the bronchodilatory effect through anticholinergic action on the vagal innervation of the bronchi. Studies have also shown *vasa* to be effective in the treatment of *amlapitta* (dyspepsia) and *pyorrhoea*. In current and future we have to conserve the plants.

Result:

The literature survey has shown that *Adhatodavasica* is

a chief source of many pharmacologically and medicinally important chemicals such as vasicine, vasicinone, vasicolone, and other various useful minor alkaloids. After studies it is clear that *Adathoda vasica* plays a great role in Ayurveda. In *vasica* two more common and major alkaloids are present called Vasicine and vasicinone^{2,3}. Medicinal properties of plants are due to the secondary metabolites (alkaloids, phenols, tannin etc.) present in different plant parts (Palombo, 2006). They are present in leaves and bark of *Adathoda*, which helps to cure different types of disease like cough, cold, asthma, and bronchitis.

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Sustainable Tourism in Kokan Region: Potentials, Challenges and Opportunities

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Abstract

This study aims to explore the opportunities and Challenges in tourism in kokan region. Tourism in India is a sun rise industry, an employment generator, a significant source of foreign exchange for the country and an economic activity that helps local and host communities. Rising income levels and changing lifestyles, development of diverse tourism offerings and policy and regulatory support by the government are playing a pivotal role in shaping the travel and tourism sector in India. However, tourism sector in kokan region is facing challenges such as lack of good quality tourism infrastructure, frequent natural disasters and shortfall of adequately trained and skilled manpower. Concerted efforts by all stakeholders such as the central and state governments, private sector and the community at large are pertinent for sustainable development and maintenance of the travel and tourism sector in kokan region. Keywords: tourism, tourism management, hospitality, infrastructure.

Introduction

The travel and tourism industry has emerged as one of the largest and fastest growing economic sectors globally. The travel and tourism sector holds strategic importance in the Indian economy providing several socio economic benefits. Kokan is well known for its natural beauty and is fast emerging as a favorite tourist destination for tourists. Kokan's greenery, coconut trees, beautiful virgin beaches, waterfalls, mountains and lush green valleys will definitely provide a rich and pleasant experience for the traveler. Kokan is a beautiful stretch of the western coastline of India. It has a 720 km long sea face. It is made up of the seven districts Mumbai City, Mumbai Suburban, Thane, Palghar, Raigad, Ratnagiri and Sindhudurg. Kokan region boasts several places of geographical, cultural and architectural interest. The coastline is dotted with palm grooves, mango trees planted in the agricultural fields, temples, creeks, sea forts, harbors, hot water springs, caves, and the tiled homes. It is one of the chief tourist regions of Maharashtra. The beautiful beaches, greenery,

world famous Warli art and sea forts of Konkan magnetize a constant flow of visitors and tourists. People in this region depend mainly upon fishing and farming for their livelihood and nowadays some are making their living with the help of growing Tourism in the area.

Tourist Places in Kokan Region

There are several places to visit in Kokan Coast owing to the long coastline along the beautiful blue azure waters of the Arabian sea. Ganpatipule, Alibaug, Ratnagiri, Sindhudurg, Dapoli, Murud, Thane, Harnai, Mahad, Kelshi, Roha, Amboli, and many more places. Tarkali (golden sand beaches), Harihareshwar (Ganesh temple and rocky Beach), Ganpatipule (Ganapati temple on the shore), Alibaug (beautiful beach), Ratnagiri (Thiba Palace and Ratnadurg Fort) etc.

Special Features of the Tourism in Konkan Area

• Water Sport :

Kashid, Murud, Tarkarli, Ganpatipule and Malvan are the beaches where the operators have already started activities. Water scooter, speed boats, banana boat and house boats are now available to tourists who want to experience the beach in a different way.

• Food / Cuisine :

Konkan cuisine is strong in spice, red chilli powder, coriander, and prepared with coconut oil. It is prepared using a deep purple berry that has a pleasing sweet and sour taste, kokum and raw mango as souring agents along with tamarind and lime.

• Kokan Forts :

Culture and people would not be existing without the forts in Maharashtra. Murud-Janjira Fort, Sindhudurg Fort, Vijaydurga Fort, Jaidurg Fort, Kolaba Fort, Suvarnadurg Fort, Padmadurg Fort, Mahipatgarh Fort, Raigad Fort, Karnala Fort are the most visited forts by the tourist in Kokan Region.

• Famous Beaches :

Kashid, Murud-Harne, Harihareshwar, Ganpatipule, Kunkeshwar, Diveagar, Tarkarli are the famous beaches in Kokan. The beaches are usually deserted on weekdays and sparsely populated on week-ends.

• Waterfalls:

The high intensity of the rainfall and quite different type of topography formed due to the Sahyadri Mountain are the two important factors responsible for the development of waterfalls in the region.

Sustainable tourism is an approach that has found much favour recently, both in academic and business world. The concept of sustainable tourism is such approach that balances tourism with its stakeholder relationship, managing the effects of globalization to the advantage of its strengths and opportunities. Sustainability considers tourism in its environmental, socio-cultural, economic, and experimental dimensions.

Literature Review

Batra, K.L has clearly mentioned that tourism plays an important and vital role in the economic development of the developing country, like India. The Study he has undertaken reveals that the Kokan region has the strength and opportunities for the sustainable tourism development. Bhatia A.K. in the book "Tourism Development, Principles and Practices", has given three main principles of sustainable tourism which are environmental, economic, and sociocultural aspects of tourism development. Bhatt Harish & Badan B.S. has stated that the sustainable development in the region will take place along with economic sustainability, environmental sustainability, Social sustainability and cultural sustainability. Kapoor, Rakesh in their book has mentioned that the lack of tourism development planning has led to over exploitation of resources and to gradual environmental degradation.

Research Methodology

The Study Region:

For this study, the Kokan region of the Maharashtra is selected as a study region. It is located in the western part of Maharashtra and has 700 km coastline. The Kokan region is well-known due to its geography, culture, history, etc.

Research Objectives:

The present study has concentrated on to the sustainable tourism development of the Kokan region. Hence, the objectives of the present study are as given below.

- To take review of tourism development in the Kokan region of Maharashtra.
- To identify opportunities of tourism development in Kokan region.
- To examine the challenges in sustainable tourism development in Kokan Region.
- To suggest recommendations for Sustainable Tourism Development in Kokan.

Limitations

1. The study is limited only with the tourism of kokan region.
2. The present study is based on the responses obtained from selected respondents.
3. Conclusions are drawn on the basis of collected data and its analysis.

Method of sampling and Sample Size

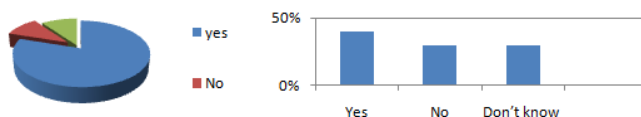
In probability sampling each element of population has been given equal and same chance of being selected. In non-probability sampling, sample is selected by choice. For this study purposive sampling method from the non-probability sampling category is used to select sample. The sample selected for this study is 10 owners of hotels and lodging and boarding in selected districts of Kokan Region.

Data Collection:

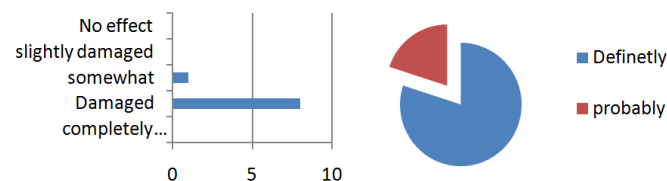
The present research work has based on both primary and secondary data. However, primary data is the main source to meet the objectives of the study. Therefore, the correlated data has collected by conducting intensive fieldwork and questionnaire has been used for the same. Secondary data has collected from the various government offices, maps, books, journals, newspapers and several websites etc., which have explained under references.

Statistical Tools Used

Percentages: -Percentage as tool to analyze data plays a vital role in interpreting large data in a very simple manner. The present study has utilized percentages method for data analysis and interpretation.



80% of the respondents are of the opinion that opportunities are available in kokan region for the development of sustainable tourism. And 40% of the respondents agreed that tourism has contributed in economic development of the kokan region up to large extent.



More than 80% respondents said that kokan tourism is adversely affected due to frequent natural disasters and pandemic. Around 85% of the respondents are of the

opinion that there is high potential for development of sustainable tourism development in kokan region.

Findings, Conclusions and Suggestions

It has been found out that there is high potential for development of sustainable tourism development in kokan region due to the strengths of kokan region like 700 km stretch of the coastline, Development of Kokan Railway, development of beaches and other coastal land forms, Mumbai International airport, hot springs, waterfalls, forts, ancient temples etc. The weaknesses identified are migration of kokan people to metropolitan cities & foreign countries, undulating physiography of the kokan region, lack of spirit of entrepreneurship etc. The threats identified are Encroachment from the outsiders in the tourism industry, mugging of historical monuments and other treasures, environmental degradation etc.

Promotion should be given to the investment in the tourism industry by the NGO's, private owners and local government which may enhance the potentiality of the tourism industry in the locality. Training may be helpful for the development of tourism having sustainable approach. There an urgent need of Kokani Food Processing Training to create easy market to the Kokani food products and beverages. The local government should create websites or the free sources of publicity like face

book, orkut etc. should be used. By taking into account need of environmental sustainability, the focus should be given on the use of eco-friendly products by the various stakeholders. It is clear that the Kokan region has the strength and opportunities for the sustainable tourism development and no doubt, it will overcome on the weaknesses and threats of the region. Definitely Kokan will become California. Furthermore, sustainable development in the region will take place along with economic sustainability, environmental sustainability, Social sustainability and cultural sustainability.

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Preliminary Survey of Sleep Disorders among College going Students during Covid- 19 Pandemic

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Abstract

The emerging novel coronavirus disease 2019 (COVID-19) has become one of the leading cause of deaths world -wide in 2020. The present systematic review and meta-analysis estimated the magnitude of sleep problems during the COVID-19 pandemic and its relationship with psychological distress. Survey method was applied for the study. Online survey was conducted by using Google form. The response of College students between the age 15-25years was taken. The data was compiled, analysed and interpreted to draw result. It was observed that of the 121 respondents 83 were females and 38 were male respondents. Among these, about 5% youth were suffering from Insomnia, 4 % respondents were suffering from Psychiatric disorders, 5% respondents have shown Circadian rhythm disorder, 8% were suffering from sleep related movement disorder, 5% were the victims of parasomnia and 25% respondents were suffering from Sleep apnea. On an average about 9% Students were suffering from various sleep related disorders. Though the percentage is less, there is need to pay attention on the mental health of students.

Keywords: Covid-19 pandemic, Sleep disorders, College going students

Introduction

Good quality sleep is pertinent for the health and wellbeing of an individual. (Kaur, 2018). Epidemiological evidences showing association of sleep disorders with cardiovascular mortality (Kaur, 2018), stroke (Partinen, 2020), diabetes, impaired glucose tolerance, immune dysfunction (Sing CY,2010), endocrine impairments (Haba-Rubio et al., 2015) and psychiatric morbidities (Ruiter et al., 2014) are expanding. Poor sleep quality is linked with poor cognitive performance (AlDabal et al., 2011), poor life quality (Gamble, 2014) and emotional dysfunction (Watson, 2014).

2020 has been an unprecedented year because a modified coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), spread rapidly from China to all continents, leading to the COVID-19 pandemic. The

first studies of COVID-19-associated sleep disorders were reported in China. (Y. Sing, 2010)

According to a European task force, symptoms of insomnia could be related to psychosocial factors and to the confinements. (Altena et al, 2020)

In Italy, anxiety related to COVID-19 was highly associated with disturbed sleep. In a survey of 2291 Italians, 57.1% reported poor sleep quality, 32.1% high anxiety, 41.8% high distress, and 7.6% reported post-traumatic symptoms of stress.³ In the International COVID-19 Sleep Study,⁴ different factors are being investigated using a harmonised set of questions. Insomnia, nightmares, sleep apnoea, fatigue, exhaustion, and REM sleep behaviour disorder are being investigated. (Casagrande et al, 2020; Partinen et al, 2020)

Following are the sleep related disorders that affects daily functioning of the sufferer.

Insomnia

Insomnia refers to the difficulty in initiation, maintenance, duration or quality of sleep. Or Insomnia is a common sleep disorder that can make it hard to fall asleep, hard to stay asleep, or cause you to wake up too early and not be able to get back to sleep. You may still feel tired when you wake up. People may experience poor concentration, lower productivity and poorer work quality as a result of insomnia. Insomnia symptoms may include Difficulty falling asleep at night, Waking up during the night, Waking up too early, Not feeling well-rested after a night's sleep, Daytime tiredness or sleepiness, Irritability, depression or anxiety, Difficulty paying attention, focusing on tasks or remembering, Increased errors or accidents, Ongoing worries about sleep

Psychiatric disorder

It is a syndrome characterized by clinically significant disturbance in an individual's understanding or perception, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental function. The main psychiatric disorders are depression, bipolar disorder, schizophrenia and other psychoses, dementia, and

developmental disorders including autism.

(<https://www.psychiatry.org/sleep-disorders>)

Circadian rhythm sleep disorders (CRSD)

Circadian rhythm sleep disorders include the sleep disorders in which sleep-wake cycle is disturbed as it happens in workers having shift duties and in travellers who get a jetlag.

Circadian rhythm sleep disorders involve either difficulty falling asleep, waking up during the sleep cycle or waking up too early and being unable to fall back to sleep. The disruption results from either a malfunction in your “internal body clock” or a mismatch between your “internal body clock” and the external environment. The Symptoms CRSD are Insomnia (difficulty falling asleep or staying asleep), Excessive daytime sleepiness, Difficulty waking up in the morning, Sleep loss, Depression, Stress in relationships, Poor work/school performance, Inability to meet social obligations. (<https://www.nhlbi.nih.gov/>), (<https://my.clevelandclinic.org/>)

Sleep related movement disorders (SRMDS)

These are conditions that are primarily characterized by relatively simple, usually stereotyped, movements that may disturb sleep, or by other sleep-related monophasic movement disorders, such as nocturnal cramps. Sleep-related movement disorders (SRMD) include restless legs syndrome (RLS), periodic limb movement disorder (PLMD), most commonly presenting as periodic leg movements of sleep (PLMS), sleep-related leg cramps (SRLC), sleep-related bruxism, sleep-related rhythmic movement disorder (SRRMD), and other movement disorders in sleep. (<https://www.sciencedirect.com>)

Parasomnia

Parasomnia is an undesirable non-deliberate motor or subjective phenomenon that takes place during transition from wakefulness to sleep or during arousal from sleep. The common symptoms of parasomnia are wake up confused or disoriented, wake up wondering where you are, not remember doing certain activities, find unfamiliar cuts on your body, have difficulty sleeping throughout the night, feel daytime sleepiness or fatigue. (<https://www.psychiatry.org/>)

Sleep apnea

Sleep apnea is a potentially serious sleep disorder in which breathing repeatedly stops and starts. If you snore loudly and feel tired even after a full night's sleep, you might have sleep apnea. The signs and symptoms of obstructive and central sleep apneas overlap, sometimes making it difficult to determine which type you have. The most common signs and symptoms of obstructive and central sleep apneas include: Loud snoring, Episodes in which you stop breathing during sleep, which would be reported by another person, Gasping for air during

sleep, Awakening with a dry mouth, Morning headache, Difficulty staying asleep (insomnia), Excessive daytime sleepiness (hypersomnia), Difficulty paying attention while awake, Irritability.

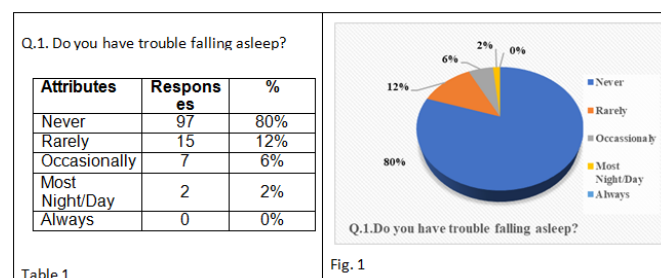
A few studies are showing high burden of sleep problems in Indian students (Kaur, 2015, 2017) Thus there is need to research the sleep quality of college students as very few studies are available. Objective of this study was to assess the determinants of quality of sleep of college students.

Methodology

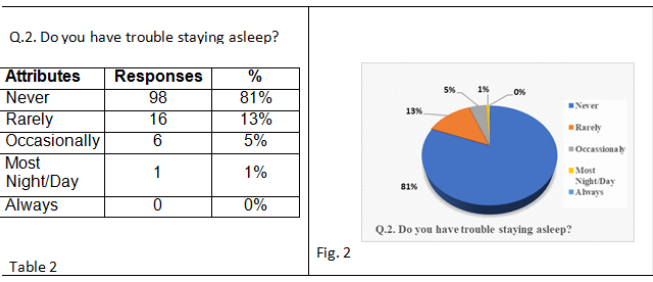
Survey method was applied for the study. Questionnaire was prepared by taking reference of the questionnaire of Towards Optimised Practice (TOP) available on internet. (<https://actt.albertadoctors.org>). Online survey was conducted by using Google form. The survey comprises of questions pertaining to the effects of sleep deprivation among college students. The response of College students of Shreewardhan taluka between the age 15-25years was taken. The data was compiled, analysed and interpreted to draw result showing percentage wise respondents affected with Insomnia, Psychiatric disorder, Circadian rhythm disorder, Movement disorder, Parasomnia & Sleep apnea. The percentage of affected students was calculated using grading scale. The conclusion was made on the basis of result obtained.

Result and Discussion

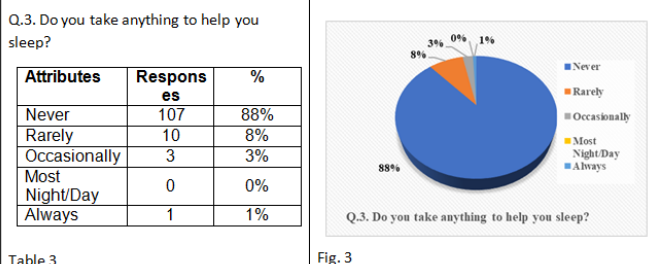
On analysing the data following result was obtained. On asking trouble in falling asleep, 80% respondents don't have any problem of falling asleep, 12% respondents rarely face such problem, 6% respondents occasionally face the problem of falling asleep. 2% respondents face such problem most during night/day. (Table 1, Fig. 1).



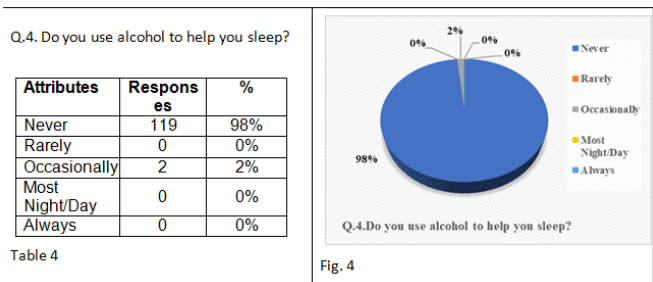
On asking trouble in Staying asleep, 81% respondents don't have any problem of staying asleep, 13% respondents rarely face such problem, 5% respondents occasionally face the problem of staying asleep. 1% respondents face such problem most during night/day. (Table 2, Fig.2)



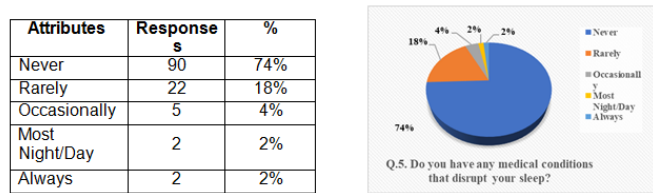
On asking about taking any help to fall asleep, 88% respondents don't take any help for falling asleep, 8% respondents rarely take such help for falling asleep, 3% respondents occasionally take the help to fall asleep. 1% respondent face such problem and take help of anything that help to fall asleep.



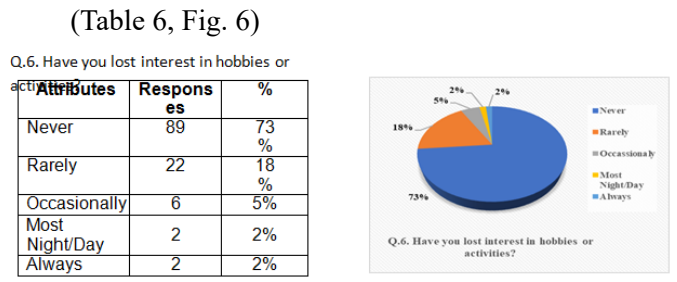
On asking dependency on use of alcohol help for falling asleep, 98% respondents don't take alcohol for falling asleep, 2% respondents occasionally take the help of alcohol to fall asleep. Whereas 0% response was in favour of Rare dependency on alcohol, Most Night/Day dependency on alcohol and respondents who always depend on alcohol for sleep respectively. (Table 4, Fig. 4).



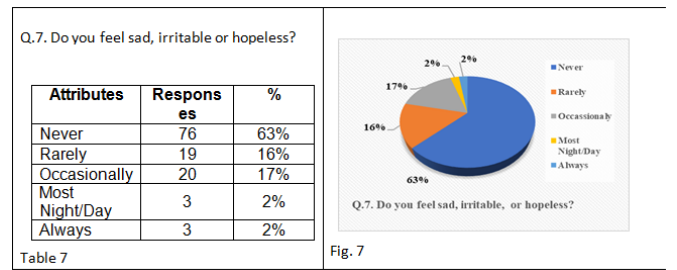
It was observed that 74% respondents don't have any medical condition at all that disrupt their sleep. 18% respondents rarely, 4% Occasionally and 2% respondents most of night/day time have some medical conditions that disrupt their sleep. Whereas 2% respondents always have some medical issues that disrupt their sleep. (Table 5, Fig. 5)



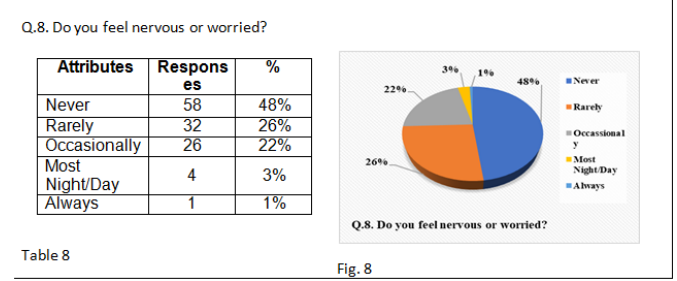
It has been observed that 73% respondents don't have any issue of loss of their interest in hobbies or their day to day activities. It was further observed that 18% respondents rarely lose their interest in hobbies or activities, 6% Occasionally, 2% respondent most of night or day time and 2% respondents always lose their interest in hobbies or activities.



It has been observed that 76% respondents never feel sadness, irritability or feeling of hopelessness. Whereas 16% respondents feel sad, irritable or hopeless rarely. Such feeling persists occasionally in 17% respondents, most of night or day time in 2% respondents and 2% respondents always feel sad, irritable or hopeless.



It has been observed that 48% respondents never feel nervous or worried. Whereas 26% respondents feel nervous or worried rarely. Such feeling persists occasionally in 22% respondents, most of night or day time in 3% respondents and 1% respondents always feel nervous or worried. (Table 8, Fig. 8).



It has been observed that on asking about thought of something wrong with body, 70% of the respondents don't have any such thoughts in their mind. 17% respondents thought rarely that something is wrong with their body followed by 8% respondents who thought it occasionally, 1% during most of the night or day time and

4% respondents always have a thought that something is wrong with their body. (Table 9, Fig. 9).

Q.9. Do you think something is wrong with your body?

Attributes	Responses	%
Never	85	70%
Rarely	20	17%
Occasionally	10	8%
Most Night/Day	1	1%
Always	5	4%

Table 9

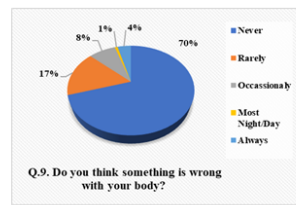


Fig. 9

It was observed that 65% respondents have their regular sleep schedule. Whereas in 18% respondents the sleep schedule is irregular. In 12% respondents irregular sleep schedule is occasional. In 3% respondents the sleep schedule is irregular during most night or day. 2% respondents always experience irregular sleep schedule. (Table 10, Fig. 10)

Q.10. Is your sleep schedule irregular?

Attributes	Responses	%
Never	79	65%
Rarely	22	18%
Occasionally	15	12%
Most Night/Day	4	3%
Always	2	2%

Table 10

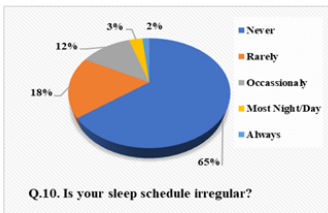


Fig. 10

On asking restlessness in legs or feeling discomfort before bed, 73% respondents don't have such issues. 8% respondents rarely, 12% occasionally, 3% during most of the night or day and 4% respondents always have an issue of restlessness in legs or feeling uncomfortable before going bed. (Table 11, Fig. 11).

Q.11. Are your legs restless and/or uncomfortable before

Attributes	Responses	%
Never	88	73%
Rarely	10	8%
Occasionally	15	12%
Most Night/Day	3	3%
Always	5	4%

Table 11

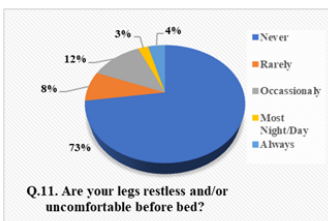


Fig. 11

On asking about having issue of restless feeling or kicking legs in sleep, 81% of respondents don't have such issues restless feeling or kicking legs while sleeping. Such issues were found to be rare in 6% respondents, occasional in 5% respondents. 2% respondents experience such issue during most of night or day, whereas 6% respondents always have such issues of restless feeling or kicking legs while sleeping. (Table 12, Fig. 12).

Attributes	Responses	%
Never	98	81%
Rarely	7	6%
Occasionally	6	5%
Most Night/Day	2	2%
Always	8	6%



On asking about having issue of unusual behaviours or movements during sleep, 72% of respondents don't have such issue of unusual behaviours or movements during sleep. Such issues were found to be rare in 13% respondents, occasional in 10% respondents. 2% respondents experience such issue during most of night or day, whereas 3% respondents always have such issues of unusual behaviours or movements during sleep. (Table 13, Fig. 13).

Q.13. Do you have any unusual behaviours or movements during sleep?

Attributes	Responses	%
Never	87	72%
Rarely	16	13%
Occasionally	12	10%
Most Night/Day	2	2%
Always	4	3%

Table 13

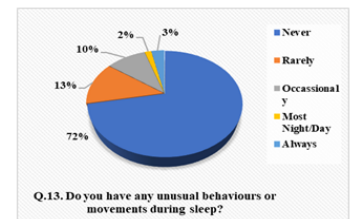
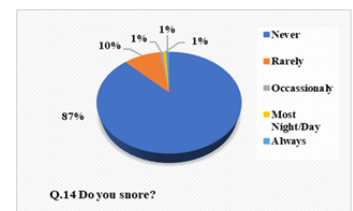


Fig. 13

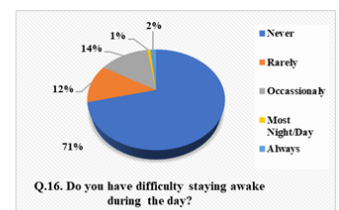
It has been observed that 87% respondents don't snore. 10% respondents rarely snore; 1% respondents occasionally snore while sleeping. Whereas 1% snores during most of night or day. 1% respondent always have problem of snoring. (Table 14, Fig. 14).

Attributes	Responses	%
Never	106	87%
Rarely	12	10%
Occasionally	1	1%
Most Night/Day	1	1%
Always	1	1%



It has been observed that 88% respondents don't have issue of breathlessness, gasping, snoring or choking while sleeping. Whereas 7% respondents rarely, 3% Occasionally, 1% during most night or day and 1% respondent always show such symptoms. (Table 15, Fig. 15).

Attributes	Responses	%
Never	86	71%
Rarely	15	12%
Occasionally	17	14%
Most Night/Day	1	1%
Always	2	2%



On asking about having difficulty in staying awake during day, 71% respondents don't have such issue. Whereas 12% rarely, 14% Occasionally, 1% during most night or day period and 2% respondents always have difficulty in staying awake during day. (Table 16, Fig. 16).

Analysis of Questionnaire

Sr. No.	Attributes	Grading Scale					Result
		Never (1)	Rarely (2)	Occasionally (3)	Most Night / Day (4)	Always (5)	
1	Do you have trouble falling asleep?	97	15	7	2	0	Insomnia 2%
2	Do you have trouble staying asleep?	98	16	6	1	0	Insomnia 1%
3	Do you take anything to help you sleep?	107	10	3	0	1	Insomnia 1%
4	Do you use alcohol to help you sleep?	119	0	2	0	0	Insomnia 0%
5	Do you have any medical conditions that disrupt your sleep?	90	22	5	2	2	Insomnia 4%
6	Have you lost interest in hobbies or activities?	89	22	6	2	2	Psychiatric Disorders 4%
7	Do you feel sad, irritable, or hopeless?	76	19	20	3	3	Psychiatric Disorders 4%
8	Do you feel nervous or worried?	58	32	26	4	1	Psychiatric Disorders 4%
9	Do you think something is wrong with your body?	85	20	10	1	5	Psychiatric Disorders 5%

Conclusion

It was observed that of the 121 respondents 83 were females and 38 were male respondents. Among these, about 5% youth were suffering from Insomnia, 4 % respondents were suffering from Psychiatric disorders, 5% respondents have shown Circadian rhythm disorder, 8% were suffering from sleep related movement disorder, 5% were the victims of parasomnia and 25% respondents were suffering from Sleep apnea. On an average about 9% Students were suffering from various sleep related disorders. Though the percentage is less, there is need to pay attention on the mental health of students. College years are time of critical transition from adolescence to adulthood. This transition is involved with inadequate sleep. This chronic sleep deprivation may impair academic performance, mood regulation, and total well-being. Investigation of new approaches to promote good sleep should be prioritized. This study provides preliminary data on sleep quality and risk factors for sleep related disorders.

Limitations of the study

Tool used in the study self-administered questionnaire, so respondent's bias can't be ruled out. No statistical study was carried out. The study gives only basic idea of percentage of students showing sleep related disorder only by analysing the data collected by using questionnaire.

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Challenges & Problems Face by Industries in Rural Market of India – An Overview

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- Prin. Dr. Shrinivas V. Joshi
(Research Guide)

Abstract:

The paper studies the changing scenario of Indian rural markets and implies some suggestions in improving the marketing strategy in rural selling and market promotion. An improved marketing mix is the call of hour, with strategies framed by deeply considering the dynamic rural buying behaviour. This is in context of Indian rural market which stands tall due to its cultural diversity. This throws an open ground challenge to the marketers in a country with multi-cultural, multi-lingual diversity. This paper is an attempt to provide some viable solutions to these challenges as it studies and follows some successful rural marketing strategies of modern times. This is particular in context of rural sales strategies rural promotion mix

Keywords: Rural, Market, Products, Problems, Challenges

1. INTRODUCTION

Marketing may aptly be described as the process of defining, anticipating and knowing customer needs, and organizing all the resources of the company to satisfy them. In fact, satisfaction of customer's needs and wants provides the rationale for the firm's existence. Knowledge of consumer behavior, therefore, is vital for a firm to achieve its marketing goals. The consumer's behavior comprises the acts, processes and social relationships exhibited by individuals, groups and organizations in searching, obtaining, use of, and consequent experience with products and services. An understanding and knowledge of the motives underlying consumer behavior helps a firm in seeking better and more effective ways to satisfy its customers. It helps to select appropriate sales and advertising strategies, and to plan marketing programme in a more efficient manner. The rural market of India started showing its potential in the 1960s. The 70s and 80s witnessed its steady development. And, there are clear indications that the 21st century is going to see its full blossoming. In our country, where research on consumer

behavior has been nominal, not much systematized information is available about the rural consumers. Only a few enlightened companies, known for their marketing orientation, viz., Hindustan Lever, Philips India, Asian Paints, Singer and Larsen and Toubro have made concrete efforts in this direction. But, by and large, we have still to understand the rural buyer, his habits, attitudes and behavior, particularly from the marketing point of view.

The Indian rural market with its vast size and heterogeneous demand base offers great lucrative opportunities to marketers. After all, two thirds of countries consumers live in rural areas and almost half of the national income is generated in the rural hinterland. India is classified into around 450 districts, and approximately 6,30,000 villages, which can be segmented in different parameters such as literacy levels, accessibility, distribution networks, income levels, market penetration, distances from nearest towns, etc. Recent developments, which has taken place in the rural areas under the five- year plans and other such special programs, are phenomenal. The overall growth of the economy has resulted into substantial increase in the purchasing power of the rural communities.

Today the rural market offers a vast untapped potential. Development programs in the field of agriculture and related activities such as health education, communication, rural electrification, etc have improved the lifestyles of village population. Rural India, which accounts for more than 70 per cent of the country's one billion population (according to the Census of India 2001), is not just witnessing an increase in its income but also in consumption and production. It is in this background that rural marketing has emerged as a special marketing strategy.

Challenges in Rural Markets

The rural markets are full of challenges because of its characteristics like illiteracy, distances, vast markets potential, communication, rail and road transportation, distribution of products and services, understanding consumer behaviour, socio- cultural factors, languages,

lack of infrastructural facilities etc. The rural market is so wide, distant and vast that it is difficult to cover and reach. One segment is totally different from other segments.

Every district, region and state is different from others. The whole India is different in itself and even then it is an ideal example of a country having different cultures. It is incredible India. Knowing Rural India is a very difficult task, its spirit, feelings, warmth, distinctness, shyness, innocence and beyond that. If marketing / sales men try to play tantrums or cheat them, they feel disgusting and try to make distance from these people. Next most important point is that many marketing men still don't know real needs of rural consumers. Designing wrong products, services and poor strategy without knowing rural India where their own consumer in the villages lives. It is also difficult to get skilled sales person conversant with rural culture. Though, marketing heads are educated from abroad and top institutions of the country but poor in knowing their consumer. There is gap in their knowledge what they know and what is in the reality about rural consumers. That is why many products have witnessed failures in rural markets.

2. OBJECTIVES OF THE STUDY

The following are the important objectives of the present study

- 1) To study the nature and characteristics of rural market in India.
- 2) To analyze the present status of rural market in India.
- 3) To analyze the problems of rural market in India

3. PROBLEMS IN RURAL MARKETING

There are many problems to be tackled in rural marketing, despite rapid strides in the development of the rural sector. Some of the common problems are discussed below:

3.1 Transportation:

Transportation is an important aspect in the process of movement of products from urban production centers to remote villages. The transportation infrastructure is extremely poor in rural India. Due to this reason, most of the villages are not accessible to the marketing man. In our country, there are six lakhs villages. Nearly 50 per cent of them are not connected by road at all. Many parts in rural India have only kachcha roads. During the monsoons, even these roads become unserviceable. Regarding rail transport, though India has the second largest railway system in the world, many parts of rural India however, remain outside the rail network.

3.2 Communication

Marketing communication in rural markets suffers from a variety of constraints. The literacy rate among the rural consumers is very low. Print media, therefore, have limited scope in the rural context. Apart from low levels of literacy, the tradition-bound nature of rural people, their cultural barriers and their overall economic backwardness add to the difficulties of the communication task. Post, telegraph, and telephones are the main components of the communication infrastructure. These facilities are extremely inadequate in the rural parts of our country. In rural areas, the literacy percentage is still low, compared to urban areas. In India, there are 18 recognized languages. All these languages and many dialects are spoken in rural areas. English and Hindi are not understood by many people. Due to these problems, rural consumers, unlike urban consumers do not have exposure to new products.

3.3 Availability of Appropriate Media

It has been estimated that all organized media in the country put together can reach only 30 per cent of the rural population of India. The print media covers only 18 per cent of the rural population. The radio network, in theory, covers 90 per cent. But, actual listenership is much less. TV is popular, and is an ideal medium for communicating with the rural masses. But, it is not available in all interior parts of the country. It is estimated that TV covers 20 per cent of the rural population. But, the actual viewership is meager. The cinema, however, is a good medium for rural communication. But, these opportunities are very low in rural areas.

3.4 Village Structure in India

In our country, the village structure itself causes many problems. Most of the villages are small and scattered. It is estimated that 60 per cent of the villages are in the population group of below 1,000. The scattered nature of the villages increases distribution costs, and their small size affects economic viability of establishing distribution points.

3.5 Rural Markets and Sales Management

Rural marketing involves a greater amount of personal selling effort compared to urban marketing. The rural salesman must also be able to guide the rural customers in the choice of the products. It has been observed that rural salesmen do not properly motivate rural consumers. The rural salesman has to be a patient listener as his customers are extremely traditional. He may have to spend a lot of time on consumer visits to gain a favorable response from him. Channel management is also a difficult task in rural marketing. The distribution channels in villages are lengthy involving more intermediaries and consequently higher consumer prices. In many cases, dealers with required qualities are not available.

3.6 Inadequate Banking and Credit Facilities

In rural markets, distribution is also handicapped due to lack of adequate banking and credit facilities. The rural outlets require banking support to enable remittances, to get replenishment of stocks, to facilitate credit transactions in general, and to obtain credit support from the bank. Retailers are unable to carry optimum stocks in the absence of adequate credit facilities. Because of this problem, they are not able to offer credit to the consumers. All these problems lead to low marketing activities in rural areas. It is estimated that there is one bank for every 50 villages, showing the poor banking facilities in rural areas.

3.7 Market Segmentation

in Rural Markets Market segmentation is the process of dividing the total market into a number of sub-markets. The heterogeneous market is broken up into a number of relatively homogeneous units. Market segmentation is as important in rural marketing as it is in urban marketing. Most firms assume that rural markets are homogeneous. It is unwise on the part of these firms to assume that the rural market can be served with the same product, price and promotion combination.

3.8 Branding

The brand is the surest means of conveying quality to rural consumers. Day by day, though national brands are getting popular, local brands are also playing a significant role in rural areas. This may be due to illiteracy, ignorance and low purchasing power of rural consumers. It has been observed that there is greater dissatisfaction among the rural consumers with regard to selling of low quality duplicate brands, particularly soaps, creams, clothes, etc. whose prices are often half of those of national brands, but sold at prices on par or slightly less than the prices of national brands. Local brands are becoming popular in rural markets in spite of their lower quality.

4. FINDINGS AND SUGGESTIONS OF THE STUDY

The following are the important findings and suggestions of the present study. Increase in purchasing power and disposable income. Improvement in the road systems linking the villages has led to a systematic product distribution system. Earlier, there was a "trickle down" of the stocks observed to the buyers in the interior villages. These days, companies use delivery cum promotion vans that travel 8-10 hats/markets daily as a part of direct contact with villagers. The urban markets have got extremely saturated with the presence of all big players. This is very much evident in the automobile market. Motorcycles and scooters often find more acceptances in rural market as compared to urban market, since there is more proliferation of brands in the latter markets. It has

been observed that the companies which cater to both urban and rural markets tackle the recession in a better way. The demand for goods in the urban market often follows a cyclic whereas in the rural market it is steady. The companies are bound to tailor the strategies depending on various factors to appeal to the rural market. Availability deals with making the product reach the consumers. For this purpose a highly integrated extensive distribution network is necessary and in rural context, the company incurs higher cost towards the logistics as compared to urban areas. Affordability involves pricing the product in such a manner that the people are attracted and at the same time it covers all the cost incurred. Acceptability encompasses issues how the product or service could be made more acceptable to the rural consumers by incorporating attractive features. Awareness is linked to the issues of promotion of product in rural areas. The promotion needs to be adapted to the village environment, the local language and means of communication used. The best places to promote could be the frequently visited local hats and meals, the local festivals. Agricultural cycles require a major consideration too. As rural households form 72 percent of total households and increasing levels of income coupled with more and more penetration to the rural markets is expected to take rural FMCG from the current Rs. 87,900 crore to a market size of Rs. 1,06,300 crore, which is a CAGR of 10 percent. There is a huge growth potential for all the FMCG companies as the per capita consumption of almost all products in the country is amongst the lowest in the world.

Conclusion:

An income dispersal projection by NCAER based on a 7 percent GDP growth (assumption) shows that the number of poor households will shrink by more than half to 28 million, from currently 61 million, where as the middle income households will double and rich households will treble over the decade in rural India. This upward push, taking rural people from poverty to prosperity, will lead to increasing purchasing power. Today's non-consumers comprising the rural poor will enter the market as the first time buyers in large numbers. Getting a larger share of the growing rural pie, This will call for a radical shift in management thinking, from gross margin to high profit, from high value unit sales to a game of high volumes, capital efficiency and from the one-solution-fits-all mentality to market innovation. Companies are taking specific initiatives to succeed in the dynamic rural market. The major segmentation of mass population is located in rural area. The market potential is huge in rural areas. It is this market strength in rural area that needs to be tapped. Now days even the educational

Institutions are concentrating on rural marketing, have developed special management programs to cater to rural marketing and are doing market research in rural places. Rural markets are rapidly growing in India but have often been ignored by marketers. The following statistics is enough to throw light on the relevance of rural markets: 46 percent of soft drinks are sold in rural markets, 49 percent of motorcycles and 59 of cigarettes are also consumed by rural and small town consumers. Apart from this 53 percent of Fast Moving Consumer Goods and 59 percent of consumer durables have market in the rural belts. There are nearly 42,000 rural haats (markets) in India. LIC sells more than 50 percent of its policies in rural India. Of the 20 millions who have signed up for Rediff mail, 60 percent are from small towns

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Checklist of Herbaceous Plants of Seasonal Pond and Surrounding Area of Lateritic Plateaus of Sakhar Village, Rajapur

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Abstract:

Sakhar village is situated in the Rajapur tehsil of Ratnagiri district in Maharashtra. During our floristic studies in Sakhar village and surrounding area of Rajapur tehsil were surveyed and collection of herbaceous plants and prepared checklist and herbarium specimens of 70 herbaceous and aquatic flowering plant species belonging to 20 families. In this study reported two dominant families, viz Cyperaceae Juss. and Poaceae Barnhart with highest number of species diversity and 12 endemic species.

Key Words: Inventory, Flowering plants, Lateritic plateaus, Konkan, Ratnagiri District.

Introduction:

Herbaceous plant is a plant that does not have much wood and its stems are green and soft. Herbaceous plants may be annuals, biennials or perennials but most are annuals and die at the end of their growing season. Biennial and perennial herbaceous plants will live for two or more years but the stems that are in the air will die every year; the underground stems will form the new aerial stems.

Small seasonal pond is situated on lateritic plateaus at Sakhar village of Rajapur area. During floristic survey in low lateritic plateaus of Ratnagiri district of Maharashtra state, continuous field visits were conducted at Sakhar village and surrounding area. Total 70 species of herbaceous and aquatic plants were collected from lateritic plateaus of seasonal pond and surrounding area of Sakhar village including recently described five species viz. *Aponogeton nateshii* S.R.Yadav, *Corynandra elegans* Chandore, U.S.Yadav & S.R.Yadav, *Eleocharis konkanensis* Chandore, Borude, Kambale & S.R. Yadav, *Eriocaulon rayatianum* Chandore, Borude & S.R.Yadav and *Pogostemon jaitapurensis* Chandore & S.R.Yadav.

Review of the relevant literature:

Western Circle of Botanical Survey of India situated at Pune made significant contributions to the floristic

studies on Maharashtra. BSI has published a floristic account of Monocotyledones (Sharma et al., 1996) and Dicotyledones of Maharashtra State in two volumes (Singh & Karthikeyan, 2000; Singh et al., 2001). In addition to number of research papers, floristic accounts of Konkan districts such as Ratnagiri, Raigad and Sindhudurg have been published by different authors and also studies floras, monograph and revisionary works viz., Report of the Botanical survey of India Ratnagiri District flora project (Mistry, 1986), Flora of Sindhudurg (Kulkarni, 1988), Flora of Sawantwadi (Almeida, 1990), Aquatic and Wetland Plants of India (Cook, 1996), Endemic and threatened flowering plants of Maharashtra (Mishra and Singh, 2001), Flora of Kolhapur District (Yadav & Sardesai, 2002), The Family Eriocaulaceae in India (Ansari, 2009), Grasses of Maharashtra (Potdar et al., 2012), Cyperaceae of Western Ghats, West Coast and Maharashtra (Wadoodkhan, 2015).

Materials and Methods:

The regular field visits were made to survey, collection and documentation of plant species during different seasons. The collected specimens were dissected under stereo zoom microscope and microphotographs of taken with the help of camera. The collected specimens were identified by referring to various floras, monographs, and revisions (Almeida 1990, 1996; Ansari 2009; Chandore et al., 2016, 2019, 2021; Cooke 1908, 1996; Kulkarni 1988; Lekhak & Yadav 2012; Mistry 1986; Mishra & Singh 2001; Potdar et al., 2012; Sharma et al. 1996; Singh et al. 2000; Wadoodkhan, 2015; Yadav & Sardesai, 2002; Yadav et al. 2015)

Herbarium specimens prepared as per Jain & Rao (1977) methods. Checklist of herbaceous plant of study region prepared as per recent nomenclature of ICN, IPNI & POWO.

Table: 1. Checklist of herbaceous plants of seasonal pond and surrounding area of lateritic plateaus of Sakhar village, Rajapur tehsil (Maharashtra)

Sr. No.	Botanical Name	Family	Exsiccata
1.	<i>Alternanthera paronychioides</i> A.St.-Hil.	Amaranthaceae	DBB-606
2.	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	DBB-600
3.	<i>Celosia argentea</i> L.	Amaranthaceae	DBB-19
4.	<i>Aponogeton nateshii</i> S.R.Yadav	Aponogetonaceae	DBB-31
5.	<i>Cryptocoryne spiralis</i> (Retz.) Fisch. ex Wydler	Araceae	DBB-721
6.	<i>Blumea oxyodonta</i> DC.	Asteraceae	DBB-193
7.	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	DBB-153
8.	<i>Coldenia procumbens</i> L.	Boraginaceae	DBB-232
9.	<i>Corynandra elegans</i> Chandore, U.S.Yadav & S.R.Yadav	Capparaceae	DBB-05
10.	<i>Murdannia semiteres</i> (Dalzell) Santapau	Commelinaceae	DBB-596
11.	<i>Murdannia versicolor</i> (Dalzell) G.Brückn.	Commelinaceae	DBB-625
12.	<i>Cyperus iria</i> L.	Cyperaceae	DBB-539
13.	<i>Cyperus pulchellus</i> R.Br.	Cyperaceae	DBB-636
14.	<i>Cyperus rotundus</i> L.	Cyperaceae	DBB-536
15.	<i>Eleocharis atropurpurea</i> (Retz.) J.Presl & C.Presl	Cyperaceae	DBB-102
16.	<i>Eleocharis geniculata</i> (L.) Roem. & Schult.	Cyperaceae	DBB-103
17.	<i>Eleocharis konkanensis</i> Chandore, Borude, Kambale & S.R.Yadav	Cyperaceae	DBB-17
18.	<i>Eleocharis lankana</i> subsp. mohamadii Wad.Khan	Cyperaceae	DBB-706
19.	<i>Fimbristylis bhuskutii</i> W. Khan & R. D. Taur	Cyperaceae	DBB-644
20.	<i>Fimbristylis lawiana</i> (Boeckeler) J.Kern	Cyperaceae	DBB-534
21.	<i>Fimbristylis quinquangularis</i> (Vahl) Kunth	Cyperaceae	DBB-698
22.	<i>Fimbristylis schoenoides</i> (Kunth) K.Schum. [<i>Bulbostylis schoenoides</i> (Kunth) C.B.Clarke]	Cyperaceae	DBB-554
23.	<i>Fimbristylis tetragona</i> R.Br.	Cyperaceae	DBB-101
24.	<i>Fuirena ciliaris</i> (L.) Roxb.	Cyperaceae	DBB-77
25.	<i>Rhynchospora wightiana</i> (Nees) Steud.	Cyperaceae	DBB-09
26.	<i>Schoenoplectus lateriflorus</i> (J.F.Gmel.) Lye [<i>Schoenoplectiella lateriflora</i> (J.F.Gmel.) Lye]	Cyperaceae	DBB-607
27.	<i>Scleria biflora</i> Roxb.	Cyperaceae	DBB-131
28.	<i>Eriocaulon elenora</i> Fyson	Eriocaulaceae	DBB-671
29.	<i>Eriocaulon heterolepis</i> Steud.	Eriocaulaceae	DBB-691
30.	<i>Eriocaulon rayatianum</i> Chandore, Borude & S.R.Yadav	Eriocaulaceae	DBB-169
31.	<i>Eriocaulon xeranthemum</i> Mart.	Eriocaulaceae	DBB-672
32.	<i>Euphorbia concanensis</i> Janarth. & S.R.Yadav	Euphorbiaceae	DBB-04
33.	<i>Euphorbia thymifolia</i> L.	Euphorbiaceae	DBB-221
34.	<i>Phyllanthus virgatus</i> G.Forst.	Euphorbiaceae (Phyllanthaceae)	DBB-649
35.	<i>Aeschynomene indica</i> L.	Fabaceae	DBB-36
36.	<i>Cassia mimosoides</i> L. [<i>Chamaecrista mimosoides</i> (L.) Greene]	Fabaceae	DBB-119
37.	<i>Geissaspis cristata</i> Wight & Arn.	Fabaceae	DBB-23
38.	<i>Geissaspis tenella</i> Benth. [<i>Geissaspis cristata</i> var. <i>tenella</i> (Benth.) M.R.Almeida]	Fabaceae	DBB-28
39.	<i>Smithia conferta</i> Sm.	Fabaceae	DBB-38
40.	<i>Smithia salsuginea</i> Hance	Fabaceae	DBB-13
41.	<i>Smithia sensitiva</i> Aiton	Fabaceae	DBB-14
42.	<i>Blyxa octandra</i> (Roxb.) Planch. ex Thwaites	Hydrocharitaceae	DBB-648
43.	<i>Pogostemon jaitapurensis</i> Chandore & S.R.Yadav	Lamiaceae	DBB-739
44.	<i>Utricularia praeterita</i> P.Taylor	Lentibulariaceae	DBB-603
45.	<i>Utricularia purpurascens</i> J.Graham [<i>Utricularia graminifolia</i> Vahl]	Lentibulariaceae	DBB-602
46.	<i>Utricularia reticulata</i> Sm.	Lentibulariaceae	DBB-641
47.	<i>Rotala densiflora</i> (Roth) Koehne	Lythraceae	DBB-814
48.	<i>Rotala malampuzhensis</i> R.V.Nair ex C.D.K.Cook	Lythraceae	DBB-545
49.	<i>Rotala occultiflora</i> Koehne	Lythraceae	DBB-633
50.	<i>Glinus oppositifolius</i> (L.) Aug.DC.	Molluginaceae	DBB-223
51.	<i>Mollugo pentaphylla</i> L. [<i>Trigastrotheca pentaphylla</i> (L.) Thulin]	Molluginaceae	DBB-667
52.	<i>Ludwigia hyssopifolia</i> (G.Don) Exell	Onagraceae	DBB-141
53.	<i>Digitaria ciliaris</i> (Retz.) Koeler	Poaceae	DBB-547
54.	<i>Dimeria gracilis</i> Nees ex Steud.	Poaceae	DBB-777
55.	<i>Eragrostis minor</i> Host	Poaceae	DBB-815
56.	<i>Eragrostis unioloides</i> (Retz.) Nees ex Steud.	Poaceae	DBB-566
57.	<i>Isachne globosa</i> (Thunb.) Kuntze	Poaceae	DBB-640
58.	<i>Ischaemum indicum</i> (Houtt.) Merr.	Poaceae	DBB-755
59.	<i>Leersia hexandra</i> Sw.	Poaceae	DBB-110
60.	<i>Oryza rufipogon</i> Griff.	Poaceae	DBB-637
61.	<i>Paspalum canarae</i> (Steud.) Veldkamp	Poaceae	DBB-657
62.	<i>Paspalum scrobiculatum</i> L.	Poaceae	DBB-803
63.	<i>Sacciolepis myosuroides</i> (R.Br.) Chase ex E.G.Camus & A.Camus	Poaceae	DBB-647
64.	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	Poaceae	DBB-549
65.	<i>Polygala elongata</i> J.G.Klein ex Willd. [<i>Polygala preslii</i> Spreng.]	Polygalaceae	DBB-15
66.	<i>Salomonina ciliata</i> (L.) DC.	Polygalaceae	DBB-100

Sr. No.	Botanical Name	Family	Exsiccata
67.	<i>Dopatrium junceum</i> (Roxb.) Buch.-Ham. ex Benth.	Scrophulariaceae (Plantaginaceae)	DBB-599
68.	<i>Lindernia angustifolia</i> (Benth.) Wettst. [<i>Vandellia micrantha</i> (D.Don) Eb.Fisch., Schäferh. & Kai Müll.]	Scrophulariaceae (Linderniaceae)	DBB-662
69.	<i>Lindernia crustacea</i> (L.) F.Muell. [<i>Torenia crustacea</i> (L.) Cham. & Schldl.]	Scrophulariaceae (Linderniaceae)	DBB-58
70.	<i>Lindernia viscosa</i> (Hornem.) Bold.	Scrophulariaceae (Linderniaceae)	DBB-500

Results and discussion:

Present research works prepared checklist of 70 herbaceous flowering plants species belonging to 20 families from Sakhar village and surrounding area of Ratnagiri district (Maharashtra). Total 12 endemic species reported from the study area viz., *Aponogeton nateshii* S.R.Yadav, *Corynandra elegans* Chandore, U.S.Yadav & S.R.Yadav, *Eleocharis konkanensis* Chandore, Borude, Kambale & S.R.Yadav, *Eleocharis lankana* subsp. *mohamadii* Wad.Khan, *Fimbristylis lawiana* (Boeckeler) J.Kern, *Eriocaulon elenora*e Fyson, *Eriocaulon rayatianum* Chandore, Borude & S.R.Yadav, *Euphorbia concanensis* Janarth. & S.R.Yadav, *Geissaspis tenella* Benth., *Pogostemon jaitapurensis* Chandore & S.R.Yadav, *Utricularia praeterita* P.Taylor, *Rotala malampuzhensis* R.V.Nair ex C.D.K.Cook. Three dominant families of study area with respect to species number, viz. Cyperaceae Juss. (16), Poaceae Barnhart (12) and Fabaceae Lindl. (7) covered about 50 % diversity of total herbaceous plants of the study area.

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Value Building Through Value Education

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ABSTRACT:

The financial market crisis that began in early 2007 is almost unprecedented in its impact, having resulted not only in losses in markets and for financial institutions, but also in an erosion of public confidence in the financial sector and among the institutions themselves across the industrialized world.

Improving the operating environment for education especially higher education which calls for a shift in the role of the government from managing the administrative aspects of higher education institutions to becoming an architect of education standards and regulations including improving and monitoring the quality of academic program, establishing accreditation standards and procedures, ensuring equity and coordinating a system with multiple players and multiple pathways to learning.

I) INTRODUCTION:

The subprime mortgage crisis and the ensuing credit crunch, combined with rising inflation worldwide and the consequent slowdown in demand in many advanced economies, has engendered significant uncertainty about the short-term outlook for the world economy. Global growth is slowing, and it is not yet clear when the effects of the present crisis will subside. The financial market crisis that began in early 2007 is almost unprecedented in its impact, having resulted not only in losses in markets and for financial institutions, but also in an erosion of public confidence in the financial sector and among the institutions themselves across the industrialized world. In the meantime, rising energy and commodity prices are having a dual effect on emerging and developing economies; on the one hand, boosting growth; on the other hand creating inflationary pressures that raise the basic cost of living, thus poverty levels.

After several years of rapid and almost unhampered growth, the global economic landscape is changing. Rising food and energy prices, a major international financial crisis, and the related slowdown in the world's leading economies are confronting policy makers with new

economic management challenges.

II) NEED OF THE STUDY :

In order to meet the global challenges there is the need of following global competitiveness, which can only be achieved through right university education.

1) Institutions :- The institutional environment forms the frame work within which individuals, firms, and government interact to generate income and wealth in the economy. The institutional framework has a strong bearing on competitiveness and growth. It plays a central role in the ways in which society's distribute the benefits and bear the costs of development strategies and policies, and it influences investment decisions and the organization \ of production.

2) Infrastructure :- Extensive and efficient infrastructure is an essential driver of competitiveness. It is critical for ensuring the effective functioning of the economy, as it is an important factor determining the location of economic activity and kinds of activities or sectors that can develop in a particular economy. Well-developed infrastructure reduces the effect of distance between regions, with the result of truly integrating the national market and connecting it to markets in other countries and regions.

3) Goods market efficiency :- Countries with efficient goods markets are will positioned to produce the right mix of products and services given supply and demand conditions, as well as to ensure that these goods can be most effectively traded in the economy. Healthy market competition, both domestic and foreign, is important in driving market efficiency and thus business productivity, by ensuring that the most efficient firms, producing goods demanded by the market, are those that thrive.

4) Labour market efficiency :- The efficiency and flexibility of the labor market are critical for ensuring that workers are allocated to their most efficient use in the economy, and provided with incentives to give their best effort in their jobs. Labour markets must therefore have

the flexibility to shift workers from one economic activity to another rapidly and at low cost, and to allow for wage fluctuations without much social disruption.

III) SIGNIFICANCE OF THE STUDY:

1) Financial market sophistication :- The present global financial crisis has highlighted the critical importance of financial markets for the functioning of national economies. An efficient financial sector is necessary to allocate the resources saved by a nation's citizen as well as those entering the economy from abroad to their most productive uses. It channels resources to the entrepreneurial or investment projects with the highest expected rates of return, rather than to the politically connected. A thorough assessment of risk is therefore a key ingredient.

2) Technological readiness :- This pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries. Therefore information and communication technologies access and usage are included in the pillar as essential components of economies' overall level of technological readiness.

3) Market size :- The size of the market affects productivity because large markets allow firms to exploit economies of scale. Traditionally, the markets available to firms have been constrained by national borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries.

4) Business sophistication :- Business sophistication is conducive to higher efficiency in the production of goods and services. This leads, in turn, to increased productivity, thus enhancing a nation's competitiveness. Business sophistication concerns the quality of a country's overall business networks as well as the quality of individual firms' operations and strategies.

5) Innovations :- The last pillar of competitiveness is technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructures, reducing macroeconomic instability, or improving the human capital of the population, all these factors eventually seem to run into diminishing returns. The same is true for the efficiency of the labor, financial, and goods markets. In the long run, standards of living can be expanded only with technological innovation.

IV) OBJECTIVES :

- 1) To increase higher labours efficiency in the market.
- 2) To adopt advance technology for enhancing productivity.

- 3) To develop the Business sophistication for Nation's competitiveness.
- 4) To create the innovation attitude towards technologies.

V) RESEARCH METHODOLOGIES :

Research analyze and criticizes the data through observations, schedule and Govt. publications.

