#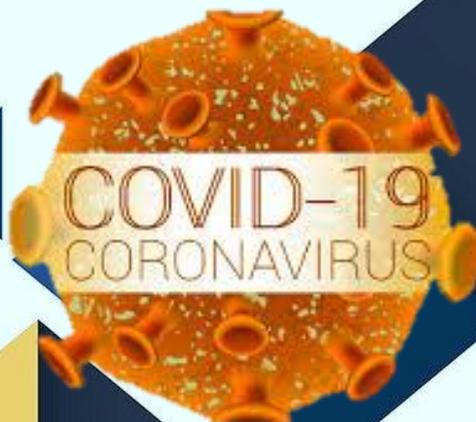 U.G.C. Care Listed Research Article Trends Of Pure Science And Applied Science Disciplines In Higher Education System In India And Abroad During Covid 19 Lockdown Period

Edited By-
Prof. Kishor Manikrao Waghmare
Advocate Mrs. Manisha Kishor Waghmare

U.G.C. Care Listed Research Article Trends Of Pure Science
And Applied Disciplines In Higher Education System
In India And Abroad During Covid-19 Lockdown Period

Printed in India

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Edited By -

Prof. Kishor Manilrao Waghmare

Mrs. Manisha Kishor Waghmare

Dedicated

To

My Parent

Sou. Ashalata M. Waghmare and

Shri. Manikrao R. Waghmare

About The Editor

Prof. Kishor Manikrao Waghmare is well known author in Library and Information Science discipline. He is working as librarian in Anandibai Raorane Arts, Commerce and Science College Tal. Vaibhavwadi Dist. Sindhudurg. He has been working as librarian since last 12 year of service and having outstanding knowledge in library and information science discipline especially in library software for library automation and library department digitization of services and facilities.

He is lifetime member of Library and Information Science discipline associations in India and Abroad such as, SALIS, ILA, etc.

He has published 26 research articles in the international level conference and seminar over all in India / abroad and 45 articles in the national level conference and seminar overall in India.

The education and qualification of Author is M.A., M. Lib. I. Sc., M. Phil., MBA- (HR), NET, SET and currently pursuing Ph.D. The author has completed his all College degrees from Pune University, Pune (MS)

Author has submitted two minor research projects in library and information science discipline in the year 2012-2013 and 2017-18 in Mumbai University.

Author has published three books at International level by International level publishers and all books are available online shopping websites.

Author is very active in social work in India and Abroad through so many societal Non -Government organizations (NGO). In the lockdown period of Covid 19 – Corona virus, he has arranged so many educational activities for keep awaken and active to every teachers, professors through involving in Online F.D.P., CAS Webinars, Ph.D. synopsis preparation webinars, Online Webinars on awareness about Covid 19, one day online International Multidisciplinary Conference etc. all online programs were conducted by him.

Author was working and affiliated to University Grant Commission's INFLIBNET SOUL project as delegated post of assistant technical officer for SOUL library software installation and provide training to library staff in the Maharashtra and Goa States. In this period he has installed and made so many libraries' automation and digitization.

Author has excellent knowledge of library automation due to 105 SOUL software has been installed and given training to handling and operating SOUL library software to staff as SOUL clients.

<u>About The Editor</u>

Advocate Mrs. Manisha Kishor Waghmare is a Professional lawyer and she is working as lawyer since last ten years as private lawyer in Mumbai High Court and Kankavli District Court.

Author has completed M.A., L.L.M. and currently pursuing Ph. D. in Law discipline from J.J.T. University, Rajasthan, India. Author's all educational qualification has been done from Pune University, Pune (MS). Author has completed her L.L.M. degree education in N.B.T. Law College, Nashik.

Author having speciality in Family Law, Civil Law and Criminal Law. Author is believing in giving proper legal justification every Indians.

Author is very active in social work in India and Abroad through so many societal Non -Government organizations (NGO).

<u>Acknowledgement</u>

I take this opportunity to express my overriding depth of gratitude towards my mother Sou. Ashalata M. Waghmare and father Shri. Manikrao Rakhamaji Waghmare and wife Advocate Sou. Manisha K. Waghmare for those great guidance, moral support and valuable suggestion for completing the book. I also wish to thank to my Ph.D. guide Dr. Santosh Salunkhe sir.

I also wish to thank to all my colleagues, teaching and non- teaching staff of Anandibai Raorane Arts, Commerce and Science College, Tal. Vaibhavwadi, for his inspiring guidance during the completion of this book.

I also wish to thank to Shri. Waghmare Brothers Non- Government Organization Body (Media and Publicity Partner in India and Abroad) for most valuable financial support and great guidance to preparation of this book.

I also wish to thank my colleague's assistant professor Dr. Ajit Sonawane, Chandrashekhare D. Wani, Dr. Ajay Kamble, Prof. Pralhad Jadhav, Dr. Anju Singh (JJTU, Rajasthan), Mr. Sachin Bhaskarrao Chavan, Chandrashekhar D. Pagare, Vikas Sonawane, Dr. Shashank Sonawane, Dr. Mangala Hirwade, Dr. Shalini Lihitkar Dr. Anil Chikate etc.

And finally I would to thank to Dr. Janice Fernandes (Library Manager, ROEHAMPTON LIBRARY, LONDON, UK) for her guidance and online lecture support to completion this book.

I also wish to thank to publisher for providing the copies on book within time

Editors

(Prof. Kishor M. Waghmare & Advt. Mrs. Manisha K. Waghmare)

Index

xi

Knowledge Management in higher educational libraries in India

Kishor Manikrao Waghmare

Ph. D. Research Scholar in Department Library & Information Science

Shri. Jagadishprasad Jhabarmal Tibrewala University, Rajasthan, India.

Registration Number 17219028

Abstract

*I*n the knowledge economy era, the library will play a very crucial role in the further extension and modification of knowledge. The growing need for knowledge management has influenced every component and operation of a library. Knowledge management requires more methods of information handling, speedy transfer of information and linking of information with individuals and their activities. It demands library patron centered development of information systems and services and customization of information at the individual level. Knowledge and libraries - this conceptual symbiosis is as old as the idea of libraries itself: libraries collect artifacts of explicated knowledge and make them available for building up new knowledge in all areas of everyday life. Learning and qualification management support are farther essential links in the knowledge supply chain, which starts at the expert knowledge of an author and ends at me targeted enhancement of another person's individual knowledge. This paper suggests a pragmatic approach to the implementation of Knowledge Management.

Keywords: - Academic libraries. Business sector. Human resource, Strategies, Technology.

INTRODUCTION :-

Knowledge Management has burst upon the information scene with suddenness and great intensity within the past seven years. Knowledge Management is based on both academic and the business sector have shown unprecedented interest in Knowledge Management and conducted much research in its theories and ventured in its

implementation. In the knowledge economy era, the management refers to effectively identify, acquire, develop, resolve, use, store and share knowledge, to create an approach to transforming and sharing of tacit and explicit knowledge, and to raise the emergency and innovation capability by utilizing the wisdom of the team. Since knowledge has become the driving force for social development, the attention of the society to information and knowledge is rising and people's demands for information and knowledge are increasing step by step.. This has provided a good environment for library development. Moreover, as information and knowledge has become an important productive factor for the modem economic system, the society will inevitably require intensified management of information and knowledge.

Knowledge Management in Academic Libraries

Knowledge Management has been tooted and hyped since late 1990s, first in the business sector, and then in higher education and now in library management. The impetus for embracing Knowledge Management in academic libraries is mainly from a combination of library budget shortfall and higher user expectations.

Rather than adopting an often-trumpeted high-tech approach, it is more practical td utilize the existing staffing, technology and management structure for academic libraries.

1. Purpose of implementing Knowledge Management in academic libraries :-

Academic Libraries are pinched on both sides: reduced budget and increased demand from faculty and students. To implement Knowledge Management in academic libraries is mainly driven by its mission rather than by the competition from Internet-based reference services or electronic books...

1.1 Impetus :-

Where there is a new phenomenon emerged, there must be an impetus. In Knowledge Management, me driving force is the necessity to survive in the business sector in face of fierce competition with rival firms or other competitors. The goal of Knowledge Management is to make foil use of me knowledge existed in a corporation to increase the productivity and operational efficiency so as to build an edge in the competition. What's the driving force for academic libraries? Budget shortfall is a primary driving force for the implementation of Knowledge Management in academic libraries. In recent years, budgets in academic libraries are stagnant at best and declining in general.

1.2 Mission :-

Libraries depend more on the support from their parent institution and immediate user constituents. To survive or thrive, libraries should constantly gauge and cater to users' needs.

Moreover, libraries should be more proactive m marketing their services and values to their user constituents. We should change our mindset and tradition of just waiting for users to come to the library. We need to reach out to our users and advertise/market our services. If they see the value of our services, they will support us more, and won't allow such a valuable institution as libraries to be closed or scale down.

Most Knowledge Management advocators stress on the systematic and centralized management of knowledge. That may be advisable in the business sector. In the library world, the survival is not hinged, so much on competitions from other libraries. There is a concern in the library world in recent years about some Internet-based companies that provide reference services or electronic books, journals and audio-visual materials. However, they are not an imminent threat yet as their services are fee-based while libraries offer free services. In mat sense, libraries have an edge in the competition.

2. <u>Procedures for implementing Knowledge Management in academic libraries</u>

Most researchers consent that Knowledge Management consists of two components:

human factor and technology. And most proponents of Knowledge Management advocate a top-down approach under a Chief Knowledge Officer (CKO). While a top-down approach is preferable, a bottom-up approach might be more practical in many instances.

2.1 *<u>Human Factor</u>* :-

Knowledge Management is a new paradigm in academic libraries in the sense that concerted efforts need to be exerted to manage knowledge systematically. Instead of establishing a new network of Knowledge Management managers under a Knowledge Management CKO (Chief Knowledge Officer), it is more practical to utilize the current management structure. Managers at all levels shall be charged to implement Knowledge Management in their respective units so that a network of Knowledge Management managers is in place. In addition to managing staff and workflow in their units, each manager is responsible for managing knowledge pertaining to their unit's goals and operations. This calls for not only gathering knowledge existing currently in their units but also knowledge relevant to their operations from other units/departments and even other libraries or professions.

2.2 *<u>Technology</u>* :-

Now how to record knowledge pertaining to library operations? What is more: How to retrieve such knowledge when needed?

Many advocators of Knowledge Management stress the importance of using advanced technology to store and retrieve knowledge. And many advocate for a centralized

turnkey Knowledge Management software product or system. Theoretically, a Knowledge Management system could encompass anything. In reality, no such systems exist. A centralized Knowledge Management product entails a pricy initial capital investment whether purchased from the market or developed in-house. Besides, subsequent and on-going maintenance and upgrades of hardware and software may not be affordable with the ever-shrinking library budget. More importantly, such an approach overlooks the technology competence and preference of individual Knowledge Management managers. It would be costly and unrealistic to train all staff to use such a Knowledge Management system. On the other hand, the value of an investment in knowledge management is often difficult to estimate or quantify. At a time when libraries face tight budget or budget reduction, it is only too natural for the library administration to hesitate to invest in such a Knowledge Management system.

2.3 *Top-down or Bottom-up Management* :-

Depending on the priority of the library administration or the library structure, Knowledge Management can be started from either bottom-up or top-down or in the middle. A top-down strategy has the advantage of the support and direction from the library administration. In places where such an option is not available, Knowledge Management can be implemented first in the front-line units. Operational knowledge can be collected and shared within the unit or beyond. A concerted effort will surely yield more efficiency. If Knowledge Management starts by middle managers, they can coordinate units to reduce the redundant or overlapping workflows and thus ensure a better efficiency. No matter where it starts, Knowledge Management will definitely increase the operational efficiency and thus enhance our services and benefit library users. Implementing Knowledge Management from bottom-up with existing staffing and technology is "a valuable low-cost and low risk way of proving the viability of a Knowledge Management approach". Experience gained and benefit reaped shall encourage the library administration to implement Knowledge Management in the whole library. 3 Cultivating Knowledge Management implementation.

Library human resources and staff development should be charged to work so friendly with managers at all levels to identify staff with valuable tacit knowledge and take every measure to retain such staff. How to motivate staff to contribute and share their knowledge is not an easy task. Some staff may not want to share their knowledge for fear that once their knowledge is shared, they might no longer be valued or deemed indispensable. Some staff may not share their knowledge for free, as there are free riders who only take for granted others' knowledge but never share their own. To encourage staff to contribute their knowledge, we need to have an incentive or reward system in place.

4. Conclusion

Knowledge Management is an emerging field, much tooted or hyped since late 1990s. However, due to the complicated nature of knowledge per se and its management, it is often difficult to estimate or demonstrate the value of knowledge management. In spite of the fact that there are many knowledge base products on the market none of them is well suited for libraries or flexible enough to cope with the dynamically changing environment in the, digital age, not to speak of the initial capital investment and future upgrade and maintenance costs. Libraries, with limited budget and human resources, should utilize the current management structure and technology to implement Knowledge Management, either bottom-up or top-down. With a concerted effort. Knowledge Management will help to increase libraries' operational efficiency and cater to the ever-increasing needs of our clientele.

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GREEN LIABRARY SERVICE IN COVID-19

DR.CHANDRASHEKHAR D.WANI

Librarian

DES's M.D.Palesha Commerce College, Dhule

*A*bstract

*C*oncept of Green Libraries gradually attracting attention of library administrators worldwide and the efforts to develop green libraries are on rise. Library is synonymous with utility. The role of library in this worldwide phenomenon is enormous. Libraries are platform for lifelong learning and provide users with information and knowledge. Green library means libraries, built with the intent to protect the environment and community. Environmental protection is a practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans. Green Libraries can serve in the way libraries have always served as landmarks in their communities. Green Libraries give pleasant environment to the user community. This article depicts the importance of this task & various methods for libraries to go green.

Keyword- Green library, covid-19.

INTRODUCTION

Green library refers to library that contributes towards maintaining the natural ecological balance in the environment, and preserving the planet and its natural systems and resources. Green Library has many meanings, including preserving natural resources for the future, living in a carbon-neutral way, and meeting the needs of the community. For the purpose of this task is as living and working in a practical and environmentally responsible manner, to ensure the protection of the world's resources for future generations. It also improved day to day operations and procedures of the library, as well as educating the community about responsible environmental practices that impact on clients and on stakeholders than one might expect. Enthusiastic library users are calling on libraries not just to provide popular services but to communicate a clear green identity. Libraries are in a unique high profile position which enables them to be community role models by implementing sustainable strategies. Small steps in going green can have a big

impact for the library's image. A small financial input can produce an important marketing outcome.

OBJECTIVE –

The following objective of this Paper have given below

- ❖ To discuss about how libraries can be transformed into Green Libraries.
- ❖ To discuss standards for Green Libraries.
- ❖ To understand about challenges for libraries to go Green.
- ❖ To appreciate the criticality of ecological deficit to our very survival.

WHY MAKES LIABRARY GREEN?

There are many ways to define a green library, but there are a number of central themes that run through all of them, including, minimizing the negative impact the building will have on the local environment, and if possible having a positive impact. Reducing the use of water and energy by designing in a way that maximizes the use of natural and renewable resources. Integrating actual greenery and vegetation into the building and site design Preferably, using drought resistant and/or native vegetation. And, maintaining high standards of indoor air quality to help ensure the health of the people who inhabit the building.

Why Need Green Libraries:

There are many reasons scholars indicated in finding the need of developing green libraries.

- Cost of construction is comparatively economical and affordable
- Natural resources are easily available
- Reduce carbon footprint in the building
- Use of more recycled material
- More use of natural resources

DEFINATION GREEN LIBRARY

The Online Dictionary of Library and Information Science defines green/sustainable

Libraries as, "A library designed to minimize negative impact on the natural environment and Maximize indoor environmental quality by means of careful site selection, use of natural Construction materials and biodegradable products, conservation of resources (water, energy, paper), and responsible waste disposal (recycling, etc.)

Oxford English Dictionary (1989) the term green is defined as "pertaining to" or "supporting environmentalism" The term Sustainable refer to "forms of human economic

activity and culture that do not lead to environmental degradation, especially avoiding long term depletion of natural resources" The information and literature published on Green Libraries is limited but now efforts are towards narrating the experiences and some literature is available since 1990s. The initial literature published in Wilson Library Bulletin in Feb 1991 as a special issue on "Libraries and the environment. An article on "Green Librarian" was wrote by James and LeRue. An issue covering "Environmental topics in the information world" Published in "The Green Library Journal" in Jan 1992 (Jankowaska, 2007). Task Force on the Environment (TFOE) formed by ALA. Later more communication published from developed countries mainly US.

BENEFITS OF GOING GREEN:

As Green Libraries give pleasant atmosphere to the users, readers will be attracted towards the library. Libraries can serve for the information needs of the users as well as the present & future of the users by saving environment.

- ➢ Beautiful & Pleasant World
- ➢ Better Quality of Life
- ➢ Better Health
- ➢ Saving Earth for Future Generation
- ➢ Improve mental health

Preparing for re-opening:

In a number of countries, there are already steps towards lifting restrictions, at least partially, with libraries potentially part of this. Timings remains uncertain, and clearly safety should be a priority. In this situation, libraries are:

- Starting to make plans for gradual reopening when rules, permissions and library buildings and resources themselves permit this to happen safely, and making necessary changes to library policies.

- Setting limits on numbers of people using the library at any one time, and establishing how to enforce these, as well as preventing situations where people may gather closely together, for example using one-way systems, limiting furniture, keeping reading rooms closed, or continuing to postpone programming, and keeping toilets closed.

- Implementing regular cleaning processes (including through short closures of the library), especially focused on surfaces where the virus appears to be able to last for longest (plastics, metals other than copper), or at least intensifying clearning

- Developing click-and-collect or drive-through services in order to allow access to books without human contact

- Ensuring that staff have the equipment and training necessary to stay safe, including consideration of screens if necessary, limiting contact as far as possible and enabling work from home for as long as possible, and provide regular updates

- Making clear when it is impossible to open safely, and otherwise ensuring that those taking decisions understand the nature of library spaces, including through a gradual approach to resuming services only when each one is safe

- Continuing to promote online services and resources in order to limit numbers looking to visit the library

- Communicate clearly about all any new rules to library users, both online and onsite, and provide regular updates

- Ensuring that plans are in place for a potential return to lock-down in case of new peaks in infection rates

IN LOCKDOWN PERIOD FULL CLOSURE:

where measures are strictest, libraries have either been forced to close, or have chosen to do so following consideration of the risks to users and staff. In these situations, libraries are, for example:

- Ensuring that all staff working from home unless completely necessary. Where staff are coming into work, ensuring that they can do so while respecting rules around social distancing

- Librarians are being reassigned to other duties in other departments within their municipalities, for example using information management skills to support health and social services

- Providing ongoing communication with users about opportunities to use library resources or services

- Organising digital story-times where copyright permits

- Promoting use of digital libraries and other tools - including potentially investing in more content/licenses

Minimal service:

- In many countries there are stricter measures still, with tougher limits on public gatherings, specific warnings for people at risk, and closures in the most affected regions. In these situations, libraries are, for example:

- Fully closing spaces and only offering the possibility to borrow or return books at a counter, or via a book drop. Some countries are experimenting with drive-through pick-up and return of books. Others are only allowing visitors who have pre-booked.

- Implementing quarantine policies on returned books (see below for further details).

- Implementing plans to offer remote services for example eLending, eLearning, or support to remote teaching

- Finalising and testing measures for all staff to work remotely and allowing those who can to do so already.

Some restrictions:

There are more cases, and governments are beginning to act in order to limit larger events, as well as actively encouraging people to take extra measures to protect hygiene. In this situation, libraries are, for example:

- Reconsidering programming such as story times or workshops, especially for groups at risk such as older users. Additional efforts to ensure hygiene, including through disinfecting hard surfaces. Removing riskier items such as toys or virtual reality headsets from circulation.
- Considering whether to close study spaces where people may spend a longer time in the company of others.
- Preparing for potential further restrictions, for example by ensuring that all staff have the skills and tools to work remotely (if this is possible) and that services, as far as possible, can still be provided digitally.

Business (more or less) as usual:

In some countries, cases of the virus have been limited and governments have not taken any specific measures. Nonetheless, normal recommendations around good hygiene apply. In this situation, libraries are, for example:

- Ensuring access to soap and warm water
- Ensuring they have a supply of hand sanitizer
- Keeping surfaces clean, including toys and library computers

- Ensuring that staff and users are encouraged to take time to recover if they are feeling ill, rather than coming in to work
- Providing pages with useful links to reliable information for users on their websites and promoting media literacy faced with potential misinformation online.

Conclusion:

The current important issue of the world is environment issue that is to save earth & save life of the earth. Libraries can take good initiative to inspire people, individuals to work towards environment protection. Change can be possible when change comes from mind. Libraries can be inspiration for this change. Libraries are in an excellent position to be both an ecological operator and promoter of environmental awareness. Libraries need to be built flexibly, in order to make room for expansions in size and in wiring capabilities. Library buildings are long term investments made to benefit the community so when designing them architects need to be looking so or 100 years into the future.

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"GRANTED ACADEMIC LIBRARIES UTILIZATION IN SANGLI DISTRICTS: A STUDY OF HIGH SCHOOL LIBRARIES IN THE DURATION OF COVID 19 PENDAMIC"

DR.SALUNKHE S.P.   DR.KANTHE RAJESH.

*A*bstract

*L*ibrary is useful to all students, teaching staff as well as guests and school body's members. Every library having varies collections of study materials for school students for their academic progress. All study materials are important in developing moral character values and honesty. Very few libraries are island libraries in Sangli district in Maharashtra.

Key-Words : - Academic Library, Study Material, Library Usages, High School Libraries.

INTRODUCTION:-

Children and their teachers need to be successful, library resources and expertise of librarians. Teachers and Children are (Keith, 2004) to teach in the school library. The school library is an academic library to support the school curriculum and the teaching and learning process. School libraries, reading and library use (Clarke 1999) to promote provide students with materials that meet their needs. Martin's (2000) research growth than similar schools, 8-21 per cent of the average values of the Library Project shows that focus on improving student pointed out that ". Adomi (2006) stressed the importance of the full set of sex.

And through independent learning in the school library, the questions to ask and how to help children find they learning. In this study, students' academic development and libraries to use and evaluate the problems encountered. This study is for people's Novena schools and university staff. Novena Novena's University in Nigeria's Delta State

University, a private university Ogume, opened in 2005. University or school, high school library staff services surveyed about their experiences and views.

Study Materials in Academic (High School) Libraries:-

High school library consist are in academic library, so these library having various types of study materials like story books, essays book, Science and Technologies Books, Daily News Papers, Audio and Visual Materials and books of speech of National Heroes. Study materials are followings:

1. Stories Books:-

In academic library having sufficient of story books, Novels, speeches of important persons are useful to children's.   Academic age is between six to fourteen years, in that age children are like story books, Cartoon books, poems, jokes, information about factious like ghosts. Famous stories of Akbar and Birbalas,Panchtrantras,Vikramas and Vetalas as well as Aesop stories are like every school students. These books are increased of school student's information and knowledge.

2. Essay / Co-curriculum Books:-

Essays plays important role in students school life. So every academic library must be essays book for students. How to write good essay? How to choose subject of essay? How to write introduction of essay? These questions are facing to every student in academic situation. Essays are improved of personality of students in academic life.

3. Science and Technologies Books:-

Now days we are lived in information and communication technology age. Technology fever is overloaded in total life of human behavior as well as academic students so that science and technology books are must in high school library for every student. In school science subjects like biology, physics, biology and information and communication technology are very important. So these books are impressed students thoughts and study of attitude.

4. Daily News Papers and Magazines:-

Current awareness and information we are got from daily news paper and magazines. Magazines are provided information about education, research, and academic trends and currents experiments of academic library field. Daily news papers are gives information to all fields of life span. Life spans of information technology are impacted to every high school students. News papers are variety in must in school library local, national and international languages. For school library we have lot of news papers to all students.

5. *Audio and Visual Materials:-*

The influenced of information and communication technology on whole human life as well as academic life are not remains for safe to that technology. Every school or academic library having CDs, DVDs, computers, Internet Nodes, television, LCD projector, maps, globes, printers, scanners, Xerox and pen drives for using to library users. These materials are very powerful, attractive and important for helping for academic library user or school students.

Survey:-

We are conducted survey of high school or academic library students of Sangli districts in Maharashtra State. Researcher selected 458 library students for this survey in Sangli district in Maharashtra State. We are used random sampling method for this study. Scope of this study is Sangli district in Maharashtra State. Academic granted high school students or library students only. We are provided some questions for library user for this study. Analyses are followings:

Q.1. Do you agree about sufficient number of study materials in high school library?

Study Materials	Responses
Yes	189
No	199
Neutral	70
Total	458
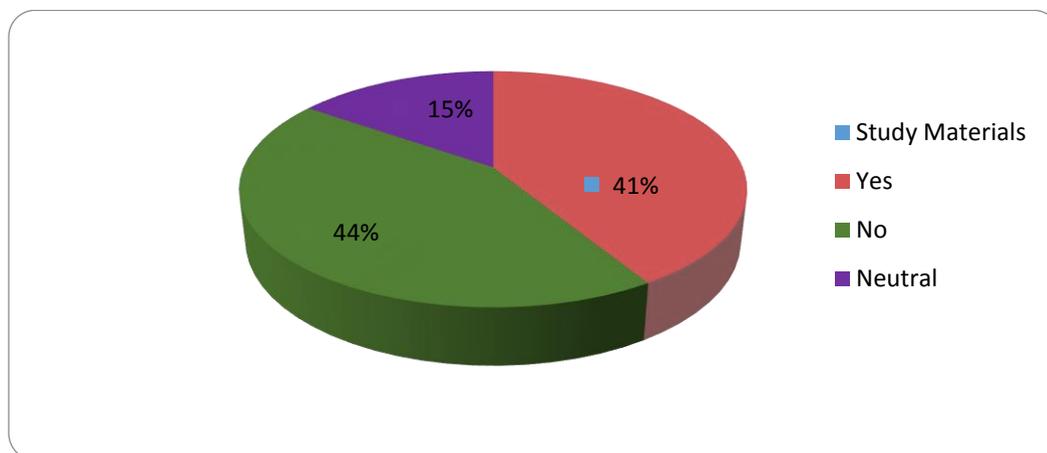
In this above table and figure shown students said that their no sufficient study material for self study or learning in Sangli districts academic granted libraries.

Q.2. In your high school is having separate space for library?

Separate Space	Responses
Yes	195
No	205
Not to Say	58
Total	458

Responses

	Yes	No	Not to Say
Responses	195	215	58
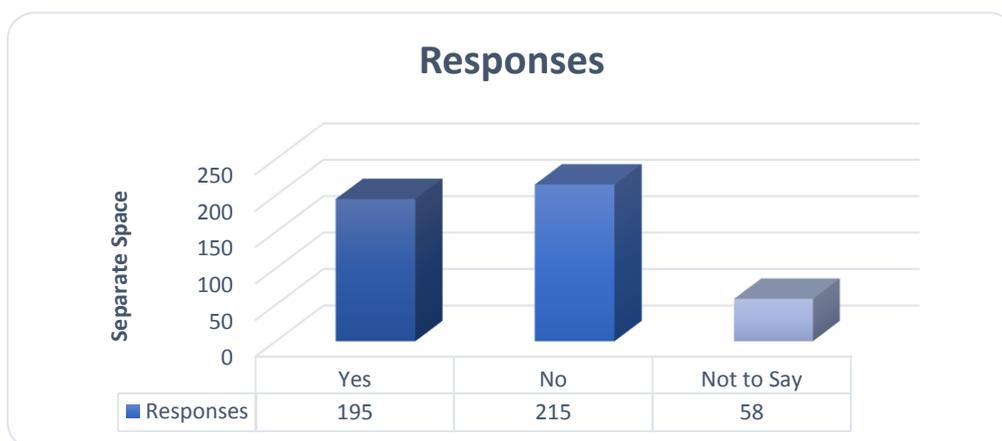
In this above table and figure shown students said that their no sufficient separate space for library for self study or learning in Sangli districts academic granted libraries.

Q.3. Do you agree about sufficient number computers / Audio and Visual materials in high school library?

Computers / Audio and Visual	*Responses*
Yes	155
No	267
Not to Say	58
Total	458

Computers/ A&V Materials

Computers / Audio and Visual	Yes	No	Not to Say
Series1	165	189	104
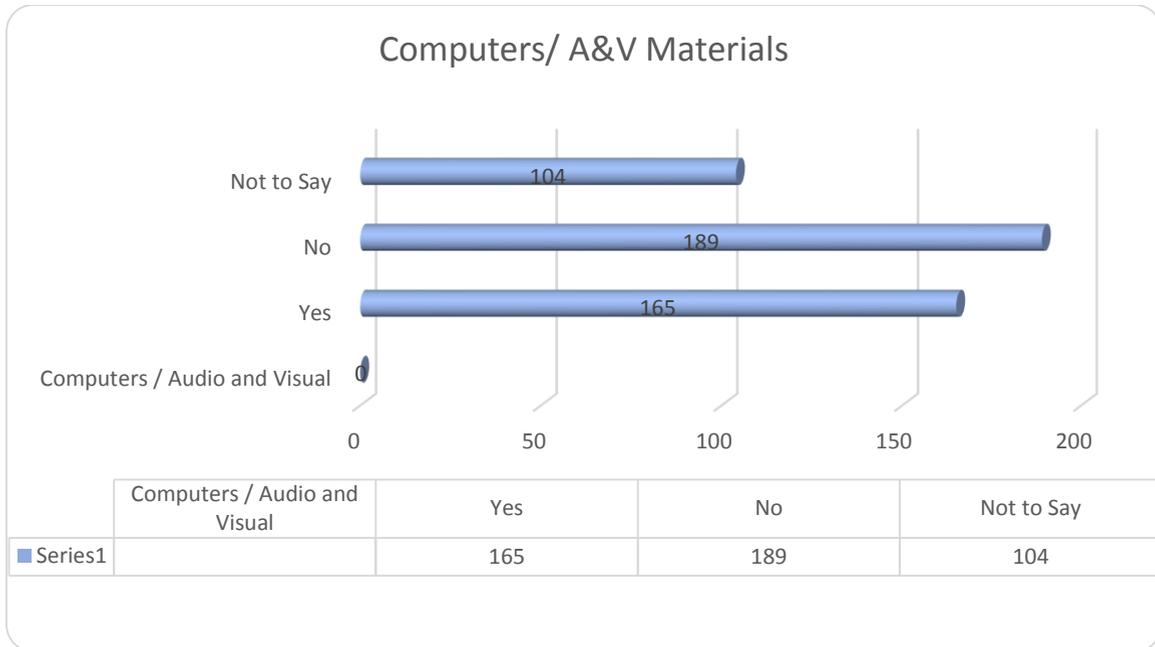
In this above table and figure shown students said that their no sufficient computers or audio and visuals materials for self study or learning in Sangli districts academic granted libraries.

Q.4. In your high school is having full time trained librarian or library staff?

In this way we asked to academic library students above question that every one students said answer is no. So the status of academic library is not good one in Sangli (Maharashtra State). There is no sufficient number of study materials for students, no separate reading room or hall for academic library students. No space for library l for academic library students. No sufficient number of audio and visual materials or no any types of newspapers or magazines for students career or academic growth at the rate of sufficient number in academic or high school library in Sangli districts.

Conclusion and Recommendations:-

Most students are not satisfied with their school library services and a collection of the survey shows that response. Literature on student academic achievement and demonstrates the importance of good school libraries. According to the importance and benefits of staff and students in the school library, I recommend:

- The school library staff and students to provide useful services to a professional librarian.
- Teacher / librarian, tours, films, exhibits and displays will be organized in order to increase user awareness of library services.

- Library staff and student to meet their educational needs and development of products to enhance its collection and resources, and to take steps to reinforce classroom teaching.
- Students must print and audio-visual materials and other shapes.
- To stimulate student interest
- Libraries should provide entertainment and information materials
- Libraries should provide enough space for reading and learning.

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IMPACT OF LAW AND JUSTICE SUBJECT READING ON HIGHER EDUCATIONAL LIBRARIES IN INDIA

ASST. PROF. RAMDAS VERMA

ASSTT. PROF. LIBRARY SCIENCE

Janata College, Bakewar, Teacher Colony, Vidya Vihar,

Etawah – Uttar Pradesh – 206124

rdvarmajcb2015@gmail.com

9557022752

Abstract

*L*egal texts and legal terminologies are unique in both their form and structure and they are of their own special genre. Legal reading is a skill that all law students need to master in order to become successful students and future lawyers. Legal reading is very important to a law student's academic career. Reading of statutory provisions and judicial opinions is central to both law students and the law practitioners. Legal reading is a challenging task for many people including the law students. In order to understand legal text, a reader needs knowledge of legal terminology and an understanding of case structure and legal theory. Since, reading is essentially a constructive process, but interpretation is built from the knowledge of reader.

INTRODUCTION

Legal texts and legal terminologies are unique in both their form and structure and they are of their own special genre. Legal reading is a skill that all law students need to master in order to become successful students and future lawyers. Legal reading is very important to a law student's academic career. Reading of statutory provisions and judicial opinions is central to both law students and the law practitioners. Legal reading is a challenging task for many people including the law students. In order to understand legal text, a reader needs knowledge of legal terminology and an understanding of case structure

and legal theory. Since, reading is essentially a constructive process, but interpretation is built from the knowledge of reader. If a reader lacks knowledge, then he/she will be unable to gate effective interpretation. Reading legal opinions to maximize time efficiency and comprehension is one of the most critical skills for any law readers.

➢ **_Nature of Legal Reading:_** There is far more to legal reading than simply reading a judicial opinion quickly or re-reading the text frequently. But the real issue became one of reading effectively, not just reading quickly. Effective legal readers should know what to pay attention to and what to let go of; in other words, readers should know what details are relevant to the decision and what details are irrelevant. At the same time effective legal readers should use reading strategies that allow them to go beyond the mere words in any opinion into the analysis and reasoning of the court. To maximize the effectiveness of legal reading various deferent reading strategies needs to be adopted. Poor readers make more oral reading errors that can affect the meaning of text. This may happen due to misreading or skipping words while reading, the reader is at risk of miscomprehending whatever is being read.

➢ **_An Expert legal readers vs. novice/learner reader:_** A successful law advocate/student must also be efficient readers so that one can devote their mental energies toward comprehending what they are reading. Good readers store words and word parts in their memories as visual orthographic images. Such storage allows readers to bypass the decoding stage to quickly retrieve words from memory. Expert legal readers read less linearly than novice/learner readers. Novice readers did not look at details such as dates, judges' names, or courts etc. Further a difference in time allocation to parts of the text between experts and novices is that novices tend to read at the same speed, no matter which part of the case they are reading, whereas expert legal readers slow down for important parts of the text, while speeding through judicial ramblings. Expert readers are more likely to understand their own cognitive processes than are novices. The ability to recognize nonessential dicta allows more advanced readers to speed through less important parts of a case while slowing down to focus on the points of law.

➢ **_Reading Strategies:_** Effective legal reading can be ensured by applying various reading strategies together, because along conventional method of reading is not effective nowadays. Various reading strategies are –

1. **_Problematizing Reading Strategies:_** These strategies help readers to solve problems within the text. Readers use problem formation strategies to set expectations for a text. They ask themselves questions, make predictions, and hypothesize about developing meaning. Various studies have associated the use of problematizing strategies with student readers and expert/lawyer readers. These readers ask questions, they talk back to the text, make predictions,

hypothesize about meaning, and connect with the overall purpose of their reading.

2. ***Rhetorical Reading Strategies:*** Rhetorical reading strategies allow the reader to move through the text in an evaluative manner or in a way that synthesizes what is being read with the reader's own experiences. Rhetorical strategies represent points where the reader took a step beyond the text itself, and is concerned with constructing a rhetorical situation for the text, trying to account for the author's purpose, context, and effect on the audience.

3. ***Default Reading Strategies:*** Readers use default reading strategies when they "moved through the text in a linear progression," which includes "paraphrasing" or "underlining" text. It also includes making "margin notes," "noting aspects of structure," and "highlighting" text. Default strategies are different from problematizing strategies because of the unproblematic nature of the process. Readers employing default strategies usually note something about the structure of the case and/or paraphrased or recited the text.

All of this does not mean that we should abandon default reading strategies. But at the same time we should realize that those default strategies will not be sufficient by themselves. Hence, we should be well assisted by incorporating an effective involvement of problematizing and rhetorical reading strategies to gain the ultimate object of legal reading.

➤ ***Importance of Legal Reading:*** The important of 'Legal Reading' truly depends upon the importance and role of 'Legal Education'. From the following facts about the legal education, the importance and role of legal education would be clear –

1. The legal education should be able to meet ever-growing demands of the society and should be thoroughly equipped to cater to the complexities of the different situations.
2. Legal education has an important role in directing and moderating social change.
3. Legal communication manifest higher moral values hence should maintain high degree of competence discipline and ensure that no section of society is denied of access to its services because of poverty or social status.
4. Legal education seeks to impart appropriate training, which should be made available through professionals' experts.
5. Legal education is expected to inculcate law students with the operative legal rules both substantive and procedural.
6. The prime object of the legal education is to produce efficient lawyers.

7. Legal education must equip the student with the necessary theoretical and practical knowledge.

➢ ***Some reading tips for law students / law readers:***

1. ***Read Like an Advocate or a Judge:*** Usually, a lawyer reads laws/cases to solve a legal problem faced by his client. As the lawyer reads the law/case, he is trying to identify the applicable legal rules and determine how those rules will affect his clients. Whereas a judge, naturally, reads cases in connection with a case pending before the court. Much like the advocate, a Judges is reading to identify the applicable rules and determine whether and how the case affects the decision he/she will render in the case.

   Both the lawyer and the judge realize that in reading the case their role is not simply to gather the information set forth by the other. Rather, they are developing their own understanding about what the case means, not only for the parties to the case, but also for the judges, lawyers and parties who come after. They are figuring out how the case can be stretched to fit their own facts or compressed to avoid their own fact.

   By following same perspective, one should lay the foundation for using problematizing and rhetorical strategies while reading legal provisions/matters. It requires a mindset to look for strengths and weaknesses in the court's analysis, bias of the court, and seeks to construct meaning instead of merely gather information.

2. ***Connect to a Purpose:*** When law students internalize a purpose for reading other than simply reading the law/case in preparation for class, they read differently. One should read the facts of the opinion more closely e.g. in context of a client, to determine whether their client's case might be analogous to the facts of the opinion. They should note the case details and procedural posture of the case more accurately and consistently. By connecting with the purpose of the law/case reading one can be more engaged and active in their case reading or overall law reading. Short focused reading is more beneficial than hours spent in the library staring at legal text. Students should assign themselves a purpose on their own for instance, pretend they are the defendant's lawyer or the appellant or the judge. The point is that active, focused reading improves a law student's overall comprehension and retention of important details.

3. ***Establish the Context of the law/case:*** All law students need to establish the context of the law/case before they read. Students need to know why they are reading? Why is the legal provision/case in the casebook at that particular place? For what legal proposition does the law/case stand? Knowing the context of the matter means understanding the specifics of the particular case and why the legal

provision is important within the larger context of the course. Knowing the context of the provisions before beginning to read would be a very useful strategy to read more efficiently.

4. ***Resolve any Confusion before reading on:*** Usually law learners became confuse as they read the law, they should page back and figure out the answer to their questions before moving on to the next paragraph. In contrast, struggling law students tends to leave their questions unanswered. Instead of figuring out the answers, the less successful students simply moved on through the text, hoping that the opinion would eventually make sense in the end.

5. ***Don't Get Stuck Using Only Default Reading Strategies:***

While reading, most of the students spent the bulk of their reading time for high-lighting text, paraphrasing, or writing notes in the margin. Whereas they should use a variety of reading strategies throughout their reading protocols. Although law students certainly need to be able to articulate the facts, issues, and holdings of any legal provision/case, they also need to understand how the legal provisions/case relates to the other legal provisions/cases they have read in the class. Was the interpretation of legal provisions/decision correctly decided? How does the case change the law? Using problematizing and rhetorical strategies in addition to default reading strategies allows law students to go deeper into the court's analysis.

➢ Role of Law Teaching towards effective Law Reading: The law teaching methods also play important role in creating effective legal/law reading methods. In this context, law teaching methods should focus on essential elements like –
   1. Giving students a strong grasp of the black-letter rules;
   2. Teaching students how to apply those rules to new fact patterns;
   3. Teaching students case analysis i.e. how to dissect a case, breaking it down into discrete components in order to discern what the court is actually doing;
   4. Improving students' ability to distinguish between facts that are pivotal to the outcome of a case and facts that are irrelevant;
   5. Teaching students to focus on procedural issues;
   6. Exposing students to ethical and professional responsibility issues that lurk beneath the surface of the cases;
   7. Giving students transaction-oriented skills training through contract drafting exercises and mock negotiations;
   8. Teaching students the methods of statutory construction and giving them statutory drafting exercises;
   9. Giving students an appreciation of the policies upon which the rules are grounded;

10. Covering the larger jurisprudential or philosophical framework of the subject;
11. Developing a rational theory to explain and justify the rules;
12. helping students to see the race or gender implications in the rules and cases; and alike.

Conclusion:

The laws and legal fields has to deal with problems of diverse magnitudes and the law students and advocates have to be trained in professional skills to meet the challenges of globalization and universalization of law. Effective legal/law reading is an important and crucial skill required to be possessed by law reader's/law student's as well as all advocates. In the beginning, we may feel overwhelmed by all these strategies and wonder where we will find the time and how to make combination of such strategies. But ultimately these strategies result in more efficient reading by increasing comprehension and it ensures that we are getting maximum value from our reading time because we are not only gathering information but also strengthening our ability to recall and apply that information. The more we practice these strategies, the more efficient we will become at using them. Consequently, the decisive purpose of reading law would be served only through effective and resulting reading.

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SCREENING AND PARTIAL 16 S RRNA GENE SEQUENCING OF KERATINASE PRODUCING STENOTROPHOMONAS MALTOPHILIA KARUNA5 ISOLATED FROM POULTRY WASTE

ASSTT. PROF. HIMMATSINGH MAHOR

Department of Physics,

Babu Shivnath Agrawal College, Mathura. U. P.

Abstract

Keratinase is a protease which degrades the insoluble protein keratin that is largely found in feather waste. Fifty seven soil samples were collected from a feather and poultry waste dumping sites. All these soil samples were subjected for enrichment in Whole feather meal medium containing 1% chicken feather as a sole source of Carbon, nitrogen and energy with pH 8.0 and incubated at 30°C on shaker condition (150 rpm) for 7 days. Out of 57 flasks only 21 showed visual feather degradation. Enriched sample from each flask was isolated on skimmed milk agar plates. Only 10 isolates demonstrated proteolytic activity by showing zone of clearance around the colony on skimmed milk agar medium. The above 10 bacterial isolates (Kar:01-12) were assayed for keratinase enzyme by growing them in Whole feather meal medium pH 8. Maximum keratinase production was demonstrated by isolate number Kar05 (41U/ml) at 30°C on shaker condition (150rpm) after 4 days of incubation. Promising isolate was identified as Stenotrophomonas maltophila KARUNA5 by morphological, cultural, biochemical and 16S rRNA sequence analysis and was submitted to NCBI (Accession no: LC271188).

Key words - Keratinase, Stenotrophomonas maltophila KARUNA5

Introduction:

Keratinase [E.C.3.4.21/24/99.11] belong to group of proteolytic enzymes which have ability to hydrolyze insoluble protein keratin more efficiently than other proteases. Due to the strength and stability of keratin, very few microorganisms are able to

degrade keratin and utilize it as carbon, nitrogen and sulphur source. Keratinase is an extracellular enzyme used for the bio degradation of keratin. Some microbes have been reported to produce keratinase in the presence of keratin substrate. Keratinase attacks the disulfide bond of keratin to degrade it. (Sahoo et al., 2012) Keratinases from microorganisms have attracted a great deal of attention in the last couple of decades, particularly due to their multitude of industrial, agricultural and medical applications such as in the animal feed and supplement, fertilizers, detergents, leather and pharmaceutical industries (Uttangi and Aruna, 2018; Thanikaivelan et al., 2004; Gupta and Ramnani, 2006; Karthikeyan et al., 2007; Brandelli and Riffel, 2005; Brandelli et al., 2010; Korniłłowicz et al., 2011). Alkaline proteases like keratinase enzymes have been obtained from various bacterial, Actinomycetes and fungal strains. Among all the microbial sources of keratinase, bacterial keratinase are important because of their various industrial applications. Bacterial strains belonging to genera Pseudomonas spp., Vibrio spp., Chryseobacterium spp., Xanthomonas spp., Fervidobacterium spp., Stenotrophomonas sp., Micrococcus spp., Nesterenkonia, Arthrobacter, Clostridium, Caldicoprobacter, Bacillus and Kytococcuss are keratinase producers (Uttangi and Aruna, 2018). Actinomycetes Genera include Streptomyces, Microbispora, Nocardia and Streptomyces (Kumar and Takagi, 1999; Kaul and Sumbali, 1997; Gushterova et al., 2005; Azza, 2013). Fungal genera which have potential to produce keratinases include Paecilomyces, Myrothecium, Aspergillus Cladosporium and Trichoderma and Candida (Veselá and Friedich., 2009; Gioppo et al., 2009; Kim, 2007; Patience et al., 2015; Huang et al., 2015; Vermelho et al., 2010, Uttangi and Aruna, 2018). There are many reports where fungal keratinase enzymes are derived primarily from dermatophytic Ascomycetous fungi such as Arthroderma sp., Microsporum sp. and Trichophyton sp.,(Burmter et al., 2011; Martinez et al., 2012).The current work deals with screening of keratinase producer from various soil samples collected from the feather and poultry waste dumping sites. Most promising keratinase producer was selected on the basis of maximum keratinase production and was identified.

Material and Methods:

Collection of samples

Eighty soil samples were collected from the regular feather and poultry waste dumping sites in Kolhapur district in clean dry plastic containers.

Enrichment: One gram of soil sample was added into 10 ml of sterile phosphate buffer saline solution (pH 7.2), mixed well and allowed to stand for 30 min. From this 2 ml of supernatant was inoculated in 250 ml flask containing100ml of Whole feather meal medium [(g/l):0.5 g of NH_4Cl, 0.5 g of NaCl, 0.3 g of K_2HPO_4, 0.4 g of KH_2PO_4, 0.1 g of $MgCl_2 \cdot 6H_2O$, 0.1 g of yeast extract 1 g of defatted whole chicken feathers] pH 8. These flasks were incubated at 30°C on rotary shaker (120rpm) till visible degradation or disappearance of the feathers observed (Agrahari and Wadhwa, 2010).

Primary screening of keratinolytic Bacteria *:* Primary screening of keratinolytic bacteria was carried out with Skimmed Milk agar medium [Peptone, 5.0; yeast extract, 3.0; dextrose, 1.0; skim milk Powder, 10.0, agar 15.0 and pH was maintained at 7.2] (Brandelli ands Riffel, 2006)

0.1 ml of the enriched sample was streaked on Skimmed milk agar plates (SMA) incubated at 30°C for 24 h to observe clear zone of proteolytic activity around the colony (Saha et al., 2010).

Determination of Percent degradation feather:

The 10 isolates were tested for their keratin degrading ability. 100 ml of whole feather meal medium with pre-weighed feather pieces was autoclaved at 121°C for 15 minutes. A 1ml of inoculums with O.D. of 0.1 was inoculated into respective medium. Un-inoculated flask was maintained as control. These flasks were incubated at 30°C for 7 days. The percentage of degradation of feather by the isolates was determined using the following formula: (Nayaka and Babu, 2014). Initial weight of feathers before degradation and final weight of feathers after degradation were taken for calculation of percentage of feather degradation. The following formula was used for calculation.

$$\text{Percentage of Weight loss (\%)} = \frac{\text{Initial weight - Final weight}}{\text{Initial weight}} \times 100$$

Keratinase assay:

Preparation of crude enzyme extract: Cultures were grown on sterile Luria Bertani broth on rotary shaker incubator (120 rpm) at 30°C for 24 hrs. The broth was centrifuged at 3000 rpm for 20 min. The cell pellet was washed and resuspended in phosphate buffer saline pH 7.2. Washed cells (2 ml) were inoculated in 100ml of Whole Feather meal medium and incubated at 30°C on rotary shaker incubator (120rpm) for 5 days. After every 24 hrs of incubation an aliquot of the broth was centrifuged and the supernatant containing the enzyme extract was assayed by Keratin azure assay (Saibabu and Niyongabo, 2013)

Keratinase Azure assay:

The keratinolytic activity was determined by using keratin azure (Sigma–Aldrich) as the insoluble substrate (Bressollier et al., 1999). Aliquots of 500 µL of the enzyme samples were incubated in a solution of 10 mg of keratin azure in 500 µL of 20 mM Glycine NaOH Buffer of pH 9.6 for 1 h at 500C. Subsequently, these were centrifuged at 5,000× g for 20 min and the absorbance of the supernatant was determined at 594nm (Beckmann DU-640 spectrophotometer). Control samples were prepared in a similar manner except

that the enzyme was replaced by the buffer. The assays were conducted in triplicate. One enzymatic unit was defined as the amount of enzyme that resulted in an increase in absorbance at 594 nm (A594 nm) of 0.01 after reaction at 500C for 1 hr with keratin azure (Bressollier et al., 1999)

PCR amplification of the 16S rDNA and sequence determination: A PCR was performed in order to amplify the 16S ribosomal DNA (rDNA) of theKar05strain. The primers used 16S Forward primer: 5' AGA GTT TGA TCC TGG CTC AG 3' and 16S Reverse primer: 5' AAG GAG GTG ATC CAG CCG CA 3' this primer pair has been shown to amplify the 1500 nucleotides in 16S rDNA from a wide variety of bacterial taxa. The PCR was performed as previously described by using a DNA thermal cycler (PTC 100, M J Research, and Water Town, MA). The DNA sequencing was done using 50 ng PCR products having 8 µl of ready reaction mix (BDT v 3.0, Applied Bio-systems, Foster City, CA). The sequencing was carried out in ABI prism 3100 Genetic Analyzer (Applied Bio-systems). The sequences were checked against the microbial nucleotide databases using BLASTN search algorithm.

Results and discussion:

Sample collection, Enrichment: Primary screening was employed to obtain potential bacterial isolates capable of producing keratinase enzyme using feather (keratin substrate) as sole carbon and nitrogen source. Presence of the keratinase rich substrate like poultry feathers induces production of the keratinase (Mazotto et al., 2010).   In current study fifty seven soil samples from different Feather and poultry waste dumping sites from Kolhapur were successfully enriched in Whole feather medium out of which 21 flasks showed visible feather degradation as shown in figure 1.