There are a number of issues involved in strengthening India's higher education system which needs to be addressed immediately. They are as follows :-

- 1) Make the education system as a whole more responsive to market needs.
- 2) Ensure expanded access to education that fosters critical thinking and learning skills for all, not just the elite.
- 3) Correcting teaching and learning processes. The learning materials have to be revised to ensure consistency between the skills taught in primary and secondary education and the needs of the knowledge economy introducing material and methods to teach students how to learn rather than stressing occupation specific knowledge.
- 4) Enhancing the quality of primary and secondary education including tackling issues related to quality and relevance, with special emphasis on ameliorating teacher vacancies and absenteeism and reversing high dropout rate.
- 5) Aising there quality of all higher education, not just a few world class ones such as IITs and IIMs
- 6) Reforming the curricula of tertiary education institutions to include skills and competencies for the knowledge economy- (Communication skills, problem solving skills, creativity and team work) that do meet the needs of the private sector also.

VI) FINDINGS OF THE STUDY :

1) Improving the operating environment for education especially higher education which calls for a shift in the role of the government from managing the administrative aspects of higher education institutions to becoming an architect of education standards and regulations including improving and monitoring the quality of academic program, establishing accreditation standards and procedures, ensuring equity and coordinating a system with multiple players and multiple pathways to learning.

2) Embracing the contribution of the private sector in education and training by relaxing bureaucratic hurdles

and putting in place better accreditation systems for private provider of education and training.

3) Restructuring higher education is a world-wide phenomenon. The USA, the UK, Australia, China, Pakistan etc. either have restructured or are restructuring their respective higher education systems with the object to match their systems in order to negotiate higher education under GATS regime. For example, Australia/ The USA, the UK, Canada, New Zealand are restructuring higher education for marketing higher education for marketing higher education as commodity and services with their prospective buyer- students from India. China and many other developing countries. For this, the USA has major plans for investment in higher education and invested \$ 134 billion in higher education over the next 10 years; the JK has injected a new dynamism in higher education sector through competition and incentives performance-based funding for teaching and research and portable students' aids). China has undertaken a package of comprehensive reforms in higher education for over last two decades and has looked education.. science and technology as the strategic driving forces of sustainable economic development and has already opened door to private universities and they are working good jobs. In Australia government funding has been significantly enhanced along with increased provisions for subsidized loans and scholarship for students and also quality audit and control mechanisms. Even Pakistan replaced her U6C by the Higher Education Commission (2002) and increased public funding in higher education from Rs.3.8 billion on 2002 to Rs.33.7 billion in 2007 and has envisaged bringing in transparency and accountability, recurrent funds to the universities on the basis of a new finding formula. Therefore, the general conclusion is: though primary and secondary education is important, it is the quality and size of the higher education system that will differentiate a

dynamic economy from a marginalized one in the global knowledge based economy. Enormous cross country data reveal that national economic growth and growth in quality higher education bear a high correlation.

4) The rapid growth of private institutions and deemed universities has created concern about equity, quality, exploitation, distribution of learning across disciplines, transparency and public accountability. However, students and parents expect much and also pay much for purchasing better education but finally many of them become frustrated for getting mediocre services, and unemployable skills as these institutions fail to give guarantee as generally done by the private sector corporate houses as profit as well as quality are integrated in corporate culture.

5) Accreditation mechanism is not a daily menu in the universities and the affiliated colleges. Evaluation by external body like NAAC looks fearful and it is never a professional outlook that evaluation, accreditation and grading are the stimuli to growth. The system likes to keep its information system hidden and fears self assessment and display the self of the system to the public. Naturally, accountability is almost a nonentity in higher education institutions. As of now only 31% of the universities and 9% of the college are accredited by NAAC.

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Diversity of Marine Fungi on Different Mangrove Plants of Same Habitat and their Comparison

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Abstract

A research study was carried out to identify the various marine fungi from the creeks and estuaries of Raigad district. Various manglicolous fungal species associated with mangrove plants were identified in various seasons throughout the year. A comparison was made of the diversity of marine fungi on three mangrove plants (*Avicennia marina*, *Sonneratia apetala*, *Acanthus illicifolius*) co-habiting in Dharamtar creek in Pen taluka of Raigad district of Maharashtra state, India. Fortyseven species were recorded associated with three mangrove plants. Onlythreespecieswerecommontoallthreemangrove plants. 20fungal species are found to be growing only on *Avicennia marina* while there was no any fungal species exclusively growing on two other plants. Jaccard and Sørensen similarity indices between host species were low indicating low similarity between these fungal communities. A list of fungi observed on each mangrove plant is given. It is a new data on the association of the fungal species with three mangrove plants in Raigad district.

Keywords—marine, mangroves, biodiversity, fungi, creek, species diversity

Introduction:

Mangrove ecosystems directly or indirectly support offshore, coastal and estuarine food webs by supplying organic matter in the form of detritus. Mangroves are intertidal plants composed of medium-sized trees and shrubs seen in estuaries and lagoons where they are protected from strong wave action; they are common in tropical or sub tropical coastal regions. Their prop roots, pneumatophores and fallen viviparous seedlings are periodically submerged in saline water and are inhabited by several marine fungi. Hyde and Jones, Jones and Kuthubutheen, Kohlmeyer and Venkatesh and Natrajan describe fungi growing on mangroves from different parts of the world. Fungal diversity may also vary from one mangrove to the next. A good data is available on the diversity and ecology of intertidal mangrove fungi in last

four decades. (Sarma & Hyde 2001, Alias & Jones 2009). But there is no much data available on the diversity of mangrove fungi from Raigad district. An Attempt was made to study the diversity of marine fungi in Dharamtar creek in Pen taluka of Raigad district of Maharashtra state. Observations made in the study on the diversity of marine fungi on three different mangrove species growing in the same habitat of creek is presented in this paper.

Methods:

Plant material was collected from Dharamtar creek and estuary area, (Fig. 1a). This location (Lat 18° 40' N & Long 73° 00' E) is on the eastern side of the Mumbai harbor. At the entrance of harbor lies the Dharamtar creek of the river Amba, which is formed by confluence of Amba river, Karanja creek and Patalganga River on the west coast of Maharashtra. It is a typical estuarine location where salinities range from that of seawater to that of fresh water, due to tidal and seasonal fluctuations in water flow. Mangroves such as *Rhizophora*, *Avicennia* and *Bruguiera*, and mangrove associates such as *Acanthus illicifolius* grow luxuriantly in this estuary. The lower parts of these mangrove vegetation are periodically flooded with salt water during high tide.

Plant material was collected during low tide in the year 2018. Samples were collected in all three seasons. In summer (April - May), in rainy season (August - September), and in winter (December - January) Dead branches, leaves, still attached to the submerged portions, fruits and pneumatophores of *Avicennia marina* (Forsk.) Vierh (*Avicenniaceae*) and *Sonneratia apetala*, L.f (*Lythraceae*). *Acanthus illicifolius* L. (*Acanthaceae*, Fig. 1d) were collected. Fifty samples were collected from each of the three selected hosts in every season. Samples were immediately washed in estuarine water to remove debris, put in sterile polythene bags and taken to the laboratory. After preliminary examination, samples were incubated in sealed polythene bags at room temperature. Moisture content was maintained in the polythene bags by spraying sterilized tap water once a week. The incubated wigs were periodically examined for sporulating marine fungi under a stereo microscope.

Sporulating structures seen were picked off with sharp needles or fine tipped forceps. Immersed fruit bodies were located by randomly slicing away the surface layers of wood with arazor blade. The sporulating structures were mounted in natural seawater on glass slides for microscopic observation. Incubation and observation of the samples continued for 2 months every season.

Statistical analysis: Similarity index was calculated with of species pair-wise among the hosts based on the presence or absence of each fungal species.

Formulae for Jaccard Index - $JI = a / (a + b + c)$ where a is the number of fungal species occurring in both hosts, b is the number of fungal species unique to the first host and c is the number of fungal species unique to the second host.

For comparing the similarity of species composition between mangrove hosts, Sørensen index was also calculated pair wise.

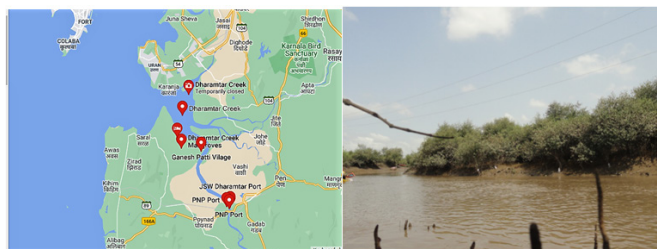
Formula for Sorensen index- $C_s = 2j / (a + b)$, where j is the number of species common to both the species, a is the number of species recorded on first host and b is the number of species recorded on the second host.

Results

The marine fungi observed during this study are listed in Table 1 together with the host on which they were observed. Table 2 lists the Jaccard and Sørensen indices of species similarity calculated pair-wise among the three plants studied. These indices between host species were low, indicating low similarity between fungal communities on the three hosts.

Total 47 fungal species comprising 34 ascomycota, 1 basidiomycota, 1 mucoromycotina, 09 Hyphomycetes and 02 coelomycetes fungi were recorded. Out of 47 species of marine fungi 45 were recorded from Avicennia marina, 17 from Sonneratia apetala and 13 from Acanthus illicifolius.

Only three species were common to all three hosts examined: Ascocratera manglicola, Clavatospora bulbosa and Halocyphina villosa. Out of 47 marine fungi recorded 20 species were restricted only with Avicennia marina. There were no any fungal species recorded exclusively associated with Sonneratia apetala and Acanthus illicifolius. There are 17 fungal species found common associated with Avicennia marina and Sonneratia apetala, 11 species were common on Avicennia marina and Acanthus illicifolius and only 03 species were growing commonly with Sonneratia apetala and Acanthus illicifolius.



Location of Dharamtar creek)

Dharamtar creek



Avicennia marina

Sonneratia apetala

Acanthus illicifolius

Table 1. Occurrence of marine fungi on three different mangrove plants species.

Fungus	Avicennia marina	Sonneratia apetala	Acanthus illicifolius
1. Aigialus grandis	+	-	+
2. Aigialus mangrovei	+	-	+
3. Aigialus parvus	+	+	-
4. Alternaria sp.	+	-	-
5. Aniptodera chesapeakeensis	+	-	-
6. Aniptodera haispora	+	-	-
7. Aniptodera mangrovei	+	-	+
8. Antenospora quadricornuta	+	+	-
9. Anthostomella nypensis	+	-	+
10. Ascocratera manglicola	+	+	+
11. Aspergillus niger	+	-	-
12. Aspergillus versicolor	+	+	-
13. Aspergillus wentii	+	+	-
14. Cirrenalia tropicalis	+	-	-
15. Clavatospora bulbosa	+	+	+
16. Cryptosphaeria mangrovei	+	-	-
17. Cunninghamella elegans	+	-	-
18. Curvularia lunata	+	+	-
19. Dactylospora haliotrepha	+	-	-
20. Eutypa bathurstensis	+	-	-
21. Halocyphina villosa	+	+	+
22. Halosarpheia marina	+	+	-
23. Halosarpheia minuta	+	+	-
24. Halosarpheia ratnagiriensis	+	+	-
25. Hysterium Sp	+	+	-
26. Kallichroma tethys	+	-	-
27. Lautospora gigantea	+	-	-
28. Leptosphaeria sp.	+	-	-
29. Lignicola sp.	+	-	-

30. <i>Lophiostoma mangrovei</i>	+	-	-
31. <i>Lulworthia grandispora</i>	+	-	-
32. <i>Marinosphaera mangrovei</i>	+	+	-
33. <i>Massarina velatospora</i>	+	-	-
34. <i>Monodictys pelagica</i>	+	+	-
35. <i>Periconia prolifica</i>	+	-	+
36. <i>Phoma sp.</i>	+	-	+
37. <i>Phomopsis sp</i>	+	+	-
38. <i>Rhizophilla marina</i>	+	-	+
39. <i>Saccardoella marinospora</i>	-	-	+
40. <i>Savoryella lignicola</i>	+	-	-
41. <i>Savoryella paucispora</i>	+	+	-
42. <i>Trichocladium achrasporum</i>	-	-	+
43. <i>Trichocladium alopallonellum</i>	+	-	+
44. <i>Trimmatostroma sp.</i>	+	-	-
45. <i>Verruculina enalia</i>	+	-	-
46. <i>Zalerion varium</i>	+	+	-
47. <i>Zopfiella sp.</i>	+	-	-
Total	45	17	13

Table 2 Comparison of species similarity of marine fungi from three mangrove plants of same habit

Paired host species	Fungicommonto both hosts	Jaccard Index	Sorensen Index
<i>Avicenniamarina/Acanthusilicifolius</i>	11	0.36	0.18
<i>Avicenniamarina/Sonneratia apetala</i>	17	0.60	0.27
<i>Sonneratia apetala /Acanthusilicifolius</i>	03	0.60	0.10

Discussion

The results of this study indicate the differences in the diversity of higher marine fungi on three mangrove species exposed to the same physical factors in an estuary. Out of 47 species found, only three were seen on all three plants under study. Same observations in the composition of fungi on individual host species growing in a single locality have been previously reported by Hyde (1990), Sarma & Vittal (2001) and Maria & Sridhar (2003).

Several of the marine fungi observed on each of the three plants under the study have already been recorded on the other mangrove plants as well. The diversity and abundance of mangrove fungi are influenced by various factors (Jones 2000, Sarma & Hyde 2001, Alias & Jones 2009, Alias et al. 2010) and Sakayaroj et al (2011), and include the type of mangrove community, type of substrata available for colonization, quality of substrata, length of time the substrata has been exposed to conditions favorable to fungal colonization, competition between fungi and various physical factors. In the present study,

because several of these influencing factors or including the physical factors were the same for each plant, differences in the observed diversity of fungi on the three mangrove species may be due to the type of substrata, the texture of substrata (hard, medium or soft) as well as the length of time the substrata had been exposed for fungal colonization. For example, the number of fungal species found on *Ac. ilicifolius* was fewer than that found on *Av. marina*. *Acanthus ilicifolius* is found in the lower strata of vegetation and is exposed to tidal waves and branching is comparatively less than the other plants. Some factors are inhibiting the colonization of fungal species.

Alias et al (2010), pointed out that mangrove ecosystems of different geographical locations differ considerably in physical attributes, composition and age of host trees, substrata available for colonization and salinity. These local environmental factors may have a larger role in deciding the dominant fungi on each host.

Identification of these fungal species from three mangrove plants is a new data on marine fungi from Raigad district.

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We thank Dr. Sanjay Deshmukh, former Vice-Chancellor, University of Mumbai and Professor in Life Sciences, University of Mumbai for his guidance during the study.

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Inventory of genus *Fuirena* Rottb. (Cyperaceae) in India

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Abstract

Fuirena Rottb., called umbrella sedges and is a genus of the sedge family (Cyperaceae). During our revisionary work on genus *Fuirena* Rottb., consultation of herbaria and the consultation of relevant literature revealed that, total 10 species and one variety of genus *Fuirena* are reported from India. In which six species and one variety are endemic to India, namely *Fuirena cuspidata* (Roth) Kunth, *F. pubescens* var. *pergamentacea* C.E.C.Fisch., *F. simpsonii* Ravi, N.Mohanan & Shaju, *F. swamyi* Govind., *F. trilobites* C.B.Clarke and *F. tuwensis* M.B.Deshp. & Shah. Present study provided the checklist of genus *Fuirena* for India with its correct name, synonyms, basionym (if any), nativity, and Indian distribution is investigated.

Keywords: Sedges, *Fuirena*, Enumeration, Review, India.

Introduction:

Family Cyperaceae is a cosmopolitan distributed with 91 genera. The members of family are commonly called as sedges. Among the genera of the family *Fuirena* is one of distributed throughout globe with represented by 55 species and most of the species distributed in warm temperate to tropical areas. In India, the genus consists of 10 species and one variety among them, 6 species and one variety are endemic. Most of the species are perennial grow in wet habitats along the sea level to up to 3000 m from mean sea level. Some of the species are noxious weed in rice fields. (Shrama et al. 1996, Khan 1998, Prasad & Singh 2002, POWO, Tropicos). Genus *Fuirena* can be easily identified from its other related genera of Cyperaceae by its grass like appearance, paniculate inflorescence, unique shape of scales and nuts. Rottboll in 1773 described the genus with a type species *F. umbellata* in *Descriptionum et Iconum Rariores*. (Muasya 1998).

Materials and methods:

Intensive and extensive field tours were conducted to observe plants in the field in relation to habit, habitat,

phenology and distribution of population of genus *Fuirena* in the period from year 2019 to 2022. In addition, authors examined herbarium specimens housed at some reputed herbaria. Each species is provided with accepted name, synonym, basionym (if any), nativity and Indian distribution. Accepted names, Synonyms Nativity and Indian distribution is studied on various relevant literature like states floras, revisionary work and consulting with experts also online database such as POWO, IPNI, TROPICOS, JSTOR, Plants of the world online, and online flora of peninsular India (JCB).

Checklist of *Fuirena* species in India:

1) *Fuirena ciliaris* (L.) Roxb, Fl. Ind. (Carey & Wallich ed.) 1: 184 (1820). *Scirpus ciliaris* L., Mant. Pl. Altera 182 (1771). Synonyms: *Fuirena rottboellii* Nees, *Fuirena striata* Llanos, *Scirpus aristatus* Willd., *Scirpus ciliatus* Rottb. *Scirpus pilosus* Retz.

Distribution: Tropical & Subtropical Old World.
INDIA: KA, MH, OD, TN, WB.

2) *Fuirena cuspidata* (Roth) Kunth, Enum. Pl. [Kunth] 2: 187 (1837). *Scirpus cuspidatus* Roth, Nov. Pl. Sp. 31 (1821). Synonyms: *Fuirena wallichiana* Kunth, *Isolepis cuspidata* (Roth) A.Dietr.

Distribution: Endemic to south India. (KL)

3) *Fuirena ponmudiensis* Ravi & Anil Kumar, *Rheedea* 4(2): 102 (1994).

Distribution: Endemic to South India. (KL)

4) *Fuirena pubescens* (Poir.) Kunth, Enum. Pl. [Kunth] 2: 182 (1837). *Carex pubescens* Poir. Voy. Barbarie 2: 254 (1789). Synonyms: *Scirpus pubescens* (Poir.) Lam., *Isolepis pubescens* (Poir.) Roem. & Schult.,

Distribution: Africa, India. INDIA: KA, MH.

5) *Fuirena pubescens* var. *pergamentacea* C.E.C.Fisch, Fl. Madras 1669 (1931).

Distribution: Endemic to South India (TN)

6) *Fuirena simpsonii* Ravi, N.Mohanan & Shaju., *Nordic J. Bot.* 22(3): 329 (2003).

Distribution: Endemic to South India (KL).

7) *Fuirena swamyi* Govind., Proc. Indian Acad. Sci. Pl. Sci. 94(1): 17 (1985).

Distribution: Endemic to South India (TN).

8) *Fuirena trilobites* C.B.Clarke, Fl. Brit. India [J. D. Hooker] 6(19): 666 (1893).

Distribution: Endemic to South India (TN).

9) *Fuirena tuwensis* M.B.Deshp. & Shah, Bull. Bot. Surv. India 10: 239 (1969).

Distribution: Endemic to India, INDIA: GJ, KA.

10) *Fuirena umbellata* Rottb., Descr. Icon. Rar. Pl. 70. t. 19. f. 3. (1773). Synonym: *F. paniculata* L.f., *F. glomerata* Lam., *F. canescens* Vahl., *F. pentagona* Schumach., *F. tereticulmis* J.Presl & C.Presl *F. rivularis* Nees, *S. rivularis* Don ex Nees., *F. capitata* Willd. ex Kunth, *F. thouarsiana* Kunth, *F. quinguangularis* Hassk., *F. guianensis* Klotzsch, *F. haemaglottis* Steud., *F. complotracha* C.Wright, *F. hildebrandtii* Boeckeler, *S. umbellatus* (Rottb.) Kuntze, *F. seriata* C.B.Clarke, *F. brasiliensis* Palla, *F. umbellata* var. *pilosa* Domin, Biblioth., *F. umbellata* var. *typica* Domin, *F. philippinensis* Gand., *F. umbellata* var. *unguiculata* Kük., *F. appendiculata* Peter., *F. multiflora* Peter, *F. brachylepis* Peter, *F. umbellata* var. *americana* H.Pfeiff., *F. mahouxii* Cherm., *S. fuirena* T.Koyama.

Distribution: Tropics & Subtropics; INDIA: KA, KR, OD, MH, WB.

11) *Fuirena uncinata* (Willd.) Kunth., Enum. Pl. [Kunth] 2: 184 (1837). *Scirpus uncinatus* Willd., Sp. Pl., ed. 4 [Willdenow] 1(1): 300 (1797). Synonyms: *Fuirena capitata* (Burm.f.) T.Koyama. *Scirpus capitatus* Burm.f., *Isolepis uncinata* (Willd.) Roem. & Schult.

Distribution: Endemic to India (KA, KR, OD, MH, WB)

(*Abbreviations: - KA: Karnataka, MH: Maharashtra, OD: Orissa, KL: Kerala, TN: Tamil Nadu, WB: West Bengal, GJ: Gujarat.)

Result and discussion:

In India Genus *Fuirena* is represented by 10 species and one variety; in which six species and one variety are endemic to India. Species like *F. ciliaris*, *F. umbellata* are widely distributed in all the states of India. Other species like *Fuirena cuspidata* (Roth) Kunth, *F. pubescens* var. *pergametacea* C.E.C.Fisch., *F. simpsonii* Ravi, N.Mohanan & Shaju, *F. swamyi* Govind., *F. trilobites*

C.B.Clarke and *F. tuwensis* M.B.Deshp. & Shah. are restricted to India and most of the *Fuirena* species distributed at south India.

Many species are found along the water-logged soil, coastal swamps and rice fields, in association with grasses, shrubs and trees. *F. ciliaris* is used as a fodder for cattle when the scarcity of grasses but other species are having less distribution areas because of anthropogenic activities; there for strict conservation strategies are required to conserve these species as about 60% of the genus *Fuirena* is endemic to India.

During the revisionary work on some genera of Indian Cyperaceae authors are studied different aspects of the genus *Fuirena* as its detailed taxonomy, nomenclature, phenology, distribution, etymology, nut morphology which helps future researchers and policy makers to understand the genus thoroughly.

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Ethnoveterinary Medicinal Plants Used by Rural People in Murbad Tehsils, Thane District, Maharashtra

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Abstract

Murbad is one of the tribal taluka of the Thane District in Maharashtra having 206 villages comprising the forest area of 35237 hectares and the population of the Murbad tahsil mainly comprises tribal groups that are well-versed in the traditional knowledge of medicinal plants found in the forest area of the said tahsil. The preliminary study has been conducted in 2021 and the data is gathered from the questionnaire replied by the rural folk about the use of medicinal plants consisting of 43 plant species spanning over 42 genera and 30 families used for the treatment of diseases and other ailments of the livestock. From this study, it is found that the rural folk of the Murbad Tahsil engaged in the livestock raising has good knowledge of the medicinal plants which has been used for the treatment of the livestock diseases and other ailments such as sore of the tongue, skin diseases, dysentery, drowsiness, and white stool, worms, asthma, swelling of the neck, flatulence of the stomach, body sore, ophthalmia, pneumonia, wounds, heatstroke, fever, hypersalivation, stomach-ache, and indigestion and insect-pest infestation.

Keywords- livestock, cattle, diseases and ailments, ethnoveterinary, health care, rural folk, forest area

Introduction

Ethno-veterinary medicinal plants for treating diseases and preserving animal health that is based on folklore, indigenous practices, skills, methods, and practices. Dr. Constance M. McCorkle coined the phrase "ethnoveterinary." Her paper "An introduction to Ethno-veterinary research and development" was the first to use it. It's used to describe indigenous knowledge that's passed down the generations by verbal verdicts (Mc Corkle, 1986).

Livestock plays an important role in Indian agriculture, supplying farm power, rural transportation, fertilizer, fuel, milk, and meat, as well as a significant role in the rural economy by providing income and employment to small-scale farmers and other weaker sections of the society. As

a result, animal health is a crucial problem for the growth of these sectors. According to the 2003 livestock census, India has a population of 185 million cattle (Yadav, 2007).

Animal diseases have a particularly negative impact on disadvantaged populations that, despite their reliance on livestock, have limited access to modern veterinary treatments. Furthermore, the bulk of livestock raisers in the Murbad area and surrounding region are physically remote from veterinary station locations and those who are closer to the sites may not be able to afford the costs for services.

Inadequate national financing for the prevention and control of animal diseases adds to the burden, especially for pastoralists living in the country's remote desert and semi-arid lowlands. As a result, combining contemporary veterinarian health care with traditional care would be a reasonable approach (Sori et al., 2004).

The ethnoveterinary remedy is defined as the study of traditional animal health beliefs, knowledge, skills, methodologies, and practices (Tyasi, et al., 2015).

The study area is rich in herbal resources. Most tribal people work in agriculture to supplement their income. The majority of the residents rely extensively on plant resources growing in their environment to suit their needs, including ethno-herbal treatment for sick animals. For ethnoveterinary information, local healers and experienced people were interviewed. Data collection and fieldwork were carried out, according to Jain (1999).

There are reports of ethnoveterinary practices documented in several regions of Maharashtra, including Buldhana district (Patil et al., 2010; Marathe et al., 2010), Chandrapur, Nagpur, and Gadchiroli district (Kulkarni et al., 2014), and Akola district (Kulkarni et al., 2014). (Jambu and Wath, 2018), Marathwada region, (Khandare, 2020, Deshmukh et al., 2011).

The most prevalent domesticated animals in Murbad villages are cows, goats, buffaloes, pigs, cats, dogs, and poultry. These animals, like humans, suffer from a variety of ailments, which are treated by indigenous healers using mostly plant-based remedies. A thorough examination of

the plants they employ to treat their livestock revealed the identification of 43 plant species spanning over 42 genera and 30 families, which are mentioned here below.

Materials and Methods

Selection of site

Murbad is one of the tribal taluka of the Thane District in Maharashtra having 206 villages comprising the forest area of 35237 hectares and the population of the Murbad tahsil mainly comprises tribes such as Thakur, Mahadev Koli, Katkari/Kathodi, and ethnic groups such as Mahar, Chambhar, Kunabi, and Agriculturist. The Medicine men from the Thakur and Katkari tribes are well-versed in medicinal plants. In the past, no ethnoveterinary research was conducted in Murbad tehsil. The tehsils of Kalyan, Ulhasnagar, Ambarnath, Bhiwandi, Shahapur, and Murbad are part of the New Thane district (Collectorate of Thane District, 2014). Murbad's main rivers are Murbadi, Kalu, and Barvi, which originate in Sahyadri and flow west. During the summer, most rivers and streams dry up. Murbad's climate includes the southwest monsoon (June to September), post-monsoon, cold, and summer seasons. The district receives an average annual rainfall of 2,293-4 mm. In a typical year, there are 83 rainy days.

Plant identification

Specimens were identified using standard procedures and Flora of Gujarat with supporting information for ethnomedical uses and recipes (Almeda, 2003, Cook, 1965, Jain & Rao, 1977), and Flora of Gujarat (Naik, 2004; Shah, 1978).

Field visit

Several survey visits to different villages in Murbad Tehsil were conducted during the Year 2021. The data was gathered from rural residents who were knowledgeable, experienced, and elderly. Interviews with farmers, experienced elders in villages, and traditional healers were used to gather ethnoveterinary data. They were asked to fill out a questionnaire in the Marathi language. The information gathered is depicted in the following table

Results and Discussion

Traditional healers and tribes in the area have a wealth of traditional knowledge on how to employ natural resources, particularly biological resources available in their surroundings, to treat diseases in their domestic animals. The plant species are traditionally used as a vermicide, lactation enhancer, fertility inducer, repellent for body-lice and other insects, and sore of the tongue, skin diseases, dysentery, drowsiness, and white stool, worms, asthma, swelling of the neck, flatulence of the stomach,

body sore, ophthalmia, pneumonia, wounds, heatstroke, fever, hypersalivation, stomach-ache, and indigestion, according to the efficacy of the treatment techniques appears to be satisfactory.

Domesticated animals such as cows, buffalos, goats, sheep, fowls, ducks, pigs, dogs, and cats are kept by the locals. These animals, like their owners, are afflicted with various ailments.

Table 1 lists the Ethnoveterinary medicinal plant species that have been identified. A record of usage includes botanical names as well as local information such as name, family, and the portion used, as well as an ethnoveterinary use in the area.

The current study documented the utilization of 43 plant species from 42 genera and 30 families to address various veterinary issues. These include issues such as helminth infestation, insufficient breastfeeding, ectoparasites, diarrhea, flatulence, pneumonia, and so on. They treat up to 23 different disorders, and the compositions are relatively basic. The majority of the plants used to treat their animals are also used to treat humans, hence these are generally well-known medicinal herbs.

For treatment, they employ various plant parts such as leaf, stem, rhizome, root, bark, fruit, flower and so on in the form of extracts, pastes, and so on. To manufacture or administer medicines, they very rarely use jaggery, black salt, or table salt. The rate of effectiveness in healing diseases with few or no side effects is critical to any sort of treatment's overall success. The animals they keep appear to be in good health, which is a testament to their veterinarian formulations' effectiveness.

According to the current research, medicinal materials were collected in the wild and used to treat veterinary illnesses. Workers' studies in other parts of India, such as Saikia and Borthakur (2010) in Assam and Galav et al., (2010) in Rajasthan, back up the findings of the current study.

The findings of this study also show that, when compared to the younger generation, the use of traditionally available medicinal herbs is more prevalent among the upper age groups of both genders. More study has found that rural people, particularly the elderly, have a vast knowledge of veterinary therapeutic plants (Satapathy, 2012, Bharti and Sharma, 2010, Naik, 2012, Rajakumar, 2012). Kiruba et al. (2006) from Cape Comorin, Dar and Verma (2011) among rural people of Jhansi district of Bundelkhand, Selvaraju et al. (2011) from Malayali tribes living in Salem district of Tamil Nadu, Muley et al. (2012) in Ahmednagar district of Maharashtra, and Pragada and Rao (2012) in tribal regions of Andhra Pradesh conducted monumental research works. The 29 ethnoveterinary medicinal plants

belonging to 25 families have been recorded against 31 livestock diseases Marathe and Deshmukh (2020). The findings of recent research studies supported the findings of the previous research.

Table No.1. List of Ethnoveterinary Medicinal Plants

Sr No.	Botanical name	Local name	Family	Parts used
1.	<i>Achyranthes aspera</i> L.	Aaghada	Amaranthaceae	Leaf juice is used to cure eye problems
2.	<i>Amorphophallus bulbifer</i> (Roxburgh) Blume	Ransuran	Araceae	The tuber is cut into thin slices smeared with a little amount of salt and rubbed on the tongue of the cow for curing sore on the tongue.
3.	<i>Abelmoschus manihot</i> L. Medik	Ranbhendi	Malvaceae	Fruit is used in curing blood dysentery.
4.	<i>Aegle marmelos</i> (L.) Corr.	Bel	Rutaceae	Paste of fresh leaves used in skin burn in cattle
5.	<i>Acacia nilotica</i> (L.) Willd.	Babul	Mimosaceae	Flower used in jaundice and bark used in dysentery
6.	<i>Ailanthus excelsa</i> Roxb.	Maharukh	Simaroubiaceae	Leaves are used in control Blood Dysentery, Tick and Lice
7.	<i>Allium cepa</i> L.	Kanda	Liliaceae	The bulb used in colic pain
8.	<i>Aloe vera</i> L.	Korphad	Liliaceae	Leaf gel is fed to cure wound healing and skin diseases
9.	<i>Annona reticulata</i> L.	Ramphal	Annonaceae	Leaf paste is rubbed on the body of cattle for removing lice.
10.	<i>Asparagus racemosus</i> Willd.	Shatawari	Liliaceae	The powder is given to buffalo prolonged lactation period and quality.
11.	<i>Bacopa monnieri</i> (L.)	Brahmi	Plantaginaceae	The whole plant, leaves, and roots.
12.	<i>Bauhinia racemosa</i> Lam.	Apta	Caesalpiniaceae	Leaf and root used in Milk increase, Wound and Eye disorders
13.	<i>Brassica nigra</i> L.	Mohri	Brassicaceae	Seeds are used to treat mastitis.
14.	<i>Butea monosperma</i> (Lam.)	Palas	Fabaceae	The flower is used in Dysuria, Paralysis; Urinary tract obstruct.

Sr No.	Botanical name	Local name	Family	Parts used
15.	<i>Calotropis gigantea</i> R.Br.	Rui	Asclepiadaceae	A mixture of latex applied on wound.
16.	<i>Capsicum annuum</i> L.	Mirchi	Solanaceae	The fruit extract is used to cure spleen disease
17.	<i>Carica papaya</i> L.	Papai	Caricaceae	Leaf and fruit is given orally for indigestion
18.	<i>Cassia uniflora</i> L.	Tarota	Caesalpiniaceae	The flower is used to treat diarrhea in goats
19.	<i>Citrus limon</i> (L.) Osbeck	Nimbu	Rutaceae	Fruit, Leaf used in Mouth ulcer, Colic, Foot and Mouth Disease (FMD)
20.	<i>Colocasia esculenta</i> (L.)	Arvi	Araceae	Leaves and petioles are chopped and boiled in sufficient water and fed to the pigs twice a day for 7 days to induce fertility.
21.	<i>Curcuma amada</i> Roxb.	Ambahalad	Zingiberaceae	The rhizome is used in bone fracture
22.	<i>Curcuma pseudomontana</i> Grah.	Ranhalad	Zingiberaceae	Rhizome are used in bone fracture
23.	<i>Cyperus rotundus</i> L.	Nagarmotha	Cyperaceae	Rhizome used in Fever, stomach disorder and Helminthiasis
24.	<i>Datura metal</i> L.	Dhotra	Solanaceae	Roasted fruits are given once a day for dysentery and cough.
25.	<i>Eucalyptus globulus</i> L.	Neelgiri	Myrtaceae	Oil is applied to the wound to kill the worms.
26.	<i>Ferula asafoetida</i> L.	Hing	Apiaceae	Gum are used in indigestion problem
27.	<i>Ficus racemosa</i> L.	Umber	Moraceae	The latex used in Bone fracture
28.	<i>Gloriosa superba</i> L.	Kallavi	Liliaceae	Tuber powder and leaf The extract used for curing pain delivery and trouble in urination
29.	<i>Helecteres isora</i> L.	Muradsheng	Sterculiaceae	Root extract is used to treat Diarrhoea and Dysentery
30.	<i>Jatropha gossypifolia</i> L.	Mogali Erand	Euphorbiaceae	The latex used in treating mouth ulcers
31.	<i>Mangifera indica</i> L.	Amba	Anacardiaceae	Seeds are given raw to cure dysentery

Sr No.	Botanical name	Local name	Family	Parts used
32.	<i>Moringa oleifera</i> Lam.	Shewaga	Moriangaceae	Root juice is useful on an ulcer in cattle, it also removes larvae of insects. Leaf paste twice a day gives quick relief from diarrhea and dysentery.
33.	<i>Murraya koenigii</i> L.	Kadhipatta	Rutaceae	Leaves are used to treat Diarrhoea and Dysentery
34.	<i>Nicotiana tabacum</i> L.	Tambaku	Solanaceae	Leaf powder used in Conjunctivitis
35.	<i>Opuntia elatior</i> Mill.	Nagphani	Cactaceae	The leaf is applied in wounds
36.	<i>Piper nigrum</i> L.	Mirewel	Piperaceae	Seeds are used in Fever
37.	<i>Ricinus communis</i> (L.)	Erand	Euphorbiaceae	Fresh leaves pounded with an equal amount of salt is made into a paste are given orally after delivery for easy removal of the placenta.
38.	<i>Syzygium cumini</i> (L.) Skeels.	Jambul	Myrtaceae	Stem Bark used in Diarrhea and Dysentery
39.	<i>Tamarindus indica</i> L.	Chinch	Caesalpiniaceae	Leaves are used in Bone fracture
40.	<i>Terminalia arjuna</i> (Roxb.) Wt.&Am.	Arjun	Combretaceae	The stem bark paste is smeared over the fractured area to treat a bone fracture.
41.	<i>Tribulus terrestris</i> L.	Gokharu	Zygophyllaceae	Juice of fresh leaves is given to animals in case of chronic cough.
42.	<i>Vitex negundo</i> L.	Nirgudi	Verbenaceae	Tender leaves grinded with pepper, garlic is useful to cure infectious diseases and muscular pain in animals.
43.	<i>Zingiber officinale</i> Roxburgh	Adrak	Zingiberaceae	In the indigestion of cows, 50 gm zinger rhizome, 25 gm ajowan, and 25 gm black salt are pounded together with and fed to the cows once a day.

Conclusion

A considerable number of domestic animals are kept by rural residents. Due to their traditional plant-based medicines, these animals are also kept in good condition. This indicates the effectiveness of herbal medicines like this. The list of plants that have been recorded includes several well-known medicinal herbs. Recent research on the other plants identified, on the other hand, may lead to the development of more effective and safer remedies.

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A Study of Scope for Application of Block Chain in Supply Chain Management

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INTRODUCTION:

Block chain is a Data base which is segmented in various functions of computer application connected to the Network. Block chain contains all the data digitally where you can access it. Block chain accumulate all the information together in a category known as Block, which contains set of information where blocks available with some limited storage capacities and when its limit is filled it can linked to previous blocks which form a chain of data known as Block chain.

PREVIOUS STUDY ON THE SUBJECT:

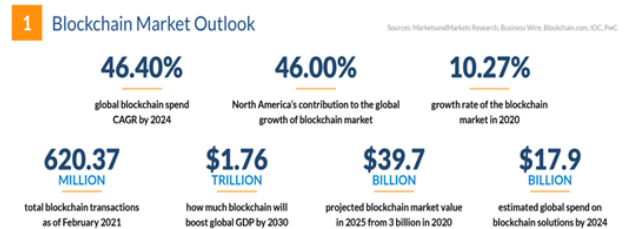
Block chain structures data into blocks which holds together like a chain. For Decentralization block chain data structure inherently makes time line one way and cannot be reverse and when Block chain collects data and filled within its capacity, it permanently freezes that data and joins with the time line. And each block ion this chain is given a specific time imprinted when it is added to the chain.

The design of block chain is made as it allow the Digital information to be collected, transferred but it is fixed and unchangeable. Because of this, the data in block chain cannot be Transact, tapered or destroyed in any manner.

Blockchain is a technology that allows each party in a supply chain to communicate verified data without the need for a trusted central entity to act as a middleman. Blockchain can improve supply chain transparency by validating and adding data in real time.

OVERVIEW OF THE STUDY:

3 Blockchain Statistics You Must Know FinancesOnline
REVIEWS FOR BUSINESS



Source: <https://financesonline.com/blockchain-statistics/>

The blockchain sector appears to be gaining traction. In 2020, the worldwide blockchain market grew by double digits, and this trend is likely to continue in the coming decade. This has led to blockchain revenue leaders like Bitcoin and Square, as well as IBM and Ant Financial filing a slew of active blockchain patents. The United States is by far the largest donor to blockchain expenditure, followed by Western Europe. In terms of industry, the banking industry spent the most on blockchain technology.

Block chain Market Size and Revenue:

In 2020, the blockchain market expanded by 10.27 percent. 2020 (MarketsandMarkets Research)

North America will account for 46% of the worldwide blockchain technology industry growth by 2020.

Governments have accepted blockchain technologies, which has aided in the expansion of the industry in the United States and Canada. (2021, Business Wire)

By 2025, the global blockchain market will have grown from \$3 billion in 2020 to \$39.7 billion. (2020, Cision PR Newswire)

There were 620.369 million transactions on the blockchain as of February 2021. 2021 (Blockchain.com).

By 2024, global spending on blockchain solutions is expected to reach \$17.9 billion, with a compound annual growth rate (CAGR) of 46.4 percent. 2020 (IDC)

Experts think that blockchain will have a positive impact on the global economy.

Potential value Drivers:

- Greater transparency and material traceability
- Lower administrative expenses
- Reduced fraud and gray-market trade risk
- Better management of outsourced contract production

Scope:

- Using block Chain to link each supply chain stakeholder for information exchange
- Alternate source of Technology:
- ERP systems
- Cloud Monitoring
- Alternate Frequency modulation

A block chain is a digital content record or collection of records, transactions, or completed events that is shared by all parties involved. Every transaction in this system is time stamped and validated by a majority of the system's users.

A blockchain is made up of a "chain" of data-storage "blocks," each of which contains information on the transactions made, the sums involved, and the people involved. Because all prior blocks in the chain can be accessed, a blockchain database can store the whole history of all assets and instructions executed since the very first one.

This is significant because blockchain ensures authenticity by ensuring that each user's copy of the block chain matches the rest of the blockchain. A third party verifies each transaction. "Miners" are a group of people who form a network. Miners to do so, you'll need to do a lot of math. Before being permitted to add, you must show "work." a new link in the network, as well as the enormous time and effort necessary to develop each in principle, a barrier would deter people. Someone who was involved in the creation of the complete to be replaced with a blockchain containing modified data the genuine copies.

This distributed verification approach supports data integrity and transparency, which means that parties don't have to know or trust one other in order to participate in value transfers with total confidence and respectable intermediaries. Because all participants will have a record of transactions, blockchain does not have a single point of failure, making it more resilient than a centralised system.

When specific criteria are satisfied, blockchain may be coded with embedded instructions, such as if-else and if-then statements, to carry out activities. These instructions can be used to create "decentralized applications," which connect the information in a blockchain to implications if the conditions of the transaction are not satisfied.

CHALLENGES FOR BLOCK CHAIN IN SUPPLY CHAIN

1. The inability to link block chain to real items continues to be a problem.
2. Total persuasion of all stakeholders to adopt Block chain
3. In supply chains, technology is still in its infancy
4. Security, cost, and ramifications are still being learned in the sector.

BENEFITS OF BLOCK CHAIN IN SUPPLY CHAIN

1. To ensure corporate security, increase the traceability of the material supply chain. The requirements are met.
2. Reduced losses due to counterfeit/Gray trading on the market
3. Enhance visibility and accessibility over compliance contract that has been outsourced manufacturing
4. Reduce the amount of papers you have. Costs of administration.
5. Improve credibility and public trust of data shared
6. Reduce potential public relations risk from supply chain malpractice
7. Engage stakeholders
8. Strengthen corporate reputation by providing transparency of materials used in products
9. Improve credibility and public trust of data shared.

BLOCK CHAIN ON SUPPLY CHAIN

Currently, digital applications are employed in the supply chain, which has simplified operations for both firms and customers; nevertheless, the shipping transportation procedure is still time consuming and

complicated.

Logistics and transportation necessitates extra paperwork, settlements, and overheads, making the process expensive, time-consuming, and insecure when delivering to desired location.

Nonetheless, a supply chain built on a block chain provides a safe, consistent, and trusted method of ordering shipments.

Everyone who has access to this system receives the same data, which clarifies the information about the product's shipping or logistics progress from the point of origin to the point of delivery. As a result, there is no risk of error, and both money and time are saved.

Moreover the suppliers can track the product from dispatch to delivery and customers have detailed information of purchased product

APPLICATIONS OF BLOCK CHAIN IN SUPPLY CHAIN

Block chain improve transparency at each stage of the supply chain.

Develop:

To better guide for R&D material selection and allow closed-loop design, have more access to source material data.

Plan:

Increase chances for suppliers and customers to collaborate on planning and forecasting, lowering forecast and inventory risk.

Source:

Reduce sourcing and administrative expenses by replacing paperwork with smart contracts and blockchain transactions; enable transparent sourcing to support "business initiatives"

Make:

Outsourced production becomes more visible and compliant.

Deliver:

Provide a comprehensive picture of all product phases along the supply chain journey to regulators and end customers.

Return:

Based on the facts available, decide which batch to recall. Return merchandise permission should be decentralised.

These are just a handful of the numerous ways that blockchain may help supply chains progress. Some solutions encompass the whole supply chain, and new blockchain solutions that can assist increase value creation and lower costs are frequently launched.

Block Chain Existing models:

- P2P Business Model
- Voltmarkets Model Platform
- Ship chain Platform
- Gyftblock platform
- Utility Token Business Model

Block chain has the ability to increase supply chain transparency and offer a variety of benefits, including:

- Improved material supply chain traceability to satisfy corporate responsibility goals sourcing guidelines.
- Fraud and counterfeit sourcing risks are reduced.
- Greater transparency and compliance with outsourced contract manufacturing.
- Lower administrative and paperwork expenses.
- Strengthened position as a responsible manufacturing leader.

CONCLUSION:

Companies are keep an eye on the Competitors in their market that have begun experimenting with blockchain as the technology develops traction. The network effect helps blockchain immensely; once a critical mass has gathered in a supply chain, it is easy for others to join in and reap the benefits. Companies can look to other stakeholders in their supply chain as well as rivals for clues on when to construct a blockchain prototype.

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Massive Open Online Course (MOOCs) for Library and Information Science Education

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Abstract:-

In this online learning environment Massive Open Online Courses (MOOCs) is an innovative addition. This innovative and useful landscape growing and spreading fast in different discipline, Library and information science (LIS) is not exception for that. LIS professionals have a better opportunity to learn new skills with the help of MOOC. This paper focused on MOOC concept, Library and information science and MOOC, Benefits of MOOCs, Need of MOOC in LIS and Contribution of SWAYAM in MOOC with reference to Library and information Science.

Keywords:- MOOCs, LIS, SWAYAM

Introduction

During year 2020, total more than 385.36 lakhs students were enrolled in higher education. To meet the growing demand for higher education the number of distance education programmers is growing up in India. On other hand due to digital movement in India the country has gone through various waves of transformations. The Government initiatives like National Knowledge Commission, Digital India and so on, have encouraged people to move towards digital way of communications, accessing and delivering services on e-platforms. The significant changes in use of the technology in online education has seen emergence of the concept of Massive Open Online Courses (MOOCs). Which the Indian higher education sector has also facing (Joshi, 2020). Term MOOC was coined by Dave Cormier (University of Prince Edward Island In 2008 University of Manitoba first time delivered Massive Open Online Courses (MOOCs)) (Yuwan Li and Powell Stephen, 2013). The credit course was offered by University for regular student as well as for off-campus students. Since then MOOCs was initiated. MOOC is now favorite trend in the online learning environment.

Overview of MOOC

MOOC contains the terms like Massive Open

Online, and Courses respectively. Platform like Edukart, EdX, Udacity, Coursera are popular now a days. For educating people and to reduce cost of education with consideration of affordability of students, higher educational institutions are implementing MOOCs. MOOCs are online courses designed for large numbers of registrations of participants, they can access their courses from any corner of the world with the help of internet. Most of the courses on MOOCs are used to be delivered free of cost but some course providers charging nominal fees for certificate. Nature of the MOOCs contains audio –video lectures, text documents in the form of notes, discussion forums and time bound assessment of progress in the form of quizzes and descriptive question - answers.

List of MOOC Providers (Vijaykumar, 2019)

S.No	Provider	Type	Headquarters	Founded
1	ALISON	Commercial	Ireland	2007
2	Canvas Network	Commercial	USA	2008
3	Coursera	Commercial	USA	2012
4	Coursmos	Commercial	USA	2014
5	edX	Non-profit	USA	2012
6	Eliademy	Commercial	Finland	2012
7	Future Learn[1][2]	Commercial	UK	2012
8	iversity[3]	Commercial	EU	2013
9	Kadenze	Commercial	USA	2015
10	Khan Academy	Non-profit	USA	2006
11	Lynda.com	Commercial	USA	1995
12	NPTEL	Non-profit	India	2015
13	Open Classrooms [4] [5]	Commercial	France	2007
14	openHPI[6][7]	N/A	Germany	2012
15	OpenLearning[8]	Commercial	Australia	2012
16	Open2Study[9][10]	Commercial	Australia	2013
17	Peer to Peer University	Non-profit	USA	2009
18	POLHN	Non-profit	Western Pacific Region	2005
19	Shaw Academy	Commercial	Ireland	2013
20	Stanford Online	Non-profit	USA	2006

21	SWAYAM	Non-profit	India	2015
22	Udacity	Commercial	USA	2012
23	Udemy	Commercial	USA	2010
24	WizIQ	Commercial	India/USA	2007

Characteristics of MOOCs:-

1. Openness – Everyone, anytime, form anywhere and n number of people can join.
2. Online Delivery of content with the help of Internet and with the help of audio visual and multimedia.
3. Online Evaluation and Assessment
4. Course content videos
5. Evaluation Through Quizzes and Assessment
6. For Doubts clearance availability of discussion forum.

Need of MOOCs in Library and Information Science:-

Library and information science has multidisciplinary approach. Total 105 universities provide bachelor of Library and information science courses, 78 universities provide the Master of library and Information science courses, 45 Universities provide PhD in Library and Information Science (Joshi, 2019). 21st century’s librarian is updated with ICT Skills, Management skills, social skills etc. We need to go with MOOC for the betterment of academic fraternity and there is need to upgrading the skills. Through the MOOCs platform, LIS professionals and students can play the roles of learner, connector, and collaborator in a self-directed yet social learning experience. MOOC can serve as a transformative environment for professional development (Bansod, 2019).

The role of libraries is changing. Traditional libraries were more of a store house of knowledge. But over a period the role has changed from storing to disseminating knowledge and even the means of providing knowledge to peoples. In academic environment the governing bodies like University Grants Commission (UGC) and All India Council of Technical Education (AICTE) have taken wise steps towards making campuses user friendly by implementing policies of use information and communication Technology (ICT) on campuses. The part of it has also promoted E-resources in libraries to make user easy to access knowledge resource.

Why LIS should part of MOOCs?:-

- a) With simple user registration process user can create user account and can find course according the interest area. Most of the

courses are free or available with nominal charge. Users can get valuable course content of renowned institutes at free of cost.

- b) Content videos are very pin pointed and shorts strict with the core theme. Learner can pause; rewind and play the video in case of learner miss out any valuable information, which is not possible in regular lectures.
- c) Course content, theme, material is combined with user’s studies or job because MOOC is very easy as the user can control his pace of learning.
- d) MOOCs help to save money and time.
- e) MOOC offered courses can be more interesting and interactive because of the multimedia mode. Learner can use any gadgets like computer, tabs, mobile phones etc. so they can assess anytime and anywhere.

Benefits of MOOCs:-

- 1) Gaining expert learning for the field.
- 2) Efficacy of online learning
- 3) Downloadable course content/ Material
- 4) Diversity in teaching- learning.
- 5) Assessment helps to enhance learning.
- 6) Helps to increase focus and attention.
- 7) Peer assistance, out-of-band learning
- 8) Enhance the education and research in LIS

Areas of Application of MOOCs in LIS Profession

- i. Theory of Library and Information Science
- ii. ICT Applications for Libraries
- iii. Practices in LIS
- iv. Continuing of Education
- v. English Communication/General Learning
- vi. Students Centric Learning
- vii. Helps in Training and Motivation
- viii. Best Tool for Board of Studies

MOOCs in Indian Scenario:-

In the beginning IGNOU has developed National Digital Repository i.e. eGyankosh. Ministry of Human Resource Development has developed Sakshat Program for National Mission on education through ICT. For delivery of e-content to faculties of colleges, central and State Universities Indian Government was developed ‘One Stop Education Portal’. Shiksha Program was developed by CBSE for delivering the electronic content to the class XI and XII students. INFLIBNET developed e-PG Pathshala in 2013 for e-learning platform for audio –video content for PG curriculum. Indian Institute of Technology. Bombay developed three courses for EdX platform. IIT Delhi, IIT

Kanpur, Birla Institute of Technology and Science (BITS) Pilani, Lady Sri Ram College, Jagga, IISC Bangalore, Visvesvaraya Technological University etc is involved in developing MOOCs. Major change happened after MHRD Government of India announced a portal for MOOCs called SWAYAM i.e. “Study Webs of Active-Learning for Young Aspiring Minds”.

SWAYAM

For bridging the gap between digital divide SWAYAM was developed to achieve 3 important education policy objectives access to education; equity in education and quality in education. The main aim of the SWAYAM platform is to deliver quality education. Nine national coordinators have been identified who are working and dealing with the education in a particular area.

1. AICTE (All India Council for Technical Education) for self-paced and international courses
2. NPTEL (National Programme on Technology Enhanced Learning) for Engineering
3. UGC (University Grants Commission) for non-technical post-graduation education
4. CEC (Consortium for Educational Communication) for under-graduate education
5. NCERT (National Council of Educational Research and Training) for school education
6. NIOS (National Institute of Open Schooling) for school education
7. IGNOU (Indira Gandhi National Open University) for out-of-school students
8. IIMB (Indian Institute of Management, Bangalore) for management studies
9. NITTTR (National Institute of Technical Teachers Training and Research) for Teacher Training programme. (SWAYAM Website)

Currently, the contents of the SWAYAM are made available in two languages English and Hindi, now government is trying to provide courses in regional languages like Marathi, Malayalam etc.

Courses Offered by SWAYAM in 2021-22 in Library and Information Science

Sr No	Course Title	Level	Course Start Date	Duration	Credits	Offered by	Course Type
1	Libraries: An introduction	Diploma	1 st Feb 2022	12 Weeks	4	IGNOU	Core
2	Library Information and Society	Postgraduate	1 st Feb 2022	12 Weeks	4	IGNOU	Core
3	Communication Skills (Library and Information Science)	Postgraduate	1 st Feb 2022	12 Weeks	4	IGNOU	Core
4	Management of Library and Information Center	Postgraduate	1 st Feb 2022	12 Weeks	4	IGNOU	Core
5	ICT in Libraries	Postgraduate	1 st Feb 2022	12 Weeks	4	IGNOU	Core
6	ICT in Libraries	Diploma	1 st Feb 2022	8 Weeks	4	IGNOU	Core
7	Information Sources and Library Services	Diploma	1 st Feb 2022	12 Weeks	4	IGNOU	Core
8	Digital Library	Postgraduate	3 rd Jan 2022	15 Weeks	5	CEC	Elective
9	KOHA Library Management System	Undergraduate / Postgraduate	27 April 2020	12 Weeks	2	AICTE	Elective
10	Library Automation and Digitization	Diploma	1 st Feb 2022	12 Weeks	4	IGNOU	Core
11	Sr.Secondary: Library & Information Science	School	1 st Nov 2021	24 Weeks	10		Core

Conclusion:- Massive Open Online Course is offering huge opportunities as well as challenges before library and information science professionals. Library professionals must explore these possibilities in most effective way. It is very difficult to provide all aspect and skill of library and information science to students; especially in developing countries library training institutes face certain challenges such as shortage of teachers, funds, skill levels, availability of resources and infrastructure. In spite of their disruptive nature, it is true that MOOCs will bring in an opportunity for librarianship in improving the LIS education and skills of library professionals. So courses like MOOCs will be more effective and cost benefited to all learner to enhance their skills in effective ways.

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Inspecting Occurrence of Pathogenic Fungi on *Solanum melongena*(L.)cultivated in Different Areas of Ahmednagar District.

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ABSTRACT

Brinjal crop is highly prostrate plant susceptible to various fungal pathogens which lead to different diseases in root, shoot, leaf and foliage affecting diseases. This crop is prone to massive attacks by several species of fungi and bacteria that cause wilt, soft rot and root rot because of the increasing restriction in the use of chemical fungicides due to concern for the environment and human health, microbial inoculants have been experimented extensively during the last decade to control wilt and other plant diseases Bacteria have been explored as bio-control agents for plant and also as plant growth promoters and inducers of disease resistance Apart from improving plant health, they also meet the increasing demand for low-input agriculture.

KEY WORDS: Fungicides, Bio-control, Inducers, Diseases

INTRODUCTION

Brinjal also known as eggplant belonging to family Solanaceae is the major vegetable crops cultivated in India. It is an annual crop grown commercially and serves as a staple vegetable crop in many parts of the world. It is widely used in many food preparations like, pickles and industrially processed foods and in daily consumption. The raw fruits are used as a vegetable cooked alone or mixed with other vegetables. Brinjal has originated from Indo-Burma region but distributed in South and South-East Asia, Southern Europe, China and Japan but (Vavilov, 1926). Asia accounts for about 94 percent of the world eggplant area, with about 92 percent of world output (FAO, 2012). Asia is the main producer, in particular China (53% of the world production), India (28%) and Turkey (4%) (Daunay, M.C et al., 2001) China, India, Japan and Turkey are the major producers of brinjal. Indonesia, Egypt, Iraq and the Philippines are also the other eggplant growing countries. In India cultivation of brinjal according to media reports, is approximately 83 lakh tonnes. In India, brinjal is cultivated in the states of Orissa, West Bengal,

Bihar and Maharashtra. Eggplant is adapted to a multi ranged climatic conditions, such as high rainfall and high temperatures from North to South and West to East. It is also one among the few vegetables capable of high yields in hot-wet environments (Hanson et al., 2006).It is grown commonly in almost all parts of the country and liked by both poor and the rich community. India is considered as the primary center of origin and diversity of brinjal (Patil et al., 2008). Brinjal fruit (unripe) is primarily consumed as cooked vegetable in various ways and dried shoots are used as fuel in rural areas. It is low in calories and fats, contains mostly water, some protein, fiber and carbohydrates. It is a good source of minerals and vitamins and is rich in total water soluble sugars, free reducing sugars, amide proteins among other nutrients. Brinjal is a nutritious vegetable with short growth duration but it requires more chemical fertilizer especially nitrogenous ones and pesticides. Huge amount of agro-chemicals causes severe health hazard and affect fertility status of soils. A report reads about 355,000 people die globally every year for the poisoning of different agrochemicals especially pesticides and two third of the global death due to chemical farming is from the developing countries like India (Sharon and Nishanthlalu, 2014).It is commonly grown and popular vegetable crop grown in the subtropics and tropics. The name eggplant has been derived from its shape which is white and shaped very similarly to hen's egg. It is called brinjal in India, and is also known by different names in different languages like badane (Kannada), baingan (Hindi), peethabhala (Sanskrit), begun (Bengali), baigan (Oriya), waangum (Kashmiri), vange (Marathi), Kathiri (Tamil), venkaya (Telugu), vashuthana (Malayalam) and ringna (Gujarathi).