Figure 1: Enrichment medium showing visible feather degradation

The enriched samples were streaked on feather meal basal medium agar plates and 12 different isolates Kar1, Kar2, Kar3, Kar5, Kar6, Kar7, Kar8, Kar9, Kar10, Kar11 and Kar12 were obtained. There were reports of isolating keratinase producing microorganisms from poultry soil, poultry wastes, poultry farm, poultry processing industry, feather and hair dumping sites and barbers' landfill (Gioppo et al., 2009; Sahoo et al., 2015; Shah, 2015). There are other studies where whole feather meal medium was used for enrichment of keratinase producers (Ramya et al., 2014; Shah, 2015).

Keratinase production ability of isolates was confirmed by production of caseinase on agar plates containing skimmed milk (Tork et al., 2010; Ramya et al., 2014). In the present study, all the 12 isolates (Kar 01-Kar 12) were subjected to primary screening on skimmed milk agar plates. Except Kar11 and Kar12 all the other isolates showed the clear zone of caseinase which was due to hydrolysis of casein (Skim milk powder) as shown in table 1. Zone of clearance i.e. protease activity around the colony on Skimmed milk agar plate suggested that these isolates might possess keratinase activity as well. Similar findings were reported by many researchers (Nayaka and Babu, 2014; Agrahari and Wadhwa, 2010, Tamilkani et al., 2015).

Table 1: Proteolytic activity of different isolates on Skimmed Milk agar

Isolate designation	Proteolytic Activity
Kar/01	+
Kar/02	+
Kar/03	+
Kar/04	+
Kar/05	+
Kar/06	+
Kar/07	+
Kar/08	+
Kar/09	+
Kar/10	+
Kar/11	--
Kar/12	--

(+) = zone of proteolysis observed

(--) = Zone proteolysis not observed.

Secondary screening: The above 10 isolates which were showing proteolytic activity were checked for the feather degradation as it is indicator of keratinase production and these isolates were grown on whole feather basal broth for 5 days. The capability of these isolates to produce maximum keratinase in the shortest period of time was studied. Out of 10 bacterial isolates, the isolate Kar05 was found to show maximum % of feather degradation on fifth day where the whole feather basal medium was completely turbid, suggesting disintegration and degradation of the feathers in the medium. The highest % of feather degradation was demonstrated by Kar05 isolate and Kar 01 and Kar 09 showed lowest % of feather degradation (Table 2).

Table 2: Percentage (%) of feather degradation demonstrated by the different isolates

Isolate designation	Extents of feather Degradation	% of feather degradation On 5th Day
Kar/01	--	04
Kar/02	+	20
Kar/03	++	45
Kar/04	++	47
Kar/05	+++	69
Kar/06	+++	61
Kar/07	++	52
Kar/08	+	30
Kar/09	--	05
Kar/10	+	11

++ = Degradation of feather vanes

+++ = Extensive degradation of feather vanes plus slight degradation of feather shaft.

++++ = Extensive degradation of feather vanes and shaft.

Keratiase assay: The keratinolytic activity was determined by using keratin azure (Sigma–Aldrich) as the insoluble substrate (Bressollier et al., 1999). All 8 isolates produced keratinase enzyme (Table 3) but Kar05 showed maximum production of keratinase enzyme after 4 days of incubation. Kar 05 was selected as a promising isolate for further studies.

Table 3: Production of Keratinase enzyme by different isolates

Name of the isolate	Enzyme activity U/ml (1st Day)	Enzyme activity U/ml (2nd Day)	Enzyme activity U/ml (3rd Day)	Enzyme activity U/ml (4th Day)	Enzyme activity U/ml (5th Day)
Kar/02	0	3	7	7	08
Kar/03	0	2	7	11	10
Kar/04	2	3	6	9	12
Kar/05	23	38	39	41	41
Kar/06	0	4	4	4	05
Kar/07	8	8	10	11	10
Kar/08	8	19	36	38	27
Kar/10	3	3	2	8	14

__Identification of promising isolate:__ The 16S rRNA gene based phylogenetic analysis demonstrated 90–95% sequence similarity of Kar05 with other species of the genus Sternotrophomonas, which suggested that the bacterium under study belongs to the genus Sternotrophomonas. The phylogenetic tree constructed from the sequence data by the Neighbor-joining method (Figure 2) which showed the detailed evolutionary relationships between the strain Kar05 and other closely related species of the genus Sternotrophomonas. The strain Sternotrophomonas maltophila strain Al-Khrj-5 (Genbank Acc. No:KY123858.1) showing 96% 16S rRNA gene sequence identity represented the closest phylogenetic neighbour of the strain Sternotrophomonas maltophila KARUNA05. The topologies of the present isolate estimated from the distance-based methods (Neighbor-joining and UPGMA) and the maximum-likelihood and parsimony analyses were essentially consistent. The nucleotide sequence of Stenotrophomonas maltophilia Strain KARUNA05 was deposited at GeneBank (accession no. LC271188).

Keratinase production by several bacteria such as Stenotrophomonas maltophilia strain S-1, Stenotrophomonas maltophilia N4, Stenotrophomonas maltophilia K279a, Stenotrophomonas maltophilia KB13, Stenotrophomonas sp. Strain Norja-1, Stenotrophomonas maltophilia DHHJ and Stenotrophomonas maltophilia YArck were previously reported (Miyaji et al., 2005; Kurane and Attar, 2017; Shah and Vaidya, 2017; Cao et al., 2009). Many related other gram negative bacteria such as Pseudomonas aeroginosa, Pseudomomanas sp., MS21, Fervidobacterium pennavorans, Microbacterium sp. kr10, Burkholderia, Chryseobacterium, Microbacterium species, Chryseobacterium

sp. and Serratia sp. HPC 1383 were also demonstrated keratinoltyic acivity (Fredrich et al., 1996; Tork et al., 2010; Thatheys and Ramya, 2015; Brandelli and Riffel, 2005; Khardenavis et al., 2009; Laba et al., 2015). Micrococcus luteus, Kytococcus sedentarius (Uttangi and Aruna, 2018). Also there are gram positive bacteria which have also shown to produce keratinase such as B. licheniformis and B.subtilis, B.subtilis strain, KD-N2, Bacillus sp. JB 99, B.amyloliquefaciens MA20, B.subtilis MA21, Bacillus thuringiensis strain Bt407, Bacillus subtilis S14 are re[ported to be keratinolytic bacteria. (Macedo et al., 2005). Similarly Keratinase producing bacterial strains of Bacillus thuringiensis were also isolated from the chicken feather dumping site (Uttangi and Aruna, 2018; Sivakumar et al., 2012; Shanker et al.,2014).
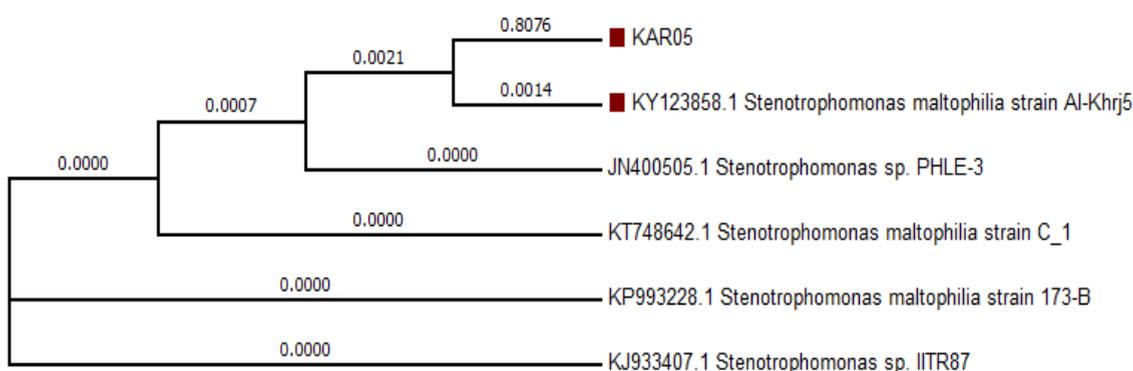
Figure 2: The phylogenetic tree constructed from the sequence data by the Neighbor-joining

Bacterial isolate capable of producing keratinases is a possible alternative to convert poultry waste into low-cost amino acids and peptides which are beneficial in the animal food stuff and agricultural use (Sahoo et al., 2012). Also the several fungi and Actinomycetes are reported to have keratinase production ability but still bacterial keratinase have more importance because of their tolerance to broad range of pH, different salts and temperature which make them significant in industrial process.

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Asstt. Prof. Himmatsingh Mahor

AN INTERDISCIPLINARY AREA OF RESEARCH IN LIBRARIANSHIP.

MR. FULARI ARJUN RAMDAS

Research Scholar.

Department of Library and Information science.

Shri. J.J.T. University,

Jhunjhunu, Rajasthan.

*A*bstract:

*C*ontemporary academics encourage the interdisciplinary studies. The agencies of higher education in India also believe in this maxim for the promotion of quality education. UGC, a national funding and accrediting body provide guidelines with promotional schemes for further betterment of the field of interdisciplinary studies. On the basis of interdisciplinary research the institutions of higher education and university are even ranked on the basis of interdisciplinary studies and its enduring values in academics and also in society. The paper is proposed to speak the background of disciplinary and interdisciplinary studies, the societal and intellectual benefits and how interdisciplinary avenues are undertaken by the librarianship discipline. More especially the research paper argues out the collaborative study of management and library science and how these two disciplines together been investigated by the scholars of library and information science in general and job studies particular.

INTRODUCTION

Conglomeration and collaboration between disciplines and interdisciplines is not age old, rather having the recent value and importance. The disciplines and its connotations refer to the modern subjects taught in the university and college setup. The subjects are classified into variety of broadways and further into narrower and specialized ways. Reviewing the classification, the attribute of subject contents are primarily considered for being disciplinary and interdisciplinary. One popular way of understanding the academic subjects are in the division of science, social science and humanities. Eventually the study

and research, researchers and scientists appraised the societal benefits of these disciplines. The research result and outcome of investigation helped the growth and development of subjects. No disciplines or subjects are restricted into certain boundaries and nature of the content demands viewing from different perspectives.

Those perspectives and multiple analyses of particular subjects are bound to be understood the relation between two or more subjects or sub-subjects, what the librarian often call it a facet. Economics is a discipline from social science categories, which is to study the economic activities, theories, the relation between demand and supply and satisfying unlimited wants with the limited income. On the other hand political science is another important discipline which is studied and taught with a definitive scope while understanding the political behavior, constitutional aspects, rights, duties and also governing principles. These two aspects are taught with definite prescribed scope. However under some circumstances while studying new phenomena, contents of both the disciplines crisscrosses and overlaps, hence formed interdisciplinarity.

Librarianship and Interdisciplinarity

Librarianship as a discipline is more than hundred years old. It has evolved through the years as one of the finest subjects of social sciences. Thought started with certificate and diploma courses, librarianship in India are taught and researched at par with other subjects of social sciences. The content is taught with modern and pragmatic syllabi by retaining the old and traditional concept with new areas of research. The discipline starts with practicable beginning of classification and cataloguing, clubbing into knowledge and organization and revealed its maturity with new areas of study and research. An application of information technology has helped to cross those traditional boundaries of discipline into enhancing the library services by applying information and communication technology. For these purposes, the library professionals are trained with the basic principles of information technology so as other technocrats. To mange libraries and information centers as an organization, the managerial principles are taught. So the new activity, duty and responsibility they are here trained with, made them librarians and library managers. More number of activities and engagements of modern libraries have transformed their original positions by training, content and orientation. Hence the new role played by librarians is not excellent with disciplinary nature of orientation and at the same time content made them practical and pragmatic also. Thought not described here exhaustively, more numbers of interdisciplinary studies are imbibed into the syllabi and content of the librarianship course.

Management, Job studies and Librarianship

Though tagged as a popular and independent terminology, Job studies are one of those core subthemes of management disciplines. Under this umbrella term job studies, Job advertisement, Job analysis and job requirement and many others are covered. 'Job analysis

commonly combines methods of data collection to achieve a comprehensive picture of the job under study. Most approaches to job analysis mix and match various job data sources and data collection techniques. Management people are trained and develop their competencies during their training and research at institutions and universities. The job study programme is considered to be one of the primary areas in management syllabi of the school of management. The basic objective of this study is to orient the young managers to adhere themselves to handle the people at different levels in the officers, institutions and organizations. It is to be noted that people are core part of any organization. As price puts it, 'how can we difference one organization from another? Large companies spend considerable amount or developing strong images for themselves. Corporate logos, decoration schemes, uniforms, marketing literature and advertisements are all designate to create a favorable impression with customers and share analysis. But public images tell us little about an organization as an employer. In fact it obscures the nature of people management. It is people who work for organization, who develop services and products of organization and eventually the people and organizations are related to each other and develop mutual cooperation and competitiveness. The result is that the organization is known through its people.

The library is also considered as a modern organization with increasingly variable nature with relation to servicing the people as client of the library. The library professionals work in the library in different capacities to serve the organizations with stipulated job descriptions and job analysis. Understanding people, the library professionals in the library have become a tedious job for library authorities, library managers and the chief librarian. The is taken up seriously by library trainers and teachers of the university to consider this issue as a special case and accordingly the elements is inscribed in the syllabus and the other training aspects of librarianship.

Syllabus and Interdisciplinary

Library school adopt the contents which best suit the students for the job market. As it is discussed above, one of the primary aspect demand a special module on the management on the library and information science centers. Majority of Indian library schools design their syllabi considering one of the core compulsory papers often entitled, 'library management'.' management of library and information centers 'etc. The basic reason of giving importance to management and managerial principles is for considering libraries as a modern complex organization. In special paper on management principles, consisting of four-five parts in the form of units or sections is having a job studies as one of them. In this part the content is so designed that people and their job is considered as one of the substantial part of library as an organization. Orientation to the job or the works, their nature and description are told in the classroom. The entire activity is related to job studies are described herewith the beginning job requirement and to fulfill those requirement, public notices in the form of advertisement to attract the best minds are

displayed followed by on the basis recruitment policy and suitable candidates are inducted and introduced to the organization. In some cases job training is initiated for the fresher's and staff development programmed is conducted time to time for updating the compliances of the people along with in-house updating programmes. All these aspects are related to job in the context of library as an organization, needs to be focused, studied and researched for further development.

Teaching management principles in general or job studies in particular are not created in vacuum. Librarianship syllabi designers need the help of others especially, from economics, and management people. Orientation and adoption of the content of management aspects into the field of librarianship is primarily the involvement of two disciplines e.g., economics and librarianship. The job study is borrowed from the content of management to its discipline, and other disciplines also borrow certain elements from the subject of library and information science. The environment of one or more disciplines speaks in the volume about the nature of the interdisciplinary study and research.

An interdisciplinary shows the brevity and credit of a discipline; librarianship is credited with all these attributes and proud to be tagged as one of key professional disciplines in Indian academics. Teaching a paper on managerial principles not only introduces the basics of management to the students of librarianship but also a future librarian is trained with all these management success tips. This interdisciplinary nature of the content of introduced in librarianship discipline, the outgoing students of the subject is empowered multifariously along with fitness to become even managers and other organizations related to libraries and information centers'. Further the interdisciplinary strengthened the discipline and attracts more students for training and research. This symptom of interdisciplinary not only strengthened the discipline but also assisting in enhancing the discipline or subjects. Hence the quality of the university is elevated.

Conclusion

From the above discussed proposition in support of interdisciplinary, introducing job studies in librarianship while adapting the managerial principles in the training of future librarianship speak the favor of modern librarianship as a subject or discipline. Newer and newer theories and principles are encouraged to be introduced in the syllabi. In some library schools, wherever is warranted by looking into the job market, a full-fledged paper may be taught under the flagship of job studies. By result, the products or students of librarianship, if not many at least few can get the benefit to be recruited by the big organizations or can be employs as job officers or training officers or as specialized employees in different corporate and government sectors. All these would be possible by adopting and encouraging the interdisciplinary nature of the study from other disciplines and librarianship can be transformed into a newer and newer professional discipline. Hence interdisciplinary can provide flexibility and dynamism from static nature of the discipline and ultimately the dynamism is principle of survival of the fittest attitude in the academics.

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AWARENESS AND USE OF MASSIVE OPEN ONLINE COURSES (MOOCS) BY COLLEGE TEACHERS IN MAHARASHTRA: A STUDY.

DR UDAY MARUTI JADHAV

Librarian

Camp Education Society's

Dr. A. B. Telang Senior College of Arts Commerce and Science Nigdi Pune Email-uday.jadhav@rediffmail.com

Mobile No. 8379 80 4928

Abstract:

*T*he present study about awareness and use of MOOCs by college teachers in Maharashtra is based on a survey. Researcher has applied a descriptive method as a research method and questionnaire as a tool for data collection of this study. Finding from study shows that 94.90% college teachers out of population are aware about online courses while 5.10% teachers are not aware about online courses also 74.5 % college teachers have done online courses and 8.2% teachers have enrolled for online courses. This study reveals in depth awareness and use of MOOCs by college teachers in Maharashtra.

INTRODUCTION

Higher education is an important part in the development of every country. In India higher education also plays an important role in the development process. Massive Open Online Courses are the most recent form of distance learning in online mode. MOOC offers flexible learning and a variety of courses.

The concept of MOOC was raised in 2008 and developed later. Now it has spread all over the world. MOOC is a student centric and gives them flexibility in online learning. It goes with the pace of students. Due to this feature, MOOC has attracted learners to it. The MOOC is divided in 4 letters -

Massive: Mass community can be its part.

Open: Freely available for all.

Online: Available through the World Wide

Web. Courses: Various structured courses.

Various components of MOOCs are -

1. Thousands of students can admit with different abilities.
2. Learning sessions are broken down into smaller segments for student'sconvenience.
3. It is open for all.
4. It is prepared by subject experts.
5. Online discussion forum is available for interaction.
6. It has an assessment part which includes quiz, assignments andMCQs.

Wikipedia has defined a MOOC as an online course aimed at unlimited participation and open access via the web.

Review of literature:

Various research studies have been carried out regarding MOOCs and related aspects. Liyanagunawardena, Adams and Williams (2013) systematically studied published literature on MOOC and categorised the literature into eight different areas. Yuan and Powell(2013) informed the developments in MOOCs from the USA and Canada.Shakya, Shrestha , and Manandhar (2016) showed how much the college students of far-western region of Nepal are aware about online learning phenomena like MOOC. Kaushik (2015) studied perceptions of Library and Information Science professionals towards MOOCs and showed diverse perceptions and insights of LIS professionals towards MOOCs. Naikwadi andGhumre (2018) explored challenges for library professionals in the age of MOOC. Soyemi And Babalola (2018) studied awareness and use of MOOCs among academic librarians in Nigeria and recommended that University should formulate strategies and programs to promote active participation in MOOC by librarians. Nagasampige and Subbaiah demonstrated the awareness and motivation among students and teaching professionals of Indian University education system.

Objectives:

1. To study awareness of MOOCs in college teachers of Maharashtra.
2. To study use of MOOCs by college teachers in Maharashtra.
3. To study the satisfaction level of college teachers in Maharashtra aboutMOOCs.
4. To study challenges/ barriers in use of MOOCs.

Scope andLimitations:

To study awareness and use of MOOCs by college Teachers, researchers have selected college teachers working in Arts, Commerce, Science colleges in Maharashtra only. The study is carried out in the lockdown period of pandemic Corona crisis specifically from 7th May 2020 to 15th May 2020.

Methodology:

For the purpose of study descriptive research method has been used and questionnaire is used as a tool for data collection. A structured online questionnaire was designed using Google form and distributed to randomly selected college teachers in Maharashtra. Questionnaire was distributed through WhatsApp link. Total 16 questions were designed, out of which 15 are closed ended. Questionnaire was distributed to 140 randomly selected college teachers in Maharashtra, out of which 98 fully filled questionnaires were received back with response rate of 70%. The data is analyzed and interpreted.

Data analysis and interpretation

Responses received from participants through Google forms are used for data analysis and interpretation.

Gender:

The gender of respondents is represented in table 1 below.

Table 1: Gender of respondents

Sr. No.	Gender	Number	Percentage
1	Male	53	54.1
2	Female	45	45.9
	Total	**98**	**100**

It is seen from table 1 that, out of 98 respondents 53(54.1%) are male while 45(45.9%) are female respondents.

Department

Table 2 shows the department of respondents.

Table 2 : Department of respondents.:

Department	Number	Percentage
Computer Sc.	12	12.24
Chemistry	10	10.20
Library	10	10.20
Mathematics	4	4.08
English	3	3.06
Marathi	3	3.06
Sociology	8	8.20
Geography	3	3.06
Commerce	7	7.14
Botany	5	5.10
Physical Education	4	4.08
Social work	5	5.10
Political Sc.	2	2.04
B.B.A. & B.C.A.	7	7.14
Electronics	2	2.04
Hindi	2	2.04
Economics	3	3.06
Statistics	2	2.04
Zoology	4	4.08
Microbiology	2	2.04
Total	**98**	**100**

Table 2 shows the department of respondents, in which maximum respondents are from Computer Science department i.e. 12 (12.24%) and minimum respondents are from Political Science, Electronics, Hindi, Statistics and Microbiology i.e. 2(2.04%) each.

Faculty:

Faculty of respondents is recorded in table 3 below

Table 3 : Faculty of respondents:

Faculty	Number	Percentage
Arts	43	43.87
Commerce	8	8.16
Science	29	29.59
Computer Sc.	12	12.24
Computer Application	6	6.14
Total	**98**	**100**

It can be seen from table 3 that 43 (43.87%) respondents are from Arts faculty while 8 (8.16%) from Commerce, 29 (29.59%) from Science, 12 (12.24%) from Computer Science and 6 (6.14%) from Computer Application faculty.

Maximum respondents are from Arts faculty i.e. 43 (43.87%) while minimum respondents are from Computer Application faculty i.e. 6 (6.14%).

Age group:

Age group of respondents has been summarised in table 4 below.

Table 4: Age group

Age	Number	Percentage
30-40	39	39.79
40-45	27	27.55
45-50	21	21.42
Above 50	11	11.24
Total	**98**	**100**

Table 4 shows that 39 (39.79%) respondents are from the 30-40 age group while 27(27.55%)from40-45agegroup,21(21.42%)from45-above 50.

It shows that maximum respondents 39 (39.79%) are from the 30-40 age group while minimum respondents 11(11.24%) are above the 50 age group.

Awareness about online courses:

Respondents were asked about awareness about online courses and response is recorded in table 5 below.

Table 5: Awareness about online courses:

Awareness about online courses	Number	Percentage
YES	93	94.90
NO	5	5.10
Total	98	100

Table 5 shows that 93(94.90%) teachers are aware about online courses while 5(5.10%)teachers are not aware.

How you got information about online courses:

How teachers got information about online courses is represented in table 6.

Table 6: How you got information about online courses

How you got information about online courses	Number	Percentage
Website	48	49
Friend	15	15.3
Newsletter	2	2.0
Advertisement	5	5.1
Colleagues	25	25.6
None	1	1.0
Other	2	2.0
Total	**98**	**100**

Table 6 shows that 48(49%) teachers got information about online courses from website while 15(15.3%) from friend, 2(2%) from newsletter, 5(5.1%) from advertisement, 25(25.6%) from colleagues, 1(1%) from none and 2(2%) from other.

It shows that maximum 48 (49%) teachers got information about online courses from websites while minimum 1(1%) from none.

Have you done online course:

Have teachers do online courses is recorded in table 7.

Table 7: Have you done online course

Have you done online course	Number	Percentage
YES	73	74.5
NO	17	17.3
ENROLLED	8	8.2
TOTAL	98	100

Table 7 shows that 73(74.5%) teachers have done online courses while 17(17.3%) teachers have not done online courses and 8(8.2%) teachers have enrolled for online courses.

Which Online Course:

Which online course teacher's have done is recorded in table 8 below.

Table 8: Which Online Course

Which Online Course	Number	Percentage
Subject related	51	52
Interdisciplinary	29	29.6
None	18	18.4
Total	**98**	**100**

Table 8 shows that 51 (52%) teachers have done subject related online courses while 29 (29.6%) teachers have done interdisciplinary online courses and 18 (18.4%) teachers replied none.

Through which platform:

Through which platform teacher's have done online courses is represented in table number 9.

Table 9: Through which platform

Through which platform	Number	Percentage
Swayam	50	51
NPTEL	3	3.1
Udemy	5	5.1
MIT OpenCourseware	8	8.2
Coursera	7	7.1
Edx	8	8.2
Other	17	17.30
Total	98	100

Table 9 shows that 50 (51%) teachers have done online courses through Swayam while 3(3.1 %) teachers have done through NPTEL, while 5(5.1%) teachers have done through Udemy, while 8(8.2%) teachers through MIT open course ware and 7 that is 7.1 % teachers through coursera and 8(8.2 %)through Edx and 17(17.30%) through other platform.

It shows that maximum 50 (51%) teachers have done online courses through Swayam while minimum 3 (3.1%) teachers have done through NPTEL.

Opinion about online courses:

Table 10 shows the opinion of college teachers about online courses.

Table 10: Opinion about online courses

Opinion about online courses	Number	Percentage
Convenient	49	50
Hectic	2	2
Access from anywhere	39	39.8
Can't say anything	8	8.2
Total	98	100

Table 10 shows that 49 that is 50% teachers said online courses are convenient, 2 that is 2% said it is hectic, 39 that is 39.8% said it can be accessed from anywhere while 8 that is 8.2% Can't say anything.

Reason for doing online course:

Reasons for doing online courses have been recorded in Table 11 below.

Table 11: Reason for doing online course

Reason for doing online course	Number	Percentage
Promotion	6	6.1
Updating subject knowledge	68	69.4
Different method of learning subject	47	48
Can't say anything	5	5.1

Table 11 shows that 6 that is 6.1 % teachers are doing online courses for promotion while 68 that is 69.4% teachers are doing online courses for updating subject knowledge while 47 (48%) percentage teachers are doing online courses for different method of learning subject and 5 (5.1 %) said that they can't say anything.

It shows that maximum 69.4 % teachers are doing online courses for updating subject knowledge while minimum 5.1% teachers can't say anything.

Do you suggested to students:

Did teachers suggest to students to do online courses is recorded in table 12.

Table 12 Do you suggested to students

Do you suggested to students	Number	Percentage
Yes	89	90.8
No	9	9.20
Total	98	100

Table 12 Shows that 89 that is 90.8% teachers suggested students to do online courses while9 that is 9.20 % teachers did not suggest students.

Students admitted for online courses:

Teachers were asked if students were admitted for online courses and the corresponding response is represented in table 13.

Table 13 Students admitted for online courses:

Students admitted for online courses	Number	Percentage
Yes	66	67.3
No	32	32.7
Total	98	100

Table 13 shows that 66 that is 67.3% teachers said yes students admitted for online courses while 32 that is 32.7 % teachers said no.

Are you satisfied with online courses:

Teachers were asked are you satisfied with online courses and response is recorded in table 14 below.

Table 14 Are you satisfied with online courses:

Are you satisfied with online courses	Number	Percentage
Yes	77	78.6
No	2	2
Can't say anything	19	19.4
Total	98	100

It is clear from table14 that 77 that is 78.6 % teachers are satisfied with online courses while 2 that is 2% teachers are not satisfied with online courses and 19 that is 19.4 % teachers can't say anything.

Reason for satisfaction:

Teachers were asked the reason for satisfaction and is recorded in table number 15.

Table 15 Reason for satisfaction

Reason for satisfaction	Number	Percentage
New Experience	54	55.1
Free of Cost	5	5.2
Remote Access	11	11.2
Available various courses	17	17.3
None	11	11.2
Total	98	100

Table 15 shows that 54 that is 55.1% teachers replied to the new experience while 5 that is 5.2 % Teacher said free of cost , 11 that is 11.2% teachers said that remote access , 17 that is 17.5% said that available various courses , 11 that is 11.2% Teachers said that none.

Challenges / Barriers in Online Courses:

Challenges/ barriers in online courses are represented in Table 16 .

Table 16 Challenges / Barriers in Online Courses

Challenges / Barriers in Online Courses	Number	Percentage
Availability of internet	40	40.8
Speed of internet	45	45.9
Language	8	8.2
Other	5	5.1
Total	98	100

Table 16 shows that 40 that is 40.8% teachers replied availability of internet while 45 that is 45.9 % teachers replied speed of internet, 8 that is 8.2% teachers replied language and 5 that is 5.1% teachers replied other.

Findings:

1. 54.1% are male while 45.9% are female college teacherrespondents.
2. Maximum respondents are from Computer Science department i.e. 12.24% and minimum respondents are from Political Science, Electronics, Hindi, Statistics and Microbiology i.e. 2.04% each.
3. Maximum respondents are from Arts faculty i.e. 43.87% while minimum respondents are from Computer Application faculty i.e. 6.14%.
4. It shows that maximum respondents 39.79% are from the 30-40 age group while minimum respondents 11.24% are above the 50 age group.
5. 94.90% college teachers are aware about online courses while 5.10% teachers are not aware about online courses.
6. Maximum 49% college teachers got information about online courses from websites followed by 25.6 % from colleagues and 15.3% from friends.
7. 74.5 % college teachers have done online courses while 17.3% teachers have not done online courses and 8.2% teachers have enrolled for onlinecourses.
8. 52 % college teachers have done subject related online courses while 29.6% teachers have done interdisciplinary online course.
9. Maximum 51 % college teachers have done online courses through Swayam while minimum 3.1 % teachers have done through NPTEL.
10. Maximum 50% college teachers said online courses are convenient, followed by 39.8% said it can be accessed from anywhere and 2% said it ishectic.
11. Maximum 69.4 % college teachers have done online courses for updating subject knowledge followed by 48% teachers done online courses for different method of learning the subject, 6.1 % teachers have done online courses forpromotion.
12. 90.80 % college teachers suggested to students to do online courses while 9.20% college teachers didn't suggest to students.
13. 67.3% college teachers said yes students admitted for online courses while 32.7 % teachers said students didn't admit.
14. 78.6 % college teachers are satisfied with online courses while 2% teachers are not satisfied with online courses and 19.4 % teachers can't sayanything.
15. While answering the reason for satisfaction with online courses, maximum 55.1% college teachers said new experience followed by 17.5% teachers said that available various courses, 11.2% teachers said that remote access and 5.2 % teachers said free of cost.
16. Maximum 45.9 % college teachers replied speed of internet is the challenge/ barrier in online courses followed by 40.8% college teachers replied availability of internet, while 8.2% teachers replied language and 5.1% teachers replied other.

Conclusion:

Maximum college teachers are aware about MOOCs. Maximum teachers got information about online courses from websites. Maximum teachers have done subject related online courses followed by interdisciplinary courses. Swayam is the maximum used MOOC platform by college teachers. College teachers found MOOCs convenient and done online courses for updating their subject knowledge. Students' enrollment for MOOCs should increase and teachers should suggest maximum students for enrollment. Availability and speed of the internet are main barriers in online courses; efforts should be done for better internet connectivity. In spite of these barriers, college teachers are satisfied with online courses and they found it as a new experience.

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Impact of NAAC on the Best practices of college Library Services in Beed District in Maharashtra

Dr.Sanjay L. Bhedekar

Librarian

Mahila Mahavidhyalay Georai Dist.Beed

E-mail- sanjaybhedekar@gmail.com

Abstract:

*T*he twenty first century creates a new environment for education in general and higher education in particular. The progress of any country is strongly linked with the quality of education. However, with mushrooming of educational institutions in all parts of the country and several types of economic activities dominating the landscape, the issue of quality has now assumed a critical dimension. College libraries play an indispensable role in the dissemination of information of knowledge, they should be in a position to provide effective teaching learning information support to its user's communities. Libraries are one of the important components of the assessment through which an impact on the accreditation of the institute is related. To meet the end user's demands effectively, they need to identify and adopt good practices. NAAC has decided to identify the set of best practices in Library and Information Services, with the help of a few case presentations from few selected libraries of the accredited Universities and Colleges. This paper shows a clear picture about the developments of college libraries of Beed district (Maharashtra) after NAAC's evaluation. It gives the status of best practices followed by the surveyed of libraries.

Keywords: NAAC, College Library, Quality in Education

1. <u>INTRODUCTION</u>

Colleges form the integral part of Higher education and libraries in colleges are the primary source for teaching &learning process. The college library is a connecting link between teaching and learning as well as place which supplement its resources what is beyond scope of class room. College libraries play an important role in the educational history of both the students as well as the faculty members. It serves the user by providing specific information to the user. But how far the college libraries are success in implementing their goals into its reality is a big question. There must be some agency to have a proper vigilance on the functioning of college libraries and also to suggest certain measures to rectify the emerging needs, and for this kind of purpose NAAC was established for maintaining quality education in higher educational institutional institute.

Till 2015 NAAC has accredited 2943 Accredited colleges registered in India and more than 431 Universities in India. The total no. of colleges affiliated to various universities in Maharasahatra i.e. 441 NAAC accredited.

2. <u>*Impact of NAAC on Best Practices*</u>

For College libraries NAAC (www.naac.gov.in)has developed the following set of best practices:

1) Computerization of library with standard software.

2) Inclusion of sufficient information about the library in the college prospectus.

3) Compiling publication student / teacher statistics.

4) Displaying newspaper clippings and a clipping file maintained periodically.

5) Career/employment information services.

6) Internet facility to different communities.

7) Information literacy programmes.

8) Suggestion Box,

9) Book Exhibition.

10) Displaying current Arrivals.

11) Instituting Annual Best use Award for students.

12) Organizing Competitions annually.

3. *NAAC in Higher Education with Special*

   Reference to College Libraries in Beed city.

The 21stcentury creates a new environment for education in general and higher education in particular. While evaluating the individual constituent of a college, NAAC has realized the importance of the "College Libraries" which were formerly known as the store house of books and the librarians as the custodian of documents. After finalizing the accreditation NAAC provides a report on the evaluated institutions, where NAAC has focused extremely to the pathetic conditions of the College Libraries which were ignored by most of the college authority. In the final report, NAAC provides the appreciation on the strength of the colleges as well as suggestion on the weakness of the colleges where college library has been kept in the focal point. With that most of the colleges in

India started to develop their libraries by appointing the full- time professionally qualified librarian with other staffs. After NAAC's initiation Library environment has an in-depth effect on every one who comes within its periphery and has a much more impact on an organization's performance.

4. *Statement of the Problem*

The objective of the study is to address the questions that arise after NAAC's assessment and accreditation to the college libraries like whether the infrastructure, services, facilities, learning resources etc.

5. **Scope of the Study**

The study of area covered the area limited to the college libraries in Beed city affiliated to Dr.Babasaheb Ambedkar Marathwada University Aurangabad.The selected college libraries have different types of disciplines mainly Arts, Science & Commerce. Out of the Six college 03 colleges are Arts, Science & Commerce, Two Colleges are Arts and Science and Only one college is single faculty i.e. Arts (female) community.

6. *Aims and Objectives of the Study*

The study was carried out to achieve the following objectives.

1) To assess the progress of the college libraries of Beed District after NAAC's assessment.
2) To examine the implementation of the guidelines imparted by NAAC in the college libraries of Beed District in Maharashtra.
3) To study the present scenario of the selected college libraries of Beed District in sample for six colleges in beed city.
4) To study the outcome of the NAAC'sassessment and accreditation for the college libraries of Beed district.

7. *Methodology*

In order to study the assign topic keeping the above scope and objectives in mind , the methodology and technique applied are survey method, questionnaire technique etc. To collect the necessary information two types of questionnaires are prepared i. e. librarian and user questionnaire

8. *Librarians' Questionnaire Analyses*

Table 1: College Libraries of Beed District under study

Sr. No.	Name of College	Year of Establishment	Year of Accreditation	Grade Obtained
01	Balbhim College, Beed	1960	2017	A+
02	Mrs.K.S.K. College Beed	1971	2018	A
03	Bankatswami College Beed	1971	2004	C
04	Sawarkar College Beed	1995	2018	B
05	Milliya College, Beed	1991	2012	B
06	Mauli Mahila College, Beed	1990	2015	B

From the Table 1 it is seen that Beed Colleges is the oldest colleges in the Beed district. Five colleges are accredited, out of that 03 colleges are reaccredited and 03 colleges are single time accredited. NAAC has suggested to all the six libraries to initiate library automation with other basic requirements.

9. *College libraries before NAAC's Assessment*

Sr. No.	Area	Balbhim College	Mrs.K.S.K. College	Bankatswami College	Sawarkar College	Milliya College	Mauli Mahila College
01	Automations	Y	Y	Y	Y	Y	Y
02	**Service**						
	OPAC	N	N	N	N	N	N
	N-List	Y	Y	N	Y	Y	Y
	ILL	Y	Y	N	Y	Y	Y
	Internet	Y	Y	Y	Y	Y	Y
03	**Section**						
	Reference Section	Y	Y	N	N	N	Y
	Book Bank	N	N	Y	N	N	Y
04	Collection	114232	92402	37816	47500	41230	7990
05	Reading Room Facility	Y	Y	Y	Y	Y	Y
06	Photo copy facility	Y	Y	N	Y	N	N
07	Drinking water facility	Y	Y	Y	Y	Y	Y

Table2: College Library scenario before NAAC visit

Table 2 reveals that before NAAC's assessment all the college libraries were performing their services traditionally. No college libraries had introduced the automation process, OPAC, ILL, internet facility, book bank section, photocopying and drinking water facility to its users.

10. *Services*

Table No. 03 Present services provided by the College Libraries

Sr. No.	Name of College	Circulation	Ref.	Repro graphy	ILL	CAS	Biblio graphy	Orien tation	Display of current arrival	N-List
01	Balbhim College	Y	Y	Y	Y	Y	N	N	Y	Y
02	Mrs.K.S.K. College	Y	Y	Y	Y	Y	N	N	Y	Y
03	Bankatswami College	Y	N	N	N	N	N	N	Y	Y
04	Sawarkar College	Y	N	N	Y	N	N	N	Y	Y
05	Milliya College	Y	N	N	N	N	N	N	Y	Y
06	Mauli Mahila College	Y	Y	Y	Y	Y	N	N	Y	Y

Out of nine services which have been selected for the survey it is found that no libraries have provided cent percent services. All the six libraries provide Circulation, Reference & Reprography services. ILL is still Four colleges provided by college libraries.

11. *Development after NAAC's Assessment*

Sr. No.	Area	Balbhim College	Mrs.K.S.K. College	Bankatswami College	Sawarkar College	Milliya College	Mauli Mahila College
01	Computerization	Y	Y	Y	Y	Y	Y
02	Internet Facility	Y	Y	Y	Y	Y	Y
03	N-List Facility	Y	Y	N	Y	Y	Y
04	Infrastructure Facility	Y	Y	Y	Y	Y	Y
05	Separate Reading Room	Y	Y	Y	Y	Y	Y
06	Well- organized facility	Y	Y	N	Y	N	N
07	Collection development	Y	Y	Y	Y	Y	Y
08	Efficient seating capacity	Y	Y	N	N	N	N
09	Increase in no. of Journal	Y	Y	Y	Y	Y	Y
11	OPAC facility	Y	Y	N	Y	Y	Y
12	LAN Connectivity	N	N	N	N	N	N
13	Network variation of Software	Y	Y	Y	Y	Y	Y

Table 4: Major areas of development after NAAC's Assessment

Table 4 reveals that after NAAC's assessment the college libraries of Beed District are improving gradually in terms of their various infrastructural developments libraries have partially started the computerization, OPAC, etc. After assessment the libraries have connected their library with LAN, Internet connectivity and started to provide N-LIST facility to the students.

12. *Findings*

1. From the survey it is found that (Table 3) gradually the college libraries of Beed district have started to provide more innovative services after NAAC's accreditation.
2. It is also found that except one college library all the remaining five libraries have started the process of automation

13. *Suggestions*

Here some of the points we have mentioned for the libraries in order to improve further:

1) The library should provide the minimum reading standard to the users with internet facility as recommended by the NAAC team.
2) Total holdings of the library should be converted into machine readable form. Process of automation should be completed as early as possible OPAC terminals should be made available so that the users need not to spend much time in searching the documents.
3) Vacant posts of the librarians along with other personnel's must be filled as soon as possible with professionally qualified persons.
4) The students should be made aware about accessibility of e-resources under N-LIST

14. *Conclusion*

The study reveals that College libraries of Beed district have achieve remarkable up liftments due to NAAC's assessment but it cannot be termed as satisfactory development. These libraries still need a lot of infrastructural development to provide a quality based services to its clientele. Moreover rapid developments in the IT has bring at remendous scope for these libraries to modernize their services for which college authorities should realize the need and importance of their respective libraries and should always be ready to provide the congenial administrative support to their librarian so that he/she can come forward willingly to reorganize the library services with the changing environment. Because of NAAC's scrutiny in College Libraries, they try to develop their libraries in an efficient way and able to get attention from both the College authority and College community. With NAAC assessment most of the college has started to develop their libraries but still a number of colleges have not realized the importance of libraries

due to lack of professionalism ethics and also scarcity of fund. NAAC is an accreditation agency where it has limitation of power is only up to the assessment but college library and their authority should take the development of library as a serious matter not only from NAAC point of view but also from service point of view.

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A STUDY ON CURRANT EDUCATION SYSTEM, NEW EDUCATION POLICY DRAFT 2019 AND CHALLENGES REGARDING IMPLEMENTATION OF 2020 NEW EDUCATION POLICY IN THE PERIOD OF COVID -19.

DR. BHAUMIK P. UPADHYAY

B.com,M.E-Business,LL.B,LL.M,Ph.D

Assistant professor

GOKUL LAW COLLEGE

GOKUL GLOBAL UNI, siddhpur

dharashastree@gmail.com

*A*bstract:

*I*n this research paper main purpose of researcher to study main features and importance of the policy, related problems and concerns of different states.The new education policy of india 2020 directly or indirectly deal with pre school education to doctorate of philoshophy. As per policy introduce by central government firstly it apply in educational institute those are under control of central educational body just like CBSC Board. When we study draft of NEP 2019 we find out It has also looked at the governance issues for these institutions and made several recommendations to bring about fundamental changes in the education system, particularly in terms of autonomy, governance and the quality of the learning experience.

Keywords: CURRANT EDUCATION SYSTEM, NEW EDUCATION POLICY DRAFT 2019,NEP 2020.

INTRODUCTION

Education has always been important in India. And our culture has been known for providing excellent education since Vedic times. However, the modern teaching method is that the student who is studying in the exam and they studies only keeping in mind what are the subjects in the exam and what will be asked, so that even after passing the exams and getting a very good percentage and getting a big degree, he gets a decent job. No power. Due to which the number of educated unemployed has increased a lot and in the current Pandemic Kovid 19, even without an examination, the students have to be passed and taken to the next class, due to which our students who only read and study for the purpose of examination. It must be understood that they failed to learn.

As per view point of Shri M. Venkaiah Naidu, Vice President of India and Chairman of Rajya Sabha,"the new education policy will make India a global center of education. He invited the public to express their views and suggestions on the draft NEP by the set date of the 15th of this month"

The draft of NPE 2019 directive is based on the pillars of access, equity, quality, affordability and accountability.

In May of this year, the draft of the National Education Policy (NEP), which was drawn up by a committee chaired by K. Kasturirangan, was released for public comment by the Ministry of Personnel Development (MHRD). For the first time since 1986, a comprehensive education policy for India is on the anvil.

Object of the study

1. To study draft of National education policy 2019.

2. To study why this policy introduce in current pandemic period.

3. To study loop holes of cuurent education system

4. To study challenges for implement new education policy 2020 in india

Research methodology

Doctrinal research method use for justified subject matter.

Key highlights of the design:

Early childhood care and education:

By 2025, all children between the ages of 3 and 6 will be offered high quality early childhood care and education.

This will be done in institutions such as schools and Anganwadis, which have a mandate to look after the child's general welfare - nutrition, health and education.

These facilities will also support families for children under three in a similar way - in their homes. The criticality of brain development in the first few years has become clear in the last few decades; This policy will have a massive positive multiplier effect on society.

Ensure basic literacy and arithmetic:

From 2025 onwards, every student will achieve an age-appropriate basic education and numeracy skills. A number of programs and measures are being formulated for this purpose. This targets the fundamental problem facing our education system today - students who are unable to read, write, and practice elementary math.

Transformed curriculum and pedagogical structure for school education:

The curriculum and educational structures will be redesigned based on the children's cognitive and socio-emotional development to be appropriate and effective.

The curriculum will be integrated and flexible, taking all subjects and areas into account equally. There will be no separation of curriculum, co-curriculum, or extracurricular areas - all in a single category of equal importance.

Professional and academic currents are integrated and offered to all students. Exam systems are being radically changed to assess real learning, make it hassle free, and seek improvement rather than judgment.

Universal access and retention in schools:

All Indians between the ages of 3 and 18 should be in school by 2030. The law on the right to education is extended from pre-school to grade XII.

Teachers in the center:

The teaching profession, and thus the teacher, will be at the center of the educational system and will focus on student and educational goals. All schools will be fully equipped with teachers - with working conditions for an energetic work culture. No "temporary" teachers will be admitted. All positions are filled with competent and qualified teachers. A development-oriented performance management system is set up. The teacher education system is being reshaped, with rigorous teacher preparation through a four-year integrated phase and subject-specific programs only offered in multidisciplinary institutions.

New institutional architecture for higher education:

India's currently 800 universities and over 40,000 colleges will be merged into around 10,000 to 15,000 institutions of excellence in order to improve quality and expand

capacity. This architecture will only have large multidisciplinary institutions with significant investments.

There will be three types of higher education institutions: Type 1 universities, which focus on research but also teach all programs, from PhD to PhD; Type 2 universities focused on teaching all programs and doing research at the same time and; Type 3 colleges focused on teaching undergrad programs. All types grant their own degrees. There will be no university affiliation system.

Quality liberal education:

All basic education will be broad-based liberal education that combines rigorous study of the sciences, arts, humanities, mathematics, and professional and professional fields with the choices offered to students.

Conclusion

NEP2020, and the 2019 draft as a whole, also contain many drastic recommendations that are more likely to do damage than improve the whole fabric of the education system. In particular, the DNEP does not necessarily argue why radical changes to the basic structure of the education system are necessary. An alternative approach could be to add new elements to strengthen the existing diverse academic structures, which in some cases have evolved organically over a century, while adapting to the diversity and region-specific realities of the Indian educational ecosystem. In addition, the DNEP contains provisions / claims in several places that need to be checked and reassessed.

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CHANGES IN THE ORGANIZATION AFTER IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT (TQM)

HIMBAHADUR THAPA*, ANUJ KUMAR GUPTA, IKRAM QURESHI ,

Department of Biotechnology, Shri Jagdishprasad Jhabarmal Tibrewala University, Vidyanagari, Jhunjhunu, Rajasthan- 333001

*A*bstract:

*T*he investigation centres on looking at the Total Quality Management (TQM) and association result. TQM is generally centres around dealing with the workers of the association, building authority, improving item or administration quality and improving or surpassing consumer loyalty. The paper has demonstrated the execution of TQM in the clinical gadget area in India. The degree of execution has been examined in this paper the positions were quality control, quality affirmation and consistent impartments. The adjustments in the association after execution of Total Quality Management apparatuses were talked about. The favourable position association have accomplished after TQM execution in immediate or aberrant manner has been examined.

Keywords: Customer satisfaction, Organisational performance, Quality Control, Quality Assurance, Total Quality Management, Continual improvement.

1. *INTRODUCTION*

In this period, the clients are more worry about the nature of the item or administrations then the expense of item or administrations. They incline toward item quality rather than amount and cost. In antiquated time the perspectives on the client was amount arranged and depended on the cost of the item or administrations. At the point when client purchases any item or acquire any administrations they think and consider the elements like constructed quality, advancement in the item, its measurements, it unwavering quality, its precisions, visual attributes and some more. Surpassing or if nothing else addressing client needs, giving quality item according to pre-characterized particulars, ideal conveying of item according to plan is the principle factor for business

accomplishment of the association. The top administration of the association assumes viral job in the structure the general edge of the association. Lakhal et al., 2006). Independent of business, producing, showcasing, dispersion, and keeping up quality traits. The top administration will guarantee and protect the vision and will lead the association to another level. Quality is just the factor for business achievement and by and large accomplishment of the association. Meeting the client need with quality is the factor for progress. This is where quality is just the driving variable for business; quality is just the key factor for transformation (Gharakhani et al., 2013). Numerous associations all through the word breakdown and neglected to make the progress and neglected to rival contenders because of wasteful in quality properties. Quality patterns were advanced in Japan and later spread around the world (Lakhal et al., 2006). This pattern has contribution of new reasoning which exhibit considering the quality and includes quality methodology all through the framework. This arrangement of reasoning got well known because of various ideas utilized in much famous association. Association like Motorolla, Xerox, Totyota, Intel, Hewlett Packard have effectively actualized TQM in their assembling unit because of which this methodology turned out to be more famous. This Total Quality Management has a way of thinking and has approach that manages constant improvement of by and large execution of association; it additionally discusses meeting or surpassing the client needs (Dean and Bowen, 1994). Including all the labor through and through of the association and moving towards the way of achievement. This TQM theory discusses two fundamental ideas one is consistent upgrades and other is consumer loyalty. TQM centres around group building, cooperating for enhancements, including all the representatives and making co-appointment and speaking with all the workers and making individuals to partake in each action. Co-activity between colleagues and their association with comprehension is the key factor for development (Prajogo et al. 2004). Include individuals and making society in the association through giving trainings. Nonstop learning and organizing formative severance in each gathering is primary worry for making mindfulness. Due quarrelsome development the prerequisite from the market, the association will concentrate on nature of item and administrations get by in the serious world. TQM centres on improving the nature of the item, administrations, diminishing imperfections in the item and administrations. Meeting market prerequisite and fulfilling the client is the fundamental of TMQ.

2. *Problem Statement*

Individuals over the world are as yet ignorant about Total Quality administration apparatus and its use. Because of different idea and speculations of TQM, it is hard for individuals to comprehend the TQM in genuine sense (Thiagarajan et al. 2001). Writing with respect to TQM is as yet lacking and deficient to do the trick the different individuals in the association. The client and market has gotten the quality arranged, advertise is continually searching for top notch item and their requests consistently continue expanding. These sorts of requests wrinkle the new patterns of value in the market the

world over. A few examinations have been done for this yet this paper will explain the idea of TMQ and its effect in the association (Baidoun and Zairi, 2003).

3. *Literature Review*
3.1 *Total Quality management:*

The idea of TQM was created and snaked in Japan in during 1930. After the assessment of TQM, numerous associations in the Japan have started to apply the idea of TQM in their assembling units. These devices were utilized by numerous associations to improve the nature of the item and administrations, to diminish the imperfections or blunders created throughout preparing exercises (Demirbag et al., 2006; Talib et al., 2010). The nature of the item and administrations are observed in different stages and guaranteed for the duration of the existence pattern of the item. The European nation and other western nation like USA have additionally acknowledged later that the TQM is valuable devices and which can upgrade the creation limit and nature of the item. Quality Management is the framework worked by the association which is perceived and adjusted by numerous associations over the world (Sachdeva et al., 2007). The worldwide association for normalization is additionally immerged as one of the broadly utilized QM framework over the globe. In writing, the writer (Talib 2013) gives the idea of Total Quality Management includes all the labor in the association; connect all the individuals for the particular assignment. The particular assignment is structured which should be improved or which should be change and as needs be plan is made for the enhancements. The plans are executed in the way of "Plan Do Check and Act (PDCA cycle)". Doing the movement according to design, checking the done action or assessment and following up on the action for advancement. This idea is associated with connecting all the individuals and including the client esteems. Safeguarding client esteems and giving the best to client according to their prerequisite as quality and conveying time. This idea coordinates the client esteems, interior working and accomplishment by the association. It likewise includes commitment of all the labor from various offices for the shared objective and accomplishing consumer loyalty. The idea includes around the business yield of the association. Contributions of the worker in the working of the business and during settling on any choice, the contribution of the representatives are likewise thought of. The groups are manufactured and include in the different outline has likewise been considered as methodologies (Yusuf et al. 2007). The idea of TQM is clarified in different wordings. Idea of TQM is comparative however numerous individuals around worker inclusion and meeting client necessities (Talib et al. 2012). Constructed group and guarantee all the individual know their errand appropriately and move towards the way of accomplishment. Association of top administration and duty from the top administration has been considered as one of the most significant factor for the achievement (Van Ho, 2011). This idea will assist with building the quality culture all through the association and improves their presentation in assembling and dispersion segments.

3.2 *Functioning of organization*

The association by and large working and execution is measure for its viability. Appropriate working is identified with its accomplishment in the related field and their capability to make the progress (Li et al. 2006). Association made the target which are considered as present moment and long haul and ideal measure their objective and examine, is the part to gauge the association work. The capacities are talked about and generally activity is started (Katou, 2008 and Stock et al., 2000). Numerous creators examine about the exhibition of the association and near examination is made with business yield. Business is considered as fundamental thought process of the association. Increment in the general business execution has been considered as association is succeeded. This incorporate generally speaking creation of the association, its deal consistently, measure of crude material devoured for its yield and inside administration cost. A different exercise includes measure of market objection got during the year, interior breakdown and preventive support exercises completed. Generally deals in the year and net revenue are additionally considered as key factor for business achievement.

3.3 *Organization functioning with respect to Total Quality Management*

Because of ascend in populace, the necessities of products are likewise expanding enormously (Harmon and Peterson, 1990). To meet the market prerequisite and to satisfy the need of consistently expanding populace as item, administration division and item quality, the usage of TQM is fundamental. The usage of the TQM device will prompts increment the creation with least waste, the deformities of the item produced with diminished to certain level. The coordination between the various groups will increment and will prompts smooth working of the procedure. The expense of the item will diminish because of decrease of wastage fabricated in the framework. Consumer loyalty level will be improved because of increment in the quality yield of the item. Inclusion of the labour from various offices will blend the general association. The current labour will turn out to be more profitable because of adequate trainings and numerous formative meetings. Soltani and Wilkinson (2010) research around the perspectives on the Total Quality Management by various layers of association life of top administration, administration, chiefs and ground level individuals working in the association. Numerous associations have just actualized TQM and have profited in a few structures. Yet at the same time numerous associations dither in embracing the TQM idea for association advancement. Still individuals are uninformed and have not actualized in full fledge. Trust in embracing TQM is as yet an inquiry to numerous associations. Wen et al. (2009) and Letica (2007) has considered and shows the general impact of Total Quality Management on the association execution and consumer loyalty. The examination was directed on assembling units and administration division both. The examination likewise centres around the method of overseeing representatives in the association, preparing led by the association on the

workers and authority process, consumer loyalty and formative severance. The powers like group building, worker the board, administration and offering significance to the inner and outside client, building quality and consumer loyalty. The investigation shows the connection among TQM and inward administration arrangement of the association. The TQM practices and consumer loyalty work connected at the hip.

4. *Objective*
1. To explain the concept and philosophy of TQM concept in detail.
2. The role of TQM in the organization performance.
3. Overview of TQM implementation in the organization.

5. *Implementation of TQM in the medical device industry*

Association receives numerous techniques for actualizing TQM devices. Clinical gadgets are one of the developing segments in India and have seen numerous clinical gadgets in India which have actualized TQM. In this exploration we are taking models structure Mumbai, India for usage of TQM. India is one of the most developing markets on the planet. India is loaded up with little and medium scale businesses the nation over. Half of the Indian populace work in little and medium scale industry. As worry about biotech segment, this area is developing segment in India. To improve the item quality productively, the majority of the organizations in the nation have adequately executed TQM (Raja et al., 2011). Hugh number of the association is getting profited by TQM. Various strategies for TQM are executed by numerous divisions. Fundamental elements for TQM execution are as per the following.

5.1 *Rank zero: No control on the procedure and connection about consumer loyalty*

This sort of the association doesn't have appropriate arranging in the assembling units. The nature of the items produced or administration gave isn't being checked in standard premise. Numerous associations don't have legitimate goal and objectives of the association. Client esteems are not saved and interior arranging stage is totally fallen (Kamran Moosa, 1998).

5.2 *Rank One: Quality Control (QC)*

This sort of association has concentrated on controlling the nature of the items or the administrations given. They have figured out how to check the item quality, appearance and other significant properties. The nature of the item is checked through the various periods of assembling (Prakash et al., 2010). The underlying crude material and bundling material, middle item quality and completed item quality is checked all through the pattern of assembling. Quality control is generally acknowledged in assembling units.

5.3 *Rank Two: Quality Assurance*

The association which falls under this rank has legitimate grasp ton process control. Quality control checks the nature of the item or administrations at a few phases. The consequences of value control will characterized the quality at a few basic states. Quality confirmation manages the control of procedures. It is accepted that the nature of the item can't be accomplished without appropriate observing the procedure. The all-around characterized process should be observed, basic boundaries should be checked and process should be control by approving the procedure. For building quality administration in the framework, numerous associations embrace framework like ISO 9001, ISO 14001, ISO 13485 and numerous different frameworks (Brun, 2010). For the most part all the association execute ISO or some other framework to set the Quality Management System in the association. This framework will characterized the procedures and set the convention for the board the whole arrangement of the association Hayat Awan (2003).

5.4 *Rank three: Continual enhancements*

The association which falls on this class has immediate or circuitous effect on the procedure viability, nature of the item or administration and by and large business of the association. It is identified with the dedication of the top administration, inclusion of the representatives, preparing and worker advancement. Numerous association centres around the constant improvement so as to improve the item quality, process exhibitions, worker inclusion and correspondence. This nonstop improvement will assist association with dealing with process adequacy and quality. The holes in the frameworks are recognized and altered to accomplish the best outcomes. Explicit undertaking is appointed to workers for enhancements. Numerous TQM methods like "In the nick of time (JIT)", kaizen, six sigma is actualized for improvement (Jamshed, 2000).

5.5 *Rank Four: Awarding strategy*

The association which falls on this class has great mastery in the market. Their item and administrations have great interest in the market. This sort of organization has just actualized and has firm arrangement of value control, quality affirmation and constant improvement. These sorts of the association have set the incentive as benchmarking. Association from this class set the present moment and long haul objective and follows the objective and accomplished with legitimate arranging and execution. Various devices for process improvement and quality upgrades are utilized. Various modules like programming and distinctive framework based programming are utilized and exhibitions are estimated given by Kaluarachchi (2010).

6 *Conclusions:*

This investigation has contrasted the association execution with reference with Total Quality Management Tool. A few explorations have been seen which have looked at the TQM device and association result in term of business. Examination has indicated that when TQM is actualized by the association and discovered powerful, it covers all the parts of association from operational view and from monetary and other related division (Hendricks and Singhal, 1999; Ittner and Larcker, 1996). At the point when writing is investigated with respect to effect of TQM and generally business of organizations, it is discovered that TQM has immediate or roundabout effect on by and large yield of association. TQM assumes indispensable jobs in the association to accomplish their last objectives expressed by Dooyoung et al. (1998). After the investigation, we can reason that the association execution, improved item quality, consumer loyalty and decrease of imperfections is accomplished by usage of Total Quality Management (TQM). Point of TQM is to expand the fulfilment level of client, by and large correspondence of the association builds, number of blunders decreased to certain level, administration character in the organization rises. Obviously association general execution is legitimately or in a roundabout way influenced by the TQM. Different components like size of the association, sort of culture followed in the association, advancement in the association, kinds of association is dismissed during the actualizing TQM. There is further extension in the examination to consider the above factor embedding the TQM in the association. Other examination can be made to check the TQM in the elements like association business, deals, and benefits due to TQM execution.

Acknowledgement

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COVID-19 PANDEMIC ISSUE, CHALLENGES & CHANGES OF HIGHER EDUCATION SYSTEM IN INDIA

DR. DATTATRAYA TAMBE

Associate Professor, HOD, Commerce

CSM's Arts & Commerce College, Chakan.

Tal - Khed, Dist -Pune, 410501 Maharashtra (India)

Contact No. 9922751290

E-mail: dattatrayatambe7519@gmail.com

Abstract:

*S*tarting from the spring of 2020, the outbreak of the COVID-19 caused Chinese universities to close the campuses and forced them to initiate online teaching. Online teaching & learning is one of the main components in educational planning which is a key factor in conducting educational plans. Despite the importance of good teaching, the outcomes are far from ideal. Since the coronavirus outbreak, online classes have become the cornerstone of modern higher education. While most universities, colleges or other educational institutions have made the complete transition to online teaching, teachers are still struggling with ways to engage students online. They are required to make tough decisions everyday whether between asynchronous and synchronous learning or educational tools that they need among lot of options. Online learning provides opportunities for higher education to deliver services for people continuing their education, to leverage technology to reduce burden on teachers and to use improved pedagogies better suited to maintaining student engagement.

Key words: Concepts of Learning, Improvement of education, Issue of education, Effects online education , Challenges & Remedies etc.

Dr. Dattatraya Tambe

INTRODUCTION

Education is itself is a challenge, particularly when whole world is suffering form Covid-19. So many countries are affected by this virus .Some of them are highly affected by this virus. So many factors are affected by this danger situation. In this case education is very much influenced by Covid-19. China, Itly, Spen are trying to get red of this scenario. India is under cover of corona. Government is trying his best to recall the disturb education system in primary to higher level in country. Students, teachers, parents and society is in critical situation. From top to bottom education suffering from so many difficulties in pandemic period. Many steps has been declared to recover it. Though India is doing his best in this situation but what type of issues will come after corona in higher education it is in discuss now days. Her we will focus on some of the issues in higher education.

OBJECTIVES OF THE STUDY:

1.   To study the online concepts of higher education in India.

2.   To give some improvement of the higher education in India.

3.   To study the issue & effects online teaching learning in India.

4.   To study the challenges & remedies online higher education in India.

RESEARCH METHODOLOGY:

The present paper is based on secondary source of data. The secondary data is also collected from various reference books, national, international published research journal, magazines, annual reports, news paper related to net internet websites,etc.

WHAT IS ONLINE LEARNING:

Online learning is education that takes place over the Internet. It is often referred to as "e-learning" among other terms. However, online learning is just one type of "distance learning" - the umbrella term for any learning that takes place across distance and not in a traditional classroom. Distance learning has a long history and there are several types available today including:

- Correspondence Courses: conducted through regular mail with little interaction.
- Tele courses: where content is delivered via radio or television broadcast.
- CD-ROM Courses: where the student interacts with static computer content.
- Online Learning: Internet-based courses offered synchronously and/or asynchronously.
- Mobile Learning: by means of devices such as cellular phones, PDAs and digital audio players (iPods, MP3 players).

IMPROVEMENT OF HIGHER EDUCATION IN INDIA:

The role of higher education in the growth and progress of a nation has been well recognised for centuries. There are many areas where we need reform higher education. Our main aim must be to nurture excellence instead of spending a disproportionate amount of energy trying to curb the lack of it. It is the responsibility of the UGC to maintain the quality of our higher education and research. The country needs skilled and trained faculty and researchers for making India superpower in the world. For this, there are some possible measures for improving quality in higher education:

1. Indian government should take steps to give more students access to a college education.

    The goal now is to more than one and half the number of 18 - 23 year olds who enrol in higher education, from the current estimated 20 percent to 30 percent. According to the HRD Ministry, to achieve this goal, India will need to add more than 45,000 new universities and colleges in the coming decade.

2. In India, the first step towards improvement should be taken at school level with aptitude tests being introduced to know where the interest of the student lies. These students should then be encouraged to join those fields of interest.

3. E-Learning appears to be a fast emerging mode of global entry at the present time. The Universities and other Institutions of higher education can design their web sites for offering online education worldwide.

4. Indian institutions and regulators should restore transparency, coherence and confidence in the higher education system both at home and abroad.

5. Laboratories should be updated and obsolescence in equipment/facilities should be removed on a regular basis. Innovative practices related to examination reforms should be empirically tested and institutionalized. All the examination processes should be computerized and recent advances in ICT should be exploited to make the process automated and efficient.

6. Emphasis should be laid on not just increasing the number of higher education institutes but Centre of excellence. Great stress must be laid on good infrastructure and facilities.

7. The RUSA and State Higher Education Councils should play key role to undertake the process of planning, execution and evaluation, in addition to other monitoring and capacity building functions.

8. There must be better mechanisms to evaluate the quality of teaching. Each higher education institution should define its mission according to the present and future needs of the society to reach the necessary level of sustainable and environmentally sound economic and social development.

9. The UGC should, likewise, produce and publicize ratings of and information about all universities and institutes of higher education. This should be a detailed, annual exercise and be prominently available on a website.

10. There should be regular monitoring and evaluation of teaching and research in the universities and other institutions of higher learning.

ISSUES IN HIGHER EDUCATION OF INDIA:

1. *Finance:* In spite of quality of Higher Education the ration of spending money on it is higher.
2. *Privatization:* A big problem faced in India but can't be a solution for improvement of quality.
3. *Teaching Quality:* Decrease in the quality of teacher is major concern now as new advent brings new method's of teaching rather than traditional.
4. *Political Factors:* Government should not allow political factors in education but still the presence of it is found.
5. *Quota System:* It is always a topic of debate come with a lot of controversies but for quality talent and merit is more important than identity.
6. *Moral Issues:* Young generation is more inclined towards getting job and hefty packages instead serving for nation. As mentioned in the above aspect the changes is ongoing at first we learn at guru kul now its a school or colleges and may be in nearer future it can take place at anywhere like one can get any information at his/her fingertips. But every coin has two sides changes brings challenges within. And to beat it one need to identify and found a solution. So, here are some Challenges and It's Remedies of Indian Higher Education.

EFFECT OF ONLINE EDUCATION:-

Today's existing education system needs to be changed with the new demands of post covid19. New technology in education system offers exciting opportunities to access the world's best knowledge. There will be long term and permanent effects of online education on not only students or teachers but also on society.

1. It can affect the bonding between teacher and student.
2. There may not be the face to face interaction so teacher and students have gap in their communication.
3. The techno savvy students can adopt integrated online methods faster than students who are not techno savvy.
4. There will be gap in students with and without online material as rich and poor.
5. Students may not know the other students ability and knowledge so it leads to lack of healthy competition.
6. The teachers who are not technically expert they may lag behind or tagged as out dated in updating the courses.
7. Practical subjects may not be cleared by online learning, as it required live experience of doing practicals.
8. Plagiarism may increase as student copy and paste knowledge.

9. Online examinations may be the tedious as far as the population of the students.
10. It will be very crucial to give training to all teachers about operating the materials for online education.
11. The technical expert personnel may exploit the teacher and students as they will be on more demand.

CHALLENGES AND REMEDIES:–

The growth rate of India in the last two decades can directly attribute to the higher education system. If India wants to greater growth, it must transform its universities and other higher technical education institution to world class institutions, then its higher education system must be reformed. Since, the country must safeguard the interests of young researchers, besides providing a strong platform for research and ensure permanent appointments for faculty members.

1. ***One common platform:-*** In India, apart from UGC (University Grants Commission) there are several regulatory bodies like AICTE, MCI, BCI, NCTE and those under state governments. These individual bodies move in different paths, creating various hurdles like exams, teaching methods for students. So we need to bring all important regulatory bodies on a common platform and develop a common understanding and strategy for managing the change.

2. ***Overcrowded Classrooms:-*** Lack of adequate number of teachers and classrooms force many colleges to reduce their number of groups and merge them into larger groups making it possible for a teacher to carry out effective classroom interaction.

3. ***Inadequate material resources:-*** Most of the higher education institutions at present does not have proper material resources like building, play ground, good number of classrooms, infrastructure, laboratory with sufficient equipment, toilet facility, and staffrooms.

4. ***Inadequate Student Services:-*** Most of the higher education institutions today are not capable enough to provide services like conducting orientation programmes, health services, hostel facilities, guidance and counseling services to the students.

5. ***Lack of good faculty:-*** Shortage of quality faculty is proving to be a great stumbling block in the transformation of higher education in India. According to a report, there is a massive need for expansion in higher education. So there is also the need to motivate deserving Ph.D. candidates for faculty positions in the higher education.

6. ***Lack of research centric approach***:- Most of the Indian higher education system lacks strong teaching-learning process and research. That is the reason why no

higher education institution of India figures in the global top 200 higher education institutes around the world. This point should also seriously be considered.

7. ***Examination Reforms:-*** Reforms in the examination system is the most common phenomenon in the recent past. Most of the researchers and academicians are not satisfied with the present examination system. It may be true for years because the pitfalls in the evaluation system make the examination system ruin. The evaluation is not reliable. This can be changed by using the new methods of grading system and other various innovative methods.

8. ***Lack of new teaching methods:-*** The Indian higher education system has been following lecture drive method for several years. This has turned ineffective and not sufficient in many areas. Besides, there is a lack of teacher's learning and development areas need which is should be in the form educating them. We should follow new approaches like mentoring, spot visits, digital learning methods, practical educational tours and involvement in research projects with peers.

CONCLUSION:

In this paper new challenging covid-19 pandemic problem The online instructor plays a vital role in developing and maintaining an effective online teaching learning environment and must possess a unique set of tools to perform successfully. Higher education worldwide is affected due to the COVID-19 pandemic that thousands & above school & colleges closures followed in a very limited span of time to enforce social distancing measures. Educational institutions particularly in the Indians, are presented with surmounting challenges in its system of planning, implementation, and assessment. On a light note, however, the global pandemic opened up opportunities to the country to upgrade its educational mode of delivery and transfer its attention to emerging technologies. Finally Online teaching learning encompasses a range of technologies, such as the worldwide web, email, chat, new groups and texts, audio and video conferencing delivered over computer networks to impart education. Online teaching "migration" is implemented quickly during the outbreak of COVID-19, students' anxiety needs to be relieved in various ways to ensure that they can actively and effectively engage in online teaching learning.

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IMPACT OF COVID 19 LOCKDOWN PERIOD ON LIBRARY PROFESSIONALS IN INDIA & ABOARD

DEVIDAS EKNATHRAO DADPE

Librarian

Lokmanya Tilak Mahavidyalaya, Wadwani Dist.Beed(M.S.)

Email:- ddadpe@gmail.com

Mobile No.:-94222929599

*A*bstract:

*D*ue to widespread or frantic CoronaCOVID-19 virus in the World. Because of widespread or distracted CoronaCOVID-19 infection in the World, came about into colossal human passings, GDP at the most minimal rate and unsettling influence in human life cycle. The current paper exhibits the preparation about Corona-Covid-19 infection, lockdown period and the gathering of on the web/live scholastic/learning programs/exercises delivered by various colleges, schools and affiliations/organizations during the lockdown time frame which filled in as data sources, to draw in understudies and educators/resources in their instructing, learning and augmentation forms in India with more accentuation on Library and Information Science online occasions. The outcome shows that during the time of lockdown 377 quantities of online courses followed by FDP (36), Workshop (26), Quiz (19), Training (7) and STC (3) and so on online occasions were hung on various subjects/topics by various establishments. The expanding quantum of online course shows that online class occasion is generally mainstream against the other online occasions. Highlight note that no any Workshop, Virtual gathering and Short term course were organized under the inscription 'Covid-19/Corona, Lockdown' aside from one preparing program. It additionally centers around the job of various foundations/distributors/merchants in giving far off e-administrations to the advantage of academicians/analysts at the standard lockdown scene with the consideration of libraries in the post lockdown period. The circumstance coordinates for 'advanced citizenship' among the academicians. Further the paper investigates title/point/topic of online course and other online occasion titles against the various subjects that can be valuable for additional arranging and recommending of new online course title and its topic.

Key words *:* Lockdown, Webinar, Information, Research, Library, Sources, Covid-19, Topic, Pandemic, Work and Home etc

INTRODUCTION

It is seen that in India alongside other corporate and government workplaces, instructive establishments also were stay shut to abstain from expanding friendship of crown infection in the lockdown residency. Libraries with their understanding corridor/study rooms were likewise shut henceforth no physical access to the print assortment and flow was watched. Subsequently the idea of 'telecommute' gives an appropriate method to deal with the home time into utilization of value time. At that point onwards a few scholarly establishments/gatherings/affiliations began different online projects like online classes, FDP, workshops, test/puzzle rivalry and trainings and so on number of themes/disciplines. The inquisitive psyche of the academicians - scientists, instructors and curators and so forth took forward to use this residency in a powerful manner by taking an interest in propositions online projects and battle the COVID-19 pandemic. Anyway there is radical change in all administrations/work including library benefits when the lockdown time frame. Lockdown: As expressed by the clinical specialists, and experienced by us the lockdown is the best answer for evade the widespread infection among the person. In India, on the accompanying time frames, across the nation lockdown circumstance was actualized. Likewise to battle this pandemic, one day 'Janta Curfew' was seen on 22-03-2020.

COVID-19, India, lockdown

It is seen that in India alongside other corporate and government workplaces, instructive organizations also were shut to abstain from expanding love of crown infection in the lockdown residency. Libraries with their understanding lobby/study rooms were likewise shut thus no physical access to the print assortment and dissemination was watched. Therefore the idea of 'telecommute' gives an appropriate method to deal with the home time into utilization of value time. At that point onwards a few scholastic establishments/gatherings/affiliations began different online projects like online courses, FDP, workshops, test/puzzle rivalry and trainings and so forth on a number of subjects/disciplines. The inquisitive brain of the academicians - scientists, educators and custodians and so forth took forward to use this residency in a powerful manner by taking an interest in proposals online projects and battle the COVID-19 pandemic. Anyway there is uncommon change in all administrations/work including library benefits when the lockdown time frame. Lockdown: As expressed by the clinical specialists, and experienced by us the lockdown is the best answer for keep away from the wide spread of infection among the individual. In India, on the accompanying time frames, across the nation lockdown circumstance was executed. Additionally to battle this pandemic, one day 'Janta Curfew' was seen on 22-03-2020.

Library closures around the world

Libraries around the globe are confronting hard decisions around which administrations to offer and how, going from insignificant limitations to full conclusion. We know that administrations themselves are adopting various strategies, some of the time requesting the conclusion all things considered, others demonstrating that life should proceed obviously, and others basically surrendering choices over to library chiefs.

Obviously any choice to confine administrations or close a library is a troublesome one and should be taken after an evaluation of the relative dangers.

We are as of now mindful of whole open library frameworks being shut in the accompanying nations and domains: Albania, Argentina, Armenia, Azerbaijan, Bangladesh, Bolivia, Bosnia, Brazil, the Cayman Islands, Colombia, Costa Rica, Cuba, Ghana, Kenya, Mexico, Myanmar, Nepal, Panama, Paraguay, Peru, the Philippines, South Africa, Ukraine, the United Arab Emirates, and the United States Virgin Islands.

In the in the interim, libraries in the Aland Islands, Algeria, American Samoa, Andorra, Anguilla, Antigua and Barbuda, Aruba, Australia, Austria, the Bahamas, Barbados, Belgium, Bermuda, Bhutan, Botswana, Bulgaria, Canada, China, Croatia, Cyprus, the Czech Republic, Denmark, Egypt, Estonia, the Faroe Islands, Finland, France, French Polynesia, Germany, Gibraltar, Greece, Greenland, Guadeloupe, Guernsey, Hong Kong (China), Hungary, Indonesia, Iran, Ireland, the Isle of Man, Italy, Japan, Jamaica, Jersey, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Macao (China), Malaysia, Malta, Martinique, Moldova, Morocco, Namibia, the Netherlands, New Caledonia, New Zealand, North Macedonia, Norway, Poland, Portugal, Réunion, Romania, Russia, Rwanda, Samoa, Seychelles, Singapore, Sint Maarten, Slovakia, Slovenia, South Africa, Spain, St Lucia, St Martin, Svalbard, Switzerland, Thailand, Trinidad and Tobago, Tonga, Tunisia, Turkey, Uganda, the United Kingdom and Viet Nam are starting to re-open with insurances set up to ensure wellbeing. Sweden, in the interim, saw over 90% of regions keep libraries open, and 85% of districts significantly offer broadened administrations.

Library and Information Science

Library and Information Science and administrations is a rundown of memoirs of top celebrated administrators, catalogers, library science educators, and library and data examine experts. This is a rundown of prominent administrators and individuals who have propelled libraries and librarianship. Additionally included are individuals basically striking for different undertakings, for example, legislators and scholars, who have likewise filled in as bookkeepers. A feature of this assortment is the consideration of recordings on the life and commitments of the administrators.

libraries have consistently been basic in a procedure of arrangement of access to information to the clients. In the computerized period Libraries are required like never

before previously, as they generally endeavor to meet both the finishes by making all around present data available to the universally present clients. The Internet empowers everybody to visit a library without leaving his/her home so as to get his/her book/data. Neil Gaiman consummately depicts what's going on in computerized times: "Google can bring you back 100,000 answers, a curator can bring you back the correct one." In the scenery of the previously mentioned depiction of the subject, the significance of Librarians in the present and future times can scarcely be overemphasized. Consequently this blog, which is required to be a significant information asset, for the administrators, data researchers, LIS workforce, research researchers and understudies. One of the features of the blog is to recognize and respect the genuine legends of the library calling, to whom the bookkeepers and libraries of the current age owe a great deal. Numerous stalwarts in Library and Information Services calling showed up on the world skyline and delivered yeomen administration for progress and success of our calling. Consequently this blog entry has been made to give data about the bookkeepers. The passages are organized one after another in order.

When the Covid-19 emergency broke out in India, the bigger colleges like Delhi University (DU) and Jawaharlal Nehru University (JNU) reported the suspension of classes until March 31. While others held on to perceive what might occur straight away, they began investigating the web classes. Private ones like Ashoka University moved to the online mode by mid-March and remained to a great extent unaffected by the across the nation lockdown upheld on March 24. "Our employees are giving talks on the web (on Google Meet, Zoom, and so forth). Along these lines, the scholastic exercises are significantly less influenced," says L S Shashidhar, educator and senior member of examination at Ashoka University.

The IITs likewise moved to leading on the web classes, and sharing examination materials and sound documents with understudies over the web. Timothy Gonsalves, overseer of IIT Mandi, says: "The employees are accessible web based during intelligent meetings for understudies to clear their questions. Contingent upon the idea of the course and understudies' web get to, instructors are enhancing Moodle (an open-source learning-the executives framework) with arranged internet based life and online stages." The colleges and educators Business Standard contacted concurred that their progress to web based educating had not been exceptionally troublesome. In any case, if the lockdown proceeded over a more drawn out period, some interest in foundation and extra preparing for instructors and understudies would be required, they said.

India under COVID-19 lockdown

The biggest COVID-19 national lockdown on the planet has been reached out to May 3. As of April 22, India has detailed 18985 affirmed cases and 603 passings from

COVID-19 of every 31 states and association domains since its first case on Jan 30. India rushed to close its worldwide outskirts and implement a quick lockdown, which WHO commended as "extreme and convenient". The lockdown has likewise given the administration time to get ready for a potential flood in situations when the pandemic is determined to top in the coming weeks. In any case, India's populace of 1•3 billion across assorted states, wellbeing imbalances, augmenting monetary and social aberrations, and unmistakable social qualities present one of a kind difficulties. Readiness and reaction to COVID-19 have varied at the state level. Kerala has drawn on its involvement in the Nipah infection in 2018 to utilize broad testing, contact following, and network activation to contain the infection and keep up a low death rate. It has likewise set up a great many brief asylums for traveler laborers. Odisha's introduction to past catastrophic events implied emergency insurances were at that point set up and have been repurposed. Maharashtra has utilized automatons to screen physical removal during lockdown and applied a group control procedure: if at least three patients are analyzed, all houses inside 3 km are overviewed to identify further cases, follow contacts, and bring issues to light. Regardless of whether this procedure will be fruitful is as yet hazy. The reason depends on there not being network transmission, and there is threat of disparagement and intimidation. In any case, states merit a significant part of the credit for India's COVID-19 reaction. The administration's abrupt implementation of the lockdown appeared to be hurriedly arranged and promptly impeded effectively weak populaces. There has been a mass migration of traveler laborers and concerns are ascending about starvation among individuals who work in the casual economy. Executing general well being measures is troublesome in places with stuffed everyday environments and insufficient cleanliness and sterilization. NonCOVID-19 wellbeing administrations have been disturbed. Reports propose that the administration's endeavors to offer monetary help and a proportion of food security to facilitate these weights will be lacking to satisfy need. In any case, better arranging and correspondence could have deflected this emergency. Paces of testing have been low (0•28 per 1000 individuals as of April 20). Limit issues, nonappearance of political will, and operational practicality have been to be faulted. In any case, endeavors to switch the circumstance are in progress as a huge number of testing packs have opened up, and all the more testing organizations and research centers have been affirmed. Testing should be extended exponentially just as deliberately as a device to give epidemiological proof. India's reaction has likewise been obliged by a lack of wellbeing laborers, however this ought to be cured by new changes that would activate extra social insurance laborers from various sources.

Future Directions

Investigating the not so distant future, containing the COVID-19 pandemic is probably going to take a while; general wellbeing mediations will be coordinated towards social separating and improving clean practices. These mediations will be successful in

postponing the beginning of wide network transmission, decreasing pinnacle frequency and its effect on open administrations. Testing, contact following, disengagement of contaminated, and prudent self-segregation of contacts is basic in lessening the quantity of new cases. An especially serious extent of comprehension in the populace and acknowledgment of these measures is additionally basic. These intercessions must be adjusted with returning to typical life and ordinary exercises to the most ideal degree until a turning around the direction of the pandemic is followed.

Somewhat information is accessible so far on backup ways to go of transmission, specifically by means of sewage, tainted water, or cooling frameworks. It is additionally inadequately known whether the individuals who have recouped from SARS-CoV-2 contamination would be shielded from reinfection, however proof to affirm this is yet to be produced. Neutralizer testing must be actualized for an enormous scope to distinguish who is now insusceptible to the infection. The impact of temperature, season, and stickiness on COVID-19 additionally affects the COVID-19 flare-up, be that as it may, results from different pieces of the world are anticipated.

Numerous preliminaries are in progress to create novel treatment choices just as an immunization to treat the respiratory disorder, yet results are still awaited.[50] Moreover, months are required before an antibody is created and affirmed. Despite the fact that crowd resistance creates after some time, weak gatherings as the social insurance workforce and old individuals should in any case be safeguarded. Shrewd working and amazed movements may be received to moderate COVID-19 transmission later on. Computerized educational and internet learning can be extended for a considerable length of time. Telemedicine, and specifically teleophthalmology, should be actualized. Additionally later on, irresistible maladies will be likely included among the most significant wellbeing dangers alongside against microbial resistance.[51] moreover, ideal recognizable proof, effective conclusion, fast segregation, and clinical administration would stay in the forefront.[51]

One of the last concerns respects the second flood of COVID-19 flare-up. Asian nations and urban communities that appeared to have managed the coronavirus scourge are unexpectedly fixing their outskirts and forcing stricter control measures, dreadful about new imported contaminations. Hong Kong out of nowhere observed new cases spike as high as 65 out of one day and requested another conclusion of unnecessary exercises. In Japan, where diseases have remained moderately controlled, cases began to ascend in March as voyagers returned in the nation of origin. New instances of nearby transmission have additionally been distinguished. Correspondingly, Singapore again declared a one-month lockdown taking into account expanded nearby transmission. This forecasts a troubling sign for the United States, Europe, India and the remainder of the world in regards to the second flood of the infection spreading once the prohibitive measures are calmed.

Conclusions

The COVID-19 pandemic has influenced the worldwide economy of which India is a major member. India is the nation with the second biggest populace on the planet, so the pandemic is particularly perilous for India. The COVID-19 influenced practically all securities exchanges far and wide. The world halted because of the infection flare-up and it drove the world into the extraordinary emergency of the century. The all out lockdown and social separating is the main answer for preventing the spreading of the infection until an immunization is accessible. India additionally reported the lockdown as a defensive measure, yet India declared somewhat late and this is obvious through the pre-lockdown period where AAR was negative. The declaration of the lockdown was taken emphatically by the securities exchange that was reflected in the financial exchange reaction; this isn't perfect, yet at the same time there is an opportunity when the lockdown is lifted and COVID-19 is annihilated from the nation, the financial exchange will recoup. The investigation finds the proof of a positive AR around the current lockdown time frame and affirms that the lockdown positively affects the securities exchange execution until the circumstance improves in the Indian setting. Be that as it may, the outcome remains constant for the select example of BSE-recorded organizations and during the period considered for the examination. It can't be summed up for other exchanged stocks, nor in different periods later on or in an alternate market condition. The ramifications of this investigation are that financial specialists can make prudent strides before exchanging stocks during the time of a lockdown. Hazard unwilling speculators can abstain from exchanging around the lockdown to dodge the hazard connected with unpredictability of stocks in the lockdown time frame. The aftereffect of this investigation will profit financial specialists as it might assist them with bettering comprehend and assess the effect of the lockdown on securities exchanges brought about by COVID 19.

In the course of recent months, COVID-19 has risen as a general wellbeing danger around the globe. It adds to the rundown of past pestilence irresistible sickness episodes, incorporating Bovine Spongiform Encephalitis in 1986, the Avian influenza in 1997, the SARS in 2002, the Swine Flu in 2009, and Ebola in 2014. Every one of these episodes advise us that we live in a living space where it is important to regard the connection between creature, public activity, and the earth to endure and flourish. Fast urbanization and our attack into timberland lands, has made another interface among people and untamed life; and presented people to new life forms regularly including the utilization of colorful natural life. As expressed by the UN Environment Chief, Inger Anderson "Our progress with disintegration of wild space has brought us awkwardly near creatures and plants that harbor infections that can bounce to people." She stated, "In the event that we don't deal with nature, we can't deal with ourselves".[53] With COVID-19, nature is sending us a message that we have to perceive the interrelationship between creatures, including pets, animals and untamed life. The transdisciplinary OneHealth methodology

including experts from numerous orders, for example, medication, veterinary, ecological wellbeing, and sociologies has been upheld to constrain new irresistible outbreaks.[54] The worldwide experience is encouraging that regulation measures and forceful agreement following are required to monitor the disease until an endorsed treatment or an immunization is accessible to the worldwide network. They ought to likewise limit the financial weight of sickness, and improve comprehension of ailment instruments, medical issues, infection rise, and reappearance to react in a proportionate and convenient way. This will help in distinguishing, forestalling, and fighting future pandemics dependent on our experience from COVID-19 episodes. The execution and improvement of the OneHealth coordinated efforts on a worldwide scale are basic in diminishing the danger of rising virus

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Dissecting Literature with Erik Erikson's Theory of Psyche

Dr. Manjusha Y. Dhoble

English Department, I.G. College, Kalmeshwar, RTMNU.

Abstract:

*A*ccording to Erik Erikson's Theory of Psyche, the conflicts in one's life serves as a turning point in the lives of the protagonists. People form connections in society to survive. These connections lend healthier habits, reduced symptoms of stress, and give a greater sense of meaning for existing. The social and economic orders also play their part in setting the behavior pattern of the protagonists. While Freud believes that the protagonists react after undergoing a struggle or conflict through its psychosexual stages. Erik feels that people who successfully deal with these conflicts develop strong sense of self –their ego builds up to next level. Erikson's theory can provide an overview of some of the developmental conflicts that people face in everyday life.

Let us view how the patriarchal forces work on the psychology of a protagonist to develop a feminist strain in her. Let us see how this theory of Erikson holds true for the protagonists of Indian novelist's like- Arundhati Roy.

Keywords – Freud's, personality, protagonists, psychological, psychosexual.

INTRODUCTION

Everybody in life has to undergo through conflicts. According to Erik Erikson these conflicts occur mostly during the growing years or the adolescence. Erik Erikson has tried to bring to our notice these stages of life. We cannot restrict these conflicts to a period of life. We observe that we go through these conflicts during our whole lifetime. Those who succeed in fully resolving the stage move forward in life. If we do not come out of each stage successfully then we remain imprisoned in that stage for ever.

"The goal of resolving conflict in a relationship is not victory or defeat. It's reaching understanding & letting go of our need to be right."(Conflict quotes, pinterest.com)

But when we are caught in situations like pandemic it is difficult to overcome stress, depression and aggression caused due to the trauma of isolation. When such attitudinal change comes through one's own experience then they are more felt and permanent; then they would have been due to external pressure.

"For example, while Erikson suggested that identity was largely a challenge during adolescence, it can be an ongoing challenge throughout life as people take on new roles and try on new identities. Creating relationships is certainly important during young adulthood, but those social connections are something that people continue to forge all through life". (Seong,)

While Erikson's theory can provide an overview of some of the developmental conflicts that people face in everyday life, it is important to remember that each person is different and life does not necessarily unfold in a series of discrete stages.

Erik Erikson was an ego psychologist. He developed one of the most popular and influential theories of development. While his theory was impacted by psychoanalyst Sigmund Freud's work, Erikson's theory centered on psychosocial development rather than psychosexual development. The stages that make up his theory are as follows as stated in "Conflict during the Stages of Psychosocial Development" by Kendra Cherry:

Stage 1 - Trust vs. Mistrust

Stage 2 - Autonomy vs. Shame and Doubt

Stage 3 - Initiative vs. Guilt

Stage 4 - Industry vs. Inferiority

Stage 5 - Identity vs. Confusion

Stage 6 - Intimacy vs. Isolation

Stage 7 - Generativity vs. Stagnation

Stage 8 - Integrity vs. Despair

This theory gives us an insight into the behavior of humans in various stages of life. Freud was of the opinion that the impact of psychology begins soon after the birth of a child. He has traced this development of human behavior with the person's sexual energy. Freud says that the unconscious mind is influenced through the Id, the ego and the superego. The Id is the belief of the human mind which demands to be fulfilled. Each person struggles to be special or better than others in his own way. This Id undergoes suppression due to social environment and parental figures. Out of this arises the ego. The ego tries to find an object in the real world which has helped it achieve its objective. The superego consists of both morals and values learnt from parents, culture, epics and society. It is the conscious of the mind. It makes us feel guilty for our bad actions. It also suppresses our wrongful ideas and advices us to live morally. The more the individual is dependable the higher would be his rate of suppression. It happens often with children and women.

Hence though they are born as individuals, the women are compelled to assume the status of 'the other'. Such is the set up of the culture – patriarchal environment.

Let us observe the strategies which individuals adopt to fulfill their libido or instincts. Their choices and behavior can be traced down to the experiences that they were in and their suppressed desires. Though the development of these stages takes place from infancy let us trace their development in the protagonists. Let us not restrict them to infancy alone.

"Never suppress your emotions; emotions are like water – let them flow. If you suppress them, they will become stagnant and will cause diseases, like stagnant water does." – Simona Rich

Stage 1 - Trust verses Mistrust

"Trust is the glue of life. It's the most essential ingredient in effective communication. It's the foundational principle that holds all relationships." – Stephen Covey.

In the first stage of 'Trust verses Mistrust', according to Erik Erikson's, Theory of Psyche, from childhood a child learns to recognize who is trust worthy. The child depends on its protector and tries to follow that person in his footsteps. The child wishes to develop some traits of personality in him. When he tries to develop certain qualities he may have to undergo various psychological crises. Various incidents influence his psychology as well.

"In the social jungle of human existence, there is no feeling of being alive without a sense of identity." Erik Erikson (Erikson, 20 Inspiring Quotes on Identity)

When Ammu in Arundhati Roy's "The God of Small Things" tells her twins that their father used to blow spit-bubbles and shiver his leg; they try to imitate his habits.

"Though Baba wasn't a clerk, Ammu said he often behaved like one.

When they were alone, Estha and Rahel sometimes pretended   that they were clerks. They would blow spit-bubbles and shiver their legs …." (Roy, The God of Small Things 84)

"Trust is the fruit of a relationship in which you know you are loved." – William P. Young

Both, Estha and Rahel have great trust in their mother, Ammu. They wish to be like their parents when they become older.

Let us view the childhood of Ammu. She was tortured by her parents and thought of as a burden. She has a nagging mother and an antagonistic, bad tempered father. Once when Ammu was nine years old after having been brutally beaten by Pappachi, she and her mother were hiding in the hedge on being thrown out of the house. Ammu loved her new

gumboots and decides to climb through the ventilator to rescue them. When she was running away with them her father catches her and again flogged her brutally.

"When he caught her, he didn't say a word. He flogged her with his Ivory-handled riding crop (the one that he had held across his lap in his studio Photograph). Ammu didn't cry. When he finished beating her he made her bring him Mammachi's pinking shears from her sewing cupboard. While Ammu watched, the Imperial Entomologist shred her new gumboots with her mother's pinking shears." (Roy, 181)

From this Ammu knows that Pappachi had the complete autonomy over the lives of the family members. She also wishes to have complete power to run her own life. She did not have faith that her parents would do something good for her. So she decides to develop trust in her own self for the betterment of her life and take decisions for her benefit. Ammu's mistrust in her parents keeps growing.

Ammu's situation at home was no better than our house arrest during this pandemic of covid-19. She becomes more and more restless. Feelings of restlessness arise when one's dissatisfied or does not use one's potential to the fullest. Living with her tormenting parents was unbearable and she longed to escape them. Anxiety and restlessness arises from one's fight-or flight response getting triggered.

"The fight-or flight response in humans is a powerful survival mechanism that helps escape dangerous situations.

Unfortunately, this same response can appear when we face problems or conflict at work and in our personal lives. Our body is flooded with adrenaline and since there's no way to expend it, such as running away, it leaves us restless." – Stephanie Wells

Meditation is the only cure over it.

Stage 2 - Autonomy vs. Shame and Doubt

"Autonomy... is freedom to develop one's self – to increase one's knowledge, improve one's skills, and achieve responsibility for one's conduct. And it is freedom to lead one's own life, to choose among alternative courses of action so long as no injury to others results." – Thomas Szasz

After gaining control over ones feelings a person tries to gain full control over his actions. Ammu's education is stopped. No proposals came her way as her father could not raise suitable dowry. Her sixteenth birthday also passes off unnoticed. "All day Ammu dreamed of escaping from Ayemenem and the cluthes of her ill-tempered father and bitter, long-suffering mother."(Roy, 38-39) She hatches various plans to be away from home. One of them works. She is allowed to attend a marriage at her Aunt's house in Calcutta. Here she meets a short man who proposes to her. He is of a different caste. She knows her parents would not agree to this marriage so she runs away with him. She boldly takes her own decisions. She readily faces all the mishaps which follow her autonomous decision.

Ammu's father-in-law presents them a fiat, "which after the wedding he drove off in himself, with all the jewellery and most of the other presents that they had been given."(Roy, 39) Her husband turns out to be a heavy drunkard, who lied unnecessarily. He beat her up every time he drank. "This fell into a pattern. Drunken violence followed by post-drunken badgering."(Roy, 42)

Ammu begins to doubt her decision and now feels ashamed of having taken it. "Doubt is the brother of shame" says Erik Erikson. Ammu knew now that life had been lived. "She had had one chance. She made a mistake. She married the wrong man."(Roy, 38)

Shame is the most powerful emotion which puts in fear of being bad. It sends one in unspeakable silence. The sympathies of unknown do no healing on the contrary it carves out the wound deeply. They make one eat one's pride. One's self-esteem is lowered. A person chooses to isolate oneself, goes in depression and can turn violent. To overcome it one has to bravely accept one's faults, forgive oneself, learn from it, try not to repeat it again and forget it. The sooner one forgets it the sooner one moves forward in life.

Stage 3 - Initiative vs. Guilt

Ammu is denied a position in the family, she is unwanted and a load for her family. Her broken marriage, the burden of her children's responsibility and womanly passion to belong to a man, all make her reckless. Ammu is an outcast in her own family who tries to seek solace by eloping with another outcast, Velutha. Ammu takes another wrong decision knowing well while on sufferance, her crossing of boundaries shall not be tolerated.

"What was it that gave Ammu this Unsafe Edge? This air of unpredictability? It was what she had battling inside her. An unmixable mix. The infinite tenderness of motherhood and the reckless rage of suicide, bomber. It was this that grew inside her, and eventually led her. to love by night the man her children loved by day." (Roy, 44)

Ammu cannot digest her surging rage, the injustice and depravation slashed out at her, and she becomes more reckless. Now she purposely took wrong decisions to avenge her family and the society.

"She did exactly nothing to avoid quarrels and confrontations. In fact, it could be argued that she sought them out, perhaps even enjoyed them."(Roy, 182) She enters into an illicit relationship with Velutha knowing well it had no future.

When Estha and Rahel are seven years old they are a witness to the death of their cousin Sophie Mol, due to drowning and Velutha, who was beaten brutally to death. They are the cause of their death. These incidents bring about their separation. Ammu is thrown out of the village Ayemenem, Estha is sent to live with his father and Rahel to a boarding school.

Similarly Estha can never forget these deaths caused accidently by him. He never stops blaming himself for it. Nor can he forget or forgive himself. "But worst of all, he carried inside him the memory of a young man with an old man's mouth. The memory of a swollen face and a smashed, upside-down smile…….. And what had Estha done? He had looked into that beloved face and said: Yes. Yes it was him."(Roy, 32)

"Once the quietness arrived, it stayed and spread in Estha."(Roy, 11)

"Slowly, over the years, Estha withdrew from the world."(Roy, 12)

He refuses to go to college, begins to do housework, did the laundry, learned to cook, bought vegetables, nurses a mongrel (dog) till his death, and takes to walking. He had just become a part of the furniture. He isolates himself from the society.

His sister Rahel, on the other hand drifts from school to school. To reprimand her ways she was cajoled, canned, starved by authorities; but it was to no avail. She was expelled from the school in six months duration. The second one was for smoking. "The third for setting fire to her Housemistress's false hair bun"(Roy, 17) She spends eight years at a five year course in college without finishing it.

Rahel drifts from marriage to marriage. Nothing can hold her down. She never returns to her village until her brother did. His emptiness fitted well with her quietness. She has an independent spirit which no one could hamper. Nothing mattered to her as worst things had happened to her in childhood.

We can see that the spirit of living had left in Ammu and both children. After that childhood episode they can never forgive themselves for being the cause of misery to their loved ones. This guilt snatches away their enthusiasm of living. Their minds remain trapped in that part of childhood miseries. Their guilt's do not leave them. They cannot separate from those memories nor move forward in life. They move in circles. They wish to relive the pain, distress and loss, experienced by them again and again. Such minds are diseased and not healthy. Those who have overcome their guilt can take an initiative to restart their life.

Stage 4 - Industry vs. Inferiority

Kids who get along well with other kids of their age and who do well in school will emerge from this stage feeling competent. Those who aren't able to successfully navigate social interactions and academic challenges may end up feeling inferior and lack self-confidence.

Estha suffers from an inferiority complex. He withdraws from school, society and takes refuge in quietness. While nothing could hamper Rahel's independent spirit. Such was the impact, the horror and the trauma that the childhood experiences had left on them. They now lived an empty life. Nothing mattered to them. Their minds could not cross the guilt stage. Time had frozen their minds in the past. They cannot do anything industrious

in their life. Trauma can cause deadening effects on minds equal to suicidal tendencies. Hence one must always make an effort to come out of it. Seek help if necessary.

Stage 5 - Identity vs. Confusion

" Estha's full name was Esthappen Yako. Rahel's was Rahel. For the Time Being they had no surname because Ammu was considering reverting to her maiden name, though she said that choosing between her husband's name and her father's name didn't give a woman much of a choice."(Roy, 36-37)

The children are confused regarding their identity. This confusion stays with them all their lives. They fail to move forward in life. Failure to handle this conflict well leads to confusion while its successful handling leads to a strong sense of personal identity.

Their mother is also confused regarding her identity. She has no locust stand I. Ammu did not wish to accept either her parental surname or her after marriage one. Nor does she create an identity of her own. Ammu put in as much work as her brother Chacko in the working of the factory, but she was not given any place in its ownership. Ammu fails to create an identity of her own. Discrepancies, rage and confusion drag her back in life. These emotions do not let her move forward in life. One should try to overcome confusion with directional thinking and contemplation.

Stage 6 - Intimacy vs. Isolation

Person's who succeed in developing strong and lasting relationships succeed in solving many conflicts of their life, while those who fail can end up feeling isolated and lonely.

After going for a divorce, Ammu is not forgiven nor accepted by the family. She stays on sufferance, while her divorced brother is readily accepted into the family. A separate entrance is built to his room, so that he can satisfy his manly needs. He is made a partner in the ownership of the factory by their mother. Ammu's rage bounds on seeing all the discrepancies around her. As a revenge on this society, family and social set up, she decides to satisfy her heart. She enters into an illicit relationship with a downtrodden. She knows her this relation has no future, still she recklessly continues with it. It gives her some relief from the calculated isolation which she is put through by her family, society and the rage inside her. She feels it shall resolve her problems but they complicate them all the more.

Stage 7 - Generativity vs. Stagnation

After being thrown out of Ayemenem, Ammu tries to stand on her feet. She tries to create her own identity, to support herself and her twins. But her mental state deteriorates and she fails to generate any identity. She seems to have fallen in her own eyes. She moves towards stagnation. She is found dead in an unknown hotel, in an unknown bed. She had

taken to intensive drinking and prostitution. She is constantly haunted by dreams of being caught by the police and displayed in the market place.