Eggplant is a bushy, erect, and herbaceous, branched and grows up to 60 to 120 centimeters upwards in height. Stem is spiny with purple pigmentation due to presence of pigment anthocyanin. It shows fibrous or surface root system. The leaves are large, simple, lobed and alternately arranged on the stem. Flowers are bisexual, pentamerous and are solitary or in 2- 7 flowered cymose. Calyx is

persistent and spiny or non-spiny. Corolla is lobed with different shapes and purple, light pink or white colored. Ovary is bi-locular with many ovules, Fruit is a berry like with wide variation in colour, shape and size. Fruit color may be nearly black, different shades of purple, white, green or variegated. Fruit shape may be round, long, oval, ovoid, elongated or cylindrical. The seeds are borne on the fleshy placenta filling the locular cavity completely. It is a self-pollinated crop but cross-pollination to varying degree has been also reported in brinjal. Cross pollination is due to its heteromorphic flower structure and is mainly by honey bees and fruit flies Flowering depends on climatic factors and high temperature and humidity in the morning hasten flower opening and dehiscence of anthers. In addition to climatic factors, fertility level of the soil also influences flower initiation and development. In Ayurveda around 14 varieties of the brinjal are being used for medicinal preparations' (Rao, 2011). Eggplant contains nutrients such as dietary fiber, folic acid, ascorbic acid, vitamin K, niacin, vitamin B6, pantothenic acid, potassium, iron, magnesium, manganese, phosphorus and copper (Srinivasan, 2009). Brinjal has medicinal values and white brinjal is considered to be good for diabetic patients. The brinjal can be grown practically on all soils from light sandy to heavy clay. Light soils are good for an early crop, while clay loam and silt-loam are well suited for high yield. Generally, silt-loam and clayloam soils are preferred for brinjal cultivation. The soil should be deep, fertile and well-drained. The soil pH should not be more than 5.5 to 6.0 for its better growth and development. It is moderately tolerant to acidic soil. Several cultivars are grown successfully under high pH level with a rich application of farmyard manure or green manure practiced before transplanting. Brinjal is mainly susceptible to many pathogenic diseases caused by variety of fungi and Bacteria's. The Brinjal plant being one of the most cultivated plant in the region is also suppressed by many biotic factors which limit the crops growth and affect its productivity. Some wild species of brinjal germinate much slower than cultivated species. Seed dormancy is sometimes observed, which varies according to cultivars and harvest conditions. Storage for a few months at an ambient temperature, or a few weeks at chilled conditions lessens this dormancy (Daunay et al.). Seed dormancy was reported in some of the cultivated brinjal species also (Yogeesha et al., 2006). The availability of nurturing climatic conditions for the different pathogens and their survival on plants mostly affects the plant growth. Stress factors are classified on the basis of their host range as fungal and bacterial stress factors. The decline of the brinjal production has been made by different diseases linked with the crop which caused severe damage to both fruit and the plant of the brinjal.

This crop is prone to massive attacks by several species of fungi and bacteria that cause wilt, soft rot and root rot because of the increasing restriction in the use of chemical fungicides due to concern for the environment and human health, microbial inoculants have been experimented extensively during the last decade to control wilt and other plant diseases Bacteria have been explored as bio-control agents for plant and also as plant growth promoters and inducers of disease resistance Apart from improving plant health, they also meet the increasing demand for low-input agriculture. The purpose of this study is to isolate and identify the fungal pathogens found on crops of brinjal cultivated in Ahmednagar district.

MATERIALS AND METHODS

Brinjal crop is delicate and is attacked by many pathogenic fungi which lead to different diseases and lead to poor conditions of the plant. The Fungi influence and degrade the quality of the crop throughout the process. In this case, fungus isolation tests were carried out.

1. Survey and Collection of samples

Brinjal crops in five different locality were surveyed and samples were gathered from respective area of cultivation, from Ahmednagar district. Food grade polythene bags were used to store collected samples. The pre-sterilized food grade polythene bags were kept in plant pathology laboratory at room temperature for further studies.

2. Isolation of Fungi

A. Moist blotter plate method

(The blotter method was developed by Doyer in 1938 which was later included in the International Crop Testing Association (ICTA) rules of 1966). In moist blotter plate method white blotter paper was jointly soaked in sterile distilled water and placed in pre-sterilized Petri-plates of 10 cm diameter. Then the fungal specimens were aseptically put at equal distances on moist blotter paper. The plates were incubated at room temperature at aseptic condition for seven days. On eight day, the specimen were examined under microscope for the preliminary determination of microflora. The fungus detected in dish was extracted and identified, then cultured in pure cultures and kept on PDA (Potato Dextrose Agar) slants for further studies.

B. Potato Dextrose Agar (PDA)

In Northern Ireland (Muskett and Malone., 1941), first time used this method for plant health determination. Peeled 200g potatoes were boiled until soft and pass through muslin cloth. Then 20g dextrose powder was added in it and final volume was made up to 1000 ml in borosil beaker. In this 20g agar was added and pH was adjusted to 5.6. (A. S. K., 2009)

C. Water agar method

For the agar plate procedure, collected specimens were kept for 3 to 4 minutes in a 0.2 percent sodium hypo chloride solution. Collected specimens were plated on sterilized glass Petri plates with water agar medium (2.5 percent, i.e. 12.5 gms in 1000ml distilled water). These Petri plates were incubated for seven days at 26±2°C. These specimens were studied under a stereo binocular microscope after seven days (N. O. Srikantappa et.al 2009)

D. Deep freezing method

The method has been recommended by ISTA (1966). Three layers of sterilized blotter were jointly soaked in sterilized distilled water. Petri dishes sterilized in autoclave. Blotter kept in sterilized petri dishes. The collected fungal specimens were added in mercuric chloride solution (0.1%) for 25 sec and simultaneously rinsing for 2 to 3 times in sterilized distilled water. Petri dishes were incubated at 23±1 o C for 24 hours under 12hrs alternating cycle of near ultraviolet (NUV) light and darkness, for next 24 hrs. Then plates were incubated at -20 o C in dark and kept black under original condition for the next 8 days. After eight days of incubation, specimens were examined with the help of stereoscopic binocular microscope.

Identifications were carried out on the basis of characterization of colonies and have also been examined under a compound microscope with 40X magnification.

III. RESULTS

Table 1.1 Table showing occurrence of pathogenic fungi in different cultivated areas of ahmednagar district.

Location	Rhizoctonia Solani	Phomopsis vexans melongenae	Cercospora lunata	Curvularia melongenae	Altrenaria
Newasa	++++				
Rahata	+++++				
Rahuri	+ - - +				
shrirampur	+ + + - -				
Shirdi	+	- - - +			
Ahmednagar	+ + + -				

(+) Present, (-) Absent.

RESULT DISCUSSION

Different number of fields were surveyed and five fungal species were recorded in cropping regions. These fungi belongs to variety of classes of fungi, but mainly Deuteromycetes. A record was made on the basis of fungi obtained from various cultivated farms. Phomopsis vexans was found in all farms except shirdi as the available conditions were not according to their survival and its frequency was high in regions with high relative Humidity and rainfall were less. Rhizoctonia solani was dominant fungi found in all the cropping fields as the temperature

was found to be low with high Relative humidity and very moderate rainfall. Curvularia lunata was confined to only three fields of Nevasa, Rahata and Ahmednagar were as not observed in rahuri, shrirampur and shirdi due to high temperature and little rainfall and high Relative Humidity. Cercospora melongenae was found in four cropping field and its frequency was similar when temperature was low to moderate with heavy rainfall and maximum Relative Humidity. Altrenaria melongenae was found at a particular places where relative Humidity and Rainfall were high and the places where the Relative Humidity and rainfall was less the fungus was absent. Therefore it may be concluded that this fungus probably does not prefer to grow neither in extreme hot conditions nor in extreme cold season. Above data suggests that parasitic fungi develop on crops according to the conditions and suitable requirements. Proper use of chemical fungicides can eliminate their presence and help the farmers to increase their yield. so far as fruit spoilage was concerned it was observed that fungi can reduce the production and damage the crop.

CONCLUSION

The findings of this study revealed that mycoflora differed from one location to the next. Due to a change in the weather conditions that existed at the time development, cultivation and maintenance of brinjal fields. Depending on cropping patterns and maintenance of the field and the environmental availability causes different microorganisms to grow on the crop. Fungi mainly found in the flowering and fruiting seasons. The standard blotter and Potato Dextrose Agar (PDA) approach was found to be better to the other two methods for detecting fungal mycoflora. Five different types of fungi were isolated from the plant samples. Rhizoctonia Solani, Phomopsis vexans, and Cercospora vexans were found to be the most common in all method of isolation. Curvularia melongenae, Altrenaria lunata, Altrenaria melongenae were also detected in some fields which are considered to be dangerous and responsible for reduction of the yield of the crop

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Uses of Indoors Plants and Why we Response Positively to them

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Abstract ;

For survival of living life plants are essential.. People have been bringing plants into their homes for thousands of years. They provide food, fiber, building material, fuel, and pharmaceuticals. Plants also produce intangible benefits for people, such as improving our health. These benefits occur with plants outdoors and indoors. We increasingly work indoors, and we are making ample use of plants in these spaces as well. Indoors plants have many uses and benefits. Their contribution is great, normally they contribute to cleaner, healthier air for us to breathe, thus improving our well-being and comfort. They also help to make our surroundings more pleasant, and they make us feel calmer. Interior plants have been associated with reduced stress, increased pain tolerance, and improved productivity in people. Research studies associated with interior plants which are discussed. Of increasing interest to many people is the question of why plants have intangible positive effects on us. If we understand this, then we can make better recommendations regarding the use of plants indoors and out to enhance their effects on people. Studies indicate that people have learned and innate responses to plants. Some of these responses appear to have genetic components. Particular studies are summarized, and potential applications of the results of these studies are presented in this paper.

Key words:- interior plants, Foliage plants, human problem, well-being, people-plant interaction, response to nature.

INTRODUCTION:

We know very well that plants are essential for our life. Because they provide food, fiber, building material, fuel, and pharmaceuticals. Another thing that plants are used to decorate our homes, both inside as well as outside, which helps to make our occasions special, such as birthday, Pooja, traditional function, weddings and funerals. Many years ago people all over the world have grown plants in the containers and brought them into their living spaces.

For many years ago plants and gardening have also been considered as good for people, like physically, mentally, and socially, yet until recently, information about the intangible effects of plants on people were based on case studies, such as people saying working in their gardens made them feel better. Now a days there are numerous scientific studies in between people and plants, in their relationship both indoors and outdoors (for summaries, see: Lohr, 2000; Pearson-Mims and Lohr, 2000; Relf and Lohr, 2003). The range of benefits that has been documented is broad: air quality is improved (Wood et al., 2002), recovery from illness is faster (Ulrich, 1984), mental fatigue is reduced (Tennessee and Cimprich, 1995), and productivity is higher (Lohr et al., 1996). Stress is lowered (Dijkstra et al., 2008)

After studies on the benefits of plants are clear that their contribution helps to increase to solve both environmental and health problems. The physical cause of the tangible effects, such as removing air pollutants, are relatively well understood. The basis for the intangible effects, such as increased happiness, is not well understood. A lack of understanding of the theoretical basis hinders the most effective use of plants to deal with these issues. This paper examines some of the studies that have documented the beneficial effects of plants, focusing on those used indoors, and then examines some of the postulated reasons why humans respond positively to plants. And why they feel more relaxed in between them.

Uses of Indoors Plants;

Indoor Air Quality;

One of the ways plants affect people is through the physical changes that plants

cause to their surroundings. For example, plants release oxygen and moisture into the air. Some of these changes to the environment can increase the health and comfort level for humans in enclosed environments. Interior plants are now playing a role in phytoremediation, and significant work has been done in this area.

1. Air Pollutants.

The U.S. National Aeronautics and Space Administration funded early studies on using plants to clean the air in space stations. The studies showed that many common foliage plants reduced levels of some interior pollutants, including formaldehyde and carbon monoxide, from small, sealed test chambers (Wolverton et al., 1984; 1985). The pollution reduction was largely due to bacteria growing on the plant roots (Wolverton et al., 1989; Wood et al., 2002). Further research has shown that plants remove many indoor air pollutants, including ozone, toluene, and benzene (Darlington et al., 2001; Wood et al., 2002; Papinchak et al., 2009). When this research first received wide publicity, many in the building industry dismissed the work, because it was done in small controlled chambers. Recent studies have shown that the effect does scale up to the whole building level (Burchett et al., 2005). Based on such findings, Darlington et al. (2001) developed a bio filtration unit with interior plants and an aquarium that can effectively maintain healthy indoor air.

2. Relative Humidity.

Other studies on the impacts of plants on air quality, and thus indirectly on human health, have followed. One study documented that foliage plants can raise relative humidity to healthier and more comfortable levels in interior spaces (Lohr, 1992). The relative humidity of the air inside buildings is often below the range of 30% to 60% recommended for human comfort, especially when buildings are being heated. When the indoor relative humidity is too low, colds are more frequent and wood dries and cracks. In this study, when plants were present, less than 2% of the space was occupied by the plants, yet relative humidity was raised from 25% without plants to 30% with plants. Some people have been concerned that interior plants might increase relative humidity too much, but this is unlikely to occur: when the relative humidity rises, the rate of water loss from the plant slows, because water does not evaporate as rapidly when humidity is high.

3. Particulate Matter.

The influence of interior plants on dust accumulation has also been explored (Lohr and Pearson-Mims, 1996). Adding plants to the periphery of a room reduced particulate matter deposition by as much as 20%, even in centre of the room many meters from the plants. The plants were in self-watering containers that watered the plants from below, and the growing medium surface was extremely dry and dusty. Documenting that under such circumstance interior plants were associated with reduced dust was especially important, because it allayed fears

that the growing medium in containers might actually be making interiors dustier.

4. Acoustics.

A study conducted by Costa and Lothian examined the effects of interior plants on acoustics in interior spaces (Freeman, 2003). This study found, as is common in studies of acoustics, that the effects were complex. They showed that plants can reflect, diffract, or absorb sounds, depending on the frequency. Plants were shown to reduce noise under certain conditions. The response was affected by many variables, including sound frequency, plant placement, and the specific room. Generally, the researchers found that plants worked best at reducing high frequencies sounds in rooms with hard surfaces; the effect was similar to adding carpet.

Well-being:

1. Feelings. Many studies asking people how they feel in the presence or absence of plants have revealed a number of positive feelings associated with plants. In a study of people working on a computer task, there were significant differences on the item "I feel attentive or concentrating" (Lohr et al., 1996). When foliage plants were in the room, people reported feeling more attentive than did people in the room without plants (3.8 vs. 3.3, respectively, on a scale from 1 = not at all to 5 = very much).

In another study, people were asked how they felt in a room with three different treatments: no colourful objects, colourful objects, or interior plants (Lohr and Pearson-Mims, 2000). People felt significantly more "carefree or playful" and more "friendly or affectionate" in the room with interior plants than in the room with or without decorative objects. In Another study compared offices workers in buildings with or without interior plants and with or without windows with views of green spaces (Dravigne et al., 2008). No more than 60% of people working in offices without plants, whether they had views of green or not, reported feeling "content" or "very happy," while 69% of people working in offices with plants but no windows and 82% of those with both plants and window views were "content" or "very happy."

2. Stress Reduction. A number of early studies showed that people recover from stress more quickly when viewing slides or videotapes of nature than when viewing images of urban scenes (Ulrich, 1979; Ulrich, 1981). These studies used stressful pre-treatments such as viewing a video on workplace accidents, and asked people to watch images during a

recovery phase. These studies used images of outdoor nature, which even included water and birds, in some cases.

A later study showed that stress reducing responses also occur when people are in a room with a few containerized interior plants, even when their attention is not drawn to the plants (Lohr et al., 1996). People were asked to participate in a study measuring their responses when performing a computer task. Participants were randomly assigned to perform the task when no plants were in the room or when plants were present and positioned within the participant's peripheral vision. While performing the computer task, participants' systolic blood pressure rose, indicating that the task was stressful. In the presence of plants, the rise was not as great, and it returned to pre-task levels more quickly than for those tested without plants. This documented that interior plants, like images of nature, could produce a calming response. Other researchers have also documented that interior plants evoke stress reducing effects that are similar to those evoked by nature (Dijkstra et al., 2008)

Productivity:

Productivity has been shown to be higher when plants are present. The computer task study mentioned above (Lohr et al., 1996) measured productivity by tracking reaction time on a task that involved visual concentration, mental processing, and manual dexterity. People responded significantly more quickly when plants were in the room than when the plants were absent, and there was no increase in error rate associated with the faster response. Reaction time in the presence of plants was 12% faster than in the absence of plants, indicating that plants contributed to increased productivity. Mental fatigue has also been shown to be reduced by plants (Tennessen and Cimprich, 1995). Students were asked to perform various tasks in their dorm rooms. While the students were working on the task, the view from their dorm window was recorded. The students living in dorm rooms looking out over nature, such as trees and grass, were less mentally fatigued and more productive than those with views of a built environment, such as sidewalks and parking lots.

Health Improvement:

1. Pain Reduction.

Other researchers have examined the effects of plants on people with specific health problems. One of the first studies showed that people recovered more quickly from surgery if they had a view of trees from their hospital room rather than a

view of a wall (Ulrich, 1984). These patients, who were experiencing acute pain, also used fewer doses of strong pain medications if their rooms had a view of trees.

Pain tolerance is also increased in the presence of interior plants among people who are not in acute pain (Lohr and Pearson-Mims, 2000; Lohr and Pearson-Mims, 2008). Subjects were tested in a room with one of three treatments: control, added colourful non-plant objects, or added plants. The room with plants was significantly more interesting, comfortable, and ornate than the control room, but the room with plants was not more interesting, colourful, or attractive than the room with colourful objects. Thus, both the plants and the non-plant objects rooms were similar in their potential to provide visual distractions to help one concentrate on something other than discomfort. Subjects placed hand in ice water and were told they could remove it at any time. The percent of people who left their hand in the ice water for five minutes (the time at which their hand would be numb) was recorded. Perceptions of physical discomfort were lower in the room with plants than in the room without plants or the room with colourful objects. This demonstrated that the positive benefits of plants are not simply associated with their decorative value or their use as a distraction to help keep one's mind off of the discomfort, because colourful objects were not as effective in influencing pain tolerance

2. General Discomfort.

The positive effects of plants on physical symptoms have been documented. For example, in a study in Norway, workers in an office with foliage plants reported fewer physical symptoms, including coughing, hoarse throat, and fatigue, than when no plants were present (Fjeld, 2000). Results of a study of elderly residents in an assisted living facility who participated in a project to grow indoor plants in their rooms found that they reported significantly improved feelings of health after working with the plants (Collins and O'Callaghan, 2008).

WHY WE RESPOND:

People have developed in conjunction with nature. It seems reasonable to assume that we would also have developed cues to factors in our surroundings related to nature and our survival. In fact, we know that people respond to day length (Bronson, 2004). Why shouldn't people also respond to other aspects of nature, such as plants and the weather?

Behavioural Ecology:

Our responses to nature and our surroundings are influenced by both innate and learned components, that is, genotype and phenotype (Balling and Falk, 1982; Miyazaki and Tsunetsugu, 2005). Balling and Falk (1982) showed photos of different biomes to children and adults. Adults in their study expressed preferences for both the African savanna photos and photos of the biome where they grew up, such as a deciduous forest, while young children only expressed a preference for the savanna. The authors suggested that the children were expressing an innate preference (genotype), while adults were expressing both the innate and learned preferences (genotype and phenotype). Good habitats provide areas that are low risk while searching for food and shelter (Orians, 1980). Since the energy expended to locate suitable habitat is high, quick recognition of cues associated with high quality habitats would be valuable. Orians and Heerwagen (1992) suggested that being able to recognize quality habitats is innate knowledge. They suggested that highly productive habitats for early humans were characterized by specific tree attributes: overall forms that are more broad than tall, canopies that are more wide than deep, and trunks that are short relative to the tree height. These tree attributes afforded humans prospect/refuge qualities: climbing the trees could aid in the detection of prey and offer quick escape from predators as well (Appleton, 1975). Trees with this form, such as *Acacia tortilis*, existed in the East African savannah and were associated with habitats that were good for human habitation (Appleton, 1975;

Orians, 1980; Balling and Falk, 1982; Orians, 1986). Other species of acacia survive in extremely dry as well as extremely wet areas, but they only assume the wide spreading form when they are growing in areas with average moisture, thus this form could be a cue to good habitat. For example, in areas that would be too dry to be favourable for human habitation, *Acacia mellifera* grows and it is short, dense, and shrubby; in areas that would be too wet, *Acacia xanthophloea* can be found, which is tall and narrow (Orians 1986). Some researchers theorize that our responses to savanna-type environments are a result of our evolutionary origins and suitability of these habitats for human survival (Appleton, 1975; Orians, 1980; Orians, 1986; Orians, 1998).

Environmental Cues:

1. Tree Form.

Researchers are trying to understand what components of nature evoke

responses in people. Tree form has emerged as important in a number of studies, with spreading canopies, similar to the *Acacia tortilis* mentioned above, being much preferred over other tree forms (Orians and Heerwagen,

1992; Sommer and Summit, 1995; Lohr and Pearson-Mims, 2006). This response has been demonstrated in people in surrounding area like office, staff, college students, hospital so on so (e.g. Orians, 1986; Sommer, 1997). Research has also documented that people exhibit positive emotional responses to the spreading tree form (Lohr and Pearson-Mims, 2006). People viewed urban images with non-natural objects or with trees that were columnar, rounded, or spreading. They preferred looking at any scene with a tree over the non-tree scenes, and the scenes with the spreading tree were the most preferred. People felt happier and less sad when they looked at any of the scenes with trees compared to the non-tree scenes, but the responses were strongest to the scenes with the spreading trees. People also appeared to respond more positively to trees with denser canopies.

2. Colour.

Colour is another variable that is associated with the strength of people's

responses to nature and landscapes. Bright greens, which are associated with healthy plants with good nutrient qualities, should be an important landscape cue (Orians and Heerwagen, 1992; Kaufman and Lohr, 2008). A yellowed plant could indicate that it is under environmental stress and thus lacking food potential. Thus, it would be reasonable to hypothesize that some responses to plant colour may be pre-programmed, as responses to tree form appear to be, because they both provide useful survival information. Response to colours that indicate nutritive value has been documented in primates, where macaques were shown to select leaves with a particular hue that correlates to leaves with high nutrient content (Lucas et al., 1998). In a study with humans, physiological responses to tree canopies of various hues and intensities were measured. It showed that, while all tree colours were calming, healthy green trees were more calming than other canopy colours, including less bright green, orange, and yellow (Kaufman and Lohr, 2008).

3. Species Diversity:

Monocultures are unlikely to provide high quality habitat, so species diversity might also be a cue for preferred habitats for people. A recent study

showed that people expressed higher levels of perceived well-being in parks with greater plant diversity (Fuller et al., 2007). In this study, people in 15 different urban parks were asked about their perceptions of well-being. Well-being was positively correlated with measures of plant species diversity in those parks. There was also a weak positive relationship with bird species diversity, but none with butterfly diversity.

4. Fractals:

Fractals, which are forms with patterns that repeat themselves as the form is

magnified, are present in much of nature such as branching patterns in trees (Hagerhall et al., 2004). Human vision is particularly attuned to fractal patterns in the 1.3 to 1.5 dimensional range, and aesthetically pleasing forms in nature, including the spreading tree form discussed above, fall within this range (Wise and Taylor, 2002). Some researchers claim that the universal appeal of Japanese Zen gardens is due, in part, to the unconscious perception of tree-like shapes or fractal-like "skeletons" inherent in their design (Van Tonder et al., 2002). There is growing evidence that people exhibit lower levels of stress when looking at images with fractal patterns, whether natural or not (Taylor, 2006).

Children in Cities:

With increased urbanization worldwide, there is growing concern about children's

loss of exposure to nature. A recent book, *Last Child in the Woods* (Louv, 2005), has

popularized this idea. Research has shown that adult preferences and attitudes towards plants, which are presumed to be largely learned, are strongly influenced by childhood interactions with nature (Lohr, 2004; Lohr and Pearson-Mims, 2005). If these childhood interactions are lost or reduced, what will the consequences be? Studies, in which 2,004 adults from the largest cities in the US were interviewed, showed how important it is for children to interact with trees, plants, and nature. Adults were asked how often they had spent time "picking flowers, fruits, or vegetables from a garden," "visiting or playing in local parks," or "taking care of indoor or outdoor plants" as children. Increased frequency of each of these activities had a strong positive influence on adult attitudes. For example, 71% of adults who often planted trees, seeds, or plants as a child felt that trees had personal meaning, while only 45% of those who never did so felt this way about trees. These results show the important influence of childhood involvement with plants on adults. The response is stronger if the interaction is active, such as picking flowers, than if

it is passive, such as visiting a park. This positive response has been documented in

people from a wide range of demographic and ethnic backgrounds.

Conclusions

There are now many studies documenting a wide range of positive effects of plants

on people. The importance of plants is not limited to their role in meeting our physical and economic needs. Plants contribute positively to our mental health, improve our physical health, and make our communities safer. An understanding of why people respond to plants is beginning to be examined. Theoretical examinations of possible phenotypic and genotypic components of these responses are yielding useful understandings. If we understand our response to specific aspects of plants, then we might predict our response to plantings before they are put in place. For example, urban environments can be enhanced by including trees of any shape or colour. Perhaps in very specific environments, where people are subjected to prolonged stress, such as in healthcare facilities, incorporating more trees with dark green canopies and spreading forms may be important. However, emphasizing the spreading tree form over other forms should not be done in all urban spaces. There are a limited number of species that naturally develop spreading canopies; they could easily become overplanted, and the necessary diversity of the urban forest could be reduced. Human well-being can be improved by planting trees of any form and any colour. Many of the research studies documenting the beneficial effects of plants on people have focused on plants outdoors or on scenes of nature. Research has shown that interior plants in individual containers can also produce the same benefits. Research has confirmed the stress-reducing benefits of passively viewing plants. It has demonstrated that people's impressions of a room and their mental well-being can be significantly improved when plants are added. It also has shown that productivity and mental functioning are improved and that pain perception can be reduced. Research on the effects of plants on people has shown, in essence, that plants are essential for people to be at their best. Plants are needed in our lives, all around us, everyday. They have a civilizing effect; they humanize our surroundings.

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An Overview of Activity Based Costing System

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1. Introduction:

In Present era of LPG the manufacturing organizations are required to give more attention towards new product line, quality of product, improvement in workforce policies as well as competent pricing of the product and so on. The management is generally responsible for taking and implementing these various types of important decisions. For decision making process the accurate data is required. Cost Accounting is one of the important accounting branch which helps the management in decision making process. Cost of a product is plays a very important role in the pricing decision also. The Product cost generally includes two types of costs i.e. direct and indirect cost. There is no need of absorption of Direct cost because the direct costs are directly related to cost object can be traced in an economical feasible way but the indirect costs or overheads cannot be traced to it n an economical feasible way. In traditional Cost Accounting, these overheads are grouped as per the cost centers and then these overheads are absorbed to the product cost on suitable basis. These overheads can be absorbed on the basis of Direct Labour Hour, Machine Hour, Volume, or any other suitable basis. Overhead absorption through traditional way, sometime gives incorrect information. It means not all traditional absorption methods produce inaccurate result.

Activity based was defined by Kalpan and Bruns in late 1980.¹ The ABC can be considered as substitute for absorption costing. ABC is an accounting system that assigns costs to activities rather than product or service. ABC assigns cost to activities based on their use of resources and then assigns cost to cost object (Product/ Customer) on the basis of their use of activities. Activity based costing provides more accurate costing results which is helpful to make more accurate pricing decision. The organization which wants to fix their price on cost basis and need to determine with reasonable accuracy have been very much benefited by the Activity Based Costing. Activity based costing makes visible the various activities to the management and it helps to eliminate the costly as well as non value adding activities. ABC increases the

reliability of cost data and helps to produce more accurate results and helps to make true pricing decision.

2. Objectives of the study

- 1) To Know the Activity Based Costing Concept
- 2) To Study the Advantages of Activity Based Costing implementation to Manufacturing organization
- 3) To know the Problems in implementing activity based costing
- 4) To study the steps in installation of activity based costing

3. Methodology:

The current study is based on secondary data and the data is collected from internet, books, journal, magazines, Newspapers, Research journals and Research Articles etc.

4. Activity Based Costing

Cooper and Kalpan developed a new and more scientific approach known as Activity based costing to overcome the problems encountered in the traditional approach of overhead distribution. The ABC aims to identify the activities that result in cost currency. The primary emphasis is on activities performed on a specific product during its manufacturing. As a result, activities are the focus of cost calculation. Activity based costing is a method of costing which is used for absorption of overheads. The cost is grouped as per activities here activity means unit of work or task. Under ABC system activities are classified at various levels and the overheads which are related to various activities are groped in to cost pools. ABC identifies the activities that will incur costs and looks for fundamental cost drivers for these activities. Once the activities and their cost drivers have been identified, this information can be used to assign overheads to the cost objects that have actually resulted in cost.

According to Horngren, "ABC is a system that focuses on activities and fundamental cost objects and utilizes cost of these activities as building blocks or compiling the cost of other cost objects."⁶

The categories of activities listed below aid in determining the type of Activity cost driver required.

Table No. 1 Table showing categories of Activities

Level of Activity	Meaning	Example
1. Unit Level Activities	These are Activities for which the consumption of resources can be identified with the number of units produced	<ul style="list-style-type: none"> Use of indirect materials/ consumables tends to increase in proportion to the number of units produced. The Inspection or Testing of every item produced, if this was deemed necessary or perhaps more likely every 100th item produced
2. Batch Level Activities	The Activities such as setting up Machine or processing a purchase order are performed each time a batch of goods is produced. The cost of batch related activities varies with number of batches made, but is common for all units within the batch	<ul style="list-style-type: none"> Material Ordering where an order is placed for every batch of production. Machine set up costs where machines need resetting between each different batch of production Inspection of products where the first item in every batch is inspected rather than every 100th item quoted above
3. Product Level Activities	These are the activities which are performed to support different products in product line.	<ul style="list-style-type: none"> Designing the product Producing parts specifications Keeping technical drawings of products up to date
4. Facility Level Activities	These are the activities which cannot be directly attributed to individual products. These are activities necessary for sustaining the manufacturing process and that are common and joint to all products manufactured.	<ul style="list-style-type: none"> Maintenance of Building Plant Security

(Source:https://static.careers360.mobi/media/uploads/froala_editor/files/Activity-Based-Costing.pdf)

Concepts in ABC:

- a) **Activity:** Event that incurs cost
- b) **Cost Object:** It is an for which cost measurement is required e.g. product or customer
- c) **Cost Driver:** The factors that influence the cost of a specific activity, known as Cost Drivers. There are two types of cost drivers i.e. Resource cost driver it is a measures quantity of resource consumed by an activity and Activity cost driver it is a measure of frequency and intensity of demand placed on activities by cost object.
- d) **Cost Pool:** A cost pool is a grouping of overhead costs that are logically related to the tasks being completed. Each activity should have its own cost pool. A cost pool is similar to a cost centre or activity centre in that costs are accumulated around it.

ABC is based on the assumption that cost drivers influence cost behavior. It should be noted that direct costs

do not require cost drivers because they can be directly attributed to a product. Direct costs are cost drivers in and of themselves. As a result, cost drivers are factors, forces, or events that influence the costs of activities.

Following table showing the main activities and cost drives:

Table No.2 Showing main activities and cost driver:

Main Activity	Cost Drivers
Customer order processing	Order value Order source (New/ Old customer) Order Source (Customer location)
Material Planning	Number of Material transactions Volume of Material Receipt Volume of Material orders
Inspection	Inspection Plans Number of Problem Suppliers Gauge Usage Lack of Good Quality
Production Control	Engineering Changes Supplies Performance Number of Parts Operational Make versus buy policy Number of Machine Changes
Production	Number to be supervised Shift Patterns Industrial Relation issues Flow of Product from Assembly Volume of service parts/ kit packing
System	Number of systems operational Number of systems devices Adequacy of existing systems
Financial Accounting	Number of Accounting transactions Number of times accounts produced Volume of Activity

(Source:<https://www.economicdiscussion.net/cost-accounting/activity-based-costing/32575>)

Stages in Activity Based Costing:

a) **Identify the various Activities within the organization**

Any process or procedure that consumes overhead resources is considered an activity. The goal is to understand all of the activities involved in producing the company's products. This necessitates interviews and meetings with employees from all levels of the organisation. For using ABC method the activities of the organization needs to be identify and make the grouping of the activities. Some activities are i) Production schedule changes, ii) Purchasing, iii) Quality Control, Material Handling etc.

b) **Relate the overheads to the Activities using Resource cost drivers:**

Overheads will be related to support and primary activities. For this purpose resource cost driver will be used. All costs will be identified under the activities, thus creating Activity cost pools/ Activity cost Bucket.

c) **Apportion the costs of Support Activities over**

the primary activities on suitable basis:

This is done on some suitable basis, which reflects the use of the support activity. The base is the cost driver that is the measure of how the support activities are used.

d) Determine the Activity cost driver for each activity:

A cost driver is an activity or transaction that incurs costs. The cost drivers for the purchasing materials activity could be the number of orders placed or the number of items ordered. Each activity may have several cost drivers. Activity cost drivers will be used to relate overheads collected in the cost pools to the cost objects/ product. This is based on factor that drives the consumption of the activity.

e) Calculate Activity Cost driver Rate:

Activity cost driver rates are computed for each activity, just like overhead absorption rates by using following formula:

$$\text{Cost Driver Rate} = \frac{\text{Total cost of Activity (Cost Pool)}}{\text{Activity Cost Driver}}$$

The Rates will be multiplied by the various amounts of each activity that each product / other cost object consumes to determine its cost.

Following are the some examples of Cost Drivers for different Activity pool in a Production Department:

Table No. 3 Showing Cost Drivers for Different Activity Pool

Activity Cost Pool	Related Cost Driver
Ordering and Receiving Material Cost	Number of Purchase Orders
Setting Up Machine Costs	Number of set ups
Machining Cost	Machine Hours
Assembling Cost	Number of Parts
Inspecting and Testing Costs	Number of Tests
Painting Costs	Number of Parts
Supervising Costs	Direct Labour Hours

(Source:https://static.careers360.mobi/media/uploads/froala_editor/files/Activity-Based-Costing.pdf)

5) Benefits and steps involved in implementation of ABC

Following are the some Advantages of Activity Based Costing:

- a) ABC improves product cost determination accuracy and reliability by focusing on the cause and effect relationship in the cost incurrence. It recognises that costs are caused by activities rather than products, and that products consume activities. ABC provides more realistic product costs in advanced manufacturing environments and technology, where support function overheads account for a large portion of total costs. When there is a greater variety of products manufactured,

such as low-volume products and high-volume products, ABC produces reliable and correct product cost data.

- b) Under ABC analysis overhead allocation is done on logical basis.
- c) It enables better pricing policies by supplying correct cost information
- d) ABC system utilize unit cost rather than just total cost
- e) Helps to identify non value added activities which facilitates cost reduction
- f) It highlights problem areas which require attention of the management

Following are the steps involved in the installation of Activity Based Costing System:

a) Specification of Objectives:

The motives for pursuing an ABC system must be established at the beginning. Generally, the objectives are:

- To Improve Product costing where there is a belief that existing methods under cost some products and over cost others or
- To identify non value adding activities in the production process this might be a suitable focus for attention or elimination.

b) Identification of Costs for ABC:

Direct Costs like materials and direct labours, are easily assigned directly to a products. Some indirect costs that are product specific (Advertisement) may be directly assigned to the product. Hence the remaining indirect costs form the focus of ABC. Such costs are indirectly assigned to the cost object via cost pools and activity drivers.

c) Process Specification:

This involves identification of different stages of the production process, the commitment of resources to each process, processing times and bottlenecks. This provides a list of transactions which may, or may not be defined as activities as t subsequent stage.

d) Activity definition:

The list of transactions as identified in the previous stage is analyzed to ensure aggregation or grouping of common activities and elimination of immaterial activities. Activities are categorized into Primary Activities and Support Activities. The resultant cost pools will likely have a number of different events, or drivers, associated with their incurrence.

e) Activity driver selection:

Activity cost drivers used to relate the overheads collected in cost pools to cost objects (products) should be determined. This is based on the factor that drives the consumption of activity, i.e. the answer to the question: What causes the activity to incur costs? Generally a single

Driver is selected for every activity even though multiple and inter-related activity

drivers may exist.

f) Costing:

A single representative activity driver can be used to assign costs from the activity pools to the cost objects. Such linking of Total Costs to Cost Objects is generally based on the activity cost driver rate.

g) Staff Training:

The co-operation of the workforce is essential for successful implementation of ABC. Staff training should be oriented to create an awareness of the purpose of ABC. The need for staff co-operation in the concerted team effort, for mutual benefit, must be emphasized throughout the training activity.

h) Review and Follow-up:

The actual operation of the ABC system should be closely monitored. Periodic review and Follow up action is necessary for successful implementation of the system.

6. Practical Application of ABC

a) As a Decision-Making Instrument

ABC can be used to make decisions in the following ways:

I ABC, in conjunction with another cost-cutting strategy, can be used to improve an organization's performance and profitability.

- (ii) By correlating costs to various activities, wholesale distributors can gain a significant advantage in the decision-making process by implementing ABC concepts. ABC can help you decide when to introduce a new product or vendor.
- (iii) ABC can assist in facility and resource expansion decisions. Cost associations are frequently used to justify the relocation or opening of a new distribution centre. Reduced freight or other logistic costs may be able to offset the cost of the new facility, staff, or equipment. The ABC model can identify the specific cost elements that are being targeted, resulting in a much clearer picture that aids in management actions.
- (iv) ABC improves human resource decision support. Because the activity (and thus the costs) can be linked to an individual, new levels of financial performance can be calculated. In the case of branch management or sales, this may be obvious.
- (v) Companies that want to price their products on a cost plus markup basis find the ABC method of costing very useful and are able to set competitive prices for their products.

b) As Activity-Based Management

The cost management application of ABC is referred to as activity-based management (ABM). Activity Based Cost Management refers to the use of ABC as a costing tool to manage costs at the activity level (ABM). ABM is a discipline that focuses on the efficient and effective management of activities as a means of continuously improving the value that customers receive. ABM makes use of cost data gathered by ABC.

Different types of analysis are used in Activity Based Management.

The following are the various types of analysis involved in ABM:

- (1) Cost Driver Analysis: In order to manage activity costs, the factors that cause activities to be performed must be identified. The causal factors are identified through cost driver analysis.

- (2) Activity Evaluation.

(a) Value-Added Activities (VA): The value-added activities are those that are required to complete the process. Customers are usually willing to pay for these services (in some way). Polishing furniture by a furniture manufacturer, for example, is a value-added activity.

(b) Non-Value-Added Activities (NVA): An NVA activity is work that is not valued by either the external or internal customer. NVA activities do not improve a product's or service's quality or function, but they can have a negative impact on costs and prices. NVA activities include moving materials and preparing a machine for a production run.

(3) Performance Analysis: Performance analysis entails identifying appropriate measures to report the performance of activity centres or other organisational units that are consistent with the goals and objectives of each unit.

Activity Based Management in the Business Environment.

Activity-based management can be used in the following ways:

- i) Cost Reduction: ABM assists organizations in identifying costs associated with activities and identifying opportunities to streamline or reduce costs or eliminate the entire activity, particularly if there is no value added.
- (ii) Business Process Re-engineering: Business process re-engineering entails examining business processes and implementing significant changes to how the organisation currently operates. ABM is an effective tool for measuring business performance, calculating the cost of business output, and identifying

opportunities to improve process efficiency and effectiveness.

- (iii) **Benchmarking:** Benchmarking is the process of comparing one segment of a company's ABC-derived activity costs to those of other segments. It necessitates consistency in the definition of activities as well as the costing of those activities.
- (iv) **Performance Measurement:** Many organisations are now focusing on activity performance as a means of competing and managing costs by monitoring activity efficiency and effectiveness.

c) Allow for Activity-Based Budgeting

The resource input or cost for each activity is examined in activity-based budgeting. It provides a framework for estimating the amount of resources needed in accordance with the level of activity budgeted. Actual results can be compared to budgeted results to highlight both financial and non-financial activities with significant discrepancies from budget for potential reductions in resource supply. It is a planning and control system that aims to support continuous improvement goals. It entails planning and controlling the organization's expected activities in order to create a cost-effective budget that meets forecast workload and agreed-upon strategic goals. ABB is the process of reversing the ABC process in order to create financial plans and budgets.

ABB's Essential Elements

The three main components of activity-based budgeting are as follows: type of work to be done, quantity of work to be done, and cost of work to be done.

7. Problems of ABC

- (a) The cost of change will be high because everything will have to be worked out from the ground up.
- (b) It would be difficult to link the marginal cost increase to a specific cost driver.
- (c) Over a period of time, the ABC will tend to standardize the cost of activities associated with a specific product or process. However, differences in set-up time, production run, and meeting a delivery order for the product or process, as well as for different products, will exist in practise.
- (d) Due to changes associated with new products and new technology, the ABC system will

require a change. Because of the inherent standardization, this will place a strain on the costing system and resources.

- (e) The ABC is at the stage of evolution. Currently, the literature on the ABC concept is primarily limited to the manufacturing environment.

8. Conclusions:

Activity Based Costing is new system of absorption costing emerged to eliminate the demerits of traditional absorption costing. ABC generates more accurate cost results and these results very much helpful for taking correct pricing decisions to the manufacturing organization. ABC helps to provide more realistic cost and it also helps to eliminate unnecessary activities. In current scenario overheads are increasing day by day because of the automation and technological changes. Competition in the market is very tuff; there is challenge to increase the market share. All these things motivate the management to adopt the ABC. Overheads are allocated on the basis of use of activities. ABC is in evolution stage and it is currently related to only manufacturing processes. For implementation of ABC entire costing system is needs to be changed and it may be expensive and the management of small organization is not interested to change the established cost accounting system. Identification of activities, cost pools, cost drivers; needs to specify process, training to staff, periodic review of the system etc. is an important part in successful implementation of the ABC system.

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Ethnobotanical Investigation on Wild Edible Vegetables used by Thane Residents

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Abstract

A field research study was conducted in the years 2020–21. This type of comprehensive survey technique could help aspiring scientists learn about the health benefits of wild edible plants, which can then be combined to create profitable crop plants. The reduction of food shortages, the regeneration of barren regions and the strengthening of rural economies will get benefitted from such a system. A total of 23 wild edible plant species from 18 families and 20 genera were discovered, identified and discussed in this study. The botanical names of plants, as well as their common names, habits, families, parts used, modes of uses, ethnomedicinal applications and tribal recipes are arranged alphabetically. With three species Amaranthaceae followed by Dioscoreaceae and Malvaceae with two species and the rest with one species each. Leaves (09), followed by fruit (06), tuber (04), stalk (02) and the rest with one species each, were the most commonly used among 23 wild edible plants.

Keywords: wild vegetables, tuber, ethnobotany, traditional knowledge, healers.

Introduction

The term "wild edible plants" refers to plants that can be used as food if collected at the appropriate stage of growth and properly utilized. (Kallas, 2010). WEPs (wild edible plants) are species that are not farmed or domesticated but are available in their native habitat and exploited as food sources (Beluhan and Ranogajec, 2010). Wild edible plants have played an essential role in human life from ancient times; they have been utilized for food, medicine, fiber and other purposes, as well as feed for domestic animals (Kanchan, 2011). Several studies have revealed that wild edible plants are a possible source of nutrients and are often more nutritious than conventionally consumed crops. (Grivetti and Ogle, 2000).

Wild edible plants serve an important role in providing food for poor rural populations, particularly tribal people who live near woodlands. Forest dwellers'/ tribal populations' subsistence methods rely heavily on wild food plants. While these plants are not widely

available, though they are important for nutrition and food security in many countries, including China, India, Southeast Asian countries, Africa and Australia. Several wild edible plants are consumed alongside domesticated in many countries, including China, India, Southeast Asian countries, Africa and Australia (Mazhar et al., 2007). Edible wild plants have always been used as the first food source, providing the necessary energy for human growth, development and reproduction (Rai et al., 2012).

Forests play a vital role in ensuring tribal food security. Forest dwellers' livelihood methods rely heavily on wild edible fruits as a source of nourishment. India has a large forest region and more than 4 million tribal people rely on wild edible plants.

The monsoon season is when uncommon wild foods are most plentiful. From July through September, these vegetables can be found in abundance in forests, along hill slopes, near river banks, surrounding ponds and in and around their hamlets, where cow dung is plentiful. During the first two months of the monsoon, most wild vegetables are available for good development. Though most wild vegetables are available to tribals during the first two months of the monsoon, due to high demand at the local taluka market, just a handful are left behind for their family members. The uncommon wild vegetables bring in extra money for the tribals because of their ethnomedicinal worth (Pant, 1996).

Earlier work on wild edible plants from many parts of Maharashtra like Amravati, Konkan, Thane and Palghar was carried out by Bhogaonkar et al., (2010), Khan & Kakde, 2014; Khyade et al., 2009; Majumdar et al., 2009; Satvi and Marathe, 2018, Oak et al., 2014 Palekar, 1993.

The current research was designed to describe the variety of wild vegetables consumed by urban residents in the Thane.

Materials and Methods

Collection of wild vegetables

Frequent monthly visits were arranged and collected wild edible vegetables from Thane Market areas, Villagers, farmers and small vegetable sellers and brought in the

laboratory for further study.

Plant identification:

Specimens were identified using standard procedures and Flora of Gujarat with supporting information for ethnomedical uses (Almeda, 2003, Cook, 1965, Jain & Rao, 1977) and (Naik, 2004; Shah, 1978). Tribes were interviewed to learn about local vegetable names, habits, habitats and their ethnobotanical uses.

Results and Discussion

Tribes eat a variety of green plants that grow wild, such as weeds according to the findings of this study. Forests are rich in wild vegetable species with substantial potential for human use, benefiting the local economy and livelihoods of many people.

A total of 23 wild edible plant species from 18 families and 20 genera were discovered, identified, discussed in this study and shown in table no.1. The botanical names of plants, as well as their common names, habits, families, parts used, modes of use, ethnomedicinal applications and tribal recipes, are arranged alphabetically. With three species Amaranthaceae followed by Dioscoreaceae and Malvaceae with two species and the rest with one species each. Leaves (09), followed by fruit (06), tuber (04), stalk (02) and the rest with one species each, were the most commonly used among 23 wild edible plants.

This study found that 98 percent of the plants reported had medicinal characteristics and are often utilized for basic ailments like coughs, asthma, stomach problems, skin infections, urine and so on. According to the market survey, locals value twenty-three wild edible plants, which are commonly sold in local markets or even transferred to larger markets nearby. The selling price of these plants was compared between the remote Thane district market and Thane town and it was observed that once they reach urban regions, the selling price doubles or triples. According to studies, several of these wild edible plants are only found in rural areas and are not widely available in urban markets.

The results of ethnomedicinal wild vegetable plant research in Thane are beneficial and interesting. Ethnobotany has become an increasingly significant subject as people's perceptions of plant utilization have changed. In different sections of the country, traditional healers are called by different names. The conclusions of the current study are based on interactions with residents in the Thane district. It's worth noting that the tribe's understudy has a broad understanding of ethnobotany, according to the current study.

Similar types of study done by many researchers Bhogaonkar et al., 2010, Marathe, 2012, Khan and Kakde, 2014, Khyade et al., 2009, Setiya et al., 2016, Chothe et al., 2014. Oak et al., 2014, Palekar, 1993, Rai et al., 2004 and Kulkarni et al., 2003. Eating enough wild vegetables,

according to a review of the literature, can help you avoid chronic diseases like cancer, obesity, diabetes, cardiovascular disease and metabolic syndrome.

Table.1. List of wild edible vegetable plants with ethnobotanical uses

Sr. no.	Botanical name	Local name	Family	Parts used	Ethnobotanical uses
1.	<i>Abelmoschus ficulneus</i> (L.) Wight and Arn.	Ranbhendi	Malvaceae	Fruits used as a vegetable	About spoonful powder of seeds is given at night for three days to cure abdominal pain or gastric problem
2.	<i>Aegle marmelos</i> (L.)	Bel	Rutaceae	Fruit	A spoonful pulp of the fruit is given along with cow milk twice a day for three days to cure dysentery
3.	<i>Amaranthus spinosus</i> L.	Katerimath	Amaranthaceae	Leaf used as a vegetable	Boiled with pulses, it is also fed to cattle to increase the yield of milk. The root is used for the treatment of bronchitis, asthma, skin diseases and poisonous stings. Leaves are used as a poultice.
4.	<i>Amaranthus paniculata</i> L.	Rajgira	Amaranthaceae	Leaf used as a vegetable	It is used in the treatment of constipation, piles and anemia
5.	<i>Amaranthus viridis</i> L.	Math	Amaranthaceae	Leaf used as a vegetable	It is used in the treatment of urine troubles and skin diseases. It is used as a vegetable by the poor. It is also given to the cattle during scarcity.
6.	<i>Amorphophallus vitiaticus</i> Roxb. Kunth.	Janglisuran	Araceae	Corm, tender petiole vegetable	About 25 gm of the freshly fried corm is consumed twice a day for six days as a tonic or as an energetic
7.	<i>Bambusa arundinacea</i> L.	Bamboo comb	Gramineae (Poaceae)	Tender Shoots Cooked as a vegetable	Bambusa leaves, branches and seeds are employed as astringents and laxatives in traditional medicine. The tender shoot acts as energetic
8.	<i>Basella alba</i> L.	Ranpalak	Basellaceae	Leaves used as a vegetable	The pulped or bruised leaves are used as a poultice. The juice of leaves is prescribed in cases of constipation, particularly in children and pregnant women. The leaves are diuretic, demulcent and useful in gonorrhoea.
9.	<i>Capparis zeylanica</i> L.	Waghate	Capparaceae	Fruits used as a vegetable	Unripe fruits are consumable good for stomach relief.
10.	<i>Carthamus tinctorius</i> L.	Kardai	Asteraceae	Leaf used as a vegetable	Paste of fresh leaves is applied to the wound
11.	<i>Chenopodium album</i> L.	Chakwat	Chenopodiaceae	Leaf used as a vegetable	Used to treat throat infections. After the symptoms of chickenpox appear, that plant's juice is mixed with honey and used to make the person suffer vomiting.
12.	<i>Cordia dichotoma</i> G. Forst.	Bhokar	Boraginaceae	Flower used as a vegetable	Fruits are used against diarrhoea
13.	<i>Dioscorea pentaphylla</i> L.	Gabholi	Dioscoreaceae	Tuber used as a vegetable	Aphrodisiac, it is said that eating a lot of flowers and vegetables can make you more attractive to other people.

14.	<i>Dioscorea bulbifera</i> L.	Kadukan d	Dioscoreaceae	Tuber used as a vegetable	Paste of root tuber is applied on the wound twice a day till cure. Powder of root tuber is applied along with coconut oil on the affected skin twice a day for five days.
15.	<i>Hibiscus cannabifolius</i> L.	Ambadi	Malvaceae	Leaves used as a vegetable	cooked leaves with rice are given to people who have dyspepsia caused by Mahuwa oil. It is a pain reliever. If there is a problem passing urine, a decoction of seeds is given.
16.	<i>Holarrhena antidysenterica</i> Wall.	Kuda	Apocynaceae	Pod used as a vegetable	Alkaloids with therapeutic characteristics are abundant in plant parts, especially fruits. Roots and bark are used to cure diarrhea they are anti-dysenteric drugs. It's acidic and it is good for digestion and cooling.
17.	<i>Leea macrophylla</i> Roxb.	Dinda	Vitaceae	Fruit used as a vegetable	The root tubers are astringent as well as have ethnomedicinal uses. Mucilage is used to treat wounds and sores because of its healing properties.
18.	<i>Momordica dioica</i> Roxb.	Kartoli	Cucurbitaceae	Fruit used as a vegetable	Tuberose roots have been used in traditional medicine to treat bleeding piles, digestive issues and urinary problems.
19.	<i>Moringa oleifera</i> Linn.	Shevaga	Moringaceae	Leaf and pod used as a vegetable	This vegetable is used to treat eye issues, indigestion and snake poisoning.
20.	<i>Nymphaea lotus</i> Linn.	Kamal	Nymphaeaceae	Tuber used as a vegetable	The rhizome is used in the treatment of diarrhea, dysentery, general debility and cardiac issues, among other things.
21.	<i>Paracalyx scariosus</i> Roxb.	Ran ghevda	Fabaceae	Fruit used as a vegetable	Ethnomedicinal uses include scorpion bites and leg cramps.
22.	<i>Portulaca oleracea</i> L.	Ghol	Portulacaceae	Used as a vegetable	Seeds are a cooling diuretic that can be used to cure jaundice and diarrhea in traditional medicine. Burns and scalds can also be treated with them.
23.	<i>Senna tora</i> L. Roxb.	Tarota	Fabaceae	Leaf used as a vegetable	Both leaves and seeds form a valuable remedy for skin diseases.

Conclusion

With rising population pressure, people will be forced to rely on wild edible plant resources as an alternative to conventional ones shortly, to meet rising food demand and nutritional requirements. As a result, plant resources are critical in resolving a variety of issues such as shelter, food and medicine. Aside from that, several of these wild foods have a high cultural value among the locals and are thus linked to their indigenous customs. Several anthropogenic and natural factors, including land-use change, habitat degradation, over-harvesting, over-grazing and invasive plants, are threatening these multi-valued wild fruit resources. Effective management of these resources is critical for the well-being of local populations and biodiversity conservation and it may also help to conserve cultural and genetic variety. The most feasible preservation and livelihood approach for the coastal zone forests, which are managed by villagers and civil society organizations,

would be to include such wild edible resources in society forest management.

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Survey of Preliminary Ethnoveterinary Medicinal Plants from Palghar Tehsil

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Abstract

A preliminary field research survey was conducted in the year 2021. This type of comprehensive survey technique could help aspiring scientists learn about the health benefits of medicinal plants. According to the findings of this research, the Palghar and Thane are rich in ethnoveterinary medicinal flora. In this work, 110 plant species from 57 families and 98 genera have been found, classified and discussed. The Plant species botanical names, as well as local names, habits, families, parts used and ethnoveterinary applications are arranged alphabetically. With seven species the Caesalpiniaceae, the family takes the lead, followed by Liliaceae with six species with five species, Apocynaceae, Euphorbiaceae, and Solanaceae, with four species, Araceae, Mimosaceae, Papilionaceae, with three species, Asteraceae, Fabaceae, Moraceae, Myrtaceae, Rutaceae, Verbenaceae, Zingiberaceae. With two species Anacardiaceae, Annonaceae, Apiaceae, Asclepiadaceae, Cyperaceae, Malvaceae, Poaceae and the rest with one species each.

Keywords- ethnoveterinary, ethnobotany, livestock, cattle, diseases.

Introduction

McCorkle coined the term ethnoveterinary in 1986, in 1996 it was defined as "the holistic interdisciplinary study of local knowledge, skills, practices, beliefs, professionals, associated social structures about health care, healthy eating, work, and culture." "Another source of income in animal production." Ethnoveterinary medicine, in its most basic form refers to people knowledge, practices, beliefs about keeping their animals healthy and productive. People all over the world have devised methods for keeping their livestock healthy and productive. Home remedies, surgical and manipulation techniques, breeding strategies, magical and religious beliefs all play a role.

Ethno-veterinary medicine is a sub-discipline of ethnobotany. Make the best use of native plant resources (Mathias, 2004). In a broader sense, the Ethnoveterinary

Medi Cinema includes the use of animals and animal-derived products to maintain animal health. For centuries, ethnoveterinary medicine has included community observation, experience, and experimentation.

Ethnoveterinary knowledge is not static; it evolves. Ethnoveterinary medicine has a history as long as man has existed on Earth. Humans and animals have always had a close relationship, and men have used animals for a variety of purposes, including food, hunting, transportation, and so on. Plants have been an indispensable source for the production of traditional preventive and medicinal products for humans and animals since ancient times, to satisfy their diverse needs. From 3000 B.C. to 4000 B.C. in China and from 1600 B.C. to 1600 B.C. by Syrians, Babylonians, Hebrews and Egyptians (Dery et al., 1999). The veterinary techniques of Egyptian healers e.g. are recorded in the veterinary papyrus of Kahun (1900 BC). Veterinarians served in the King Hammurabi region of Babylon as early as 1800 BC.

The Rigveda (4500 - 1600 BC) mentions the use of medicinal plants in the treatment of humans and animals, so veterinary science developed in India. Atharvaveda (3500-500 BC) teaches about healing herbs and medicines. Arthashastra of Kautilya contains this information (200B). Ayurveda (The Science of Life) is concerned with medical knowledge. Another ancient text that describes the medical treatment of animals is Mrig (Pashu) Ayurveda. Animal disease treatment with Ayurvedic medicine is mentioned in the Agni Puran, Atri Samhita, Matsya Puran, and many other texts. The Ashvayurveda Siddhanta literature was written by Shalihotra, the world's first recognized veterinarian and an expert in horse breeding and treatment. Ayurvedic Hair Care Palakapya specialized in elephant care and published a treatise on Gaja Ayurveda. The Charak Samhita (1000-800 B.C.), Sushrut Samhita (800-700 B.C.), and Vagbhatas Astanga Hridaya were among the most important additions after then. These documents are rich in information about the Indian medical system and its therapeutic potential (Mitra and Jain, 1996). Rajmartanda is one such work, with a chapter on pet care. Pashuvaidya

Mattu vagadam is a Tamil book that covers over 250 ailments and cures for cattle.

Even though India is a wonderfully biodiverse country, ethnoveterinary studies have gained traction and numerous workers have begun exploring their topic in the last 30 years. The majority of medications used in human health care are derived from medicinal plants, and more medicines are based on traditional knowledge. Animal health applications, on the other hand, are limited. Knowledge of traditional traditions is required to expand the spectrum of herbal medications, which can be more effective and safer than synthetic treatments.

Tribes from all over India live in different parts of the country. They use the ambient vegetation resources to supplement their indigenous herbal system for cow's wellness. Diverse researchers looked into the ethnoveterinary medical uses of various cultures. The Dictionary of Ethnoveterinary Plants of India (Jain and Srivastava, 1999), which gives a brief overview of 836 plant species, was just published.

Few publications on ethnoveterinary applications of medicinal plants in various parts of India are known (Gaur et al., 2010; Tiwari et al., 2010; Ramana, 2008) e.g. There have been very few publications in Maharashtra as well (Patil et al., 2001). Wath and Jambu conducted an ethnoveterinary survey from the Melghat region in the Amravati district (2010).

According to the 1992 cattle census, Palghar Tehsil has 4,26,577 animals. The total number of cattle was 2,38,404 buffalo 70,233 sheep 2843 goats 11,3538 and pigs 1559 according to the census. The aim of this study is therefore to record and collect information on ethnoveterinary medicine that may be useful for future scientific research.

There has been no attempt to document the diversity and value of ethnoveterinary medicinal plants and practices in the Palghar region. The presence of the ethnoveterinary medicinal plants was recorded through direct visual observation. The collected specimens were identified using various taxonomic literature.

Material and Methods

Selection of the site

About Palghar Tehsil Palghar Taluka from Thane District has a total population of 550,166 people according to the 2011 census. Families lived in Palghar Taluka. The average gender ratio of Palghar Taluka is 907. According to the 2011 census, 41% of the population live in urban areas while 59% live in rural areas. The total area of Palghar is 1,042 km², including 923.32 km² of rural area and 118.53 km² of an urban area. There are approximately 212 villages in the Palghar block.