During this stage of middle adulthood, people who aren't able to contribute towards their family, children and society, often feel disconnected from the rest of the world.

Stage 8 - Integrity vs. Despair

After retirement, Pappachi has trouble with the ignominy of retirement. His wife was seventeen years younger to him. He was already old and she was in her prime years. He was jealous of the attention his wife got. She carried out the business of pickle and jam. To Pappachi's resentment, he hears that his much hated assistant has got fame for his discovery of moth. All this so infuriates him that his frequency of beating his wife increases. "Pappachi's moth was held responsible for his black moods and sudden bouts of temper. Its pernicious ghost -…. - haunted every house that he ever lived in. It tormented him and his children and his children's children."(Roy, 49`)

During this last stage of Erikson's theory of psychosocial development, older people looking back on their lives, who feel satisfied with all they've experienced and accomplished will emerge with a sense of wisdom and satisfaction. Those who are not satisfied with it shall experience despair.

Conclusion

If it is not easy to come out of trauma, it is not difficult either. One needs to give oneself time. Practice meditation and do yoga. Calm one's anger, rage and injustices suffered. Unless you calm down your mind it shall not be able to think straight. Recollect what went wrong, be involved with other such common survivors, try to talk it out, ask for support, and try to sort out one's life. According to psychiatrics one should ask for support and try to get into a routine. Do things which shall help one move forward in life. Try to forget and forgive such traumatic situations. One should forget who or what hurt one. Let the past be gone, appreciate the present and focus on the future. The greater time it takes one to come out from the past the lesser time one shall have to make ones future.

Feminism according to Arundhati Roy is to be in a position where a person wishes to be. When Ammu takes a decision for herself, of running away or of getting married or of searching for a job; she becomes a feminist. Her decisions turn out to be wrong. This is a different thing that she does not wish to learn from her mistakes and her rage makes her choose the dead end. To move forward in life one should learn to make decisions for oneself.

"Do not let the shadows of your past darken the doorstep of your future. Forgive and forget." – Recoveryexperts.com

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IMPACT OF EVOLVING EDUCATION 4.0 IN INDIAN EDUCATION SECTOR DURING COVID-19 PANDEMIC

TUHIN PATRA

Student of M.A in Education, School of Education,

Netaji Subhash Open University, Kolkata, West Bengal, India

Email- tuhin.suri.patra123@gmail.com

Mobile no.-9064393482

Abstract:

The pandemic COVID 19 has led the Government of India to declare a lockdown in March 2020 and to shut down all the academic institutions from nursery to postgraduate level in the country temporarily, affecting around 600 million learners and their conventional studies across the world postponing or canceling admissions and all exams in this academic year. Now, the virtual class-driven technology-mediated education, shortly termed as Education 4.0 which outstrips the systems of Gurukula, traditional university, and distance learning, has a significant role at present on the teaching-learning process using various Online tools for teaching like Hangouts Meet, Zoom, Google Classroom, Youtube, online apps like Jamboardapp, ed puzzle, Hot Potato, Kahoot, Edusprint and Google docs, Google forms, Google sheets, Google slides to design assignments, tests, feedback, and grading. Besides this, music, dance, art, robotics, yoga, meditations have been introduced to reduce stress and anxiety among students. But virtual classroom has become a challenging task among students, parents, and teachers especially for rural students based on the digital divide from various perspectives like network issues, lack of android handsets or laptops, training among teachers, interest among students resulting in less attendance, motivation, engagement and interaction hampering all over socio-economic development of the students. To overcome the above challenges, change in the teaching and learning process, policy boost from government, Taskforce framing, integrated approach aided by Telecom Sector, Personalized Learning should be planned

and implemented as well. Therefore, during the COVID period, the new normal at the present situation would be like – open your WhatsApp, download a PDF file, listen to the Audio-Video Lecture, and video chat with the teachers to discuss the lesson. But, we have to go for blended learning rather than only conventional learning after the post COVID period strengthening the online education to cope with the situation in the future.

Keywords: Pandemic, Lockdown, Education 4.0, Digital divide, Blended learning

INTRODUCTION

All educational institutes in India were closed from mid of March due to the spreading of COVID-19 globally after the declaration by "WHO". After the announcement of nationwide lockdown by The Government of India, the education system has to be moved from offline to online mode to maintain social distance in this pandemic although affecting the access to schooling and learning, broader socio-economic issues, teaching and assessment methodologies making digital divide with embedded gender and class divide. UNESCO recommends the use of online learning programs to cater to the disrupting situation in education so that teachers can reach the remote learners but only a few institutions could cope up with the online teaching methods. But the economic divide, the rural-urban divide, and the resulting digital divide all have played a mixed role in the education sector.

Objectives

The major objectives of this study are:

1. To understand the meaning of Education 4.0

2. To understand the impacts of COVID 19 on the Education sector

3. To find out the strategies against the barriers of online education.

Research Methodology

For my detailed descriptive method of analysis, I have taken a wide range of materials, including policy and media reports, blogs, survey reports, study reports, reviewed published research report by various agencies along with a few research papers, journals, and news articles published during this year trying mostly to rely on understanding and reading ability of myself to have a better overview on this issue. The study is mostly based on the subjective implementation of information

Discussion

- ### *What is Education 4.0?*

Schools in India have been working hard in creating a comprehensive online infrastructure for effective remote learning with the help of multiple formats bridging time and space both. The new, total technology-mediated education can be termed as Education 4.0 dealing with innovative producing education, after the first three waves of education systems that evolved over 2000 years of civilization - the Gurukula system (one master to a few pupils dealing with lectures and memorization), the traditional university system (one to many learners dealing with internet-enabled learning) and distance learning (one to very many learners across the spectrum dealing with knowledge-producing education).

- ### *Teaching and learning through online mode*

Most used Online video conferencing tools for teaching nowadays are Google Hangouts, Google Meet, Zoom, Google Classroom, WEBEX, TEAM, etc. Some online apps are used to enable students with the content like Jamboardapp (Virtual whiteboard), Ed puzzle (create audio-video lessons), Hot Potato (create MCQ, short answer, jumbled sentences, crossword, matching/ordering, gap fill exercise), Kahoot (Quiz based games and other study materials), Edusprint (to upload audios, videos, presentations). Besides this, e-mail, Whatsapp, youtube are also playing helpful roles. Google docs, Google forms, Google sheets, Google slides are also useful Applications for designing Assignments, tests for an individual as well as collaborative work providing feedback to individual learners and Grading. Teachers are also introducing Music, Dance, Art, Robotics, Yoga, Meditations promoting the concept of "Happy learners are better learners" measuring the Happiness quotient to reduce the stress and anxiety among students, parents for the well being of overall societal and mental health.

Impacts and Findings

- ### *Positive Impacts*

Blended learning

It is arising with different teaching models for a major transformation in the area of curriculum development and pedagogy as a set norm in most of the schools, colleges, and universities. When the situation will be normal laboratory-based subjects like Chemistry, Biology mathematics which needs specialized equipment programming software will be carried on the face to face interaction and subjects like humanities may be taught in online mode.

Boost for many EdTech companies

It will be aiming at developing innovative ways of transforming the e-learning system.

Quality of the learning materials

Innovative teaching methods and e-learning platforms are adopting new ways of delivery and assessments of learning outcomes to make more interesting for the students bringing transparency in academics.

Without any boundaries

Digital learning has no physical boundaries with more learning engagement experience via collaborative teaching and learning which is cost-effective giving proper comfort zone to the students.

- ### *Negative impacts*

Lack of Internet connectivity along with the digital system

Internet connectivity is one of the major problems faced by teachers and students. According to The 2017-'18 National Sample Survey report on education and The Telecom Economic Times(over7,600 respondents), we can make a list of the percentage of people using the internet having electronic machines in India.

Connectivity	Users	% of use
Internet facility	Households	24
Internet facility	Rural people	15
Internet facility	Urban people	42
Mobile internet	Men	36
Mobile internet	Women	16
Smartphones	Indians	77
Smartphones	Students	12.5
computer	Households	11
Mobile hotspot	Out of 7600	72.60
PC using broadband	Out of 7600	15
PC using Wi-Fi dongle	Out of 7600	9.68
poor internet	Out of 7600	1.85

The digital divide

Lack of internet access can prevent students in rural areas and from disadvantaged families to opt for digital education. The government is not in a situation to build digital education presently due to lack of budget.

Lack of preparedness for teachers

Teaching and learning at the level of higher education and the school level are surely different. Teachers do not understand whether their teaching methodology and technique is useful or not for every level. Being a special kind of methodology, the majority of the teachers who are facing a sudden shift in education, need to upgrade technological skills and teaching resources.

Student learning outcomes

Shut down of schools have shown a negative impact on underprivileged learners regarding lack of essential learning, growth, and development having fewer educational opportunities beyond school which is creating a struggle for the parents especially with limited education and resources.

Postponement of exams

As exams have to be postponed and it cannot be conducted online easily there is a question of imparting continuous and comprehensive learning as well as evaluation during this pandemic. Recently, CBSE, and other State Education Boards, NTA and competitive exam Boards have already canceled the Board exams, college and university exams, NEET 2020, UGC NET, JEE Main 2020, JEE Advanced 2020.

Effect on childcare

Childcare with poverty might be a cause of school dropouts and a family problem indeed in India. In rural areas, many parents who are reluctant supporters of schooling in the best of times might compel their kids to drop out to support the family financially during this situation. The lockdown creates problems even to wealthier parents in urban areas also to deal with the academic study under stress.

Suggestions and Recommendations

A Policy boost from government

The government needs to make policy with DIKSHA, EdTech platforms with a certified curriculum, adopting policies from different countries on e-learning, allow schools to tie-up with EdTech companies.

Mitigating measures in socio-economic demand

Measures should be taken to mitigate the effects of the pandemic on job offers, internship programs, and research projects improving the quality of and demand for higher studies in India.

Change in teaching and learning process

It is highly demanded to update the online teaching-learning and evaluation system.

Modernizing Educational infrastructure

They should be increased with the help of the Integrated Public-Private Partnership approach aided by Telecom Sector companies advocating the free use of their products, free internet access to aid students, and teacher training.

Reducing Syllabus burden

A huge syllabus burden should not be there this year compromising and balancing it with next year so the Total number in exams should be reduced.

Awareness and readiness on the digital system

Development should be done on Local power supplies, internet connectivity, and digital skills of teachers and students choosing the most relevant video lessons, MOOCs broadcasting through radios and TVs.

Training on digital tools

Brief training or orientation sessions, online courses, and webinars for teachers and parents may be organized to support them on the use of digital tools if monitoring and facilitation are needed.

Appropriate approaches to blended education

The blending of education should be modeled and a limited number of applications and platforms should be downloaded by the students and parents designing formative questions, tests, or exercises to monitor the students' learning process closely.

Establishment of Taskforce

The task force, as well as special fund allocation should be established to frame guidelines to formalize approach with the government agencies, EdTech solutions providers, school management services, academicians, education boards, and edupreneurs so that Plan may be scheduled depending on the situation of the affected zones, level of

studies, needs of students, needs and availability of parents choosing the appropriate learning.

Conclusion

Schools are the centers for real-life where students are accustomed to the conventional Face-to-face communication following teachers' body language in the academic institutions but corona has taught to update and modify teaching methods to gain the opportunity for the best solutions in a maximum way increasing quality learning through online mode although there is a lack of institutional infrastructure and adequate platforms. Since mass gathering cannot be avoided in our classrooms in this vulnerable situation so millions of students around the world struggle to study at home. Online classes are no substitutes for classroom lectures but the digital divide and the Indian Internet structure aren't ready for the standard shift to online learning. So, the Government required some relevant action in the sector of the internet, electricity, and E-learning taking it seriously for overall growth to fight with this type of pandemic in the future.

Influence on future education system

Since the online mode has become the default delivery pattern in this situation, it should be well continued to give us the best faculties and students across the globe in the future. The quality of education will be considered based on subject knowledge, IT skills. A student could study courses from any College/ University of the world based on the same quality of teacher and fee structure where there will be no deficiency of educational resources.

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Human and Non Human as Counterparts to One Another in Girish Karnad's Naga Mandala

Dr. Sunil Ganpat Baviskar

Smt. N.N.C. Arts, Commerce & Science College

Kusumba Tal & Dist- Dhule 424302 (Maharashtra)

baviskarsunil1967@gmail.com

Mobile No. 9823616341

Nonhuman animals are purely material beings. They have no concepts. They experience hunger and pain. They don't contemplate the injustice of suffering

A human being is material and immaterial — a composite being. We have material bodies, and our perceptions and imaginations and appetites are material powers, instantiated in our brains. But our intellect — our ability to think abstractly — is a wholly immaterial power, and our will that acts in accordance with our intellect is an immaterial power. Our intellect and our will depend on matter for their ordinary function, in the sense that they depend upon perception and imagination and memory, but they are not themselves made of matter. It is in our ability to think abstractly that we differ from apes. (https://evolutionnews.org/2015/11/the_fundamental_2/ Accessed on 25 March 2020)

*A*bstract:

*I*t is undoubtedly true that human beings have immaterial power which animals do not have. Human beings are gifted with speaking tongue and reasoning power, by which, they always prove themselves superiors to all the animals on the surface of the earth. But in tales and stories, one finds animals as human counterparts. George Orwell's Animal Farm (1945) is the best example of it. In his fourth play Naag Mandala (1990), Girish Karnad presents some animals and inanimate objects such as Cobra- snake man, Yakshini-

snake woman, The Story, The Flames. To the contrary, there are human characters, which are emotionless, senseless, and rigid like non human beings and objects.

Key Words*: Human, Non Human, Counterpart, Feelings, Emotions

1. *Preliminaries:*

Girish Karnad is the greatest playwright of India, writing in English. He is a bi-lingual writer. He himself translated most of his plays into English from Kannada language. Like Shakespeare, he has not only taken the popular plots for his plays from the History, Mythology, and Folk Literature etc., but he also painted the characters greatly. There are eleven plays to his credit. The plays -- Yayati, Tuglaq and Hayavadana gave him much popularity. In his play Naag Mandala, there are only four to five human and non human characters but striking feature is that all human and non human characters are counterparts to one another. Human characters are senseless, emotionless; on the other hand, non Human characters having all the senses and emotions like human beings.

2. *Naag Mandala: Mixture of Two Folk Tales*

The playwright Girish Karnad as usual borrows the story for the play from famous two Kannada folk tales. One, the story of Kappanna and Rani as main plot. Two, the story of Kurudavva and Kappanna as sub plot. Both the stories blended nicely. Kappanna marries Rani and brings her to his house when she becomes a woman. Kappanna has no love for her. He everyday locks her in house and goes to another woman, he only returns to Rani for having bath and lunch at time of midday. Rani feels lonely and cries for Appanna's love. The blind woman Kurudavva, the friend of Appanna's mother meets Rani and understands the situation in which Rani is living. Kurudava too tells her tragic story to Rani and gives her two roots as solution on her sorrow. One day Rani gives a small root to Appanna, but she does not get the result. She then makes paste of another root and mixes in curry but curry becomes very red and in fear she decides of not giving to her husband and pours the curry in ant-hill. The cobra living in the ant-hill eats that curry and falls in love with Rani. The cobra then disguises as Appanna visits her every night and gives that love for which she is craving. She cannot understand the behavior of Appanna who comes only for bath and lunch at mid day times and Appanna (Cobra in guise of Appanna) who comes at the time of night. But when she gets pregnant and tells the news to her husband (human) then she realizes the situation in which she is trapped. She successfully faces the snake ordeal as ordered by villagers and gets declared as Goddess, the incarnation. In the sub plot, Kurudava's son Kappanna, like Rani, gets loved by a snake woman Yakshini.

3. *Non Humans as Humans:*
3.1 *The Naga: True Lover*

While reading the play, the readers see that the Naga when disguises as Appanna, he proves himself as a strong willed true lover. He falls in love with Rani as he eats that magical curry poured in his ant-hill by her. As a brave lover, he, by taking the risk of his life, fights with dogs and mongoose to reach to his human beloved. He becomes so blind in her love that he does not take notice of his wounds and dangers in his ways to her. He even proves himself as clever and cunning lover and man. He very cleverly rescues himself by being exposed before mirror. As per situations, he uses his reasoning power for example when Rani seems to be in confusion about his coming-going at only nights, he becomes ' a Man' and makes silent by saying, "When I come and go at night, don't go out of this room, don't look out of the window – whatever the reason. And don't ask me why?" [Karnad 1990: 24-25]. As a cunning lover, he requests Rani for not disclosing the secret of her pregnancy to anybody. He then provides solution as to face the snake ordeal. He then keeps his word—he does not bite her and makes her declared as Goddess, the incarnation. Post snake-ordeal episode, the situation becomes very difficult for him; Rani gets accepted as a wife along with her child. Her married life becomes happy as she was longing since her marriage with Appanna. Now no place remains for him in life of Rani. He becomes very sad. He wants to kill her, but as a good lover and kind hearted man, he drops that idea by saying to himself:

Why shouldn't I kill her? If I bury my teeth into her breast now, she will be mine— mine forever…No, I can't My love has stitched up mu lips. Pulled out my fangs. Torn out my sac of poison. Withdraw your veils of light, Flames. Let my shame float away in the darkness [Ibid: 42].

Finally, he decides to end his life in her long tresses. As a true lover, he sacrifices his life for her. The critic Rajinder Paul rightly points out, "It is a play where a cobra plays the lover and proves to be better behaved than his human counterpart who is as insensitive as a husband as we read about in the bad tales" [Paul 1990:31].

3.2 *Snake Woman:*

The playwright Karnad does not give much place and importance to sub plot. Kurudavva's son Kappanna becomes hunted by a snake woman-Yakshini and leaves his mother forever. Kappanna, though blind, but she rightly senses that she might be snake woman: "…A temptress from beyond? A yaksha woman—Perhaps a snake woman? Not a human being" [Karnad 1990:38]. The love story of Kappanna and Yakshini runs parallel to the love story of Rani and Naga.

3.3 *The Story and The Flames:*

Girish Karnad uses dramatic devices but with different way. He uses Story as Narrator means as a human being and that Story tells the all the story in the play. As a good narrator, the Story appears where it's presence is essential in order to develop the action of the play. Jaysingh Dodiya puts in this context, "…In Naga Mandala, the human and nonhuman worlds enter into one another's lives to reveal the playwright's vision of reality"[Dodiya 1999: 201].

The Playwright Karnad also uses a mythical belief that the flames after being put up by their masters in the house at the time of night, they come in temple and by taking a shape of females do gossiping about their masters and mistresses. Karnad himself talks about beliefs: "Man: (To the audience) I had heard that when lamps are put out in the village the flames gather in some remote place and spend the night together" [Karnad 1990: 24].

4. *Humans as Non Humans:*

In the characters list, there are four human and four non human characters. But, Appanna and Kappanna also come in the list of non human characters. Both Appanna and Kappanna are insensitive, emotionless and hare hearted persons.

4.1 *Appanna:*

Appanna marries Rani but he has no love for her. He has already kept a woman. He comes to her only for having bath and lunch. He everyday locks her in house. He does not have a loving heart to understand her feelings and love for him. Whenever she tries to ask him, he makes her silent by saying- "Look, I don't like idle character. Do as you are told, you understand" [Ibid: 07]. He treats her just a piece of furniture of the house. In fact, he is immoral, but expects morality from wife. When his wife Rani gives the news of her pregnancy that he becomes very angry and wants to kill her, that time we find Appanna as a true representative of patriarchy. In anger he goes to villagers and demands justice. But this heartless person forgets that he himself did injustice to her. In short, though he seems to be human but he too belongs to non human world.

4.2 *Kappanna:*

Kappanna is the son of blind woman Kurudavva. In fact, it is his responsibility to take care of her. He forgets how his blind mother brought him up. And when becomes young, just forgets his mother and goes after Yakshini to gratify his sexual desires. The playwright Karnad has not given much place to him in the play, but we get the idea that Kappanna is merciless towards her mother and joins the group of non human world. The words of his mother ring in our mind, when she says-" …I must go. Look for my son. Can't

waste time like this—Kappanna, Son, it's your Mother. Don't torment me now, child…"
[Ibid: 38].

5. *__Conclusion:__*

The playwright Girish Karnad intertwines two folk tales in the play Naga Mandala. As demand of the story, he has to paint super natural characters with all colors. But while painting the characters he very beautifully painted human traits in non human characters like Naga, Yakshini, the Story, the Flames. But the same time, he gives non human traits to human characters such as Appanna and Kappanna. In this way, human and non human characters become counterparts to one another.

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IMPACT OF COVID-19 ON VIRTUAL EDUCATION SYSTEM: A SOCIOLOGICAL PERSPECTIVE

DR. A. N. GAYATHRI

Assistant Professor in Sociology,
Field Marshal K M Cariappa College,
A Constituent College of Mangalore University,
Madikeri-571201, Kodagu Dist. Karnataka. Ph:9449853956
Email: dr.angayathri@gmail.com

Today world is facing the biggest public health risk which is leading to one of the largest societal disorder. The epidemic had spread to over 185 countries and resulted in the closure of all schools, colleges and universities impacting on the students all over the world by the end of 2020. The speedy spread of the pandemic impact on the closure of higher education institutions and the transition from offline to online teaching was so swift that it hardly gave any time to plan and to reflect on the potential risks and opportunities that such a sudden change could bring. The present pandemic situation is important to look at the impact and reflect on what has transpired and what is likely to happen as we move forward in the field of education. In India too, the government as a part of the nationwide lockdown has closed all educational institutions, as a consequence of which, learners ranging from school going children to postgraduate students, are affected.

*A*bstract:

*H*igher education has many possibilities and challenges during the keeping physical distance period. India is one of the largest nations with many geographical variations which make the learning process is very much difficult proposition in this period. But online classes using various platforms offer big opportunities to reach out to the students living in remote locations. Virtual classrooms are become a popular reality, but online education has its own limitations too. The main obstacle is the digital devices due to the non-availability of high speed internet in rural and remote areas in India. The inclusive education system cannot function keeping the unprivileged out of this exercise.

The second issue is financial backwardness of the students. In India, a large section of the society still cannot afford to but good quality smart phone or laptop which is a necessity for the online educational system. More and more people have become jobless which increase the gravity of this problem. Moreover, due to these issues there is a section of the society which hesitates to upgrade themselves to digital platforms. Online education will be more successful only if it reaches every student. The internet infrastructure in the country needs to be improving first. Spreading the communication network to rural interiors must get importance in these situations. Financial backwardness can be addressed by both government and social organizations. Colleges and universities too can support students in a big way. Students are totally deprived at classroom interaction and the fun times they have with their friends. The Indian internet infrastructure is not ready for the paradigm shift to online learning mandated by the situation arising due to covid-19.

Connectivity to the rural communities and signal issues are the most prevailing problems faced by students while attending online classes. Major chunk of the students hailing from poor families, where parents are largely labours. Connectivity is an issue, buying data for every month is not possible for many of the parents and so teachers record their classes and send it to those students who cannot access it. Recorded audios can reach to all types of community background because which needs less data service. Children studying regional languages are at a disadvantage as there is not much standardised content available yet online for them.

The sudden shift to online learning without any planning is especially in countries like India where the backbone for online learning was not ready and the curriculum was not designed for such a format which has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. Added to this is that we may be leaving a large proportion of the student population untouched due to the digital divide that is part of many developing nations including India. We are now beginning to realize that online learning could be dull as it is creating a new set of passive learners which can pose new challenges.

Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Thus, most of the teachers are just conducting lectures on video platforms such as Zoom which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. There is a risk that in such a situation, learning outcomes may not be achieved and it may be only resulting in engaging the students. There is a great opportunity for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process. Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that the use of learning management systems will bring about more openness and transparency in academics.

All India Radio is broadcasting syllabus based educational contents daily in its Vidyabhyasa Rangam programme. Governments and universities can utilize this very effectively. Almost all state governments and the central governments are already utilizing the radio programming. Main advantage of the radio is, the service of a subject expert can be utilized by a large audience with a very low per capita cost.

Television channels (Doordarshan) can reach out to students in a better way. Since, they can telecast video, multimedia contents and audio simultaneously. This is a project by the Ministry of Human Resources development (MHRD), Government of India to empower teachers in the digital environment. This is an infrastructure for knowledge sharing. It conducts various courses for teachers for their systematic progression in their noble profession. One can access a large volume of digital resources form Youtube and other social media platforms. Many institutions are conducting classes using this can be accessed by learners round the clock.

Socio-Economic impact of Covid-19:

The Covid-19 pandemic is seriously impact on higher education sector will be impact on India's economic future as lakhs people have already they lost their daily wages, food and shelter even. Introducing the exclusive online system with the prevailing apathy and inertia of most educators, the effective changeover from offline to online medium of teaching and education is a biggest challenge. It will be hard to cope up for the vast majority of students who lose opportunities to learn, lockdown may worsen the conditions thus translating into economic and social disadvantage. Many graduating students are looking for job interviews, and those with offers are yet to receive the certificates and mark sheets before taking up their jobs.

Due to economic slowdown the employment deficit can also affect the paying capacity in the private sector, which accommodates sizeable section of the students in the country. Shrinking employments indicate towards the possibility of a major recession this year. Universities may observe a delay in student internships and placements and student counselling programs will be affected more. There is anxiety and helplessness among the students and parents due to almost unpredictable conditions. The students are already enrolled in universities in abroad eg. US, UK, Australia and China, may face visa restrictions.

Conclusion:

As we know that due to coronavirus pandemic the state governments across the country temporarily started shutting down schools and colleges. As per the present situation, there is an uncertainty when schools and colleges will reopen. No doubt, this is the crucial time for education sector because entrance tests of several universities and

competitive examinations are held during this period. The immediate solution of coronavirus is necessary or if like these days pass then closure of schools and colleges does not even have short term impact in India but can even cause far-reaching economic and societal consequences. Let us tell you that due to the closedown of educational institutes it is estimated to affect around 600 million learners across the world.

Despite of all these issues in virtual classroom education, while there are some institutions that are doing quality work, there are many who are also not benchmarked for their teaching or syllabus. This has led to an issue of tech not being able to solve the problem of inclusiveness and further accelerated the problem of those who want to avail of the education. Education cannot be self learning primarily, and it is time technology is used by organizations to fill their gap.

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A Study on Impact of Working Capital Management on Profitability of Karnataka State Road Transportation Corporation

Mr.Shashidhara D.

Dr (Smt) Chandramma M.

Assistant Professor, Department of Commerce,
PG Centre, Chitradurga, Davangere University And
Research Scholar, Department of Commerce, Karnatak University, Dharwad.
Mail : shashidhar.jmm@gmail.com
Mobile No. 9972600359

Professor, Department of Commerce, Karnatak University, Dharwad.
Mail : Chandramgangothri@gmail.com
Mobile No.9380076427

*A*bstract

*T*he working capital plays a Vitol role in smooth functioning of a firm. The working capital is like blood of the firm, which keeps a firm functioning and getting an expected output from the functioning. The working capital will be contributed the strength towards profitability and sustainability of the firm. The present study analysed the working capital management and its impact on profitability and trend growth of working capital of Karnataka State Road Transport Corporation (KSRTC). The study has analysed the effectiveness of working capital management on profitability and the impact the KSRTC. The study covered the period of six years from 2012-13 to 2017-18 to analyse the data. For analysis purpose the study used the ratio analysis technique, the focus of the KSRTC'S Working management is because of the huge requirement of working capital to run and keep active the depo buses with necessary short term financial fulfilments.

Keywords: Working capital management, Ratio analysis, profitability, liquidity, financial performance.

Data source: KSRT annual reports from 2013-14 to 2018-19.

https://ksrtc.in/pages/annual-administration-report.html .

INTRODUCTION:

Working capital is the short term capital required by the firm to meet the every-day financial requirements. The working capital management cab be called as a process of managing the currents assets against current liabilities at a required level. In this study, how the KSRTC has been managing its working capital since 2012-13 and how does working capital would be impacted on the profitability of the KSRTC. The present paper will give a brief introduction regarding working capital management and its strategies. The KSRTC, how it will carry out systematically the management of working capital with a remarkable manner and how the working capital and liquidity will be impacted on the profitability and financial performance of KSRTC. This kind of depiction will be shown by the paper with the techniques of financial statement analysis. The KSRTC stands fifth largest transport corporation in India. It has been awarded best transport corporation of the country. Though a significant performance of the KSRTC in providing services to the public, it has been suffering from its own difficulties. So the present study intended to focus on the working capital management of the corporation with relevant statistical data.

Objectives of the Study:

1. To know the impact of working capital management on profitability of Karnataka State Road Transportation Corporations.

Review of Literatures:

Dr. Shivakumar Sinha, Dr. Vinayak Chand Tiwari & et al, (2012). They made an attempt to study the working capital components and working capital management and its impact on profitability or financial performance of Cipla Ltd. The study also depicted the correlation between liquidity and profitability of Cipla Ltd. The study has been used ratio analysis and percentage and co-efficient of correlation to analyse the financial statements period covered 2011-12 to 2016-17.

P.Kalaivani and Dr. K. Jothi (2017). They have been expressed the importance of working capital management and the impact of working capital management on profitability. In this paper authors found that, Working Capital Management of companies are influenced by Debtor Turnover Ratio, Inventory Turnover Ratio and Current Assets Turnover Ratio.

Ugas Osman Hassan, Hellen K Mberia and Willy Muturi (2017). They deal with the role of Cash Conversion Ratio, Sales Turnover Ratio, Receivables Turnover Ratio and Payable Turnover Ratio in determining the financial performance of water processing firms in Puntland. They found from the Multiple Linear Regression Return on assets on the four variables (CCR, STR, RTR, PTR), all the variables are very volatile give the high values of co-efficient of variation for each of the variables.

Lawal .A.A, Abiola B.I, Oyewole O.M (2015). They examined the Working Capital Management impact on the profitability of selected manufacturing companies. The study found a significant negative (inverse) relationship between the components of Working Capital (DCP, ACP and ITID) and the profitability (ROI). And based on the study, the authors given a valuable suggestion is that companies should manage their cash, accounts receivable, Inventories and accounts payables with a view to reducing the cash conversion cycle so as to increase their profitability amongst other things.

Statement of Problem:

Though there are number of studies are carried out on working capital management and its effect on profitability of the manufacturing concern, still only few studies are carried out in relation to the service sector. Since the KSRTC has been losing its ability to make profit may due to various factors, hence the study will focus on the impact of working capital management on profitability of the corporation.

Research Methodology:

To reach the objective of the study, the study is using secondary data. The study has been used five years Profit and Loss Account and Balance Sheets of the KSRTC. The study has been used financial analysis techniques such as Ratio analysis and Percentage method to analyse the impact of working capital management on profitability of KSRTC.

Scope of the Study:

The study has covered only KSRTC's Profit and Loss Account and Balance Sheet to analyse the working capital management and its impact on profitability of the corporation. The study has been covered five-year Period of study data from 2012-13 to 2016-17.

Year	Inventory	Cash	Debtor	Loans & Advances	Other C.A	Gross Working Capital	Current Liabilities	Provisions	Total Current Liabilities	Net Working Capital
2013	2612.12	4571.32	6281.56	2814.81	4757.01	**21036.82**	36466.98	12434.76	**48901.74**	-27864.9
	12.416	21.730	29.859	13.380	22.612	**100**	74.571	25.428	**100**	
2014	2888.19	7206.47	3621.38	14814.46	5850.71	**34381.21**	36941.66	12713.33	**49654.99**	-15273.8
	8.400	20.960	10.533	43.088	17.017	**100**	74.396	25.603	**100**	
2015	3194.28	10968.35	4410.27	1686.29	8702.76	**28961.95**	3644.19	10349.19	**13993.38**	14968.57
	11.029	37.871	15.227	5.822	30.048	**100**	26.042	73.957	**100**	
2016	3170.06	23529.12	4239.96	1084.03	12438.17	**44461.34**	51217.42	9831.67	**61049.09**	-16587.8
	7.129	52.920	9.536	2.438	27.975	**100**	83.895	16.104	**100**	
2017	3549.01	23529.12	3722.23	2652.95	13746.86	**47200.17**	65517.19	12127.78	**77644.97**	-42418.9
	10.074	49.849	7.886	5.620	29.024	**100**	84.380	15.619	**100**	
2018	3953.04	9452.87	5210.98	2685.87	13637.69	**34940.45**	67310.27	16930.10	**84240.37**	-49299.9
	11.313	27.054	14.913	7.686	39.031	**100**	79.902	20.097	**100**	
Total	**19366.7**	**79257.25**	**27486.38**	**25738.41**	**59133.2**	**210981.9**	**261097.7**	**74386.83**	**335484.5**	-124503
Average	3227.783	13209.54	4581.063	4289.735	9855.533	35163.66	43516.29	12397.81	55914.09	

Table-1,Working Capital Components   **(Rs in Lakhs)**

Source: Annual Reports of KSRTC from 2012-13 to 2017-18

Analysis of Findings of the study:

Need for the study:

Due to the following questions the study is need to conduct

1. What is the role of working capital management on ability to make profit by the KSRTC?
2. Why the KSRTC is in the path of poor performance in profits making.
3. What are the ingredients may help the corporation to come over from the poor performance?

A Brief Profile of Karnataka State Road Transport Corporation (KSRTC)

The Karnataka State Road Transport Corporation is a state owned road transportation company in the state of Karnataka in India. Corporation has the largest fleet of Volvo buses among state owned transport companies in India. It is wholly owned by Govt. of Karnataka. It founded in 1961, under the provision of RTC Act 1950 in Bangalore. KSRTC is serving the almost south India major states such as Karnataka, Goa, Kerala, Andhra Pradesh, Telangana, Maharashtra, Puducherry, Tamil Nadu. KSRTC's subsidiaries are Bengaluru Metropolitan Transport Corporation, North Eastern Karnataka Road Transport Corporation, North Western Karnataka Road Transport Corporations. It covers 17 districts of the state. It has totally 17 divisions, 16 operating divisions. It has work force about 37019 employees.

1. *Working Capital Analysis:*

From the table 1 it is clear that, overall gross working capital has increased from Rs 21036.82 lakhs in 2012-13 to Rs 34940.45 lakhs in 2017-18. It may of course due to systematic generation of current assets. As far as debtors concerned, it was 29.85% in the year 2012-13 which gradually decreased to 14.913% in the year 2017-18, Since the corporation is not in position to offer service on credit, the debtors are may not so high with the corporation. and the least debtor has been occurred at the 9.53% in the year 2015-16. Loans and advances were 13.38% of gross working capital in the year 2011-12, suddenly it had increased in the year 2013-14. Later it had decreased to 7.686% in the year 2017-18. Since the corporation keep on losing its revenue generation, it may does not have sufficient surplus hence the loans and advances have been decreasing.

As far as total current liabilities concerned, the total liabilities in the year 2017-18 with Rs 8,4240.37 lakhs. In KSRTC total current liabilities is composed of current liabilities and provisions. The trend of current liabilities in the year 2014-15 with 26.04 %, whereas in later years the current liabilities had increased to 79.902%. This shows the poor management of current liabilities. This result may because of lack of revenue generation due to corruption of employees of the department and omission of ticket money etc. Which made the corporation to rely more on short term borrowings, it resulted higher current liability than the current assets.

The networking capital of the KSRTC shows negative networking capital during Period of study except the year 2014-15. During the year 2014-15 the shows positive networking capital. But as a whole the networking capital of the corporation was in critical condition because of continuous negative working capital of the corporation. Due the above mentioned reasons like corruption, lack of favouritism of passengers towards the KSRTC vehicles, improper management of cash, which leads lack of business to the corporation, It will lead to poor operational as well as profitability of the KSRTC.

Table 2: Liquidity Ratios and Profitability Ratio							
Year	CTR	ITR	WTR	CR	LR	WC/TA	ROCE
2013	47.506	76.101	-7.570	**0.430**	**0.376**	-0.121	**-0.007**
2014	40.179	86.035	-15.491	**0.692**	**0.634**	-0.058	**-0.018**
2015	28.438	84.975	17.264	**2.069**	**1.841**	0.0554	**-0.001**
2016	14.660	79.464	-15.24	**0.728**	**0.676**	-0.056	**-0.092**
2017	10.725	75.116	-5.949	**0.453**	**0.407**	-0.144	**-0.097**
2018	26.059	72.97309	-0.195	**0.414**	**0.112**	-0.189	**0.003**
Average	**27.927**	**79.110**	**-4.530**	**0.797**	**0.674**	**-0.085**	**-0.035**

Source: Annual Reports of KSRTC

CTR- cash turnover ratio, ITR- inventory turnover ratio, WTR- working capital turnover ratio, CR- current ratio, LR- liquid ratio, WC to FA- Working capital to total assets, ROCE- Return on capital employed.

The cash Turnover Ratio had decreased from 47,506 times 2012-13 to 10,725 times in the year 2016-17, Since the corporation is in the position of low cash flow because of manipulation of cash, leakage of cash flow to the treasury of the corporation etc. Inventory Turnover Ratio shows a good rotation of inventory in the company, it may because of the need of supplying spares of the buses continuously since the huge number of buses are running on the road. The results show that corporation's large amount of short time liabilities against the Current Assets which affects the working capital Turnover Ratio at low level. Current Ratio during the Period of study fluctuated but average shows (0.8744) poor position it indicates inadequate capacity in meeting short term dues, because the current ratio of the corporation not even reached its standard position (2:1), except the current ratio position during the year 2015-16, it reflects the level of solvency of the corporation in meeting its short term financial requirements so as to run the corporation. The Liquidity Ratio also fluctuated during the period. The Liquid Ratio not even reached its standard (1:1) at least in any year of the Period of study except during the year 2014-15 (1.841 times) the standard liquidity ratio is not there, so that it is clear that poor short term solvency in pay off of current liabilities. Return on Capital Employed depicts negative except in the year 2017-18, this may due to higher inventory, lack of liquidity, improper availability cash requirements to bring the smooth of business of the corporation, which leads to poor profitability of the corporation. The weighted return on capital is (-) 0.035.

Suggestions:

- For a drastic fluctuation in working capital components throughout Period of study, the corporation should adopt conservative working capital strategy, which will make the corporation to maintain some additional temporary working capital, that may help for consistent current assets maintenance with temporary working capital in the corporation to meet short term obligations and thereby supporting for continuous service providing process.

- Current liabilities also have been dominating in the corporation, because of that, throughout this Period of study the negative networking capital resulted. So it is advisable to make arrangements to reach the standard current asset ratio i,e 1.26 to meet its current liabilities in the corporation.

- Importantly the corporation should maintain a standard position of current ratio and liquidity ratio, so that the corporation could able to improve its short term solvency.

Conclusion:

Finally, it is concluded that, though the corporation has sufficiency in some of the components of the working capital, it is failed to bring out the good return on capital employed. But the corporation has maintained adequate amount of cash balance conversely it is lack in maintaining high cash turnover ratio. The corporation had failed to reach the standard position of current ratio (1.26) and liquidity ratio (1.12) in this Period of study. The study also shows that there is a lot of inadequacy in between working capital to sales depicted in working capital turnover ratio. The study shows that there is significant impact of working capital ratios on the ROCE of KSRTC.

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IMPORTANCE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN HIGHER EDUCATION IN INDIA

DR.SANJAY L. BHEDEKAR

*(Librarian)
sanjaybhedekar@gmail.com
J.BS.P.M,S Mahila Mahavidhyalay Georai Dist.Beed(M.S)

*A*bstract

*T*he paper is covered to all parameters on the highlight the impact of information and communication technology (ICT) in the higher education for the 21st century .Education is much more important for the social heritage importance will continue to grow and develop in the 21st century. Information and communication technologies(ICT)have become common place entities in all aspects of life. Across the last twenty years the use of (ICT)has fundamentally changed the practices and procedures of all forms of efforts business and governance. Education is a very socially oriented activity and quality education traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in higher education lends it self to more student -centered learning settings and often this creates some tensions for some teachers and students. The paper argues the role of ICT in transforming teaching and learning and seeks to explore how this will impact on the specific program will be offered and delivered in the universities and colleges of future.

Keywords: ICT ,Higher education ,Social development

INTRODUCTION:

Information and communication technology is a force that has changed many aspects of the way we live. If we can compare such different types of fields as medicine ,tourism travels ,banking ,law, business, engineering and architechture, the impact of ICT

133

across the last two or decades has been tremendous. The way these fields operating today is much more vastly different from the ways they operated in the past. But when one looks at education, there seems to have been an unique lack of influence and less changed ,There have been a number of factors impeding the wholesale lift of ICT in education across all sectors. These have included such factors as a lack of funding to support the purchase of the technology, a lack of training among established teaching practitioners, a lack of motivation and need among teachers to adopt ICT as teaching tools (Starr, 2001). But in recent times, factors have emerged which have strengthened and encouraged moves to adopt ICTs into classrooms and learning settings. These have included a growing need to explore efficiencies in terms .Computers can be used briefly for academic administration .The following are some areas where computers can be used for effective academic administration eg.

1.General Administration

2.Financial Accounting.

3.Administration of Enrollments..

4.Shelving and Furniture management

5.Maintanance of Personal Record

6.Library Management System

The Indian higher education system is one of the largest in the world. With only 20 universities and 500 colleges with 0.1 million students at the time of independence, but we now have about 789 universities and university-level institutions and 37,204 colleges as of feb. 2017and11,443stand-alone institution in India. According to a report from Spring board Research, India's education sector will increase its IT spending september09,2016 at present higher education sector witnesses spending of over Rs.42,219.5crore and Rs26,855crore was allocated(approx 7.3per cent increase) is allocated for higher education.

Despite the significant rise in numbers, when it comes to IT solutions in the education market, there is significant scope for improvement in India .Integration of ICT in Indian universities and colleges would respond to the twenty-first century demands.

The impact of information &communication technology on learning system.

Conventional teaching process has emphasized content. So many years education courses have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tests, tutorials and learning process designed to consolidation and rehearse the content. Contemporary settings are now favoring curricula that promote competency and performance. Curricula are starting to emphasize capabilities and to be concerned more with how the information will be used than with what the information is as follow.

access to a variety of information sources;

1.Types of information forms and to access sources.

2.Student-centred learning settings based on information access.

3.Learning environments centred on problem-centred and inquiry-based activities;

Teachers are to guides , Just as technology is influencing and supporting what is being learned in schools,College and universities. So it is supporting changes to the way students are learning. Moves from content-centered curricula to competency-based curricula are associated with moves away from teacher-centered system of delivery to student-centered system. Through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning .In the past students have become very comfortable to learning through transmission modes. Students have been trained to let others present to them the information that forms the

curriculum. The growing use of ICT as an instructional medium is changing and will likely continue to change many of the strategies employed by both teachers and students in the learning process. The following sections describe particular forms of learning that are gaining prominence in universities,College and schools worldwide.

Students centered oriented learning :

Information communication   Technology has the capacity to promote and encourage the transformation of education from every teacher directed enterprise to one which supports more student- centered models. Evidence of this today is manifested in:

1.Rapid increase the capability, competency and outcomes focused curricula

2.Moves towards problem-based learning

3.Increased use of the Website as an information source, Internet users are able to choose the experts from whom they will learn. The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs

by their very nature are tools that encourage and support independent learning. Students' using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools .

Importance of ICT in education:

1.   Impact of ICTon teachers in Teaching process

In the past, the role of teacher in an educational institution was a role given to only highly qualified people. With technology-facilitated learning, there are now opportunities to extend the teaching pool beyond this specialist set to include much more people. The changing role of the teacher has seen increased opportunities for others to participate in the process including workplace trainers, mentors, specialists from the workplace and others.

Through the educational environment and capabilities of technology, today we have a much expanded pool of teachers with varying roles able to provide support for learners in a variety of flexible settings. This trend seems set to continue and to grow with new ICT developments and applications. And within this changed pool of teachers will come changed responsibilities.

2. *Impact of ICT on students in learning process :*

In the past, education has been a privilege and an opportunity that often was unavailable to many students whose situation did not fit the mainstream. Through the flexibilities provided by technology, so many students who previously were unable to participate in educational activities are now finding opportunities to do so. The pool of students is changing and will continue to change as more and more people who have a need for education and training are able to take advantage of the increased opportunities. Interesting opportunities are now being observed among, for example, school students studying university courses to overcome limitations in their school programs and workers undertaking courses from their desktops.

3. *Importance of ICT education in students life*

Traditional thinking has always been that technology-facilitated learning would provide economies and efficiencies that would see significant reductions in the costs associated with the delivery of educational programs. The costs would come from the ability to create courses with fixed establishment costs, for example technology-based courses, and for which there would be savings in delivery through large scale uptake. We have already seen a number of virtual universities built around technology delivery alone (eg. Jones International University, www.jiu.edu). The reality is that few institutions have been able to realize these aims for economy. There appear to have been many underestimated costs in such areas as course development and course delivery. The costs associated with the development of high quality technology-facilitated learning materials are quite high

CONCLUSION:

This paper has sought to explore the role of Information communication Technology in higher education as we progress. In particular paper has argued that ICTs have impacted on educational practices and education policies in higher education to up to date in quite small ways but that the impact will grow considerably in years to come and that ICT will become a strong agent for change among many educational practices. The method of current activities and practices, the continued use and development of ICTs within higher education will have a strong impact on the following :

1. What is learned ?
2. How it is learned;
3. When and where learning takes place .
4. Who is learning and who is teaching.

The outcome of all this activity is that we should see marked improvements in many different types of areas of educational efforts. Learning should become more relevant to stakeholders' needs, learning outcomes should become more discuss and targeted, and learning opportunities should diversity in what is learned and who is learning

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Effect of Vinyasa Training on Lower Body Strength of Male National Level Yoga Players

Vikas Singh | Prof. Mahendra Kumar Singh

(Research Scholar, LNIPE, Gwalior, M.P.)) | *(Professor, LNIPE, Gwalior, M.P.)*

*A*bstract

*Y*oga is a wonderful gift to the humanity from Ancient India and must be preserved as one of our priced heritage. And especially during this Covid-19 period everyone realized its importance1. In the present study researcher tried to evaluate Effect of Vinyasa Training on Lower Body Strength of Male National Level Yoga Players age ranging from 18-25 years who participated at National level. The participants were selected from Lakshmibai National Institute of Physical Education Gwalior. Strength was measured by using Leg Dynamometer. ANCOVA was employed as the statistical tool at 0.05 as level of significance. Where obtained p-value=0.000 which infer significant difference on Lower Body Strength of National Level Yoga Players. The result of the study revealed that there is a significant difference of Vinyasa Training on Lower Body Strength of National Level Yoga Players.

Key Words: - Vinyasa, Yoga, Lower body, Strength, Training.

INTRODUCTION

The word yoga comes from the Sanskrit word yuj, which means union of the individual and universal consciousness. The literally meaning of yoga is "to know the reality within you", "reality of your life", "reality of your existence", "and the purpose of your life"2. In competitive sports and games the rate of success and failure depends on physical as well as psychological conditioning of players. Maehle (2007) defines Vinyasa as sequential movement that interlinks postures to form a continuous flow. It creates a movement meditation that reveals all forms as being impermanent and for this reason is not held on to. Lower body strength is a key factor in any sport-discipline and in specially

yoga and gymnastics. Many research studies have revealed that yogic practice helps in improving various physical as well as psychological domains.

Purpose of the study:-

The purpose of the study was to evaluate the Effect of Vinyasa Training on Lower Body Strength of Male National Level Yoga Players.

Methodology:-

- #### *Selection of sample*

The research scholar selected 20 advance National Level Male Yoga Players aged between 17-25 years from LNIPE, Gwalior. All the subject of the study were divided into 2 groups consists of 15 each i.e. one experimental group and another one as control group.

The demographic information as follows:

Table 1

Demographic Information of Experimental and Control group Male National Yoga Player

GROUP	Gender	Sport	No. of Participants	Percentage (%)
Experimental	Male	Yoga	10	100
Control	Male	Yoga	10	100
		Total	20	

- #### *Procedure*

ANCOVA Single Pre-test and Post-test Group Design was employed in the study. The subjects were divided into experimental group and control group. The experimental group was imparted 30 minutes of training of Vinyasa for 5 days in a week for 6 weeks under the supervision and guidance of the scholar; while no training was imparted to control group. At the end of 6 weeks post test was conducted for both the groups. The level of significance was 0.05. And for collection of data Leg Dynamometer was used as instrument for the study.

- *Results:-*

Table-2

Dependent Variable: LEG STRENGTH AFTER TRAINING

Group	Mean	Std. Deviation	N
Experimental	118.260	10.763	**10**
Control	106.130	7.589	**10**
Total	112.195	10.994	**20**

Table -2 indicates that the mean of the experimental group is 118.26 and standard deviation 10.76. While in the control group the mean is 106.13 and standard deviation is 7.59.

Table -3

ANCOVA Table

Dependent Variable: LEG STRENGTH AFTER TRAINING

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
PRE_TEST	913.088	1	913.088	23.958	.000
GROUPS	867.405	1	867.405	22.759	.000
Error	647.917	17	38.113		
Corrected Total	2296.690	19			

a. R Squared = .718 (Adjusted R Squared = .685)

b. Computed using alpha = .05

Table-3 indicates that the F-statistics for the leg strength is significant because the p-value associated with it is 0.00 which is less than 0.05. Thus the null hypothesis of no difference among the groups may be rejected at 5% level.

- *Discussion of Findings:-*

The statistical results of the study revealed that six week Vinyasa Training Programme is effective in improving Lower Body Strength Male National Level Yoga

Players. The 'ANCOVA' test for dependent variables exhibited that there was a significant difference in Lower Body Strength of control and experimental training group of Male National Level Yoga Players.

Conclusion:-

Hence the researcher can conclude that six week Vinyasa Training Programme is effective in improving Lower Body Strength of Male National Level Yoga Players. After implementation of "Six Week Vinyasa Training Programme" the findings showed that there was significant difference ($p<0.05$) between control and experimental groups and thus Null hypothesis is rejected. In light of conclusions drawn, following recommendations are made:

- The study may be helpful to assess the effect of Vinyasa on other variables besides Leg Strength.

- The result of the study may be helpful for common people as well as sports persons especially during COVID-19 period when we are advisory to stay home and stay fit with the practice of Vinyasa yoga.

- The results of the study may provide an authentic understanding of practicing Vinyasa.

- The study can also be conducted on various age groups and other sex.

- The similar study may be done by increasing the duration of training programme under control conditions.

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AN ANALYTICAL STUDY OF MIGRANT LABOUR IN CURRANT COVID -19 PANDEMIC SITUATION IN INDIA

MAHARSHI THAKER

B.com,LL.B,LL.M

Assistant professor

Gokul integrated law college

Gokul Global University

Siddhpur

mmthaker.thaker@gmail.com

Abstract

*T*he basic purpose behind this study is to find out various challenges face by those labour or wokers who migrant their own land for the seek of Roti,Kapada and makan .the law applicable for protection of migrant labour in our country is In terms of wage policy in India, it has been observed that male and female migrant workers get lower wages than minimum wages. They do not get minimum, wages stipulated under the minimum wages Act, 1948.Long and flexible working hours, combined with low wages are reported in the case of most seasonally migrant workers in India. For Section 12 of the erstwhile Workmen's Compensation Act, 1923 holds the employer vicariously liable even for the injury caused to the workman in the course of his employment of the contractor, employed by him. ... Migrant workers may also be said to be entitled under the Employees' State Insurance Act, 1948. Here researcher try to find our result regarding how to protect right of migrant people or workers or labours in our country.

INTRODUCTION

As a matter of fact, any citizen of the country should have the right to express his grievances. It is always fundamental right of all person so why we not cover worker in it?

It has been also observed that only the workers organized under the trade unions have the right to express grievances and to fight for rights as per my view this is really very biggest problems to save rights of worker and also it give opportunity regarding corruption. But one more and most important question arise in my mind that what about the labour in the unorganized sector, workers who aren't organized and cover into any trade unions? Perhaps, they all are belong to lower and very poor area of our society in comparison to the organized workers, currant position is really very questionable regarding migrant workers as well as unorganized workers are struggling for labour rights and labour standards. There are various problems of migrant workers like the abolition of contract labour system, implementation of the provisions of the labour laws, an eight hours working day, payment of minimum of wages, social security schemes, insurance, labour welfare amenities[1].

It has been seen that migrant workers are not aware of their rights or labour rights, because of lack of education and pressure of earning for maintain their family.

There are various workers in the unorganized sectors such as bamboo cutters, salseed collectors in orissa state ,the fisherman and women , the leather flayers and the salt workers, the beedi workers, the hand loom weavers, the hand crafts men and women, the workers in brick kilns and stone quarries etc, All these workers. Who all victims of the same situation[2].

Object of the study

1. To study currant situation face by migrant labour in India
2. To study various issue and challenges regarding protection of right of migrant labour in India.

Research methodology

Doctrinal research method use for justified subject matter.

Migrant labor concept:

They are casual and unskilled workers who systematically move from one region to another offering their services on a temporary basis, generally seasonal. They leave their hometown and go to work in a big city.

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[1] Gill, Sucha Sing, (Migration of labour in India, The Indian Journal of Labour Economics, vol. 41. No.4, 1998.
[2] http://www.oit.org/legacy/english/protection/travail/pdf/rdwpaper22a.pdf

Reasons for worker migration:

Mostly we see the seasonal migration of workers, it is estimated that a staggering 120 million people or more migrate from rural areas to urban labor markets, industries and farms. One of the main reasons for migration is too little or too much rain. Most come from regions that face frequent rain shortages or floods, or where population density is high relative to land. Areas facing unresolved social or political conflicts also become prone to high migration. Poverty, the lack of local options, and the availability of work elsewhere become the trigger and push for rural migration, respectively.

Status of migrant workers in India

Challenges such as Fighting with low wages, safe physical and sexual exploitation are problems faced by migrant workers and more specifically the unorganized sector in India. We could find a better condition for these workers on paper, but in reality there is nothing good with them and industrialists do not follow labor laws. They are forced to work longer hours without extra pay and even receive less wages than the government mandates.

They often get caught in exploitative labour arrangements that forces them to work in low-end, low-value, hazardous work. Lack of identity and legal protection accentuates this problem. The hardships of migrant workers are especially magnified when state boundaries are crossed and the distance between the "source" and "destination" increases[3].

Migrants can also become easy victims of identity politics and parochialism. The urban labour markets treat them with opportunistic indifference extracting hard labour but denying basic entitlements such as decent shelter, fair priced food, subsidized healthcare facilities or training and education. They are people who are affected first, whenever such types of crisis comes but nobody pays attention to theirs problems.

Crisis due to lockdown:

Whole world is fighting with this lethal pandemic situation and on 25th of March our government take decision to lockdown our country completely for 21 days. There was a nationwide pause after the decision came and everyone were trapped, where they were. This lockdown badly affected daily wages labors. Trains and buses went out of service with almost no notice, giving people little time to leave.

In a survey by Jansahas, over half of India's daily wage and migrant population earns just Rs200-400 a day, much below the prescribed minimum wage of Rs692, Rs629 and Rs571 for skilled, semi-skilled, and unskilled workers respectively and over 40% of migrant workers surveyed did not have any food supplies. Only a handful of them said they had ration to support their households for two to four weeks and all these fear forced them to walk thousands of kilometers for their hometowns[4].

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[3]https://www.thehindu.com/news/national/coronavirus-lockdown-migrant-workers-should-not-be-prosecuted-says-supreme-court/article31784841.ece

[4]http://www.legalserviceindia.com/legal/article-2765-migrant-labour-crisis-in-india.html

Due to rumors, we saw gathering of these people across different places in the country which was a big thread for the spread of this pandemic virus. This lockdown nearly affect 40 million migrant labours. As per 2011 census, total number of internal migrants in India, is 45.37 crore or 37.2% of the country's overall population. It includes inter-state migrants as well as migrants within each state, while the recent exodus is mainly due to the movement of inter-state migrants.

Migrant workers, who were dismissed by employers, having no protection from their respective governments, and are often thrown out of their accommodation by their landlords, in urgent need of food transport and money, driven by desperation to walk home. It is a scene many have described as reminiscent of the migration at Partition. This is the outcome of the largest and one of the strictest lockdowns in the world enforced during the coronavirus disease crisis — a lockdown that has been widely applauded internationally.

There had been rumors of train services restarting, and the workers had gathered defying rules of social distancing, putting themselves and others at risk. They demanded that authorities arrange transport to send them back to their hometowns and villages so that they could be with their families. The police, instead, used sticks to disperse them. Around the same time in western state of Gujarat, hundreds of textile workers protested in Surat city, demanding passage home. And a day later, there was outrage in Delhi when several hundred migrants were discovered living under a bridge along the Yamuna River. The river here resembles a sewer and the bank is strewn with rubbish.

Not seeing much response from government a bulk of people leave the cities for their villages, they all decided to walk towards their villages seeing no other option left for them. We all saw a bulk of people all around the street of our country who were walking to their hometowns carrying their luggage on their shoulder and family with them. This was the scene on the road between the capital of India and the capital of its most populous state.

Lot and lots of heartbreaking news comes to us through media or through other social platforms about these migrant labours. While talking to media some of them said:

corona se to baad me marenge, bhukh se pehle mar jaayenge.

Most of them move from the villages to work in the cities as domestic servants, drivers and gardeners, or as day laborers on construction sites, shopping centers, overpasses and housing, or as street vendors and now they are jobless and have no nothing to eat. . Both the central government and the state government were doing their best, they distribute free rations to all the poor, they open many shelters where these people can live and there is free food for them, but reaching all the people was difficult.

Although our government is transferring money to people's accounts, that is not enough for the whole family. Some of them will also not be able to access food rations and cash transfers advertised under a $ 22 billion package for poor people, because they do not

have identity cards in the cities. Seeing the condition of the workers, the government decides to send the workers to their hometown, the workers saw a release and lined up to return. Now the problem was how to control the flow. There is no way to choose some of the crore who wish to travel back. So there was a money filter, the cruelest way to keep the poor out. Although the state had promised to bear the costs of the tickets, not only did the workers have to pay for the tickets, but they were also overcharged, the workers who could not pay did not get on the trains. Some were stopped to board the train just because they did not have proper documentation and some were unable to register.

Conclusion

When we talk about workers like migrant from their own land they are known migrant labours and those workers, migrate from their area to another area for the earn roti,kapada,makan within the state or country in order to get seasonal or temporary or part time work in diverse or various sectors. Migrant workers, who are not organized under any trade unions and their labour standards, are not protected by the government as well as trade unions, these migrant workers are illiterate, ignorant, and belong to backward community .They do not get minimum wages stipulated under the Minimum wages Act. Currently, the real issue is how to extend human rights to all segments of the labour market. There are many groups of workers in the unorganized sector or informal economy, like migrant workers in agriculture, building and road construction, brick kilns, and many others, for whom decent work is a very distant goal.

We need to remember that Migrant workers are the person who make everything which we need to live a better life, whether it is our beautiful houses, or the offices where we work. If they suffers, it directly affect our industries because a lot of them work in some or other industry and it affect the economy of our country. After all there are laws for protection of migrants labors, but a sound system is required to implement these laws strictly. It also be remember that they are also human being and they deserve every right that a human being possess.

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APPLICATIONS OF EDUCATIONAL DATA MINING

YUGANDHARA MORE

Research Scholar (Reg.No.261117045)

SHRI JAGDISHPRASAD JHABARMAL TIBREWALA UNIVERSITY, RAJASTHAN

Abstract

*D*ata mining (DM) is implied the path toward isolating concealed and supportive data in immense data chronicles. Data Discovery and Data Mining (KDD) is a multidisciplinary zone focusing upon frameworks for removing accommodating Knowledge from information and there are a couple of important KDD instruments to isolating the data. This data can be used to assemble the idea of preparing. Enlightening DM is stressed over developing new methods to discover data from informative/educational database and can be used for dynamic in informational/academic structures. This paper looks at about what is instructive DM, its sweeping application locales, favorable circumstances of instructive DM, troubles and blocks to viable use of enlightening DM and the new practices that must be held onto to successfully use instructive DM and learning examination for improving teaching and learning.

Keywords:

Data Mining (DM), Educational Data Mining, Knowledge Discovery in Database (KDD).

1. *INTRODUCTION*

Over a wide assortment of fields data are being gathered and collected at sensational pace. There is a pressing requirement for another age of computational speculations and instruments to help people in separating valuable data (information) from the quickly developing volumes of computerized information. These speculations and instruments are subject for the rising field of information disclosure in databases (KDD). KDD alludes to the general procedure of disclosure valuable data from data, and DM alludes to a specific advance in this procedure. DM is the use of explicit calculations for removing designs from

information. The across the board application zones of DM incorporate bio-informatics, web based business, misrepresentation location and now in the field of instruction too. The DM in the field of instructive exploration is known as Educational Data Mining (EDM). EDM attempts to recreate an understudy model which might be utilized for the improvement of understudies by foreseeing the future patterns. The sharing of data, joint effort and interconnectivity are the center components of any e-learning framework. Since e-learning framework is open, circulated and interconnected at that point, the security turns into a significant test so as to guarantee that intrigued and approved entertainers just approach the correct data at the suitable time [1]. This paper clarifies the techniques for EDM through model data taken from an e-learning stage and furthermore manages its security dangers and dangers. This paper is sorted out as: EDM and its significant techniques like grouping, bunching. It additionally clarifies how WEKA device is utilized to dissect the understudy information in online advanced hardware course taken from college database.

2. *(EDM) Educational Data Mining:*

Training is progressively happening on the web or in instructive programming, bringing about a blast of information that can be utilized to improve instructive viability and bolster essential exploration on learning. E-Learning can be characterized as, the utilization of web innovations to convey a wide exhibit of arrangements that upgrade information and execution. E-learning depends on three central rules' they are

- Networked for moment refreshing circulation, stockpiling/recovery and sharing of data.

    Content conveyance through PC utilizing WWW

- It centers around the broadest perspective on learning and learning arrangements.
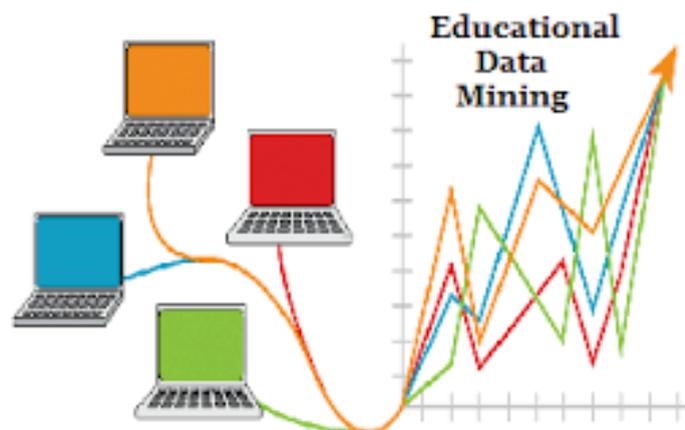
The significant test in E-learning frameworks is the assortment of unstructured data that stifles the instructive framework without giving any lucid data to its entertainer's DM was destined to handle issues this way. EDM is a rising order, worried about creating techniques for investigating the extraordinary kinds of information that originate from instructive settings, and utilizing those strategies to more readily get understudies and the settings which they learn in. EDM creates strategies and applies methods from insights, AI and DM to break down data gathered during instructing and learning. Data Collected from web based learning frameworks can be amassed over enormous number of understudies and can contain numerous factors that DM calculations can investigate for model structure.

3. *Objectives of EDM:*

- Predicting understudy's future learning conduct by making understudy models that join such point by point data as understudies' information, inspiration, meta comprehension and mentalities.

- Discovering or improving area models that portray the substance to be scholarly and ideal instructional successions.

- Studying the impacts of various types of academic help that can be given by learning programming and

- Advancing logical information about learning and students through structure computational models that consolidate models of the understudy, the space and the product's instructional method.

4. *Application areas for EDM:*

Romero and Ventura [2] surveyed the EDM articles and recommended that future EDM research center on the accompanying viewpoints:

- coordinate EDM apparatuses with e-learning frameworks

- normalize information and models

- make EDM devices simpler for teachers and non-master clients

- tweak conventional digging calculations for instructive setting

This segment briefs about the application zones for EDM in e-learning frameworks.

Table 1. Examples of software products with the capabilities of Data mining and Process mining

Tool Name	Vendor	Website
ProM	Open Source	www.promtools.org
ProM Lite	Open Source	www.promtools.org
RapidProM	Open Source	www.rapidprom.org
RapidMiner	Open Source	www.rapidminer.com
WEKA	Open Source	www.cs.waikato.ac.nz/ml/weka/
Orange	Open Source	orange.biolab.si
NLTK	Open Source	www.nltk.org
Celonis Process Mining	Celonis GmbH	www.celonis.de
Disco	Fluxicon	www.fluxicon.com
Minit	Gradient ECM	www.minitlabs.com
Perceptive Process Mining	Lexmark	www.lexmark.com
QPR ProcessAnalyzer	QPR	www.qpr.com
Rialto Process	Exeura	www.exeura.eu
SNP Business Process Analysis	SNP AG	www.snp-bpa.com
SPSS	IBM	www.ibm.com/software

- ### *User Modeling*

Client displaying envelops what a student knows, what the client experience resembles, what a student's conduct and inspiration are, and how fulfilled clients are with web based learning. Client models are utilized to modify and adjust the framework practices to clients explicit needs so the frameworks 'state' the 'best' thing at the 'right' time in the 'right 'way [5]. EDM can be applied in demonstrating client information, client conduct and client experience.

- ### *User Knowledge Modeling*

Deducing what substance does an understudy know like explicit abilities and ideas or procedural information and higher request thinking aptitudes is known as client information demonstrating. Information can be surmised from aggregated information that speak to the collaborations among understudies and the learning frameworks, for example, accuracy of understudy reactions alone or in an arrangement, time spent on training, number and nature of indications mentioned, redundancies of wrong answers, and blunders made. Such "surmisings" can be made by a prescient PC model or by an educator taking a gander at understudy information on a dashboard.

- ***User Behavior Modeling***

Web based learning frameworks log understudy information that can be mined to distinguish understudy practices that relate with learning. Client conduct demonstrating in training frequently portrays understudy commitment. It depends on similar sorts of learning information utilized in foreseeing client information in addition to different measures, for example, how much occasions an understudy spent on the web (or on the framework), regardless of whether an understudy has finished a course, participation, lateness, and some of the time an understudy's degree of information as construed from their work with the taking in frameworks or from other such information sources as state sanctioned grades.

- ***User Profiling***

Profiling implies gathering related clients into classifications utilizing unmistakable qualities. At that point, these classes can be utilized to give encounters to gathering of clients or to make suggestions to the clients. In training, information mining methods, for example, grouping and characterization, are regularly used to sift through (or profile) students dependent on the sorts of individual learning information, on understudy segment information or both.

- ***Domain demonstrating***

Space demonstrating is to a great extent exploratory with the objective of seeing how to introduce a subject also, at what level of detail. A space model is frequently made to speak to the key ideas that make up a subject or point zone like science. The area model likewise distinguishes the connections among every single key idea or units of study. Examination in space demonstrating in instructive DM researches how learning is influenced by contrasts in how a point is isolated into keys ideas at a specific degree of speculation.

- ***Trend Analysis***

In training, pattern examination helps answer such inquiries as what changes have happened in understudy learning after some time and how learning has changed. At the school level, pattern investigation can be utilized to look at test scores and other understudy markers after some time to assist executives with deciding the effects of arrangements. In instructive DM, pattern investigation frequently alludes to methods for separating a basic example, which may be somewhat or almost totally covered up by information that doesn't add to the example (i.e., commotion).

5. *Results and Conclusion:*

This paper talks about instructive DM, its applications and strategies to be utilized in instructive DM. The utilization of DM strategies in the instructive segment is a fascinating wonder. DM procedures in instructive associations help us to learn understudy execution, understudy conduct, planning course educational plan and to spur understudies on different boundaries.

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A DICOTYLEDONOUS DRUPACEOUS FOSSIL FRUIT Myrtocarpon ganeshii GEN. ET. SP. NOV. FROM MOHGAONKALAN, M.P., INDIA

DR. PUNDKAR S.V., DR. KOKATE P. S., DR. THORAT K.M.

Department of Botany,Shri Shivaji Science College ,Amravati.

*Department of Botany,Shri Shivaji college of Arts,Com & Science ,Akola.

***Dr. Manorama and Prof. Haribhau Shankarrao Pundkar College, Balapur

Email Id- swatipundkar54@gmail.com

EmailId - pratikshakokate811@gmail.com

Abstract

*T*he present fossil fruit is small, fleshy, globular, dicotyledonous, drupe. It is unilocular and single seeded, having three distinct wavy appendages at the apical region. Pericarp composed epicarp, mesocarp and innermost layer is hard endocarp. Seed coat not fused with pericarp. Inside embryo two unequal and large cotyledons are seen prominently. Drupaceous fruit structure shows similarities with the Syzygium genus of Myrtaceae, hence name given to present fossil fruit as Myrtocarpon ganeshii. The generic name given from family Myrtacaeae and specific name is give after the name of eminent Palaeobotanist Dr. Ganesh V. Patil, Former V.C. of S.G.B. Amravati University, Amravati.

Key words: Fossil, Dicotyledon, Drupe, Deccan ,Intertrappean beds.

INTRODUCTION

Mohgaonkalan is the well known locality of the Deccan Intertrappean series, in Chhindwara district of Madhyra Pradesh. Fossil palms forms a major group of the Indian fossil flora. Some monocotyledons fruits are described from the same locality, many species of Palmocarpon have been described by Sahni (1934), Fossil fruit resembling with

present fossil fruit is reported by Trivedi and Verma (1969). Other drupaceous fruits are Hyphaenocarpon indicum (Bande, et al., 1981), Arecoidocarpon kulkarnii (Bonde, 1990) . Other fructification comprising drupaceous fruitlets are Viracarpon hexaspermum (Sahni, 1934, 1944, 1964) .

The dicotyledons fruits are also reported from the same locality. The drupaceous dicot fossil fruit is of Trapa mohgaonsis (Paradkar and Patki, 1987). Euphorbiocarpon drypeteoides (Mehrotra et al., 1983) and Grewia mohgaonsis (Paradkar and Dixit, 1984) Gyrocarpusocarpon intertrappea (Mistri and Kapgate, 1990); Plectroniocarpon intertrappeans (Kokate et al., 2009); Pinangocarpon deccanensis (Kokate, 2009); Scaevolacarpon indicum (Kokate, 2010); Solanoceocarpon agashi (Thorat, 2015) ;Lycopersicocorpon harisiigen(Deshmukh, 2016); Premnocarpon Mohgaoanii (Dighe, 2016): Coffeocarpon deccanii and Azimocarpon indicium (Dighe, 2017);Clerodendrocarpon deccanii and Momordiocarpon deccanii (Deshmukh,2019)

MATERIAL AND METHODS

The present fossil specimen was well preserved in black chert. The etching of chert was done by Hydrofluric acid. This specimen was studied by taking serial peel sections. As the preservation is very good the sections shows all anatomical details clearly.

DESCRIPTION

The present fossil specimen is fleshy fruit, globular in shape. Fruit is exposed in longitudinal plane. Fruit is single seeded, drupaceous in nature. It is 1.38 mm in length and 1.08 mm in breadth. The fruit is having prominent apical appendages. It consists of two parts i.e. I) Pericarp and ii) Seed (Text Fig. 1, Plate Fig. 1).

A) *Pericarp*

The fruit wall is called as pericarp. It is divided into three prominant layers.

i) *Epicarp*

It is the outermost smooth layer of fruit wall measuring 19.8 μ in thickness. The cells are compactly arranged and 2-3 layered in thickness. The cells are squarish in shape and each cell measuring about 6.6 μ in size (Text Fig. 1 & 2, Plate Fig. 1).

ii) *Mesocarp*

Mesocarp is well presvered, but not uniform in thickness, size varies from 8 μ to 14.7 μ. The cells are parenchymatous, oval and thin walled with intercellular spaces. In apical part fruit mesocarp consists of elongated fibrous cells (Text Fig. 1,3 & 4, Plate Fig. 3 & 4).

iii) *Endocarp*

The innermost layer of pericarp is endocarp. It is seem to be very hard, measuring 9.9 µ in thickness. It is comprising two layers. It is made up of cubical to rectangular cells. Vascular bundle are not seen (Text Fig. 1 & 5 Plate Fig. 2 & 5).

B) *Seed*

In present fossil fruit single seed is present. The seed is large, oval and non-endospermic in nature, and measuring 99 µ x 79.20 µ in thickness. The seed coat is not fused with pericarp. At some places in apical region, pericarp at seed coat is observed clearly. It is thin walled and parendymatous. Each cell is measuring 15.20 µ in thickness. Inside the large seed two unequal cotyledons are seen prominently, measuring 92.40 µ x 38 µ in thickness. The cells of cotyledons are also observed clearly which are parenchymatous and each cell is 7.6 µ in thickness. (Text Fig. 1 & 6 Plate Fig. 5).

DISCUSSION AND COMPARISON

The present fossil specimen is single seeded drupe, having dicot embryo, so it can be placed in dicotyledonous family. To investigate the palaeoenviroment of particular region, This fossil fruit described here supports the presence of marshy habitat. The present fruit is fleshy, single seeded dicotyledonous drupe. Mesocarp is fibrous, these characters shows resembles with the families considered for comparison are Menispermaceae, Tiliaceae, Simarubaceae, Meliaceae, Ochnaceae, Burseraceae, Celastraceae, Rhamnaceae, Anacardiaceae, Rosaceae, Holoragidaceae, Myrtaceae, Combretaceae, Cornaceae, Salvadoraceae, Goodeniaceae, Trapaceae (Cook, 1958).

When present fossil fruit is compared with fruit of Menispermaceae differs in not having drupaceous fruit which is 1-3 in number and endocarp rugose i.e. thrown into wrinkles, which is not seen in the present fossil fruit.

The fruit of Simarubiaceae and Meliaceae differs from the present fossil fruit in having 2-5 lobed fruit, while the present fruit is unilocular. When comparison of the present fruit is done with fruits of family Tiliaceae and Rutaceae it differs in not having more than one locules with numerous seeds, in it. The fruits of family Ochnaceae and Burseraceae are drupaceous but compound, each drupe or pyrene is with 1-4 seeds. The drupe of family Celastraceae differs from present fossil fruit in having 2-5 locules with arillate seed and may be sometimes winged. In family Rhamnaceae fruits are 3 celled drupes which is not seen in the present fossil fruit.

When present fossil fruit is compared with drupe of Anacardiaceae it does not resemble in having 1-5 celled drupe and seeds are albuminous. In Rosaceae family fruits show numerous small one seeded drupes which are generally succulent in nature while in genus Pygeuim of Rosaceae drupe is with thin pericarp which may be dry or juicy and cotyledons are also thick which resembles with present fossil fruit but differs in having

transversely oblong 2 lobes. While the fruits of family Haloragidaceae are small drupes but is four furrowed which is not observed in the present fossil fruit.

The present fossil fruit is further compared with the fruits of Combretaceae family which do not resemble in not having angular drupe with which frequently winged and crowned by enlarged calyx. In family Cornaceae fruit is drupaceous with two bony pyrenes and cotyledons are thin and foliaceous. Which is not seen in presently described fossil fruit. In Salvadoraceae family fruits are drupe unilocular, single seeded and globose which resembles with present fossil specimen but presence of persistent calyx and carolla and crustaceous endocarp is not seen in present fossil fruit. When present fossil fruit is compared with the single seeded drupe of Trapaceae it does not resemble in not having calyx limb with 2-4 spines surrounding fruits and barbs present on spine. In Goodeniaceae fruits are unilocular drupaceous with single seed. When the fruit of Myrtaceae compared with present fossil fruit, which shares characters mainly with fruit of genus Syzygium cumini, is drupaeceous, sub-globose and somewhat lobed with fleshy exocarp with thin outer layer and presence of woody or hard and thin endocarp.

Comparison with fossil fruits

Dicotyledonous fruits are capsular, drupe in nature. Enigmocarpon parijai (Sahni, 1943); Harrisocarpon sahnii (Chitaley and Nambudiri, 1968); Daberocarpon gerhardii (Chitaley and Sheikh, 1973); Deccanocarpon arnoldii (Paradkar, 1975); Mohgaoncarpon eydei (Yawale, 1977); Kremocarpon aquatica (Chitaley and Kate, 1975); Kremocarpon indicum (Upadhye, 1979) and Wingospermocarpon mohgaonse (Sheikh and Kapgate, 1984). All these fruits differ from the present fossil fruit mainly in having capsular nature and many other characters.

The present fossil fruit reveals the characters resembling the, drupaceous fruit, so it should be compared with already reported fossil drupaceous fruits. The majority of drupaceous fruits are belonging to the monocotyledonous, present fossil fruit differs from the Palmocarpon sps (Sahni, 1934), Nipa sps (Chitaley, 1960, Nambudiri, 1966); Cocos sps. (Patil and Upadhye, 1984), Hyphaenocarpon indium (Bande et al., 1981), Arecoidocarpon kulkarnii (Bonde, 1990) and Carpolithus striatus (Jain and Dayal, 1966) in not having typical fibro-vascular bundles in the mesocarp and typical thick, stony and hard endocarp.

While other monocotylendous drupaceous fruits, Tricocttes trigonum (Chitaley, 1956), Viracarpon hexaspermum (Sahni, 1934, 1944, 1964) and Shuklanthus superbum (Verma, 1958 and Chitaley and Patil, 1971) differs in having single or many seeded fruitlets of compound drupe or pyrenes which is totally absent in the present fossil fruits.

When fossil fruit is compared with the drupaceous dicotylendonous fossil fruit Trapa mohgoensis (Paradkar and Patki, 1987) and Trapa sps. (Puri, 1951) belonging to family Trapaceae. It shares characters like single seeded drupaceous fruit with pericarp

differentiated into 3 zones i.e. exocarp, mesocarp and endocarp with present fossil fruit but differs in not having calyx limb with 3-4 spines surrounding the fruit and barbs seen on spine.

When Euphorbiocarpon drypeteoides (Mehrotra et al., 1983) compared with present fossil fruit, it shows difference in having trilocular drupe with elliptical seed with multilayered seed coat. Grewia mohgaoensis (Paradkar and Dixit, 1987) is small, round, five lobed, two pyrened, two seeded drupaceous and indehiscent fruit differing from the present fossil fruit.

Pinnangocarpon deccanensis (Kokate et al., 2009) fruit is single seeded but having fibrous strands in mesocarp is different from present fossil fruit. Plectronicarpon intertrappean (Kokate et al., 2009) is single seeded drupe fruit but presence of two coherent pyrenes takes away the present fossil fruit.

Scaevolacarpon indicum (Kokate et al., 2010) is also single seeded, unilocular drupe with air cavities in pericarp which is not seen in present fossil fruit.

Solanoceocarpon agashi (Thorat, et.al. 2015) ; It is spherical ,globose and fleshy in nature but present fossil fruit differs in having prominent apical appendages.

Premnocarpon Mohgaoanii (Dighe, 2016); Fruit small dicotyledonous drupaceous, indehiscent and some what trianglular in shape. It is subglobose, ovoid with pyrene with single seed. Air space is present , this characters not seen in present fossil fruit.

Clerodendrocarpon deccanii (Deshmukh,2019); dicotyledonous drupaceous, indehiscent and bulbous in shape.It is single seeded. Seed is solitary and unitegmic in nature but this is not seen in present fossil fruit.

Lycopersicocorpon harisiigen(Deshmukh, 2016); Coffeocarpon deccanii and Azimocarpon indicium (Dighe, 2017); Momordiocarpon deccanii (Deshmukh, 2019): dicotyledonous, berry fruit, but present fossil is dicotyledonous drupe fruit.

From the above discussion it is very clear that the present fossil fruit is different from already reported fossil fruits. Although the exact affinities of present fruit are not ascertainable, yet its drupaceous fruit structure shows similarities with the Syzygium genus of Myrtaceae, hence name given to present fossil fruit as Myrtocarpon ganeshii. The generic name given from family Myrtacaeae and specific name is give after the name of eminent Palaeobotanist Dr. Ganesh V. Patil, Former V.C. of S.G.B. Amravati University, Amravati.

Dignosis

Myrtocarpon ganeshii gen. et. sp. nov.

A unilocular large single seeded drupe, 1.38 mm long and 1.08 mm broad in longitudinal in section. Fruit is fleshy, globose in shape. It is having three distinct appendages at the apical region. Pericarp differentiated into epicarp 19.8 µ, mesocarp and endocarp 9.9 µ in thickness. The epicarp thickwalled, compactly arranged constituting 2-3 layered. Mesocarp is not uniform in thickness, the cells are parenchymatous with few intercellulr spaces. Endocarp is hard. The vascular bundle are not seen. Seed is large and non-endospermic, measuring 99 µ x 79.20 µ in thickness. Two cotyledons are seen prominently, measuring 92.40 µ x 38 µ in thickness.

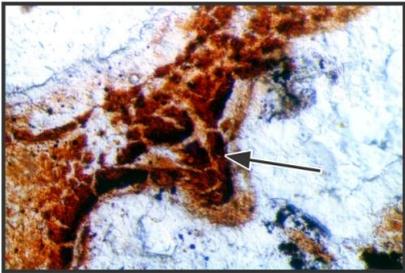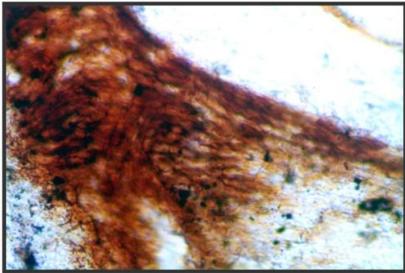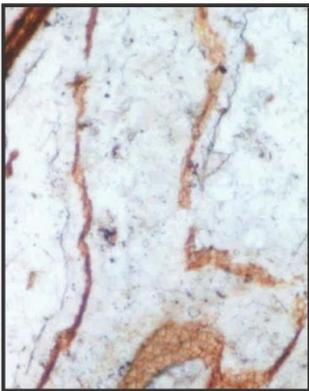|		
Holotype	-	MOH/SVP/DICOT - FRUIT - II
		Department of Botany, Shri. Shivaji College, Akola
Locality	-	Mohgaonkalan, Dist. Chhindwara, M.P. India
Horizon	-	Deccan Intertrappean Series of India
Age	-	Upper Cretaceous
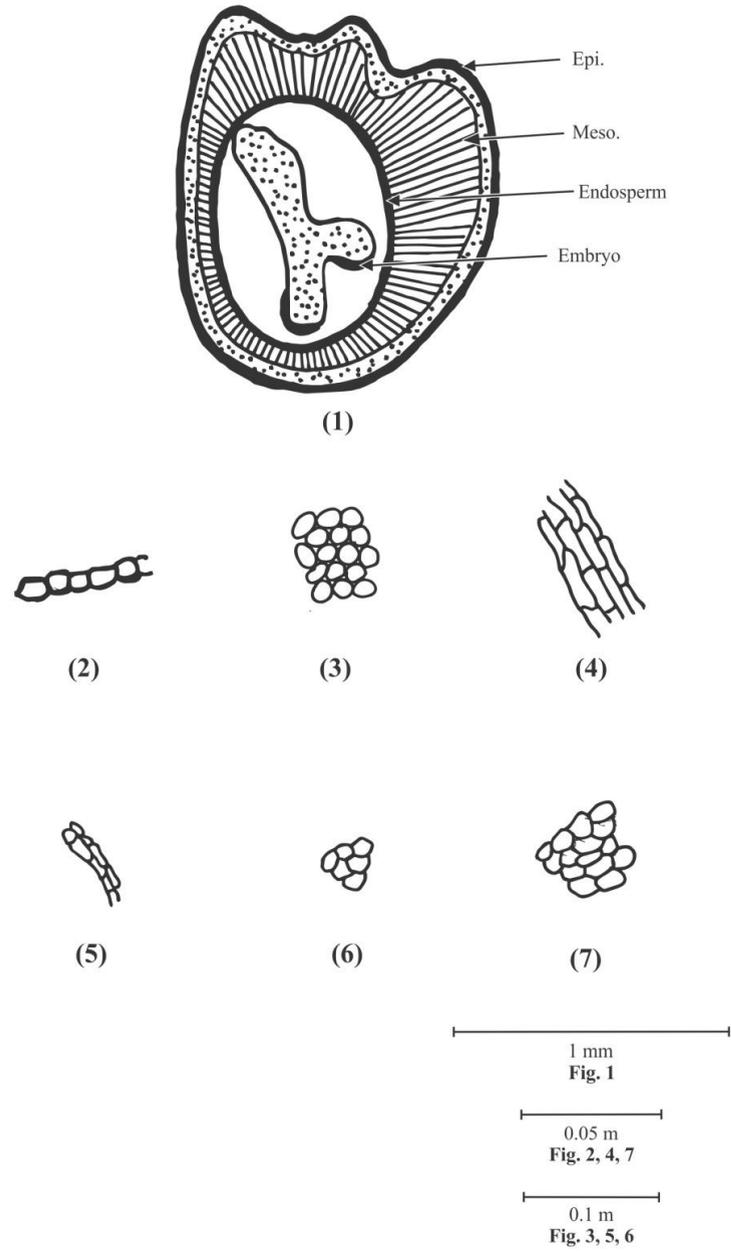
Text Fig. *Myrtocarpon ganeshii*

(1)

(2)

(3)

(4)

(5)

Plate Fig. *Myrtocarpon ganeshii*

	Myrtocarpon ganeshii gen. et. sp. nov.
	Explanation of Text Figures 1 to 7
1	Section of L.S. fruit showing Epicarp (Epi), Mesocarp (Meso), Endosperm and Embryo (Diagramatic)
2	Cells of Epicarp
3	Parenchymatous cells of mesocarp
4	Fibrous cells of vasculature
5	Cells of Endocarp
6	Cells of Embryo
7	Cells of Cotyledons

	Myrtocarpon ganeshii gen. et. sp. nov.
	Explanation of Plate Figures 1 to 5
1 and 2	Section of L.S. fruit showing Epicarp, Mesocarp, Endocarp and Embryo x20
3	Apical appendages x100
4	Fibrous mesocarp x100
5	Embryo

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Dr. Pundkar S.V.

OCCUPATIONAL HEALTH HAZARD IN MARITIME SECTOR-- A STUDY TO OVERCOME THE CHALLENGES

CAPT. MIHIR CHANDRA

Associate Professor

School of Nautical Studies

Indian Maritime University Chennai Campus

Chennai, India

Email Id: mihir2211@gmail.com

*A*bstract

*O*ccupational health is a field, which involves all activities that intend to protect and promote workplace health. Occupational hazards are physical, chemical, biological, radiation, ergonomic or psychological in nature and may lead to acute or chronic effects on the individual worker. Maritime sector abounds about 85% of universal trade. And therefore for economic wellbeing of a nation, sea-route trade is of paramount importance. This can be very well understood from the miseries faced by land-locked countries. Safety concept is genetically fed though in maritime sector; the global village concept has penetrated into the anatomy of core-body, that is shipping industry and the safety concept of good old days are getting challenged by mariner's health; his or her vulnerability with the similar or near similar atmospheric conditions. These have altered -mainly because of man-machine interface stratification, changes in lifestyle, continual changing technological demands, individual job-profiles, non-awareness of psychological issues by individual and organisations and so the reflected and refracted causative disorders. The seafarers working environment is unique and equally special nature is that of marine sector; unlike other onshore occupations and organisation. The inherent challenging nature of the seafarer's

job in the isolated and sometimes confined environment, with limited resources and the station, where both his work and leisure activities take place, poses a unique occupational safety and health issue. On the equating balance pan of economic wellbeing, the marine industry competes with other shore based industry but it also needs to give a balancing thought that seafaring community, seafaring tools and resources are not on the same measuring scale of resource efficacy as shore workers due to time and space being limited for seafarers and so makes for a unique health and safety issue.

Key words: ergonomics, safety-concepts, occupational hazards.

1. *Background:*

There are approximately 150,000 seafarers employed in Indian maritime industries, and these seafarers face a higher risk of injury, illness, and fatality than other occupational workers in India. Occupational Hazards encountered in the maritime industry can be both on the water and at waterfront facilities such as ports and shipyards affecting those employed on vessels, at waterfront facilities working in and around vessels, and onshore workers directly supporting maritime operations. The maritime industry accounts for a major percentage of global trade and is important for the economic growth of the Nation.

Though the commitment to safety has long prevailed in the maritime industry due to its inherently global nature and international organisations regulating the industry, over the decades there has been a substantial shift in the outlook of various determinants of maritime occupational safety and health. The changes are seen in the three elements of the maritime occupation namely people, environment and machine. Global burden of disease, lifestyle changes, exposure to occupational hazards, globalisation, technological advancements, automation, communication, digitalisation, multilingual multi-cultural crew, approaches to human resource management, job characteristics, policies, and regulations are some of the factors that have changed over time. The major current issues that need to be addressed are prevalence of non-communicable diseases, chronic effects of occupational and environmental hazards, sleep deprivation, disruption of work-rest cycle, stress, fatigue, psychological and psychosocial problems, attrition, job insecurity, role conflict, reduced manpower, conflict in man-machine interaction, coping with advanced technology and adapting to recent regulatory policies, legislation, security and piracy issues.

The universal burden of disease has shifted from nutritional and communicable diseases in the past to non-communicable diseases in the present days. In general seafarers' health has shown some improvement in health related life style behaviours like reduced smoking habits, alcohol consumption and healthy dietary habits. Despite these improvements, there is an appreciable increase in psychosocial and psychological problems of seafarers, fatigue and reduced quality of sleep is frequently reported. Increased complexities due to heightened globalised trade, stringent regulations, security, piracy has

brought in growing awareness of the psychological impact of these changes on seafarers, and focus on the psychosocial dimension to seafaring research. The history of experience of seafaring has been one of work and leisure in confined environment, isolated from land-based social networks, special bonding with shipmates and facing occupational challenges as a team.

Currently with globalisation, recruitment is multi lingual and multicultural. This is making socialisation and communication difficult and is leading to work stress. Advances in technology lead to possibilities of reduced isolation from family, new innovations in navigational and training opportunities, and all with improved healthcare on board vessels. But this also means reduced manpower, job insecurity, shift work, disruption of work-rest cycle, role conflict and seafarers having to work harder and longer leading to fatigue and eventually making them perpetrate mistakes. Stringent security, regulatory policies and legislations in the recent times have imposed restrictions in the movement of seafarers during shore-based turnaround times, quick turnaround times in ports, reduced leisure activities and lack of socialisation causing a significant impact on the seafarer welfare. While enforceable health and safety standards prevent short term occupational risk like workplace injuries and illnesses, current study emphasis is on long term risks associated with exposure to occupational hazards as there is an increased risk of morbidity and mortality. All these issues pose a need for in-depth understanding of the human factors, environmental aspects, man-machine interaction and psychosocial dimension to seafaring. Future seafaring research should emphasize on optimizing benefits and mitigating negative impacts of constant advancements and developments in the maritime industry.

With the advent of Autonomous ships, Digitization of processes and Block-chain technology being endorsed for various functions in shipping market, it is imperative to get up to the new challenges thrown to human intelligence via Artificial intelligence, and cyberspace interventions. The autonomy though will give a novel dimension to this industry but it will also manifest itself in new health issues for unique risks and related vulnerabilities due to novel machines, increased level of output demand and practically nil human factor on-board ship but relatively more skilled human behind machine. This human element will be exposed to new environment and so vulnerabilities of health risk. There is hence a need for an in-depth understanding of the human factors, environmental aspects, man-machine interaction and psychosocial dimension to the seafaring/maritime occupation. With constant advancements and developments in the maritime industry in vogue, future seafaring research should emphasize on optimizing benefits and mitigating negative impacts of these inevitable changes.

At the last decade of last century, 'Chernobyl' nuclear disaster had created a new paradigm of 'safety culture' against the then prevailing 'safety program' concept, as a clarion call to naysayers towards more systemic approach of safety. This paper outlines the need of a paradigm shifts for prevailing Occupational health hazards and safety programs to a different but enhanced level of systemic approach to hazards and of progression

towards a safety culture. Is it not a known fact that the hidden costs of accidents (human element) exceed in gigantic proportion to that of the cost of a safety culture?

2. *Scope:*

This paper is presented to diagnose the hazards related to Indian seafarers' health with a specific awareness towards the safety of soul and wellbeing of financial health of maritime industry in context of novel technological demands on the blocks.

3. *Risk of Non-communicable diseases (NCD) on board ships and control measures:*

Non communicable diseases(NCDs) among sea-farers have also been named as chronic ones and injury related issues which have caused cases of mortality and in capacitance. This has resulted in loss of a bread winner to the family of seafarer and also loss to industry economically. Among many NCDs, CVDs, Diabetes, different types of hypertension [home to masked], cancer, nuclear radiation hazard [nuclear ships] are the few of significance, a far as seafarers are concerned.

Various literatures on these issues relate to morbidity rate resulting in loss of life and insurance claims. Retrospective study done by Yale university [UK] in 2012 suggests that the number of CVD patients [seafarers] as per insurance claim reports, though was low in percentage than that of land based patients;but the gross high expenses of medical bills for even the low percentage was alarming.

Therefore, the control measures need to be considered.

3.1 On personal management level, control measures for NCDs are supposed to be awareness about own medical history and present physical health condition. Awareness will lead to mitigating mechanism through

self-control. Routine medical check-ups; prior-ship-joining medical checks to periodic checks at defined intervals, for specific NCDs have been effective tools to prevent enhanced morbidity rate. Ships' demanding routine enhance few addictions which are independent variables for dependable ones and so awareness level of cause to effect asks for self-control. On ships intake of carbohydrate food is more because of long and shift type working hours and if fitness activities are not indulged in regularly the weight status of seafarer starts showing itself through myriad of diseases.

Ship board injuries are also type of NCDs only and Ship-safety-attitude development is again one of the personal control measures. Wearing personal protective gears; such as nose mask against dust, chemical gas hazards for mitigating risks of pulmonary diseases, from sun protection while working on deck by means of caps and lotion-application to guard against UV radiation, gears to protect against radiation hazards

on nuclear ships. These gears are among many, which are commonly used against ship-board functions.

3.2 As far as administrative control measures are concerned it needs to have multi-pronged strategy. Some one's Quote is very relevant with this domain- "If you think safety related processes are expensive, try having an accident".

Legislation of statutory natures to follow safety norms all the time on board ship are required to be in place---reward and incentivisation to be formulated for those who follow personal and public hygiene along with initiative skill display for promotion of safety.

Training of staff, such as healthy cooking courses for cooks, smoking reduction courses, awareness for passive smoking hazards, meditation and yoga classes may lead to wellbeing of seafarers. Posters must be displayed at conspicuous places for safe practices. Do's and Don'ts must be advised.

Engagement schedule in leisure time through frequent get together, fitness activity response plans, fatigue reduction through charted rest hours, inducing better sleep pattern by monitoring shift schedules are few measures of administrative domains.

Ship-board health data sheet of seafarers need to be monitored with absence of duties and feedback on health to be assessed regularly for persons with reported NCDs.

3.3 With reference to engineering control measures, fitness related facilities must be provided. Ergonomics with regard to safety must be adhered to. Facilities for recreation, communication to family should be arranged. Proper medicine chest, medical evacuation and tele medic facility with helicopter landing arrangement must be dealt with as applicable to ship size, planned voyage and number of crew. Healthy food items, water quality and healthy cooking systems should be considered to control effects of obesity and CVDs.

At length a pre joining ship briefing on medical status and after leaving ship [duty off] briefing must be recorded and extrapolation must be done for anticipated risk on NCD for the seafarer and necessary advice may be summoned to him for redress, when ashore on leave. On his join-back after leave the extrapolated risk must be bench-marked for pre-sea medical tests. Above mentioned control measures may benefit seafarers against NCDs.

4. *Indian seafarers' health and awareness level:*

The overall health awareness level among individuals is very good. It is due to ready to serve access of information by digital media, increased initiatives by CSR models and GoI schemes of AYUSH, AYUSHMAN BHARAT portals. Recent days are flooded with information; for case in example being COVID-19 attack. United nations have many awareness initiatives for general public health. Some organisations like ISWAN are doing note-worthy contribution towards seafarers' health and respective awareness schemes.

Need of the hour still is data collection, auto-acquisition techniques, data analysis and eventually creating a block for the concept of Data mining in this sector. It will give access to many derivatives, such as (a) automatic pattern prediction of individual health over a period of career progression (b)creation of decision oriented pattern of career sustenance or lateral shift of career or alternative schemes for deployment (d) large data sets and data bases for analysis (d)clustering based on findings and document grouping of facts which were not deciphered earlier.

5. *Maritime Occupational Hazards and resulting injuries to seafarers:*

Maritime occupation in the days of yore used to be known with health risks of HIV, STDs, Cirrhosis of lever etc. But now for last few decades the trend has changed and the sickness has moved towards Diabetic related, hypertension, CVDs and psychological disorders.

It has been already documented through various literatures that maritime occupation has hazards which are mostly related to injuries by SLIPS, TRIPS and FALLS. Injuries related with human error and human negligence have also been discussed and analysed at different fronts. But few recent studies show that individual health level and consciousness about individual health give different outcomes of vulnerabilities against same environmental conditions. It has been found that few seafarers have contracted sickness due to own lower immune parameters in a normal

working condition of a ship with particular cargo being carried in a particular voyage and this has been observed by self during sailing days. But seldom these data have been recorded. Any sickness of prolonged and of recurring frequency with cargo-types or port-types or voyage types also must be recorded on board ships.

Shift type of work is common in sailing days and also in port-sectors. Seafarers, Pilots and dockworkers have to work in shifts as this industry is alive in kicking 24/7, whether running or laid-up or slow-steaming. Altered sleep-wake up cycle gives poor metabolism rate and results in altered BMI index. It makes a seafarer for weight gain in some cases and few suffer from various gastronomical disorder; which if not taken care of in time may yield to protracted diseases of posterity. Circadian rhythms; navigation bridge-control related duties in almost dark conditions and sleeping in daylight conditions, working in machinery space mostly with artificial lights-a typical work pattern on board ships; which therefore need to be regulated for a better wellbeing on board ships and it needs to be augmented with physical exercise facilities [gym] on board ships as part of seafarers' welfare tools which has been amply underscored by ILO- enshrined- MLC2006. Rest and work hours are suitable defined and legislated the conditions for better sleeping with better facilities customised to counter circadian rhythms—like positioning of beds at lesser vibration, furnishing to create artificial darkness and scientifically developed mattresses. It further needs to inculcate safety culture paradigm in day to day routine by

keeping the complements on board optimally fit. Panics at the sight of risk should be countered with precautions, and corrective actions.

6. *Stress related health determinants:*

Hans Selye, popularly known as 'father of stress research'[1] defined stress as a non-specific result of any demand in the body. Stress is found as occupation health risk. On board ships stress develops due to illness, finance problem, family relationships, communication gaps or breakdown due to social-distancing (off shore job), contract employment related, work, task-based performances etc.

This stress is the fountain head of following problems, which impact health and safety; such as, fatigue, sickness, lack of confidence, negativity, impaired judgement and insomnia. Chronic condition of any of these lead to larger health and safety issues.

These issues have also resulted in attrition rate of seafarers getting slowly increased.

Stress management techniques, awareness programs and workplace environment monitoring must be adhered to through administrative measures of shipping industry; on board and ashore.

7. *Pollution issues:*

A study has shown in year 2007 that 40% of deaths on the global index has impact of pollution, directly or indirectly due to air, water and land pollution. In reference to pollution through shipping as means of transport, this industry merits for least pollution causing industry. CO_2 emissions per ton of cargo transported one-mile index gives shipping as the most efficient form of transport. IMO, through Annex VI of MARPOL Convention[2] has controlled environmental pollution in a big way and so paving way for better breathing air out at sea, but Ambient air quality in ports and coastal environmental pollution are becoming the determinants of health risk for seafarers, fisherman and dock-workers. Asthma, chronic lungs disorders, are few of diseases which get impacted due to pollution of air.

8. *Conclusion:*

It is imperative therefore that as safety culture was need of the hour after CHERNOBYL disaster, a health culture paradigm should take root in our systems which will foster, awareness at school level for this occupation and related health demands. It needs to be built up as a detailed course-ware in Pre-sea course programs and micro-credit course program for Post-sea courses. An aware seafarer about own health and one's colleague health shall be the real wellness at sea. Data collection and data mining through a maritime health laboratory is need of the day in INDIA. It will coin a new dimension to socioeconomic growth of our country.

Abbreviations:

1. NCD-Non communicable disease
2. CVD-Cardio-vascular disease
3. CSR-Company social responsibility
4. COVID-19-Corona Virus
5. HIV- Human Immunodeficiency Virus
6. STD-Sexually transmitted disease.

Disclaimer: This paper is not the exhaustive detail on the topic and lot of work is required to be done for data acquisition in INDIA.

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2. IMO Convention- Marpol, Annex VI.