Plant identification

Specimens were identified using standard procedures and Flora of Gujarat with supporting information for ethnomedical uses and recipes (Almeda, 2003, Cook, 1965, Jain & Rao, 1977), and Flora of Gujarat (Naik, 2004; Shah, 1978).

Results and Discussion

Plants in the Palghar and Thane area are used to treat milking, diarrhea, arthritis, eye injury, milk disorder, wounds, bone fractures, fever, and other ailments in animals, according to the current inquiry-based on interactions with traditional medical practitioners and local people. Discussions with respondents who practiced the usage of the recognized herbs for veterinary purposes confirmed the findings.

In remote areas of Palghar and Thane District, many traditional healers are present who have great indigenous knowledge about animal diseases, herbal treatments, herbal formulations, etc. The study indicates that the tribal's are using a significant traditional treatment system for most of the diseases of their cattle. The present preliminary study has been made to explore and compile valuable data on the ethnomedicinal plants used in traditional veterinary practices in the tribal villages of Thane and Palghar.

Ethnoveterinary medicinal found in a preliminary field survey are listed in Table No.1. According to the findings of this research, the Palghar and Thane are rich in ethnoveterinary medicinal flora. In this work, 110 plant species from 57 families and 98 genera have been found, classified, and discussed. Plant species botanical names, as well as local names, habits, families, parts used and ethnoveterinary applications, are arranged alphabetically.

With seven species, the Caesalpinaceae, the family takes the lead, followed by Liliaceae with six species with five species Apocynaceae, Euphorbiaceae, and Solanaceae, with four species Araceae, Mimosaceae, Fabaceae with three species Asteraceae, Papilionaceae, Moraceae, Myrtaceae, Rutaceae, Verbenaceae, Zingiberaceae. With two species Anacardiaceae, Annonaceae, Apiaceae, Asclepiadaceae, Cyperaceae, Malvaceae, Poaceae, and the rest with one species each shown in Table No.1.

Following observation recorded during study the tree 47 plants dominantly used in ethnoveterinary practices followed by herb 41, shrubs 13, climbers 04, tuber 03 and rest one. The most commonly used plant parts for the preparation of ethnoveterinary plant-based medicine were leaves (37 species) followed by root (20 species), stem (16 species), fruit, bark, and seed (14 species), rhizome, latex (gum) (04 species), bulb, tuber, and oil (03 species) and pod (02 species) shown in Table No.1 and Graph

No.1 and 2.

The current study findings suggest that there is a lot of scope for more research. Investigate these plant species, which can lead to the development of less expensive and more drugs that are effective not only for the present but also for the future livestock, but they can also be useful to humans.

Table.1. List of Medicinal plants used in ethnoveterinary

Sr No.	Botanical name	Local name	Family	Plant form	Parts used
1.	<i>Achyranthes aspera</i> L.	Aaghada	Amaranthaceae	Herb	Root
2.	<i>Abelmoschus manihot</i> L. Medik	Ranbhendi	Malvaceae	Herb	Root
3.	<i>Abrus precatorius</i> L.	Gunj	Fabaceae	Twiner	Root
4.	<i>Acorus calamus</i> L.	Vekhand	Araceae	Herb	Root
5.	<i>Adhatoda vasica</i> (L.) Nees.	Adulsa	Acanthaceae	Shrub	Leaf and stem
6.	<i>Aegle marmelos</i> (L.) Corr.	Bel	Rutaceae	Tree	Leaf and fruit
7.	<i>Acacia catechu</i> L. Willd.	Khair	Mimosaceae	Tree	Stem
8.	<i>Acacia leucophloea</i> Roxb. Willd.	Hiwar	Mimosaceae	Tree	Leaf
9.	<i>Acacia nilotica</i> (L.) Willd.	Babul	Mimosaceae	Tree	Leaf, bark, gum pod
10.	<i>Ageratum conyzoides</i> L.	Bhutakuli	Asteraceae	Herb	Leaf
11.	<i>Ailanthus excelsa</i> Roxb.	Maharukh	Simaroubiaceae	Tree	Leaf
12.	<i>Albizia lebbbeck</i> (L.) Benth.	Shirish	Mimosaceae	Tree	Stem and bark
13.	<i>Allium cepa</i> L.	Kanda	Liliaceae	Herb	Leaf, Bulb
14.	<i>Allium sativum</i> L.	Lasun	Liliaceae	Herb	Bulb
15.	<i>Aloe vera</i> L.	Korphad	Liliaceae	Herb	Leaf
16.	<i>Annona reticulata</i> L.	Ramphal	Annonaceae	Tree	Leaf
17.	<i>Annona squamosa</i> L.	Sitaphal	Annonaceae	Tree	Seed, Leaf
18.	<i>Amorphophallus konkanensis</i> Hett.	Suran	Araceae	Tuber	Corm
19.	<i>Asparagus racemosus</i> Willd.	Shatavari	Liliaceae	Herb	Root
20.	<i>Asphodelus tenuifolius</i> L.	Jangali Kanda	Liliaceae	Herb	Bulb
21.	<i>Arachis hypogaea</i> L.	Shendana	Leguminosae	Herb	Seeds
22.	<i>Azadirachta indica</i> (A.) Juss.	Neem	Meliaceae	Tree	Leaf, Seed, and bark
23.	<i>Bacopa monnieri</i> (L.)	Brahmi	Plantaginaceae	Creeping herb	The whole plant, leaves, and roots.
24.	<i>Bauhinia purpurea</i> L.	RaktaKanchan	Caesalpiniaceae	Tree	Leaf, stem
25.	<i>Bauhinia racemosa</i> Lam.	Apta	Caesalpiniaceae	Tree	Leaf, Root
26.	<i>Bombax ceiba</i> L.	Savar	Bombacaceae	Tree	Stem, bark and seed
27.	<i>Bombusa arundinacea</i> Retz Wild.	Bamboo	Poaceae	Shrub	Leaf
28.	<i>Boswellia serrata</i> Roxb. ex. Colebr.	Salai	Burseraceae	Tree	Fruit

29.	<i>Brassica nigra</i> L.	Mohri	Brassicaceae	Herb	Seed
30.	<i>Bryophyllum pinnatum</i> (Lam.) Kurz	Panfuti	Crassulaceae	Herb	Leaf
31.	<i>Buteamonosperma</i> (Lam.)	Palas	Fabaceae	Tree	Flower
32.	<i>Caesalpinia bonduc</i> (L.) Roxb.	Sagargoti	Caesalpiniaceae	Shrub	Seed
33.	<i>Calotropis gigantea</i> R.Br.	Rui	Asclepiadaceae	Shrub/ small tree	Root
34.	<i>Calotropis procera</i> (Willd.) R.Br.	Rui	Asclepiadaceae	Shrub/ small tree	Leaf, stem, and latex
35.	<i>Canna indica</i> L.	Kardali	Cannaceae	Herb	Leaf
36.	<i>Capsicum annum</i> L.	Mirchi	Solanaceae	Herb	Fruit
37.	<i>Carica papaya</i> L.	Papai	Caricaceae	Tree	Latex
38.	<i>Carissa carandus</i> L.	Karwand	Apocynaceae	Shrub	Leaf
39.	<i>Cassia fistula</i> (L.)	Bahawa	Caesalpiniaceae	Tree	Pod
40.	<i>Cassia uniflora</i> L.	Tarota	Caesalpiniaceae	Herb	Fruit
41.	<i>Catharanthus roseus</i> G. Don.	Sadaphuli	Apocynaceae	Herb	Root
42.	<i>Cissus quadrangularis</i> L.	Kandwel	Vitaceae	Shrub	Stem
43.	<i>Cleome gynandra</i> L.	Pandhri Tilwan	Cleomaceae	Herb	Leaf, seed
44.	<i>Clerodendron serratum</i> (L.) Moon.	Bharangi	Verbenaceae	Shrub	Root
45.	<i>Clitoria ternatea</i> L.	Gokarna	Papilionaceae	Twining herb	Seed
46.	<i>Cocos nucifera</i> L.	Naral	Araceae	Tree	Oil
47.	<i>Cordia dichotoma</i> Forst.	Bhokar	Boraginaceae	Tree	Fruit
48.	<i>Colocasia esculenta</i> (L.)	Arvi	Araceae	Corm tuber	Corm
49.	<i>Coriandrum sativum</i> L.	Dhania	Apiaceae	Herb	Whole Plant
50.	<i>Curcuma amada</i> Roxb.	Ambahalad	Zingiberaceae	Herb	Rhizome
51.	<i>Curcuma longa</i> L.	Haldi	Zingiberaceae	Herb	Rhizome
52.	<i>Curcuma pseudomontana</i> Grah.	Ranhalad	Zingiberaceae	Herb	Rhizome
53.	<i>Cuscuta reflexa</i> Roxb.	Amarwel	Cuscutaceae	Climber	Whole plant
54.	<i>Cymbopogon nardus</i> (L.) Rendle	Gavaticaha	Poaceae	Grass	Leaf
55.	<i>Cyamopsis tetragonoloba</i> L.	Gawar	Fabaceae	Herb	Seed
56.	<i>Cyperus rotundus</i> L.	Nagarmotha	Cyperaceae	Herb	Whole plant
57.	<i>Cynodon dactylon</i> (L.)	Durva	Cyperaceae	Herb	Whole plant
58.	<i>Dalbergia sissoo</i> Roxb.	Sissam	Papilionaceae	Tree	Leaf
59.	<i>Datura metel</i> L.	Dhotra	Solanaceae	Shrub	Fruit
60.	<i>Delonix regia</i> L.	Gulmohar	Caesalpiniaceae	Tree	Stem, bark
61.	<i>Dolichandrone falcata</i> Seem.	Medshing	Bignoniaceae	Tree	Bark, fruit
62.	<i>Dioscorea bulbifera</i> L.	Kadukarand	Dioscoreaceae	Tuber	Tuber
63.	<i>Eucalyptus globulus</i> L.	Neelgiri	Myrtaceae	Tree	Oil
64.	<i>Euphorbia hirta</i> L.	Dudhi	Euphorbiaceae	Herb	Entire plant
65.	<i>Ferula asafoetida</i> L.	Hing	Apiaceae	Herb	Gum

67.	<i>Ficus racemosa</i> L.	Umber	Moraceae	Tree	Leaf
68.	<i>Ficus religiosa</i> L.	Pipal	Moraceae	Tree	Bark
69.	<i>Gardenia latifolia</i> Ait.	Dikemali	Rubiaceae	Tree	Stem, Bark
70.	<i>Gloriosa superba</i> L.	Kallavi	Liliaceae	Climbing	Rhizome
				herb	
71.	<i>Gossypiumherbaceum</i> L.	Kapas	Malvaceae	Herb	Fruit, roots and seeds.
72.	<i>Helicteresisora</i> L.	Muradsheng	Sterculiaceae	Tree	Fruit
73.	<i>Helianthus annuus</i> L.	Suryaful	Asteraceae	Herb	Oil
74.	<i>Ipomea fistulosa</i> Mart. Ex.	Beshram	Convolvulaceae	Shrub	Leaf Stem
75.	<i>Jatropha curcas</i> L.	Chandrajyoti	Euphorbiaceae	Shrub	Leaf, stem and bark
76.	<i>Jatrophagossypifolia</i> L.	MogaliErand	Euphorbiaceae	Shrub	latex
77.	<i>Lawsonia inermis</i> L.	Mehandi	Lythraceae	Tree	Leaf
78.	<i>Limoniaacidissima</i> L.	Kawath	Rutaceae	Tree	Leaf
79.	<i>Limumstitatissimum</i> L.	Jawas	Linaceae	Herb	Seed
80.	<i>Luffaacutangula</i> (L.) Roxb.	Dodka	Cucurbitaceae	Climber	Leaf
81.	<i>Lycopersicon esculentum</i> L.	Tamatar	Solanaceae	Herb	Leaf
82.	<i>Madhucalongifolia</i> Koenig.	Mohua	Sapotaceae	Tree	Flower, seed
83.	<i>Mangifera indica</i> L.	Amba	Anacardiaceae	Tree	Seed, bark and fruit
84.	<i>Moringa oleifera</i> Lam.	Shewaga	Moriangaceae	Tree	Bark
85.	<i>Mucuna pruriens</i> L.DC.	Khajkuhili	Papilionaceae	Herb	Root
86.	<i>Murrayakoenigii</i> L.	Kadhipatta	Rutaceae	Tree	Leaf
87.	<i>Musa paradisiaca</i> L.	Keli	Musaceae	Herb	Root
88.	<i>Nerium oleander</i> L.	Kanher	Apocynaceae	Tree	Tuber
89.	<i>Nyctanthes arborescens</i> L.	Parijatak	Oleaceae	Tree	Leaf
90.	<i>Phyllanthusamarus</i> L.	Bhuiawali	Euphorbiaceae	Herb	Root, leaf
91.	<i>Physalis minima</i> L.	Ranpopati	Solanaceae	Herb	Leaf
92.	<i>Piper nigrum</i> L.	Miguel	Piperaceae	Climber	Fruit
93.	<i>Plumbago zeylanica</i> L.	Chitrak	Plumbaginaceae	Herb	Root, leaf
94.	<i>Plumeria rubra</i> L.	Sonchapha	Apocynaceae	Tree	Fruit
95.	<i>Psidium guajava</i> L.	Peru	Myrtaceae	Tree	Leaf, stem and bark
96.	<i>Rauwolfia serpentina</i> (L.) Bth. ex Kurz.	Sarpgandha	Apocynaceae	Shrub	Root
97.	<i>Ricinus communis</i> (L.)	Erand	Euphorbiaceae	Shrub	Seed
98.	<i>Santalum album</i> L.	Chandan	Santalaceae	Tree	Leaf stem
99.	<i>Semecarpusanacardium</i> L.	Bibba	Anacardiaceae	Tree	Seed
100.	<i>Solanumsurattense</i> Burm. f.	Bhuiringni	Solanaceae	Shrub	Fruit
101.	<i>Syzygiumcumini</i> (L.) Skeels.	Jambul	Myrtaceae	Tree	Bark
102.	<i>Tamarindus indica</i> L.	Chinch	Caesalpiniaceae	Tree	Stem, bark
103.	<i>Tectona grandis</i> L.	Sag	Verbenaceae	Tree	Root
104.	<i>Terminalia arjuna</i> (Roxb.) Wt.&Arn.	Arjun	Combretaceae	Tree	Bark
105.	<i>Tinospora cordifolia</i> Willd.	Gulvel	Menispermaceae	Climber	Stem, root
106.	<i>Tribulus terrestris</i> L.	Gokharu	Zygophyllaceae	Herb	Leaf
107.	<i>Tridaxprocumbens</i> L.	Eddandi	Asteraceae	Herb	Whole plant
108.	<i>Vigna mungo</i> L.	Moong	Fabaceae	Herb	Seed
109.	<i>Vitex negundo</i> L.	Nirgudi	Verbenaceae	Small tree	Root, leaf
110.	<i>Ziziphus jujuba</i> L.	Bor	Rhamnaceae	Shrub/ small tree	Fruit

Fig.1. Plant parts used for ethnoveterinary medicine

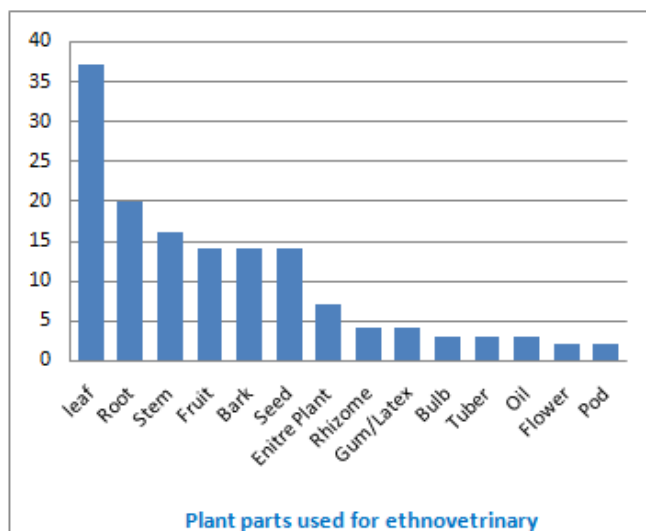
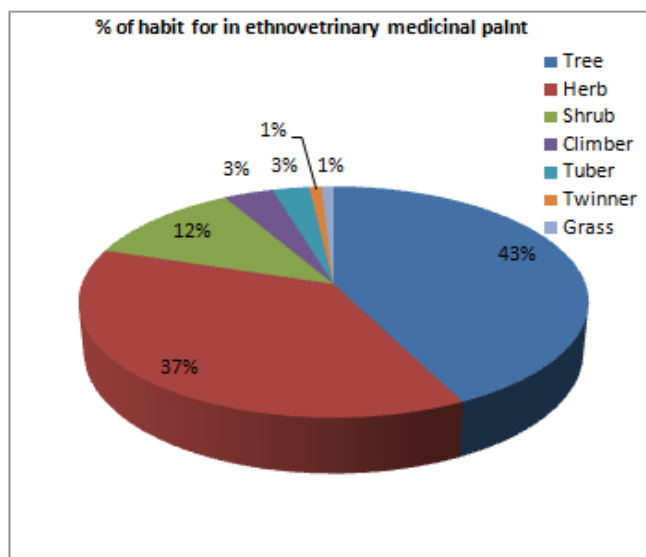


Fig.2. Percent of habit for in ethnoveterinary medicinal plant



Conclusion

Ethnoveterinary methods would also provide revenue for the country's small-scale farmers. The merging of modern ethnoveterinary medicine is, however, urgently required. To create synergy in animal health care, modern science and ethnoveterinary techniques must be combined.

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Diversity of Succulents Plants from the Region of Navi Mumbai, Maharashtra

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Abstract

The present study was based on extensive surveys and field observation in different localities like parks, gardens, roadside and nurseries of Navi Mumbai city in 2020-21. During the field visits, the plant specimens were surveyed. The plants had been picked and digital photos of them were taken. Specimens were identified using standard procedures and flora. Plant species, botanical names, as well as local names, habits, families, significance of the plants are arranged alphabetically. The exploration and field survey resulted in the documentation of 17 species belonging to 10 families and 10 genera distributed in the different localities of Navi Mumbai. With four species Portulacaceae family takes the lead, followed by the Agavaceae with three species, Euphorbiaceae and Asparagaceae with two species and the rest with one species each. According to the survey, many of the plants were cultivated in public parks, gardens, industrial areas and roadsides for the beautification of the city.

Keywords: diversity, floristic, succulents, cactus and draught.

Introduction

Succulents and cacti are plants with specific features that allow them to store water in thick fleshy leaves or stalks. They are light-loving plants, attractive towards sun. Except when actively growing, they require little attention. There is a distinct difference between the two. The presence of areoles, which resemble woolly cushions with spines, hairs or glochids, distinguishes cactus and the flowers emerge from or near the areoles. Cactus spines are modified leaves that gives shelter from the harsh sunlight and aid in moisture conservation while also protecting the plant from birds and animals. Cacti are all succulents because they store water, however not all succulents are cacti. Gardeners love succulent plants and are used to brighten up sunny locations in gardens, homes, window frames and rock gardens (Bose et al., 1999).

Succulent plants are found in practically every habitat

type and have a global distribution. Succulent plant species can be found in over 30 botanical families, ranging in size from tiny annuals to massive trees (IUCN, 1997).

The world's most diversified succulent flora can be found in the "Succulent Karoo" of South Africa and Namibia. Mexico boasts the most variety of cactus of any country on the continent (Ortega and Hector, 2006). More than 60 species are recognized in the Union for Conservation of Nature of Nature's (IUCN) Red Data Book (IUCN, 2003). Most of these species are significantly vital biologically, culturally and economically.

Succulents originated from other related plants that grew in a normal environment by adapting to their habitat's shifting climatic circumstances, particularly the frequency and amount of rainfall. Every family's adaption process was different, and many plants undoubtedly died in the quest for survival. Water is required for the growth and survival of all vegetation, including succulents, which have perfected the art of water conservation (Rudolf, 1980). The earth's climate altered over time, becoming drier as mountains were pushed higher, creating rain shadows and deserts. Other plant families have adapted to these conditions in a similar way and there are thousands of succulent species to choose from (Edwards and Donoghue, 2006).

Succulent plants are becoming increasingly popular among plant lovers, home gardeners and professional landscapers for a variety of reasons. With their colorful foliage, sculptural shapes and ease of maintenance, succulents are a striking and forgiving plant for pots (Bald, 2010). Succulents are available in a wide range of sizes and shapes. The succulents studied in this study are diverse. Gardeners in Maharashtra largely disregard them because many of them are aesthetic. Succulents are now widely employed in outdoor and indoor gardening in Navi Mumbai, including malls, industries, colleges, hospitals and gardens. As a result, documenting such decorative groups is equally critical. Succulents are commonly planted as pot herbs, but some are also produced as succulent shrubs. Most of these attractive succulents

are exotics that have been planted in private gardens, botanical gardens, industrial sites and public gardens. These succulents, both native and exotic, have adapted to a variety of climates (Arora, 1999).

From boutonnières to hanging pots, succulents have become increasingly popular. They are a fad that's sweeping the nation, not just in gardens, but also in weddings and home design. Succulents are plants that flourish in dry environments. Most succulents are native to Africa or Central America, where the climate is hot and humid. They can tolerate long hours in the sun and little irrigation because their leaves retain water. These plants are wonderful for bringing structure and color to gardens and homes. Succulents can be used as focal points in a home office or as colorful accents in a lush garden (Randhawa and Mukhopadhyay, 1986).

The current examination gives a record of the variety and appropriation of the diversity of succulent plant types in the Navi Mumbai Thane district.

Materials and Methods

Study Area

Navi Mumbai is a planned satellite city of Mumbai, on the west coast of Maharashtra in India. It was established in 1972, as a new urban township for Mumbai and is now the world's largest planned city. Navi Mumbai is 29 metre above sea level. The climate is tropical here. In the winter, there is significantly less rainfall than in the summer. The average annual temperature in Navi Mumbai is 26.6 °C |79.9 °F. The annual rainfall is roughly 1,920 mm (76.4 inches).

Floristic Analysis

The present study was based on extensive surveys and field observation in different localities like parks, gardens, roadside and nurseries of Navi Mumbai city in 2020-21. During the field visits, the plant specimens were surveyed. The plants had been picked and digital photos were taken. Specimens were identified using standard procedures and flora (Almeda, 2003, Anderson, 2012, Cook, 1965; Mary, 2000; Naik, 2004).

Results and Discussion

The exploration and field survey resulted in the documentation of 17 species belonging to 10 families and 10 genera distributed in the different localities of Navi Mumbai. Plant species, botanical names, as well as local names, habits, families and significance of the plants, are arranged alphabetically. With four species Portulacaceae family takes the lead, followed by the Agavaceae with three species, Euphorbiaceae and Asparagaceae with two species and the rest with one species each. According to the survey, many of the plants were cultivated in public

parks, gardens, industrial areas and roadsides for the beautification of the city. Various authors have reported on similar types of surveys and findings. Floristic study of Parner Tehsil of Ahmednagar District, from Maharashtra, was recorded five families with six genera and six species (Aher, 2015). Survey of Succulent Plants From Kopergaon Tehsil of Maharashtra (Bhalerao et al., 2018), Diversity Survey of succulent ornamental from Amravati region was recorded 18 ornamental succulent species belonging to six families (Pawade, 2016), Survey of succulent plants from various regions of Maharashtra has recorded five Families, 10 Genus and 13 species (Aglave, 2018), Study of succulents plants growing in Gandhinagar, Gujarat, Ahmedabad was recorded 10 genera and 10 species belonging to 10 families (Patel et al., 2018).

From boutonnières to hanging planters, succulents are now everywhere. They are a popular trend not only in gardens but also in wedding and decorative items. Succulents are plants that grow well in dry climates. Most succulents are from Africa or Central America, where temperatures are high and humidity levels are low. They can withstand long periods of direct sunlight and little watering because their leaves store water. Succulents are known for their low maintenance and long-life spans, making them ideal for people who work all day, are constantly on the go, or simply are not great at caring for plants. These plants are excellent for providing structure and uniqueness to gardens and homes. Succulents come in a variety of colors and can be used as corner plants in a home office or as vibrant colors in a lush garden.

1. *Agave americana* L., Common name- Century plant, Family-Agavaceae.

Occurrence-Almost all gardens in the Industrial area and Cactus Garden Navi Mumbai.

A massive evergreen shrub with a rosette of leaves and a short stem. The leaves are leathery, fibrous and hard. On a 3 - 6 m tall scape, flowers only once in a lifetime, after many years.

Significance- Fibers are extracted from the leaves, which are quite important. Leaves are used as fodder during times of famine.

2. *Agave attenuata* Salm-Dyck, Common name- Foxtail Agave, Family-Agavaceae.

Occurrence-Almost all gardens in the Industrial area and Cactus Garden Navi Mumbai.

The plant is widely grown as a flowering plant in the garden. The plant has no teeth or terminal spikes, making it an excellent choice for locations near pathways. It is a drought-resistant plant that can withstand heat and moderate salt exposure. Fibrous-rooted crowns of a

perennial herb. Rosettes on thick, fibrous-rooted crowns, typically rhizomatous stem aboveground. The evergreen rosette leaves are lanceolate, thick, succulent and have a sharp-pointed apical tip.

Significance- Used in treatment of scabies, tumors, dysentery and as insecticides

3. *Agave salmianavar. ferox* (K. Koch) Gentry, Common name-Century plant, Family-Agavaceae.

Occurrence- Industrial area and Cactus Garden.

The xerophytic rosette is a succulent plant that requires little water. The underground stem has been reduced. Dark green leaves with a hint of bluish near the base. The leaves are curved toward the tip and corrugated. Their edges are covered in sharp-pointed spines.

Significance- Because of its attractive foliage, it is primarily used for decorative purposes.

4. *Aloe vera* (L.) Burm. f. Common name- Aloe, Family- Liliaceae

Occurrence- Almost all gardens in the Navi Mumbai.

Vase-like leaves are grouped in a rosette on this small plant. Radiant, fleshy leaves with distant horny prickles on the margins, broad at the base, narrowing from base to apex.

Significance- The aloe plant is used as a stomachic and purgative. It is beneficial in the treatment of rectal fissures and piles. Mucilage is a cooling substance that is used as a poultice to treat inflammations. To keep insects away, the entire plant is frequently hung in living spaces and stables.

5. *Bryophyllum pinnatum* (Lam.) Oken. Common name-Pan-Futi, Family- Crassulaceae

Occurrence- cactus garden.

A succulent plant. 4-angled stem, decussate leaves, the bottom simple, the higher 3-5 or 7-foliate, petiole long, stems joined by a ridge. Leaflets are ovate or elliptic in shape and create. Flowers with opposite thick branches hanging.

Significance- It was cultivated in the gardens. Leaves produce adventitious buds when they are placed in damp soil. The juice of the leaves is used to cure diarrhea, dysentery and bruising due to its antibacterial and astringent properties.

6. *Cissus quadrangularis* L., Common name- devil's backbone, Family- Vitaceae

Occurrence- Almost all gardens in the Navi Mumbai

This is a large succulent. Long, fleshy, deep green, glabrous, quadrangular stem with immature branches that are sharply angular or winged, long, simple tendrils. Leaves are deciduous, oblong, or reniform, with 3-7 lobed,

denticulate, rounded bases and oval stipules.

Significance- It is important because it is used as a hedge plant and in gardens. Young stems are used in curries. Stem juice is used to treat scurvy. Broken and damaged bones, as well as swellings, are treated using stem pulp. It can also help with persistent ulcers and eye problems.

7. *Coleus amboinicus* Lour., Common name-Indian Mint, Family-Lamiaceae (Labiatae)

Occurrence- Industrial area and Cactus Garden.

With short hairs and squishy stems, it is a spreading, perennial, succulent plant. Petiolate leaves with serrated margins, simple, highly velvety, meaty, oblong to roundish leaves. Flowers Sepals are bell-shaped, pedicellate. Bilipped corollas in various colors of blue, maroon and pink. A tube formed by the union of stamens.

Significance- The leaves have a strong flavor that complements meat and chicken fillings. The leaves have traditionally been used to treat coughs, sore throats and nasal congestion, but they have also been used to treat infections, rheumatism and flatulence. It is also cultivated in private gardens.

8. *Euphorbia nerifolia* L., Common name-Indian spurge tree, Family-Euphorbiaceae

Occurrence- Industrial area and Cactus Garden.

A big, fleshy shrub with many branches. The stem branches are spherical and verticillate, with pairs of sharp, stipular spines emerging from low conical truncate tubercles that are arranged in a spiral pattern. The fleshy, alternate, obovate, rounded at the apex, smooth, narrow at the base, sessile deciduous leaves are fleshy, alternate, obovate, rounded at the apex, smooth, thin at the base.

Significance- This plant is found all over the world and is frequently used to create hedges.

9. *Euphorbia tirucalli* L., Common name-African Milk bush, Family- Euphorbiaceae

Occurrence- Industrial area and Cactus Garden.

Deciduous shrubs or small trees with dichotomous branches, greenish-brown bark, white or grey wood, pale to dark green branches, cylindrical, smooth, spreading with abundant of latex, younger sections flexuose, internodes striate when dry. Leaves are small, linear to spatulate, subacute or obtuse at the apex, tapering at the base, entire along the margins, pale to dark green, minutely pubescent when young, glabrous when old.

Significance- The importance of this plant is that it can be used as a windbreak or a hedge. Even though the plant is unarmed, cattle avoid it due to its poisonous effects. Latex is used for gastrointestinal problems with

Bajri. Wood is also used to make toys.

10. *Opuntia elatior* Mill, Common name-Prickly Pear, Family-Cactaceae

Occurrence- Industrial area and Cactus Garden.

Shrubs having a jointed stem, Succulent, leafless, prickly, flat, obovate, glaucous-green, succulent, leafless, spiny, flat, obovate, glaucous-green color flowers are yellow or pale pink, with a reddish-purple center. They are axillary and solitary on the free margins of joints. Fruits are ripe, fleshy berries that are edible.

Significance- Frequently used as a hedge beside cultivated fields and as an escape in scrub woodlands.

11. *Pachypodium geayi* Costantin & Bois, Common name- Madagascar Palm, Family-Apocynaceae.

Occurrence- Industrial area and Cactus Garden.

A deciduous tree that can grow to be 4 m in height. pachypaule trunk in metallic grey with needles (thick stems disproportionate to their length). Slender, grey-green leaves grow at the top of the trunk (stem) The midrib of the leaves turns a lovely bright pink color when the plant is cultivated in direct sunshine. Flowers are white with a golden throat and sweet-scented on mature bushes.

Significance- It is a very important Madagascar decorative plant.

12. *Portulaca grandiflora* Hook. pilosa L., Common name- Office Time, Family-Portulacaceae

Occurrence- Industrial area and Cactus Garden.

The herb habit is small, hairy and succulent. Slender stem and branches Inner, narrow, 1-1 1/2 in long, hairy leaves. Flowers open only in the morning sun, are red or a variety of colors and are large. 5 petalled, obovate, free corolla. There are many stamens.

Significance: Grown in the gardens.

13. *Portulaca pilosa* L., Common name- Pink purslane, Family-Portulacaceae

Occurrence- Industrial area and Cactus Garden.

A succulent herb that is small, prostrate, fleshy and branching. Leaves are alternate, succulent, more or less rounded and linear to oblanceolate. Deep pink flowers with five petals. The seeds in fruits are very small.

Significance: Occurred as a wild plant. It is also well-known for its ability to prevent erosion.

14. *Portulaca quadrifida* L., Common name- yellow purslane, Family-Portulacaceae

Occurrence- Industrial area and Cactus Garden.

A small annual herb with a filiform glabrous stem that roots at the base. Leaves are fleshy, ovate, acute and opposite, with a ring of silvery hairs around the stipules and short petioles. Flowers Solitary, terminal, almost sessile, with silvery hairs and a four-leaf involucre. Two oblong sepals and yellow petals. Conical, pyxidium fruits Seeds are small.

Significance: This is a common weed. Burns and ulcers are treated with fresh leaves.

15. *Portulaca umbratica* Kunth, Common Name- Red Purslane, Family-Portulacaceae

Occurrence- Industrial area and Cactus Garden.

A perennial or annual that is herbaceous, prostrate and spreads. Flat, succulent leaves. Flowers come in a variety of colors, including pink, red, violet, yellow, orange and white. Dehiscent, dry capsules are the fruit.

Significance: It's widely used as a decorative plant. Salads can be made with raw leaves and stems.

16. *Sansevieria cylindrica* Bojer ex Hook. Common Name: Mother-in-Law's Tongue, Family-Asparagaceae

Occurrence- Industrial area and Cactus Garden.

Perennial herb with a thick, short rhizome. Leaves are erect, rigid, terete, quite solid, leathery, circular in outline, grooved, tapering at the apex, dark green with grey-green cross bands that fade with age. Flowers in fascicles along the rachis of a young raceme are cream-white with a pink tinge.

Significance: Cultivated as a foliage plant on occasion.

17. *Sansevieria trifasciata* Prain, Common Name: Snake Plant, Family: Asparagaceae.

Occurrence- Industrial area and Cactus Garden.

A perennial herb with a short, thick rhizome. Leaves are erect, with long, leathery, linear-lanceolate leaves that are deep green with light green to gray-white waxy cross bands. Raceme of inflorescence Flowers that are greenish-white in color.

Significance: Cultivated as a foliage plant on occasion.

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Atrend Analysis of Imports and Exports of Cut Flowers from India

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Abstract

Floriculture, branch of ornamental horticulture concerned with growing and marketing flowers and ornamental plants as well as with flower arrangement. Because flowers and potted plants are largely produced in plant-growing structures in temperate climates, floriculture is largely thought of as a greenhouse industry, though many flowers are cultivated outdoors in nurseries or crop fields. Both the production of bedding plants and the production of cuttings to be grown in greenhouses or for indoor use as houseplants are usually considered part of floriculture. India is one of the major exporters of flowers. Floristry business has been catching eyes of traders, importers and a lot of exporters. The paper is a attempt to study the changing trends in global market to getter better insights of EXIM situation in India. The paper is descriptive in nature and data is sourced from official government records. The research concludes that's in last decade, India observed a steep rise in exports but later there was a considerable decline in the numbers. A similar trend was observed in import of cut flowers. This shows that there has been a diminishing demand of cut flowers hampering trade and commerce of floriculture industry.

Keywords - Cut flowers,export,import,floriculture, trends

INTRODUCTION

Floriculture means the farming of flowers, it is a part of horticulture dealing with the cultivation of flowering and ornamental plants for garden, floristry and everything that comprises in floral industry.

The Floriculture business in India is flourishing in success due to its high demand in the country itself and in the international level as well. In the near future the Flower Export business in India will reach great heights and increase its growth worldwide.(Vaibhav Sharma,2021)

Indian roses grown in Bengaluru and Pune have biggest demand in Europe and United Kingdom.Indian Society of Floriculture Professionals have estimated that flowers exported from India across the world are worth around 30 crores.During the time of Valentine's day and

Christmas, Flower Export from India is at peak specially for beautiful Indian roses.Ghodawat Agro Group also known for sending three lakh stems of flowers every day to Indian market as well as Export market, is planning to set up a floriculture project in Goa aiming to construct biggest orchid farms in the world.

Floristry business has been catching eyes of traders, importers and a lot of exporters. The paper is a attempt to study the changing trends in global market to getter better insights of EXIM situation in India.

LITERATURE REVIEW

Togar M. Simatupang, Ramaswami Sridharan, (2008), in an article titled "Design for supply chain collaboration" discussed about architecture of supply chain collaboration and to propose a design for supply chain collaboration (DfC), which enables participating members to create and develop key elements of the proposed architecture.

Cao, Mei; Zhang, Qingyu (March, 2011), in an article titled "Supply chain collaboration: Impact on collaborative advantage and firm performance" disused about uncovering the nature of supply chain collaboration and explored its impact on firm performance based on a paradigm of collaborative advantage.

Bhide, Hetal, (March 2013) in an article titled "Vibrant trends in Packaging" discussed about the change in packaging trends in floristry market and its need for sustaining in dynamic business environment. Author discussed about the various Packing methods adopted at various levels in supply chain.

Bhide, Hetal, (March 2014) in an article titled "Awareness about floriculture business amongst flower cultivators with special reference to Nasik District" discussed about the awareness levels of floriculture partners amongst flower cultivators at all the supply chain partners of floriculture business.

Bhide, Hetal, (Oct 217) in an article titled "A critical study if challenges influencing floriculture business with special reference to Nashik District" discussed about the challenges affecting all the supply chain partners of

floriculture business.

Bhinde, Hetal, (Jan 2018) in an article titled “An analytical study of current organization and management of floriculture business in Nasik district” discussed about the organization and administration of floriculture business where an attempt has been made to simplify the challenges affecting floriculture business.

Bhinde, Hetal, (Sept 2018) in her thesis titled “A Study of Organisation and Management of Floriculture business with special reference to Nashik district from 2007 to 2015” discussed about problems faced by farmers in floristry business. Author gave a brief for integrating various parties associated with supply chain and setting up a LLP company for benefit of all the stake holders involved in the business.

Bhinde, Hetal, (Dec 2018) in an article titled “Supply chain collaboration: A case study of floristry business” summarized a model for Supply Chain Collaboration amongst partners of floristry business. A collaborative model clearly explained the benefits of collaborative supply chain for aggregating the business to fetch better market and money for farmers, retailers and exporters as well as best quality product for end consumers.

Bhinde, Hetal (2019) in a paper “Floriculture Corridor: An Endeavor to Collaborate Floristry Business” presented a corridor model clearly explain the benefits of collaborative business aggregation to fetch better market and money for farmers, retailers and exporters as well as best quality product for end consumers. This business model can act as a boon to floristry business partners in near future.

Bhinde, Hetal (June 2020) in a research “An overview of floriculture business in India during COVID 19 pandemic” concluded that the government should provide some additional benefits to farmers to increase the trade in coming future to balance their current losses and continue with growth of cut flowers.

Research Gap

A lot of research has been done in past to study the trends and overall floriculture business. Few research articles highlighted to values of exports and imports of flowers from India to global market. Yet there exists a need to study the trends observed over long durations to study the changing trends in market to get better understanding of floral EXIM situation.

MATERIALS AND METHODS

Objectives of the Study

To study the trends of imports and exports of cut flowers from India.

Scope of the Study

The purpose of this study is to study the trends of imports and exports of cut flowers from India. The study

is limited to exports of commodity group 0603. It covers a time frame from 2009 to 2020

Sampling Techniques

The research is conducted for a time frame from 2009 to 2020. Hence sample amounts to be 12 years’ data. The data is based on latest records that are published by government. Hence it can be noted that convenience sampling for 12 years is used.

Limitations of the Study

It covers a time frame from 2009 to 2020.

The study is limited to exports of commodity group 0603.

Type of research

The study is a descriptive research which attempts to study the study the trends of imports and exports of cut flowers from India.

Data Collection

The research is confined to Indian context only. The research data is collected from secondary sources like website, research papers, articles, etc.

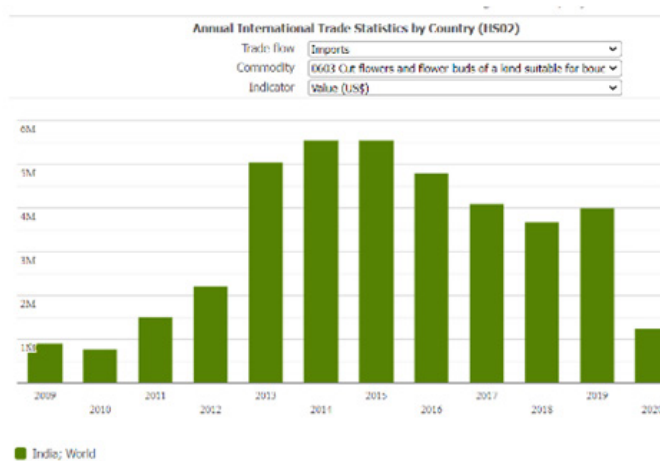
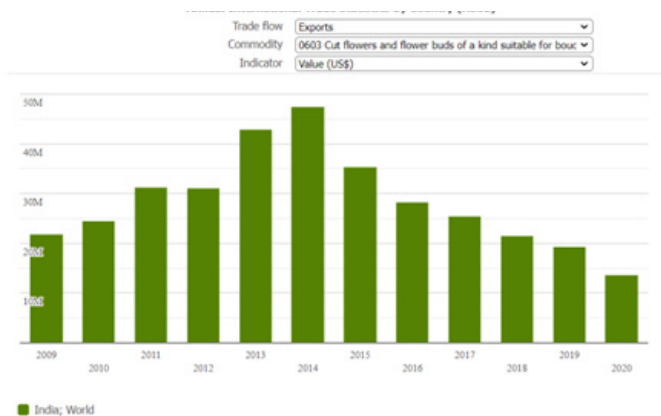
RESULTS AND DISCUSSION

The tables below display the value and value growth (%) of imports and exports of cut flowers from India to other nations.

EXPORTS

Sr. No.	Exports		
	Year	Value (US \$)	Value Growth YOY (%)
1	2009	21856640	-10.35
2	2010	24465532	11.93
3	2011	31321721	28.02
4	2012	31175950	-0.46
5	2013	42952138	37.77
6	2014	47456887	10.48
7	2015	35310577	-25.59
8	2016	28292840	-19.87
9	2017	25539374	-9.73
10	2018	21511690	-15.77
11	2019	19350644	-10.04
12	2020	13699943	-29.20

Annual International Trade Statistics by Country (HS02).



Annual International Trade Statistics by Country (HS02)

Activate Window

IMPORTS

Sr. No.	Imports		
	Year	Value (US \$)	Value Growth YOY (%)
1	2009	908723	4.70
2	2010	774815	-14.73
3	2011	1514187	95.42
4	2012	2201612	45.39
5	2013	5034414	128.66
6	2014	5552899	10.29
7	2015	5550578	-0.04
8	2016	4798942	-13.54
9	2017	4088263	-14.80
10	2018	3678016	-10.03
11	2019	3990835	8.50
12	2020	1248314	-68.72

The value of exports of commodity group 0603 "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." from India totalled \$ 13.6 million in 2020. Sales of commodity group 0603 from India decreased by 29% in value terms compared to 2019. exports of commodity group 0603 "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." decreased by \$ 5.65 million (cumulative exports of commodity group 0603 from India amounted \$19.3 million in 2019)

Exports of commodity group 0603 "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." amounted to 0.004% of total exports from India (cumulative merchandise exports from India totalled \$ 275 billion in 2020). The share of commodity group 0603 in total exports from India decreased by 0.001 p.p. compared to 2019 (it was 0.005% in 2019 and cumulative exports from India were equal to \$ 323 billion).

Exports of commodity group 0603 amounted to 18.7% of total sales of group "" from India in 2020

(the value of exports of commodity group from India amounted to \$73 million in 2020). The share of exports of commodity group 0603 in sales of commodity group from India lowered by 5.68 p.p. compared to 2019 (it was 24% in 2019, and exports of commodity group from India were \$79 million).

India export of Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared.

Top export destinations of "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." from India in 2020:

- United Arab Emirates with a share of 15.8% (2.17 million US\$)
- USA with a share of 13.6% (1.87 million US\$)
- United Kingdom with a share of 13% (1.79 million US\$)
- Singapore with a share of 10% (1.38 million US\$)
- Malaysia with a share of 9.3% (1.27 million US\$)
- Germany with a share of 5.14% (704 thousand US\$)
- Spain with a share of 4.22% (578 thousand US\$)
- New Zealand with a share of 2.7% (371 thousand US\$)
- Kuwait with a share of 2.52% (346 thousand US\$)
- Nepal with a share of 2.52% (345 thousand US\$)

Exports structure of 0603 - Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared. - from India in 2020 represented by the following main commodity groups:

- 52% (7.19 million US\$): 060310 - Cut flowers & flower buds of a kind suit. for bouquets/ornamental purps., fresh
- 47% (6.5 million US\$): 060390 - Cut flowers & flower buds of a kind suit. for bouquets/ornamental purps., dried/dyed/bleached/impregnated/othw. prepd.

The value of imports of commodity group 0603 "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." to India totalled \$ 1.24 million in 2020. Sales of commodity group 0603 to India decreased by 68% in value terms compared to 2019. imports of commodity group 0603 "Cut flowers and flower buds of a kind suitable for bouquets or for ornamental

purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared." decreased by \$ 2.74 million (the value of imports of commodity group 0603 to India was equal to \$3.99 million in 2019)

Imports of commodity group 0603 reached 6.59% of total imports of group "" to India in 2020 (imports of commodity group to India totalled \$18.9 million in 2020). The share of purchases of commodity group 0603 in imports of commodity group to India went down by 6.05 p.p. compared to 2019 (it was 12.6% in 2019, and imports of commodity group to India accounted for \$31 million).

Lastly, In the fiscal year 2021, floriculture products worth over five billion Indian rupees was exported from India. United States accounted for the largest share of these exports that year, followed by the Netherlands.

CONCLUSION

The research concludes that's in last decade (12 years considered in this study), India observed a steep rise in exports but later there was a considerable decline in the numbers. A similar trend was observed in import of cut flowers. This shows that there has been a diminishing demand of cut flowers hampering trade and commerce of floriculture industry.

ACKNOWLEDGMENT

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Identification and Surveillance Study of The Ethno-Botanical Plants used for Veterinary Purpose in The Murbad Area of Thane District, Maharashtra

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Abstract

A preliminary investigative surveillance was conducted in the year 2021 leading to the collection of traditional knowledge about Ethnoveterinary Herbal Remedies in Murbad Tahsil of the Thane District, Maharashtra. This comprehensive surveillance would aid to emerging research scholar to gain the knowledge about the parts of the ethnobotanical plants for the treatment of the ailments and or diseases of the cattle and other rearing animals reared in the rural and tribal folk of the Murbad Tahsil of the Thane District in the State of Maharashtra. According to primary investigative surveillance findings of this study, Murbad Tahsil of the Thane District in the State of Maharashtra are rich in the flora of ethnobotanical plants used for the treatment of rearing animals that extends to the 125 plant species from 63 families and 109 genera that has been found which has been classified as above. Plant species alongwith botanical names as well as local names, their habits, families and the plant parts used and its applications for treatment of the ailments of the rearing animals are arranged in alphabetical manner. Amongst them, the plants of Caesalpiniaceae are leaders with seven species, followed by Liliaceae, Mimosaceae, Euphorbiaceae and Solanaceae with six species, Apocynaceae and Fabaceae with five species, Araceae, Asteraceae, Rutaceae and Papilionaceae with four species, Moraceae, Myrtaceae, Verbenaceae, Zingerberaceae and Annonaceae with three species, Anacardiaceae, Apiaceae, Asclepiadaceae, Lamiaceae, Cyperaceae, Malvaceae, Poaceae with two species and Papaveraceae, Boraginaceae, Sapindaceae, Lythraceae the rest with one species each.

Keywords- ethnobotany, livestock, cattle, diseases, ethnoveterinary.

Introduction

Mc Corkle coined the term "ethnoveterinary" in 1986, and it was defined as "the holistic interdisciplinary study of local knowledge and its associated skills, procedures,

beliefs, practitioners and social systems pertaining to the healthcare and healthful husbandry of food, work, and other income producing animals" in 1996. Ethnoveterinary medicine, in simple terms, refers to people knowledge, techniques, and attitudes about keeping their animals healthy and productive. People have designed their own methods for keeping their animals healthy and active all around the world. Home medicines, surgical and manipulative treatments, husbandry strategies, and linked magico-religious beliefs are all examples.

Ethnoveterinary medicine is a branch of ethnobotany that deals with animals. Ethnobotany is the scientific study of the human-plant interaction, or how people of a given culture and religion make the most use of local plant resources (Mathias, 2004). Ethnoveterinary medicine encompasses the use of animals and animal-derived products for animal health care in a broader sense. Ethnoveterinary medicine is based on centuries of community observation, experience, and experimentation. Ethnoveterinary knowledge is not static. It changes on a regular basis.

Veterinary medicine has been practised in India since the Vedic period. The Rigveda (4500 - 1600 B.C.) specifically mentions medicinal herbs in the healing of humans and animals. Atharveda (3500-500 B.C.) is a text that contains knowledge about medicinal herbs and medications. The Kautilyas Arthshastra contains references on animal husbandry (200B.C.).

As per the World Health, at least 80% of people in underdeveloped nations depending on indigenous methods to control and treat diseases that harm humans and animals. Because India is predominantly an agricultural country with a rural population, animals, especially cattle, play an important role in the rural economy and social welfare. Historically, using medicinal herbs to cure animal ailments has been a well-documented method. Domesticated animals began before the prehistoric period. Sheep and goats were generally domesticated approximately 9000 years ago, cattle around 6000, and buffaloes and horses around 4000 years ago (Patil, et.al. 2010).

In India, livestock owners maintain a close relationship with their animals. Many people rely on their livestock animals for food, clothes, labour, fertiliser, and money, as well as acting as a store of wealth and a medium of exchange. Traditional medicinal procedures have been used to keep animals healthy for ages. They contain thorough information on numerous animal ailments, their symptoms, and how to treat them. These folks used to make medication out of plants that grew naturally in the area and they utilised it to prevent and treat various animal illnesses. In India's villages, there is a rich and effective ethnoveterinary tradition that is an inherent part of rural life.

Indigenous knowledge and practise based on locally available bioresources is successful in curing ailments and is simple to implement. The ancient yet effective system of tribal medicine has gradually been superseded by human engagement in development, depletion of natural plant resources, and rapid modernization of creative systems. A lack of resources Tribes have limited access to modern illness prevention and treatment procedures, especially in areas lacking proper health coverage. India is one of the world's 12 mega-diversity countries. It contains 8% of the world's plant genetic resources. According to a project supported by the Ministry of Environment and Forests in New Delhi, out of 17,500 flowering plants in India, roughly 8000 plants are utilised in folk and herbal medicine, whereas only 10% of these plants are used in the drug and pharmaceutical sectors (Pushpangadan, 1994).

Despite the fact that India has a diverse biodiversity, traditional herbal veterinary medicines have received insufficient attention. Over the last 30 years, ethnoveterinary studies have gained traction, and several workers have begun conducting research in their field.

Few publications on ethnoveterinary applications of medicinal plants in various parts of India are known (Gaur et al. 2010; Tiwari and Pandey 2010; Ramana 2008), for example. There have been very few publications in Maharashtra as well (Patil, et.al. 2001). Wath and Jambu conducted an ethnoveterinary survey from the Melghat region in the Amravati district (2010).

This tradition is under threat of extinction due to a variety of social, economic, and political factors. These ethnomedicinal plants should be scientifically screened in order to discover new sources of ethnoveterinary drugs and medicines. As a result, the current study focused on documenting prevalent indigenous knowledge in Murbad Thane district.

Materials and Methods

Selection of site

Murbad Tehsil's population is made up of tribes such

as Thakur, Mahadev Koli, Katkari/Kathodi, and ethnic groups such as Mahar, Chambhar, Kunabi, and Agri. Medicine men from the Thakur and Katkari tribes are well-versed in medicinal plants. In the past, no ethnoveterinary research was conducted in Murbad tehsil. The tehsils of Kalyan, Ulhasnagar, Ambarnath, Bhiwandi, Shahapur, and Murbad are part of the New Thane district (Collectorate of Thane District, 2014). Murbad main rivers are Murbadi, Kalu, and Barvi, which originate in Sahyadri and flow west. During the summer, most rivers and streams dry up. Murbad's climate includes the south-west monsoon (June to September), post-monsoon, cold, and summer seasons. The district receives an average annual rainfall of 2,293-4 mm. In a typical year, there are 83 rainy days.

Plant identification

Specimens were identified using standard procedures and Flora of Gujarat with supporting information for ethnomedicinal uses and recipes (Almeda, 2003, Cook, 1965, Jain & Rao, 1977), and Flora of Gujarat (Naik, 2004; Shah, 1978). The medicinal plants that has been identified for this study is extends to the 125 plant species from 63 families and 109 genera that has been classified in the following Table No.1 in the alphabetical manner.

TABLE No.1: LIST OF ETHNOVETERINARY MEDICINAL PLANTS FOUND IN MURBAD TAHSIL

Sr No.	Botanical name	Local name	Family	Plant form	Parts used
44.	<i>Achyranthes aspera</i> L.	Aaghada	Amaranthaceae	Herb	Root
45.	<i>Abelmoschus manihot</i> L. Medik	Ranbhendi	Malvaceae	Herb	Root
46.	<i>Abrus precatorius</i> L.	Gunj	Fabaceae	Twiner	Root
47.	<i>Acacia nilotica</i> L.Del.	Babul Stem	Mimosaceae	Tree	Stem
48.	<i>Acacia simuata</i> Lour.	Shikakai	Mimosaceae	Shrub	Bark,Pods
49.	<i>Acacia torta</i> Roxb.	Chilar	Mimosaceae	Shrub	Bark
50.	<i>Acorus calamus</i> L.	Vekhand	Araceae	Herb	Root
51.	<i>Adhatoda vasica</i> (L.)Nees.	Adulsa	Acanthaceae	Shrub	Leaf and stem
52.	<i>Aegle marmelos</i> (L.) Corr.	Bel	Rutaceae	Tree	Leaf and fruit
53.	<i>Acacia catechu</i> L. Willd.	Khair	Mimosaceae	Tree	Stem

Results and Discussion

In the present investigation, it revealed that the ethno-botanical required for treatment of livestock animals in Murbad tahsil region of Thane District extends to 125 plant species belonging to 63 families. The ethno-veterinary medicinal uses of such plants against the ailments in cattle, sheep, Buffaloes goats, hens such as wounds,

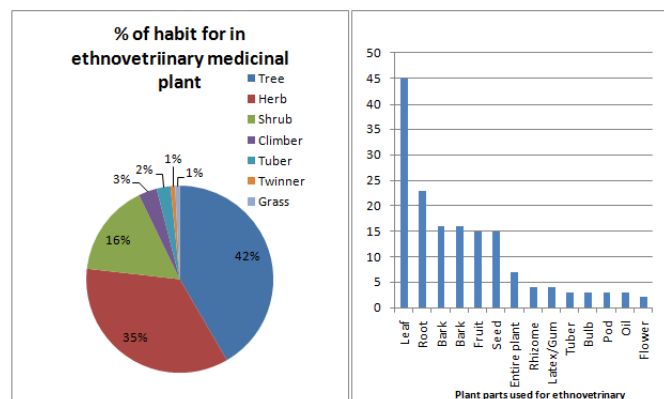
fever, boils, foot and mouth disease, diarrhoea etc. The Livestock farmer who lives close to their animals often have detailed knowledge on various disease, their causes and control measures.

The Ethnoveterinary medicinal plant found in a preliminary field surveillance are listed in Table No.1. Murbad tahsil are rich in flora and fauna having forest area extending to the 35237 ha covering 125 plant species and 109 genus found in the field surveillance of this study. The Plant species is described with botanical name, local name, habitats, families, plant part used as veterinary medicine are arranged in alphabetical manner.

With the help of the field survey seven species of family Caesalpiniaceae, six species of family Liliaceae, Euphorbiaceae, Solanaceae, Mimosaceae with five species of Apocynaceae, fabaceae. Four species of Araceae, Papilionaceae, Asteraceae, Rutaceae with three species of Moraceae, Myrataceae, Verbenaceae, Zingiberaceae, Annonaceae. Two species with Anacardiaceae, Apiaceae, Asclepidaceae, Lamiaceae, Cyperaceae, Malvaceae, Poaceae and rest one species of each family shown in the above Table No.1.

The medicinal plants that has identified for the ethnoveterinary purpose has been analysed and recorded that the 52 tree used in medicinal purpose followed by 44 herb, 20 shrub, 4 Climber, 3Tuber, 1 Twinner and 1 grass. The most part used as ethnoveterinary are leaves 45, Root 23, Stem 16, Fruit 15, Bark 16, Seed 15 Rhizome 4, latex or gum 4, bulb 3, tuber 3, oil 3 and pod 3 that has been shown in the above Table No. 1 and in the following Graph 1 and 2.

Considering the above, the Ethnoveterinary information needs to be conserved. This knowledge is very precious and confined among the people of society which needs to be documented in scientific format and should be popularized for the conservation of medicinal plants.



Conclusion

Small-scale farmers in the country would benefit

from ethnoveterinary methods as well. However, the integration of modern ethnoveterinary medicine is critical. Modern science and ethnoveterinary approaches must be integrated to produce synergies in animal health care.

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Biodiversity of Macro Marine Algal Species Along The Raigad Coast of Konkan Region, Maharashtra

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ABSTRACT:

Raigad coast line of konkan are plentiful natural resources like macro marine algae, colourful fishes, various crabs ,beautiful corals, marine mammals, seagrasses and various organisms. It shows various types of marine algae like caulerpa, ulva, chaetomorpha, sargassium, gracilaria, gelidiopsis, hypna, codium ,stoechospermum, padina, cladophora, enteromorpha, porphyra, jania rubens etc. found in large quantity. Biodiversity of macro marine algae plays an important role as a source of food, feed, fodder, fertilizer and medicines throughout the world, since ancient times .Raigad coast line shows various types of chlorophyta, phaeophyta, and rhodophyta. In this investigation total 45 species were found, out of that 13 species belonging to green algae, 14 species belonging to brown algae and 18 species belonging to red algae. The 44 algal species belonging to 34 Genera and distributed in 24 different families. Macro Marine algal species like green algae, brown algae, and red algae found abundantly at coast line of Raigad of konkan, Maharashtra.

KEY WORDS: Biodiversity, Macro Marine Algae, Raigad Coast line of Konkan, Maharashtra.

Introduction:

Marine algae, popularly known as Seaweeds, one of the most beautiful group of photosynthetic organisms which grow under the sea water. There are three major groups of seaweed which can be identified on the basis of their colour as Green algae [Chlorophyta], Brown algae [Phaeophyta], and Red algae [Rhodophyta]. Marine algae are rich source of Protein , carbohydrates, vitamins, and minerals(Black 1957). Marine algae are important living resource, these are source of food, feed, fodder and medicine etc, since ancient times.(Chapman 1981). Marine algae are photosynthetic, non-vascular aquatic plants containing chlorophyll and having simple reproductive structure. Algae are considered to be evolved early on earth based on fossil records from Precambrian periods (Chapman and Chapman, 1981) and also from Proterozoic and Cambrian periods (Vidal and Moczydlowska – Vidal 1977). These are the primary producers and major player of

the entire ocean ecosystem. Marine algae are found in the form of unicellular, colonial, filamentous, heterotrichous and parenchymatous tissue. The size of marine algae varies from microscopic cell to huge plant more than 700 feet as in the case of Laminaria and Macrocystis. (Hoyt 1970). Seaweeds are used for the consumptions compared to the vegetable because of high contain in essential amino acid and high level of unsaturated fatty acids and these are the good source of vitamin A, Vitamin B-12, Vitamin C, Vitamin D, and Vitamin E, protein and lipids.