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पर्यावरण पर कोरोना वायरस का प्रभाव

डॉ० अरविन्द कुमार द्विवेदी

मो0 नं0— 7376664664, 9554664664

लक्ष्मी नारायण पी0जी0 कॉलेज पखईपुर (कुशमौर), मऊ

ईमेल — **arvind511980@gmail.com**

सामान्य परिचयः–

वर्तमान में देश ही नहीं, बल्कि पूरी दुनिया कोरोना वायरस नामक एक ऐसे दुष्चक्र में फंसी है जिससे निकलने के लिए असाधारण कदमों और उपायों की जरूरत है. जहाँ एक ओर कोरोना वायरस (कोविड-19) की वजह से मानव जीवन बुरी तरह अस्त-व्यस्त एवं प्रभावित हुआ है, वही दूसरी तरफ यह प्रकृति के लिए किसी वरदान से कम नही है. हम सिर्फ सिक्के के एक पहलू के आधार पर कोरोना वायरस को महामारी मान रहे हैं, परंतु अगर दूसरे पहलू को देखा जाए तो यह पारिस्थितिकी तंत्र, प्रकृति एवं पर्यावरण के लिए तो वरदान सिद्ध हो रहा है. पूरी दुनिया जिस पर्यावरण और पारिस्थितिकी तंत्र की रक्षा और चिंता की खातिर बड़ी-बड़ी संगोष्ठियाँ और कार्य योजनाएं बनाती रही, वैश्विक चिन्तन होता रहा, अरबों रुपये भी खर्च हो चुके हैं पर फिर भी कुछ खास नतीजा नहीं निकला, वहीं यह काम एक अदने-से वायरस की बदौलत हुए विश्वव्यापी लहकडाउन ने कर दिखाया. इंसानियत पर भारी कोरोना ने बड़ी सीख और ज्ञान भी दिया. अब भी समय है चेतने और जाग उठने का वरना देर हुई और प्रकृति ने कहीं और भी तेवर दिखाए तो क्या गत होगी, यह नन्हें विषाणु कोरोना ने जता दिया है।लहकडाउन की बदौलत हमारी पृथ्वी में पहले से बहुत कम कंपन हो रहा हैं इन दिनों हमारी पृथ्वी पहले से कहीं अधिक स्थिर हो गई हैं. भूवैज्ञानिकों के मुताबिक अब पृथ्वी उतनी नहीं कांप रही जितनी लहकडाउन से पहले कांपती थी. ये भूवैज्ञानिक दृष्टि से एक बड़ा अवसर है. ऐसा परिवर्तन इसलिए हुआ है क्योंकि विश्वव्यापी लहकडान के दौरान पृथ्वी पर 24 घंटे होने वाली गतिविधियां बंद पड़ी हैं. पूरी दुनिया इस समय ठहरी हुई है. भूकंप वैज्ञानिकों की कहना है कि इस समय दुनिया भर में कम हुए ध्वनि प्रदूषण के चलते वे बहुत छोटे-छोटे भूकंप को भी मापने में सफल सिद्ध हो रहे हैं, जबकि इससे पहले ये भी बड़ी कठिनाई से संभव हो पाता था. पृथ्वी का कंपन कम होने के कारण वैज्ञानिकों को पृथ्वी की सतह पर होने वाली प्राकृतिक गतिविधियों का बेहतर अध्ययन करने का ये सुनहरा अवसर है इसके दौरान भूवैज्ञानिक ज्वालामुखी के व्यवहार की भविष्यवाणी करने और भूकंप के उपकेंद्र के स्थान को त्रिभुजित करने के लिए जिम्मेदार समुद्र की लहरों के प्रभाव का उपयोग करने वालों सहित अन्य शोध-अनुसंधान सरलता से कर सकेंगे।

विश्वव्यापी लहकडाउन के कारण कार्बन उत्सर्जन रुक गया है. अमेरिका के न्यूयहर्क शहर की ही बात करें तो पिछले साल की तुलना में इस साल वहां प्रदूषण 50 प्रतिशत कम हो गया है. इसी तरह चीन में भी कार्बन

उत्सर्जन में 25 प्रतिशत की कमी आई है. चीन के 6 बड़े पावर हाउस में 2019 के अंतिम महीनों से ही कोयले के उपयोग में 40 प्रतिशत की कमी आई है. पिछले साल इन्हीं दिनों की तुलना में चीन के 337 शहरों की हवा की गुणवत्ता में 11-4 फीसद का सुधार हुआ. दुनिया भर में द्वितीय विश्व युद्ध के बाद से पहली बार कार्बन डाइअहृक्साइड के उत्सर्जन में 5 प्रतिशत से अधिक की कमी दर्ज की जा सकती है. टाइम्स अहफ इंडिया में कैलिफोर्निया यूनिवर्सिटी में अर्थ सिस्टम साइंस के प्रोफेसर जैक्सन के हवाले से कहा गया है कि कोरोना संकट के बीच यह एक सुखद खबर है. ग्लोबल कार्बन प्रोजेक्ट के चेयरपर्सन रहब जैक्सन के अनुसार वर्ष 2008 में आर्थिक मंदी के समय कार्बन उत्सर्जन में 1-4 प्रतिशत की कमी आई थी. विशेषज्ञों के अनुसार एक फरवरी से 19 मार्च 2020 के बीच पिछले वर्ष की समान अवधि की तुलना में उद्योगों से कार्बन डाइअहृक्साइड (CO2) उत्सर्जन में 10 मिलियन टन यानी एक करोड़ टन की कमी दर्ज की गई है.

प्रकृति ने हम इंसानों को जीवन-यापन के लिए एक से बढ़कर एक संसाधन दिए, मगर अपने लालच एवं स्वार्थ के चलते इंसान सबकुछ से निर्वासित हो गया और हालात ऐसे बन गए है कि उसे अपने-अपने घरों में बंद होकर जीना पड़ रहा है. कोरोना धीरे-धीरे भयानक रुप लेता जा रहा है. और इसके चलते मानवीय क्रियाएं ठप्प पड़ चुकी है और इसका प्रत्यक्ष लाभ प्रकृति को मिल रहा है. वातावरण स्वच्छ और निर्मल हो गया है, पानी, नदियाँ, हवा, जंगल, भूमि एवं पूरा पर्यावरण खिलखिला रहा है. हवा शुद्ध होने से आसमान भी साफ हो गया है. पक्षियों का कलरव दुबारा गूंजने लगा है. सड़कें प्रदूषण रहित हैं. न वाहनों से निकलनेवाले धुएं हैं और नहीं उनके हहर्न. कोरोना वायरस के चलते अमेरिका और यूरोप सहित विश्व के ज्यादातर देशों में लहकडाउन है. सड़कों पर गाड़ियों के नहीं चलने से सुखद व सकारात्मक परिणाम देखने को मिल रहा है. पर्यावरण को दमघोंटू प्रदूषण से राहत मिली है. द्वितीय विश्वयुद्ध के बाद से यह पहला मौका है जब पृथ्वी से जहरीली गैसों का उत्पादन बेहद कम हो रहा है. जालंधर से हिमालय पर्वत की ईंखला दिखाई पड़ने लगी है. मुंबई के समुद्री तट पर लाखों की संख्या में कछुओं सहित कई अन्य जलचर मजे करते हुए दिखे हैं. अब बिना दूरबीन के ही कोरी आँखों से ही दिल्ली, मुंबई जैसे महानगरों से सप्तऋषि मण्डल, ध्रुव तारे, बुध और अन्य ग्रहों-तारों, आकाशीय पिंडों को निहारा जा सकता है.दुनिया भर में कोरोना वायरस ने इंसानी गतिविधियों पर ब्रेक लगाकर कुदरत को बड़ा आराम पहुँचाया हैं, प्रकृति और उसके दूसरे वाशिंदे कैसे इस शांति का आनन्द ले रहे है. कहीं नदियाँ साफ हो रही हैं, तो कहीं हवा साफ हो रही है, जानवर और पक्षी बेफिक्र घूम रहे हैं, लगता है आज इस कोरोना की उत्पत्ति मानव द्वारा हुई है जो कि पर्यावरणीय प्रदूषण का प्रतिफल है कहना मुश्किल है, परन्तु एक बात बहुत ही साफ है कि कोरोना वायरस की उत्पत्ति प्रकृति से मानवीय छेड़छाड़ का ही प्रतिफल है. आज कोरोना ने पूरे विश्व को घर में कैद होने को मजबूर कर दिया हैं, मानव इस वायरस के आगे पंगु बना हुआ है, आज जंगल के जानवर सड़को पर घूम रहे है और मनुष्य घरो में कैद है। मनुष्य को अभिमान हो गया था कि हमनें प्रकृति पर विजय प्राप्त कर दिया है। परन्तु प्रकृति ने सिद्ध कर दिया कि ऐसा नहीं है, प्रकृति जब चाहेगी अपना संतुलन स्वंय बना लेगी। आज हम पुरानी संस्कृतियों की तरफ आकृष्ट होने के लिए मजबूर हैं और आज हम धीरे-धीरे उन्हीं को मानने के लिए अग्रसर हैं और यदि हम उन्हे नही मानते हैं, तो हमारा भविष्य नष्ट होनें की तरफ अग्रसर हो जाएगा। आज वही कहानी चरितार्थ हो रही हैं, हम जिस पर्यावरण रुपी डाली पर बैठे है उसे ही काट रहें हैं, जो हमारे भविष्य के लिए बहुत ही भयावह होगा, हमें जल्द से जल्द समझना होगा तथा हमें अपनें जीवन को पर्यावरण के रक्षा को ध्यान में रखकर आगे बढ़ना होगा नही तो हमारा आस्तित्व ही समाप्त हो जाएगा।

कोरोना का कारण एवं पर्यावरण पर प्रभाव :-

आज का कोरोना वायरस प्राकृतिक छेड़छाड़ का ही प्रतिफल है। मनुष्य जब से पृथ्वी पर आया प्रकृति से छेड़छाड़ करता रहा, धीरे-धीरे प्राकृतिक छेड़छाड़ इतना बढ़ गया कि आज प्रकृति ने खुद इसे सुधारने के लिए एक विकराल रुप ले लिया। कोरोना की उत्पत्ति लैब में हुई हो या प्राकृतिक रुप से, दोनों स्थिति में प्राकृतिक छेड़छाड़ के

कारण ही हुई है। जब भी मनुष्य प्राकृतिक वस्तुओं से छेड़छाड़ करता है, प्रकृति इसे बैलेन्स करने की कोशिश करती है वह भूकम्प के रुप में, बाढ़ के रुप में, ज्वालामुखी के रुप में, हमें प्रकृति का उतना ही उपयोग करना चाहिए जितना आवश्यक है, परन्तु आज हर देश औद्योगिक प्रतिस्पर्धा में, गरीबी से विकासशील तथा विकासशील से विकसित होने ही होड़ में लगा है। प्राकृतिक दोहन अन्धाधुन हो रहा हैं और प्रकृति इस दोहन से कराहने लगी है । आज ओजोन लेयर का छिद्र, CO का बढ़ना वैश्विक तापमान का बढ़ना, समुन्द्री जल स्तर का बढ़ना प्राकृतिक उत्पीड़न का ही भयावह रुप है। जब मनुष्य वह सब खाने लगेगा जो उसके लिए नहीं बना है, तो उसके जिवाणु या रोग मनुष्य में अवय आयेंगे और उसका रुप भी अलग–अलग और भयावह होगा। कोविड १९ का वायरस जानवर का वायरस है जो या तो लैब प्रोडक्ट है या इस वुहान शहर के विभिन्न जानवरों के मार्केट इन्सानी भोजन के बाद इन्सान में प्रवेश किया है।

यह कोरोना भले ही प्राकृतिक छेड़-छाड़ का प्रतिफल हैं, लोगों को निगल रहा है परन्तु इसने पूरे पर्यावरण को 70 साल पहले जैसा शुद्ध और स्वच्छ बना दिया। ओजोन लेयर का छिन्द्र भर रहा है। नादियाँ साफ हो गयी है, चंडीगढ़ से हिमालय का दिखना, जो 200 कोश दूर है यह पर्यावरणीय स्वच्छता का ही प्रतीक है। आज दिल्ली की हवा जिसमें सांस लेना मुश्किल था, कुछ दूर की ही वस्तुएँ धुंधला दिखाई दे रही थी आज साफ दिखाई दे रही हैं यह कोरोना काल में गाड़ियो, कल-कारखानें बंद होने के कारण ही सम्भव हो सका है। जनता मर रही है यह दुःखदायी है यह बहुत ही सोचनीय है।

आज सभी देशों की टेक्नोलाजी और वैज्ञानिक इस कोरोना के सामने पंगु बनकर खड़े है, आज वैज्ञानिक जो प्रकृति पर विजय की कल्पना कर रहे थे वह आज प्रकृति के सामनें घुटनें टेक दिए है आज पूरा विश्व इस महामारी के सामनें विवश है। कोई दवा काम नहीं कर रही है। आज अमेरिका, फ्रांस, स्पेन, इजराइल, ब्रिटेन, रुस, सिंगापुर, ब्राजील, आस्ट्रेलिया, इटली जैसे विकसित देश अपनें नागरिकों को मरते हुए देखने को विवश है। आज लाशों को ढ़कने के लिए कफन, ताबूत और जमीन की कमी हो गयी है। लोग सड़को पर गिर रहे है अस्पतालो में बेड नहीं है, डाक्टरो, नसों के लिए कोरोना से बचने की किट नहीं है। अस्पतालों में लोग फर्सों पर पड़े हैं। मजदूर पैदल ही 800-1000 किमी की दूरी बिना खाऐ-पिऐ तय कर रहे हैं बिना रोजगार, पैसे-रुपये के जीने को मजबूर, मजदूर घर वापसी पैदल, साइकिल, टेम्पो, ट्रकों पर, रिक्शा से हजारों किलोमीटर की यात्रा तय कर रहे है। यह आपदा बहुत ही भयावह है। आज अमेरिका भूगोलवेत्ता कु० एलेन सेम्पुल की पंक्ति सत्य साबित हो रही है उन्होने कहा था "Man is poppet in the hand of nature." आज मनुष्य प्रकृति के हाथों की कढपुतली बनकर घर में कैद है। दिल्ली में बार बार भूकम्प का आना जिसका माप रिचर स्केल पर भले ही 3.0 है परन्तु आनें वाले बड़े भूकम्प का द्योतक हैं। वैसे भी दिल्ली संवेदनशील जोन में है। यह सब पर्यावरण प्रदूषण के कारण ही हुआ है। आज जहाँ मानवता कोरोना से त्राहिमान कर रही है और खाने-पीने के लाले पड़े है वही दूसरी ओर भूकम्प दूसरी प्राकृतिक आपदा लोगों को दहशत में डाली हुई है। इसी आपदा में अम्फान तूफान का आना पश्चिम बंगाल एवं उड़िसा के तटीय क्षेत्रों तथा राज्य में तबाही का लाना पर्यावरणीय प्रदूषण का प्रतिफल है। अम्फान तूफान जो पश्चिम बंगाल और उड़िसा में 12 घण्टे तक 180-200 km/h के वेग से हवा और पानी के साथ तांडव करता रहा यह तुफान आज तक का सबसे भयंकर तुफान था। इसने इतना तबाही मचाई कि खुद प्रधानमंत्री जी को इसका जायजा लेनें जाना पड़ा तथा पश्चिम बंगाल को 1000 करोड़ का राहत पैकेज तबाही को देखने के बाद देना पड़ा।

मानवता पर कोरोना का कहर, लेकिन प्रकृति को क्या फायदा

मौजूदा वैश्विक महामारी कोरोना वायरस कोविड 19 के पहले मामले की आधिकारिक पुष्टि 31 दिसंबर 2019 को चीन के हुबेई प्रांत के वुहान शहर में हुई थी। उसके बाद यह वायरस तेजी से फैला। देखते देखते इसने चीन के अन्य शहरों को अपनी जद में लेते हुए पूरी दुनिया को चपेट में ले लिया। यूं ही नहीं है कि यह वायरस

एक शहर में पैदा हुआ है। पीटर दास्जाक बताते हैं, 'हमने प्राकृतिक पर्यावरणीय पारिस्थितिकीय प्रणाली में दखलअंदाजी से वायरस तैयार किया था'। वायरस को उनके कुदरती प्रश्रय (मेजबानों) से हटाया और चाहा कि वे नये प्रश्रय से तालमेल बिठा लें और फिर इन्हें इंसानों तक पहुंचाया या उनमें डाल दिया। जैसा कि कोविड १६ महामारी से स्ट्ट है कि शहरी स्वास्थ्य जोखिम तेजी से फैलते हैं, यकायक वैश्विक स्वास्थ्य आपदाकाल बन सकते हैं। इस महामारी से अब तक दो लाख से ज्यादा लोग संक्रमित हो चुके हैं। सात हजार से ज्यादा लोगों की मौत हो गई है। अभी भी संक्रमित होने वालों और मरने वालों की संख्या दिनोंदिन बढ़ने पर है। कोविड 19 मानव स्वास्थ्य, उत्पादन, जीवन, सामाजिक आचार व्यवहार और अंतरराष्ट्रीय संबंधों पर गंभीर असर डाल रहा है।

भौगोलिक निगरानी :-

कोविड 19 के खिलाफ लड़ाई में ज्योग्राफिकल इंफॉरमेशन सिस्टम्स (जीआईएस) तथा बिग डाटा तकनीकों ने अनेक तरीकों से महत्वपूर्ण भूमिका निभाई। 23 जनवरी को चीन की सरकार ने निर्णायक फैसला करते हुए वुहान शहर को सील कर दिया। हुबेई प्रांत में सभी शहरों तक पहुंचने वाले बाहरी रास्तों को बंद कर दिया। प्रत्येक प्रांत ने प्राथमिक स्तर पर सार्वजनिक स्वास्थ्य पर ध्यान केंद्रित किया, जिससे संक्रमण को शुरुआत में तो फैलने से काफी हद तक रोक दिया गया था। चीन ने काफी इंसानी और सामाजिक आर्थिक नुकसान उठाने के बाद स्वयं और शेष विश्व को बचाने और संक्रमण पर नियंत्रण के लिए समय नहीं गंवाया। तीन फरवरी को निर्माण किए जाने के मात्र दस दिन बाद ही, हुशेनहाल अस्पताल, वुहान में एक हजार बिस्तरों का अस्पताल, शुरू कर दिया। आठ फरवरी को लीहेनशन अस्पताल, जो 1600 बिस्तरों का अस्पताल का निर्माण कार्य पूरा करके जनता के लिए खोल दिया गया। इस बीच देश भर से चिकित्सकीय स्टाफ को संक्रमण से पार पाने के लिए हुबेई प्रांत प्रांत भेज दिया गया।

बारह फरवरी को स्थानीय सरकार ने वे उपाय करने शुरू कर दिए जिनसे संक्रमण को महामारी में तब्दील होने से रोका जा सके। नतीजा हुआ कि संक्रमण के नये मामले आने का सिलसिला कम होने लगा। इस दौरान चिकित्साकर्मियों ने जीआईएस और बिग डाटा तकनीक का इस्तेमाल किया। यह बेहद वैज्ञानिक और तकनीकी मदद है जो सरकार को मिलती है। इससे संक्रमण की स्थिति का आंकलन करने में सुविधा होती है। तद्नुरूप बचाव व कारगर नियंत्रण उपाय संभव हो पाते हैं।

आज मुख्य चुनौती यह है कि उन रणनीतियों का पता लगाया जाए, जिनसे पारंपरिक तकनीकी तरीकों के साथ तालमेल बिठाया जा सके। त्वरित सामाजिक प्रबंधन के लिए सटीक जानकारी तत्काल हासिल हो सके। इसके अलावा, बिग डाटा के इस दौर में, डाटा अब सरकार की तरफ से मुहैया नहीं कराया जाता है, बल्कि विभिन्न उद्यमों से जुटाया जाता है। फलस्वरूप, जीआईएस को डाटा एकत्रीकरण में समस्या आती है। विभिन्न डाटा से निष्कर्ष तक पहुंचने में दिक्कत आती है। जरूरी है कि सरकारें कारोबारी उद्योग और अकादमिक साथ मिलकर संबद्ध नीतियां तैयार करें। तकनीक के स्तर पर बिग डाटा के लिए भौगोलिक विश्लेषण तरीकों का इस्तेमाल बढ़ रहा है। अभी और आने वाले समय में जीआईएस के विकास को मजबूत करना होगा, ताकि त्वरित जानकारी हासिल करने के लिए डाटा आधारित प्रणाली तैयार की जा सके।

तेजी से फैला कोविड 19 :-

कोविड 19 का तत्काल पता नहीं लग पाता। यही कारण है कि यह तेजी से फैला और महामारी का रूप ले लिया। ऐसी स्थिति में जरूरी है, कि जीआईएस और बिग डाटा तकनीक से विश्लेषण किए जाएं और संक्रमण संबंधी जानकारी तेजी से मुहैया हों, ताकि समय रहते मदद पहुंचाई जा सके। इस संक्रमण के भौगोलिक रुझानों, चिकित्सा सामग्री की मात्रा, जनसंख्या और सामाजिक मनोविज्ञान का तीन स्तरों पर विश्लेषण किया। व्यक्तिगत स्तर पर भौगोलिक रूप से संक्रमण के फैलाव को जाना और मरीजों की जानकारी ली गई। समूह के स्तर पर जनसंख्या के प्रवाह का अनुमान लगाकर भौगोलिक फैलाव को जाना गया। क्षेत्रीय स्तर पर भौगोलिक जोखिम, चिकित्सकीय

संसाधनों की आपूर्ति और मांग के बीच संतुलन का विश्लेषण तथा भौगोलिक अंतर की दृष्टि से चिकित्सकीय परिवहन की क्षमता का विश्लेषण तथा सामाजिक धारणाओं को जाना गया।

2018 में विश्व की 55 प्रतिशत आबादी शहरी क्षेत्रों में आबाद थी। उम्मीद है कि 2050 तक यह बढ़कर 68 प्रतिशत हो जाएगी। शहरों में आबादी का घनत्व भी सर्वाधिक होता है, इतिहास उठाकर देख लें। शहरों में ही संक्रामक रोग फैलने के सर्वाधिक मामले प्रकाश में आते रहे हैं। लेकिन शहर ही हैं, विशेषकर विकसित देशों में, जहां ग्रामीण क्षेत्रों की तुलना में औसत आयु ज्यादा होती है। दरअसल, शहरों में साफ सफाई का अच्छे से ध्यान रखा जाए तो कोई महामारी फैलने की आशंका ज्यादा नहीं होती है। यदि फैलती है तो सर्वाधिक प्रभावित भी शहरी आबादी ही होती है। कोविड 19 ने इस डर को पुष्ट कर दिया है, कि शहरों पर यह संक्रमण रोग फैलते रहे हैं, उनके लिए कोई न कोई कारगर दवा हमारे पास रही है, लेकिन कोविड 19 के मामले में निराशाजनक पहलू यह है कि इसके उपचार के लिए अभी तक कोई कारगर दवा मौजूद नहीं हो पाई है। चाइना वक्त रहते इसे अपने देश से बाहर जाने से रोकने में नाकाम रहा, उसने अपने राज्यों को तो सील किया किन्तु देश को नहीं। कहीं यह उसका बायोलॉजिकल हथियार तो नहीं, आज भी पूरा विश्व इसपर असमंजस में है, अगर चीन चाहता तो स्थिति इतनी भयावह नहीं होती। आज विश्व के 80% देश इसके लिए चीन को जिम्मेदार ठहरा रहे है।

कहीं हवा साफ हो रही, कहीं नदियां तो कहीं जानवर और पक्षी बेफिक्र घूम रहे हैं. लगता है कि कोरोना संकट पर्यावरण पर काफी अच्छा असर छोड़ कर जाएगा. लेकिन कुछ बुरे असर भी होंगे जिन पर लोगों का ध्यान नहीं जा रहा है।

कोविड-19 ने जहां एक ओर दुनिया भर में कई विकट चुनौतियां पैदा की हैं, वहीं दूसरी ओर प्राकृतिक सौंदर्य के अद्भुत व जीवंत नजारे भी देखने को मिल रहे हैं। इतिहास गवाह है कि अतीत में जब-जब इस प्रकार की भयानक महामारियां आई हैं, तब-तब पर्यावरण ने सकारात्मक करवट ली है। यकीनन कोरोना संक्रमण काल में प्रकृति का यह रूप मानवीय जीवन के लिए भले ही क्षणिक राहत वाला हो, परंतु जब संक्रमण का खतरा पूरी तरह खत्म हो जाएगा, तब क्या पर्यावरण की यही स्थिति बरकरार रह पाएगी? जब सभी देशों के लिए विकास की रफ्तार को तेज करना न केवल आवश्यक होगा, बल्कि मजबूरी भी होगी, तब क्या ऐसे कदम उठाए जाएंगे जो प्रकृति को बिना क्षति पहुंचाए सतत विकास की ओर अग्रसर हो सकेंगे।

पर्यावरणीय समस्या का यह अल्पकालिक सुधार न तो स्थायी समाधान है और न ही वांछनीय परिणाम। हालांकि वर्तमान स्थिति को प्रकृति की ओर से दी हुई चेतावनी समझनी चाहिए जो मनुष्य की जीवन शैली और विकास प्रक्रिया के तौर-तरीकों को बदलने का अवसर प्रदान करती है। इतिहास ऐसे कई उदाहरणों से भरा पड़ा है जो यह साबित करता है कि महामारियों का गहरा प्रभाव पर्यावरण पर पड़ा है, परंतु महामारी के फौरन बाद आर्थिक विकास की रफ्तार को बढ़ावा देने के लिए प्राकृतिक संसाधनों का बड़े पैमाने पर अमर्यादित दोहन भी किया गया है। ऐसे में कोरोना महामारी से उत्पन्न अल्पकालिक पर्यावरणीय सुधार से बहुत अधिक खुश होने की जरूरत नहीं है, बल्कि मानव, प्रकृति और आर्थिक विकास के अंतर्संबंधों को नए सिरे से परिभाषित करने की आवश्यकता है।

मनुष्य-प्रकृति के बीच असंतुलन का दुष्परिणाम :-

कई पर्यावरणविदों का मानना है कि यह वायरस मनुष्य और प्रकृति के बीच पैदा हुए प्राकृतिक असंतुलन का दुष्परिणाम है। वैज्ञानिकों का कहना है कि अत्यधिक मांस का उत्पादन, रोगाणुरोधी प्रतिरोध और बढ़ते वैश्विक तापमान जैसे कारक वन्यजनित विषाणुओं को मनुष्यों में फैलने और भयावह रूप धारण करने में महत्वपूर्ण भूमिका निभा रहे हैं। साथ ही जलवायु संकट विषाणु जनित रोगों से लड़ने के प्रति हमारी प्रतिरोधक क्षमता भी कम कर रही है। दरअसल, विगत कुछ दशकों से हो रहे पारिस्थितिकीय परिवर्तन, बेरोकटोक आर्थिक विकास और प्राकृतिक संसाधनों के बेतहाशा दोहन ने पारिस्थितिकीय तंत्र के अनुचित तथा असंतुलित प्रयोग को बढ़ाया है।

व्यापक स्तर पर घटी खनिज संपदा :-

बढ़ती जनसंख्या ने शहरीकरण एवं औद्योगीकरण का विस्तार किया जिससे व्यापक स्तर पर खनिज संपदा घटी है और वनोपज का दायरा सिमट गया है। इससे जैविक और प्राकृतिक असंतुलन की स्थिति पैदा हुई है। पर्यावरणीय विसंगतियों का खुलासा करती विश्व मौसम विज्ञान संगठन की रिपोर्ट 'द स्टेट अह्फ द ग्लोबल क्लाइमेट' बताती है कि हाल के वर्षों में ग्लोबल वार्मिंग के कारण तापमान बढ़ोतरी के कई रिकह्हर्ड टूटे हैं। जहां वर्ष 2019 सबसे गर्म वर्ष रहा, वहीं वर्ष 2010-2019 के दशक को सबसे गर्म दशक के रूप में रिकह्हर्ड किया गया।

पर्यावरणीय क्षति केवल जैव-विविधता को ही नुकसान नहीं पहुंचाती, मानवीय जीवन को भी बदतर स्थिति में ले आती है। रिपोर्ट बताती है कि प्राकृतिक आपदाओं की वजह से 2018 में दुनिया में 82 करोड़ लोग भुखमरी के कगार पर थे और लगभग 67 लाख लोग विस्थापित हुए। ये तथ्य हमें सोचने पर मजबूर करते हैं कि आखिर पिछले कुछ दशकों में ऐसा क्या हुआ कि प्रकृति की ये दुर्गति हुई है। यकीनन संकट के इस दौर में मनुष्य के अति-भौतिकवाद, उत्पादनवाद और उपभोगवाद को विकास का पर्याय मान लेने की मानसिकता पर सवाल उठाहै। आधुनिकता की चकाचौंध से लोगों में व्यक्तिवाद और सुखवाद की प्रवृत्ति बढ़ी है। मानवीय उत्थान के लिए तो ये चीजें अच्छी लगती हैं, लेकिन नई-नई वैज्ञानिक तकनीकों द्वारा पारिस्थितिकी तंत्र को नियंत्रित करने की मनोवृत्ति ने पर्यावरणीय विसंगति को जन्म दिया है।

बेबस हुई आर्थिक शक्तियां :-

संयुक्त राष्ट्र पर्यावरण कार्यक्रम अपनी एक रिपोर्ट में इस बात की पुष्टि भी कर चुका है कि मनुष्यों में हर चार महीने में एक नई संक्रामक बीमारी सामने आती है। इन बीमारियों में से करीब 75 फीसद बीमारी जानवरों से आती है। इसके बावजूद इंसान यह भूलता जा रहा है कि जैव-विविधता को चोट पहुंचना कितना खतरनाक हो सकता है। आज आधुनिकता व वैज्ञानिकता का दंभ भरने वाली तमाम आर्थिक शक्तियां इस बीमारी के आगे बेबस हैं। देर से ही सही, पर इस संक्रमण की दवा भी खोज ली जाएगी, लेकिन तब तक बहुत कुछ तबाह हो चुका होगा। इसलिए अगर हमें वाकई में आर्थिक विकास और संवहनीयता के बीच सह-अस्तित्व की भावना बनाए रखनी है तो उपभोग और जीवन-शैली को इस तरह बनाना होगा जिससे प्रकृति पर नकारात्मक असर न पड़े।

तभी इस संकट से उबरने में होंगे कामयाब :-

आज कोरोना जैसी महामारी और पर्यावरणीय विसंगतियों को दूर करने के लिए आर्थिक स्तर पर मूलभूत संरचनात्मक बदलाव लाने होंगे। कोरोना ने हमें यह अवसर दिया है कि स्थानीय और वैश्विक स्तर पर अर्थव्यवस्था और पर्यावरणीय राजनीति को पारिस्थितिकी सम्मान और न्याय के तर्ज पर फिर से परिभाषित किया जाए। भूमंडलीकरण के बजाय स्थानीयकरण को बढ़ावा देने की भी चर्चा हो रही है, लेकिन हमें यह नहीं भूलना चाहिए कि इस बीमारी की तरह पर्यावरणीय समस्या भी वैश्विक है, इसलिए स्थानीय सेवाओं और रोजगार को बढ़ावा देने के साथ-साथ वैश्विक संस्थाओं में सहयोग और निवेश को भी मजबूत किया जाना आवश्यक है। न केवल हरित अर्थव्यवस्था और पर्यावरणीय-नवीनीकरण से जुड़े कार्यक्रम को बढ़ावा देने की जरूरत है, बल्कि व्यक्तिगत, कानूनी व प्रबंधकीय स्तर पर भी परिस्थितिकी प्रबंधन व संरक्षण को प्रोत्साहित किया जाना चाहिए। इन तमाम प्रयासों, नवाचारों, पारदर्शिता, जवाबदेही और मजबूत राजनीतिक इच्छाशक्ति के सहारे हम इस संकट से उबरने में कामयाब हो सकते हैं।

निष्कर्ण सुझावः-

कोरोना काल से एक शिक्षा अवश्य लेना चाहिए कि पूरे विश्व को साल में कुछ दिनों का लाकडाउन करना चाहिए ताकि हमारा पर्यावरण शुद्ध और स्वच्छ हो सके। Lockdown हर देश को प्रायः एक साथ करना चाहिए और जरुरी वस्तुओं के लिए मार्केट हप्ते में शिलशिलेवार एक-एक करके खुले। अब हमें जो भी प्लान करना चाहिए

प्रकृति को ध्यान में रखकर ही प्लान करना चाहिए ताकि प्राकृतिक संतुलन बना रहें। हम जब भी पारिस्थितिकी संतुलन को असंतुलित करेगें, पर्यावरण उसको ठीक करने का प्रयास करेगा जो मानव जाति के लिए भयावह होगा । अतः हमें अनावश्यक प्राकृतिक छेड़-छाड़ को रोकना होगा इसके लिए सख्त कानून बनाने की आवश्यकता है।

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डॉ० अरविन्द कुमार द्विवेदी

THE ELEMENT OF INTRA CASTE PREJUDICE IN SELECTED DALIT AUTOBIOGRAPHIES

DR. SUNIL GANPAT BAVISKAR

Smt. N.N.C. Arts, Commerce & Science College

Kusumba Tal & Dist- Dhule 424302 (Maharashtra)

baviskarsunil1967@gmail.com

Mobile No. 9823616341

Abstract

*T*he Dalits all over the world have been exploited, suppressed and marginalized by the powerful high class people. They have been crushed for their color, caste, religion and backwardness. But when the Dalits themselves did the same thing with their people, the question stands to study their socialization, their physical and mental situation. For the purpose, the researcher has selected three Dalit autobiographies to find out the reasons or mentality behind the intra caste prejudices and conflicts among them. For the study, the reference of African American Black slaves has been taken. The negative socialization, mentality crushed under assigning menial job by the high caste people. In addition, their humbug and sense of selfishness too are the reasons behind it.

Key Words: Dalits, High Caste People, Exploitation, Socialization, Panchayat

Preliminaries:

India, in the context of population, is the second in the world. People belonging to various castes, communities, sects and religions live happily in our country. In the same way, people make communications though have their own separate mother tongues. They have their own festivals, rituals and cultures. Unity in variety has always been maintained from all sections of people. It is undoubtedly true that India seems to be one from Kashmir to Kanya Kumari. But beneath that unity, a great bitter hatred is hidden. For times

immemorial, the high caste people had exploited, humiliated, and lynched the low caste minorities. They on basis of their so called books like Manushruti, first of all, made 'woman' a piece of furniture in the house. She was confined in a house as an inanimate thing or doll. Secondly, on the basis of four ideological classes called Varna, they did such inhuman atrocities on Shudra that the Dalits had lived the worst life for generations. The high caste people had a sense of superiority and power, by which they had crushed the Dalits. But what was there in the low caste people, they too exploited, humiliated and lynched the people from their own community, including women?

The aim of this paper is to find out the reasons behind the intra caste conflicts and prejudices among dalits themselves. For the purpose, the researcher has selected three dalit autobiographies- Kishore Kale's Against All Odds (2000), Sharankumar Limbale's The Outcaste (2008) and Laxman Gaikwad's The Branded (2005). All these books were originally written in Marathi.

Reasons behind Intra Casteism:

Many critics are of the opinion that there are many similarities between Indian Dalits and African American slaves. Both were brutally and inhumanly treated by their high caste people and White Americans respectively. The Noble Laureate Toni Morrison was too one if the victims of slavery. She, in her debut novel The Bluest Eye (1999) tries to put the exact reasons behind the intra racial prejudice among black people. She writes:

It was their contempt for their own blackness that first insult its teeth. They seemed to have taken all of their smoothly cultivated ignorance, their exquisitely learned self-hatred, their elaborately designed hopelessness and sucked it all up into a fiery cone of scorn that had burned for ages in the hallows of their mind – cooled -and spilled over lips of outrage, consuming whatever was in its path [Morrison 1999: 50].

Morrison provides reasons—their own blackness, cultivated ignorance and self hatred and hopelessness. All these reasons seem to be present in the intra caste conflicts and prejudices of Dalits. Dalits were black, ignorant, and hopeless and resultantly they too hated themselves. The critic Harihar Kulkarni has his own views regarding to the intra racial prejudices among slaves. He puts: "At physical level, the manifest ramification of the socialization process are: brutalization, destruction of the victim's family unit, rape, lynching, flogging, branding, assignment of menial jobs and traumatization of every sort"[Kulkarni 1990:55].

This view too seems to be there in Casteism among Dalits. Like Blacks, Dalits were too negatively socialized. Their families were destructed by doing rapes, lynching, flogging, branding and assigning menial jobs. That negative socialization at physical level disturbed their mental order and they sometimes blindly followed the high caste people and had done the same atrocities of which they were the victims.

Kishore Kale's Against All Odds:

Kishore Shantabai Kale was a great Dalit activist and writer. His Against All Odds (2000) is an autobiography. It deals with the atrocities inflicted on the writer Kale and his mother Shantabai as a tamasha dancer by their own Kolhati community and the high caste people. Like Shantabai, Kusum is also tamasha dancer. She is a good stage dancer. She is kept woman of a high caste rich man and has a son named Sanjay. The film producer by seeing her dance offers roles in movies. On a certain day, she elopes with a person Kamble, from Mahar community. According to her family, she has committed two crimes—one, elopes from house and second, marries with a Mahar, the lowest of the castes. Thus, the parents snatch away her son Sanjay from her. The Kolhati community declares Kusum as an outcaste and her family is warned if they allow her to come in their home, the family too will be declared as an outcaste. The writer further writes:

For a Kolhati to marry a Mahar or a Muslim is the ultimate crime, but they have no scruples when it comes to accepting money from Muslim or Mahar men at dance shows. In any case, Muslims and Mahars in that area are normally poor and cannot pay for the upkeep of a dancer's family, so relationships with them are not encouraged. [Kale 2000: 59]

Harianna is too Kolhati man. He decides of uniting Kusum and her son Sanjay. So he secretly takes Kusum's son Sanjay to Bombay for giving her son back. The parents and the Kolhati community too outcaste Harianna and threatens his parents for not taking Harianna in their house.

In fact, like Mahar community, the Kolhati community too comes under the Dalit communities. Both have been the victims of atrocities inflicted on by high caste people from ages immemorial. The Kolhati people have been brutally socialized in the process. They too consider themselves superiors to Mahars and Muslims. They do not want to be corrupted with the contact of these communities. But they are humbuggers, when any high caste Patil offers money to keep their young girls as whores, then they have no problem. The fathers and brothers of the Kolhati community are money minded, beyond money nothing concern them.

Sharankumar Limbale's The Outcaste:

The Outcaste (2008) is an autobiography of Sharankumar Limbale. It deals with the starvation and poverty and atrocities inflicted on the Mahar community by high caste Patils. But it is to be noted that there are an intra caste conflicts and prejudices among themselves. The writer Sharankumar Limbale is son of Patil father and Mahar mother. In Maharwada, he is treated as an impure. He and all his sisters are from different fathers, in spite of it, his sister Nagi while quarreling with him abuses that he has no connection with them. She further says that they are not from a same father. The writer Limbale falls in love with a Mahar girl named Shewanta. In fact, it is not possible to the writer for being not a son of a

Mahar to marry with Mahar girl. In past, Rohidasmama, a boy of born not by Mahar, also tried to marry with a Mahar girl, the people from Maharwada stopped him for doing so At first thought, his grandmother Santamai consents the marriage but the next moment when she remembers the episode of Rohidasmama's. She persuades the writer by saying that: "The Mahars are a fierce people. They will cut you into pieces, and there will be no one to care us. Our house has neither a male child nor a female one to continue our lives. They will force us to sleep with them. You'd better stop your affair with Shewanta" [Limbale 2008:27].

The writer Limbale has a friend Mallya. Sonuaji, Mallya's grandmother suggests a girl for the writer. The girl belongs to sweeper family and is the niece of Janabai. On a certain day, Sharankumar and Mallya go to see the girl. But Janabai becomes angry and shouts loudly that still they have not lost their self respect to marry their girls with such bastard boy. Form this moment Limbale decides to marry with only hybrid type of girl like him. "The girl I married needed to be a hybrid like me to ensure a proper match. A bastard must always be matched with another bastard. No one else will marry their daughters to a bastard like me" [Ibid: 98]. Finally he gets married with a drunkard Maryappa's daughter Kusum, but he a number of times gets insulted by family members of his wife. The writer Limbale has a Mang friend named Arjya. He is always warned by his family members for not living with Arjya. Santamai does not allow Arjya to drink water from the vessel which they use for drinking. She also scolds the writer for drinking water from Mang's water reservoir. Santamai shouts at him and warns him, if he does not stop playing with a Mang boy, she would stop feeding him.

The Mahar Community, Like the Kolhati community, is the victim of negative socialization. They consider the Mang people as inferior to them; in fact, they live in same locality divided as Maharwada and Mangwada. It is highly shocking that they have divided the same river bank into their own separate drinking water reservoirs and restricted themselves for using the water from other side. The writer is only an educated boy from their community, but they do not ready to give their daughter to him only because he is bastard. In fact, by time to time, the Mahar women get raped and molested by Patils.

Laxman Gaikwad's The Branded:

The Branded (2005) is the story of exploitation, suppression and oppression of the Uchalya community. They are too outcaste as the Kolhati and Mahar people. They also seem to be the victims of negative socialization. Like the Kolhati community, the Panchayat plays a great havoc in the lives of the Uchalya people. The writer has no faith in the Panchayat. He opines: "I found the functioning of the Panchayat obnoxious and disgusting" [Gaikwad 2005: 120]. In this connection R.S. Jain has rightly attacked:

Jatpanchayat is a team of selected members of castes who settle the disputes of the people in the caste. It mostly played negative and at times destructive role in the overall

development of the community. Though the Panchayats were constituted with high ideals of maintaining unity and harmony in the community, they in reality created hurdles in the individual progress of ambitious men. Arbitrary decisions of members of Jatpanchayat were aimed at suppressing the dissents of the innovative youth rather than discharging their duties as impartial Judges [Jain 2006: 10]

He narrates three decisions of Panchayat and makes clear that the Panchayat has nothing to do with the justice; they just make arrangement of their expenses of wine and food through the fine collected from the clients. The Panchayat has regular sessions throughout the surrounding villages where the Uchalya people live. But the final sessions used to be held in Kavatha. The decision given at Kavatha Panchayat is considered to be final and binding to all. Shankarya is a man who marries with his own daughter. The Panchayat gives a shocking verdict. Both the husband and wife are declared as outcaste and besides his moustache to be shaved with the urine of his daughter. The narrator further states that the community too has treated Shankarya as an outcaste strictly. It shows terror of the Panchayat on the mind of people.

It is a custom in the community regarding marriage rituals that a married woman cannot tie the sacred thread to a bathing bowl if she is punished by Panchayat in her life. The narrator Gaikwad describes one incident of marriage to which his family attended at Mahalagra. One of the headmen suddenly stops Kashibai, the elder sister-in-law of Gaikwad himself and accuses that she is tainted because her grandmother was eloped with a Maratha. The quarrel starts and it reaches to the Panchayat. The decision of Panchayat is very funny: "that Kashibai should be fined twenty-one rupees and received in the community as purified. It was declared that there was no other taint in her" [Ibid: 55]. The same type of situation occurs when Gaikwad and his whole family go to attend marriage at Salagara. The marriage is being solemnized of the younger brother of narrator's sister-in-law. The Panch Maruti of Holicha Majkura objects that bride's grandmother was married with a Maratha; it would bring taint to the narrator's family. The Panchayat again gives very disgusting decision that the head of the bride's mother to be shaved.

The narrator tells that how the persons from their own community treat badly their own people when they become rich and powerful. Shamrao Guruji is the leader of the Uchalya community. He runs an Ashram Shala for the students of his community. He gets grants from the government. But the narrator himself finds that the headmaster, who is the son of Shamrao Guruji, beats the little students for demanding more food at the hostel. There is one rich lady Smt. Jadhav at Latur. The narrator goes to her for help along with his sister-in-law. The lady Smt. Jadhav shows no sign of affection even to the relatives. Gaikwad regrets: "I thought that being a rich woman of our fraternity she would have a soft corner for us. I was, however, disappointed for she drove us away" [Ibid: 93].

Conclusion:

The selected Dalit autobiographies belong to separate communities. Kale's Against All Odds (2000) deals with the Kolhati community, Limbale's The Outcaste (2008) with the Mahar community and Gaikwad's The Branded (2005) with the Uchalya community. The Kolhati people consider Mahar and Muslims as an outcaste, the Mahar community treats Mangs as low birth and dirty while the Uchalya community feel even superior to Dhobi people. The fact is that all are dalits and very badly exploited, suppressed and oppressed in the hands of high caste people. Toni Morrison and Harihar Kulkarni in the context of African American slaves opined that negative socialization and their physical suppression by White Americans made them mentally weak and in that rage the slaves badly treated their own people. The reasons provided by Morrison-- their own blackness, cultivated ignorance and self hatred and hopelessness. And by Kulkarni-- Their families were destructed by doing rapes, lynching, flogging, branding and assigning menial jobs. That negative socialization at physical level disturbed their mental order and they sometimes blindly followed the high caste people and had done the same atrocities of which they were the victims. All these reasons seem to be present in Dalits in more or less proportion. But so far as Indian Dalits are concerned, their problems somewhat different from black slaves. Undoubtedly Indian Dalits too have been negatively socialized. But they are highly governed by their Jat Panchayat too. In all three autobiographies, the headman or the Panchayat has a strong hold on them. The poor, uneducated people have no idea that they are being exploited even by their own people. In addition, humbugging is another fault in these people. They are stern and strict in the context of their own people but immediately surrender before high caste people. This is the tragedy that becomes the fate of them and quarrel among themselves like an ignorant armies fight at the time of night.

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IMPLEMENTATION OF 5S SYSTEM IN BIOTECHNOLOGY INDUSTRY

HIMBAHADUR THAPA*, IKRAM QURESHI, ANUJ KUMAR GUPTA,

Department of Biotechnology,
Shri Jagdishprasad Jhabarmal Tibrewala University,
Vidyanagari, Jhunjhunu, Rajasthan- 333001

*A*bstract

*5*S is that the housekeeping system which focuses on shoring, arranging, cleaning the fabric and workspace, standardising the method within the best practice way and sustaining to focussing to continual improvement. 5S is incredibly simple Kaizen technique which is able to evolve the organization to next level. Implementation of this method will allow organization to manage the work space properly. It reduces the defects and errors within the process. Cost management will allow organization to resolve the capital issues. Involvement of employees with proper training and rewarding will boost and increase the self-confidence of the staff. Systematic way of implantation the 5S system is given stepwise during this article.

Keywords: 5S, continual improvement, Cost management, Kaizen technique.

INTRODUCTION:

In nowadays, every organization within the world is searching for business increase within the kind of profit. Because of tremendous competition within the market, making margin within the product is every difficult considering increase within the risen market and customer requirement. For creating cash in on the merchandise, with reduction of waste generated during manufacture of the merchandise is extremely essential (Wazed M.A, 2009). Managing waste generated, reducing error or defects within the product, utilizing existing man power and making employees more productive is extremely essential for organization sustainability and growth. The goal may be achieved only by implementing

the tools which may manage the prevailing work environment properly. 5S is that the concept of managing work environment. World class environment is built only by implementing the system within the organization. Organization have various department like QA, QC, manufacturing, material enclosure, were house, engineering area, finish goods, scraps yard and administration cabins. Implementation of 5S system within the organization can bring the hug changes within the utilizing the work place properly, maintaining the work environment, employee's involvement and far more. The research has been conducted to implement the 5S system within the small and medium scale industry as mentioned by Aziz Wan et al. (2011). 5S is first implemented within the Toyota manufacturing unit located in Japan.

Figure 1: 5S system in detail

2. *Literature review:*

Present situation of small and medium scale industries affecting because of the dearth of product quality (Chakraborty et al. 2011). This type of industry doesn't have huge backup plans and don't have huge investors within the market. Organization is especially work on financial gain during selling the products. Organization can overcome and may get benefits after reducing the value of the merchandise together with reducing the defects within the manufacturing units. Upadhye et al. (2010) have studied and understand the character and concept of small scale industry in India. Small and medium scale organizations in India plays crucial role in growing the Indian capital. Contribution of small and medium scale industry in economy is extremely high as compare to other reasonably income. These small and med-size enterprises (SMES) are contributing more in developing economy of the country and helps to construct and built the nation's economy. P. M. Rojarsra et al. (2013) has found that SMES is one among the foremost important sectors

for generating revenue and proving jobs to people across India. The general performance of SMES industry in India for its contribution and its advantages has been discussed during this paper. Chauhan et al. (2010) have focused and shown the matter faced by the world market within the recent period. Lean manufacturing is just the thanks to survive within the business within the market. This can help organization to survive and to attain the goals as set by the organization. After implementing lean manufacturing, the general cost of the assembly reduced to certain level. The type the waste and errors within the products reduced to certain level. Employ management and time management for the method is achieved successfully. Lukas et al. (2010) has shown and mentioned the matter faced by the organization while implementing lean manufacturing within the organization. The choice of tools by keeping the view of organization needs and type of organization is discussed within the paper. Proper section of tools is extremely important as wrong selection of tools without proper knowledge will end with ruining the organization output. Kumar and Kumar (2010) has studied and represented the keys of 5S system. The way of implementing 5S within the organization and steps taken by the organization is mentioned properly. The advantages of 5S and its advantages on normal culture are mentioned properly. Gheorghe (2008) has described the advance within the manufacturing unit after implementation of 5S system. Significant changes within the organization after implementation is mentioned here. The step wise pre and post implementation is given in proper way. Khedkar et al. (2012) has given the thought of implementation of 5S within the industry. The correct use of tool and its advantages are explained. Changes organization faced after 5S implementation is discussed here.

3. *Company background*

This company is one of the leading companies in India in the field of biotechnology. The company is mainly focusing on manufacturing of the biological drugs which are used to cure the disease. 80% of the company business is thorough export and only 20% is distributed in local markets. So keeping the view of market requirement and customer need, the implementation of 5S is essential act to manage the work environment and to maintain accordingly. Implementation is mainly focused in engineering area.

4. *Problem statement*

As organization is leading in the production and distribution of bio-pharmaceutical products to maintain its standard and to sustain in the market it's very important to manage internal environment. Problem observed during the activity required too much time to search the material during performing activity. Required and non-required materials are not sorted properly. Work space is not properly organized.

5. *Implementation methodology:*

5.1 *Seiri*

Seiri is that the first stage of the concept 5S. It involves with the sorting of things in one work area. The teams are set which are answerable for removing all the things from the realm in one place. The fabric which don't required for any of the method should remove from the realm. The materials are classified pro required and not required material. This could help the operator to spot the fabric which is required and are important. Further materials are classified as needed a not required material. This could help the operator to spot the fabric which is vital and required. Later materials are classified as frequently used material and not frequently used items. Non-frequently used items are placed far from the operator. This may help operator to search out the correct items at right time. This can save time spend in searching and work place remains clean.

Benefits of seiri

1. Improves work place
2. Cost saving
3. Problem solving
4. Proper organization of work space
5. Elimination of waste

5.2 *Seiton*

This is the method of setting the sorted items so as. After removal of unwanted material, the wanted and required materials are set so as or arrange as per process compatibility. Sorted material is organized properly which may be easy for the operator to seek out the fabric, use it and again place within the proper place. Efficiency of the method is often increased by this system. The main target of this activity is to avoid wasting the valuable time of labour and focus more on their operations. Use of proper material which might visualize properly. Proper marking of floor will helps to spot the world. Proper colour coding of machines, equipment's, and instruments are incorporated.

Benefits of seiton

1. Save time of searching material
2. Easily identified of material
3. Increase efficiency of work
4. Controls inventory

5.3 *Seiso*

This is the method for cleaning the sorted items. All the desired material shall be clean to shine and should look new. Cleaning should be done from all the areas which

reduce non-compliance of the fabric. The errors within the machine like leakage, rusting, chipping, dent, bending, breakage will be identified and may be controlled. Regularly cleaning of the work environment will increase efficiency. Cleaning should be daily habit of the staff and may be clean on regular internal of your time. Regular cleaning will help them to spot the defects and elimination of breakdown.

Benefits of seiso

1. Work place will remain clean
2. Efficacy of machine increases
3. Elimination of errors and defects
4. Elimination of accidents and incidents
5. Motivations to the employees as area is clean
6. Increase life of machine
7. Environment become safe
8. Reduction of waste

5.4 Seiketu

This is the process to ensure all the 3S have been properly implemented and now it's standard. The processes which are followed in one area shall be followed by entire organization. Colour code given to specific kind of files should be uniform to entire organization to avoid confusion. This process ensure that first 3S has been implemented successfully.

Benefits of Seiketu

1. Standard process aligned to the entire department
2. Proper and classified work environment
3. Reduced breakdown
4. Improve work area visually

5.5 Shitsuke

This is the final stage of 5S. This is the process of sustaining all the 4S and check whether all the 4S have been followed or not. Continual improvements of the system are achieved. Maintaining the cleanliness and conducting the audit of 4S. Proper training to the employees about 4S.

Benefits Shitsuke

1. Involvement of employees helps to boost the moral value of employee.
2. Positive work environment
3. Proper organized work culture

6. *Results:*

The overall productivity of the organization has been increase because of implementation of 5S system. Employees and operations time is saved which was spent in searching the fabric. Because of proper arrangement of workspace, much space is saved and area becomes specious. Detrition of inventory is reduced to certain level because of timely cleaning and visual inspection of fabric. Because of unorganized area, required material wasn't entering into time so plenty of new materials were procured unwantedly. Proper organization results in monitory save. Involvement of top management and employees from the bottom level has built up the commination channel and boosted their moral values. Changes after implementation of 5S are as follows.

Figure 2: Before and after implementation of 5S, Place 1

Figure 3: Before and after implementation of 5S, Place 2

7. *Conclusion:*

The aim of the research is to implement the 5S system in the organization. After implementation, it is concluded that 5S housekeeping tools proved to be very effective. This tool has managed the work space in proper organized way. Lots of time were reduced and saved which were spending in searching the items due to proper organization. Procurement of unwanted material reduces upto certain limit. Proper clearing reduce the material defects and appropriate corrective and preventive action is initiated within the time. Moral values increased due to involvement of employees and rewarding.

Acknowledgement

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IMPACT OF DIGITAL MEDIA ON BARTER DEALS

TARU GUPTA (RESEARCH SCHOLAR)

Ph.D. in Management,

Shri Jagdishprasad Jhabarmal Tibrewala University

DR. HARISH PUROHIT (RESEARCH GUIDE)

Shri Jagdishprasad Jhabarmal Tibrewala University

Abstract

*C*omputerized Marketing thought starting from the period of the trade framework, bit by bit advanced into creation and deals directions, with more noteworthy accentuation on the procedure, quality, and selling of items. From there on, consumer loyalty as a fundamental part of the key choice procedure involves a huge situation among different Digital Marketing exercises. This paper plans to address the insufficient exploration contributions on deciding the time-explicit developmental importance of Digital Marketing thought revealing into the basic parts of each Digital Marketing idea, particularly those with consumer loyalty as a measurement in the estimation build.

1. *INTRODUCTION OF BARTER DEALS*

Barter deals, which occur frequently not only in backward areas of under-developed countries but also as a mechanism of international trade among several countries due to their economic and trade policies or new forms of emerging international relations, have given birth to well-planned and quite sustainable efforts in the context of Digital Marketing thought (Doole and Lowe, 2002). Thus, today Digital Marketing is not confined to initial forms of limited barter system; rather, it has become a strong instrument in removing all kinds of trade barriers the world over to strengthen the ongoing process of global business. In this context, the discipline of Digital Marketing integrates the whole of world into a business village, i.e. under the regime of the WTO, Digital Marketing inputs have become a linking pin between the developed countries and the rest of the world (Levitt, 1983), thus

giving new shape to market thought. Even within the developed, developing, or underdeveloped countries, Digital Marketing has made tremendous progress, leading to the emergence of trade groups like the European Union, the Central European Free Trade Association, the Asia Pacific Economic Co-operation, the Association of South East Asian Nations, the North American Free Trade Agreement, the Economic Community of West African States, the United States-Canada Free Trade Area, the South Asian Association for Regional Cooperation, the G-3 (Colombia, Mexico, and Venezuela), the G-7, the G-15, the G-77, etc. (Cateora, 1997; Keegan, 2002). In fact, Digital Marketing thought, i.e. efforts of both researchers and industry in the forms of conceptual orientation and accordingly the business actions after having passed through a long and meaningful journey has reached a new and vibrant stage of service dominant approach.

In this backdrop of its evolutionary journey originating from the economics of self-sufficiency, today Digital Marketing has become a holistic character to meet the aforesaid vibrant global business challenges and opportunities. Thus, now it utilizes disciplines like psychology – to study buyer behavior, human motivation, and perception (Maslow, 1943); sociology – to understand interpersonal trust and long-term buyer-seller relationships (Dwyer et al., 1987); statistics – to research into market potential, product design preferences, and socio-economic profiles of different target markets; law – to represent a society's value and legal frameworks; anthropology – to study the buyer's physical character, historical and present geographical distribution, social classification, group relationships, and cultural history; and economics – to understand market dynamism in order to adopt different strategic positions. Though it emerged as an independent and indispensable discipline in the USA in 1930s, and all the aforesaid developments have made it a dominant identity of all types of enterprises everywhere around the globe (Stanton et al., 1994). Thus, accordingly it has become a most sought after subject of study in college level business education due to its time tested socio-economic relevance. Therefore, before dwelling appropriate Digital Marketing efforts in a given situation, it is desirable to understand early contributions in Digital Marketing thought relevant to an earlier business environment.

2. *EARLY CONTRIBUTIONS OF DIGITAL MEDIA ON BARTER DEALS*

Digital Marketing, which emerged from different disciplines (Converse, 1945), has evolved, developed, and expanded significantly from its original focus on the distribution of goods (Meinert et al., 1993) to the total business concept (Drucker, 1982). Initially Digital Marketing thought got influenced by the significant contribution made by Richard T. Ely, the first director of the School of Economics at University of Wisconsin (1892), and Edwin Francis Gay, the first Dean of Harvard Business School (1908) (Jones and Monieson, 1990). At the University of Wisconsin, under the well-known institutional economists Ely and John Commons, historical, statistical, and descriptive studies of Digital Marketing problems such as efficiency in the Digital Marketing process,

distributive justice, and the basic functions of Digital Marketing were emphasized by early Digital Marketing scholars such as Edward Jones, Henry Taylor, Benjamin Hibbard, and James Hagerty. At Harvard, German-trained economists such as Edwin Gay and Frank Taussig stressed the role of Digital Marketing philosophy in the actual efforts made by the companies in the cases they used in their teaching, which got developed, popularized, and later considered to be one of the most important pertinent concepts in the early development of the Digital Marketing discipline both in theory and practice (Converse, 1945). The ideas and teachings of economics at University of Wisconsin and Harvard University were examined to identify the methodological, philosophical, ideological, and pedagogical assumptions originating from industry that had influenced early Digital Marketing scholars. University of Illinois (1902), New York University (1902), Ohio State University (1905), University of Pittsburgh (1909), and the Harvard Business School (1908) were the earliest American Universities to offer Digital Marketing courses (Hagerty, 1936). The University of Michigan was the first to offer a course in Digital Marketing in 1902, followed by the Wharton School at the University of Pennsylvania (1904), and Ohio State (1905) (Weld, 1941). Bartels (1951) opined that the idea to start Digital Marketing as a course was floated by Edward D. Jones, Simon Litman, George M. Fisk, and James

E. Hagerty in Michigan (1902), California (1903), Illinois (1903), and Ohio State (1905), respectively. In this context, Arch W. Shaw was the first to formulate a set of Digital Marketing functions and to suggest their value in the analysis of market operations (Converse, 1945) and Ralph Starr Butler was the first to use the term "Digital Marketing" for his text (Bartels, 1951).

Digital Marketing, thus, emerged as a separate discipline in the early 1900s (Meinert et al., 1993), where the initial interest of the pioneers was the result of three types of influences: youthful experiences, academic stimuli, and occupational demands (Bartels, 1951). On the basis of their experiences, Digital Marketing thinkers developed definitions of Digital Marketing, which can be classified according to four viewpoints: economic utility (in the mid 1910s; a commodity, channels, and functional perspective); societal (in the 1930s; a macro Digital Marketing perspective); consumer (in the 1950s; a buyer's perspective); and the managerial viewpoint (in the 1950s; a seller's perspective; Cooke et al., 1992). The modern era of Digital Marketing recognized its role in creating utility or satisfaction.

Alderson (1957) was the first and perhaps the only Digital Marketing scholar who modified and extended economic theory to meet the needs of Digital Marketing students and practitioners. Although he was widely recognized as a brilliant and creative thinker and regarded as the founding father of the interdisciplinary approach to the study of Digital Marketing, his writing has been criticized for its confusing terminology (Sheth and Gross, 1988), a lack of close reasoning, and poor development of concepts (Barksdale, 1980). Alderson (1957) relied on a "value-in-use" reasoning. Further, he advised, "what is needed

is not an interpretation of the utility created by Digital Marketing, but a Digital Marketing interpretation of the whole process of creating utility" (Alderson, 1957, p. 69). In fact, Alderson shifted the focus of the Digital Marketing discipline from a macro functions-institutions-commodities framework to a micro Digital Marketing management paradigm. He introduced the "functionalist theory" of Digital Marketing to represent a systems approach to the study of Digital Marketing, wherein he believed that theory and practice must go together hand-in-hand (Lusch, 1980). In addition, Bartels's (1962, 1976, 1988) book on the History of Digital Marketing Thought deliberated the meaning of Digital Marketing, and discussed early theories of Digital Marketing and the beginning of Digital Marketing thought, as well as a number of special areas of Digital Marketing thought, such as advertising, sales management, retailing, and Digital Marketing research.

3. *Rationale for theoretical framework*

Academic-industry interactions and collaborative efforts have resulted into a metamorphic shift from one school of Digital Marketing thought to another, thereby introducing significant changes leading to sustainable growth and competitiveness for long-term success in business. In this regard, three issues need to be addressed:

1. What determines the needed level and nature of Digital Marketing orientation in the case of a particular industry?
2. Should all companies adopt the latest Digital Marketing thought in their practices along with the associated innovative changes?
3. How have academics and industry kept pace with the aforesaid changes?

A viable rationale for deliberating on this topic is the fact that heretofore only limited endeavor has been made to investigate the underlying framework of Digital Marketing concepts, particularly in consolidated and interlinked form. In fact, this attempt will provide an opportunity to academicians and practitioners to contemplate how and when different situation specific strategic Digital Marketing efforts emerged. It will facilitate a general understanding and knowledge about the application of various Digital Marketing concepts in a more coordinated and cohesive manner. For example, management scientists take up Digital Marketing efforts in their total quality management (TQM) programs or even in customer relationship management (CRM) in the same way that these issues are handled by Digital Marketing experts using different terminologies like product orientation and relationship Digital Marketing (RM), respectively. Thus, it indicates the necessity of implementing Peter Drucker's total business concept of Digital Marketing through integrated, unified, and concerted efforts without any tug of war over jurisdictional proprietary of the various functional areas of management. Further detailed conceptual analysis will aid in understanding the basic dimensions on the premise of which Digital Marketing concepts have been developed, which will provide knowledge to discriminate between two closely associated concepts, namely, Digital Marketing and market orientation. A review of previous studies on Digital Marketing will open many

exciting avenues for further research, Digital Marketing scholars will be in a position to identify unanswered questions or unquestioned answers relating to various Digital Marketing issues. It is in this context, understanding of why and how such a discipline of holistic character has drawn consistent and meaningful attention of both academics and industry; evolutionary prospective has been discussed here, under its different phases. Although the Digital Marketing literature is flooded with the text on metamorphic shifts in the Digital Marketing thought and practice for developed economies, particularly the USA and the UK, but there has been inadequate effort to study the status of Digital Marketing approaches in developing countries, especially those aspiring to become integral partners in global business. This gap in the literature has prompted our attempt to synthesize the schools of Digital Marketing thought relevant to such societies. Besides, others, India has become a central hub for exploring and catering unmet needs through a series of mergers, acquisitions, disinvestments, and privatizations in a more transparent and liberalized form in order to attract foreign direct investment. However, earlier competition was almost negligible, and concepts like "market orientation" and "customer value" were never heard. In recent years after entry barriers were curtailed by economic liberalization and global companies came into the marketplace, the advantages that well entrenched players had built up over the years have been eroded.

1. *Indian scenario*

After independence the Indian companies enjoyed a protected market with virtually no competition, and some of them even monopolized the market, with customers having little or no choice. As a result complacency set in and no pressure existed for improvement or change (Jagadeesh, 1999). However, with liberalization came increased competition and manufacturing came under pressure to improve quality, which was necessary for growth and indeed for survival (Khanna et al., 2002). Now country like India is playing a significant role in the global economy, as it is growing rapidly and is already poised to be the number two or three economy of the world. Indians want world class at Indian prices, i.e. global quality at local prices and thus, India represents a significant under served market (Prahalad, 2005). With gross domestic product (GDP) growth more than double that of the USA and UK during the past decade, and with a forecasted continued real annual growth of almost 7 percent, India is one of the world's most promising and fastest growing economies, with multinational companies eager to invest (Shukla, 2006). After the economic liberalization in 1991, Indian organizations are under great pressure to prepare and develop their human resources according to the global standards in skills, efficiency and performance for survival, sustenance and successful existence (Khandekar and Sharma, 2006). Hence, developing a critical mass of employees who are knowledgeable or skilled in a particular technology constitute a potential source of competitive advantage in the long run for them (Sharma and Khandekar, 2005). Since 1991, Indian manufacturing sector has been transforming and right sizing, improving plant uptime, productivity, quality

and general customer orientation, reducing costs and finding innovative methods of doing all these (Narain et al., 2004). It is the quality that has become the key slogan in Indian organizations as they strive for a competitive advantage in an atmosphere characterized by liberalization, globalization and knowledgeable customers. Owing to economic reforms and competition, organizations have undergone a paradigm shift from an inward-production-led philosophy to an outward-customer-focused approach (Sureshchander et al., 2002). Hence, global competition, technological change, and demanding customers are creating a more knowledge intensive, turbulent, complex and uncertain environment. Thus, any manufacturing firm, which is able to compete on all dimensions of competitive priorities such as fast delivery, high quality, low price, volume, and product flexibility is being considered as a competitive firm (Singh et al., 2007).

Today Indian market consists of 200 million adults who cannot read and thus, it provides a chance to innovate and help educate them (Prahalad, 2005). India's contribution of car production is negligible at around 0.9 percent against 20.8, 19.7, 13.1, 6.4, 5.6, 5.2, and 4.3 percent of the USA, Japan, Germany, France, Spain, Canada, and UK, respectively, (India Infoline, 2002). In the short time, since the market has been opened, the private sector companies have set a completely new paradigm of services in both life and general insurance sector (Mony, 2005). Further, the Indian retail sector is one of the biggest industries in the country with a turnover of around $180 billion and is the second largest employer after agriculture. It accounts for 10-11 percent of the GDP (Xavier et al., 2005). Furthermore, competition among auto assemblers has become intense and as a result, firms are increasingly being innovative in order to reduce costs, enhance quality and improve their performance and responsiveness to customers' demand (Saad and Patel, 2006). Owing to steady growth in the automobile sector, India is a player of little consequence in the world auto market (Khanna et al., 2002). Moreover, Indians use internet for e-mail, videogames, downloading of movies and music, teleconferencing, financial transactions, adult literacy, etc. rather than its intended use in USA (Prahalad, 2005).

Present Indian marketplace has become extremely competitive, as multinationals have stormed into the country and there are more brands available than ever before in virtually every segment of every market (Aggarwal and Singh, 2004). Thus, there is a compelling need to develop appropriate strategic Digital Marketing in the Indian perspective in the light of the paradigm shifts in Digital Marketing thought that have taken place the world over. The integration of many economies into a small business village has led to India being the most sought after destination of the Fortune 500 companies.

2. *Phases in Digital Marketing thought*

The journey of Digital Marketing thought through different phases from Barter deals to service orientations has halted at various platforms before being stationed at the newly emerged service-centric approach. In terms of monetary exchanges, the voyage started with the production concept due to the influence of market forces leading to

excessive demand for fulfilling customers' wants. With the result of intensive competition for grabbing market share, the attention of manufacturers was directed toward ensuring quality products/services. Thereafter, due to the existence of many competitors fighting for limited market, the sales concept evolved to the aggressive selling of products for which demand was less than supply. Consequently, marketers started gathering information regarding customers' needs and requirements, as a weapon to gain competitive advantage, which resulted into the introduction of customer orientation. Here, the emphasis was to gain and retain market share through high customer satisfaction. However, the use of only customer orientation without attaching due significance to competitors' movements led to the emergence of market orientation, wherein not only current but also prospective customers were the target, particularly in the context of growing consumption. After recognizing that not every customer is profitable and that all customers are not equally rewarding, the concept of RM evolved, wherein the ideas of generating trust, increasing satisfaction, ensuring commitment, and gaining loyalty have been identified as the major concepts. Finally, a paradigm shift in Digital Marketing thought has been registered with greater focus on customers in seeking greater efficiency in Digital Marketing productivity through the co-creation of products, pricing, and distribution. In fact, now Digital Marketing thought has reached a stage where the "service" perspective has been broadened to include products by recognizing that product has become merely a distribution exchange in order to avail any service (i.e. service orientation).

Almost Digital Marketing scholars (including Bell (1972), McCarthy (1979), Boone and Kurtz (1980), Hughes (1980), Enis (1980), Rachman and Romano (1980), Hartley (1983), Stanton (1984), Buell (1985), Kotler (2003), etc.) have interchangeably used the words namely, concepts, orientation, and philosophy in order to define most significant dimensions of Digital Marketing as envisaged by different business organizations. These evolutionary phases of Digital Marketing thought which passed from a production orientation to a customer-centric one (Figure 1) are discussed as under section "Production orientation."

3. *Production orientation*

Emergence of Digital Marketing on a large-scale basis started with the industrial revolution (McCarthy and Perreault, 1991) due to the market requirements of mass production, distribution, and consumption. Production-oriented Digital Marketing efforts are most suitable in a seller's market in which demand exceeds supply, such as the Indian railway system. Manufacturers produce products by focusing their efforts on physical production and technological development and do not emphasize personal and quality services (Zikmund and d'Amico, 2001) because of its irrelevance to the gap in the supply of goods in question. Under the situation, products enjoying heavy demand sell themselves (Berkowitz et al., 1994). Production-oriented firms generally aim at increasing production rather than overall effectiveness in meeting customer needs. For example, Pillsbury's

management attempted to increase output and reduce production costs through scientific improvements, because customers had to buy the products due to limited options available (Rosenberg, 1977). Hence, the product had to be made easily available in the market and at permissible price and minimum quality standards.

In the developed countries of America and Europe, production-orientation was prevalent in the 1930s when the shortage of goods relative to demand and the lack of competition resulted in a seller's market. Service markets in most countries have tended to retain a production orientation longer than that of most of goods markets due to the fact that many key services such as postal services, telecommunications, gas, electricity, and water supply have been dominated by state or private monopolies which give consumers very little choice (Palmer, 2000) due to the non-presence of competition.

Until recently the Indian Digital Marketing continued with a philosophy to produce what marketers wanted and the market absorbed it (Seth and Tripathi, 2005). An appropriate example in this regard is the Indian passport office, which is procedure oriented, harassing customers through lengthy and tedious processes (Ravichandran and Bahuguna, 2006).

Hence, the production era marked a firm focus on physical production, introduction of new technologies, and more efficient management techniques for production efficiency, with distribution left to wholesalers and retailers. The firm would offer limited product lines, conduct little or no research into customers' needs, maximize profitability by increasing production given the limited competition and excess demand (Fullerton, 1988). Therefore, mass production was the driving force for this orientation as firms had access to mass production technology, better transportation and communication facilities, greater financial resources, and more sophisticated human resources management (Sheth et al., 2000). This leads to the proposition (Table I):

P1. The greater the emphasis on techniques and technology of production, the higher the level of production orientation of a firm. Profitability

P2. The greater the focus on the quality of products manufactured/services delivered, the higher the degree of product orientation of a firm.

- ### *Sales orientation*

The sales orientation concept emphasizes selling the products through aggressive sales techniques, irrespective of consumer needs. Such a philosophy focuses on efforts to complete a single exchange agreement at a particular point of time, i.e. an immediate sale with the objective to increase short-run sales rather than to emphasize long-run profits and business partnerships. A sales orientation concept becomes more prominent during the periods when supply exceeds demand, such as during the Great Depression (1929-1933). At such a time, competition becomes indispensable, and the difficulties in reaching and convincing the market crop up and therefore focus shifts to effective salesmanship to retain

the existing market and also to explore new markets and consumers with aggressive selling (Berkowitz et al., 1994). The premise is that consumers would buy enough products only if an organization undertakes a large-scale selling and promotional effort (Zikmund and d'Amico, 2001).

In India, institutions of higher education are becoming increasingly aggressive in their activities (Umashankar and Dutta, 2007). Further, Indian small companies pursue sales maximization as their objective (Kinra, 1995).

Therefore, the sales oriented approach focuses more on discrete transactions, with communicational skills and selling techniques being the dominant features for ensuring short-term profits (Table I). In short, as firms entered the market, the resulting increase in product variety rendered mass market techniques less effective, resulting in a selling orientation (Sheth et al., 2000). Hence, the next proposition:

P3. The greater the attention towards salesmanship skills and techniques, the higher the level of sales orientation of a firm.

- ***Digital Marketing orientation***

Since 1960, the Digital Marketing orientation has occupied a significant place both in theory and practice (Kotler, 2003; Levitt, 1969; Shapiro, 1988; Webster, 1988). Its philosophy rests on the ground that a quality product will not be successful unless it is effectively developed, targeted, and marketed through the understanding of consumer needs (Boone and Kurtz, 1980). Digital Marketing orientation, which represents a management philosophy directed at pre-determining customers' wants in order to satisfy profitably (Hartley, 1983), basically attempts to carry out the Digital Marketing concept (McCarthy and Perreault, 1991). It involves three components: customer orientation, integrated organizational efforts, and enhanced profits through customer satisfaction and repeat purchases (Cunningham and Cunningham, 1981; Fox and Wheatley, 1978; Hartley, 1983; Kotler, 2003.

P4. The greater the emphasis on assessing and fulfilling customers' needs through Digital Marketing department, the higher the level of Digital Marketing orientation of a firm.

- ***Customer orientation***

Though customer satisfaction emerged as a legitimate field of inquiry in the early 1970s with the US Department of Agriculture developing an index on customer satisfaction (Pfaff, 1977), its definition by Olson and Dover (1979) received wider acceptance; they defined consumer satisfaction as a function of consumer expectations taken as a standard against which subsequent performance is measured and evaluated. Hence, disconfirmation, if any, may result in either satisfaction or dissatisfaction. Further, Woodruff et al. (1983)

found that satisfaction depends on the size and direction of the disconfirmation experience, which in turn, is related to the person's initial expectations that are:

- Confirmed when a product performs as expected;
- Negatively disconfirmed when the product performs more poorly than expected; and
- Positively disconfirmed when the product performs better than expected.

Therefore, a mismatch between expectations and performance causes a positive or negative disconfirmation, leading to an emotional reaction called satisfaction/ dissatisfaction. However, the extent to which the business firm is able to satisfy its customers is an indication of its general health and its prospects for the future, has a direct long-term impact on the future performance of the companies (Fornell, 1992).

Customer satisfaction, being an end result of customer orientation, has been measured as transaction specific (the post purchase evaluative judgment of a specific transaction; Boulding et al., 1993; Hunt, 1977; Oliver, 1977, 1980, 1993) as well as cumulative (an overall evaluation based on the total purchase and consumption experience with goods or services over time; Fornell, 1992; Johnson and Fornell, 1991). Whether discrete or continuous, satisfaction results from purchase and consumption and is associated with post-purchase phenomena such as attitude change, repeat purchase, and brand loyalty, which lead to increased profitability. While focusing on the measurement of cumulative satisfaction, LaTour and Peat (1979) explain that the comparison level is developed from prior experience with the attributes of a brand or similar brands in a product category. Further, Swan and Martin (1981) and Cadotte et al. (1982) assert that experience-based evaluations of a comparison brand are better predictors of satisfaction than evaluation using only focal brand expectations. Such a quantitative perspective of satisfaction developed by Swan and Mercer (1981) through social equity theory, affirms that the basis for comparison between expectations and performance becomes the degree of equity (cost/benefit ratio), which consumers perceive between what they achieved and what others achieved. Thus, satisfaction is an outcome of purchase and use resulting from the buyer's comparison of rewards and costs of the purchase in relation to the anticipated consequences (Churchill and Surprenant, 1982), wherein satisfaction will be low when customer preferences are heterogeneous and supply homogenous (Fornell, 1992) and comparatively higher when competition, differentiation (Fornell and Johnson, 1993), involvement or experience are high or when switching costs, difficulty of standardization, or ease of evaluating quality is low (Anderson, 1994). Similar ideology expressed by Howard and Seth (1969) confines that satisfaction level is dependent on value, where Zeithaml (1988) defined value as the ratio of perceived quality relative to price or benefits received relative to costs incurred and is based not only on current expectations but also all past as well as future or anticipated expectations. Thus, Woodruff et al. (1983) opine that the nature and amount of a consumer's experience with a set of brands are important

determinants of the satisfaction process, which are derived from personal use experience, word-of-mouth endorsements/criticisms and/or Digital Marketing efforts of companies. Further, Fornell (1992) affirms that expectations, perceived quality and value equally affect the level of satisfaction whereas Churchill and Surprenant (1982) apprehend that disconfirmation and perceived quality are found to affect customer satisfaction more than expectations. There is ample empirical support for quality as an antecedent of customer satisfaction (Anderson and Sullivan, 1993; Churchill and Surprenant, 1982; Cronin and Taylor, 1992; Fornell, 1992), which implies that customers require experience with a product to determine how much satisfied they are with it (Oliver, 1993). Henceforth, high quality leads to high levels of customer retention (Steenkamp, 1989), which in turn is strongly related to profitability (Reichheld and Sasser, 1990) and all this needs to be re-visited in the measurement of customer satisfaction.

4. *Conclusion, managerial implications, and future research directions*

Although Digital Marketing thought has traveled gradually from the earlier barter system through the concept of production orientation to the latest concept of service orientation in the developed economies, yet in many companies of underdeveloped and developing nations it has not found favor due to local conditions and different business orientations. The countries dominated by public sector thinking limited to production and/or product concepts focusing only on their domestic compulsions (for example, all public sector undertakings (PSUs)) in India all in the areas of, water, electricity, oil, gas, steel, post offices, and railways are governed by the respective central/state governments. These governmental entities enjoy a monopoly like situation and are in a position to influence market forces as they find little incentive to develop customer-focused business plans. However, modern technology has resulted in major changes due to electronic products such as audio/video players, TVs, washing machines, refrigerators, air conditioning, and computers, but manufacturers have not moved beyond a selling philosophy. Their emphasis is still on increasing sales volume to enhance revenues in the short run without focusing on the sustenance of the company's earnings by adopting a market-oriented culture. In fact, these companies lack the vision to understand the importance of adopting Digital Marketing concepts, which have far reaching impact on their overall growth, survival, and success.

With the introduction of disinvestments/privatization under the backdrop of a new international business order, Digital Marketing thought in India has changed but not significantly. However, limited competition introduced by private and foreign firms has posed challenges, and threatened the survival of PSUs, especially the services sector, may it be banking, education, hospitals, airways, and insurance, by introducing a customer-oriented philosophy. Consequently, the ideology of business process outsourcing has resulted in the introduction to RM of both forward and backward natures, which is particularly successful in B2B relations as a means of retaining profitable customers by

offering them attractive and credible packages. To a greater extent, only two/four wheeler manufacturers could ensure the availability of products according to market needs by offering a wide variety of cars and motorbikes. Thus, India has been a seller's market in most developing/underdeveloped nations, where the concept of consumerism or "the consumer is a king" has not yet made much breakthrough.

While investors and corporations have focused intensively on China, India could potentially be a bigger growth story over the long run (Wilson and Purushothaman, 2003), as it is consistently stepping up its contributions to global growth and demand (Purushothaman, 2005). India can breakthrough innovation by helping poor people get access to world class quality at affordable prices (Prahalad, 2005). Particularly discussing service sector, the future growth of insurance industry in India will largely depend on how effectively the insurers are able to come up with product designs suitable to our context and how effectively they are able to change the perceptions of the Indian consumers and make them aware of the insurable risks (Bhat, 2005). Hence, the future in life insurance is defined by the launch of customized plans to suit niche requirements, improved positioning and market communication by players and improved service levels (Krishnamurthy, 2005). Moreover, customer-focused approach that fitted in with the bank culture is a critical factor in making Bancassurance a success through ready manpower, customer database, and relationship banking of the bank to the customers of banks making insurance a value-addition and thus, in a way beneficial to both partners (Bhat and Dixit, 2005).

According to global competitiveness index 2003-2004 released by the World Economic Forum (WEF), India is ranked 56th place on the WEF's growth competitiveness index. Thus, despite many decades of prodding by pioneers and relentless competitive pressure, progress in achieving high levels of quality till the last decade was very slow (Dutta, 2007). Hence, the biggest challenge for Indian organizations today is to be competitive, not only in the country but globally also. As the Indian customer becomes more and more brand savvy-largely owing to the media exposure, quality consciousness is doomed to increase and if quality issues in the Indian industry are not addressed in time, competition might result in elimination (Rahman and Siddiqui, 2006). Owing to the difference in the performance of ISO and non-ISO organizations in terms of technology management, quality management programs, causes of poor quality and quality control techniques used, Indian manufacturers have begun to realize that quality plays a greater role in the future growth or even survival of their business (Gupta, 2000). Though efforts have been made to boost industrial development, yet much needs to be done by reducing costs, improving quality, offering more variety of products with improved services (Chandra and Shastri, 1998). Therefore, the pressure to compete in domestic market and zeal to become global sourcing base, has compelled Indian executives to start quality initiatives. A strong leadership is essential to change the mindset of people, especially about quality and maintenance (Seth and Tripathi, 2005).

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A NEW PETRIFIED DICOTYLEDONOUS BERRY FRUIT FROM THE DECCAN INTERTRAPPEAN BEDS OF MOHGAONKALAN, M.P. INDIA.

THORAT K.M, KOKATE, P.S; PUNDKAR S.V.

** Department of Botany, Dr. Manorama and Prof. H. S. Pundkar Arts,
Commerce and Science college, Balapur.
Department of Botany, Shri. Shivaji College of Arts,
Commerce and Science, Akola.
Department of Botany,
Shri. Shivaji Science College Amravati.
Email: kmthorat12@gmail.com
Email: pratikshakokate811@gmail.com*

Abstract

The present paper deals with study of fossil berry fruit was collected from Mohagaonkalan M.P,India The fossil fruit is spherical in shape, globose and flesy in nature, fruit broadly divided into fruit wall - pericarp and seeds, Pericarp thick, fleshy and seeds absent but only one chamber, pericarp made up of thin walled parenchymatous cells and central part also consist of thin walled parenchymatous tissue. The present fossil fruit shows close resemblances with family Solanaceae,

Keywords: Berry fruit ,Fossil, Mohagaonkalan, Solanaceae,

INTRODUCTION

Mohgaonkalan, M.P., India, well known fossiliferous locality belonging to uppermost Cretaceous period. There are many different type of fruits reported from Mohgaonkalan. M.P. India. But some of very few berry types of fruits of dicotyteledons and monocotyledons are reported these are - Mohgaoncarpon eydei (Yawale, 1977),

Kremocarpon indicum (Upadhye and Patil, 1978), Erythroxylocarpon intertrappea (Khubalkar, 1982) and Kremocarpon aquatica (Kate, 1974).Cucurbitaceocarpon sahani (Bobabe,2005) Bicarpelocarpon Singhpurii (Bhowal and Sheikh,2008) Portulacaceaeocarpon jamsavlii (Meshram and et al.,2011) Coffeocarpon deccani i(Dighe,2017) Lycopersicocarpon harishii (Deshmukh,2018) Momordiocarpon deccanii (Deshmukh,2019)

MATERIALS AND METHODS

The present fossil fruit specimen is collected from the fossiliferous locality. On cutting the chert, the present specimen was exposed as a petrifaction, in transverce plane. It is studied by peel method by taking serial sections of material.

DESCRIPTION

The present petrified fossil specimen is unilocular and without seeds which looks like berry fruit.

The present fossil berry fruit is spherical in shape, globose and fleshy in nature. It measures 1.4 mm in diameter.

The fruit is broadly divided into fruit wall that is pericarp and seeds. The pericarp is fleshy. There are nov seed but only one chamber is which might be containing seed. In cavity of fruit there is a presence of ill preservation of axis.

Pericarp is about 24 μ thickness and consist of thin parenchymatous cells. No further differention into epicarp, mesocarp and endocarp is seen. The seeds are not well preserved but in the centre axis like structure is seen.

The interesting features about fruit is thin walled parenchymatous tissue in the central part measures in 47.6 μ in thickness. It suggests pulpy nature of fruit.

DISCUSSION

The characteristic features of the described fruit for identification are-

- Fossil berry fruit is spherical in shape, globose and fleshy in nature.

- The fruit is broadly divided into fruit wall that is pericarp and seeds. The pericarp is fleshy.

- Epicarp is made up of thin walled parenchymatous cells and the seeds are also not well preserved.

- Interesting features about fruit is thin walled parenchymatous tissue in the central part. It suggests pulpy nature of fruit.

From the above features it confirms as fossil specinem in berry like fruit with pericarp is fleshy and parenchymatous tissue in central part. The fruit shows various degrees of resemblances to some families   having berry fruits. These families are Verbanacae, Rutaceae, Violaceae, Cactaceae, Rubiaceae, Sapotaceae, Musaceae and Solanaceae. Out of this present fossil fruit shows resemblance with family Solanaceae in many aspects (Cooke, 1958).

Comparison with modern families

In family Verbenaceae, the fruits either berry or drupe; ovary 2/4 locular with 1-2 ovules in each locule; fruit is usually a drupe, which is not seen in present fruit.

When family Rutaceae is compared with present fossil fruit it shows similarites in fruit which is usually berry but differs in number of ovules they are one to many.

Family Vitaceae shows similarities in having fruit type berry, axile placentation, but differs in having fruit with one to six chambered berry 1-2 seeds in each chamber.

In family Cactaceae placentation is parietal bearing numerous ovules while in present fossil fruit placentation is axile, hence it is different.

In family Rubiaceae berry fruit with axile placentation but differs in having ovary two to many locular.

In family Sapotaceae fruit is having 1-8 locular berry with ovule in each locule, which is different from present fossil fruit.

Musaceae family shows similarities in fruit type i.e. berry, but differs in having, trilocular tricarpellary nature with many ovules in each locule.

The present fossil fruit shows close resemblances with family Solanaceae, which has berry fruit and some specimen shows axile placentation.

Hence, from the above described characters, structure of the present fossil fruit should be close to the family Solanaceae. Therefore, this fruit is being tentatively assigned to the family Solanaceae.

Comparison with fossil fruits

Kremocarpon aquatica (Kate, 1974; Chitaley and Kate, 1975). It is fibrous berry epicarp fleshy mesocarp is fibrous with vascular suppley having unilocular with three seeds and parietal placentation. In the present fossil fruit pericarp is fleshy and parenchymatous and seeds are not seen clearly. So, the already reported fossil fruit Kremocarpon aquatica is different from present fossil fruit .

Mohgaonkalan eydei (Yawale, 1977) is unilocular, many seeded berry and globbose in shape and present fossil fruit is spherical shape unilocular but shows ill preserved of seeds of pulpy nature.

Kremocarpon indicum (Upadhye and Patil, 1978), the present specimen shows similarities in unilocular condition but differs in shape and size hence it is different from present fossil fruit.

Cucurbitaceocarpon sahani (Bobade, 2005), the present specimen shows similarities in dicotyledonous type pericarp is differentiated but differs in ellipsoidal shape with hairy outgrowth.

When present fruit compared with Coffeocarpon deccanii (Dighe,2016) it shows similarities in fruit shape and fleshy nature but differs in having thick pericap.

Lycopersicocarpon harisii (Deshmukh,2018),the present specimen shows similarities in shape ,dicotyledonous and berry fruit type but differs in not having diffentitation of pericarp in epicarp,mesocarp and endocarp.

Momordiocarpon deccanii (Deshmukh 2019),the present specimen shows similarities in berry fruit type and fleshy nature of fruit but differs in having spiny structure on pericarp and fruit wall is divided into epicarp,mesocarp and endocarp.

From the above discussion and comparison, it is observed that the fossil fruit is more or less similar to fruit of family Solanaceae. Present fossil fruit is berry showing resemblance with family Solanaceae. So, present fossil fruit is tentatively asigned in family Solanaceae and fruit is named as Solanoceocarpon and generic name is given after the palaeobotanist Dr. L. V. Agashe.

DIAGNOSIS

Solanaceocarpon gen. nov.

Fossil berry fruit spherical in shape, globose and flesy in nature, fruit broadly divided into fruit wall - pericarp and seeds, Pericarp thick, fleshy and seeds absent but has only one chamber, pericarp is made up of thin walled parenchymatous cells and central part also consist of thin walled parenchymatous tissue.

Solanaceocarpon agashi gen.et sp. nov.

Fossil berry fruit spherical in shape, globose and flesy in nature, measures 1.4 mm, in diameter, fruit broadly divided into fruit wall that pericarp and seeds; the pericarp fleshy and no seeds but only one chamber, placementation might be axile. Pericarp is about 24 μ in thickness and consist of parenchymatous cells, no further differenciation into epicarp, mesocarp and endocarp. Parenchymatous cells of pericarp measures about 0.11 μ, the seeds are not well preserved but in the centre, axis like structure is seen. Central part of consist of parenchymatous tissue measures in 47.6 μ in thickness.

| Holotype	-	MOH/KMT/DICOT/FRUIT-IV Department of Botany ,Shri.Shivaji College,Akola
Locality	-	Mohgaonkalan, District Chhindwara, M.P., India
Horizon	-	Deccan Intertrappean Bed, India
Age	-	Upper Cretaceous

Text Fig. *Solanaceocarpon agashi*
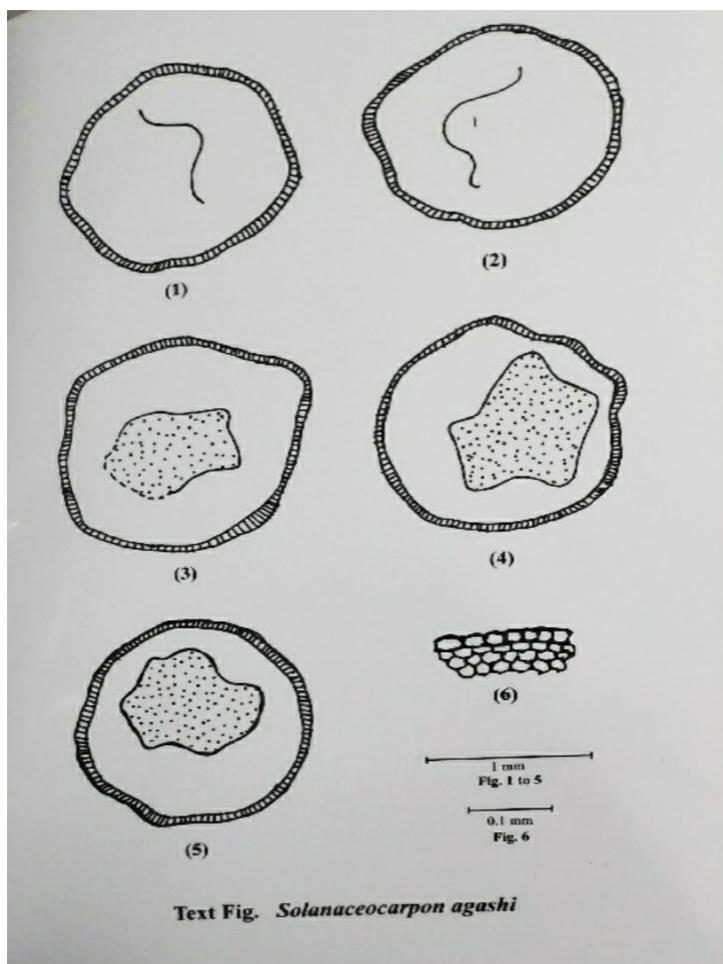
Explanation of plate figures 1 to 6

1 to 5 -Serial sections T.S . of fruit showing pericarp and parenchymatous central part .

6.- Cellular details of pericarp.
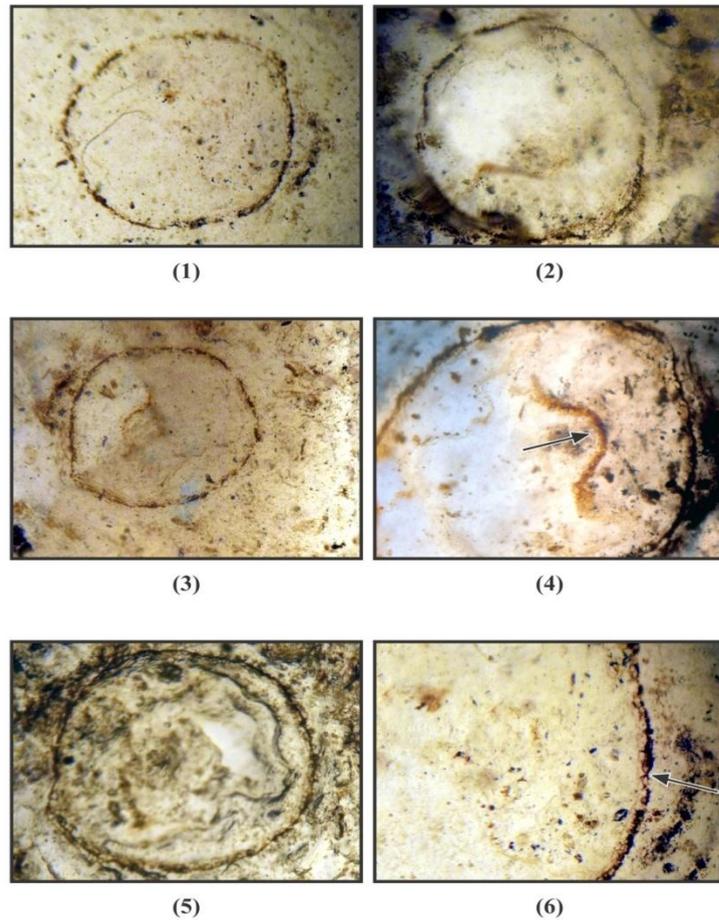
Plate Fig. *Solanaceocarpon agashi*

Explanation of plate figures 1 to 6

1,2,3 and 5 -Serial sections T.S . of fruit showing pericarp and parenchymatous central part x20

4.-T.S. of fruit showing parechymatous tissue x40

6.- Cellular details of pericarp. X 100

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EUTHANASIA OR RIGHT TO DIE: A CRITICAL ANALYSIS

DR. SURESH G. SANTANI

Assistant Professor, GJ Advani Law College, Bandra W, Mumbai

sureshsantani@rediffmail.com Mob. No. 8149990541

The denial of a right to die would imply a 'duty to live', no matter what the horrible condition of that life might be.

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*A*bstract

*I*n current scenario of twenty first century 'Euthanasia' is one of the most puzzling issues which the courts and legislatures all over the world are facing. The word 'Euthanasia' is derived from the Greek words 'eu' and 'thanotos' which literally mean "good death". It is otherwise also described as mercy killing. The general legal position all over the world seems to be that active euthanasia is illegal unless there is legislation permitting it whereas passive euthanasia is legal even without legislation provided subject to certain conditions and safeguards to be maintained. Recently in the case of Common Cause (A Regd. Society) vs Union Of India decided on 9 March, 2018 the Supreme Court of India held that a person in persistent vegetative state can opt for passive euthanasia and that a person can execute a living will to refuse medical treatment in case of a terminal illness.

> ### *Euthanasia, Physician assisted dying, Active and Passive Euthanasia:*

Euthanasia is of two types i.e. active and passive. Active euthanasia entails the use of dangerous substances or forces to kill a person or taking specific steps to cause the patient's death, such as injecting the patient with some toxic substance, e.g. sodium pentothal which causes a person deep sleep in a few seconds, and the person instantaneously and painlessly dies in this deep sleep or a lethal injection given to a person with terminal cancer who is in terrible pain.

Passive euthanasia is usually defined as withdrawing medical treatment with a deliberate intention of causing the patient's death. For example, if a patient requires kidney dialysis to survive, not giving dialysis although the machine is available or denying food to a person in coma or patient in permanent vegetative state (PVS) will be passive euthanasia. Similarly, if a patient is in coma or on a heart lung machine, withdrawing of the machine or not giving life saving medicines like antibiotics in certain situations will ordinarily result in passive euthanasia.

There can be further categorization of euthanasia i.e. voluntary euthanasia and non voluntary euthanasia.

1. Voluntary euthanasia is where the consent is taken from the patient.
2. Non voluntary euthanasia is where the consent is unavailable e.g. when the patient is in coma, or is otherwise unable to give consent.

Logically one can say that there is no legal difficulty in the case of the former whereas the latter imposes numerous problems.

Sometimes a distinction is drawn between euthanasia and physician assisted dying. Here the difference being in who administers the lethal medication. In euthanasia, a physician or third party administers it, while in physician assisted suicide it is the patient himself who does it, though on the advice of the doctor. In many Countries/States the latter is legal while the former is not. Active euthanasia is a crime all over the world except where it is permitted by legislation. In India active euthanasia is illegal and a crime[1], even the physician assisted suicide is a crime[2] .

> ## *Permanent Vegetative State (PVS):*

No doubt causing someone's death with free consent provides a platform to rethink about its validity. However logically speaking the position of person who is not able to give his consent for anything due to illness i.e. permanent vegetative state (PVS) should be judged on different approach in comparison of those who can give their free consent.

The distinctive feature of PVS is that the brain stem remains alive and functioning while the cortex has lost its function and activity. Certain safeguards[3] are expected to be observed before composing the life support for such patients such as –

1. Every effort should be made at rehabilitation for at least six months after the injury;
2. The diagnosis of irreversible PVS should not be considered confirmed until at least twelve months after the injury, with the effect that any decision to withhold life prolonging treatment will be delayed for that period;
3. The diagnosis should be agreed by two other independent doctors;

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[1] Section 302 or Section 304 Indian Penal Code, 1860 (Murder / Death caused without intention).
[2] Section 306 Indian Penal Code, 1860 (abetment to suicide).
[3] A Paper on Treatment of Patients in Persistent Vegetative State issued in September 1992 by the Medical Ethics Committee of the British Medical Association

4. Generally, the wishes of the patient's immediate family will be given great weight.

➢ *__Whether right to die should be legalized?__*

As in India we do not have any express law[4] for legalization of such crucial aspect. But before answering this question following aspects have to be studied in dept.

• *__Answers of Basic questions:__* Why is suicide committed? Does suicide produce adverse sociological effects? Is suicide against public policy? Does commission of suicide damage the monopolistic power of the State to take life? Why a particular act is is treated as crime? Is suicide a non-religious act? Is suicide immoral? Etc.

• *__Meaning of Life[5]:__* Life is not mere living but living in health. Health is not the absence of illness but a glowing vitality the feeling of wholeness with a capacity for continuous intellectual and spiritual growth. Physical, social, spiritual and psychological well-being are intrinsically interwoven into the fabric of life.

• *__Indian mythology:__* Lord Rama and his brothers took Jalasamadhi in river Saryu near Ayodhya; history says Buddha and Mahavira achieved death by seeking it; modem history of Independence says about various fasts unto death undertaken by no less a person than Father of the Nation, whose spiritual disciple Vinoba Bhave met his end only by going on fast.

• *__Moksha -__* There is a moral right to terminate his life, because death is simply changing the old body into a new one by the process known as Kayakalp, a therapy for rejuvenation.

• *__Three basic objects of law:__*
1. "Harm-to-others" is what ought to be prevented by law.
2. Law should aim to establish minimum and not maximum standards of behaviour showing respect for tolerance and privacy.
3. Only the universal values merited legal support and not those which fluctuate according to fashion.

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[4] "Medical Treatment to Terminally ill Patients (Protection of Patients and Medical Practitioners) Bill 2006" was proposed but could not adopted as Act.
[5] View of Dr. M. Indira and Dr Alka Dhal under the caption "Meaning of Life, Suffering and Death" as read in the International Conference on Health Policy, Ethics and Human Values held at New Delhi in 1986.

- *Is it against public policy?:*

The term public policy is not capable of a precise definition and whatever tends to injustice of operation, restraint of liberty, commerce and natural or legal rights; whatever tends to the obstruction of justice or to the violation of a statute and whatever is against good morals can be said to be against public policy. These decisions have also pointed out that the concept of public policy is capable of expansion and modification[6]. In this context, saying the right to die is against public policy is not easily justifiable.