The ocean covers about 70% of earth surface and therefore marine algae are primary producer, sustain the entire ecosystem. They work as primary producer. The minerals which are found abundance in marine algae are potash and iodine, which are commercially extracted. They are used as good source of fertilizer for the plant growth, Chapman (1970).

Along the coast line of Maharashtra, Dixit, (1940) presented a historical account of algal investigations in Bombay presidency from 1847-1940. He also reported 9 Chlorophyta, 11 Phaeophyta and 10 Rhodophyta species along the Malvan coast. Biswas and Mitra, (1943) made certain observations on marine algae from the sea shore of Mumbai. Survey of marine algae of Mumbai was carried by Deodhar (1987) and reported 60 different species of marine algae. Dhargalkar et al, (2001) studied macro marine algal diversity along the Maharashtra coast and reported 91 algal species distributed in 51 genera and 30 families.

Dhargalkar and Komar pant (2003) carried out work on 'Impact on the distribution, abundance and community of rock intertidal macro algae of colaba coast 'and reported 41 macro algal species. Oza and Zaidi (2001) studied coastal and marine biodiversity of India and reported 844 algal species and out of that 97 algal species from coast line of Maharashtra. Dhargalkar and Pereira (2005) carried out work on Importance of seaweeds. Jagtap et al, (2001) reported more than 100 marine algal species from central west coast of India by using LANDSAT data.

Along the Indian coast line about 624 algal species

have been recorded. The major species of economic importance are Gracilaria, Saragassum, Gelidium, Ulva, Caulerpa etc. Untawale .et.al, (1983). Untawale and Dhargalkar, (1975) surveyed the along the coast line of Goa. Rao et al(2006) carried out work on Indian seaweed resources and sustainable utilization: Scenario at the dawn of a new century.

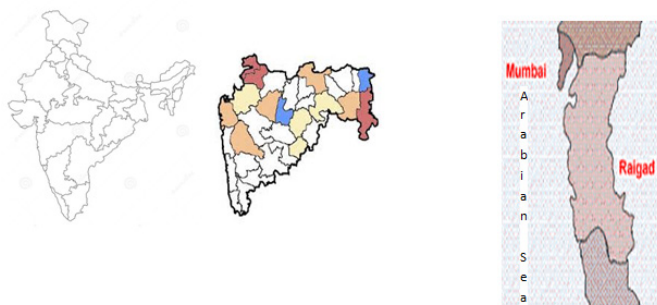
The first record of utilization of seaweeds is found in Chinese herbaria, since seaweeds are still used as source of food, feed, fodder and manure throughout the world. In India, manure from brown algae directly used as compost or as dried seaweed meal in Coconut plantations and for Orchid trees. (Black and Woodward, 1957).

The main objective of the present investigation deals with “Biodiversity of marine algae along the Raigad coast line of Konkan, Maharashtra”, with special focus on occurrence of marine algal species, species variation, and ecosystem and to know and record the biodiversity of marine algae along the Raigad coast of Konkan, Maharashtra.

Material and Methods :

For the present investigation, collection of Macro marine algae carried out with selected sites of Raigad coast of konkan, during the low tides. The collected macro marine algae were washed in sea water and fresh water thoroughly to remove the epiphytes and other contamination. Then the washed algae samples were immediately transferred into a polythene bag. Then these bags were labeled and brought to the laboratory. Collected species of macro marine algae were preserved in 4 % formalin solution for identification. Herbarium specimens were prepared for each species for identification and to confirm their taxonomic position. Identification of macro marine algal species were done by referring Taylor (1960), Deodhar(1987), and Dinabandhu sahuo (2009) and other previous publications.

Fig : Location of study area-Coast line of Raigad of konkan, Maharashtra.



RESULT:

Raigad coast which included in Konkan region

of Maharashtra shows large no. of macro marine algal species. The brief information about these algal species is as follows,

I.Class –Chlorophyta (Green algae)

1. Acetabularia calyculus (Family – Dasycladaceae)

Occurrence : This alga species grows on the shells , coral stones and other substratum in brackish water in intertidal zone.

Characters: These algae are clustered and grows up to 3 – 5 cm. uppermost part a shallow basin shaped disc present, rhizomestous base, stipe towards us upper end with deciduous hair branches, superior corona is cylindrical or irregular.

Uses: It used as animal feed.

2. Caulerpa, microphysa, (Family –Caulerpaceae)

Occurance : This alga found in low tide pools, shallow rock pools and hard substances

Characters : It is greenish in colour small, forming dense clusters on corals and rocks and grow up to 12- 15 cm. The plants have slender creeping rhizomes; thalli are bright dark in colour, bearing descending branches, filiform rhizoides at the ends, stolen shortly stipulated, simple.

Uses: It used as food and animal fodder.

3. Caulerpa recemosa (Family – Caulerpaceae)

Occurance: This algae found in shallow rock pools, on sandy floors.

Characters: It is green in colour and attached to old colonies with stolons with erect branches, cylindrical and un branched.

Uses: It is Used as food and animal feed.

4. Caulerpa sertulariodes(Family –Caulerpaceae)

Occurrence : This alga found in surface of the sea to a few meter depth.

Character : It is light green to yellow green in colour plants with prostrate branched, cylindrical rhizome, stolons creeping on substrate. These are naked with a number of upright, delicate and flexible. Cylindrical axis with lateral outgrowth. Base of pinnules slightly larger than the apex. Assimilators are flattened and feather like with lateral in two rows.

Uses: It is used as animal feed.

5. Caulerpa scealpelliformis (Family – Caulerpaceae)

Occurrence : This alga found on rocky substances in low tide pools.

Character : Thallus is dark green with extensive stoloniferous prostrate axis bearing upright frond. It is grows Up to 8 to 10 cm. in height. Upright fronds are terete near the base, bearing closely flattened.

Uses: It is used as animal feed.

6. *Caulerpa peltata* (Family – Caulerpaceae)

Occurrence : This alga found in low tide pools, shallow rock pool, on rocky shores .

Character : It is light green colour, it shows various branches, and rhizoid is below, cylindrical and colorless. Erect axis is vertical, variation in length, shows short branch lets, and terminating in a peltate assimilating disc. Plant with develop stolons which is naked, horizontal and creeping over substratum.

Uses: It is used as food and animal fodder.

7. *Chaetomorpha antennina* (Family - Cladophoraceae)

Occurrence: This alga found on rocky substances and in intertidal sublittoral zone.

Characters: It is dark green in colour, unbranched, filamentous, rigid below and flexuous above, it grow up to 4-10 cm and attached with hard rocks. Filament end are colourless. It grows at high water mark on all rocky coasts.

Uses: It is used as source of Alginate, food, and animal fodder.

8. *Cladophora glomerata* (Family-Cladophoraceae)

Occurrence : It is firmly attached to the substratum under low tide pools.

Characters : Thallus is yellowish green in colour and grows up to 2-3 m in length. The filaments are rough to touch, filaments are highly branched, and it gives a more bushy appearance. These algae grow in association with various seaweeds and sea grasses.

Uses : It used as raw materials in paper industry.

9. *Codium dwarkense* (Family - Codiaceae)

Occurrence : This alga species found in low tide level, shallow rock pool on slit covers in a intertidal zone.

Characters : These algae green in colour and it is tall up to 12-20 cm. Thallus is attached with a disc like holdfast. Its texture is soft and spongy. Thallus is dichotomously branched, vesicles are of two types slender and border.

Uses : It is used as source of alginate.

10. *Enteromorpha intestinalis* (Family – Ulvaceae)

Occurrence : This alga found in mid littoral zone in brackish water habitats.

Charaters : Plants simple or branched, light to green

in colour and up to 15 cm. longs attached by rhizoidal portion and later become freely floating. Matured specimen often in flatted at intervals giving an intestine like appearance contorted and irregularly constricted.

Uses: It is used as food in Japan, and Korea.

11. *Monostroma oxyspermum* (Family - Monostromataceae)

Occurrence: This alga grows on rocks, in lagoons and in sub littoral belts.

Characters: It is light green in colour, membranous, gelatinous in appearance. It grows up to 3-10 cm in height. Thalli initially saccate, later split into irregular membranous. Thallus arising as a sac from a prostrate discoid portion and rupturing at maturity to form monostromatic blade.

Uses: It is used as source of alginate.

12. *Ulva fasciata* (Family -Ulvaceae)

Occurrence: It is found in deep water and on the rocky substances.

Characters: It is light green in colour, plants frond is large, longer and attached to the substratum by holdfast. Thallus is divided into many small parts, lobes are flat and linear.

Uses: It is used as animal feed and in medicine.

13. *Ulva lactuca* (Family -Ulvaceae)

Occurrence: It is growing on the rocky substances, on other plants and attached to the substratum.

Characters: It is light green in colour. Plants grow on other substratum, it is very small and thallus is foliaceous, margin of thallus is folded and thallus lobe is thick.

Uses: IT is used as sea lettuce, vegetable and animal feed.

II. Class- Phaeophyta (Brown algae)

1. *Cystoseira indica* (Family –Cystoseiraceae)

Occurrence: This algal species found in the rock pools of the intertidal regions and at low tide level.

Characters : This alga is brown in colour, perennial, bushy ,and shows differentiation into holdfast. Main axis shows extensive branches. Thallus is attached to the substratum by a cup like disc; air bladder is prominent and occurs on short laterals.

Uses: It used as fertilizer.

2. *Dictyopteris woodwardia* (Family -Dictyotaceae)

Occurrence: This algal specie found in low tide level, and in shallow rock pool.

Characters : Thallus is pale brown in colour, and erect with defined holdfast. Fronds height is more than

15 cm, flat, 5-7mm broad, and linear. Surface of fronds perforated on both sides by minute pores.

Uses: It used as animal feed.

3. Dictyota bartayresiana (Family - Dictyotaceae)

Occurrence: This algal species grows in low tide level, and in a intertidal zone.

Characters : Plants are erect variable, and bushy. Thallus is branched when young later becomes bent. Margin entire; apex acute, thallus is three celled and thick.

Uses: It is used as animal feed and source of alginates.

4. Dictyota dichotoma (Family –Dictyotaceae)

Occurrence: This algal species found in low tide level, in shallow rock pools, on slit covered stones, and on hard substances.

Characters : This alga is tall, bushy ,forking at angles, with little decrease in width, lower segment is broader below each fork and internodes are long.

Uses: It used as animal feed and source of alginates.

5. Dictyota pinnatifida (Family - Dictyotaceae)

Occurrence: This alga found in a surface of the sea to a few meter depths.

Characters : It is brown in colour , grows up to 10-30 cm long dichotomously branched, branches more profuse towards upper side .fronds is narrow and twisted.

Uses: It is used as animal feed.

6. Hydroclathrus clathratus (Family – Scytosiphonaceae)

Occurrence : This alga grow well in the under surface rocks or coralline pieces, it can also grow on neighboring plants.

Characters: This alga is yellow to brown in colour, size and shape is irregular. Thallus is loosely attached by the undersurface rocks, thallus is fragile.

7. Lobophora variegata (Family – Dictyotaceae)

Occurrence : This alga found in the low intertidal, on coral debris in lagoons , and deep subtidal rocks.

Characters : This alga is orange to dark brown in colour. Prostrate thallus is attached by moniform rhizoids, they are small, thick, prostrate plants with irregularly lobed blades.

Uses: It is used as food by aquatic animals.

8. Padina tetrastratica (Family – Dictyotaceae)

Occurrence : This alga found in low water level and in rock pools.

Characters : Plant is erect, rhizome is prostrate which is attached to substratum, fronds is varying in size,

it is thin ,flat, blades split into narrow and hairs present in younger thallus and in older thallus hairs absent.

Uses : It is used as animal feed and in a antibacterial activity.

9. Spatoglossum asperum (Family – Dictyotaceae)

Occurrence : This alga found on rocks in the subtidal area of seashore exposed to strong waves of sea water.

Characters : Plant is dark brown to dirty green in colour. Thallus is 20-40 cm or more in height. The branches are strap like, dichotomously divided with large and small lobes, are elongate, linear, apex is rounded or acute.

Uses: It used as animal feed.

10. Sphacelaria frucigera (family – Sphacelariaceae)

Occurrence : This alga found in a low tide level in a intertidal zone, and estuaries .

Characters : This alga is stoloniferous, erect and branched. Segments are longitudinally divided and without secondary transverse divisions. Rhizoids are descending and stalk is tapering to the base and it is cylindrical.

Uses: It used as animal feed.

11. Stoechospermum marginatum (family – Dictyotaceae)

Occurrence : This alga grows in low water level, in intertidal lagoons, rocky pools at mid tide level and in tranquil bays.

Characters : This alga is tall, thallus is flat, erect and dichotomously branched, apex is flatly truncate, Thallus is without midrib and fertile plant shows marginal dark line of crowded sporangia.

Uses: It used as animal feed and fertilizer.

12. Saragassum cinerum (family – Saragassaceae)

Occurrence : This alga grows on rocks, in lagoons and in sub littoral belts.

Characters : This alga is short in length, smooth, stout main axis, primary branches at upper part, leaves are long membranaceous , and round at the apices, branch lets of leaves are lanceolate and vesicles are rounded

Uses: It is used as fertilizer, medicine and source of alginates.

13. Saragassum tenerrimum (family – Saragassaceae)

Occurrence : This alga grows in lagoons and rocks in sub littoral belts and on rocks dashed by waves.

Characters : Plants are light green to yellowish in colour, pyramidal in shape with basal disc from which several branches arises. Secondary branches fork repeatedly. Leaves are wide and tapering at the end, thin,

linear-lanceolate and translucent, with toothed margin, and receptacles are freely-branched structures.

Uses: It used as source of alginate and fertilizer.

14. *Saragassum wightii* (Family – Saragassaceae)

Occurrence : This alga grows on the rocky substratum, in sub tidal zone.

Characters : plants is yellowish brown in colour, it grows up to 20-30cm, leaves are 4-8cm long and 2-8mm broad with tapering at the ends. It bears large spherical vesicles. Receptacles in clusters and repeatedly branched.

Uses : It is used as animal feed.

III. Class : Rhodophyta (Red algae)

1. *Acanthophoria specifera* (Family - Rhodomelaceae)

Occurrence : It is growing on sub tidal dead corals, on the rock or hard substances.

Characters : It is purple brown in colour. Thallus is attached by holdfast which produces many rhizomatous branches. Main axis is cylindrical, with proliferous spinous outgrowths ramuli on determinate branches.

Uses: It is used as fertilizer.

2. *Ahnfeltia plicata* (Family – Ahnfeltiaceae)

Occurrence : It grows on the sandy shores and sub littoral belts.

Characters : Thallus is dark red to purple black in colour. It grows up to 10 cm, cylindrical in structure, and dichotomously branched. It shows occasional proliferations.

Uses: It is used as animal feed.

3. *Asparagopsis taxiformis* (Family- Bonnemaisoniaceae)

Occurrence : It grows in a shallow sub tidal habitats with heavy water motion.

Characters : Plant is red to bluish violet in colour, bearing with a creeping rhizomatous portion. The creeping part usually much branched, densely covered with branches.

Uses: It is used as animal feed.

4. *Amphiora anceps* (Family - Corallinaceae)

Occurrence : It grows on the rocky substratum in low tide level with other algae.

Characters : It is red to bright purple in colour, and sub-compressed below and flattened above, 6-10 cm high, dichotomously branched. Due to complete calcification of some node no articulation is visible.

Uses: It is used as animal feed.

5. *Centroceras clavatum* (Family -Ceramiaceae)

Occurrence : This alga species grows on rocks and in a low tide level mark.

Characters : Thallus is purple red in colour, it grows by an apical cell and 1-3 cm in height. The axis consists of nodes and internodes, the spines are present in each node. Rhizoids are colourless, unbranched and helps in anchorage of plants to substratum.

Uses: It is used as animal feed.

6. *Chondria armata* (Family -Rhodomelaceae)

Occurrence : This alga grows on rocks and in intertidal zone.

Characters : This alga is light red in colour. It is attached by discoid holdfast, branch lets are opposite, upper branchlets are short and curved at the base. When algae become dry, then colour changes from Red to Green.

7. *Champia compressa* (Family - Champiaceae)

Occurrence : It grow in the lower intertidal to subtidal zone of shores exposed to moderate wave actions.

Characters : This alga is red in colour , grows up to 2-4 cm, the branches are slightly compressed irregularly, branched alternately, and highly mucilaginous.

8. *Corallina berteroi* (Family- Corallinaceae)

Occurrence : It grows well on mollusk shells and other macro algae.

Characters : Thallus is variable in colour such as pink ,purple ,yellowish and red. It is 8-12 cm in height, calcareous branched, segmented fronds. Thallus contain disc shaped holdfast, branches are opposite with like appearance.

Uses: It is used as animal feed.

9. *Gelidium pusillum* (Family- Gelidiaceae)

Occurrence : It grows on sandy rocks in the subtidal zone, shells etc.

Characters : it is red in colour, plant is small 6 – 7 mm height horizontal stolons are prostrate portion irregularly branched the without midrib, attached by rhizoids, erect fronds simple or rarely branched.

Uses: It is used as source as agar.

10. *Gracillaria corticata* (Family- Gracillariaceae)

Occurrence : It grows on the rocky substratum in low tide level.

Characters : The thallus is violet red in colour it attached the firmly to rocky surface. Thallus grows up to 10 – 15 cm in length both male and female plants are morphologically different.

Uses: It is used as animal feed.

11. Gracillaria edulis (Family -Gracillariaceae)

Occurrence : It is grow on the rocky substances with other macro algae like Enteromorpha species and Ulva reticulata .

Characters : Thallus is redish brown in colour, cylindrical, 20-25 cm in height and branching pattern is 3- 4 order, subdichotomus in nature they attached to coral stone or substratum with discoid holdfast.

Uses: It is used as animal feed.

12. Gracilaria verrucosa (Family - Gracilariaceae)

Occurrence : This algal species grows on rocks, shells, sandy shores in brackish water.

Characters : Plant is dull purple to grayish in colour. Plant is bushy, mature thalli of attached type plants and grows up to 50-60 cm, branching is profuse and sub-dichotomous.

Uses: It is used as salad, cooked with vegetables, and animal feed.

13. Grateloupia filicina (Family- Halymeniaceae)

Occurrence: It is grow on the rocky substances in intertidal zone.

Characters : These algae is deep redish brown in colour. Thallus is highly branched with several upright branches, arising from common discoid holdfast it is a rounded at the basal region, branches are long linear and short in height.

14. Hypnea musciformis (Family- Hypneaceae)

Occurrence : This algal species grows on rocks , stones, shells in intertidal zone.

Characters : plants are purple red in colour with 12-25 cm height. Thallus exists in clumps, cartilaginous and highly branched. Branches are cylindrical, irregular, twisted, and flattened with broad hooks. Holdfast is small, and inconspicuous.

Uses: It is used as animal feed.

15. Hypnea valentiae (Family –Hypneaceae)

Occurrence : This algal species grows on rocky surface, shells, in intertidal zone.

Characters : Plant is purple red in colour, bushy, large and grow up to 15 cm in height, branching irregularly and cylindrical, long, slender, possesses short rumuli which curved towards axis.

Uses: It is commonly used in salad.

16. Jania rubens (Family –Corallinaceae)

Occurrence : This algal species grows on rocks, on sandy shores, and in brackish water.

Characters : Plant is light green to pale yellow in colour. Plant is small, erect, 2-5 cm high, forming closely bunched on the substratum, all branches with an erect posture, and tapering or acute at the apices.

Uses: It is used as medicine.

17. Porphyra sp. (Family –Bangiaceae)

Occurrence : This algal species grows on rocky coast.

Characters : It is green to yellowish or grayish in colour. Plant is very thin, cylindrical, and slightly rough, its life period is short. (3 months).

Uses: It is used as animal feed.

18. Sarconema filiforme (Family-Solieriaceae)

Occurrence : This algal species found in low water level and in rock pools.

Characters : This algae is greenish yellow to purple in colour. Thallus is thin and filamentous, dichotomously forked, grows up to 15-20 cm in height.

Discussion:

The present investigation deals with the biodiversity of marine algae along the coast line of Raigad District of konkan, Maharashtra. The macro marine algal species were collected at coast line of Raigad, during low tides except rainy season. The macro marine algal biodiversity of Indian coast line were studied by different peoples at different sites mainly, Dixit (1940), Biswas and Mitra (1943), Deodhar (1989) ,Dhargalkar (2001), Untawale (1979), Sahoo (2001) etc. Sahoo et al (2001), reported 770 algal species of seaweeds from the coast line of India. Oza and Zaidi (2001) reported 844 algal species from sea coast of India and out of that 197 species from Maharashtra .Dhargalkar et al (2001), reported 91 species of macro marine algae from the coast of konkan. According to their studies, the information about biodiversity of marine algae, their occurrence and knowledge about algal variations of Indian coast line can be known to us.

In present study, 44 marine algal species were found ,out of these 44 algal species , 12 species are belonging to Green algae (class –Chlorophyta), 14 algal species belonging to Brown algae (class- Phaeophyta), and 18 algal species belonging to Red algae (class – Rhodophyta). These 44 algal species belonging to 33 Genera and distributed in a 24 different families.

During this study it is observed that the coast line of Raigad of konkan is rich in macro marine algal species, their abundance, and algal variations. The availability of algal species was increased after September to December and decreased from January to March and again increased from April. It is also observed that, along the Raigad coast

line Red algae species found in large quantity, while the quantity of Green algae and brown algae species found less in quantity as compared with Red algae.

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Volumetric Study of D-arabinose in Aqueous Solutions of Sodium Saccharin At $T = 303.15$ K

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Abstract:

Using a volumetric approach, densities of D(-)-arabinose, in H_2O and in aqueous Na saccharin with molality, $m = (0.05, 0.15, \text{ and } 0.3) \text{ mol.kg}^{-1}$ were investigated at $T = 303.15$ K. The apparent molar volumes (V_ϕ), partial molar volumes (v_ϕ^0), and Masson's coefficient (S_v) were determined with help of density (ρ) values. The data was further analysed in terms of transfer characteristics ($\Delta_{tr,s}V_\phi^0$), apparent specific volumes (ASV), and volumetric interaction coefficients (V_{AB}, V_{ABB}) using McMillan–Mayer theory). Studied arabinose was found to have a sweet taste in mixed aqueous Na saccharin.

Keywords: Apparent specific volume, Density, Partial molar volume, Na saccharin.

1. Introduction

Recent work has examined the nature and degree of intermolecular interaction in aqueous solutions of combinations using thermophysical characteristics. Depending on the number of saccharide units present, sugars are divided into four different types. Simple sugars like glucose, fructose, galactose, mannose, ribose, xylose, arabinose, etc are called monosaccharides. Carbohydrates are the most prominent source of energy consumed by humans [1]. It also performs an important role in the regulation of living creatures throughout biologically based cycles [2,3]. Many researchers have demonstrated their biological significance on the properties of aqueous saccharide solutions. The hydration abilities of saccharides are due to their hydrophilic hydroxyl group (-OH) [4,5]. Sugar is important in confections and medicine because it not only adds sweetness but also improves the texture of foods, improves taste, exerts stability, and thus protects vitamins during processing and storage. Saccharides in H_2O electrolyte arrangements play an important role in a number of scientific fields [6-9], including biology, pharmaceutical preparations, catalysis, climate, and food preparation. Recent data from the literature suggests that saccharide-metal ion blends have been extensively studied, and the results are interpreted in the form of solute-solute and solute-solvent interactions.[10-14]

Today, a range of new sweeteners are available as an alternative to natural sugars. Natural sweeteners are high in calories, and some are found in fruits and milk naturally, whereas others are used during the preparation or processing of products. Various sweeteners have been used to sweeten our daily food for decades. Many artificial sweeteners [15-20], are available, out of which only some are approved as food additives with wide commercial use in the food and pharmaceutical industry by the "Food and Drug Administration" (FDA), and in India by FSSAI (Indian regulatory authority). The food industry uses common artificial sweeteners like Aspartame, Acesulfame K, Sodium Saccharin, and Sucralose. Saccharin is listed as one of the five FDA-approved artificial sweeteners and is also an approved food additive in most countries in the world. Blending sweeteners [21-23] with sugars is to reduce the amount used, reduce the cost, and improve the taste. Molecular interactions between sugar and receptor forms via H_2O molecules that surround them. The conduct of metal ions with saccharides in aqueous solutions is useful to comprehend solute-solvent (sugar- H_2O), and solute-cosolute (sugar-saccharin) interactions along with taste.

The D-arabinose (0.04-0.20) m (mol.kg^{-1}) densities were evaluated at $T = 303.15$ K in H_2O and in aqueous Na saccharin with molality, 0.05, 0.15, and 0.3 m. The interactions between saccharide-saccharin Na in an aqueous media were discovered using partial molar volume, transfer characteristic, interaction coefficient, and apparent specific volume.

2. Materials and Methods

2.1. Chemicals

D(-)-arabinose, and Na saccharin were purchased from Sigma with a maximum purity of 99.0% and used exactly as received.

Aqueous solutions of solute and cosolute were prepared using triply distilled freshly prepared water and a stoppered airtight glass bottle. Similarly, measurements were done on a weight-by-weight (w/w) scale with the use of an analytical Dhona balance (uncertainty in accuracy \pm

0.0001 g). H₂O is used as a solvent and saccharide is used as a solute in both binary and ternary solutions, with sodium saccharin, m = (0.05, 0.15, and 0.3) mol.kg⁻¹ acting as a stock solution for subsequent usage.

2.2. Methods

The densities (ρ) of D(-)-arabinose in H₂O and in aqueous Na saccharin were measured experimentally using a bi-capillary Pycnometer [24-29] at T = 303.15 K. To submerge the pycnometer in a vertical position, a glass-walled water bath with a constant temperature of ± 0.01 K was utilized. At the studied temperature, the Pycnometer was calibrated by using organic solvents like ethyl acetate, carbon tetrachloride, and acetophenone. When the findings were compared to the reported values, it was revealed that they were in good agreement. Solvent density at the studied temperature was taken from published data [30,31]. The density of studied system was investigated using the same method.

3. Results and Discussion

3.1. Apparent molar volume

At T = 303.15 K, the thermophysical characteristics and parameters of saccharides in aqueous sodium saccharin are studied. The apparent molar volumes of the studied saccharide in solvent and in sodium saccharin were calculated using the equation (1). [5,32]

$$V_{\phi} = M/\rho - (\rho - \rho_o)/(m\rho\rho_o)$$

In this equation, apparent molar volume is represented by (V_φ). Similarly, the density of a solution is denoted by ρ and its molality is denoted by m. The molar mass of a solute is also indicated by M.

The densities (ρ), and apparent molar volumes (V_φ) of D(-)-arabinose in H₂O and in aqueous sodium saccharin, m = (0.05, 0.15, and 0.3) mol.kg⁻¹ at T = 303.15 K are shown in Table 1 and 2, respectively. The results show that, observed densities and apparent molar volumes depend on concentration and vary linearly with solute and cosolute concentrations.

Using the least-square fit approach and Masson's equation [33,34], the (V_φ⁰), values of binary and ternary mixture are correlated with molality as shown below:

$$V_{\phi} = V_{\phi}^0 + S_v \cdot m$$

The equation (2) is in the form y = mx + c, with intercept, (V_φ⁰) (partial molar volume), and slope, S_v(Masson's coefficient).

The results of (V_φ⁰) are summarized in Table 3, while variations of (V_φ) of D-arabinose in H₂O, and in aqueous sodium saccharin with molalities, m = (0.05, 0.15, and 0.3) mol.kg⁻¹ are represented in Fig. 1. The positive (V_φ⁰) values offer significant solute-solvent interactions for molality, m = (0.05, 0.15 and 0.3) of saccharide-Na saccharin system [35,36]. Additionally, the Masson's coefficients (S_v)

are positive but smaller than the values of (V_φ⁰). It shows that solute-solute interactions are much lower than those between solute and solvent.

Table 1. Densities (/kg•m⁻³), and apparent molar volume ((V_φ) m³ - mol⁻¹) of D(-)-arabinose in H₂O at T = 303.15 K.

m (mol.kg ⁻¹)	ρ	V _φ ·10 ⁶
0.0000	995.648	
0.0432	998.08	93.87
0.0814	1000.20	93.95
0.1213	1002.39	94.08
0.1612	1004.56	94.19
0.2107	1007.21	94.34

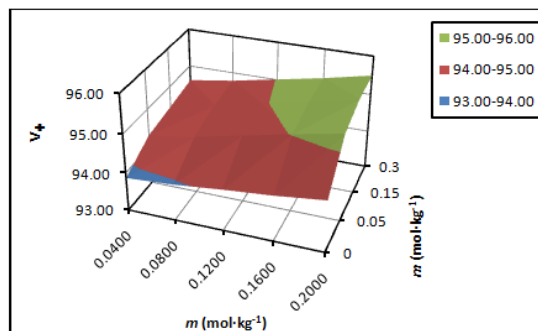
Table 2. Densities (/kg•m⁻³), and apparent molar volumes ((V_φ) /m³•mol⁻¹) of monosaccharide, D(-)-arabinose in aqueous saccharin sodium at T = 303.15 K for m = (0.05, 0.15, and 0.3) mol•kg⁻¹.

m (mol.kg ⁻¹)	ρ	V _φ ·10 ⁶	m (mol.kg ⁻¹)	ρ	V _φ ·10 ⁶	m (mol.kg ⁻¹)	ρ	V _φ ·10 ⁶
	0.05			0.15			0.3	
0.0000	1000.23		0.0000	1006.11		0.0000	1019.73	
0.0407	1002.48	94.31	0.0395	1008.27	94.45	0.0412	1021.97	94.60
0.0807	1004.67	94.49	0.0776	1010.34	94.69	0.0800	1024.05	94.78
0.1201	1006.78	94.76	0.1161	1012.40	94.96	0.1199	1026.16	95.01
0.1595	1008.87	95.02	0.1565	1014.52	95.19	0.1627	1028.38	95.24
0.1996	1010.96	95.26	0.1994	1016.73	95.48	0.2098	1030.78	95.50

Table 3. (V_φ⁰), (S_v), ASV, and (Δ_{trs}(V_φ⁰)) of D(-)-arabinose in H₂O, and in aqueous Na saccharin at T = 303.15 K for m = (0.05, 0.15, and 0.3) mol•kg⁻¹.

System	Parameters			
	V _φ ⁰ ·10 ⁶ (m ³ •mol ⁻¹)	S _v ·10 ⁶ (m ³ .kg.mol ⁻²)	ASV·10 ⁶ (m ³ .kg ⁻¹)	(Δ _{trs} V _φ ⁰)·10 ⁶ (m ³ •mol ⁻¹)
D(-)-arabinose + H ₂ O	93.736	2.85	0.624	
D(-)-arabinose + 0.05 m Na saccharin	94.028	6.15	0.6263	0.2926
D(-)-arabinose + 0.15 m Na saccharin	94.199	6.41	0.6274	0.4629
D(-)-arabinose + 0.3 m Na saccharin	94.361	5.41	0.6285	0.6255

Fig. 1. Variation of (V_φ) of D(-)-arabinose in H₂O and in Na saccharin with molality, m = (0.05, 0.15, 0.3) mol•kg⁻¹ at 303.15 K.



3.3. Transfer volume

Using the following relation, the transfer volume of ($\Delta_{\text{trs}} (v_{\phi}^0)$) saccharides from H₂O to aqueous Na saccharin was obtained for the investigated systems at infinite dilution.

$$\Delta_{\text{trs}} (v_{\phi}^0) = (v_{\phi}^0) \text{ (in sodium saccharin)} - (v_{\phi}^0) \text{ (in H}_2\text{O)}$$

Table 3 shows the D-arabinose (v_{ϕ}^0) values that can be used to determine transfer volumes ($\Delta_{\text{trs}} (v_{\phi}^0)$) from H₂O to aqueous sodium saccharin with molality *m*. The transfer volume is positive at infinite dilution, often used to examine solute-cosolute interactions in aqueous medium and increases with concentration of cosolute. In the present study, two possible types of interaction occurring between arabinose, and aqueous Na saccharin in ternary system could be categorized as follows:

I) Hydrophilic-ionic interactions- Between arabinose hydrophilic groups (-C=O, -OH and -O-), and the Na⁺ ion of saccharin sodium salt.

II) Hydrophobic-ionic interactions- Between arabinose and cosolute ion.

According to the "co-sphere overlap model" [37], type (I) interactions positively contribute to the $\Delta_{\text{trs}} (v_{\phi}^0)$ whereas type (II) interactions negatively contribute to the $\Delta_{\text{trs}} (v_{\phi}^0)$. Kumar et al. [38] reported similar results.

3.4. Volumetric Interaction Coefficients

Kozak et al. established the "McMillan-Mayer theory" [39,40] of solutions in order to study volumetric interaction coefficients. On the basis of this, Krishnan et al. [41] explored the interactions of solutes and cosolutes in solvation spheres. Numerous researchers have investigated interactions in aqueous solutions using the theory. [42–44]

The transfer volume is also related as:

$$\Delta_{\text{trs}} (v_{\phi}^0) = 2V_{\text{AB}} m_{\text{B}} + 3V_{\text{ABB}} m_{\text{B}}^2 + \dots$$

A represent D-arabinose (solutes) where as B represent saccharin Na (co-solute). These parameters were determined by analyzing experimental data and using the least-squares approach to equation 7. The calculated value of V_{AB} for D-arabinose is (2.352)·10⁻⁶ (m³·mol⁻²·kg), whereas those for V_{ABB} is -2.9436)·10⁻⁶ (m³·mol³·kg²), respectively, at T = 303.15 K. Positive values are contributed by the doublet interaction parameter (V_{AB}), whereas negative values are contributed by the triplet interaction parameter (V_{ABB}). Positive V_{AB} value show that, monosaccharide, and saccharin sodium have strong interactions. Negative value of V_{ABB} on the other hand; indicate the absence of D-arabinose-saccharin-saccharin interactions. Jiang and coworkers [45] noted the similar observation for ternary systems at 298.15 K.

The "Group Additivity Model" of Savage and Wood [46] examines the four forms of pair interactions between

electrolyte (sodium saccharin), and non-electrolyte (D-arabinose). The type I interaction of Na⁺ – R (-R is an alkyl group) makes a small negative contribution to V_{AB} and Type II interaction of Anion – R contributes negatively to V_{AB} also Type III interaction between Na⁺ – O is more dominant and contributes positively to V_{AB} (-O, hydrophilic groups in non-electrolyte) whereas type IV interaction of anion - O, contributes negatively to V_{AB} but smaller than type I (hydrophobic groups).

In aqueous medium, the complete dissociation of ions of electrolyte, saccharin sodium takes place. Interactions of Na⁺ with hydrophilic groups of saccharides (-OH, C=O, and -O-), the pair interaction coefficient is positive. Both theories proposed that interactions between solutes and cosolute (saccharin sodium) are taking place.

3.5. Apparent Specific Volume

Apparent Specific Volume (ASV) is helpful for getting data with respect to the taste conduct of sugars in blended aqueous sodium saccharin solutions. The aqueous solutions are classified as salt, sweet, bitter, and sour with respect to taste by Shamil and Birch [47]. The ASV range suggested by Parke et al. [48], for sweet molecules is from (0.51 to 0.71)·10⁻⁶ m³·kg⁻¹ with an ideal value (0.618)·10⁻⁶ m³·kg⁻¹ at the centre. The equation (8) is used to calculate the ASV of solutes in solvent and cosolute.

$$\text{ASV} = (v_{\phi}^0) / M$$

8

The solute's molar mass is denoted by *M*, and its partial molar volume is denoted by (v_{ϕ}^0). Table 3 shows the ASV values of monosaccharide in H₂O, and saccharin Na at T = 303.15 K for *m* = (0.05, 0.15, and 0.3) mol·kg⁻¹. The ASV value for arabinose at experimental temperature ranges from (0. 0.624 to 0.628)·10⁻⁶ m³·kg⁻¹. Saccharide investigated in this study when incorporated in saccharin Na solution, kept their sweetness.

4. Conclusions

The study includes volumetric data of D(-)-arabinose in H₂O, and aqueous saccharin Na at T = 303.15 K. The investigational data were utilized to compute various thermodynamic parameters. The corresponding transfer volume of arabinose transferred from H₂O to aqueous saccharin Na is positive, and its magnitude rises as concentration increases. Positive values of V_{AB} indicate, the strong interactions between the D-arabinose and the Na saccharin. The ASV (0.624-0.628)·10⁻⁶·m³·kg⁻¹ range suggested sweet taste for D-arabinose in blended aqueous Na saccharin.

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Medicinal Plant and Ethnoveterinary Practices in Palghar Tehsil of Maharashtra

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Abstract

The main aim of the research was to highlight indigenous practice to traditional ethnoveterinary medicine and medicinal plant used by tribal people. The Palghar district has a rich tribal culture. These primitive traits have learned to live in the most hostile environmental conditions in localities that are immensely rich in biodiversity. The tribes have played a vital role in the conservation of environmental management and development process as they possess traditional knowledge which has been useful in veterinary medicine. Many indigenous medicinal plant parts recipes are used to cure boil, wound, mouth ulcer, itching, bone fracture, diarrhea, fever, etc. After such a survey, we found 43 plant species belonging to 31 families. The plant species used by the people are arranged alphabetically followed by their botanical names, as well as local information such as name, family and the part used, and its method of preparation. This work is the opportunity to scrutinize the plant for the discovery of new medicinal sources for veterinary.

Keywords-healthcare, ethnoveterinary, disease, ethnobotany, healers.

Introduction

Ethnoveterinary medicine has a long history dating back to the dawn of man on the planet. From the beginning, the human and animal interactions were quite close. Animals were employed by men for a variety of functions, including food, hunting, and transportation. As a result, he began domesticating animals to meet his diverse demands. Plants have been an important source of both preventive and curative traditional medicine preparations for humans and cattle since prehistoric times. Different plants were employed as early as 5000 B.C. to 4000 B.C. in China and 1600 B.C. by Syrians, Babylonians, Hebrews and Egyptians, according to historical reports of historically used medicine (Dery et al. 1999). The veterinary papyrus of Kahun, for example, records Egyptian healers' veterinary therapeutic procedures in 1900 B.C. During the reign

of King Hammurabi of Babylon, veterinarians were providing services as early as 1800 B.C.

Using age-old home medicines, surgical and manipulative procedures, and religious practice, people, have built their system for keeping animals healthy and productive over generations (Bharti, and Sharma, 2010). Ethnoveterinary medicine is a less expensive and long-lasting alternative to synthetic treatments (Chitralkha and Jain, 2006). The use of ethnoveterinary medicine varies not just from one region to the next, but also within communities (Dar et al., 2011). Ethnoveterinary medicinal practice and abilities have evolved, primarily by trial and error, with some experimentation and creativity thrown in for good measure (Deo et al., 2013).

Animal diseases have a devastating impact especially on poor people, despite their reliance on livestock, have limited access to contemporary veterinary treatments. Furthermore, the majority of livestock raisers in the Palghar area and adjacent regions are physically away from veterinary station locations and those who are closer may not be able to afford the costs of services.

Ethno-veterinary practices are specially used for ruminants such as cattle and other large animals. Livestock owners from Cameroon have an amazing good knowledge of ethnobotany; most medicines are prepared from plant parts. They have a good understanding of the plant parts, quantities required and the methods of harvesting, processing, storing, preserving and utilizing medicinal plants to ensure good drug efficacy, also to enhance the survival of plant germplasm (Toyang et al., 1995).

Herbal riches are abundant in the study region. For their economic needs, most of them engage in agriculture. To meet their needs, the majority of the inhabitants rely heavily on plant resources growing in their surroundings, including ethno-herbal medicine for sick animals. Local healers and experienced persons were interviewed for ethnoveterinary information. According to Jain, 1999, data collection and fieldwork were carried out.

Ethnoveterinary practices have been observed in Maharashtra's Buldhana district (Patil and al., 2010;

Marathe et al., 2010), Chandrapur, Nagpur and Gadchiroli districts (Kulkarni et al., 2014) and Akola district (Wath and Jambu, 2018).

Researchers have placed a greater emphasis on traditional ethnoveterinary knowledge from diverse states in recent years. In the Gonda region of Uttar Pradesh (Pandey et al., 2000) discovered 27 ethnoveterinary herbs. (Reddy and Raju, 2000) identified 35 plants for ethnoveterinary application in the Anantpur district. (A.P. Chitralkha and Jain, 2006) described ethnoveterinary practices in the tribal zone of Jhabua District and (M.P. Ravikumar et al., 2004) validated ethnoveterinary plant resources from Dindigul District, Tamil Nadu. Ramdas and his colleagues formed the group, a non-profit that has made important contributions to ethnoveterinary surveys in Andhra Pradesh and Maharashtra. (Ramdas and Yaksi, 2001).

Mahadeokoli tribe ethnoveterinary medical procedures were improved by Kulkarni and Kumbhojkar (2002), who used 128 plant resources for diverse ailments. Plants used to heal animals were reported by Deshmukh et al., (2011) from the Jalna area, whereas EVM research was reported by Ramalah and Patil (2005) from the Nandurbar district. The ethnoveterinary plant use in the Bhor region of the Pune district was researched (Kamble and Kulkarni, 2013) Bhor has been utilized to gain a better understanding of the utilization of deworming medicinal plants in livestock (Deo et al., 2013). Some herbs have been shown to aid in wound healing and the treatment of maggoty wounds (Kamble et al., 2014)

Material and Methods

Selection of the site

Palghar Tehsil (Palghar Taluka) from Thane District has a total population of 550,166 people according to the 2011 census. Families lived in Palghar Taluka. The average gender ratio of Palghar Taluka is 907. According to the 2011 census, 41% of the population live in urban areas while 59% live in rural areas. The total area of Palghar is 1,042 km², including 923.32 km² of rural area and 118.53 km² of an urban area. There are approximately 212 villages in the Palghar block.

Plant identification

Specimens were identified using standard procedures and Flora of Gujarat with supporting information for ethnomedical uses and recipes (Almeda, 2003, Cook, 1965, Jain & Rao, 1977), and Flora of Gujarat (Naik, 2004; Shah, 1978).

Survey

In 2021, Several survey visits were made to several

villages in Palghar Tehsil. The information was acquired from knowledgeable, experienced and elderly rural locals. To collect ethnoveterinary data, researchers interviewed farmers, village elders, and traditional healers. They were asked to complete Marathi survey questions.

Results and Discussion

In the present study, 43 plant species from 42 genera and 31 families were used to address diverse veterinary concerns. Herbal remedies and tribes in the area have a lot of traditional knowledge on how to treat problems in their domestic animals using natural resources, notably biological materials available in their surroundings. According to the efficacy of the treatment, techniques appear to be satisfactory, the plant species are traditionally used as a vermicide, lactation enhancer, fertility inducer, repellent for body-lice and other insects and sore of the tongue, skin diseases, dysentery, drowsiness and white stool, worms, asthma, swelling of the neck, flatulence of the stomach, body sore, ophthalmia, pneumonia, wounds, heatstroke, fever, hypers, etc., The majority of the plants used to treat their animals are also used to treat humans, making these therapeutic herbal remedies well-known.

Cows, goats, buffaloes, pigs, cats, dogs, and poultry are the most common domesticated animals in Palghar villages. In the same way that humans suffer from various diseases, these animals do as well, and they are treated by local healers using largely plant ingredients.

The Ethnoveterinary medicinal plant species that have been identified are listed in Table 1. Botanical names, as well as local information such as name, family and the part used, are included in a record of usage, as well as an ethnoveterinary use in the area.

They use extracts, pastes, and other methods to treat various plant components such as a leaf, stem, rhizome, root, bark, fruit, flower and so on. They rarely utilize jaggery, black salt, or table salt to make or give remedies. The rate of efficiency in curing diseases with few or no side effects is crucial to the overall success of any treatment. Their animals appear to be in good health, which is a testimonial to the efficiency of their veterinarian formulations.

This work shows their faith and understanding of the tribal people about the traditional ethnoveterinary uses of plants and their knowledge of ailments. The proper plant part and its method of preparation of medicine to cure different ailments with the appropriate amount of doses. The tribal people find their traditional ethnoveterinary therapy to cure ailments.

Medicinal resources were obtained in the wild and used to cure veterinary ailments, according to the current research. Workers' studies in other parts of India, such

as those by Saikia and Borthakur (2010) in Assam and Galav et al. (2010) in Rajasthan, support the current study findings.

The findings of this study also suggest that the usage of traditionally available medicinal plants is more widespread among the upper age groups of both genders as compared to the younger generation. According to more research, rural people, particularly the elderly, have a broad understanding of veterinary therapeutic plants (Satapathy, 2012, Bharti and Sharma, 2010, Naik, 2012, Rajakumar, 2012). Kiruba et. al. (2006) from Cape Comorin, Dar and Verma (2011) from Bundelkhand's Jhansi district, Selvaraju et al. (2011) from Malayali tribes in Tamil Nadu's Salem district, Muley et al. (2012) from Maharashtra's Ahmednagar district, and Pragada and Rao (2012) from Andhra Pradesh's tribal regions conducted ground-breaking research. The results of recent research investigations corroborated the prior study's conclusions.

Table No.1. List of medicinal plants used in ethnoveterinary

S r No.	Botanical name	Local name	Family	Parts used
1.	Abrus precatorious L.	Gunj	Fabaceae	s t o m a c h problems
2.	Amaranthus spinosus L.	Kantebhaji	Amaranthaceae	Leafy shoots are fed to cows and buffaloes to enhance lactation
3.	Abelmoschus manihot L. Medik	Ranbhendi	Malvaceae	Fruit is used in curing blood dysentery.
4.	Adhatoda vasica (L.)Nees.	Adulsa	Acanthaceae	Decoction of leaves and stem is given to treat fever.
5.	Acacia catechu L. Willd.	Khair	Mimosaceae	The bark is used in the crack of the nipple of cows and buffalo. Bark extract along with heartwood is used to treat broken horns of domestic animals.
6.	Ageratum conyzoides L.	Bhutakuli	Asteraceae	Leaf
7.	Albizia lebbeck (L.)Benth.	Shirish	Mimosaceae	Stem and bark
8.	Allium sativum L.	Lasun	Liliaceae	The bulb used in colic pain

9.	Andrographis paniculata Nees.	kalamegha	Acanthaceae	Decoction of the whole plant is useful to treat fever and cough in animals.
10.	Annona squamosa L.	Sitaphal	Annonaceae	Leaf paste is rubbed on the body of cattle for removing lice.
11.	Argemone mexicana L.	Pivla dhotra	Papaveraceae	The whole plant crushed and soaked in water is applied on boils and other body parts of cattle
12.	Azadirachta indica (A.) Juss.	Neem	Meliaceae	The body of cattle is washed with leaf decoction once a day for 3 days in skin diseases.
13.	Bauhinia variegata L.	Kanchan	Caesalpinaceae	Bark powder is applied topically on wounds
14.	Bombax ceiba L.	Savar	Bombacaceae	Stem, bark used in Joint pain, back pain and anorexia
15.	Bryophyllum pinnatum (Lam.) Kurz	Panfuti	Crassulaceae	Paste of leaves is given in Urinary and s t o m a c h Problems
16.	Caesalpinia bonduc (L.) Roxb.	Sagargoti	Caesalpinaceae	Seeds used in intestinal worms.
17.	Calotropis procera (Willd.) R.Br.	Rui	Asclepiadaceae	The paste of flowers with double amount of jaggery is very useful for easier delivery
18.	Capparis zeylanica L.	Waghati	Capparaceae	Leaves are used in bone fracture
19.	Cassia fistula (L.)	Bahawa	Caesalpinaceae	Legume paste is used to treat digestive problems in cats and goats.
20.	Cissus quadrangularis L.	Kandwel	Vitaceae	Pieces of the stem are used to treat bone fractures and m u s c l a r pains in goats, buffalos, and cows.

21.	Cocos nucifera L.	Naral	Araceae	tender coconut water given twice a day will cure Diarrhoea and dysentery
22.	Coriandrum sativum L.	Dhania	Apiaceae	Whole Plant used in foot and mouth diseases. Seed used in treat Diarrhoea and Dysentery
23.	Curcuma longa L.	Haldi	Zingiberaceae	10 gm rhizome is pounded and mixed with 1 tablespoon of lime and applied on the body of fowls to cure body sore
24.	Cyamopsis tetragonoloba L.	Gawar	Fabaceae	Seed is used in lactating milk
25.	Cynodon dactylon (L.)	Durva	Cyperaceae	The whole plant was given to cow buffalo for lactating milk
26.	Dioscorea bulbifera L.	kadukarand	Dioscoreaceae	Bulbils, Tuber used in Wound and internal Injury
27.	Euphorbia hirta L.	Dudhi	Euphorbiaceae	Leaves are fed to milking cows for improving lactation.
28.	Ficus benghalensis L.	Wad	Moraceae	The latex used in Bone Fracture
29.	Ficus religiosa L.	Pipal	Moraceae	Bark and leaves Juice is given for urinogenital problems
30.	Gossypium herbaceum L.	Kapus	Malvaceae	Fruit, roots, and seeds.
31.	Jatropha curcas L.	Chandrajyoti	Euphorbiaceae	Extract of stem bark is applied to the body of cows and buffaloes to cure skin sores.
32.	Mentha spicata L.	Pudina	Lamiaceae	Leaves are used to treat Diarrhoea and Dysentery.

33.	Momordica dioica Roxb. ex Willd.	Kartule	Cucurbitaceae	Fruit and black pepper are crushed and mix with egg white and scrub this paste are applied to mouth ulcer.
34.	Mucuna pruriens L.DC.	Khajkuri	Papilionaceae	Wound itching The seed paste is a tie on the wound.
35.	Musa paradisiaca L.	Keli	Musaceae	Fruit are fed with fodder to increase lactation period.
36.	Ocimum sanctum L.	Tulas	Lamiaceae	Leaf paste is applied to the wound.
37.	Phyllanthus amarus L.	Bhuiawali	Euphorbiaceae	The whole plant is fed with fodder to cure dysentery.
38.	Plumeria rubra L.	Sonchapha	Apocynaceae	Boiled pods are good for lactation in cows and buffalos, seeds are used on snakebites.
39.	Semecarpus anacardium L	Bibba	Anacardiaceae	Seed powder with water is useful to cure foot and mouth infection diseases in animals.
40.	Tagetes erecta L.	Zendu	Asteraceae	The leaf juice is a tied on wound or the leaf can be applied with bandage
41.	Terminalia bellirica (Gaert) Roxb.	Beheda	Combretaceae	Bark decoction with Nilgiri oil given orally to goats to cure blood dysentery
42.	Tinospora cordifolia Willd.	Gulvel	Menispermaceae	The decoction of the whole plant is given orally in fever
43.	Tridax procumbens L.	Eddandi	Asteraceae	Leaves extract is applied topically on wounds

Conclusion

Rural residents have a large number of domestic animals. These animals are also kept in good health sincere appreciation to their traditional plant-based remedies. This demonstrates the efficacy of herbal treatments of this type.

A variety of well-known medicinal plants are included in the list of plants that have been recorded. However, recent studies on the other plants recorded could lead to the development of more effective and safer treatments.

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Economic Thoughts of Dr. B. R. Ambedkar for Indian Economy - A Need Forever

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Introduction:-

India is known as a great country, just because of its cultural, religious, Economical and social heritage. When we talk about political, social and Economical point of view, we strongly remember a legend personality is Dr. Babasaheb Ambedkar who is not only a father of Indian Constitution but also a world's best Economist contributed on various research aspect in economics such as Agricultural Land Reforms, problems of Rupees & its origin, Labour Management, Economics of Cast system, Socialism, Strategies of Economic development, taxation policies, Industrialisation, and Many more about Indian Economy.

Dr. Ambedkar's Economic Thoughts are ready useful to solve many economic issues nowadays. Therefore today also immortally his Economic Thoughts are really pioneer and Economic solution for further economic issues in future.

Here in this Research paper. The researcher focuses on a contribution of Economic Thoughts of Dr. B. R. Ambedkar for today and tomorrow.

Key Notes- Land Reforms, Economic Cast System, Labour, Constitution, Socialism, State Management.

Objectives:-

- 1) To understand an Importance of Economics Thoughts of Dr. B. R. Ambedkar.
- 2) To verify Economic Thoughts of B.R. Ambedkar comparatively present with future.
- 3) To find out Ambedkar's Economic, Socialism link in present & future period.
- 4) To know the Economic Development Ideas of Dr. B. R. Ambedkar.

Assumption:-

- 1) Dr. B. R. Ambedkar's Economic Thoughts Contribute More in Indian economy than its past.
- 2) Ambedkar's Economic Thought can overcome all the economic problems and issues in present as well as future period.
- 3) Economics Thoughts of Dr. B. R. Ambedkar

plays an important role in free Enterprise and Socialism.

Economics Thoughts of Dr. B. R. Ambedkar at present and in future:-

Contribution of Economic Thoughts of Dr. Bhimraoji Ambedkar is noteworthy. His views in Economics deals with current and future issues of Indian Economy especially Ambedkar thoughts on public finance and agriculture has a vital relevance to the current situation of India. In order to enhance a productivity of agriculture, industry and service sector in present and future. It is very important for all of us to adopt his Economic Thought in good manner.

Ambedkar's Thoughts on Agriculture and Land Reforms:-

"Dr. Ambedkar has great contribute on in Agriculture and Land Reforms in India according to him holdings of land by few people is a major problem of Indian agriculture having various disadvantages and difficulties in cultivations. As he says, "Productivity of agriculture is related not only to with the size of holdings of land but also with other factors like capital, labour, etc. Therefore if capitals, labours are not available in adequate quantity and quality. Then large size of holding also can turn into unproductive. On the other hand small size land can be productive. If resources are available in plenty."

As per above Economic Thoughts the researcher knows how Dr. B. R. Ambedkar has strongly recommended for the use of resources in good manner for enhancing productivity of land and agriculture in today and tomorrow in India.

Dr. B. R. Ambedkar & Economic Caste system:-

"As per Economic view of Dr. B. R. Ambedkar in India especially in Hindu community caste system is major obstacle in Economic growth and Development under caste system only the members of their own caste were allowed to learn particular profession. If any person had skill belonging to other caste for necessary Job would not accept the profession of caste lower than his own. According to Dr. B. R. Ambedkar restriction on inter

occupational mobility has many consequences. Such as, unemployment in various groups, Economic Inefficiency in market, Individual injustice therefore caste system in economic should be root out quickly.”

With a view of Dr. B. R. Ambedkar it is cleared that in case of distributing profession caste is a one of the major problem nowday. So it should be remove from society for caste free enterprise and rapid growth & development as well if it continues, then future India will be also good enough economically to sustain at global level.

Dr. B. R. Ambedkar & labour problem in India:-

“Dr. B. R. Ambedkar was a minister of Labour ministry who recognised various problems of Labour very closely, therefore he supported trade union movement and right to strike against capitalism. He was fought for all the rights Labour such as earned leave for permanent workers, welfare activities for them, consultation and trade disputes. According Dr. B. R. Ambedkar that Industrial peace will prevail, if it is based on social justice. He kept 5% to 6% reservation for schedule castes in Central Government and many more untouchable students of technical Education in foreign countries were- financially helped by him. Dr. B. R. Ambedkar strongly opposed Mr. Gandhi talking to him that caste system not only divide labours but also its actual division of labours which is very bad for Economic development in India.”

Yes it is with above point of view The Researches is agree with Ambedkar Thought that Labourers should get all necessary benefits by the government for enhancing his productivity at present and future. And in future there should be caste free division of labour in any profession that well make an upliftment of Economy.

Ambedkar's Economic view on Industrialization:-

“Dr. B. R. Ambedkar attacked on village system in India as he wanted people to leave villages and settled in cities. His thoughts were against to Gandhi who gave a slog of ‘Chalo Gaon Ki Aur’ Mr Gandhi wanted to develop his idea on village based but Dr. Ambedkar was against that vision of Mr. Gandhi according to him the villages and their poor living standard only is responsible for helplessness and shameful picture of his great nation. On the other hand Dr. B. R. Ambedkar Thought villages are strong protector of caste system and social inequalities therefore he wanted to Impact education for equality. According to him democracy is a strong device for Industrialisation and when people approach to cities and towns it would bring more Industrialisation, so more Industrialisation will bring more economic benefits.

As per above view of Dr. B. R. Ambedkar here the Researcher came to know that how Industrialisation is an important tool for accelerating growth rate of Economy in today's period.

Thoughts on currency problem in India:-

“There was an Economic Crisis during British rule in India. Indian Government was struggling enough with falling value of Indian Rupee. At the same time Dr. B. R. Ambedkar in 1923 wrote on ‘the problem of rupee its origin and solution’. In this he argued that the gold exchange standard does not have stability. According to him that Country like India cannot afford gold exchange standards beside this it can also increase the risk of Inflation and price rise. Afterward he showed with evidence that how Indian Rupee has lost its value? Hence the purchasing power of rupee is falling. However at the same time to solve this problem he suggested to Government to regulate deficit budget and also advised that money should have circular flow”.

As above Economic thoughts of Dr. B. R. Ambedkar highlighted on currency system in India. If an Economy requires bringing stability today & tomorrow then Indian Government should follow Ambedkar's Gold Standard system instead of gold exchange system maintain economic stability forever.

Dr. B. R. Ambedkar and Human Capital:-

“According to Dr. B. R. Ambedkar population is an assets of Nation, where human being is a centre point of Economic growth and development. He argued that Human Capital in India is useless, if the poorer and downtrodden untouchable Dalit's are not recognized by other classes as human being with equal social prestige and religious basis. Therefore it is impossible to use this human capital in economic development in India.”

Here with above justification The Researcher understood the deepness in Economic Thoughts of Dr. B. R. Ambedkar for development of Human Capital. We also understood that Dr. B. R. Ambedkar is strongly supported to inclusive growth for backward & downtrodden classes in India.

Economic Upliftment in Indian Women:-

“Dr. B. R. Ambedkar was very positive for economic upliftment of women in India as he knew that women can play significant role in economic development.

According to him that economic development is impossible without the participation of women along with developing their social status and equality due to bad economic conditions of women in India. India's economic progress is hampered that is why it is essential to improve the economic condition of women and give those equal rights and freedom of occupation.”

Here it is cleared that according to Dr. B. R. Ambedkar an economic wheels of Nation depends on women's like men's. Therefore the Researcher knows that how a participation of woman is important in Economic development for today and tomorrow.

Dr. B. R. Ambedkar and State Management:-

Dr. B. R. Ambedkar emphasized on the nationalization of economy. He was of the view that state should manage the economy that the production might reach the optimum level and the benefits must not be taken away by the capitalist. The benefits must be distributed equally. He stood for the progressive transformation of society, removing glaring social and economic inequalities that were due to capitalist system. Dr. B. R. Ambedkar was a firm believer of socialism. According to him, "state socialism is essential; for India's industrialization. Private economy cannot do so and if it makes an attempt it would give way to economic disparities.

He firmly believed that by eliminating exploitation, the industrial harmony can be established through labour welfare and congenial industrial relation. He remarked "we have attained political freedom and equality but without economic and social equality this is quite insufficient." Ambedkar emphasised more on economic and social freedom and equality. His concept of society and socialism aimed for the welfare of the poor classes, ending inequality based on birth eliminating discriminatory practices in social behaviour patterns reorganising the political economy for the benefit of all maintaining full employment and education, providing social security for the weak and sick.

Conclusion:-

What we can conclude from this brief foray in to various economic themes with whom Ambedkar

was concerned? It can be said that Dr. B. R. Ambedkar's economic thoughts have not been researched much. His economic thoughts reflect in his books as 'The problem of rupee': Its origin and its solution and 'The evolution of provincial finance in British India': A study in the provincial decentralization of imperial finance has not been researched much.

Dr. B. R. Ambedkar strongly suggest agriculture shall be a state industry and be organized by the state taking over all land. He also focused on Industrialization, Human capital, Sustainable development for Indian economy. Dr. B. R. Ambedkar also stress on payment workers, welfare activity's for workers and trade union movement.

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Postcolonial Perspectives in The Lying Days and The Grass is Singing

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As contemporary writers presenting pan-African insight, Nadine Gordimer and Doris Lessing enjoy international reputation. Their works detail power relationships of the colonizer in their encounter with the Third World, where they are an insider as well as an outsider and for whom the awe-inspiring dark continent of Conrad is but a myth and a reality. The academic quest here is concerned with the differences and similarities in the nature of their encounter and their fictionalisation of it and how it coloured their perspectives in the postcolonial scenario.

A victim of colonization and Apartheid, the African continent has always been in a state of flux. It has been shifting from rural to urban conditions, from farming to industry, from communal values to individualism and from oral to written concepts of communication. These changes in social, economic and political scenario paved the way for the emergence of literary effusions containing universal as well as local interest contributing to the complexity of African fiction. The sheer multiplicity of approaches in the novels by Africans as well as non-African authors and the nuances of their experiences provide different perspectives. Out of the ever increasing number of novelists, the writings of Doris Lessing and Nadine Gordimer stand out as perceptive records of the allegory of the oppressed and the oppressor. African experiences silhouetted against the vast canvas of African history and political environment, the concrete firsthand knowledge of human drama, and the undercurrent of psychological and social impact on helpless human beings form the subject matter for these two writers. This research paper entitled Post-Colonialism: Polarities and Similarities in The Lying Days and The Grass is Singing will be an attempt to show how history is dramatized and fictionalized by a writer like Nadine Gordimer who is still in Africa and a writer who has already left but whose memories tie her down to Africa. An attempt is made to explore fictionalisation of reality from two different perspectives. The dichotomy of existence in the African context, the cultural shock sustained by the colonizer and the animosity of the colonizer who

cannot respond positively to the African bush, the ironical acknowledgement that the ideal world of the prosperous farmer is supported by black labour, all these come under the purview of these novelists. An effort has been made in this paper to relate the works of both these writers to postcolonial theories in the light of the troubled historical past of South Africa.

In *Postcolonialism: An Historical Introduction*, Robert Young presents postcolonial theory as an extension of anticolonial movements in the third world. "Even though colonialism has become passé, repercussions of the passing era of colonialism has left behind tell tale imprints on the psyche of people subjected to such historical truth" (Young 7-8). As Padmini Mongia says in the Introduction to *Contemporary Postcolonial Theory*:

The development of postcolonial theory needs to be understood in terms of new socio-historic pressures. The political concepts that have shaped modern history—democracy, the citizen, nationalism no longer seem adequate for coping with contemporary realities. . . . Profound changes such as decolonization the movements of people on a hitherto unmatched scale, and new distributions of global power, have led to instabilities which have revealed that the old narratives of progress and reason are inadequate for addressing contemporary realities and the numerous fractures that attend them. Postcolonial theory has been formed as a response to these pressures even as it offers a means of speaking of them. (5)

The historical fact of European colonialism governs the understanding of specific, local circumstances with the result that all that came before become "pre-colonial" and everything after, "postcolonial." The progress narrative that postcolonial theory is interested in critiquing remains firmly in place as the history of the world is re-written in terms of pre-colonial, colonial and postcolonial stages. The term "Postcolonial" connotes writing and other forms of cultural production which display an oppositional and resistant attitude towards colonialism and which are more or less anti-colonial in orientation. These works have an overt political stance and often articulate the violence of a

racist regime and all the duplicity, tensions and perversions of the normalcy of a totalitarian state. The works of Nadine Gordimer and Doris Lessing describe a continuum of experience in which colonialism is experienced as an agency of disturbance, unsettling notions of the settler culture.

Postcolonial echoes all the ambiguity and complexity of different cultural experiences and addresses all aspects of postcolonial process from the beginning of colonial contact. Independence has not provided any solution to neo-colonial domination. Postcolonialism is a continuous process of resistance and reconstruction in the sense that it has paved the way for the developments of new elites within independent societies. It has led to the development of internal divisions based on racial, linguistics or religious discriminations, continuing the unequal treatment of indigenous people in settler / invader societies. As such postcolonial theory involves discussion about experience of various kinds—migration, slavery, suppression, resistance, representation, difference, race, gender, place and responses to the influential master discourses of imperial Europe. Settler colonies problematise the idea of resistance as a simple binarism articulating the ambivalent complex and processual nature of all imperial nations.

Ashcroft et. al. assert in *The Empire Writes back*, “Postcolonial culture is inevitably a hybridised phenomenon involving a dialectical relationship between the ‘grafted’ European cultural systems and an indigenous ontology with its impulse to create and recreate an independent local identity” (195). Nurtured on Eurocentric norms, the European responds to the other in terms of identity or difference. He judges “the other” according to his own cultural values but the genuine comprehension of otherness is possible only if the self can negate or put in parentheses, the values, assumptions and ideology of his culture.

The negation is what we can perceive in the works of Nadine Gardiner and Doris Lessing. JanMohamed asserts that while the surface of each colonialist text purports to represent specific encounters with specific varieties of racial other, the subtext valorizes the superiority of European cultures, of the collective process that has mediated that representation. According to Aijaz Ahmad, the term postcolonial “is simply a polite way of saying not-white, not Europe, or perhaps not Europe-but inside Europe” (28).

But living within a fractured society, Gordimer does not seem to speak like an unprivileged subject nor is there a sense of patronising the other. Even for Doris Lessing who fled the uncomfortable South African realities, opting for a voluntary exile in the mother country, such colonial mentality was an anathema. Both the writers project a

sympathizing self across the borders of race and colour. Using Lacan’s distinction of Imaginary and Symbolic stages of development as a conceptual tool in analysis, JanMohamed emphasizes the self-contradictions of binary constructions:

The colonialist literature is divisible into two broad categories ‘The Imaginary and The Symbolic.’ The first type represented by the novels like E. M. Forster’s *A Passage to India*, and Rudyard Kipling’s *Kim*, attempts to find syncretic solutions to the Manichean opposition of the colonizer and colonized. (15)

The novels of Joseph Conrad and Nadine Gordimer according to JanMohamed come under the category of symbolic fiction in terms of inter subjectivity, heterogeneity and particularity:

This adamant refusal to admit possibility of syncretism, of a rapprochement between self and other is the most important factor distinguishing the ‘imaginary’ from the ‘symbolic’ colonialist text. The symbolic text’s openness towards the other is based on a greater awareness of potential identity and heightened sense of the concrete socio-politico-cultural differences between self and other. Although the ‘symbolic’ writer’s understanding of the other proceeds through self understanding, he is free from the codes and motifs of the deeper, collective classification systems of his culture. (22)

In Maxwell’s opinion wherever postcolonial writers originated they shared certain outstanding features, which set their work apart from the literary traditions of England.

There are two broad categories. In the first, the writer brings his own language—English—to an alien environment and a fresh set of experiences: Australia, Canada, and New Zealand. In the other, the writer brings an alien language—English—to his own social and cultural inheritance: India, West Africa. (Maxwell 82-3)

Implicit in Maxwell’s analysis of the postcolonial is a particular kind of “double vision.” This vision is one in which identity is constituted by difference; bound up with love or hate with a metropolis which exercises its hegemony over the immediate world of the post colonial” (26). Maxwell did not include South Africa in his category of settler colonies. White South African literature has clear affinities with Australia, Canada and New Zealand.

Through her African encounter, Gordimer meets the double obligation, to history, society and ideology on the one hand and to her own artistic vision through a transformation of experience. It is possible to identify three groups in South African society

a) Indigenous minority b) Immigration societies c) Nationalities in competition. “Belonging to a group” called ethnic identity, manifests itself in different ways in different social, political and economic circumstances

(Adam et. al. 17).

Focusing on the experience of white South Africans, through her words Gordimer implies that the price one pays for living in a colour-bar society and accepting the dubious privilege of belonging to the “master-race” is high. The setting of most of the novels and short-stories is the golden city of Johannesburg. Hybridity, marginality and the diasporic become ever more seductive notions for describing contemporary constructions of conflict-ridden subjectivity and experiences of migration becomes emblematic of the fissured identities, sustained by colonized people.

With post-colonization and neo-colonization in the air Gordimer becomes ex-centric. As a white South African writer even while enjoying the centric position Gordimer could write about the imperatives to decentre and topple the power structures in society. This peculiar positioning beckons ambivalence. Ambivalence in turn engenders alienation.

“Anxiety about ambivalence stems from a deep-seated contradiction in the process by which the other is constructed, a basis of fundamental contradiction which opens colonial discourse to possibility of fracture from within” (Bhabha 30). But JanMohamed argues that “ambivalence is itself a product of ‘imperial duplicity’ and that underneath it all, a Manichean dichotomy between colonizer and colonized in what really structures colonial relations” (55). The early novels of Gordimer and Lessing namely *The Lying Days* and *The Grass is Singing* uncover the ways in which such oppositions work in colonialist representations.

In an interview Gordimer herself has admitted her guilt over the colonial legacy. Voicing her nagging sense of guilt she admits, “I have gone through the bit of falling over backwards and apologizing because I am white” (Cooper-Clark 83). By empathizing with the marginalized blacks in a country where guilt by association was a fact, she took the bold step of making writing, an act in a political sense. By articulating peoples struggle in a country where “Politics is character” she has imaginatively essayed the African encounter at a social, political and psychological level (Cooper-Clark 84). As social and historical vignettes her novels maintain a close observation of the world in which she lives. This observation ranges from matters of minor details such as the language people use, their habits, of dress and behaviour to broader social and political themes such as the rise and demise of the movement of multiracialism in 1950 to major historical events such as the accession to power of the National party in 1948, or the Soweto Revolt of 1976. According to Stephen Clingman, the first level at which she relays to us “a history from inside is through close observation of

the present, its realities, its codes and its implications” (7).

As an insider the perspective she employs is social and historical in nature. Key to this perspective is that social and private life is seen as integrally related. In this respect to some critics her novels approximate to critical realism.

With the publication of her first novel *The Lying Days* Gordimer stirred up a hornet’s nest when she ventured to step down from her pedestal of a colonizer to comment on the monstrous divisions and injustices that constitute life in South Africa. The limitation of out look as a colonizer is not there in her works. As she confesses in an interview, “despite the laws, despite everything that has kept us (blacks and whites) apart, there is a whole area of life where we know each other” (Cooper-Clark 81).

It is this knowledge which she has made us of in the larger interest of her novels. Her fictional judgments, which made her a chronicler of her times, show that she does not take an elusive position, choosing not to be silent on sensitive issues. There are no blinkers on attitude in her novels despite her imperial status, as party to the colonizer. To quote Stephen Clingman, her novels are “fictional models surveying the present and the future attempting to assess their implication for the world with which they come to grips” (13).

Collating Gordimer’s first novel *The Lying Days* with Lessing’s *The Grass is Singing*, we encounter multifarious post colonial dilemmas. The theme of *The European in Africa* is a recurrent one in both Gordimer and Lessing. Like many white African writers before them, the sense of loss under a white skin pronouncing the alienation of the European subject is hinted at in *The Lying Days* as well as in *The Grass is Singing*.

The Lying Days is a novel of self-exploration where the novelist tries to find her own small personal voice, and her South African identity. It delineates the colonial hierarchy governing the Mine Estate of Atherton. As Clingman remarks, “The fundamental historical concern of *The Lying Days* lies in its general encounter with local environment” (91) and as an intrinsic part of this encounter the novel undertakes veritable wealth of social observation of the world with which it engages. The observation seems to have been drawn from the details of Gordimer’s own early youth. As such the novel is in autobiographical form and certain descriptions of Atherton correspond with Gordimer’s description of Springs where she grew up. The novel expounds a kind of English ideology where the parental generation regards England as their home, as do the white settlers of Doris Lessing’s *Southern Rhodesia*. “For many the word ‘Home’ spoken nostalgically meant England, although both her parents were South Africans and had never been to England” (GIS 32).

In *The Lying Days* the Mine Estate where Helen grows up is shown as part of the surviving remnants of an English colonialism. The novel suggests the class stratification internal to the white world with which racism is interlocked. Through out the novel there is foregrounding of diversity and cultural differences. A corollary to the novel's investigation of South African identity is its exploration of South African literary identity. In one part of the novel Helen remarks, "I had never read a book in which I myself was recognisable in which there was a girl like Anna who did the housework and cooking and called the mother and father Misses and Baas" (LD 20).

The books Helen reads as a girl tell her nothing about her own environment. The novels Mrs. Shaw borrows from the library tend to be concerned with English gentility. So Helen Shaw is in for a surprise when disobeying the orders of her parents, she goes out of the gate in a mood to explore the world outside her home. She stops at a Jew store "She stood in that unfamiliar part of the world knowing and flatly accepting it as the real world because it was ugly and did not exist in books" (LD 21).

For Helen Shaw as well as for the novelist this real African encounter "was the beginning of disillusion, it was also the beginning of colonialism, the identification of the unattainable distant with the beautiful, the substitution of "overseas" for "fairy land," Helen Shaw "felt for the first time something of the tingling fascination of the gingerbread house before Hansel and Gretel, anonymous, nobody's children in the woods" (LD 21).

The cultural melee of the concession stores come as revelation of South African ethnicity and instead of going home she goes to the tennis club where everything was decorous. As in a picture she sees suddenly "the white figures with turning pink faces" providing a foil to the native's dark brown faces "dark as teak and dark as mahogany shining with the warm grease of their own liveliness lighting up their skin" (LD 24). The otherness of the world of the natives engenders a lost feeling among the colonizers, resulting in alienation of the self. "In colonial discourse blackness has been frequently evoked as the ultimate sign of the colonized's racial degeneracy" (Bhabha 77).

But this perceived otherness only induces a thrilled sense of excitement in young Helen Shaw. "She wanted to giggle, to prevent herself from squealing with excitement; she nearly stuffs her hand in her mouth" (LD 21). This was Helen's transition from being into knowing, and moving from one level of maturity to the next entails a lot of wisdom. The chapter ends with a shift in focus from the local environment to the sophistication of the Tennis club highlighting the divide. Helen's introspective comment

about the European crowd that "she was quite one of them" (LD 25), clinches the inevitability of her superior position and traces the trajectory of historical consciousness, the discovery of African cultural identity and of the self. Hence "The colonial discourse produces the colonized as a social reality which is at once an other and yet knowable and visible (Bhabha 70-1). The colonized as "the other" are outside western knowledge as is represented in *The Lying Days*, at the same time Helen Shaw's family from their colonizer position tries to domesticate them and the novelist tries to bring them inside western knowledge by constructing knowledge about them. So this split position of the other inside and outside western knowledge is of prime importance in Gordimer's novels. As a novel of exploration *The Lying Days* represents this ambivalence and polyvalence of the colonized subject and colonized world sliding between the polarities of similarity and difference:

A little girl must not be left alone because there were native boys about. That was all. Native boys were harmless and familiar because they were servants, or delivery boys bringing the groceries or the fish by bicycle from town or Mine boys something to laugh at in their blankets and their clay-spiked hair, but at the same time they spoke and shouted in a language you didn't understand and dressed differently in any old thing, and so were mysterious. . . (LD 14)

Colonial representations in the Victorian period tended to traffic in iconic representations of white women as epitomising the West's perceived higher moral and civil standards. Vron Ware explains in her book *Beyond the Pale: White Women, Racism and History*: "one of the recurring themes in the history of colonial repression is the way in which the threat of real or imagined violence towards white women became a symbol of the most dangerous form of insubordination" (38).

The opening chapter of *The Lying Days* testifies to this concept, "an unwritten law so sternly upheld and generally accepted that it would occur to no child to ask why: a little girl must not be left alone because there were native boys about. That was all" (LD 14). Here again the text reinforces the "split contrary position" of colonialist representations of stereotypes as "domesticated, harmless, knowable; but also at the same time wild harmful and mysterious" (LD 53).

In *The Lying Days* exploration of society and self-exploration of the central character run parallel. The first seven years of Helen Shaw's life, pass at ease with the values of the enclosed world of white community. Contrasts provided by the natives hired as domestic help, and the sybaritic paraphernalia of the rich white community emphasizes the dual nature of African encounter.

Relations between black and white people on the Mine are not detailed to any great degree except for an incident of the strike that Helen witnesses as a young girl. It coincides with the historic African Mine workers strike of 1946. But the strike fictionalized is only an ineffectual protest on the Compound Manager's lawn over the mealie pap they are given to eat, where as 1946 African Mine strike was the longest single stoppage in South African history. The divide between the center and the marginalised, the haves and have-nots is greatly contrasted by the fact that the strikers come to register their silent protest on a Sunday while the English were having "lovely tea" in "Mrs. Ockert's beautiful lounge." "The boys at the compound didn't like the food they were given, and so they all came together to Mr. Ockert's house to complain" (LD 39).

Hunger strike of the natives contrasted with Helen's own hunger appears ironic. "Hunger was whistling an empty passage right down my throat to my stomach—I twisted my hand out of my father's and ran on ahead, to bacon and egg put away for me in the oven" (LD 39). Here objectified perception is directed to inner subjective experiences. Ethnicity arouses curiosity in young Helen:

Standing before the one small window of the native medicine shop, I could no longer be bored before the idea of beckoning witch and the collection of pumpkins and lamps and mice that shot up into carriages and genii and coachmen or two headed dogs . . . I was interested in the native customers inside the medicine shop who were buying roots and charms, the way people buy aspirins. (LD 21-2)

An encounter in the nature of confrontation with the African bush and alien terrain is there in Lessing's maiden effort *The Grass is Singing*. The African bush and an environment to which the protagonist could not respond spiritually prepare the ground for a different mode of encounter where ultimately the bush avenges itself. *The Grass is Singing* like *The Lying Days* being a debutant work is full of the African milieu and lush green nature descriptions. The ambience created is such that the whites encounter with an unknown terrain and the awe of such cross-cultural confrontations gives away the sympathetic reaching out at contract zones. Except for their first creative efforts, pure nature descriptions are absent in the works of both writers. Descriptions of landscapes slowly fade away, giving way to mindscape. Bush, veld and sky evolve ethereal atmosphere: "The stars moving and flashing among tree boughs. The sky was luminous, but there was an undertone of cold grey. The stars were bright; but with a weak gleam" (GIS 190).

The settler world is set in this beautiful background. The novel has as its protagonist, Mary Turner, a

conventional woman who enters into a bad marriage because of the force of circumstances. The social context dissected in the novel is preoccupied by colour issues. The black servant Moses is looked down upon as "the other." A few reviewers have criticized Lessing's portrayal of the "boy" Moses as vague and shadowy. The portrayal is suggestive rather than vague, and he is a reflector of white responses; as colonial stereotype, he epitomizes animalistic and brutal strength. Certain references in the novel reinforce such stereotyped notions. For example, the novelist tells us that Moses "followed her like a dog" (67).

The otherness of the colour-hiatus is strongly pronounced throughout the text. Although with her husband Dick she seemed at ease, quiet, almost maternal, "with the natives she was a virago" (GIS 69). She was very pernickety with the little they left undone and bullied them. Once when Dick fell ill she took on herself the business of controlling the natives. Noticing that one of the farm hands had stopped working she shouted at him to get back to work. At this he stopped still, looked at her squarely and said in his own dialect which she did not understand. He says:

'I want to drink.'

The man then repeated in English 'I . . . want . . . water' sticking his finger down his throat.

Most white people think that it is 'cheek' if a native speaks English. . . . Involuntarily she lifted her whip and brought it down across his face in a vicious swinging blow. (GIS 119)

Here again through his "mimicry" of the European language, the colonizer in *Mary Turner* woke up to the "worrying threat of resemblance" between colonizer and colonized. As Albert Memmi states in *The Colonizer and the Colonized*, "The mythical portrait of the colonized therefore includes an unbelievable laziness, and that of the colonizer a virtuous taste for action" (79).

The text cites many instances of the Nero complex which Memmi speaks of in the temperament of the colonizer.

. . . when a white man in Africa by accident looks into the eyes of a native and sees the human being (which it is his chief preoccupation to avoid), his sense of guilt which he denies flames up in resentment and he brings down the whip. (GIS 144)

We see Moses, the native boy almost entirely through the eyes of Mary and other whites who "colour" him in accordance with their prejudices and apprehensions. He is a reflection of white responses as when he acts, to kill Mary, out of jealousy aroused by the coming of the new white assistant Marston. He sheds the African role of the colonized in which he had borne the blows of Mary passively and becomes vindictive, self-defining as his

white masters. The xenophobia of the colonized victim, here acts as a catalyst to trigger him to violent action. The narrative voice wonders, “. . . what thoughts of regret or pity or perhaps even wounded human affection were compounded with the satisfaction of his completed revenge, it is impossible to say” (GIS 206). “The Conradian note of speculation upon the incomprehensible workings of the native mind” (14) drops the curtain on this human drama of neurotism and revenge. The Turners at the very outset are pictured as pathetic members of the master race. Making a distinction between a colonial, colonizer and the colonial Memmi says:

A colonial is a European living in a colony but having no privileges, whose living conditions are not higher than those of a colonized person of equivalent economic and social status. By temperament or ethical conviction a colonial is a benevolent European who does not have the colonizer’s attitude towards the colonized. (10)

If so Dick can be termed a colonial. As is stated in Doris Lessing’s *Africa* by Michael Thorpe, Dick is “the first of many fated dreamers in an uncompromising country that yields only to the fighter” (14).

Through the character of Dick, Lessing presents a romantic’s encounter with Africa. Turner is the first character to embody how an intense love of Africa can exist with a callous indifference to its people. Dick loved the land and will not violate it like Charlie Slatter, the stereotype of the exploiting colonizer. But Mary Turner only. “. . . wanted him to be a success and make money so that they would have the power to do what they wanted, to leave the farm to live a civilized life again. The stinking poverty in which they lived was unbearable; it was destroying them” (GIS 97).

African encounter as portrayed in *The Grass is Singing* is in the form of a fight for survival. Dick’s point of view differs from that of his wife. He loved the soil and “. . . could not look at farm as she did. He loved it and was part of it. He liked the slow movement of the seasons, and the complicated rhythm of the ‘little crops’ that she kept describing with contempt as usual” (GIS 123). Once Charlie Slatter, the successful farmer tries advising him:

It was no pity for Dick that moved him. He was obeying the dictate of the first law of white South Africa. ‘Thou shalt not let your fellow white sink lower than a certain point’, because if you do the nigger will see he is as good as you are. (GIS 178)

As a colonizer Charlie tries to ward off the worrying threat of resemblance between colonizers and colonized. This threatens to collapse the colonizer’s structure of knowledge in which such oppositional distinctions are made. The ambivalent position of the colonized in relation to the colonizer as “almost the same but not quite” is oft

repeated in the novel.

Mary’s hostile encounter with African bush is vividly portrayed towards the end of the novel. Her sense of displacement, alienation and neurotic frenzy come to the surface. Here in the novel eventually Moses becomes the avenging spirit of the bush. Like the biblical Moses striking the rocks of the desert to bring forth the waters of salvation, Mary seals her fate in the hand of the native boy Moses. As Michael Thorpe remarks, “Moses becomes an almost superstitiously conceived symbol of an abused African reality of which Mary approaches tragic understanding” (16).

For the white man (and woman) the black man is marked by his colour and his supposedly limitless sexuality. ‘Negrophobia’ turns on the fear and desire of rampant black sexuality. For the white subject, the black other is everything that lies outside the self. For the black subject however, the white other serves to define everything that is desirable, everything that the self desires. This desire is embedded within a power structure, therefore ‘the white man is not only the other but also master, real or imaginary.’ (Loomba 144)

The two great writers straddle the complex world of Africa and Europe in their romantic encounter with its reality. The awe inspiring beauty of African bush clothed in semiotic language heightens the climax in *The Grass is Singing* whereas the mine town, its complexities politics and the emotional entanglements of people connected with it colour the vision in Gordimer’s fiction.

The marginal and the central as constructs have their grounding in alienation. The sense of alienation induces Mary Turner in *The Grass is Singing* to waste away in the sylvan beauty of the African bush to which she could not respond.

A major feature of postcolonial literatures is the concern with place and displacement. It is here that the crisis of identity comes into being; the concern with the development or recovery of an effective identifying relationship between self and place. Critics such as D.E.S. Maxwell have made this the defining model of postcolonialism:

A valid and active sense of self may have been eroded by dislocation, resulting from migration, the experience of enslavement, transportation or voluntary removal for indentured labour. Or it may have been destroyed by cultural denigration, the conscious and unconscious oppression of the indigenous personality and culture by a supposedly superior racial or cultural model. The dialectic of place and displacement is always a feature of post colonial societies whether these have been created by a process of settlement, intervention or a mixture of the two. Beyond their historical and cultural differences,

place, displacement and a pervasive concern with the myths of identity and authenticity are a feature common to all post-colonial literatures in English. (9)

In translating the colonial experience for the readers from an impartial point of view Lessing and Gordimer objectify and present colonial dilemmas and contradictions within the society suspended between an indigenous and exotic culture, the subject succumbs to displacement, alienation and various other physical and psychic dislocations.

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Phenol Contamination Study in Ground Water Resources Around Vile-Bhagad Industrial Area in Raigad District (M.S) Spectrophotometrically

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Abstract

Phenols are toxic in nature. In present study the phenol contamination in ground water resources near Vile-Bhagad MIDC area has been determined using calibration curve method spectrophotometrically. For that samples were collected from eleven different wells and analyzed. The results of all water samples shows that observed phenol contamination is near about in permissible limit. Throughout the year this water from all sampling sites can be used for domestic as well as irrigation purpose as contamination is within permissible limit.

Keywords: Spectrophotometry, Phenol, calibration, well, permissible limit.

Introduction

Phenolic compounds are toxic, widely used in the manufacture of synthetic phenolic resins, dyes, plastics, lamp black paints, air fresheners, paper soaps, paint removers etc. It is introduced into the environment through industrial discharges from coke oven plants, petroleum refineries, drug manufacturing units, antioxidants and dye industries. Phenol as priority pollutant and set a discharge limit of 0.1 mg/l of phenol in wastewaters. As per Indian Standards for disposal of treated effluents (IS: 2490 Part A), the permissible limit of phenol for the discharge of effluent into inland surface water is 1.0 mg/l and in public sewer and marine disposal it is 5 mg/L. The effect of phenol on the aquatic life is destructive at low concentrations; for fishes 5-25 mg/L is lethal depending on the temperature and state of maturity.

Well is the major source of water supply for domestic as well as agriculture purpose, the toxic phenol if present will definitely enter in human food chain via consumption of different flora, fauna and water itself.

In present work an attempt has been made to determine phenol contamination in well water around Vile-Bhagad industrial area spectrophotometrically.

Materials and Methods

Apparatus: Spectrophotometer was used for spectral measurements. PH meter was used for pH measurements.

All chemicals used were of analytical reagent grade and double distilled water was used for dilution.

Reagents: Phenol Stock : 1 mg mL⁻¹ stock solution of phenol is prepared in 5% ethanolic solution. Working standards were prepared by the appropriate dilution of the stock.

Leucocrystal violet (LCV) [Eastman Kodak Co.]: 250 mg of Leucocrystal Violet (4,4',4'' methyl-dynetris (N, N'-Dimethylaniline) was dissolved in 200 mL of distilled water containing 3 mL 85% phosphoric acid (Merck) and the volume was made up to 1 litre with distilled water and was stored in amber coloured bottle away from sunlight.

N- Bromophthalimide (NBP) [Loba chemie]: 0.04 g NBP was dissolved in 8 mL acetic acid and the volume was made up to 25 mL with double distilled water and was stored in amber coloured bottle.

0.5% Sodium hydroxide: 2 g sodium hydroxide in 100 mL distilled water.

Buffer solution: Buffer solution of pH 4 ± 0.1 was prepared by dissolving 17.01 g potassium hydrogen phosphate in 490 mL water followed by drop wise addition of 85% phosphoric acid until the pH becomes 4 ± 0.1 and volume was made up to the mark in 500 mL standard flask.

Waste water samples were collected from the wells including MIDC area. They were filtered through Whatman No. 42 and stored in glass bottles. Then the samples were ready for analysis. Water samples were collected in triplicate after every two months for one year.

Procedure

Standard solution containing 0.5 – 7.0 µg of phenol were prepared, 1 mL of NBP was added and warmed slightly. After 2 minutes, 1 mL of buffer was added and stirred gently. To this 1 mL of LCV followed by 0.5 mL of 0.5% NaOH and 1 mL of CTAB was added and mixed. The solution was diluted up to 25 mL and kept at 300C for full colour development. An intense violet colour dye having maximum absorption at 595 nm was obtained at ~ 4pH. The calibration curve was plotted absorbance against concentration in micrograms (µg/l). Same procedure was

followed for samples of water and concentration of phenol in samples were calculated from calibration curve.

Result and Discussion
Observation Table No.1

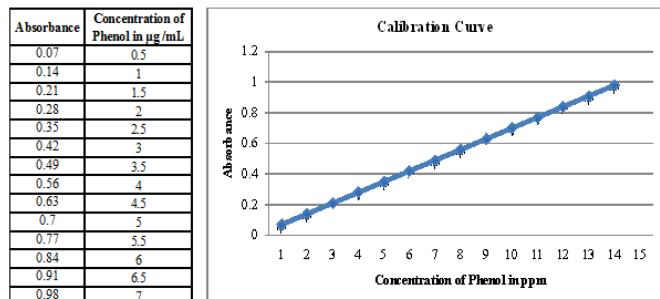


Table and Graph showing Calibration Curve of Absorbance Vs. Concentration of phenol in ppm (µg/l)

Observation Table No.2

Well No./Sample no.	Concentration of phenol in µg/l.					
	January	March	May	July	September	November
1.	0.47	0.45	0.39	0.35	0.41	0.51
2.	0.38	0.22	0.05	0.47	0.36	0.31
3.	0.32	0.22	0.55	0.26	0.15	0.35
4.	0.23	0.05	0.18	0.48	0.18	0.44
5.	0.49	0.95	0.03	0.32	0.19	0.11
6.	0.19	0.78	0.28	0.50	0.28	0.05
7.	0.44	0.97	0.44	0.13	0.37	0.58
8.	0.10	0.12	0.09	0.29	0.40	0.27
9.	0.15	0.14	0.19	0.22	0.34	0.24
10.	0.39	0.39	0.32	0.33	0.31	0.47
11.	0.20	0.33	0.27	0.51	0.11	0.21

The phenol concentrations in water samples analyzed by spectrophotometric method. The values are given in Observation Table No. 2. shows phenol concentration in micrograms per liter (µg/l) after every two months for one year.

Conclusion

In all seasons the concentration of phenol in water samples were found under permissible limit (1 to 2 µg/l) given by Bureau of Indian Standard for drinking water. If other parameters of water are in permissible limit people can use water from all sampling sites for drinking as well

as other purposes such as irrigation and marine aquatic life through out the year.

(Central Pollution Control Board, Pollution Control Acts, Rules, and Notifications issued there under. Fourth edition pp. 358-359. New Delhi, CPCB, Ministry of Environment and Forests. 897 pp)

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India and Environment

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Abstract:

Environment is a broad concept encompassing the whole range of diverse surroundings in which one perceives experience and react to events and changes. It includes the land, water, vegetation, air and the whole gamut of the ecological environment. It concerns people's ability to adapt both physically and mentally to the continuing changes in environment.

Keywords: Environment, sustainable Development

Introduction:

Achieving economic development is vital to a country. But what if it comes at the cost of environment degradation? With globalization opening the doors of economic development for so many countries, there is a serious concern regarding how far we are being able to save the environment and not hamper its constitutions.

to understand the impact of economic growth and development on the environment, we need to be aware of the concept of sustainable development as an alternative solution. The Environment refers to the totality of resources and the total planetary inheritance we have received. It includes biotic (animal, plants birds) and abiotic (sun, land, water, mountains) components. It explains the interrelationship that exists between the abiotic and biotic components.

Function of Environment:

1. Supplying Resources:

The environment contains both renewable (air, water, land) and non-renewable (fossil fuels) resources. While the former are re-usable and do not get depleted soon, non-renewable resources come with the fear of depletion.

2. Assimilating Waste:

Economic activities generate wastes which the environment absorbs through natural processes.

3. Sustenance of life : The Environment comprises biotic components that aid the living of biotic components. In the absence of elements such as air, water, land, etc. there would be no life on the planet.

4. Aesthetic Value:

The environment adds aesthetic value of life. The

mountains, oceans, seas landmasses and other scenery of the environment enhance the quality of life.

Environmental Degradation

Economic activities such as production and consumption have led to environmental degradation over the last few years. This is recognizable from the fact that there is a certain carrying capacity of the environment. When the rate of extraction of resources exceeds the rate of their regeneration the environment fails to perform its activities. The resulting phenomenon is called environmental degradation.

Resources are limited and therefore, their over utilization is leading to their extinction. The waste generated is also exceeding the absorption capacity of the environment. Rivers and other waterways are getting increasingly polluted due to the excessive dumping of wastes into them. This has led to poor water quality for consumption. The rate of use of non-renewable resources has not only depleted their limited resources but also led to pollution tendencies.

The increasing emphasis is therefore on renewable sources or on devising other sources of generating energy. Different kinds of pollution have harmed the environment as well as man's well-being. Air and water pollution particularly contribute to air and water-borne disease and ill health. Ozone layer problem resulting from such degradation.

Global Environment Crisis:

Environmental degradation can be broken down into particular problems that plague the global community as under

Global Warming:

It refers to the gradual increasing in the lower atmosphere of the earth. The main cause of global warming is recognized to be the release of greenhouse gases like carbon dioxide into the atmosphere. These gases can absorb heat and thus contribute to global warming. The causes are deforestation and burning of fossil fuels like coal and petroleum. Global Warming has led to melting of polar ice caps and an average increase in temperature all over the world.

Ozone Layer Depletion:

It is the phenomenon of depletion in the amount of ozone in Earth's stratosphere. The main causes of ozone depletion through the releases of substance called chlorofluorocarbons into the atmosphere. These compounds include chlorine, bromine in air conditioners, refrigerators etc. Ozone layer depletion implies that the Earth gets more and more exposed to the ultraviolet rays of sun. These rays are excess very harmful to human health are known to cause skin cancer to human beings. They also affect the growth of aquatic and terrestrial plants.

Measures to save the Environment:

Concerted efforts are required to deal with the global environment crisis. The concept of sustainable development thereby comes in to play. Some of the measures that can be undertaken to control the crisis that already underway include.

1. Pollution Control:

Air, water, noise, soil are some of the major forms of pollution plaguing the environment today. Pollution control boards can be set up or regulatory standards must be enforced to keep pollution within lowest levels

2. Waste Management:

Solid waste management must be carefully managed in urban areas. Rural Waste has the potential of being used as natural manure by converting it into compost.

3. Implementation of policy Programmers:

Enactment of environment centric acts and policies is not enough. Their effective implementation and careful observe ovation are what will actually make a difference to environmental conservation efforts.

4. Forest conservation:

Increased industrialization has come at the cost of deforestation. The implication of foresters being cut down is that the ecology is significantly affected. A forestation measures need to be taken and forest conservation regulations must be seriously implemented.

5. Social Awareness:

Until people are made aware of the graveness of the situation, the problem of environmental degradation cannot be dealt with creating awareness through campaigns and movements can help avert the problem of the ongoing environmental crisis.

Sustainable Development:

The idea of environmental conservation gains real momentum if we are able to conserve resources and use them in a manner that they are sufficiently available for the coming generation as well. The United Nations conference on Environment and Development (UNCED) defines this

using the concept of sustainable development. It explains sustainable development as a process that provides for the present generation without compromising on the needs of the future generation. Without compromising on the needs of the future generations.

Sustainable development has gained momentum as larger movements over the years. We now associate it with improving living standards, poverty alleviation, minimizing social and cultural instability and resources depletion. The Brundtland commission lays emphasis on the idea of passing on an environment with enough and good quality resources to the future generation just previous generations. The features of sustainable rise in per capital income worldwide, rational usage of resources, pollution checks, pollution control and energy to meet future generation needs.

The way forward with sustainable development.

1. The planet must shift to renewable sources of energy as compared to the regular thermal or hydropower plants that lead to climatic degradation. Solar energy is an effective alternative that can harness using photovoltaic cells. It is less costly and environmentally friendly.
2. A shift to wind energy is also a option. Setting up windmills in areas with high speed wind can help convert the natural resources into electricity for commercial or household usages. Another effectiveness solution can come through the use of natural manure or bio-compost as a substitute for chemical fertilizers. This helps avert soil erosion and soil pollution. Subsidies LPG as a fuel in rural areas and CNG as a fuel for vehicles in urban areas could lead the way forward.
3. The rest of the change can come majorly through increased awareness and consciousness. Only when the gravity of the situation and a moral responsibility towards forthcoming generations is realized can we pass on a healthy environment to them.

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The Study of Attitude of Individual Investors Towards Equity Investment With Reference To Malegaon City

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INTRODUCTION

In the context of ongoing period of stress in the financial markets where stock price fluctuations are so violent that it has become difficult for the investment experts to predict the market movements. Individual investor is the worst sufferer in the times of chaos. It has greatly affected the attitude and psychological tendency of Investors decision making towards their equity investment. Investor's point of view towards making financial decisions in present situation is getting altered due to increasing risk, uncertainty and volatility in the stock market. It is essential to study how retail equity investors' adapt themselves to the changed situation and take equity decision, and to know their expectations from the investment.

Behavior is an important and crucial to decision making process as it leads to psychology of an individual to perceive the state of affairs. Behavioral and cognitive psychology provides explanations for influence of behavioral factors as to why people make irrational financial decisions. There are several behavioral factors that impact the investment decisions of individual investors. This paper is an attempt to explore and to focus and on studying and analyzing the attitude of retail investors through behavioral theories as their expectation of returns on investment and risk appetite is influenced by their behavioral approach.

OBJECTIVES OF THE STUDY

1. To study the attitude of individual investors with reference to their shareholdings in Malegaon city.
2. To study the behavioral influence of Individual investors in equity investment decision.
3. To study and understand expectations of retail individual investors' associated with equity Investment.
4. To investigate the investors' expectations in terms of overall return from equity in changed and volatile situation.

CONCEPTUAL FRAMEWORK

This research work comes under Behavioral finance

as spotlight and attempt to study the behavioral factors influencing equity decisions.

Since the 1950s, standard finance theories have assumed investors to be rational and objective decision makers. It has always ignored the investors' psychology (Kadir Can YALCIN) and believed that humans are emotionless. In contrast, a field of 'Behavioral finance' believes that individuals suffer from irrationality at the time of decision making. It studies the psychological and sociological factors including the emotional processes that influence the financial decision making process of individuals, groups and organizations.

Behavioural finance adopts an inter-disciplinary approach. It borrows knowledge from psychology to understand the behaviour of financial practitioners and their effect on markets. With the stock markets becoming more and more volatile and subsequent melt down of financial market understanding, irrational investor behaviour is as important as it had ever been. Empirical evidence that appears to strongly contradict the random walk hypothesis has recently spurred the development of what has come to be known as "Behavioural Finance".

Behavioral finance is the integration of classical economics and finance with psychology and the decision-making sciences. It is defined as the study of how investors systematically make errors in judgment, or "mental mistakes." (Russell J. Fuller)

LITERATURE REVIEW

Kahneman D and Amos (1979) stated that individuals' investment decisions are not rational. Their decisions are affected by inevitable cognitive and emotional biases which make their decisions irrational. This phenomenon is more relevant in case of stock market investors' behavior.

Statman (1995) wrote an extensive comparison between the emerging discipline behavioral finance vs. the old school thoughts of "standard finance." According to Statman, behavior and psychology influence individual investors and portfolio managers regarding the financial

decision making process in terms of risk assessment (i.e. the process of establishing information regarding suitable levels of a risk) and the issues of framing (i.e. the way investors process information and make decisions depending how its presented).

Robert Olsen (1998) describes the “new paradigm” or school of thought known as an attempt to comprehend and forecast systematic behavior in order for investors to make more accurate and correct investment decisions.

Furthermore, Barber and Odean (1999, p. 41) stated that “people systemically depart from optimal judgment and decision making. Behavioral finance enriches economic understanding by incorporating these aspects of human nature into financial models.

Meir Statman and Hersh Shefrin (Two leading professors from Santa Clara University,) have conducted research in the area of behavioral finance. Shefrin (2000) describes behavioral finance as the interaction of psychology with the financial actions and performance of “practitioners” (all types/categories of investors). He recommends that these investors should be aware of their own “investment mistakes” as well the “errors of judgment” of their counterparts. Shefrin states, “One investor’s mistakes can become another investor’s profits” (2000, p. 4).

A number of empirical facts line up reasonably well with the predictions of these theoretical models. Investors who trade the most perform the worst (Barber and Odean (2000) Men, who are more prone to be overconfident than women, trade more and perform worse than women (Barber and Odean (2001)).

Jegadeesh and Titman (2001) found the momentum effect as a cause of irrational behavior in the stock market while in against of that Daniel and Titman (2000) found strong momentum in growth stocks compare to value stocks which shows rational behavior of investors.

Jay R. Ritter (2003) provides a brief introduction to behavioral finance. According to the author, Behavioral finance encompasses research that drops the traditional assumptions of expected utility maximization with rational investors in efficient markets. The two building blocks of behavioral finance, mentioned in the article, are cognitive psychology (i.e., how people think) and the limits to arbitrage (i.e., when markets will be inefficient).

BEHAVIOURAL THEORIES

Herd Theory

Herding effect can be said to a behavioral approach which defines inclination of investors’ behaviors to follow the others investors’ decisions and performance. In the viewpoint of behavior, herding can be basis of various emotional biases, including congruity conformity and cognitive conflict. Investors may have a preference for

herding if they think that herding can assist them to extract valuable and reliable information.

Loss Aversion

People tend to view the possibility of recouping a loss as more important than the possibility of greater gain. The priority of avoiding losses holds true also for investors. No matter how low the price drops, investors, believing that the price will eventually come back, often hold that stock.

Over confidence

People are overconfident about their abilities. Overconfidence manifests itself in a number of ways. One example is too little diversification, because of a tendency to invest too much in what one is familiar with. Their trade frequency is also more.

Representativeness

People tend to underweight long-term averages. People tend to put too much weight on recent experience.

Anchoring

When things change, people tend to be slow to pick up on the changes. In other words, they anchor on the ways things have normally been. The conservatism bias is at war with the representativeness bias. When things change, people might under react because of the conservatism bias. But if there is a long enough pattern, then they will adjust to it and possibly overreact, underweighting the long-term average.

Disposition Effect

The disposition effect refers to the pattern that people avoid realizing paper losses and seek to realize paper gains. The disposition effect manifests itself in lots of small gains being realized, and few small losses. The disposition effect shows up in aggregate stock trading volume. During a bull market, trading volume tends to grow. If the market then turns south, trading volume tends to fall.

Market Theory

Investors’ behavior affects financial market as change reflects alteration in their perception towards market. It is thought that the investors may have over or under reaction to market share price changes or news as new information; extrapolation of past trends into the future; lack of consideration to fundamentals underlying share as can be focus on popular or stable stocks and cyclical movements.

Heuristics

Heuristics, or rules of thumb, make decision-making easier. But they can sometimes lead to biases, especially when things change. These can lead to suboptimal investment decisions. When faced with N choices for how to invest retirement money, many people allocate using the 1/N rule.

RESEARCH METHODOLOGY

Research aims to understand and study the attitude

,behavior and expectations of retail individual investors’ for investment in equity in form of dividend which made it descriptive in nature This study has been conducted on the 80 individual investors trading in the stock broking office in Malegaon city. Convenient sampling method is used for data collection. Only primary data relating to the study was collected by questionnaire and personal meeting. The questions focused on the attitude of individual investors. The sample respondents were asked to express their views on investor behavior. The collected data have been analyzed through simple percentage method.

DATA ANALYSIS TABLE

Sr. No	Situations	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1.	You prefer to invest in shares for capital appreciation and dividend both	38 (47.50)	22 (27.50)	-	10 (12.5)	-	80 (100.0)
2.	You tend to extend your holding period expecting more dividend	11 (13.75)	37 (46.25)	8 (10.00)	14 (17.50)	6 (7.25)	80 (100.0)
3.	You prefer stable stock as compared to aggressive stock	42 (52.50)	28 (35.00)	6 (7.25)	13 (16.25)	11 (13.75)	80 (100.0)
4.	Other investors’ decisions of choosing stock types have impact on your investment decisions.	6 (7.25)	15 (18.75)	10 (12.50)	28 (35.00)	21 (26.25)	80 (100.0)
5.	Other investors’ decisions of buying and selling stocks have impact on your investment decisions.	17 (21.25)	23 (28.75)	9 (11.25)	13 (16.25)	18 (22.50)	80 (100.0)
6.	Trading volume affect your stock selection and investment decision	19 (23.75)	26 (32.50)	5 (6.25)	23 (28.75)	7 (8.75)	80 (100.0)
7.	After a prior loss, you become more risk averse.	18 (22.50)	25 (31.25)	10 (12.50)	17 (21.25)	9 (11.25)	80 (100.0)
8.	You avoid selling shares that have decreased in value and readily sell shares that have increased in value.	15 (18.75)	14 (17.50)	30 (37.50)	13 (16.25)	8 (10.00)	80 (100.0)
9.	Market information is important for your stock investment.	41 (51.25)	25 (31.25)	5 (6.25)	9 (11.25)	-	80 (100.0)
10.	You put the past trends of stocks under your consideration for your investment.	24 (30.00)	36 (45.00)	7 (8.75)	9 (11.25)	-	80 (100.0)
11.	You fix a target price before buying and selling	21 (26.25)	34 (42.50)	14 (17.50)	7 (8.75)	4 (5.00)	80 (100.0)
12.	You believe that your skills and knowledge of stock market can help you to outperform the market.	15 (18.75)	22 (27.50)	10 (12.50)	22 (27.50)	11 (13.75)	80 (100.0)
13.	You are normally able to anticipate the end of good or poor.	12 (15.00)	15 (18.75)	30 (37.50)	17 (21.25)	6 (7.50)	80 (100.0)
14.	The return rate of your recent stock investment meets your expectation	2 (2.5)	8 (10.00)	5 (6.25)	45 (56.25)	20 (25.00)	80 (100.0)
15.	Your rate of return is recently equal to or higher than the average return rate of the market.	12 (15.00)	13 (16.25)	-	45 (56.25)	10 (12.50)	80 (100.0)
16.	You feel satisfied with your investment decisions in the last year (including selling, buying, choosing stocks, and deciding the stock volumes).	5 (6.25)	15 (18.75)	15 (18.75)	30 (37.50)	25 (31.25)	80 (100.0)

*Note – Numbers in the Bracket indicate Percentage.

FINDINGS AND OBSERVATIONS

Capital Appreciation

Individual Investors consider both capital appreciation and dividend important for equity return as 75 % respondents have agreed. So it can be interpreted that investors prefer regular returns as well as capital appreciation. Individual investors give preference to dividend also at time of their decision towards equity investment as 60% of them hold their equity investments for a long time in order to receive more dividends.

Herd Behavior

Choice of stock, volume of stock, buying and selling and speed of herding are the variables of herding that influence the individual’s investment decision. According to the results shown in the table choice of stock selection(26%) has a low impact on individual investment

decision. All other variables of herding factor which are volume of stock(56.25%),and buying and selling(50%) have a moderate impact on individual investment decision making.

Loss Aversion and Regret Theory

Many people think that they do not lose until they sell the losing stocks, thus, they refuse to sell them although selling may be the best solution at this time. In other words, they are afraid of losing money, hence they try to keep those stocks and wish for reverse trend. It has a moderate impact(36.75%) on investment decision making.

Regretting the investment decision after encountering loss is normal reactions of investors(53.75%) because the prior investment success encourages them so much whereas the failure surely depresses them a lot. It impacts their next decision moderately.

Market Information

According to the result shown in the table market information has a high impact on investment decision making. Investors pay attention(82.5%) to new information as they believe it affects return on the investment.

Overconfidence

Results in the table show that individual investors are moderately over confident (46.25%) about their skills and knowledge of stock market that can help them to outperform the market and normally able to anticipate the market trends(33.75%).

Anchoring

Investors rely on their previous experiences in the market for their next investment. Anchoring has a high impact(75%) on their investment decision making. Respondents also believe in fixing the buying and selling targets before making an investment(68.75%).

Investors’ Expectations and Investment Performance

Most of investors(81.00%) think that the return rates of recent stock investment do not meet their expectation. Most of investors(68.75%) believe that their rates of return from stock investment are less than the average return rate of the market. There may be no official report showing the average return of the market, so individual investors may not have sufficient information to compare. Consequently, they try to compare with higher return rates from other investment channels and make conclusion that their return rates are less than the average of the market. Otherwise, they attempt to compare with the returns of other successful investors that they know. However, these successful investors may not represent for the average of market. The investment satisfaction has strong connection with the return rates. As stated above, most of investors(68.75%) expect higher return rates than what they achieve, thus, they may not satisfy with their investment decisions.

CONCLUSION AND DISCUSSION

Following conclusions may be drawn on the basis of study findings:

Majority of investors prefer to invest in stable stocks irrespective of the fact that they may give lower returns. It is found that the herding variables' impact on the investors' decisions is low to moderate. Thus, it is believed that the herding instinct is reasonably strong in Malegaon.

Loss aversion, the result demonstrates that to some extent, after a gain, the investors become more risk seeking whereas after a loss, they tend to be more risk averse. These are normal reactions of investors because the prior investment success encourages them so much whereas the failure surely depresses them a lot. Many people think that they do not lose until they sell the losing stocks, thus, they refuse to sell them although selling may be the best solution at this time. In other words, they are afraid of losing money, hence they try to keep those stocks and wish for reverse trend. In terms of anchoring, it has moderate impact. This can be explained that the high and unexpected fluctuations of stock price trend make the investors to think of the more reliable ways to predict the changes of stock prices than the prices that they experienced in the past.

The individual investors at the Malegaon city have the degree of confidence at the moderate level. In the discussions, investors could not predict the market trend and failed to jump into and out of the market timely; they certainly feel less confident of their decisions. In other words, the investors at Malegaon need to be more confident to have the effective decisions for their investment.

Market factor has the highest influences on the investment decision-making of the investors. Market factor includes the market information (about the customers, company's performance, and so on), the price changes of stocks in the market, and the past trends of stocks. These market variables are very important to the investors and usually taken under their considerations for the making investment decisions.

Majority of the investors think that the return rates of recent stock investment do not meet their expectation. According to the investors, many international factors (FIIs outflows, low global development rate, decrease in economic stimulus, etc.) and national local signals (inflation, high interest rate, foreign exchange rate instability, etc.) alarming a difficult period. As a result, stock price has gone down and this has made the investors' returns decreased. Most of investors believe that their rates of return from stock investment are less than the average return rate of the market. There may be no official report showing the average return of the market consequently, they try to compare with higher return rates from other investment channels and make conclusion that

their return rates are less than the average of the market. Otherwise, they attempt to compare with the returns of other successful investors that they know. However, these successful investors may not represent for the average of market. The investors of Malegaon are not satisfied with their investment decisions.

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Global Challenges Before Professions

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I) INTRODUCTION :

As the world economy is undergoing the transition, the significance of the developing nations is rising as the major growth drivers. As these economies embark on the growth path, there are several challenges on socio-economic front acting as potential growth disrupters. Education is one such key issue being faced by all the engorging countries including India. Although the Indian government is making considerable budgetary allocations for education expenditure, the quality of education still remains one of the major concerns. Millions of graduates produced by the education system do not fulfill the industry purpose, bearing a cost to the economy in terms of lack of employable people. While the country is home to a considerable number of engineering, medical and management schools, the industry by and large suffers from the 'talent crunch'. The need for skill development at vocational level has been felt to meet the employment generation requirement of the country.

India needs multi-dimensional and broad-based quality education to maintain its leadership in the 21st century. Therefore India should show the concern over the quality in education as the education in India is not competitive in terms of the quantity and quality with other countries. India needs to emphasis on quality education and following key issues:

1. Low Enrolment at Higher Education
2. High Dropout at School Education
3. Poor quality of Education both at School as well as Higher Education level.
4. Low employability
5. Regulatory Framework in Higher Education
6. Quality and Quantity of Human Resource in Educational sector.

Low Enrolment at Higher Education

Some dramatic changes have taken place in India's education system in the past couple of decades, of which only a few are reflected in statistics.

"A quality education has the power to transform

societies in a single generation, provide children with the protection they need from the hazards of poverty, labor exploitation and disease, and given them the knowledge, skills, and confidence to reach their full potential".

Low Employability of Professional Education

The Confederation of Indian Industry (CII) and the Boston Consulting Group (BCG), have pointed out in a recent report that the mismatch between educational standard and suitability for employment will result in a 'talent gap' of five million by 2012 and a shortfall of 750,000 skilled workers in the next five years. India's 520 universities, 25,000 colleges and 6000 Industrial Training Institutes turn out 2.3 million non-technical and 500,000 technical graduates, but according to the National Association of Software and Services Companies (NASSCOM), only 10 per cent of the former and 25 per cent of the latter are employable.

Mr. Sam Pitroda, Chairman of the National Knowledge Commission said that "of the 90,000 odd MBAs produced each year, only a miniscule percentage is found to be worth employing." A report on global skills of graduates in financial services also says that "58 per cent of financial service organizations are facing difficulties in recruiting people with the right set of skills." In the job fairs conducted at the University of Madras in 2007, though there was no dearth of job opportunities, the number of graduates who had the required conceptual, analytical, communication and interpersonal skills was only 4 per cent and the remaining 96 per cent were substandard and unfit.

II) SIGNIFICANCE OF THE STUDY :

The following points provide a policy frame work for improving the quality of teaching and learning by taking into account the various levels of and key factors in education.

Improving Teaching and Learning

The teaching and learning process brings the curriculum to life. It determines what happens in the classroom and the quality of learning outcomes. Good practice requires attention to six key policy issues with direct impact on teaching and learning. It also requires

attention to the resources that indirectly enable the process.

III) OBJECTIVES OF THE STUDY:

- 1) To increase the enrollment in higher education.
- 2) To create employment through professional education.
- 3) To adopt quality education

Appropriate Aims

Policy dialogue must arrive at a relevant, balanced set of aims describing what learners should learn and why. The development of cognitive, creative and social skills is invariably included, but there is also concern for values, both global – respect for human rights, the environment, peace and tolerance – and more locally defined, such as cultural diversity.

Subject Balance

As the goals and aims of curricula are reflected in the subjects taught in schools, there is a policy debate regarding how subjects are defined, how many are taught and the time allocated to each. In practice, the number of subjects or subject areas listed in official curricula around the world has changed relatively little over the last two decades.

Good Use of Time

Research shows consistent positive correlations between instruction time and student achievement, at both primary and secondary level. Significantly, this relationship appears stronger in developing countries.

IV) RESEARCH METHODOLOGY :

Researcher felt uneasy as and when quality education is tolerated or neglected due to political influences today. And so essential information is collected through the Primary data i.e. analytical and descriptive data is collected by an interview of the educationist, eminent professors and the teachers and secondary data is collected through the reference books and educational journals.

Regulatory Framework in Higher Education

Massive and complex machinery manages the Indian education system. Education being on the concurrent list of the Constitution, its responsibility is shared between the Union Government and State Governments. The predominant bulk of the schooling system lies within the ambit of State Governments, while higher education is mostly run by the Union. For the school system, curriculum is largely determined by the National Council of Educational, Research and Training (NCERT), a central body. All monitoring and supervision of schools at the grassroots level is carried out by the education departments of State Governments, or local bodies, Examinations are conducted by 35 boards.

For professional and vocational streams, there are centralized bodies that grant recognition and lay down functional norms. Thus, the All India Council for Technical Education (AICTE) supervises professional colleges, in collaboration with various professional bodies like Medical Council of India. Some professional institutions are run directly by the Central Government, including the famous IITs and IIMs. On the other hand, Industrial Training Institutes (ITI), which form the back bone of the vocational stream, are run by the Labour Ministry. The National Council for Teacher Education (NCTE), another Central body, supervises the training of teachers and setting up of teachers' education colleges. Higher education is largely controlled by the University Grants Commission, which not only funds colleges and universities, but also lays down norms for appointments and recognition.

In this maze of statutory bodies there are two which are specifically responsible for ensuring quality standards – the National Assessment and Accreditation Council (NAAC) for general colleges and universities, and the National Board of Accreditation (NBA) for professional colleges, recognized by UGC.

V) SUGGESTIONS:

Yet recent evidence suggests that, globally, annual intended instruction time has not increased. Indeed, many countries have reduced it, in part because of pressure to meet higher demand under tight resource constraints. Micro studies show that much time allocated for instruction is lost because of teacher and pupil absenteeism, shortage of classrooms, lack of learning materials and weak discipline. Although 1,000 'effective hours' of schooling per year is broadly agreed as a benchmark, few countries reach it. Better school management and more effective teaching strategies can help counter this trend.

1) Pedagogic Approaches for Better Learning

In many countries, the commonly used styles and methods of teaching do not serve children well. Practitioners broadly agree that teacher-dominated pedagogy, placing students in a passive role is undesirable.

2) Undesirable Language Policy

About 1.3 billion people – 20% of the world's population – have a 'local language' as their mother tongue. In such cases the choice of language(s) used in school is of utmost importance for the quality of teaching and learning. Evidence shows that starting instruction in the learner's first language improves learning outcome cost-effectively, reducing grade repetition and dropout rates.

3) Learning from Assessment

Regular, reliable, timely assessment is a key to improving learning achievement. At classroom level, assessment may be classified as summative (evaluating achievement through externally devised tests) or formative (diagnosing how each pupil learns through observation). The goals are to give learners feedback and to improve learning and teaching practices.

4) Need to Raise Investment in Education

Education can be the next big area of economic growth in the country. Population dividend that everyone keeps talking about cannot be reaped unless we invest in people, train them to work in Indian companies that have global standards. Despite promises by the policy planners to raise investment in education to 6% of GDP, state and central governments together have spent less than 4% of GDP on education. The 11th Five-Year Plan has proposed a four-fold increase in investment in education. Anything less than that would mean further delays in eradicating illiteracy and poverty.

5) Need to Stop Commercialization of Education

Any initiative to arrest and reverse the rapidly-deteriorating situation will have necessarily to begin with educational institutions. There is, in fact, plenty that can be done even within the existing pattern of education and academic and professional course content to raise the level of awareness and proficiency of the students, provided the 'temples of learning and scholarship' live up to that description.

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Entrepreneurship : A Need of an Hour

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The role of entrepreneurship in economic development involves more than just increasing per capita output and income; it involves initiating and constituting change in the structure of business and society. This change is accompanied by growth and increased output, which allows more wealth to be divided by the various participants. What in an area facilitates the needed change and development? One theory of economic growth depicts innovation as the key, not only in developing new products (or services) for the market but also in stimulating investment interest in the new ventures being created. This new investment works on both the demand and the supply sides of the growth equation; the new capital created expands the capacity for growth (supply side), and the resultant new spending utilizes the new capacity and output (demands side).

In spite of the importance of investment and innovation in the economic development of an area, there is still a lack of understanding of the product-evolution process. This is the process through which innovation develops and commercializes through entrepreneurial activity, which in turn stimulates economic growth.

The innovation can, of course, be of varying degrees of uniqueness. Most innovations introduced to the market are ordinary innovations, that is, with little uniqueness or technology. As expected, there are fewer technological innovations and breakthrough innovations, with the number of actual innovations decreasing as the technology involved increases. Regardless of its level of uniqueness or technology, each innovation (particularly the latter two types) evolves into and develops toward commercialization through one of three mechanisms: the government, entrepreneurship, or entrepreneurship.

Entrepreneurship has assisted in revitalizing areas of the inner city. Individuals in inner-city areas can relate to the concept and see it as a possibility for changing their present situation. One model project in New York City changed a depressed area into one having many small entrepreneurial companies.

Scientific research has little application to any social need. The few by-products that are applicable require

significant modification to have market appeal. Though the government has the financial resources to successfully transfer the technology to the marketplace, it lacks the business skills, particularly marketing and distribution, necessary for successful commercialization. In addition, government bureaucracy and red tape often inhibit the business from being formed in a timely manner.

Recently, this problem has been addressed with federal labs being required to commercialize some of their technology each year. In order to help their scientists commercialize their technology and think more entrepreneurially, some labs are providing entrepreneurial training and are working with university entrepreneurial educators.

Entrepreneurship:

Intrapreneurship (entrepreneurship within an existing business structure) can also bridge the gap between science and the marketplace. Existing businesses have the financial resources, business skills, and frequently the marketing and distribution systems to commercialize innovation successfully. Yet, too often the bureaucratic structure, the emphasis on short-term profits, and a highly structured organization inhibit creativity and prevent new products and businesses from being developed. Corporations recognizing these inhibiting factors and the need for creativity and innovation have attempted to establish an entrepreneurial spirit in their organizations. In the present era of hyper competition, the need for new products and the entrepreneurial spirit have become so great that more and more companies are developing an entrepreneurial environment, often in the form of strategic business units (SBUs).

The third method for bridging the gap between science and the marketplace is via entrepreneurship. Many entrepreneurs have a difficult time bridging this gap and creating new ventures. They may lack managerial skills, marketing capability, or financial resources. Their inventions are often unrealistic, requiring significant modification to be marketable. In addition, entrepreneurs frequently do not know how to interface with all the

necessary entities, such as banks, suppliers, customers, venture capitalists, distributors, and advertising agencies.

Yet, in spite of all these difficulties, entrepreneurship is presently the most effective method for bridging the gap between science and the marketplace, creating new enterprises, and bringing new products and services to the market. These entrepreneurial activities significantly affect the economy of an area by building the economic base and providing jobs. Given its impact on both the overall economy and the employment of an area, it is surprising that entrepreneurship has not become even more of a focal point in economic development.

ENTREPRENEURIAL CAREERS AND EDUCATION :

What causes an individual to take all the social, psychological, and financial risks involved in starting a new venture ? At first there was limited research on this aspect of entrepreneurship, but since 1985 there has been an increased interest in entrepreneurial careers and education. This increased interest has been fostered by such factors as the recognition that small firms play a major role in job creation and innovation; an increase in media coverage of entrepreneurs; the awareness that there are more entrepreneurs than those heralded in the media, as thousands upon thousands of small cottage companies are formed; the view that most large organizational structures do not provide an environment for self-actualization; the shift in employment, as women become increasingly more active in the workforce and the number of families earning two incomes grows; and the formation of new ventures by female entrepreneurs at three times the rate of their male counterparts.

In spite of this increase, many people, particularly college students, do not consider entrepreneurship as a career. A conceptual model for understanding entrepreneurial careers, indicated in Table 1.3, views the career stages as dynamic ones, with each stage reflecting and interacting with other stages and events in the individual's life-past, present, and future. This life-cycle approach conceptualizes entrepreneurial careers in nine major categories: educational environment, the individual's personality, childhood family environment, employment history, adult development history, adult non work history, current work situation, the individual's current perspective, and the current family situation.¹¹

Although there exists a common perception that entrepreneurs are less educated than the general population, this opinion has proved to be more myth than reality. Studies have found entrepreneurs overall, and female entrepreneurs in particular, to be far more educated than the general populace.¹² However, the types and quality of the education received sometimes

do not develop the specific skills needed in the venture creation and management process. For example, some female entrepreneurs are at more of a disadvantage than their male counterparts in this respect, as they frequently do not take significant business or engineering courses.

Childhood influences have also been explored, particularly in terms of values and the individual's personality. The most frequently researched personality traits are the need for achievement, focus of control, risk taking, and gender identity. Since personality traits are more thoroughly discussed in Chapter 3, it is sufficient here to indicate that few firm conclusions can be drawn from all the research regarding any universal personality traits of entrepreneurs.

The research on the childhood family environment of the entrepreneur has had more definitive results. Entrepreneurs tend to have self-employed fathers, many of whom are also entrepreneurs. Many also have entrepreneurial mothers, although this aspect did not receive much research attention until the last decade. This lack of research emphasis has limited the amount of information available on entrepreneurial mothers. The family, particularly the father or mother, plays an important role in establishing the desirability and credibility of entrepreneurship as a career path. As one entrepreneur said: "My father and mother always encouraged me to try new things and do everything very professionally. They wanted me to be the very best and have the freedom and independence of being my own boss."

Employment history also has an impact on entrepreneurial careers, in both a positive and negative sense. On the positive side entrepreneurs tend to have a higher probability of success when the venture created is in their field of work experience. This increased success rate makes the providers of risk capital particularly concerned when this work experience is not present. Negative displacement (such as dissatisfaction with various aspects of one's job, being fired or demoted, being transferred to an undesirable location, or having one's spouse take a new position in a new geographic area) encourages entrepreneurship, not only in the United States but in other cultures as well.

Although no definitive research has been done on the adult development history of entrepreneurs, it appears to also affect entrepreneurial careers. One's development history has somewhat more of an impact on women, since they tend to start businesses at a later stage in life than men, usually after having experienced significantly more job frustration.

There is a similar lack of data on adult family/nonwork history. Although there is some information on entrepreneurs' marital and family situations, the available

data add little to our understanding of entrepreneurial career paths.

The impact of the current work situation has received considerably more research and attention. Entrepreneurs are known for their strong work values and aspirations, their long workdays, and their dominant management style. Entrepreneurs tend to fall in love with the organization and will sacrifice almost anything in order to ensure its survival. This desire is reflected in the individual entrepreneur's current career perspective and family / nonwork situation. The new venture usually takes the highest priority in the entrepreneur's life and is the source of the entrepreneur's self-esteem.

While in college, few future entrepreneurs realize that they will pursue entrepreneurship as their major life goal. Even among the minority that do, relatively few individuals will start a business immediately after graduation, and even fewer will prepare for a new venture creation by working in a particular position or industry. This mandates that entrepreneurs continually supplement their education through books, trade journals, seminars, or taking courses in weak areas. Generally, skills that need to be acquired through seminars or courses include creativity, financing, control, opportunity identification, venture evaluation, and deal making.

Entrepreneurship education is a fast growing area in colleges and universities in the United States and Europe. Many universities offer at least one course in

entrepreneurship at the graduate or undergraduate level, and a few actually have a major or minor concentration in the area. Since the area is so new, the U.S. Department of Education has not yet separated entrepreneurship from small business, and the statistics associated with entrepreneurship are not as accurate as other educational statistics in more established educational areas.

Business management skills include those areas involved in starting, developing, and managing any enterprise. Skills in decision making, marketing, management, financing, accounting, production, control, and negotiation are essential in launching and growing a new venture. The final skill area involves personal entrepreneurial skills. Some of these skills differentiate an entrepreneur from a manager. Skills included in this classification are inner control (discipline), risk taking, innovativeness, persistence, visionary leadership, and being change oriented.

These skills and objectives form the basis of the modular approach to an entrepreneurship curriculum. By laying out the modules, a course or sequence of courses can be developed, depending on the needs, interests, and resources of the particular university. This modular approach helps ensure that the most important areas of the field are covered in the courses offered, whether on a quarter or semester basis or involving one or a series of courses.



महाराष्ट्रातील पर्यटन आणि पर्यटनाचे परिणाम

– डॉ. संदीपन गव्हाळे

अर्थशास्त्र विभाग प्रमुख

अण्णासाहेब वाघिरे, ओतूर ता. जुन्नर, जिल्हा - पुणे

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सारांश -

पर्यटन हे फुरसतीचा वेळ घालविण्याचे एक साधन म्हणून जगभरात अतिशय लोकप्रिय झाले आहे. २००० च्या शतकाच्या अखेरीस आलेल्या जागतिक मंदीने व कश्ल१ फ्लूच्या साथीने २००८ च्या मध्यापासून ते २००९ च्या अखेरपर्यंत रोडावलेल्या पर्यटनात वाथ होऊन २०१२ मध्ये जागतिक पर्यटकांच्या संख्येने १०० कोटीचा इतिहासा घडविला. आंतरदेशीय पर्यटन उत्पन्न (आंतरदेशीय देणे जमाखात्यातले पर्यटनावरचे उपखाते) २०११ मध्ये १.०३ लाख कोटी अमेरिकनडॉलर (७४ हजार कोटी युरो) इतके वाढले. २०१० च्या तुलनेत ३.८% अधिक होते. २०१२ मध्ये चीन जगातील पर्यटनावर सर्वात जास्त खर्च करणारा देश बनला आणि त्याने अमेरिका व जर्मनी यांना त्याबाबतीत मागे टाकले. चीन व उदयोन्मुख राष्ट्रे ह्यांचा पर्यटनावरचा खर्च गेल्या दशकात लक्षणीय वाढला आहे.

सर्वात प्रथम म्हणजे पर्यटनाकडे बघण्याची आपली दृष्टी बदलायला हवी. पर्यटन हा महाराष्ट्राच्या विकासाचा एक महत्वाचा पैलू आहे, स्थानिकांना बसल्याजागी उत्पन्नाचं एक नवीन साधन निर्माण होईल आणि आपली संस्कृती टिकवायलाही मदत होईल. हा तिहेरी हेतू साध्य करण्यासाठी पर्यटनाचा विकास आपण करायला हवा. पर्यटन वाढीत स्थानिक लोकांचा सहभाग जितका जास्त असेल तितका त्या गावाचा तसेच नगराचा विकास लवकर होऊ शकतो. रस्ते, वीज, पाणी यासारख्या मुलभूत सुविधा पर्यटनाच्या विकासाच्या विचाराने लवकरात लवकर पुरवता येऊ शकतील. स्थलांतर रोखल्यामुळे शहरावर अतिरिक्त ताण येणार नाही आणि युवक वर्ग आपापल्या ठिकाणीच राहिल्याने तिथला विकास होण्यासही मदत होईल.

मुख्य शब्द - पर्यटन, महाराष्ट्रातील, स्थानिक, आर्थिक, परिणाम

प्रस्तावना -

पर्यटन म्हणजेच एक प्रवास, एक मनोरंजन किंवा श्रम, विश्राम, क्षण आनंदतसेच फुरसतीचा वेळ आहे. जागतिक पर्यटन संस्थापर्यटक म्हणजे ते लोक जे आपल्या सामान्य वातावरणाच्या बाहेर प्रवास करतात आणि राहतात, हा दौरा मनोरंजन, व्यवसाय, इतर कारणांसाठी एका वर्षापेक्षा जास्त काळ केला जातो, तो त्या ठिकाणी कोणत्याही विशिष्ट क्रियेशी संबंधित नाही. आहे एक मनोरंजन क्रिया म्हणून पर्यटन जगभरात लोकप्रिय

झाले आहे.

श्रीमंत लोक नेहमीच जगापासून दूर जगातील सर्वात मोठ्या इमारती आणि कलाकृतींवर प्रवास करतात, म्हणून तेनवीन भाषा शिकण्यासाठी नवीन भाषा शिकतात, संस्कृतीचा अनुभव वर्षानुवर्षे एकाच गावी राहणाऱ्या स्थानिक लोकांना आपल्या गावाबद्दल खडानखडा माहिती असते. ह्या माहितीचा उपयोग पर्यटन विकासासाठी उत्तमरीत्या करून घेता येऊ शकतो. इतिहासकार, पुरातत्व विभागातील संशोधक, त्याच्या विषयातील तज्ञमंडळी इ. च्या मदतीनं प्रत्येकस्थळा विषयीची समग्रमाहिती सुद्धास्था निकांनी एकत्र केल्यास पर्यटन स्थळाचं आकर्षण वाढू शकतं. तरुण, सुशिक्षित युवक-युवती पर्यटन दौऱ्यासचं सर्व व्यवस्थापन पाहण्याचं (सी शीरी) आणि वाटाड्या (सीळवश) म्हणूनही प्रशिक्षण घेऊ शकतील. प्रेक्षणीय स्थळांचा इतिहास, सांस्कृतिक माहिती, त्या स्थळामुळे असलेलं त्यागावाचं भौगोलिक महत्व, इ. सारख्या गोष्टींचा अंतर्भाव या प्रशिक्षणात असावा. हा युवक वर्ग पर्यटकांसाठी आपल्या गावाचं प्रतीनिधित्व करू शकतो. तिथली स्थानिक आकर्षणं, खाद्य संस्कृती, कला-कौशल्य, जैव-वैविध्ययाची माहिती पर्यटकांना सांगू शकतो. ज्या मुला-मुलींमध्ये भाषा कौशल्य असेल ते एखादी परकीय भाषा शिकू शकतात, जेणेकरून त्यांना दुभाषे म्हणून काम करता येईल. यासर्वामुळे स्थानिकांना रोजगाराच्या संधी उपलब्ध होतील.

संशोधनाचे उद्दिष्टे -

१. पर्यटन संकल्पना अभ्यासणे.
२. महाराष्ट्र पर्यटन अभ्यासणे.
३. स्थानिक लोकांचा सहभाग अभ्यासणे.
४. पर्यटनाचे परिणाम अभ्यासणे.

महाराष्ट्रातील पर्यटन -

महाराष्ट्राच्या दृष्टीने पर्यटनाला अनन्य साधारण महत्त्व आहे. महाराष्ट्राला ऐतिहासिक वारसा देखील लाभला आहे. नैसर्गिक साधनांनी महाराष्ट्र सधन आहे. थोडक्यात महाराष्ट्रात पर्यटनाला चालना सहज मिळू शकते यावर दुमत नाही. हिमच्छदित प्रदश सोडला तर महाराष्ट्राला अभयारण्य, डोंगरदऱ्या, सह्याद्री पर्वत, गडकिल्ले, समुद्र किनारे, तीर्थक्षेत्र देखील लाभले आहे तसेच मोठमोठी जलाशय असणारी धरण शेत्रे देखील आहेत. अश्या विविधतेमुळे महाराष्ट्राचे सौंदर्य खुलून दिसते. पर्यटनाच्या बाबतीत येवाठी विविधता महाराष्ट्रात असली तरी पर्यटकांचे खरे आकर्षण हे समुद्र किनारे आणि गडकिल्ले आहेत. कारण महाराष्ट्र

हा दुर्गाचा प्रदेश आहे. इतिहासाची आवड आणि इतिहास जाणून घेणारे पर्यटक महाराष्ट्राच्या पर्यटन विकासासाठी खूप मोठी संधी आहे.

महाराष्ट्राला लाभलेली आणखी एक सुवर्ण संधी म्हणजे धार्मिक पर्यटन हे सुद्धा आहे. महाराष्ट्रात विविध धर्माची, पंथांची विविध धार्मिक स्थळे देखील आहेत जी पर्यटनाच्या दृष्टीने अतंत्य आवश्यक मानली जातात. निरनिराळ्या आराध्य दैवतांची स्थळे देखील महाराष्ट्रात दिसून येतात. विविध संतांची जन्म भूमी आणि कर्म भूमी देखील महाराष्ट्र असल्याने महाराष्ट्राच्या पर्यटनात तेजी येते.

सांस्कृतिक पर्यटनाच्या दृष्टीने महाराष्ट्र हे खूप वैभव संपन्न आहे. महाराष्ट्राला लाभलेल्या विविध कला संस्कृतीमुळे पर्यटन व्यवसाय आणखी वृद्धिंगत होऊ शकते. पर्यटनात वाढ होण्यासाठी विविध टूर रिझिडन्सची आखणी करणे देखील विकासाच्या दृष्टीने महत्वाचे आहे. अश्या पौकेज च्या माध्यमातून लहान समूहाने पर्यटक आकर्षित होतील आणि त्यांची योग्य व्यवस्था करणे देखील सोपे होईल. पर्यावरणाच्या दृष्टीने शाश्वत विकास देखील या माध्यमातून सध्या करता येईल. महाराष्ट्रात विविध पर्यटन स्थळे पर्यटकांना आकर्षित करीत असली तरी काही पर्यटक स्थळांचा विकास करणेही गरजेचे आहे.

पर्यटनाचे परिणाम -

पर्यटन आधुनिक काळात एक महत्वाची बाब आहे. पर्यटनाचा विकास समाजावर विविध परिणाम करतो. हे परिणाम अनुकूल आणि प्रतिकूल अश्या दोन्ही प्रकारचा असतो.

सामाजिक परिणाम -

- स्थानिक लोकांच्या जीवनात सामाजिक बदलांच्या संदर्भात उद्भवणारे प्रभाव प्रतिबिंबित करतात.यात लोकप्रिय संस्कृतींचा इतरांवर कसा प्रभाव पडतो, पायाभूत सुविधांमधील सुधारणा, पारंपारिक हस्तकला व परंपरा पुनरुज्जीवन, जीवनशैलीत बदल, आंतर सांस्कृतिक संप्रेषण आणि समजातील बदल यांसारख्या प्रभावांचा समावेश आहे.
- वाढत्या गुन्हेगारीचे दर, पारंपारिक संस्कृती, आदिवासी संस्था, त्यांची संस्कृती आणि बाह्य लोकांकडून त्यांचे शोषण केले जाणारे स्रोत इत्यादी म्हणून नकारात्मक प्रभाव दिसतो.

आंतरराष्ट्रीय परिमाण -

- शांतता-निर्माण आणि मदत निराकरण प्रक्रियेत पर्यटन महत्त्वपूर्ण भूमिका बजावू शकते,समुदाय सहभाग आणि सशक्तीकरण, क्षमता वाढवणे आणि प्रशिक्षण आणि संघर्षानंतरच्या समाजांमध्ये लोकसहभाग यातून शांती प्रक्रिया पर्यटनाच्या माध्यमातून पुढे नेण्यासाठी./ खासगी क्षेत्राची भागीदारी महत्वाची बाब आहे.
- पर्यटनावरील विश्वास आणि सद्भावनाचा वाहक आहे. संस्कृती समजून वृत्तीबदलू शकतात आणि शांती मिळू शकते.दारिद्र्य निर्मूलन, सांस्कृतिक जतन आणि पर्यावरण संरक्षणासमोरील योगदानामुळे शांतता इमारतीत पर्यटनाची

भूमिकादेखील असू शकते.

आर्थिक परिणाम -

- पर्यटन उद्योग यजमान देश आणि पर्यटकांच्या मूळ देश दोघांसाठी भरीव आर्थिक फायदे मिळवितो. विशेषतः विकसनशील देशांमध्ये एखाद्या परिसराचे पर्यटनस्थळ म्हणून स्वतः ची जाहिरात करण्याचा मुख्य हेतू म्हणजे आर्थिक फायदा होय.
- एक आकर्षण म्हणून पर्यावरण - वातावरणात, लोकांबद्दल निसर्ग आणि वातावरणाशी जवळीक साधून पर्यावरणाकडे लोकांची आवड वाढविण्याची आणि पर्यावरणाच्या समस्यांविषयी जागरूकता वाढविण्याची शक्यता आहे.या कनेक्टिव्हिटीमुळे लोकांमध्ये निसर्गाचे महत्त्व अधिक जागरूकता वाढू शकते आणि पर्यावरणाचे संवर्धन करण्यासाठी पर्यावरणाविषयी जागरूक वर्तन आणि क्रियाकलापांना प्रोत्साहन मिळू शकते.

पर्यावरणावरील परिणाम -

- पर्यावरणीय संरक्षण, संवर्धन आणि जैविक विविधता पुनर्प्राप्ती आणि नैसर्गिक संसाधनांच्या शाश्वत वापरासाठी पर्यटन महत्त्वपूर्ण योगदान देऊ शकते.प्राचीन आकर्षणे आणि नैसर्गिक क्षेत्र त्यांच्या आकर्षणामुळे मौल्यवान वारसा म्हणून चिन्हांकित केले आहेत आणि त्यांचे आकर्षण टिकवून ठेवण्याची गरज राष्ट्रीय उद्याने आणि वन्यजीव उद्याने तयार करण्यास प्रोत्साहित करू शकते.
- जरी जगातील बरीच क्षेत्रे बाग आणि संरक्षित क्षेत्रे म्हणून संरक्षित केली गेली असली तरी पर्यटनाच्या विकासाचे गंभीर नकारात्मक परिणाम होऊ शकतात.

निष्कर्ष -

- पर्यटन लोकांना आवडणारी आणि आनंदाचा क्षण आहे.
- पर्यटनामुळे स्थानिकांना रोजगार उपलब्ध होतो.
- पर्यटनामुळे स्थानिक लोकांचे स्थलांतरण थांबते.
- पर्यावरण समाजावर विविध प्रकारचे परिणाम करतात.

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पर्यटन – महत्व आणि आव्हाने

- संदीपन गव्हाळे

अर्थशास्त्र विभाग प्रमुख

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सारांश -

दुसऱ्या महायुद्धानंतर जगाची पर्यायाने समाजाची परिस्थिती बदलली. मनुष्यस्वतासाठी जीवनांत, राहणीमानात बरेच सकारात्मक बदल करू लागला. ज्यामुळे देशातच नव्हे तर देशाबाहेरील पर्यटनाला देखील चालना मिळाली.

श्रीमंत लोक नेहमीच जगातील सर्वात मोठ्या इमारती, हॉटेल आणि कलाकृती बघण्यासाठी आणि त्याचा आनंद घेण्यासाठी प्रवास करतात, नवीन भाषा शिकण्यासाठी नवीन ज्ञान घेण्यासाठी, तसेच नवीन संस्कृतींचा अनुभव घेण्यासाठी आणि नवीन आणि भिन्न प्रकारच्या चवदार पाककृती जाणून घेण्यासाठी देखील विविध क्षेत्रात पर्यटन होत असताना दिसून येते. मानवाच्या विकासासाठी आणि आनंदासाठी, भारतीय पुरातन ग्रंथांमध्ये शांती आणि ज्ञानाचे समाधान आणि ज्ञान यासाठी पर्यटन अतिशय महत्त्वपूर्ण मानले जाते. आपल्या भारत देशातील ऋषीमुनींनीही पर्यटनाला सुरुवातीला महत्त्व दिले असे दिसून येते

मुख्य शब्द - पर्यटन, प्रवास, मानव, संस्कृती, आनंद.

प्रस्तावना -

पर्यटन म्हणजेच एक प्रवास तसेच आनंदाचे क्षण असे प्रामुख्याने म्हटले जाते. पर्यटन हे मानवी जीवनातील एक अविभाज्य अंग आहे. मनोरंजन क्रिया म्हणून पर्यटन जगभरात लोकप्रिय असणारी एक बाब आहे. प्राचीन काळात पर्यटन हे अतिशय महत्वाचे होते तसेच मानवी जीवनाचा अविभाज्य भाग देखील हे पर्यटन होते. प्राचीन काळात विविध उद्देश समोर ठेऊन प्रवास केला जात असे. ज्यात धार्मिक यात्रा, नवीन प्रदेश किंवा नवीन स्थळांचा शोध घेणे यांचा प्रामुख्याने समावेश असायचा, म्हणजेच या पर्यटनाचे मुळ प्राचीन काळात देखील दिसून येते. पर्यटनामागील उद्देश किंवा ध्येय हि काही नवीन नाहीत शिवाय त्याला लोकप्रियता देखील आहे. मात्र प्राचीन प्रवास आणि आधुनिक पर्यटन यात फार तफावत आहे. आधुनिक काळात पर्यटनाने एक विशिष्ट पातळी गाठून आर्थिक विकासात हातभार लावला आहे. सद्याच्या काळात तर विकली ऑफ हि संकल्पना आली ज्यामुळे या पर्यटनाला आणखीनच महत्त्व प्राप्त झाले. या पर्यटनाला आंतरराष्ट्रीय महत्त्व देखील मिळाले आहे. दुसऱ्या महायुद्धानंतर पर्यटनात खूप वाढ झालेली दिसून येते. प्रवास आणि पर्यटन हा भारतातील सेवा क्षेत्रातील सर्वात मोठा उद्योग

आहे. यात प्रामुख्याने सांस्कृतिक, वैद्यकीय, व्यवसाय आणि क्रीडा पर्यटन प्रदान करते. या क्षेत्राचे मुख्य उद्दीष्ट म्हणजे पर्यटन विकसित करणे आणि प्रोत्साहन देणे.

जागतिक पर्यटन संस्था देखील पर्यटनाचे महत्त्व नाकारत नसून हे अत्यंत महत्वाचे आहे हे स्पष्ट करते. २००७ मध्ये ९०३ दशलक्षाहून अधिक आंतरराष्ट्रीय पर्यटकांच्या आगमनानंतर २००७ च्या तुलनेत ६.७% वाढ नोंदविण्यात आली. २००८ मध्ये आंतरराष्ट्रीय पर्यटन माध्यमातून झालेली प्राप्ती ६५६ अब्ज डॉलर्स एवढी होती. जागतिक अर्थव्यवस्थेत अनिश्चितता असूनही, पर्यटनाद्वारे होणारी प्राप्ती दर वर्षी वाढतच होती. जागतिक पर्यटन संघटना (वर्ल्ड टूरिझम ऑर्गनायझेशन) (यूनॅडब्ल्यूटीओ) यांचा असा अंदाज आहे की, आंतरराष्ट्रीय पर्यटनात नेहमी वाढ होत राहिल.

पर्यटन हे विकसित होण्यामागील विशेष कारण हे आराम किंबहुना आरामाचा संकल्पनेत झालेले बदल हे देखील असू शकते. वाढते राहणीमान हे देखील त्या मागील एक कारण आहे. हा प्रवास आणि पर्यटन वाढण्यामागे एक महत्त्वपूर्ण कारण वाढती वाहतूक व्यवस्था, उपलब्धता आणि त्यांची गती हे आहे. त्यामुळे आंतरराष्ट्रीय पर्यटनाला देखील चालना मिळाली. पर्यायाने पर्यटन दिवसात म्हणजेच पर्यटन कालावधीत देखील वाढ झालेली दिसून येते. वाहतूक व्यवस्थेत वाढ झाल्याने दूरवरील प्रवास किंवा अंतर पार करणे शक्य असल्याने, वाहतूक सोई सहज उपलब्ध असणाऱ्या स्थळांच्या ठिकाणी पर्यटकांची गर्दी देखील दिसून येते. मानवाच्या विचाराची प्रगल्भता वाढल्याने कठीण समजल्या जाणाऱ्या ठिकाणी सुद्धा प्रवास आणि पर्यटनात वाढ झालेली दिसून येते.

संशोधनाचा उद्देश -

१. पर्यटन इतिहास जाणून घेणे.
२. पर्यटनातील वाढ अभ्यासणे.
३. पर्यटनाचे महत्त्व अभ्यासणे.
४. पर्यटन समोरील आव्हाने अभ्यासणे.

पर्यटनाची व्याख्या -

प्रवास ह शब्द latin भाषेत TORNOS या शब्दापासून तयार झाला आहे. पर्यटन हि संकल्पना प्रवास याच शब्दाशी निगडित आहे. TORNOS म्हणजे वर्तुळाकार प्रवास म्हणजेच सद्ध्याचे पकेज टूर्स हा

शब्द प्रथम इ.स. १९४३ मध्ये वापरला गेला. जाच अर्थ एकाठीकाणाहून दुसऱ्या ठिकाणी जाने असा होतो. तसेच ढीं या शब्दाची उत्पत्ती होण्यामागे Torah हा हिब्रू शब्द देखील आहे. ज्याचा अर्थ शोध घेणे असा होतो. Torah हे जू लोकांचे कायदा विषयक ग्रंथ आहे.

१. जागतिक पर्यटन संस्थापर्यटकम्हणजे ते लोक जे आपल्या सामान्य वातावरणाच्या बाहेर प्रवास करतात आणि राहतात, हा दौरा मनोरंजन, व्यवसाय, इतर कारणांसाठी एका वर्षापेक्षा जास्त काळ केला जातो, तो त्या ठिकाणी कोणत्याही विशिष्ट क्रियेशी संबंधित नाही.
२. हूनझिकर आणि क्रॅफ (१९७१) यांनी पर्यटनाची व्याख्या अशी केली की पर्यटन हे अनिवासींच्या प्रवास आणि मुक्कामातून उद्भवणार्या संबंध आणि प्रक्रियेचा योग आहे. हे लोक येथे कायमस्वरूपी वास्तव्य करत नाहीत आणि येथे कोणताही क्रियाकलाप मिळवत नाहीत.
३. मॉकिंटोश आणि गोल्डनर पर्यटना आणि इतर अभ्यागतांना आकर्षित आणि होस्ट करण्याच्या प्रक्रियेत पर्यटक, व्यापार पुरवठा करणारे, यजमान सरकार आणि यजमान समुदाय यांच्यातील परस्पर व्यवहारातून निर्माण झालेल्या संबंध आणि घटनेचा योग म्हणजे पर्यटन

पर्यटनाचे फायदे -

१. शहरीकरण, उत्पादनाचे यांत्रिकीकरण, उपभोगाचे नीरसपणा तसेच माहितीच्यालक्षणीय प्रमाणात वाढल्यामुळे एखाद्या व्यक्तीने पूर्वीपेक्षा अधिक थकलेलकार्य केले. थकवा ही बाब मानसिकदृष्ट्या स्वभावाची आहे आणि कॉन्ट्रास्ट (तणावमुक्ती) आवश्यक आहे. चिंताग्रस्त तणाव आणि एकरूपतेशी संबंधित असलेल्या कामाच्या जीवनाचा खरा कॉन्ट्रास्ट कायमस्वरूपी निवासस्थान आणि कामाची जागा सोडत आहे आणि सर्वात महत्त्वाचे म्हणजे दृश्यास्पद आणि सामान्य जीवनशैलीत बदल प्रदान करणे. हे सर्व पर्यटनामुळे शक्य होऊ शकते.
२. रिकामा वेळेचा योग्य वापर. उत्पादक शक्तींच्या विकासांमुळे कामगारांचा मोकळा वेळ वाढतो. या संदर्भात, त्याच्या तर्कसंगत वापराची समस्या उद्भवली. समाजाचे कार्य म्हणजे सहकामी नागरिकांना त्यांच्या मोकळ्या वेळेत सकारात्मक क्रियाकलापांकडे आकर्षित करणे, जे दारूबाजी, अंमली पदार्थांचे व्यसन, चुकीच्या स्वरूपाची अनौपचारिक संघटना निर्माण करण्यापासून त्यांना विचलित करते.
३. स्वस्त दरात लोकांद्वारे दिले जाणारे दौरे आणि सहल यांची यादी त्यांना पर्यटकांच्या सुट्टीकडे आकर्षित करते. पर्यटक उत्पादनांच्या ग्राहकांना आपला मोकळा वेळ वापरून एक दिवस सुट्टी, सुट्टीतील सुट्टी, पर्यटकांच्या मार्गावर आणि सहलीवर तर्कसंगतपणे फायदा आणि

व्याज घालविण्याची संधी मिळते.

४. पर्यटन (शनिवार व रविवार मार्ग) च्या सहाय्याने आठवड्याच्या शेवटी (आठवड्याचा शेवट) विश्रांती उपक्रमांचे आयोजन ग्राहकांना हा वेळ तर्कसंगत आणि व्याज सह खर्च करण्यास मदत करते.
५. लहान सहली कितीही वारंवार केल्या तरी पुरेसा विश्रांती घेऊ नका. सुट्टी आणि सुट्टीच्या कालावधीत विश्रांती घेणे हे पर्यटन संस्थांचे कार्य आहे आणि आम्ही असे म्हणू शकतो की हे योग्य स्तरावर केले जाते त्या प्रमाणात समाजाचे नैतिक आणि शारीरिक आरोग्य काही प्रमाणात अवलंबून असते.
६. तरुणांना हायकिंग ट्रेल्स, रोमांचक केकिंग आणि राफ्टिंग ट्रिप, जंगल आणि पर्वत यांच्या माध्यमातून सुरक्षा आणि पर्यावरणीय आवश्यकतांचे निरीक्षण करून आकर्षित करू शकतील अशा विविध टूरिस्ट क्लबचा विकास निरोगी पिढीच्या निर्मितीस हातभार लावू शकतो.
७. नोकरीची सुरक्षा. त्याच वेळी, विशिष्ट क्षेत्रात पर्याप्त प्रमाणात विकसित पर्यटन उद्योगाची उपस्थिती आपल्याला बऱ्याच कामगारांच्या रोजगाराची समस्या सोडविण्यास परवानगी देते, कारण पर्यटन हा सर्वात श्रम-केंद्रित उद्योगांपैकी एक आहे,
८. पर्यटनाच्या पायाभूत सुविधांचा विकास कामगार संसाधनांना आकर्षित करतो, त्यामध्ये पर्यटकांच्या सेवेत त्यांचा सहभाग असतो. म्हणूनच, पर्यटनाचा विकास बेरोजगारीच्या घटनेस कमी करण्यास मदत करतो.
९. विशिष्ट प्रदेशातील पर्यटन उद्योग स्थानिक लोकांसाठी केवळ रोजगार उपलब्ध करून देत नाही तर काम आणि राहण्यासाठी अतिरिक्त कामगार संसाधने देखील आकर्षित करतो, ज्यामुळे या भागाची लोकसंख्या वाढते.
१०. कामगारांचे जीवनमान सुधारणे. लक्षणीय कामगार स्रोत वापरण्याची क्षमता, नफा आणि तुलनेने त्वरित परतफेड या संदर्भात पर्यटनाचा लोकसंख्येचे जीवनमान सुधारित करण्याचा थेट किंवा अप्रत्यक्ष प्रभाव आहे.
११. अप्रत्यक्ष प्रभाव पर्यटन केंद्रांमध्ये विस्तृत सेवा नेटवर्कच्या विकासाशी निगडित आहे.

पर्यटनासामोरील आव्हाने -

१. टूरिझम इन्फ्रास्ट्रक्चर - ही परिवहन, सामाजिक आणि पर्यावरणीय पायाभूत सुविधांची पुरवठा साखळी आहे ज्यामध्ये विमानतळ, मोठे रस्ते आणि रेल्वेमार्गाद्वारे आंतरराष्ट्रीय आणि देशांतर्गत बाजारात येणाऱ्या लक्षणीय पर्यटकांचा समावेश असेल. हॉटेल). यात प्रदर्शने, कार्यक्रम आणि सेवांसाठी असलेली राष्ट्रीय रचना, राष्ट्रीय उद्याने, सागरी उद्याने आणि अभयारण्य तसेच अभ्यागत सुविधा यासारख्या पर्यावरणीय पायाभूत

- सुविधांचा समावेश आहे.
२. पर्यटनासाठी नैसर्गिक आणि मानवनिर्मित वातावरणाचा दर्जा आवश्यक आहे.
 ३. पर्यावरणाशी पर्यटनाचा जटिल संबंध आहे.यात पर्यावरणावर विपरित परिणाम करणार्या विविध क्रियाकलापांचा समावेश आहे.पर्यटनाच्या विकासाचा नकारात्मक परिणाम हळूहळू त्याच्यावर अवलंबून असलेल्या पर्यावरणीय संसाधनांचा नाश करू शकतो.
 ४. पर्यटन केवळ हवामान बदलांमध्येच योगदान देत नाही तर त्याचा संपूर्ण परिणामही करते.हवामान बदलामुळे आपत्ती, चक्रीवादळ आणि तीव्र हंगामी कार्यक्रमांची वारंवारता वाढू शकते, जे प्रभावित भागात पर्यटनावर विनाशकारी प्रभाव आणू शकते.पर्यटनाच्या इतर काही दुष्परिणामांमध्ये दुष्काळ, रोग, उष्णता विषयक बाब, तीव्र पूर (उदा. उत्तराखंड पूर), दरडी कोसळणे, नद्यांमध्ये आणि समुद्रांमध्ये प्लास्टिक काच-न्यामधील वाढ यांचा समावेश आहे.
 ५. पर्यटकांच्या गरजा भागविणार्या व्यावसायिकांची कमतरता.
 ६. भारतात हजारो अविश्वसनीय पुरातत्व साइट आहेत ज्यांचे नूतनीकरण आणि देखभाल आवश्यक आहे
 ७. एकूणच व्यापक पर्यटन धोरणाचा अभाव आहे.यासंदर्भातले कार्यक्रम बऱ्याच मंत्रालयेचालवतात, त्या मुळे राज्य आणि केंद्र यांच्यातही पर्यटनाशी संबंधित विषयांवर वादनिर्माण होतो.
 ८. पर्यटकांवर वारंवार होणाऱ्या हल्ल्यांमुळे हा दुर्भावनायुक्त घटक बनला आहे.
भारतात नुकत्याच झालेल्या आफ्रिकांविरुद्ध अमानुष हिंसाचार ही एक गंभीर घटना आहे.विशेषतः महिलांच्या सुरक्षिततेच्या बाबतीत (गोव्यात जर्मन मुलीची हत्या आणि त्यानंतरच्या खटल्यात) हे सत्य आहे.

९. पर्यटकांवर वारंवार होणाऱ्या हल्ल्यांमुळे हा दुर्भावनायुक्त घटक बनला आहे.
भारतात नुकत्याच झालेल्या आफ्रिकांविरुद्ध अमानुष हिंसाचार ही एक गंभीर घटना आहे.विशेषतः महिलांच्या सुरक्षिततेच्या बाबतीत (गोव्यात जर्मन मुलीची हत्या आणि त्यानंतरच्या खटल्यात) हे सत्य आहे.

निष्कर्ष -

१. पर्यटनासाठी वाहतूक व्यवस्था असणे गरजेचे आहे.
२. पर्यटना ठिकाणी सुरक्षितता असणे गरजेचे आहे.
३. पर्यावरण स्वच्छतेकडे लक्ष द्यायला हवे.
४. महिलांच्या सुरक्षिततेसाठी सुरक्षा यंत्रणा पर्यटन स्थळी असावी.

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रत्नागिरीच्या खेड तालुक्यातील किल्ला रसाळगड

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इतिहास विभाग,
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पार्श्वभूमी : -

दक्षिण कोकणच्या रत्नागिरी जिल्ह्यातील खेड तालुक्याची कितीतरी घटकांनी ओळख करून दिली जाते. खेड तालुक्यात अनेक पुरातत्वीय अवशेष आढळतात. त्या मध्ये किल्ले, लेणी, मंदिरे, पूल आणि मूर्ती-शिल्प इत्यादी घटक आहेत. त्यातील महत्वाचा घटक 'किल्ला' किंवा 'गड' आहेत. त्यामुळे खेडला ऐतिहासिक महत्त्व प्राप्त झाले आहे. खेड तालुक्यात महिपत गड, रसाळ गड, पाल-- दुर्ग असे ऐतिहासिक गड किंवा किल्ले आहेत. 'रसाळगड' हा छत्रपती शिवाजी महाराजांच्या पद-स्पर्शाने पावन झालेला मुकुटमणी गड म्हणून ओळखला जातो. प्रत्यक्ष या गडाकडे पाहिल्यानंतर शिवकालीन अनेक स्मृती जाग्या झाल्याशिवाय राहत नाहीत. या परिसरातील जुने-जाणते लोक आजही छत्रपती शिवाजी महाराजांनी या ठिकाणी काही काळ वास्तव्य केले होते असे म्हणतात. भौगोलिक दृष्ट्या रसाळगड हा खेड शहराच्या पूर्वेस सुमारे २२ कि. मी. अंतरावर असून गडावर पोहचण्यासाठी खेड पासून घेरा रसाळगडा पर्यंत एस. टी. महामंडळाची बस व्यवस्था आहे. घेरा- रसाळगड गावा पासून सुमारे ५ की. मी. पर्यंत डोंगररांगा पायी चढून चालत जावे लागते.

दंतकथा : -

रसाळगडाच्या निर्मिती विषयी अनेक दंतकथा प्रचलित आहेत, येथील लोकांशी चर्चा केल्यानंतर या दंतकथा समजतात. राजा भोज यांच्या काळात या गडाची निर्मिती झाली असे येथील काही लोक सांगतात. कारण या परिसरातील लोकांच्या मते, दक्षिण भारतात राजा भोज यांची सत्ता होती. त्या वेळी राजा भोज याने रसाळगडाची निर्मिती करण्यासाठी 'रसाळ' नावाच्या सरदाराला परवानगी दिलेली होती. तर काहींच्या मते, या गडाची निर्मिती मौर्य कालखंडात झाली. यासाठी ते रसाळगड या ठिकाणी सापडलेल्या मूर्ती-शिल्प विशेषतः महिषासुर-मर्दिनी व हत्तीच्या मूर्ती या अवशेषांचे पुरावे देतात.

भौगोलिक व ऐतिहासिक माहिती : -

रसाळगडाची उंची पायथ्यापासून ३०० मीटर इतकी असून, रसाळगडाच्या तिन्ही बाजूंनी डोंगर, दऱ्या-खोऱ्या, चहुबाजूने घनदाट जंगल, अशी भौगोलिक परिस्थिती लाभलेल्या व विविधतेने नटलेल्या कोकणच्या निसर्गरम्य परिसरात अनेक वर्षे विविध आपत्तींना तोंड देत 'रसाळगड किल्ला' आजही दिमाखात उभा आहे, डोंगराची चढण चढून

वरती गेल्यावर किल्ल्यामध्ये प्रवेश करण्याकरिता कातळ-दगडाच्या पायऱ्या असून, आज काही ठिकाणच्या पायऱ्या नष्ट झाल्याचे दिसून येते. या पायऱ्या किल्ल्याच्या मुख्य दरवाज्या पर्यंत असल्याचे दिसते. किल्ल्याच्या माथ्यावरील भाग अगदी सपाट असा दिसतो. रसाळगड हा किल्ला सुमार गड, महिपतगड या दुर्गत्रयींतला आकाराने आटोपशीर परंतु अत्यंत मजबूत आणि भक्कम आहे. लांब व रुंद विस्तार फार नाही. माथ्याचे शिखरावरील क्षेत्रफळ साधारण ५ एकर आहे. परंतु, हा किल्ला मोठ्या बंदोबस्ताने जोपासला असावा असे दिसून येते. 'किल्ला' या संज्ञेला शोभतील अशी लक्षणे त्यावर आहेत. किल्ल्यामध्ये मुबलक पाणी आहे. तसेच तोफांसाठी आवश्यक असलेला दारू-गोळा साठवण्याचे बुलंद कोठार आहे. किल्ल्यावरील बाले किल्ला, किल्ल्याचे बुरुज आणि दोन दरवाजे आजही निसर्गाशी झुंज देत उभे आहेत. परंतु किल्ल्याच्या आतील वाडे आणि इतर इमारती आज कोसळलेल्या अवस्थेत आहेत. किल्ला आटोपशीर असला तरी किल्ल्याची बांधणी आणि मजबुती अतिशय भक्कम असून कोणत्याच बाजूने शत्रूला सहजा-सहजी आत येण्यास वाव नाही. उंच कड्यावर या किल्ल्याची निर्मिती केलेली असल्यामुळे इतर किल्ल्यांप्रमाणे ह्या किल्ल्यास माथ्यावर तटबंदी फार काही उंच उभारण्याची आवश्यकता भासली नसावी असे दिसून येते.

पुरातत्वीय वैशिष्ट्ये आणि खुणा : -

रसाळगडावर इतिहासाच्या असंख्य पाऊल-खुणा व अनेक वैशिष्ट्यपूर्ण गोष्टी दृष्टीस पडतात. या पूर्वी पुरातत्व खात्याच्या उत्खननातून अनेक प्राचीन व पुरातत्वीय साधने या ठिकाणी सापडली आहेत. त्यावरून शिवकालाची निशितच आठवण झाल्या शिवाय राहत नाही.

किल्ल्याचे बुरुज : - रसाळगड किल्ल्यास एकूण तीन बुरुज बांधलेले दिसून येतात. सैन्यामध्ये ज्या प्रमाणे सेनापतीला महत्त्व असते त्याप्रमाणे गडावरती बुरुज काम करत असतात. या किल्ल्याच्या पूर्व-पश्चिम आणि उत्तर दिशेला हे बुरुज दिसतात. या बुरुजांचे बांधकाम अत्यंत साध्या परंतु मजबूत कातळ-दगडात केलेले दिसते. मात्र आता त्यांची काही प्रमाणात पडझड सुरु झाली आहे. किल्ल्यावरील तोफा : - या गडावर सुरुवातीला २० तोफा उघड्यावरती इतस्थतः पडलेल्या अवस्थेत होत्या. येथे झालेल्या पुरातत्वीय उत्खनना नंतर या ठिकाणी ३७ तोफा सापडलेल्या आहेत. या तोफांवर सन लिहिल्याचे दिसून येते. देवनागरी लिपीतील अंक ०-१२-१७, ०-४-१७, ०-११-१७ असे उजवीकडून डावीकडे लिहिलेले आहेत. तोफांचे वैशिष्ट्य म्हणजे ह्या

तोफा अनेक वर्ष निसर्गाशी झुंज देत असून या तोफा अजूनही गंजलेल्या नाहीत. त्यावरून तोफांसाठी वापरलेला धातू व तंत्रज्ञान किती उच्च प्रतीचे आहे याचा अंदाज आपल्याला यतो.

किल्ल्यावरील तलाव : - गडावरती दोन तलाव आणि एक विहीर आढळते, हे तलाव खोल असून त्यात आजही बारमाही पाणी असते, या तलावांच्या कडा मजबूत दगडांनी बांधून काढल्याचे दिसून येते, एका तलावातून एक गुहा काढण्यात आली आहे अशी स्थानिक लोकांमध्ये वदंता आहे, कारण तलावातून सोडण्यात आलेला पेंढा हा सुकिल्ली नदीच्या पत्रात प्राप्त होतो अशी दंत कथा आहे.

किल्ल्यावरील दरवाजा : - किल्ल्याच्या पायऱ्या चढून गेल्यानंतर उत्तर दिशेला मुख्य प्रवेशद्वाराचे दर्शन होते, हा दरवाजा कातळ दगडात बुरुजांनी चांगला मजबूत केला आहे. बाहेरील दरवाजाच्या समोरच कोपऱ्यात मारुती या हिंदू देवतेची मूर्ती आहे. हि मूर्ती इसवी सणाच्या सतराव्या शतकातील असावी. पहिला दरवाजा ओलांडून गेल्यानंतर किल्ल्याचा दुसरा दरवाजा लागतो.

किल्ल्यावरील मंदिर : - किल्ल्याच्या मध्यभागी झोलाई-वाघजाई नावाचे पेशवेकालीन मंदिर आहे. या मंदिराचे स्तंभ पाषाण दगडात असून, ते पायाकडे चतुष्कोणी दिसतात आणि मध्यभागी अष्टकोनी दिसून येतात. असे सहा स्तंभ दिसतात. मंदिराच्या तूळ्या मात्र लाकडी आहेत. त्यावर वेल-बुट्टीदार नक्षी कोरलेली आहे. मंदिराचे छप्पर मंगलोरी कौलाचे आहे. असे असले तरी मंदिराच्या स्थापत्य रचनेवरून हे मंदिर १७ व्या शतकातील असावे, असे मत किल्ले अभ्यासक श्री. र. रा. बोरकर यांचे आहे. मंदिराच्या आत महिषासुर-मर्दीनीची मूर्ती स्थापन केली आहे. येथे तीन वर्षातून एकदा नोव्हेंबर-डिसेंबर मध्ये मोठी यात्रा भरते.

किल्ल्याची तटबंदी : -

किल्ल्याच्या माथ्यावर देवालयसमोर डोंगराचे जे दोन फाटे दिसतात ती दोन्ही तटबंदीनी मजबूत केलेली आहे. एक तटबंदी दक्षिण-पूर्व व दुसरी दक्षिण-पश्चिम जाते. आग्नेयेकडे छप्पर नसलेल्या पण बऱ्या अवस्थेत दिसते. पूर्वेकडे किल्ल्याचे एक टोक पलीकडच्या डोंगराच्या रांगेत घुसले आहे. या किल्ल्याचा देखणा आकार आणि वरून दिसणारे विहंगम दृश्य यामुळे किल्ला बघताना डोळे सुखावतात.

हा किल्ला कोणी बांधला ह्या विषयी निश्चित पुरावा मिळत नाही.

परंतु इ. स. १३४७ मध्ये सुलतान अब्दुल मुजफ्फर अलाउद्दीन बहामनी शहा यांच्याकडे हा किल्ला होता. त्या नंतर १७ व्या शतकात शिवाजी महाराजांनी हा किल्ला आपल्या साम्राज्यात घेतला. त्याच वेळी महाराजांनी ह्या किल्ल्याची बरीच डागडुजी करून हा किल्ला अधिक संरक्षणक्षम बनविला. एप्रिल १६७४ मध्ये शिवाजी राजांचा राज्याभिषेक ठरल्यानंतर चिपळूणच्या भेटीसाठी आलेल्या शिवाजी राजांनी आपल्या सैन्यासह रसाळ गडाला भेट दिल्याची माहिती मिळते.

सद्यस्थिती : -

आज रसाळगड किल्ला भारतीय पुरातत्व विभागाच्या ताब्यात आहे. सन १९९९ मध्ये श्री. रामदास भाई कदम ह्यांचा प्रयत्नामुळे किल्ल्यावरती विजेची व्यवस्था करण्यात आली आहे. व त्यांच्याच प्रयत्नाने या किल्ल्याच्या विकासाला गती मिळाली आहे. आज रसाळगडाला पर्यटन दर्जा मिळावा अशी स्थानिक व शिवप्रेमी लोकांची मागणी आहे. या किल्ल्याच्या विकासात काही स्थानिक संघटना व सामाजिक कार्यकर्त्यांचे फार मोठे योगदान आहे. त्यामध्ये शिवप्रेमी संघटना, हिंदू जन जागृती संघटना व इतिहासप्रेमी लोक किल्ला जतन करण्यासाठी योगदान देत आहे. या किल्ल्याच्या संरक्षणासाठी बांधकाम व आरोग्य सभापती श्री. शशी चव्हाण. यांचेही मोलाचे योगदान मिळाले आहे. त्यांच्याच प्रयत्नामुळे आज या किल्ल्याच्या जतन आणि संवर्धनासाठी भारत सरकारचा फंड उपलब्ध झालेला आहे. व त्या माध्यमातून किल्ल्याच्या विकासासाठी प्रयत्न केले जात आहेत. भारताचा पुरातन वारसा जतन करण्यासाठी व पर्यटन स्थळाचा दर्जा प्राप्त करून घेण्याच्या दृष्टीने अनेक व्यक्तींचे योगदान या कार्यामध्ये निश्चितच मिळत आहे.

संदर्भ ग्रंथ : -

१. गॅझेटियर ऑफ इंडिया - महाराष्ट्र स्टेट. - रत्नागिरी जिल्हा.
२. रत्नागिरी जिल्ह्यातील किल्ले. - श्री. र. रा. बोरकर.
३. भारतीय संस्कृती कोष. खंड दुसरा.
४. गड - कोट - किल्ले आणि दुर्ग. - वा. सी. बेंद्रे.
५. शिवाजींचे किल्ले व दुर्ग. - त्र्यं. श. शेजवलकर.
६. महाराष्ट्रातील पुरातत्व. - ह. धी. सांकलिया, म. श्री. माटे.
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माहितीपत्रक – एक प्रभावी मार्ग

– सौ.मृणमयी मनोज भुसाणे
(मराठी विभाग)

गोखले एज्युकेशन सोसायटीचे कला,
वाणिज्य व विज्ञान महाविद्यालय, श्रीवर्धन, जि.रायगड

प्रास्ताविक:-

आजचं युग हे स्पर्धेचं युग आहे. आजच्या स्पर्धेच्या युगात जागतिकीकरणामुळे आणि व्यापारीकरणामुळे ग्राहक अधिक चौकस आणि चिकित्सक झाले आहेत. कोणताही व्यवहार करताना आता लोकांना संबंधित व्यवहाराबद्दलची सखोल माहिती हवी असते. बारीकसारीक तपशील हवा असतो. हा तपशील घरबसल्या, लिखित स्वरूपात मिळाला तर लोकांना ते हवेच असते. लोकांची ही मानसिकता आता व्यवसायिकांनी, सामाजिक, शैक्षणिक आणि आर्थिक व्यवहार करणाऱ्यांनी; तसेच उत्पादक आणि विक्रेत्यांनी ओळखली आहे. या मानसिकतेचे समाधान करण्यासाठी जे काही निरनिराळे मार्ग उत्पादक, व्यावसायिक हाताळतात, त्यातलाच एक प्रभावी मार्ग आहे तो म्हणजे 'माहितीपत्रक'.

उद्दिष्टे :-

- 1) माहितीपत्रकाचे कौशल्य विकसित करणे.
- 2) लेखनासंबंधीचा आत्मविश्वास निर्माण करणे.
- 3) मराठी भाषेविषयीचे ज्ञान समृद्ध करणे.
- 4) माहितीपत्रकाविषयी आवड निर्माण होणे.
- 5) व्यक्तिमत्व विकास होण्यास मदत होणे.
- 6) समाजातील सामाजिक, शैक्षणिक, आर्थिक व व्यावसायिक क्षेत्रातील प्रगती होण्यास हातभार लागणे.
- 7) उत्पादक व विक्रेते यांच्या मानसिकतेचे समाधान करणे.

संशोधन पध्दती:-

सर्व सामान्य भोमधे ज्ञानाचा तोड म्हणजे संशोधन. एखाद्या विद्यासंबंधीची समर्पक माहिती गोळा करण्यासाठी जे पध्दतशीर आणि त्त्रशुद्ध अन्वोण केले जाते त्याला संशोधन म्हणतात. त्त्रीय शोधांची कला म्हणजे संशोधन होय. संशोधन ही एक विद्याविषयक कृती आहे. अध्ययन, निरीक्षण, तुलना आणि प्रयोग यांच्या मदतीने सत्याचा मागोवा संशोधनाद्वारे घेतला जातो.

संशोधन कार्याचे नियोजन करण्यासाठी संशोधन आराखडा तयार करणे आवश्यक असते. संशोधन आराखडयात संशोधनाची रूपरेषा निश्चित केली जाते. संशोधन आराखडयात नमुना निवड योजना, निरीक्षण योजना, संख्याशास्त्रीय योजना याबाबतची रूपरेषा ठरविली जाते. संशोधन

आराखडयामुळे संशोधनकर्त्याला संशोधन कार्य सुरळीतपणे करणे ाक्य होते. संशोधनासाठी तयार केलेल्या आराखडयाची प्रत्यक्ष अंमलबजावणी करण्यासाठी आराखडयाचे व्यवहार्य संशोधन आराखडयात रूपांतर केले जाते.

माहितीपत्रकाचे स्वरूप :-

माहितीपत्रक म्हणजे वैशिट्यपूर्ण माहिती देणारे परिचयात्मक पत्रक होय. माहितीपत्रक हे एक प्रकारे उत्पादने, सेवा, संस्था लोकांपर्यंत पोहोचवण्याचे साधन आहे. नवनव्या योजनांकडे, उत्पादनांकडे, संस्थांकडे लोकांनी डोकावून पाहावे यासाठीची ती एक खिडकी आहे. जनमत आर्कित करण्यासाठी ते एक लिखित स्वरूपाचे जाहीर आवाहन असते. माहितीपत्रकामुळे माहिती देणारा आणि माहिती घेणारा यांच्यात एक नाते निर्माण होण्यास मदत होते. नवीन ग्राहक मिळवण्याची, नवीन बाजारपेठ काबीज करण्याची ती पहिली पायरी आहे. माहितीपत्रकामुळे ग्राहकाला हवी असलेली माहिती ग्राहकाकडे सतत उपलब्ध राहू ाकते. माहितीपत्रक कमी वेळात, कमी खर्चात ग्राहकांपर्यंत घरबसल्या पोहोचवता येते. माहितीपत्रक हे अप्रत्यक्षपणे जाहिरातीचे कार्य करते. माहितीपत्रक वाचताक्षणीच लोकांच्या मनात कुतूहल, उत्कंठा, औत्सुक्य जागे झाले, की समजावे माहितीपत्रकाचा हेतू साध्य झाला आहे.

माहितीपत्रकाची गरज :-

माहितीपत्रकाची गरज सर्वत्र असते. अगदी फळफळावळ आणि भाजीपाला विक्रेत्यांपासून ते थेट लक्षावधी रुपयांच्या आलिशान कार विक्रेत्यांपर्यंत सर्वांना माहितीपत्रकाची आवश्यकता भासतेच. दिवाळीफराळ, रेडिमेंड कपडे, साड्या, खेळणी, किराणा माल, दिवाळी अंक, पुस्तके, स्टेशनरी, हॉटेल्स, डायनिंग हॉल, मंगल कार्यालये, फर्निचर, विद्युत उपकरणे, यंत्रसामग्री, घरगुती वापराची उपकरणे, वाहने, कारखाने, इलेक्ट्रॉनिकस उपकरणे, औधे, दुधदुभते, खादयपदार्थ इ.ची. माहितीपत्रके पाहावयास मिळतात.

नाट्यगृहे, सिनेमागृहे, सहकारी संस्था, आर्थिक आणि शैक्षणिक संस्था, सामाजिक आणि साहित्यिक संस्था, सांस्कृतिक आणि क्रीडासंस्था, कंपन्या, हॉस्पिटल्स, पर्यटन संस्था, एलआयसी, पोस्टबँका, पतपेढ्या, बचतगट इ. ठिकाणी माहितीपत्रकाची गरज असते.

कला, संगीत, छोटे मोठे अभ्यासक्रम, शेती अवजारे, बांधकाम

साहित्य, प्रवासी कंपनी, रोपवाटिका, यांसारखीच इतरही अनेकानेक क्षेत्रे आहेत. जिथे जिथे लोकमत आकर्षित करण्याची गरज असते तिथे तिथे माहितीपत्रक आवश्यक ठरते. आपले वेगळेपण, आपले वैशिष्ट्य, आपल्याकडून ग्रहकाला होणारा फायदा, या गोटी जिथे अधोरखित करायच्या असतील तिथे माहितीपत्रकाची गरज हमखास असते.

माहितीपत्रकाच्या रचनेची वैशिष्ट्ये :-

माहितीपत्रकाच्या रचनेची वैशिष्ट्ये खालीलप्रमाणे सांगता येतील.

१) 'माहिती' ला प्राधान्य :-

नावच 'माहितीपत्रक' असल्याने माहितीपत्रकात 'माहिती' ला सर्वात जास्त प्राधान्य दिले जाते. ज्या हेतूने माहितीपत्रक तयार केले जाते, त्या हेतूशी सुसंगत, अचूक माहिती दिली गेली पाहिजे. माहिती आटोपशीर, संक्षिप्त असावी. संस्थेशी संबंधित अत्यावश्यक आणि कायदेशीर माहिती (उदा. संस्था नोंदणी क्रमांक, संस्था नोंदणी दिनांक, दूरध्वनी क्रमांक, ई-मेल, वेबसाईट, संस्थेचे बोधचिन्ह, घोषवाक्य, पत्ता, पदाधिकाऱ्यांची नावे, कामकाजाची वेळ इ.) माहितीपत्रकात दिली गेलीच पाहिजे. मुख्य म्हणजे माहितीपत्रकातील माहिती वस्तुनिष्ठ, सत्य, वास्तविक असली पाहिजे. तिच्यात अतिशयोक्त, चुकीची माहिती असता कामा नये. माहितीपत्रकातील माहिती वाचनीयही असली पाहिजे. तथापि त्यात माहितीचा अतिरेक नसावा.

२) उपयुक्तता:-

आपले माहितीपत्रक उपयुक्त, परिणामकारक कसे होईल याचीही दक्षता घेतली पाहिजे. वाचून झाल्यानंतर ते चुरगाळून फेकून न देता जपून ठेवण्याची, वापरण्याची, इच्छा झाली पाहिजे. असे उपयोक्त्य माहितीपत्रकाला केव्हा प्राप्त होईल; तर जेव्हा माहितीपत्रकात वाचकाच्या (ग्राहकाच्या) जिवाळ्याची माहिती दिली जाते तेव्हा. 'माझ्या दैनंदिन जीवनातील समस्या, अडचणी, प्रश्न यांच्या सोडवणुकीसाठी हे माहितीपत्रक मला उपयोगी पडेल' असे ग्राहकाला वाटायला लावणारे माहितीपत्रक उपयुक्तच असते. माहितीपत्रकातील 'तुमच्या पालेभाज्यांवर अतिरिक्त कीटकनाशके मारली आहेत का?' 'दुधातली भेसळ ही अशी ओळखा' अशा वाक्यांकडे वाचकांचे लक्ष गेले, की 'हरी व्यक्तींनाही कृती-प्रदर्शनाविधीचे माहितीपत्रक उपयोगी वाटू लागते.

३) वेगळेपण :-

इतरांच्या माहितीपत्रकांपेक्षा आपले माहितीपत्रक वेगळे आणि वैशिष्ट्यपूर्ण कसे असेल याचीही काळजी घेतली पाहिजे. हे वेगळेपण माहितीपत्रकाच्या मजकुरात आणि रचनेत आणले पाहिजे. इतरांपेक्षा वेगळी, नवी, रोचक, उपयोगी माहिती देणे आणि वेगळा लेआऊट, वेगळा आकार, वेगळी रचना आणि वेगळा दृष्टिकोन ठेवणे याद्वारे माहितीपत्रकात वेगळेपण आणता येते.

४) आकर्षक मांडणी (लेआऊट):-

माहितीपत्रकातील माहितीची मांडणी आकर्षक असली पाहिजे. मांडणी सरधोपट असू नये. माहितीपत्रक दिसताक्षणी ते 'वाचावेच' असे

वाटले पाहिजे. त्याचा कागद दर्जेदार असावा, छपाई रंगीत असावी, पहिले पृष्ठ तर खूपच चित्ताकर्षक असावे. त्याचा आकार योग्य असावा. त्याचे रीक, बोधवाक्य ठसठशीतपणे दिसणारे असावे. माहितीपत्रकाची मांडणी वेधक करण्यासाठी गरजेनुसार त्या क्षेत्रातले कुशल कलाकार, चित्रकार, संगणक तज्ञ मदतीला घ्यावेत.

५) भाषाशैली:-

'माहितीपत्रक' केवळ पाहिले जात नाही, तर ते 'वाचले' ही जाते. म्हणूनच ते वाचावेसे वाटावे यासाठी त्याची भाषा आकर्षक आणि वेधक असली पाहिजे. उदा. 'आमच्या कृतिपर्यटन केंद्रात' राहायला आलात तर तुम्ही खूप सुखी व्हाल; इथे तुम्ही इतके रंगून जाल, की तुम्हांला दुःख करत बसायला वेळच मिळणार नाही. एवढी सगळी माहिती 'आता तणावाला वेळ नाही' एवढ्या चारच शब्दांत सांगणे म्हणजेच मनाला भिडणारी शब्दयोजना करणे होय! थोडक्यात, भाषाशैली पाल्हाळीक नको तर मनाची पकड घेणारी हवी.

माहितीपत्रकासाठी आवश्यक मुद्द्यांचा नमुना :-

समजा, एका कनिष्ठ महाविद्यालयात नवीन वैशिक्षणिक वार्तापासून विज्ञानशाखा नव्याने सुरु करायची आहे. ही बाब जास्तीत जास्त प्रवेशोत्सुक विद्यार्थ्यांपर्यंत आणि पालकांपर्यंत प्रभावीपणे पोहोचवायची आहे. कारण तसे झाले तरच विद्यार्थी प्रवेश घेण्यासाठी त्या कनिष्ठ महाविद्यालयाशी संपर्क साधतील. तर मग कशी पोहोचवता येईल ही बाब त्यांच्यापर्यंत

अर्थातच माहितीपत्रकाच्या माध्यमातून

कोणकाणते मुद्दे असले पाहिजेत या माहितीपत्रकात....

- १) ते कनिष्ठ महाविद्यालय ज्या वैशिक्षणिक संस्थेमार्फत चालवले जाते त्या संस्थेचे बोधचिन्ह / बोध वाक्य, संस्थेच्या महत्वाच्या पदाधिका-यांची नावे.
- २) त्या संस्थेचे नाव / पत्ता / स्थापना र्वा / दूरध्वनी क्र. / मोबाईल क्र. / ई-मेल / वेबसाईट.
- ३) त्या कनिष्ठ महाविद्यालयाचे नाव / पत्ता / स्थापना र्वा / दूरध्वनी क्र. / मोबाईल क्र. / ई-मेल / वेबसाईट.
- ४) संस्था व कनिष्ठ महाविद्यालयास असलेली शासकीय मान्यता / मंजूरी विषयक संक्षिप्त माहिती.
- ५) कनिष्ठ महाविद्यालयाशी संबंधित प्राथमिक माहिती (उदा. शासकीय / खाजगी / अनुदानित / विना अनुदानित इ.)
- ६) कनिष्ठ महाविद्यालयाची थोडक्यात पार्श्वभूमी.
- ७) आवश्यक ती सांख्यिकीय माहिती.
- ८) कनिष्ठ महाविद्यालयातील सुविधा (उदा. स्वच्छतागृहे, प्रयोगशाळा, क्रीडांगण, सभागृह, ग्रंथालय, अभ्यासिका, वसतिगृह, वाहनतळ, उपाहारगृह इ.)
- ९) कनिष्ठ महाविद्यालयाची इतर वैशिष्ट्ये
- १०) कनिष्ठ महाविद्यालयात होणारे उपक्रम (उदा. कमवा व

- शिका, एन.एस.एस.,सहली इ.)
- ११) पूरक फोटो.
 - १२) संस्थेच्या इतर गाखामधील परीक्षांचे निकाल
 - १३) कनिष्ठ महाविद्यालयाच्या भवियकालीन योजना
 - १४) विद्यार्थ्यांना दिल्या जाणाऱ्या तैक्षणिक सवलती, शिष्यवृत्ती इ.
 - १५) कनिष्ठ महाविद्यालयापर्यंत जाणाऱ्या रस्त्यांची माहिती / नकाशा.
 - १६) प्रवेश प्रक्रियेबद्दलची माहिती,प्रवेश क्षमता,प्रवेशाच्या, अटी आवश्यक ती कागदपत्रे, प्रवेशाबाबतची पात्रता, प्रवेशाची अंतिम तारीख, प्रवेश अर्जाचा नमुना, फी, सुरुवातीला भरायची रक्कम, संबंधित कोर्सचा कालावधी, प्रवेशाच्या कामकाजाची वेळ, सुट्ट्या केव्हा असतील, संबंधित अधिकाऱ्याचे नाव, त्यांचा फोन क्र. प्रवेश निश्चित केव्हा होणार त्याची तारीख (यादी जाहीर करणे)

कनिष्ठ महाविद्यालय सुरु होण्याची तारीख याबद्दलची माहिती.

निष्कर्ष :-

आजच्या काळात आर्काक आणि नेमकी माहिती पुरवणारे माहितीपत्रक तयार करणे ही व्यावसायिकांची गरज आहे आणि ते वेळेवर उपलब्ध होणे ही ग्राहकांची गरज आहे. त्यामुळे माहितीपत्रक तयार करणे या गोटीला व्यावसायिक मूल्य प्राप्त होत आहे.

संदर्भसूची :-

- १) संशोधन पध्दतीशास्त्र व तंत्रे - डॉ. प्रदीप आगलावे - विद्याप्रकाशन नागपूर.
- २) संशोधन पध्दतीशास्त्र - डॉ. रा.र.बोरुडे - पुणे विद्यार्थी गृह प्रकाशन.
- ३) महाराष्ट्र राज्य पाठ्यपुस्तक निर्मिती व अभ्यासक्रम संशोधन मंडळ, पुणे.



क्रिप्टोकरन्सी: अत्याधुनिक डिजिटल चलन

- प्रा. नवज्योत नथुराम जावळेकर गोखले

एज्युकेशन सोसायटीचे कला, वाणिज्य व विज्ञान महाविद्यालय श्रीवर्धन (रायगड)

प्रस्तावना

क्रिप्टोकरन्सी, क्रिप्टो-चलन, किंवा क्रिप्टो हे एक अत्याधुनिक डिजिटल चलन आहे, जे संगणक अंतर्जालाद्वारे व्यवहाराचे माध्यम म्हणून काम करण्यासाठी तयार केलेले आहे. हे चलन टिकवून ठेवण्यासाठी किंवा राखण्यासाठी सरकार, बँकेसारख्या किंवा इतर कोणत्याही वित्तीय साधनांवर किंवा केंद्रीय प्राधिकरणावर अवलंबून नाही. डिजिटल लेजरमध्ये वैयक्तिक नाण्यांच्या मालकीच्या नोंदी ठेवल्या जातात. हा लेजर व्यवहाराच्या नोंदी सुरक्षित करण्यासाठी, अतिरिक्त नाण्यांच्या निर्मितीवर नियंत्रण ठेवण्यासाठी आणि नाण्यांच्या मालकीच्या हस्तांतरणाची पडताळणी करण्यासाठी मजबूत क्रिप्टोग्राफी वापरलेला संगणकीकृत डेटाबेस आहे. क्रिप्टोकरन्सी ही पारंपारिक अर्थाने चलन मानली जात नाही. आणि त्यांना विविध श्रेणीत्मक उपचार लागू केले गेले आहेत, ज्यामध्ये वस्तू, ठेवी, तसेच चलने म्हणून वर्गीकरण समाविष्ट आहे. क्रिप्टोकरन्सी सामान्यतः व्यवहारात एक वेगळा मालमत्ता वर्ग म्हणून पाहिली जाते. क्रिप्टोकरन्सीला अंतरजालीय चलन म्हणून देखील संबोधले जाते. बिटकॉइन हे एक क्रिप्टोकरन्सीचे उत्तम उदाहरण आहे. क्रिप्टो चलनांमध्ये क्रिप्टोग्राफी वापरली जाते. ही एक प्रकारची डिजिटल मालमत्ता आहे ज्याप्रकारे आपण नोटा आणि नाण्याद्वारे व्यवहार करतो त्याचप्रकारे वस्तू किंवा सेवांच्या खरेदीसाठी क्रिप्टोकरन्सी वापरली जाते. ही एक पीअर टू पीअर इलेक्ट्रॉनिक सिस्टम आहे, ज्याद्वारे आपण इंटरनेटवरून नियमित चलनांऐवजी वस्तू आणि सेवा खरेदी करण्यासाठी वापरू शकतो. आर्थिक व्यवहार सुरक्षित ठेवण्यासाठी, अतिरिक्त समूहांच्या निर्मितीवर नियंत्रण ठेवण्यासाठी आणि मालमत्तेचे हस्तांतरण सत्यापित करण्यासाठी सशक्त क्रिप्टोग्राफी वापरते. केंद्रीकृत डिजिटल चलन आणि मध्यवर्ती बँकिंग प्रणालीला विरोध म्हणून क्रिप्टोग्राफी विकेंद्रीकृत नियंत्रणाचा वापर करतात.

क्रिप्टोकरन्सी ही डिजिटल चलन असतात जी Computer Algorithm वरती तयार केलेले आहेत. क्रिप्टो करन्सी चलनाला कोणीही मालक नाही म्हणजेच ही चलने कोणत्याही बँक किंवा सरकारच्या नियंत्रणात येत नाहीत. रुपया, डॉलर, युरो किंवा इतर चलनांप्रमाणे क्रिप्टो करन्सी हे चलन कोणत्याही राज्य, देश, संस्था किंवा सरकारद्वारे चालवले जात नाही. हे एक डिजिटल चलन आहे ज्यासाठी क्रिप्टोग्राफी तंत्रज्ञान वापरले जाते. सर्वसाधारणपणे कोणतीही वस्तू किंवा सेवा ऑनलाईन खरेदी करण्यासाठी या चलनांचा वापर केला जाऊ शकतो.

२००९ मध्ये जपानच्या सातोशी नाकामोटो इंजिनिअर ने जगातील पहिली क्रिप्टो करन्सी बिटकॉइन चा शोध लावला. सुरुवातीला क्रिप्टो करन्सी जास्त लोकप्रिय नव्हत्या परंतु कालांतराने याची किंमत खूप अफाट वाढली. बिटकॉइनपासून सुरुवात झाल्यावर अनेक क्रिप्टो करन्सी बनवल्या गेल्या, आज जगभरात एक हजार पेक्षा जास्त क्रिप्टो करन्सी आहेत ज्या Peer-to-Peer इलेक्ट्रॉनिक सिस्टिम च्या रूपात कार्य करतात.

क्रिप्टोकरन्सी कार्यपद्धती

ब्लॉकचेन च्या माध्यमातून क्रिप्टो करन्सी कार्य करते. क्रिप्टो करन्सी च्या व्यवहाराची सर्व नोंद ब्लॉकचेन च्या स्वरूपात ठेवली जाते. शक्तिशाली कॉम्प्युटर च्या नियंत्रणात क्रिप्टोकरन्सीचे सर्व व्यवहार केल जातात त्याला क्रिप्टोकरन्सी Mining असे म्हणतात आणि यासाठी जे कॉम्प्युटर उपलब्ध करून देतात त्यांना मायनर्स असे म्हणतात.

Blockchain मध्ये क्रिप्टोकरन्सीचे व्यवहार स्टोर होतात. प्रत्येक व्यवहाराला एका Block मध्ये ठेवले जाते. मायनर्स कडून ह्या ब्लॉक ला सुरक्षा मिळत असते. मायनर्सचे चे कॉम्प्युटर्स या ब्लॉकच्या सुरक्षेसाठी गणितीय समीकरण सोडवून एक स्वतंत्र Hash कोड बनवतात ज्यामुळे प्रत्येक ब्लॉक ला एक विशिष्ट Hash Code मिळतो.

नेटवर्क मधील इतर कॉम्प्युटर सॉफ्टवेअर द्वारे प्रत्येक ब्लॉकचा हॅश कॉड हा Verify केला जातो. पडताळणी झाल्यावर Mine केलेली क्रिप्टोकरन्सी ही Miner ला रिवार्ड म्हणून दिली जाते. Miner ने सोडवलेले Cryptographic समीकरण पडताळणी करण्याच्या प्रक्रियेला Consensus असे म्हणतात. अश्या प्रकारे क्रिप्टोकरन्सीचे व्यवहार चालतात जे पूर्णपणे सुरक्षित असतात आणि कोणत्याही संस्था किंवा सरकारच्या नियंत्रणात नसतात.

क्रिप्टोकरन्सीचे प्रकार -

जगातील सर्वात लोकप्रिय क्रिप्टो चलन म्हणजे बिटकॉइन आहे. जगात एक हजार पेक्षा जास्त क्रिप्टोकरन्सी उपलब्ध आहेत. आपण त्यातील काही लोकप्रिय क्रिप्टो करन्सी खालील प्रमाणे

१) बिटकॉइन

बिटकॉइन ही सर्वात लोकप्रिय आणि सर्वात जास्त मौल्यवान क्रिप्टो करन्सी आहे. जपानच्या सातोशी नाकामोटो या इंजिनिअर २००९ मध्ये बिटकॉइन चा निर्माण केला होता. सुरुवातीला ही करन्सीजास्त

लोकप्रिय नव्हती परंतु कालांतराने याची किंमत खूप वाढली. इतर क्रिप्टो करन्सीप्रमाणे ही सुद्धा डिजिटल स्वरूपात असते. बिटकॉइन ची आजची किंमत पाहायला गेलात तर ती ३६ लाख रुपये च्या घरात आहे जी रोज कमी जास्त होत आहे.

२) इथरियम

बिटकॉइन प्रमाणेच ही एक डिजिटल करन्सी आहे, जी Open Source, Decentralized Blockchain Based Computing Platform आहे. इथरियम ला २०१५ मध्ये विटालिक बुटेरिन याने लाँच केले. बिटकॉइन नंतर ही सर्वात लोकप्रिय क्रिप्टो करन्सी आहे. याची आजची किंमत ३ लाख रुपये आहे.

३) लाइटकॉइन

लाइटकॉइन ही एक Peer-to-Peer क्रिप्टोकरन्सी आहे. लाइटकॉइन या करन्सी ला ऑक्टोबर २०११ मध्ये चार्ल्स ली द्वारे लाँच केले गेले. चार्ल्स ली आधी गूगल कंपनीत कर्मचारी होऊन गेलेले आहेत. लाइटकॉइन चे व्यवहार बिटकॉइन च्या तुलनेत चार पट वेगाने होतात कारण लाइटकॉइन चा ब्लॉक तयार करण्याचा वेळ बिटकॉइन च्या तुलनेत चार पटीने कमी आहे. लाइटकॉइन ची आजची किंमत ११ हजार रुपये आहे.

४) डॉजकॉइन

डॉजकॉइन सुद्धा एक क्रिप्टोकरन्सी आहे, Bitcoin चा विनोद बनवण्यासाठी ही क्रिप्टोकरन्सी बनवली गेली होती. डॉजकॉइन चा शोध बिली मार्क्स याने २०१३ मध्ये लावलेला आहे. डॉजकॉइन च्या लोगो मध्ये कुत्र्याचा फोटो आहे. डॉजकॉइन ची आजची किंमत १३ रुपये आहे.

५) डॅश

डॅश चे आधीचे नाव एक्सकॉइन आणि डार्ककॉइन असे होते. डॅश शब्दाचा अर्थ उळसळीरश्त्र आणि उरीह असा आहे. डॅश ही बिटकॉइन प्रमाणे Open Source, Peer-to-Peer क्रिप्टोकरन्सी आहे. यामध्ये बिटकॉइन पेक्षाही जास्त Features उपलब्ध आहेत. डयाश ची चळपळपस करण्यासाठी जास्त शक्तिशाली कॉम्प्युटरची गरज नाही लागत, बिटकॉइनसाठी खूप शक्तिशाली कॉम्प्युटर लागतात. डॅश ची आजची किंमत दहा हजार आहे.

क्रिप्टोकरन्सीचे फायदे –

क्रिप्टोकरन्सी एवढी लोकप्रिय आणि महाग आहे. याचे कारण म्हणजे यांचे फायदे, ज्यामुळे ही डिजिटल चलने एवढी लोकप्रिय झालीत. क्रिप्टोकरन्सी चे काही महत्वाचे फायदे खालील प्रामाने.

- १) क्रिप्टो करन्सी चे स्वरूप डिजिटल असल्यामुळे याच्या व्यवहारात फसवणूक होण्याची शक्यता खूप कमी असते.
- २) क्रिप्टोकरन्सीमध्ये गुंतवणूक करणे खूप सोपे असते कारण क्रिप्टोकरन्सी स्टोर करण्यासाठी अनेक Digital Wallet उपलब्ध आहेत.
- ३) क्रिप्टो करन्सी वरती कोणत्याही संस्था, बँक किंवा

सरकारचे नियंत्रण नसल्याने नोटबंदी किंवा चलनाची किंमत कमी होण्याचा धोका नसतो.

- ४) क्रिप्टोकरन्सी चे व्यवहार खूप सुरक्षित चालतात, साधारण व्यवहार आणि क्रिप्टो करन्सीच्या व्यवहारात खूप फरक असतो.
- ५) क्रिप्टो करन्सीचा वापर पैसे लपवून ठेवण्यासाठी खूप केला जातो आहे, पैसे लपवून ठेवण्याच्या लोकांसाठी क्रिप्टो करन्सी हा एक उत्तम पर्याय म्हणून समोर आला आहे.

क्रिप्टोकरन्सीचे तोटे

काही देशात क्रिप्टो करन्सी ला बंदी घालण्यात आलेली आहे, याचे कारण म्हणजे क्रिप्टो करन्सी मुळे होणारे तोटे ते खालील प्रामाने

- १) क्रिप्टो करन्सी चा वापर अनेकजण पैसे सरकार पासून लपवून ठेवण्यासाठी करतात आणि यामुळे अनेक देशांनी यावर बंदी घातली आहे.
- २) क्रिप्टो करन्सी हॅक होण्याची शक्यता जास्त असते जर आपले कॉइन कोणी हॅक केले तर ते परत मिळण्याची शक्यता शून्य असते.
- ३) क्रिप्टो करन्सी स्टोर केलेली Wallet ID जर आपण विसरलात तर ती पुन्हा मिळत नाही त्यामुळे त्यातील पैसे आपण कधीच काढू शकत नाहीत.
- ४) क्रिप्टो करन्सीमध्ये जर आपल्याकडून जर चुकून दुसऱ्या व्यक्तीला पेमेंट केले तर ते आपण परत मिळवू शकत नाहीत.

निष्कर्ष

क्रिप्टोकरन्सी हे चलन कायदेसंमत नाही आणि सध्या ते अनियंत्रित आहे. त्यास उच्च मूल्य अस्थिरता नेहमी बाधित करते क्रिप्टोचलनात व्यापार/व्यवहार करत असतांना जोखिम आहे. क्रिप्टोकरन्सी हे आभासी चलन आहे. ते ऑनलाईन उपलब्ध असतं. त्यात व्यवहार करणाऱ्याची माहिती गुप्त ठेवता येते. केवळ टोकन म्हणून किंवा व्हर्च्युअल धन म्हणून हे चलन वापरता येतं. भारतात क्रिप्टो करन्सीला अद्याप अधिकृत मान्यता नाही. यामध्ये होणारी सगळी गुंतवणूक सध्या अॅप्सद्वारे होते. ज्याप्रमाणे सेबी शेअरबाजारावर लक्ष ठेवते तसा क्रिप्टोकरन्सीसाठी नियामक नाही. त्यामुळे या क्रिप्टोकरन्सीमध्ये करण्यात आलेली गुंतवणूक कितपत सुरक्षित असा प्रश्न निर्माण होतो.

संदर्भसूची

१. जयराज साळगावकर बिटकॉइन क्रिप्टोकरन्सी चलनक्रांतीच्या एक पाऊल पुढे-परममित्र प्रकाशन
२. Antony Lewis-Bitcoins and Blockchains
३. <https://mr.wikipedia.org/s/4irp>



श्रीवर्धन तालुक्यातील आदिवासी व त्यांच्या सामाजिक संस्कृतीचे अध्ययन

– सौ.सुरेखा रा. चित्ते

गोखले एज्युकेशन सोसायटी संचालित
कला, वाणिज्य व विज्ञान महाविद्यालय, श्रीवर्धन जि.रायगड

प्रस्तावना –

सहयाद्रीच्या कुशीत वसलेले श्रीवर्धन तालुका आहे. त्यांत मोठी मोठी सागाची दाट जंगले, ऐन, हेद, पळस, खैर, आंबा, काजु, नारळ, सुपारी, करंवद वैगेरे झाडे या जंगलात विपुल आढळतात. चोहोंकडे दिसणारी दाट हिरवीगार झाडी, निळे मोकळे आकाश व गावच्या शेवटच्या टोकाला अथांग समुद्र पाहून मन प्रसन्न होते. श्रीवर्धन तालुक्यात लहान मोठे गाव आहेत तसेच येथे रानावनात, जंगलात आदिवासी पाडे सुध्दा मोठ्याप्रमाणात आहेत. आदिवासी संस्कृती जाणून घेण्याची असेल तर त्यांचा जवळून अभ्यास केला पाहिजे येथे राहणाऱ्या आदिवासी लोकांचे जीवन जवळून पाहिले पाहिजे. त्यांची संस्कृती, लोकजीवन, जीवन राहटी समजून घेतली पाहिजे.

आदिवासी समाज हा अतिप्राचीन मूळ भारतीय समाज आहे. एकेकाळी भारतीय वनसंपत्तीचा मालक असणारा हा समाज इंग्रजांच्या आर्थिक शोषणामुळे आर्थिकदृष्ट्या दुर्बल बनत गेला आदिवासी म्हणजे आदिकाळापासून वास्तव्य असणारा समुदाय होय. आदिवासी समाज हा निसर्गपुजक आहे. त्यांच्या दैनंदिन जीवनाचे इतर समाजाशी काही देणेघेणे नाही. त्यांचे देव, भाषा, आणि चालीरिती अन्य ग्रामीण आणि शहरी लोकांपेक्षा भिन्न आहे. नागर संस्कृतीपासून दूर व अलिप्त राहिलेले संबंधित प्रदेशातील रहिवासी म्हणजे आदिवासी, असे सामान्यपणे म्हणता येईल. सर्वसाधारणपणे जंगलात, दुर्गम दऱ्याखोऱ्यात वस्ती करून राहतात. नागर संस्कृतीचा त्याप्रमाणे वर्गश्रेणीबद्ध समाजाचा संपर्क न झालेल्या वैशिष्ट्यपूर्ण चालीरिती किंवा 'संस्कृती' आदिवासीत आढळतात. आदिवासी म्हटले की, उन्हातान्हात मेहनत करणारे अंगावर वितभर वस्त्र असलेले आणि रानावनात भटकणारे आदिवासी बांधव डोळ्यासमोर येतात. स्वातंत्र्यानंतर सहा दशके उलटूनही कातकऱ्यांबाबत हे चित्र अजूनही तसेच आहे. या काळात आदिवासींच्या विकासासाठी शासनाने अनेक योजना राबविल्या असल्या तरी आदिवासींना त्याचा विशेष लाभ झालेला नाही.

आदिवासी हा मुलभूत सुविधांपासून वंचित आहे आणि दुसरीकडे शिक्षणाच्या प्रवाहापासूनही वंचित असल्याने एकूणच या समाजाचे भवितव्य व्यसनाधिनता आणि निरक्षरता यांत गुरफटून पडले आहे. हा समाज नेमका किती आहे, याची नोंद शासनाकडे उपलब्ध नाही.

'उद्दिष्टे –

१) श्रीवर्धन तालुक्यातील आदिवासींच्या विविध परंपरा, चालीरितीचा

अभ्यास करणे.

२) श्रीवर्धन तालुक्यातील आदिवासींचे लोकजीवनाचे अध्ययन करणे.

३) श्रीवर्धन तालुक्यातील आदिवासींना जवळून अभ्यासने.

श्रीवर्धन तालुक्यातील आदिवासी समजून घेताना –

आदिवासी म्हटल की आपल्या समोर एक लोककल्पित प्रतिमा निर्माण झालेली दिसते. मग त्यांना रानटी, जंगली, नरभक्षी, मागासलेले, लंगोटे अशी अनेक दूषणे दिली जातात. म्हणून आदिवासींची जगण्याची काय परिमाणे आहेत, त्यांचे भारत देशातच नव्हे तर जगाच्या इतिहासात काय योगदान आहे हे साकल्याने डोके साबूत ठेऊन आत्मचिंतनात्मक अभ्यास करणे गरजेचे आहे.

श्रीवर्धन तालुक्यातील आदिवासी (कातकरी) म्हणजे काय –

कातकरी महाराष्ट्रातील एक आदिवासी जमात आहे. कात तयार करणे हा जुन्या काळी कातकऱ्यांचा मुख्य व्यवसाय होता. आणि त्यावरून त्यांना कातकरी हे नाव पडले. शिकार करणे, कोळसा बनवणे, जंगलातील लाकडे व मध गोळा करून विकणे, शिकारी व तिरंदाजीत निष्णात असून हरणे, ससे यांची शिकार करून त्यावर पोट भरतात. कातकरी लोक लहान लहान टोळ्या करून रानात राहतात व नेहमी वस्त्या बदलतात. त्यांच्या झोपडीत कायम एक शेकोटी पेटलेली असते तिला 'परसा' म्हणतात. खुद्द श्रीवर्धन तालुक्यात आदिवासी लोकांची वस्ती असून तिथे त्यांच्या अनेक वाड्या व वस्त्या आहेत.

श्रीवर्धन तालुक्यातील आदिवासींचे व्यसन –

आदिवासींना हातभट्टी दारु पिण्याचे व्यसन जास्त आहे. त्यांची कमाई करून मिळेल तेवढ्या पैशांची दारु पिऊन कुठंती लोळत पडणे हि एक वाईट सवय आहे. आदिवासीं महिला सुद्धा या व्यसनाला बळी पडलेल्या दिसतात. मिळेल ते खायचे, कमवलेला पैसा दारुतच संपवायचा हा त्यांचा दिनक्रम, बहुतांश वस्त्यांवर प्रत्येक झोपडीत हातभट्टीची दारु नजरेस पडते. पुरुषाबरोबर महिला आणि लहान मुलेही पाणी प्यावे तितक्या सहजतेने दारु पितात. चार बाजुने कुडाची भिंत असलेल्या या घरात दारुचीच दुर्गंधी जाणवते.

श्रीवर्धन तालुक्यातील आदिवासींची अंधश्रद्धा -

अंधश्रद्धा समूळ उच्चटन करण्याचा शासनाने कितीही संकल्प केला तरी या समाजाचा विश्वास आहे तो भगतावरच आजही कोणी आजारी पडल्यास त्या व्यक्तिला डॉक्टरकडे न नेता प्रथम मांत्रिक किंवा भगताचा शोध घेतला जातो. आदिवासी समाजातील लोक कधीही दवाखान्यात दिसत नाही. त्यांची कुटीर रुग्णालयात नोंद होत नाही. आदिवासी समाजातील स्त्रीया आजुनही रानावनातच बाळंत होतात त्यांना बाळांतपणासाठी रुग्णालय डॉ., नर्स किंवा मेडिकल वरील औषध काहींचा उपयोग करून घेत नाहीत. आदिवासी रानावनातील झाडपाल्यांच्या औषधांचा उपयोग करतात. म्हणजेच त्यांना औषधी वनस्पतीची माहिती आहे असे दिसून येते. एखाद्या अनोळख्या व्यक्तीला जर विंचू, साप चावला तर ते लगेच जंगलातील वनस्पतीचा पाला किंवा मूळ आणून ती जखमेवर लावतात. आणि अश्चर्य म्हणजे काही क्षणातच विष उतरून जात आणि त्या व्यक्तिला कसलाही त्रास होत नाही. पण त्यांना सखून चौकशी केली असता ते त्या वनस्पतीचे नाव सांगण्यास नकार दर्शवितात.

श्रीवर्धन तालुक्यातील आदिवासी समाजाची श्रद्धा स्थान कोणती-

आदिवासी निसर्गपूर्वक आहेत. त्यांची श्रद्धा सर्व चराचर जीवात्मा असतो, त्यामुळे त्यांच्या देवांना आकार नाही. निसर्गातील अद्भूत चमत्कारांना देवतारूपे माणून वृक्ष, पशू-पक्षी, नदी -नाले, सुर्य- चंद्र इत्यादी रूपात निर्गूण निराकार ईश्वराची तो पुजा करतो. कोकणचा देव 'शिवाऱ्या' हा आहे. आदिवासी संस्कृतीत माता किंवा शक्तीची पुजा अतिशय महत्वाची मानली जाते.

श्रीवर्धन तालुक्यातील आदिवासींचे उदरनिर्वाहाचे साधने -

श्रीवर्धन तालुक्यात खेडीं, भोस्ते, हरिहोश्वर, बागमांडला, कोलमांडला, कारविणे, कुरवडे, रानवली, जसवली, बापवन, गालसुरे,मारळ, आरावी बीच, शिर्वणे, धनगरमलई, गुलधे, वाळवटी, कोंडवली, बोलीं पंचतन, दिवेआगार, भरडखोल, शेखाडी, साखरोणे, मेंदडी, खुजारे, पांगळोली अश्या अनेक छोट्या-छोट्या गावाच्या बाहेर वाडया मध्ये उघडयावर राहतात. आदिवासी हे भात लावणीसाठी रोजनदारीवर काम करतात. त्यात भात लावणी, भात राखण, भात कापणी, मळणी अशा प्रकारची कामे करतात. तसेच उन्हाळयात काजू, आंबे, करंवद, सुकलेल्या लाकडयाच्या मोळी विकतात आणि जुन महिन्यात म्हणजेच पावसाळयामध्ये रानभाज्या, खाडीतील मासे, नदितील मासे, खेकडे पकडून ते विकून त्यांच्या पोटापाण्याचा प्रश्न सोडवितात.

श्रीवर्धन तालुक्यातील आदिवासींची शिक्षणाची आबाळ-

आज्ञानाने गांजलेल्या या समाजात शिक्षणाची आबाळ असल्यामुळे काही आर्थिक विवंचनेने ग्रासलेल्या गावाबाहेर असलेल्या या पाडयांना मुलभुत सुविधाही मिळत नाहीत. वस्तीवर कातकरी काम मिळेल तिथे या गावातून त्या गावात भटकत असतात. त्यामुळेच त्यांच्या शिक्षणाची आभाळ होताना दिसते.

श्रीवर्धन तालुक्यातील आदिवासींचं जगण -

डोंगर कुशीत राहणारी कातकरी, आदिवासी ही जमात अद्यापही हजारो वर्षांची परंपरा जपत, आधुनिक जगतापासून दूर राहतात. खडतर पण स्वतंत्र जीवन जगत आहेत. बांबु आणि कारवीच्या शेणामातीने लिंपलेल्या भिंतीवर उभ्या - आडव्या बांबूवर सागाची पाने व गवताने शाकारलेली आसतात. काकडी, भोपळा, झेंडूच्या फुलांची झाडे, घरात जर्मन पितळीच्या भांडयानी सजविलेला संसार आणि त्यातच एक बाजुला बकऱ्यांसाठी जमिनीत रोवलेल्या खुंटया त्याला बांधलेली दावे (दोरी) आणि कोंबडीचे खूराडे इत्यादी आढळून येत.

आदिवासींची भारतीतील राज्यघटनेत असलेले हक्क-

भारतीय राज्यघटनेत अशा आदिवासींचा समावेश अनुसूचित जमातीमध्ये केला आहे. समाजाच्या मुख्य प्रवाहात आणण्यासाठी त्यांना नोकरी व्यवसायात आणि निवडणूकांत उमेदवार म्हणून त्यांच्यासाठी खास जागा ठेवल्या आहेत. भारतात ९ ऑगस्ट हा दरवर्षी आदिवासी दिवस म्हणून साजरा करतात. या दिवशी विविध प्रकारचे कार्यक्रम राबविले जातात. आदिवासी समाज बांधवांमध्ये जनजागृती व्हावी या दृष्टीने साजरा केला जातो.

श्रीवर्धन तालुक्यातील आदिवासी संगीत व साहित्य -

आदिवासी जमातील गीतगायनाचे प्रसंग वारंवार येतात अंगाई गीते, प्रीतीगीते, युध्दगीते,भजने हे प्रकार आदिवासींत आढळतात. तसेच थट्टा मस्करीही गीतांतून करण्यात येते. भांडणाऱ्या व्यक्ती ढोलक्याच्या साथीवर गीत म्हणून एकमेकावर आरोतप्रत्यारोप करतात. गीताचा व साहित्याचा आर्थातच संस्कृतीशी निकटचा संबंध आसतो. जमातीचा इतिहास सांगण्यासाठी व आयुष्यातील वेगवेगळया प्रसंगाचे वर्णन करण्यासाठी गीतरचना करण्यात येते. दंतकथाद्वारे जमातीची माहिती देण्यात येते. त्यांच्या कथांमध्ये शिकारीची अनुभव, प्रणय व प्रणयातील खोटी भांडणे, विवाहप्रकाराचे चित्रण इत्यादीचे रसभरीत वर्णन असते. सृष्टी, जमात व कुळी यांच्या उत्पत्तीसंबंधी कथा असतात. नाते संबंध,सलगी संबंध व परिहार्यसंबंधी गीत गाऊन दर्शविले जातात. अशा तरुण तरुणींस आपापले जोडीदार निवडण्याची मोकळीक आसते. त्यांच्यात संगीत, नृत्याला फार महत्वाचे स्थान असते व सर्वलोक त्यांत उत्साहाने भाग घेतात.

श्रीवर्धन तालुक्यातील आदिवासींची अनुवंशात्मक जीवनपध्दती -

आदिवासींची उदात्त जीवनमूल्ये हे त्यांच्या अनुवंशात्मक जीवनपध्दतीत आढळते. त्यांच्याकडे दुसऱ्याच्या ताटातील घास ओरबडण्याची अपप्रवृत्ती आढळत नाही. आदिवासी समाजात,कुटूंबात स्त्रियांना मानाचे स्थान आहे. तिची जीवनशैली मुक्त, दडपण रहित, कष्टमय आहे. पुरुषांच्या खांदयाला खांदा लावून कष्ट करण्याची धमक तिच्यात निसर्गदत्त आहे. मातृसत्ताक पध्दतीने ते अधिकच तेजोमय केले आहे. विवाह प्रसंगी मुलीच्या बापाला पैसे, वस्तू स्वरूपात देण्याची पध्दत

आहे. वधू मुलगी मुलाकडे नांदायला गेल्याने तिच्या आई -वडिलांच्या तिची कमाई मिळत नाही म्हणूनच वर पक्ष मुलीच्या बापाला रक्कम अदा करतो. आदिवासी समाजात मुलीला सन्मानजनक वागणूक मिळते. तिला मुलीच्या मायेने वागविले जाते. आदिवासी समाजात हुंडा नावाच्या अघोरी,अधम चालीरीती नसल्याने मुलीला कधीही जाळून मारले जात नाही. असा स्त्रियांचा सन्मान करण्याचे धारिष्ट्य अपवाद वगळता बागी कुठल्या समाजव्यवस्थेत पाहायला मिळणार नाही.कातकरी जमातीत पूर्वीपासून विधवा विवाह रुढ आहे. या लोकात गांधर्वविवाहाची प्रथाही आहे. हे लोक विधीपूर्वक लग्न करतात. कातकरी कुटूंबात स्त्रियांची हुकुमत असते. या जमातीतील स्त्रिया गुंजाच्या माळा दागिने म्हणून घालतात. कानाच्या पाळ्यांना मोठी भोक पाडून त्यात त्या साखळ्याही घालतात.

श्रीवर्धन तालुक्यातील आदिवासींची जात व बोलीभाषा -

कातकरी जमातीत अथावर, धेड, सिधी,सोन व वरप असे पाच पोटविभाग आहेत. आदिवासी लोकांची बोलीभाषा विविध प्रकारच्या आसतात. ज्याप्रमाणे भाषा दर कोसावर बदलते असे म्हणतात. त्या पध्दतीने आदिवासी बोली भाषांमध्ये देखील थोड्या मोठ्या प्रमाणात बदल दिसून येतात. प्रमाण भाषेपासून दुर असल्यामुळे या लोकांना शिक्षण घेता येत नाही. अडचणी येताना दिसतात. शिक्षणात अडचण निर्माण झाली की आपोआपच सर्व प्रकारच्या विकासाचे वेग आपोआपच मंदावतात.

आदिवासी हस्तकला / आदिवासी चित्रकला -

प्राचीन काळापासून आदिवासी भिंतीवर चित्रे काढत आले आहेत.

आजही आदिवासी भागात धार्मिक कल्पनांशी निगडीत अशी खूपच सुशोभित नमुन्यांची भिंतीचित्रे आदिवासी स्त्रिया सणावाराच्या निमित्ताने काढतात. या चित्रांतून आजुबाजुच्या परिसरातील पशु-पक्षी, वृक्ष- वेली, नदी-नाले, पहाड जंगल, नाच-नृत्ये, यात्रा, शेतीचा हंगाम, निसर्ग,घरे इत्यादी विषय घेऊन भिंती रंगविल्या जातात. काटकोन , त्रिकोन, चौकोन, वर्तुळाकार, उभ्या आडव्या रेषा काढून स्त्री,पुरुष, डोंगर, नदी, झाडे, शेती, पाने, फुले, यातून सृष्टीदेवतेचे चित्र रेखाटले जाते.

आज वारली जमातींच्या भिंतीचित्रांची सर्वत्र चर्चा आहे. कपडयावर, दागिन्यांवर, घरांच्या भिंतींवर वारली पेंटींग आवडीने काढतात. तिला जागतिक स्तरावर मानाचे स्थान मिळाले आहे.

निष्कर्ष-

आदिवासी समाजाने खुप वाचन करून ज्ञानमय झाले पाहिजे, व्यसनांपासून दुर राहिले पाहिजे, सामाजिक कार्यात सहभागी झाले पाहिजे. एखादी आदिवासी विद्यापीठाची स्थापना झाली तर त्यामुळे आदिवासी संस्कृतीचा अभ्यास होईल काही ठराविक कायदे राबविले पाहिजे म्हणजे गावतील स्वयंशासन, वाडी, वस्ती,जमीन विकास, शिक्षण असे विविध प्रश्न सोडवता येतील त्या ठिकाणी वैचारिक व सांस्कृतिक चळवळीतून मानवी जीवनाच्या समस्या व त्यावर उपाय यावर चर्चा होणे गरजेचे आहे.

संदर्भ ग्रंथ :

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‘शिवी’ – एक चिंतनात्मक अभ्यास

– सौ.सुरेखा रा. चित्ते

गोखले एज्युकेशन सोसायटी संचलित
कला, वाणिज्य व विज्ञान महाविद्यालय, श्रीवर्धन जि.रायगड.

प्रस्तावना :-

१. एखाद्या व्यक्तिला रागाच्या भरात शिव्या दिल्याने त्याच्या मनात राग निर्माण होतो व बदल्याची भावना त्याच्यामध्ये तयार होते व त्या बदल्याच्या भावनेने गुन्हेगारी निर्मिती होतात आणि गुन्हा घडू लागतो. त्यासाठी शिव्यांचा वापर कमीत कमी झाला पाहिजे जेणे करुण गुन्हेगारी कमी होतील. शिव्या ह्या मनात राग निर्माण करणाऱ्या नसाव्यात, शिव्या ह्या प्रेमाने सुध्दा दिल्या जाव्यात जेणे करुन समोरच्या माणसाला त्याची चुक लक्षात आली पाहिजे.

२. वरील सर्व गुंड्यावर रोख लावण्यासाठी शिव्यांचा वापर कमीत कमी व्हावा, व शिव्या देताना माझ्या संशोधनाचा विचार मानात येऊन शिव्याला चाप बसावा ह्या उद्देशानेच शिव्यांचा शोध निबंध लिहिला गेला आहे.

उद्दिष्टे -

- १) शिव्यांचा कमीत कमी वापर व्हावा.
- २) शिव्या ह्या महिलांवरून देण्यात येवू नये.
- ३) शिव्यांमूळे होणारी गुन्हेगारी कमी व्हावी.
- ४) शिव्यामूळे भांडण-तंटा कमी व्हावा.

संशोधन पध्दती -

- १) शिव्यांचा संशोधन विषय निवडताना दूर्यम साधनांचा वापर करण्यात आला आहे.
- २) उपरोक्त विषयामध्ये जेथे प्रकाशित आहे उदा: संशोधने, इंटरनेट, तसेच दुरध्वनी वरील न्युज चॅनलवाल्यांची स्पेशल रिपोर्ट

अभ्यासाचे महत्व:

उपरोक्त विषयाच्या अभ्यासाचे महत्व पुढीलप्रमाणे आहेत.

१. हा अभ्यास महिलांवरिल शिव्या कमी व्हाव्यात यासाठी आहे
२. हा अभ्यास समाज्यात सर्वच व्यक्तींना उपयोगी पडेल.
३. या अभ्यासामुळे समाजातल्या प्रत्येक व्यक्तित्तेचे अंतरमन स्वच्छ होईल /किंवा अंतरमनात बदल घडेल.
४. या अभ्यासामुळे आपआपसातले भांडण तंटे कमी होतील.

उद्देश :

- १) या संशोधनाचा उद्देश शिव्याबाबत जागरुकता निर्माण करणे.
- २) आपल्या पध्दतीने लोंकाना शिव्या देण्याच्या मानसिकतेत बदल करण्याचा प्रयत्न करणे.

शिवी म्हणजे काय

शिवी म्हणजे दुसऱ्या माणसाचा अपमान करण्यासाठी त्याला दुखवतील असे असभ्य, अश्लील किंवा अपमानकारक शब्द वापरून टोचून बोलणे. शिव्यांचा वापर हा स्थळ, काळ आणि परिस्थितीनुसार बदलत असतो. सार्वजनिक ठिकाणी शिवराळ बोलणे असभ्य समजले जाते, तरीही शिव्या या प्रत्येक समाजाच्या संस्कृतीचा अविभाज्य भाग असतात. इतर भाषांप्रमाणेच मराठी भाषेत देखील अनेक प्रकारच्या शिव्या रुढ झाल्या आहेत. पश्चिम महाराष्ट्र आणि कोकणामध्ये निखळ मराठी शिव्या ऐकावयास मिळतील. बाकीच्या भागातील शिव्यांवर हिंदीचा प्रभाव दिसून येतो. साहित्यात किंवा लिखित स्वरूपात शिव्या उतरविणे हे असभ्य समजले जाते.

रागातून, तिरस्कारातून एखाद्या व्यक्तीची, समूहाची, किंवा परिस्थितीची मानखंडना करण्यासाठी शिवी दिली जाते. कधीकधी कारण नसताना पुरुषार्थ्यांचा, पुरुष असण्याचा भाग म्हणून किंवा शाब्दिक सवयीचा भाग म्हणूनही शिव्या दिल्या जातात. शिवी देताना दुसरी व्यक्ती, समूह वा परिस्थिती यांच्या स्त्री नात्यांच्या संदर्भात संभोग वा लिंगनिदर्शक समाज अमान्य अशी वाचिक क्रिया शिवी देताना केली जाते. शिव्या म्हणजे दुसऱ्याच्या वागणूकीबद्दल आपल्याला आलेला राग व्यक्त करण्याचे साधन होय.

शिव्या देण्याचे कारण :

कोणताही वाद जेव्हा भांडणाचं स्वरूप घेतो, तेव्हा शिव्याची लाखली वाहिली जाते. दोन पुरुषामधिल भांडण असले तरी महिलांच्या उल्लेख करत शिव्या दिल्या जातात. एकुणच केंद्रस्थानी नेहमी महिलाच असतात.

शिव्यांचे प्रकार

शिव्या या धर्मावरून, जातीवरून, व्यवसायावरून, शारीरिक आणि मानसिक व्यंगावरून, जनावरांवरून देता येतात. प्रियजनांवरून, लैंगिकतेवरून व विशेषतः या दोहोंच्या एकत्रीकरणातून दिलेल्या शिव्या

सर्वात जास्त अपमानकारक समजल्या जातात. शिवी खाणाऱ्यांच्या मातृत्वाबरोबरच्या संबधाला भाषिक रूपात आव्हान दिले जाते. हे सहन न झाल्याने शिवी लागते, मानखंडना होते.

शिव्याबाबत जागरूकता निर्माण करणे

सध्याच्या वातावरणात राग येण्याची, शिव्या देण्याची अनेक कारण आहेत. सरकारबाबत नाराजी, वाहतुकीच्या समस्या, नोकरी, रिलेशनशिप वैगिरे. लोंकामध्ये चीड इतकी आहे की, अशा परिस्थितीत तोंडातून शिव्या निघण स्वाभाविक आहे.

शिव्यांची उत्पत्ती कशी झाली

शिव्या देण्याची कृसंस्कृती आणि त्यामध्ये महिलांचा वाईट पध्दतीने उल्लेख करण्याची ही प्रवृत्ती कधी निर्माण झाली हा सुध्दा एक प्रश्नच आहे.

तज्ञांच्या मते भाषा निर्माण झाली तेव्हाच शिव्या ही निर्माण झाल्या असाव्यात सामाजिक विकासानंतर चांगल आणि वाईट यांची व्याख्या होऊ लागली त्याचवेळी शिव्या देणंही सुरु झाल असेल शिव्या एका प्रकारे राग किंवा संताप व्यक्त करण्याचा मार्ग आहे.

इतिहासात शिव्यांचा वापर / लोकगीतामध्ये शिव्यांचा वापर

हिंदी लोकगीतामध्ये व्याही किंवा नवऱ्याची आत्या यांना प्रेमळ पध्दतीने शिव्या देण्याची पध्दत आहे. लग्नानंतर गायल्या जाणाऱ्या लोकगीतामध्ये शिव्या देण्याची परंपरा आहे. भगवान रामाच्या लग्नानंतरही अशा शिव्या दिल्याच सांगितले जाते. लोकगीतामध्ये शिव्यांचा उपयोग जुना आहे. पण भांडणात दिलेल्या शिव्या वेगळ्या असतात. संतप्त होऊन शिव्या दिल्या जातात तेव्हा त्याचा प्रभाव वेगळाच आसतो.

शिव्यांचा कुसंस्कृतीत महिलांचा उल्लेख कधीपासून केला जाऊ लागला ?

वैदीक काळात महिला आणि पुरुष समान होते पण कालांतराने महिलांचा महत्व घटू लागल पुरुषांचे वर्चस्व वाढू लागले. महिलांची सुरक्षा करण्याची जबाबदारी पुरुषांवर आली. हळुहळु स्त्री ही पुरुषासाठी प्रतिष्ठेचा विषय बनली. युध्दात मुलींचा सौदा होऊ लागला. पराभूत झालेल्या राजांना मुली द्याव्या लागायच्या यामध्ये प्रतिष्ठा धुळीला मिळते, असा समज होता. त्यामुळे राजे आपल्या मुली इतरांच्या हाती लागू नये म्हणून त्यांना स्वतःच संपवून टाकू लागले. यामध्ये शिव्यांमध्ये महिलांचा उल्लेखांच मुळ आहे. स्त्री सुरक्षा हा त्याकाळी सर्वात मोठा मुद्दा बनला होता. स्त्री पुरुषांची संपत्ती बनत गेली. त्यानंतर तिला शिव्या दिल्या जाऊ लागल्या या शिव्यांमध्ये पुरुषी अहंकार लपलेला आसतो. इतरांना खालच्या दर्जाचं दर्शवण्याचा हा प्रकार आसतो. पुढे कालांतराने आधुनिक काळात यांच प्रचलन वाढत गेले.

लैंगिक शिव्यांचा वापर

पूर्वी महिलांना प्रतिष्ठा होती पण पुढे महिलांना इज्जतीचं प्रतिक म्हणून पाहिल जाऊ लागल. इज्जत वाचवायची असेल तर महिलेने उंबरठ्याच्या आतच राहिल पाहिजे, असा विचार यामुळे पुढे आला. समाजात महिला अशक्त मानल्या जाऊ लागल्या. एखाद्या व्यक्तीचा अपमान करायचा असेल, त्याला त्रास द्यायचा असेल, तर त्याच्या घरातील महिलांबाबत लैंगिक शिव्या देण्याचा प्रकार सुरु झाला.

शिव्यांचा सर्वे

आपल्या आवती भोवती समाजात विचार पुस केली असता असे निर्देशनास आले की, या मध्ये महिला विषयक जातीवाचक आणि भेदभाव न दर्शविणाऱ्या शिव्या लिहून पाठवण्यास सांगितल. सुमारे ८०० शब्द मिळाले पण त्यापैकी ४० टक्के शब्द जातीवाचक ५०० च्या आसपास निर्मळ शिव्या मिळाल्या.

'शिव्या देणारी माणसं

आपल्यावर लहाणपणापासूनच संस्कार झालेले असतात. शिव्या देऊ नये तोंडात शिवी असणं हे असभ्यापणाच लक्षण आहे. पण आपण मोठे होत जातो आणि हे संस्कार क्षीण होत जातात. आसपासची माणसं चिडल्यावर अपशब्द उच्चारतात. आसपास भांडताना गुंड आधी शीवीगाळ आणि मग हाणामारी करतात. सतत ऐकून नकळत आपल्यालाही मनात शिव्या खोल रुतून बसतात. प्रसंगी मनाविरुध्द काही घडल, आपल्यावर अन्याय झाला की त्या शिव्या आठवतात, कधी उच्चरतो, कधी पुटपुटतो तर कधी गिळून टाकतो.

'शिव्यांचे आकर्षण का ?

क्रिकेटच्या सामन्यात अनेक खेळाडू परस्पराना उद्देशून असभ्य टोमणेबाजी उर्फ स्लेलिंग करतात. राजकिय पुढाऱ्यांना टाळ्या मिळण्याचा आवेग आवरता येत नाही. मग विरोध पक्षातल्या एखाद्या नेत्यावर शिवराळ भाषेत कोटी करतात. सोशलमिडियावर सामान्य माणसे आणि पगारी ट्रोलर्स देखील सतत शिवीगाळ करताना दिसतात. त्यांचे समर्थनही केले जाते. लोक आणि अनेक प्रसिध्द माध्यमे शिवराळ भाषेला दाद देतात तेव्हा सखेद नवल वाटते. शिव्यांविषयी समाजात एवढे आकर्षण का ?

'समस्या विधान

दोन पुरुषामध्ये सुरु असलेल्या भांडणात महिलांचा उल्लेख असलेल्या शिव्या असतात. जातीवाचक किंवा एखाद्या समुदायाचा उल्लेख असलेल्या शिव्यांचा वापर केला जातो. त्याऐवजी अशा काही शिव्या आपण वापरू शकतो, ज्यामुळे समोरच्याला जास्त वाईट वाटणार नाही, शिवाय तुमचं कामसुध्दा होईल. अपमानजनक किंवा खालच्या दर्जाच्या शिव्या नसाव्यात.

'शिव्या देण्यामागचा उद्देश

हो खरे, वेडा, पागल, बावळट, मूर्ख, षंढ इत्यादी शिव्या अगदी मिळमिळीत वाटत असतील. कदाचित घरातील स्त्री, आई-बहिण, बायको हे सर्व पुरुषांचे आगदी मर्मातील आणि जिवाळ्याचे स्थान असते. सगळ्यात नाजुक जागेवर मारले कि जास्त लागते ना, म्हणून असेल कदाचित जास्तीत जास्त दुखवण्याचा उद्देश असेल.

कस आहे, आई आणि बहिण या व्यक्तीच्या मानबिंदू समजल्या जातात. त्यांच्याशी व्यक्तीचं अत्यंत जवळच नांत आसत. घराची प्रतिष्ठा आणि मर्यादा हि स्त्रियांवर अवलंबून असते. शिव्या हे मुख्यतः राग व्यक्त करण्याच माध्यम आहे.

जेव्हा एखादा व्यक्ती दुसऱ्या व्यक्तिला आई, बहिणीवरून शिव्या देतो तेव्हा तो त्या व्यक्तीच्या आणि परिवाराच्या सन्मानाला हात घालत

आसतो. तो सर्वोच्चपातळीचा शाब्दीक अपमान आहे. म्हणून शिव्या आई बहिणीवरून दिल्या जातात. यात स्त्रियांना वाईट वृत्तीचे मूळ ठरवले जाते.

'मानसिकता

पूर्वी लोक कुटुंबीयांचा आदर करायचे घरात आजोबा वडील किंवा ज्येष्ठ व्यक्तिसमोर अशा शब्दाचा वापर करण्यास कचरत होते. पण असे शोशलसेरिंग संपत चालले आहेत. शोशल मिडियावर लोक सहज शिव्यांची लाखोली वाहताना दिसतात. त्या शिव्यांना लाईक्सही मिळतात. सध्या हे समाजात सर्वसामान्य बनल्याप्रमाणे दिसत आहे. त्यामध्ये वाईट काहिच नाही अशी माणसिकता बनत चालली आहे.

'शिफारशी

१. महिलांवरून दिल्या जाणाऱ्या शिव्या कमी व्हाव्यात.
२. शिव्यांमुळे मानवाच्या भावना अतीतिव्र होतात.
३. शिव्यांना आळा बसण्यासाठी रागावर नियंत्रण ठेवणे गरजेचे आहे.
४. आपल्या पध्दतीने लोकांच्या शिव्या देण्याच्या मानसिकतेत

बदल करण्याचा प्रयत्न केला पाहिजे.

निष्कर्ष

१. अध्ययन केल्यामुळे वरिल निष्कर्ष मिळाले.
२. प्राचीन काळापासूनच शिव्यांचा वापर दिसून येतो.
३. प्राचीन काळातील विविध वस्तूस्थिती वरून शिव्या वापरल्या जात होत्या.
४. शिव्या देण ही बिभत्स मानसिकेतेचचं प्रतीक आहे अशा शिव्या प्रात्यक्षिक स्वरूप घेतात, त्यावेळी निर्भया प्रकरणा सारख्या घटना घडतात.

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