- *Role of family:*

The importance of role of family or next friend for once well-being is a settled fact. But the possibility of mischief being done by relatives or others for inheriting the property of the patient can not be denied. If such things are left solely to the patient's relatives or to the doctors or next friend to decide whether to withdraw the life support of an incompetent person there is always a risk that this may be misused by some deceitful persons who wish to succeed to or otherwise snatch the belongings of the patient. At the same time low ethical levels existing in our system and the extensive commercialization and corruption are also considerable issues. Hence giving vast power to the desires / discretion of the parents, spouse, or other close relatives or next friend of the incompetent patient and also giving due weight to the opinion of the attending doctors to decide whether to discontinue the life support or not is not fair all the times.

- *Position in India:*

In the first case[7] on 'euthanasia', the Supreme Court, made it clear that passive euthanasia is permissible in our country. But it would be subject to the safeguards and guidelines to be observed in the case of a terminally ill patient who is not in a position to signify consent on account of physical or mental predicaments such as irreversible coma and unsound mind. It was laid down that:

1. A close relation or a 'surrogate' cannot take a decision to discontinue or withdraw artificial life sustaining measures.
2. The High Court's approval has to be sought to adopt such a course.
3. The High Court will have to obtain the opinion of three medical experts. The court laid down the further procedure to be adopted by the High Court.

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[6]Bhagwant Genuji Girme v. Gangabisan Ramgopal35; Mafizuddin Khan Choudhury v. Habibuddin Shekh : AIR 1957 Cal 336; AIR 1940 Bom 369: 42 BLR 750: 191 IC 806; Kolaparti Venkatareddi v. Kolaparti Peda Venkatachalam : AIR 1964 AP 465: (1964) 1; Andh WR 248 and Ratanchand Hirachand v. Askar Nawaz Jung: AIR 1976 AP 112: ILR (1975) AP 843 :(1975) 1 APLJ (HC).

[7]Aruna Ramchandra Shanbaug vs. Union Of India & Ors [(2011) 4 SCC 454]

[8] The doctrine of Parens Patriae (father of the country) had originated in British law as early as the 13th Century. It implies that the King is the father of the country and is under obligation to look after the interest of those who are unable to look after themselves. The idea behind Parens Patriae is that if a citizen is in need of someone who can act as a parent who can make decisions and take some other action.

4. The Supreme Court also explained the doctrine of 'Parens Patriae'[8]. Apex Court observed that Article 226 of the Constitution gives ample powers to the High Courts to pass suitable orders on the application filed by the near relatives or next friend or the doctors/hospital staff seeking permission to withdraw the life support to an incompetent patient.

➤ *Foreign Provisions:*

To have a global idea over the current topic we have to see few relevant foreign provisions. Though the countries like U.K., Spain, Austria, Italy, Germany, France, etc. in none of these countries euthanasia or physician assisted death is legal. Still few countries are having statutory provisions towards conditional legalisation of euthanasia.

1. *Netherlands:*

There Euthanasia is regulated by an express law i.e. the 'Termination of Life on Request and Assisted Suicide (Review Procedures) Act', 2002. It states that euthanasia and physician-assisted suicide are not punishable if the attending physician acts in accordance with the criteria of due care. These criteria concern the patient's request, the patient's suffering (unbearable and hopeless), the information provided to the patient, the presence of reasonable alternatives, consultation of another physician and the applied method of ending life. To demonstrate their compliance, the Act requires physicians to report euthanasia to a review committee. It legalizes euthanasia and physician assisted suicide in very specific cases, under very specific circumstances. The procedures codified in the law had been a convention of the Dutch medical community for over twenty years. The law allows a medical review board to suspend prosecution of doctors who performed euthanasia following laid down conditions. Few conditions are like –

1. The patient is suffering is unbearable with no hope of improvement.

2. The patient has requested for euthanasia, consent must be voluntary and persist over time i.e. the request cannot be granted under the influence of others, psychological illness, or drugs.

3. The patient must be fully aware of his/her condition, prospects and options.

4. There must be consultation with at least one other independent doctor who needs to confirm the conditions mentioned above.

5. The death must be carried out in a medically appropriate fashion by the doctor or patient, in which case the doctor must be present.

6. The patient is at least 12 years old (patients between 12 and 16 years of age require the consent of their parents).

7. The doctor must report the cause of death to the municipal coroner in accordance with the relevant provisions of the Act.

8. A regional review committee assesses whether a case of termination of life on request or assisted suicide complies with the due care criteria. Depending on its findings, the case will either be closed or, if the conditions are not met, brought to the attention of the Public Prosecutor.

The legislation contains clear recognition of the validity of a written declaration of the will of the patient regarding euthanasia. Such declarations can be used when a patient is in a coma or otherwise unable to state if they wish to be euthanized.

2. *Switzerland:*

Switzerland has an unusual position on assisted suicide. It is legally permitted and can be performed by non-physicians. However, euthanasia is illegal. Article 115 of the Swiss Penal Code, which came into effect in 1942, considers assisting suicide a crime if, and only if, the motive is selfish. The Code does not give physicians a special status in assisting suicide; although, they are most likely to have access to suitable drugs. Ethical guidelines have cautioned physicians against prescribing deadly drugs. Switzerland seems to be the only country in which the law limits the circumstances in which assisted suicide is a crime, thereby decriminalising it in other cases, without requiring the involvement of a physician. Consequently, non-physicians have participated in assisted suicide. However, legally, active euthanasia e.g. administering a lethal injection by a doctor or some other person to a patient is illegal in Switzerland (unlike in Holland where it is legal under certain conditions).

3. *Belgium:*

Belgium became the second country in Europe after Netherlands to legalize the practice of euthanasia in September 2002. The Belgian law sets out conditions under which suicide can be practised without giving doctors a licence to kill. Patients wishing to end their own lives must be conscious when the demand is made and repeat their request for euthanasia. They have to be under 'constant and unbearable physical or psychological pain' resulting from an accident or incurable illness. The law gives patients the right to receive ongoing treatment with painkillers; the authorities have to ensure that poor or isolated patients do not ask to die because they do not have money for such treatment. Unlike the Dutch legislation, minors cannot seek assistance to die. In the case of someone who is not in the terminal stages of illness, a third medical opinion must be sought. Every mercy

killing case will have to be filed at a Special Commission to decide if the doctors in charge are following the regulations.

4. *United States of America:*

Active Euthanasia is illegal in all states in U.S.A., but physician assisted dying is legal in the states of Oregon, Washington and Montana.

- *Oregon:* Oregon was the first state in U.S.A. to legalize physician assisted death. Under the Death With Dignity Act 1997, a person who sought physician-assisted suicide would have to meet certain criteria's like one must be an Oregon resident, at least 18 years old, and must have decision making capacity. The person must be terminally ill, having six months or less to live. The person must make one written and two oral requests for medication to end his/her life, the written one substantially in the form provided in the Act, signed, dated, witnessed by two persons in the presence of the patient who attest that the person is capable, acting voluntarily and not being coerced to sign the request. Few other conditions are also prescribed including providing Counseling if the patient is suffering from depression or a mental disorder which may impact his judgment.

- *Other States in U.S.A.:* At Washington the Washington Death with Dignity Act, 2008 and at Montana their Supreme Court held that there was nothing in Montana Supreme Court precedent or Montana statutes indicating that physician aid in dying is against public policy. In no other State in U.S.A. is euthanasia or physician assisted death is legal.

Conclusion: In India where adultery is no more an offence, triple talaq has been declared unconstitutional, third gender, affirmed with the fundamental rights and status of Lesbian, Gay, Bisexual, and Transgender have been recognized, now the time demands relook at the right to die with dignity.

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ROLE OF INSURANCE INTERMEDIARIES IN INCREASING INSURANCE PENETRATION IN INDIA

MRS. APARNA SANJAY GER

RESEARCH SCHOLAR

UNIVERSITY OF MUMBAI

Email ID: aparnager@rediffmail.com

Presenter: Mrs. Aparna Sanjay Ger

Subject Area: Commerce

Abstract

*I*nsurance penetration in India is one of the lowest at 3.69%, according to Annual report by IRDAI (as on 23rd Feb 2019). In India Insurance policies needs strong marketing in order to be purchase by the general public. Most surveys show that financial literacy is still poor in India. The Standard and poor survey from 2014, showed in its report that still 76% of adults in India do not have any proper financial planning i.e. people lack financial planning basics. Most of the insurers design their products as per the need and requirements of the consumers and obtain approvals. And to sell their products in the market these insurer needs various intermediaries, who act as a bridge between the seller and the buyer. Intermediaries play very important role in Insurance market. In India these intermediaries are, 1) Individual agents2) Corporate agents3) Banc assurance (banks as corporate agents) 4) Insurance Brokers5) Direct channel 6) Micro insurance agents7) Distance marketing channels 8) Web aggregators 9) Insurance Marketing Firms. Based on consumer requirements as markets evolved, insurers, with Regulators approving or Regulators themselves taking initiatives in creating intermediaries, many kinds of intermediaries have come to the fore in the insurance sector. The aim of these intermediaries is to allow consumers to access and purchase products as per their suitability.

After the liberalization of an Insurance sector in the year 2000, many private players and foreign players have entered into the market and created huge competition in the Indian Insurance sector. Entry of private and foreign players in Indian insurance industries have brought tremendous transformation like innovative products, Better consumer service, greater use of information Technology, various distribution channels, Aggressive promotional strategies, multiple premium payment gateways Wider choice of products and services and thereby it has reduced the boundaries between Traditional and new insurance players. This paper attempts to examine the recent trends of leading insurers, in product development and customization of the needs of consumers in a way to reach new segments of customers and enrich the existing products. This paper would also try to understand the role and responsibilities of the insurance intermediaries in insurance penetration in India.

Keywords: Insurance intermediaries, Insurance penetration, Insurance market, IRDA.

1. <u>INTRODUCTION</u>

For Insurance intermediaries, it's very important to have good life long and trust worthy relationship with the policyholders. Advance technology is an opportunity for Insurance agents to transform their traditional roles and thereby benefit both the insurance industry and the policyholders. Over the last few years there is a huge growth in the business of insurance industry through direct channels and insurance intermediaries.

Insurance intermediaries are very important connecting link between the insurer and the end consumers. Intermediaries traditionally called, "Brokers" or "Agents" or "Producers", who offers information and other services about sale of Insurance to the consumers that, complement Insurance transaction. Insurance brokers are licensed by the IRDA and governed by the Insurance Regulatory and development Authority (Insurance Brokers) Regulations, 2002.

To target the consumers, insurance companies are using various channels to reach to the consumers. The amount of commission to be paid to Insurance Agents and Insurance Intermediaries has been decided by the Insurance Statutory and Regulatory framework traditionally. E.g. corporate agents, Insurance brokers, web aggregators, and insurance marketing firms for the penetration of Insurance business. To improve the quality of service in insurance industry in the long run it's essential to pay IRDA regulated commission charges to these Insurance intermediaries. Insurers must have approved policy of board of directors in relation to the payment of commission and rewards to insurance agents and intermediaries.

In the world of digitalization, where technology is advanced like selling online insurance products and services have become more convenient. The role of insurance intermediaries have become more challenging because consumers are more exposed to the knowledge due to advancement of technology. Today's consumer will not buy what we

convince them to buy, in fact they will buy what is most suitable to their needs. Its essential to pay fair rate of commission to the insurance intermediaries and provide them proper training to deal with the consumers and to motivate them to work efficiently towards the trend of Insurance penetration. The Insurance intermediaries' services pre sale and post sale will be of good quality if they get good amount of remuneration and commission by the Insurance Companies.

In the world of competition where all the insurance companies are facing stiff competition, the roles of insurance intermediaries are very important in selling insurance products and services to the consumers. Policyholders are highly sensitive towards the trust factor of Insurance companies. So it's essential point to be kept in mind and utmost care and efforts should be taken from insurance intermediaries to improve the service quality without any scope of complaints from policyholders.

There is large variety available in the market for Insurance products after liberalization of Insurance Industries. Sometimes it becomes difficult for consumers to understand the benefits of the insurance policies because of large varieties available in the market and it confuses the consumers and sometimes they are failure to understand the loopholes in the policies. Here insurance intermediaries play very important role in identifying the right products for their consumers and making them aware about its various benefits. The Insurance intermediaries are the major connecting link in the areas where the importances of insurance policies are not realized and still insurance penetration is low.

2. *LITERATURE REVIEW*

Lloyd's Global Underinsurance Report (October 2012) found that India's uninsured loss (% of total loss against average uninsured loss per natural catastrophe 2004-2011) would be in excess of 80%. Business Line on April 30th 2015 reported a statement from the Chief of IIB stating that 55% of vehicles plying in the country do not have the mandatory third party motor insurance. This is also echoed by the General Insurance Council Despite this motor premium more than 40% of the total premium in India. A study on cattle insurance made by NIA recently noted that even though India has 300 million cows and buffaloes, only about 6% of them are insured. Taking these forward, cattle insurance premium alone can be Re.30, 000 crores in size. Motor premium in India can double; disaster relief insurance can go up phenomenally and so on.

Balasubramanian, T.S. and Gupta, S.P. (2000) in their book on "Insurance Business Environment" explains at length the global and Indian pictures of Insurance systems. The book has explained the impact of globalization and liberalization and the challenges insurance business is facing because of liberalization and it has also focused on the importance of clear understanding on various challenges.

P.S. Palande, R.S. Shah and M.L. Lunawat (2003) Increased competition is breaking down the conventional barriers between institutions like insurance, banking,

development banking and stock market transactions. All the services are offered through one agency or by 41different entities but through one window or under one roof as an integrated package – a sort of one stop service. Sellers of various non insurance services will also try to weave in an element of insurance to cover in their transactions. Moreover, the insurance companies may no longer remain just life or non-life insurance companies.

D.Rajasekar, (2014) The SWOT analysis i.e. strengths, weakness, opportunities and threats for bancassurance has been studied. Bancassurance is a distribution model for insurance products. World bancassurance is a combination of bank insurance. Bank is a vehicle which selling different types of financial products like loans, PPF, Money Transfer, Share & debentures, deposits, etc.

3. *MEANING OF INSURANCE INTERMEDIARIES IN INDIA:*

Most of the Insurance companies in India facing tough competition after liberalization of insurance Industry and advancement of technology in product distribution to the consumers. It increased the expectations of the consumers and at the same time technology advancement created more awareness among the consumers. Considering the factor of competition and awareness the Role of Insurance intermediaries have become more challenging. So that it is expected from them to be more professional and proper knowledge about the various insurance products is essential for them. Most of the insurance intermediaries Play very important role in increasing the profit for the insurance companies with their utmost trust factor and thereby consumer satisfaction. In the world of competition where the Insurance players are trying to compete with each other, it becomes difficult for most of the insurance companies to take care of all the activities like sales and administration of insurance services. An insurance intermediary acts as a bridge between the insurance provider and the end consumer.

It was announced in the budget speech that foreign companies operating in India will be allowed to own insurance intermediaries fully. It can be an Individual Agents, Corporate agents, Banks, Brokers or any kind of insurance firms. It also includes Surveyors and third party Administrators and these intermediaries are not involved in the procurement of business. Most of the Surveyors on behalf of the Insurance companies assess losses. Third party Administrators provide services related to health insurance for Insurance Companies.

4. *TYPES OF INSURANCE INTERMEDIARIES IN INDIA:*

1. *Insurance Agents:*

Insurance agents, usually they are licensed to conduct a business on behalf of an insurance company. They operate under the term and conditions of insurance companies and they represent an insurance company. Insurance agents can be individuals, Sole proprietors. Companies and partnership.

2. *Insurance Brokers:*

Insurance brokers are full time professional intermediaries who act on behalf of potential policyholders. They represent more than one insurance company and may deal with more than one life or general insurer or both. Insurance brokers represent the customer and they are licensed by the insurance companies. Insurance brokers also provide expert advices to their customers on the insurance policies suitable for them and paid Brokerage by the firm whose policy they finally sell to the consumers.

3. *Corporate agents:*

A corporate agents are usually a firm or any company or a registered society who represents the insurance company and sell their insurance policies. Any bank can work as a corporate agents and it is referred as bancassurance arrangements or partnership.

4. *Direct channels:*

These give the insurer direct contact with the customer. Many time sales personnel are appointed to provide the product and services of insurance to the customers with higher skills of persuading consumers. Direct channels are call centers, Insurance agents, Lloyds agents, Appointed representatives, Mutual organizations etc. depends on the types of product and services.

5. *Micro Insurance Agents:*

According to IRDA regulations, District cooperative banks, nongovernmental organizations (NGO'S), Microfinance institutions (MFIs), Regional Rural, Urban Cooperative banks, Primary agricultural cooperative, Companies appointed as banking correspondents and Individual owners of kirana shops, Medical shops, Petrol pumps, and Public Call Offices in rural areas can act as Micro Insurance Agents. Data from insurance company disclosures show a majority don't have micro agents. According to the Insurance Regulatory and Development Authority's (IRDA) micro- insurance regulations, the commission is 15% of the premium in the non-life segment and 20% in the life segment.

6. *Distance Marketing Channels:*

Distance marketing channels includes every activity of solicitation (including lead generation) and sale of Insurance products, through voice Mode including telephone calling, Short messages services (SMS), electronic mode which includes e-mail, internet, Physical mode which includes direct postal mail, newspaper, magazines, bank ATMs etc. The main purpose of distance marketing channels is to give information about the insurance products and sell it to the consumers. IRDA has put out some guidelines to insurance companies in order to protect the interests of people who buy policies through such Channels.

7. *Web aggregators:*

Usually web aggregators work as a insurance intermediaries with the objective of supervising and monitoring. They maintain a website for providing a transparency in price comparison and information of products of various insurers and their services. Web aggregator's role is compiling information of various insurance policies of insurance companies and provides it on the website.

8. *Insurance Marketing Firms:*

Insurance Marketing Firms are a new distribution channel to solicit or procure Insurance products to distribute other financial products by employing individuals licensed to market, distribute and service such other financial products.

9. *Third party Administrators:*

Most of the insurance companies outsource their claims processing to third parties. A third party administrator is a company engage in providing various operational services like claims processing and employee benefits management under contract to another company.

(Source: Insurance Regulatory Development Authority of India website)
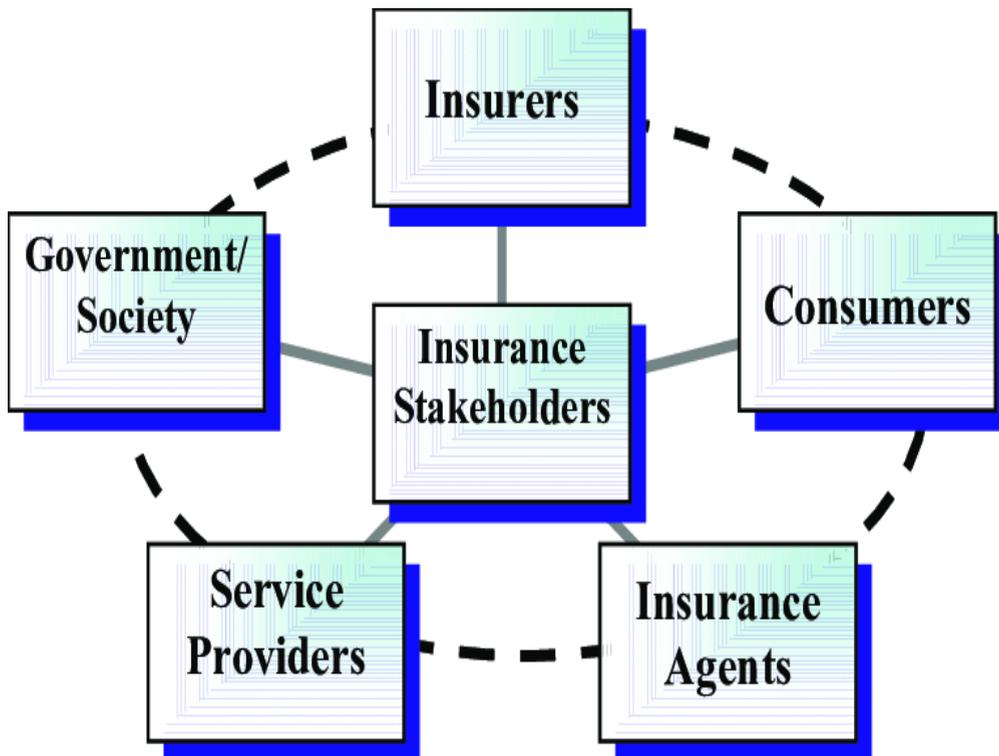
(Source: researchgate.net)

5. *ROLES AND RESPONSIBILITIES OF INSURANCE INTERMEDIARIES IN INDIA:*

Most of the businesses in India are unable to function without proper security measures. There are many risk and uncertainty involved in business to secure these uncertainties Insurance play very important role because it gives security against various risk involved in business. Insurance is the best way to solve various problems associated with uncertainty. To cover different types of risk in agriculture and the territory sectors Insurance is the great instrument. It makes various risk covered under its different policies and helps these sectors to run smoothly. The small or large all types business requires insurance policies to secure themselves from unpredicted risk.

India is highly populated country and more than two-thirds of Indian population is not covered by any Insurance because of unawareness. The potential available with insurance is largely untapped. Here the role of Insurance intermediaries gains prominence in the background of untapped potential. According to the global survey financial literacy rate is consistently low in India and there is a huge need to make financial awareness among these people to order to accelerate economic growth.

The roles of insurance intermediaries are very important in making people aware of the benefits of risk covered for life and business. The agents or the advisors and the brokers come under the banner of intermediaries. However, in strict definitional purpose, the IRDAI lists out agents, corporate agents, brokers, surveyors, TPA services, web aggregators, insurance repositories, and insurance marketing firms as the intermediaries.

As the term suggests, they are the connecting link between the insurer and the insured. They are the interpreters of insurance and their role is communicating the benefits of insurance products plays crucial role in the growth of insurance business Given the inadequate financial literacy and inclusive growth, time has come for the mediators to do the role of social entrepreneurs for spreading the gospel of insurance in the public and 'infuse the spirit of calm confidence which insurance alone can give'. In the world of competition where after liberalization of insurance industry Consumers expectations have increased and they are more exposed to technology so the information is just one click away. In this situation it is more challenging for insurance intermediaries to convince buyer to buy the insurance policies. Today consumers are more smart then before and to gain the confidence of the consumers on insurance business is a challenging task for the insurance companies. So with the regulators' approval many insurance companies taking services of insurance intermediaries to sell their products in the market.

6. *CONSUMER RIGHTS IN THEINSURANCE SECTOR:*

1. Right to information and advice

2. Right to suitability of products

3. Right to fair terms in contracts

4. Right to fair treatment

5. Right to redressal of grievances

6. Right to privacy of personal information

Customer rights should be made paramount and demonstrable by all in the sector. Mis-selling of any kind, other unethical selling/servicing practices, non-transparency of information, non-compliance to protection of policyholder interests and grievance redressal must give way to providing the customer visible cues that they are treated fairly and the relationship gives protection certitude. The culture of bad practices must be systemically cleaned up. The three curses of the insurance sector, namely denial of cover, denial of claim payment and delay in service must be addressed through necessary changes in the structures, processes and cultural practices of the industry.

7. *OBJECTIVES OF THE STUDY:*

1. To evaluate the role and importance of Insurance intermediaries in the growth of Insurance business in India.
2. To understand the responsibilities of Insurance intermediaries and their contribution in increasing Insurance penetration in country like India.

8. *RESEARCH METHODOLOGY:*

The data for the study has been collected from the secondary sources. The secondary data has been collected from the annual reports of IRDA, Insurance Journals, Insurance websites and magazines. The study has covered role of Insurance Intermediaries in Insurance Industry in India. Since the penetration of insurance business has been low, awareness of the products and services has been facing many challenges.

9. *SIGNIFICANCE OF THE STUDY:*

Actually Insurance should not be a target driven profession. Insurance can be considered as a value based social vocation. It is for the welfare of the society and the intermediary plays a very crucial role as a social cause. An agents/ brokers are a social entrepreneur. If insurance penetration is less than 4%, and percentage of people covered under insurance is less than one third of the insurable population, it tells that there is lot to be done by the intermediaries.

The model he has to design is 'merging money with motive'; in other words, do social good and earn profit also. There is no person in the world that has no needs. Each need- product/ service is interwoven with the risk; and as long as there is risk, there can be insurance. For example, the farmers are depending on loans from banks and government institutions for undertaking agricultural activities. From 2010 to 2014, the quantum of loans

sanctioned to the farmers in India has gone up from 17,835 crore rupees to 47,430 crore rupees. The numbers of farmers who have taken loans also have gone up from 958 lakhs to 3854 lakhs in the same period. The incidence of indebtedness can be had from the following figure 1.
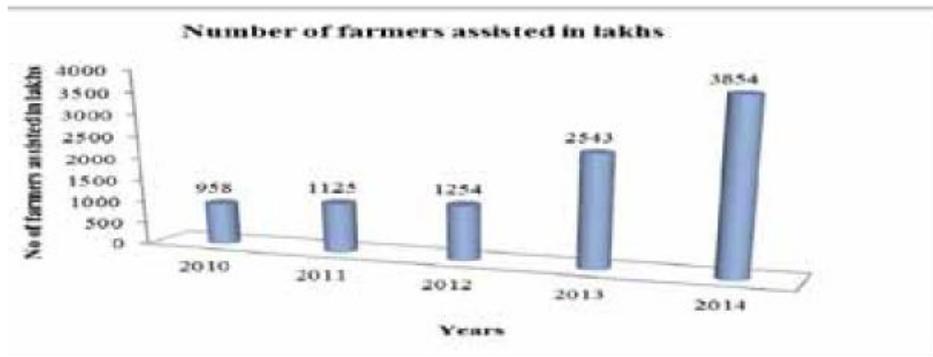
It is an acknowledged fact that the premature death of the borrower will be a liability both to banks and the dependents of the borrower. If an agent develops a system to cover all the borrowers of loans, he is doing yeoman services to the society. It is a social calling and a social responsibility. Thus identifying the individual needs of the customers and providing insurance solutions is the major role of an insurance intermediary. The insurance agent, we say, is a primary underwriter. He is the person who has seen the customer and none else, especially for non-medical policies. When non-medical business is on a growth trajectory, it is the responsibility of an agent to highlight all material information necessary to assess the risk in the moral hazard report. The interest of the organization is more important over achieving individual business targets.

Selling and servicing are two sides of the same coin and anyone ignoring this aspect is doing this at his own peril. Insurance is not a product or commodity; it is an idea or a dream. It is a promise that is payable at a future date. Again, especially with life insurance, it is a long term contract. Pushing the sale and pulling out from the preview of the customer is not what is expected by the intermediary. He has to identify the needs of the customer and sell what is needed by the customer. It is his onerous responsibility to explain the Human Life Value and try to sell neither less nor more than what is necessitated and be with the customer until the final payment is done by the insurance company. He has to assist the customer in revival, loan, alteration, modification and other related activities and display the image of friend, philosopher and guide to the customer. 'Selling gives the agent a living but servicing makes it a life'. The image makes him an unproclaimed brand

ambassador for the company for which he works and his duty is to leverage his good will in recycling all maturity claims in to new business. After all this is a social objective and the intention is to cover all family members of the policy holders.

Financial literacy is abysmally low in India and this is more pronounced with insurance. Inclusive growth becomes a mirage unless all sections of the society are drawn to the fold of insurance. The individual life insurance companies and the IRDAI are playing their part in spreading the gospel of insurance in each and every nook and corner of rural India. Their efforts get strengthened if there is a proactive force of intermediaries ready to take up the challenges. The number of people covered in a given period of time and not necessarily the premium income brought in the same period decides the success canvas of an intermediary. The role of the intermediary is to form, inform and reform the public opinion and be a brand ambassador for the organization.

10. *CONTRIBUTIONS & LIMITATIONS OF THE STUDY:*

This study is a pioneering contribution in understanding the role of an insurance intermediaries and their contribution in increasing Insurance penetration. It can be considered as an important aspect in understanding the reasons of low penetration in country like India. The data has relied on secondary data as available from IRDA, Insurance Institute of India and other industry sources.

11. *CONCLUSION:*

Despite the opening of the insurance sector in the year 2000 and the entry of a large number of players including intermediaries in the insurance sector, the penetration in the country is low and flat for general insurance, and currently declining for life insurance. Here there is a need to find out carefully what is the barrier in widening and deepening of insurance penetration in the country. Disasters such as the recent Chennai floods (December 2015) have devastated virtually every ground floor in the city, whether residential or business, disabled many motor vehicles and created serious havoc in the lives of many people. It is very essential to push insurance penetration in transformative ways to respond to the distress of repeated disasters in the country.

Insurance companies and their agencies as also brokers and banks (who can both lend money and sell insurance) need to introspect on the real triggers that motivate the customer to insure. Traditionally the Indian consumer has been 'compelled' to insure by the many financing agencies that help to create assets for the economy. Now that all financing agencies can be bonafide intermediaries and many more intermediary options are available in the market, the insurance industry must make a serious attempt to upgrade from compulsion selling to conviction selling. An insurance intermediary is a change agent in a society.

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Mrs. Aparna Sanjay Ger

A STUDY OF EMPLOYEE'S PERFORMANCE EVALUATION SYSTEM

AKANKSHA TAUNK

Mob no. 07798750204
akanksha.mis@gmail.com
akanksha.taunk@iimspune.edu.in
Head – Placements & Corporate relations,
International Institute of Management Studies, Pune

Abstract

*T*oday's working conditions demands a great deal of commitment and effort from Employees, who in turn naturally expect a great deal more from their Employers. Performance evaluation must be seen as an intrinsic part of a Manager's responsibility and not an unwelcome and time-consuming addition to them. It is about improving performance and ultimate effectiveness. Performance evaluation is a systematic means of ensuring that Superiors and their staff meet regularly to discuss past and present performance issues and agree to what is appropriate on both sides. This meeting should be based on clear and mutual understanding of the job in question and the standards and outcomes, which are a part of it. In normal circumstances, Employees should be appraised by their immediate Superiors on one to one basis .Assessment concerns itself only with the past and the present . The staff is being appraised when they are encouraged to look ahead to improve effectiveness, utilize strengths, redress weaknesses and examine how potentials and aspirations should match up. It should also be understood that pushing a previously prepared report across the desk, cursorily inviting comments, and expecting it to be neatly signed by the Employee is not Appraisal- this is merely a form filling exercise which achieves little in terms of giving staff any Positive guidance and motivation. In Interlink Capital Advisors Pvt. Ltd. my research was a "Study of Employee's Performance evaluation system" So to improve the condition it is necessary to review the performance of Employees. In this research, I had to study the current Performance evaluation system at Interlink Capital & check the effectiveness of current Appraisal system. (2019).

Keywords: Performance Evaluation, Appraisal, Management by objectives (MBO) , Superior, Subordinate, Peer, Review, Employment, 360o, Appraisal system.

INTRODUCTION

Performance Evaluation (Appraisal): Appraising the performance of individuals, groups and organizations is a common practice of all societies. While in some instances these appraisals processes are structured and formally sanctioned, in other instances they are an informal and integral part of daily Activities. Thus teachers evaluate the performances of students, bankers evaluate the performance of creditors, parents evaluate the behavior of their children, and all of us, consciously or unconsciously evaluate our own actions from time to time.

WHAT IS PERFORMANCE EVALUATION/APPRAISAL?

Performance Evaluation/ Appraisal is a method of evaluating the behavior of employees in the work spot, normally including both the quantitative and qualitative aspects of job performance. Performance here refers to the degree of accomplishment of the tasks that make up an individual's job. It indicates how well an individual is fulfilling the job demands. Often the term is confused with effort, but performance is always measured in terms of results and not efforts. A student, for e.g., may exert a great deal of effort while preparing for the examination but may manage to get a poor grade. In this case, the effort expended is high but performance is low.

In order to find out whether an employee is worthy of continued employment or not, and so "whether he should receive a bonus, a pay rise or promotion" his performance needs to be evaluated from time to time.

OBJECTIVES OF THE RESEARCH

Primary Objective

- To study the employee's performance evaluation methods in Interlink Capital advisors Pvt. Ltd.

Secondary Objectives

- To Study & analyze the effectiveness of present Performance evaluation method being followed in Organization.
- To collect feedback of Appraiser & Appraisee about the existing Performance evaluation or appraisal method.
- To collect information about the drawback/shortcomings of the performance evaluation system in place in the organization.

- To make suggestions, based on employee feedback and other information collected with a view to improve the evaluation/ appraisal system / process in the organization.

SCOPE OF THE STUDY

- This work is confined to study the evaluation/ appraisal process present in the organization. It also visualizes real time scenarios in Industry. It explores some of the merits and demerits in existing system.

- This study comprises the complete executive level staff and is exhaustive, depicting the Appraiser-Appraisee relationship and the significance of the overall performance evaluation system in the company, the research is based on the study of the attitudes of the employees towards performance evaluation. In order to understand the entire process, I initially studied the performance evaluation system where I found that appraisal is done annually.

- To study the attitudes of employee toward the performance evaluation, I have selected few numbers of employees who can represent the whole employees of the company.

RESEARCH METHODOLOGY:

The term research is composed of two words "re" & "search" which mean to search again, Research for new fact or to modify the existing fact. Research methodology is one of the important chapters which helps the researcher to do the research work in a systematic way. Research is the systematic way of solving the problem. Research is an original contribution to the existing stock of knowledge making for its achievement. Research is the pursuit of truth with the help of study, interpretation & comparison & experimenting.

In research the various steps are generally adopted by a researcher in studying research problems along with the logic behind them .In short the research is the search for knowledge through objective and systematic methods of finding solution of the problem.

Research is the process which includes defining and refining problem, formulating hypothesis or suggested solutions collecting, organizing & evaluating data; making deduction & reaching conclusion and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

DEFINITIONS:

Redman & Mar - "Research as a systematic effort to gain new knowledge".

Advance Learner Dictionary -"A careful investigation or inquiry especially through search for new fact in any branch of knowledge".

P.V. Young - "Research is nothing but an investigation of new facts or verifying old facts with help of scientific knowledge is called research".

METHODS USED:

Since it is not possible to collect feedback from all the employees working in the organization, a sample of 56 employees was selected for conducting the survey. An effort has been made to cover as many departments as possible. All major departments such as Personnel, Sales, Marketing, Finance, Training, Administration etc have been covered under the survey.

SOURCES OF DATA:

Sample method is used for data collection. The types of data collected were-

- Primary Data
- Secondary Data

Primary data: It is the data which is collected for once own research purpose. The primary data was collected through questionnaire & informal discussion & it is interpreted. The questions were framed so as to gain maximum firsthand knowledge from employees, which were analyzed in order to arrive at suitable conclusion.

1. ***Questionnaires:*** 56 questionnaires were distributed covering various departments such as Personnel, Sales, Marketing, Finance, Training, Administration etc.

2. ***Informal discussions:*** Informal discussions were held with various employees in the organization, especially in the Personnel department & the Training department. This helped me to gain additional information, not only relating to the subject of my research but also other functions and activities.

Secondary data: Secondary data were collected from past records and manual of the company, books, internet etc. It is the data already collected, which is made available for reference purposes. In my research the secondary sources used are, various files and records maintained by organization, HR manual.

COLLECTION OF DATA:

Both primary and secondary data were collected for the purpose of the research. Primary data was more useful in analyzing and finding out the drawbacks of industrial relations & disciplinary action system in the organization.

Secondary data was useful in gathering information about the history & growth of the company, the industrial relation & disciplinary action system used in the former years in the organization & the revised system that is being followed today, financial position in recent years etc.

Sample Size: I have selected 56 Appraiser (Managers) +Appraisee (Executives) for questionnaire Random

Sampling Method for my research work.

Data Analysis: Data analysis is represented by Pie Chart.

Data Instrument -

Questionnaire: Data collected from executives who were working in sales/marketing departments by taking interviews and from employees working in administration, training and related departments.

LIMITATIONS:

Employee Opinion: Employee feedback may not be 100% reliable and accurate. Sometimes, they may keep back information that may be detrimental to the image of the organization. Also some employees may fear their superiors and refrain from furnishing any negative data.

Language Barrier: Since many junior level executives working in the organization are not well-versed in English, hence questions were discussed in Hindi language with such persons and data was collected.

Time Factor: Since the time was limited, not all employees could be included in the survey. A sample of 56 employees was selected for the purpose of conducting the survey and collecting relevant data. All in all, the employees were very co-operative and helpful. In spite of their busy schedules they took time out to fill the questionnaires and provide me with additional inputs and information.

FINDINGS AND OBSERVATIONS:

1. Company did not follow the 360 degree feedback method in company.
2. Parameters of appraisals for higher-level employees are too many.
3. 33 % employees say the Performance evaluation system in INTERLINK CAPITAL is complicated.

4. Maximum number of employees considered the Performance evaluation is held on only for organization's development.

5. The Appraisee(s) also expects that their Comments and Suggestions should be taken in to account while conducting the appraisal.

6. From the survey it is evident that both the Appraiser's and Appraisee's expectation from Performance Evaluation system are the same i.e. "Determination of Promotion or Transfer" and "Salary Administration and Benefits".

7. Also a majority of Employees were satisfied with the current evaluation system although they requested for few changes.

8. Maximum number of employees says that the review of Performance is taken only once in a year.

9. 100 % employees are aware about Performance evaluation/review in Interlink Capital.

CONCLUSION:

1. One of the factor that became very clear in the course of gathering information in the organization is that majority of the employees were well aware of the system of performance evaluation followed in the organization.

2. They are well acquainted with the subject and have knowledge about the need and purpose to have a good evaluation system in place.

3. They even suggested measures to make the system of appraisal in the organization a better one.

4. Most of the employees in the organization are fairly happy with the performance evaluation system in the organization. However the system should be modified such that it should keep away from personal biases, likes and dislikes of the appraisers.

SUGGESTIONS / RECOMMENDATIONS

Company must Adopt the 360 Degree Feedback system for PA - 360 degree feedback system is a method of appraisal which is a full -circle, multi-source and multi-rated system of obtaining information from peers, subordinates and internal and external customers, about the employee's performance.

Company should reduce the Parameters of appraisals - The parameters, especially for appraising the higher-level personnel, (senior officers, deputy managers, managers etc.) are many, and need to be reduced in number. Otherwise, it becomes a long and cumbersome process for the appraiser.

Lengthy forms be done away with- Performance appraisal forms for senior officers and above is very lengthy and should be modified and made shorter and simpler.

Self-Appraisal-Self-appraisal could be introduced for employees at all levels. At present the system of self-appraisal is applicable only to personnel from middle Management.

Proper communication of Evaluation report (Feedback) - The appraisal report should be properly communicated to the concerned employee. Good performance should be appreciated so that the employee is sufficiently motivated and happy. Also shortfalls and weaknesses must be made known to the employees so that they can work on their weaknesses and perform better the next time.

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Oleocarpon Intertrappea Drupaceous Fruit from Deccan Intertappean Beds of Central India

Kokate P. S

Department of Botany, Shri. Shivaji Arts,Commerce and Science College, Akola 2

pratikshakokate811@mail.com

Dighe S. W.

Department of Botany, Shri Pundlik Maharaj Mahavidylaya, Nandura

Email: suchitadighe11@gmail.com

Mobile No. 9022449542 / 9623366548

Introduction

Mohgaonkalan is the well known locality of the Deccan Intertrappean series, in Chhindwara district of Madhya Pradesh. Fossil palm forms a major group of Indian fossil flora. Some monocotyledonous fruit are described from the same locality, many species of Palmocarpon have been described by Sahni (1934), Sahni and Rode (1937), Mahabale (1950), Prakash (1954, 1960) and Trivedi and Chandra (1973). Besides these Nipa, palm like fruit have been described by Rode (1933), Chitaley (1960), Lakhanpal (1952), Kaul (1951) and Patil and Upadhye (1984) described species of Cocos fossil fruit resemblances with present fossil fruit is reported by Trivedi and Verma (1969). Other drupaceous fruit are Hyphaenocarpon indicum (Bande et al., 1981), Arecoidocarpon kulkarnii (Bonde, 1990), Carpolithus striatus (Jain and Dayal, 1966), and Tricoccites trigonum (Rode, 1933, Sahni and Rode 1937, Shukla, 1950; Chitaley, 1956 and Bonde, 1985). Other fructification comprising drupaceous fruitlests are Viracarpon hexaspermum (Sahni, 1934, 1944, 1964; Chitaley and Nambudiri, 1969), and Shukalnthus superbum (Verma, 1958 and Chitaley and patil, 1971).

The dicotyledonous fruits are also reported from the same locality. The drupaceous dicot fossil fruit is a Trapa (Puri, 1951), and Trapa Mohgaonse (Paradkar and Patki, 1987), Euphorbiocarpon drypteoides (Mehrotra et al., 1983), and Grewia mohgaonsis (Paradkar and Dixit, 1984), Gyrocarpusocarpon intertrappea (Mistri andKapgate, 1990);

Plectroniocarpon intertrappeans (Kokate et al.,2009), Scaveolocarpon indicum (Kokate, 2010), Myrtocarpon ganeshii (Pundkar 2014). Prunusocarpon indicum (Pundkar et. Al., 2014), Morusocarpon chitaleyii (Pundkar et al., 2015) Pyrenocarpon harrisii (Thorat et al., 2015), Lycopersicocarpon harisii (Deshmukh and Kokate, 2018)Momordiocarpon deccanii (Deshmukh and Kokate ,2019)

MATERIAL AND METHODS

The present fossil specimen was well preserved in black chert, the etching chert was done by hydrofluoric acid. This specimen was studied by taking serial peel sections. As the preservation is very good the sections shows all anatomical details clearly.

DESCRIPITION

The present fossil specimen is fleshy fruit, globular somewhat triangular in shape. Fruit is exposed in longitudinal plane. It is unilocular and single seeded drupe fruit. It is 2.33 mm in length and 2.03 mm in breadth. It consist of two part i.e. pericarp and seed (Text Fig. 1, Plate Fig.1)

A) Pericarp

The fruit wall is called as pericarp measuring in thickness 62.51 µ. It is thick and divisible into three prominent layers i.e. Epicarp, Mesocarp and Endocarp.

i) Epicarp

It is the outermost smooth layer of fruit wall measuring 0.266 µ in thickness. The cells of fruit of this layer are compactly arranged. The cells are thick walled and 2-3 layered in thickness. The cells are squarish in shape and each cell measuring about 0.133 µ in size (Text Fig.8, Plate Fig. 4)

ii) Mesocarp

Mesocarp is well preserved, but not uniform in thickness, size varies from 1.33 µ to 2.66 µ. The cells are parenchymatous .Oval and thin walled with intercellular spaces. Each cells measuring in thickness 0.13 µ to 0.26 µ in thickness.

iii) Endocarp

The innermost layer of pericarp is endocarp .Endocarp is distinct compact zone between mesocarp and the seed can be clearly made out as the cells of this zone are uniformly well preserved. Endocarp is seen to be very hard, measuring in thickness 0.399 µ. It is comprising 2-3 layers. It is made up of cubical to rectangular cells. Each cells of endocarp is 26 µ to 39 µ in thickness. Vascular bundles are not seen. (Text Fig. 6, Plate Fig.8)

B) *Seed*

In present fossil fruit single seed is present. The seed is large oval and non-endospermic in nature and measuring 119.7μ x 42.56 μ in thickness. The seed coat is not fused with pericarp. It is thin walled and parenchymatous. Inside the large seed cotyledons are not clearly seen. Seed coat is two layered. Inside the seed coat tissues of endosperms are present. The tissues of endosperm those surrounding embryo are parenchymatous and polygonal in shape.The embryo is situated in tissues of endosperm. The embryo is long and broad in size. It is oval in shape. (Text Fig. 9, Plate Fig. 7,8).The further differentiation of embryo is not very clear.

COMPARISON WITH FOSSIL FRUIT

As already mentioned from the fossiliferous locality of Deccan intertrappean bed some petrified fruits are reported. As the present fossil fruits is described as drupaceous monocotyledonous fruit it is compared with monocotyledonous fossil fruits. Palmocarpon is the genus of common occurance from the studied fossiliferous locality. Many species of Palmocarpon are reported by different workers. It chiefly differs from the present fossil fruit in having large size and presence of fibrovascular bundles in a particular pattern. The endocarp in Palmocarpon sp. is three layered which is not seen in present fossil fruit.

When present fossil fruit is compared with other common palm fruit Nipa (Rode, 1933; Nambudiri, 1966 and Chitaley, 1960) shows dissimilarities in not having large size and presence of Longitudinal ridges on the surface of fruits formed by four to five facets.

The fossil fruit of Cocos reported by Kaul (1951) and Patil and Upadhye (1979) shows dissimilarities when compared with the present fossil fruit. Cocos intertrappeansis (Patil and Upadhye, 1979) fruit is oval, broad at base and narrow at the apex. At the apical end three projections are seen. The middle layer of fruit wall; mesocarp is with four types vascular bundles and the endocarp is differentiated into three layers which is not observed in present fossil fruit so it is different. When present fossil fruit is compared with other palm fruit Hyphaenocarpon indicum (Bande, Prakash and Ambawani, 1982) shares characters like having single seeded unilocular drupaceous fruit with massive pericarp differentiated into epicarp, mesocarp and endocarp but differs in anatomical structure of endocarp and fleshy mesocarp. Endocarp of Hyphaenocarpon indicum is composite consisting of mostly fibrous strands and fibrovascular bundles, it is situated in the middle part of the fruit wall, that Borassoid palm type of endocarp, which is not observed in the present fossil fruit.

Aricoidocarpon kulkarni (Bonde, 1990) shares apparent characters like single seeded drupaceous fruit with presently reported fossil fruit but again differs in having Arecoid palm type of endocarp structure in having fibre, fibrovascular bundles and brachysclerids in endocarp layer which is absent in present fossil Fruit.

When compared with the palm fruit Carpolithus striatus (Jain and Dayal, 1966) it differs in not having large size and presence of number of prominent vertical striations on the surface of fruit. The present fossil fruit is also compared with monocotyledonous fruits other than palm fossil fruits. Viracarpon hexaspermum (Sahni, 1934, 1944, 1964; Chitaley and Patil, 1971; Patil, 1972, 1973) shows dissimilarities with present fossil fruit in having triangular in shape and fleshy mesocarp and stony endocarp.

The already reported Shuklanthus superbum (Verma, 1958;Chitaley and Patil, 1971) is different from the presently described fossil fruit as it is typical drupe and smaller in size.

When present fossil fruit is compared with Tricoccites trigonum (Rode, 1933; Sahni and Rode, 1937; Shukla, 1950; Chitaley, 1956; Trivedi and Varma, 1978; Bonde, 1985) shows dissimilarities in not having trilocular fruit with three seeds. Fruit is ribbed longitudinally and therefore having angular structure which is totally absent in the present fossil fruit.

All these fruits differ from the present fossil fruits mainly in having capsular nature and many other characters.

The present fossil fruits reveals the characters resembling the drupaceous fruit, so it should be compared with already reported fossil drupaceous fruits. The majority of drupaceous fruits are belonging, the monocotyledonous, present fossil fruit differs from the Palmocarpon species (Sahni, 1934), Nipa Sps (Chitaley,1960, Nambudirii, 1966), Cocos Sps (Patil and Upadhye, 1984),

Hyphaenocarpon indicum (Bande et al., 1981), Arecoidocarpon kulkarnii (Bonde, 1990) and Carpolithus striatus (Jain and Dayal, 1960) in not having typical fibro vascular bundles in the mesocarp and typical thick stony and hard endocarp. While, other monocotyledonous drupaceous fruits,Tricoccites trigonum (Chitaley, 1950), Viracarpon hexaspermum (Sahni, 1934, 1944, 1964, Chitaley and Nambudiri, 1969) and Shuklanthus superbum (Verma, 1958 and Chitaley and Patil, 1971) differs in having single or many seeded fruit lets of compound drupe or pyrenes which is totally absent in the present fossil fruit.

When Euphorbiocarpon dryptertdes (Mehrotra et al, 1983) compared with present fossil fruit, it shows difference in having trilocular drupe with elliptical seed with multilayered seed coat.

Grewia mohgaoensis (Paradkar and Dixit, 1987) is small, round, five lobed, two pyerne, two seeded drupaceous and indehiscent fruit differing from the present fossil fruit. Pinangocarpon deccanensis (Kokate et al., 2009) fruit is single seeded but having fibrous strands in mesocarp is different 2009) is single seeded drupe fruit but presence of two coherent pyrenes takes away the present fossil fruit. Plectroniocarpon intertrappean

(Kokate et al.2009) is single seeded drupe fruit bu presence of two coherent pyrenes takes away the present fossil fruit.

Scaveolacarpon indicum (Kokate et al., 2010) is also single seeded, unilocular drupe with air cavities in pericarp which is not seen in present fossil fruit.

Myrtocarpon ganeshii (Pundkar, 2014) resembles in some character with present fossil fruit having unilocular single seeded drupe fruit but shows affinities with intercellular spaces in mesocarp and smaller than present fossil fruit i.e.1.38 mm. After that when compared with Prunsocarpon indicum (Pundkar, 2014) which is petrified unilocular fleshy dicotyledonous drupe, unitegmic but differs in having seed endospermous with a central cavity and smaller than present fossil fruit. Morusocarpon chitaleyeii (Pundkar, 2015) is drupe but differs in having aggregation of drupe.

Already reported Pyrenocarpon harrisii (Thorat, 2015) resembles with drupe fruit, presence of pyrene of Rhamnaceae family differs in size from present fossil fruit.

Lycopersicocarpon harisii (Deshmukh and Kokate, 2018) Fruit shows a two different chambers with the help of well-preserved vertical septum i.e. berry which is completely different from present fossil fruit.

When Momordiocarpon deccanii (Deshmukh and Kokate ,2019) compared with present fossil fruit is having 4.5 cm length and 2.29 cm breadth , unilocular consisting of well-preserved spiny out growth on pericarp which is different than present fossil fruit.

DISCUSSION AND COMPARISION

The structural features of present fossil specimen indicate that it is with fleshy outer layer and stony inner layer i.e. endocarp means it is a drupaceous fruit. Further observations of fruit wall shows that the middle layer i.e. mesocarp of fruit which is fleshy in nature. Which may help in the identification of fruit that must be from monocotyledonous category. So, for comparison we consider only monocotyledonous extant families having drupaceous fruits.

The monocot families which are taken into consideration are Cannaceae, Marantaceae, Commelinaceae, Liliacaea,Typhaceae, Pandanaceae, Araceae, Potamogetonaceae, Cyperaceae,

Apogetonaceae and Palmae. The presence of loculicidal capsule as a fruit is characteristics of the families Cannaceae, Marantaceae, Commelinaceae and Liliaceae while the present fossil fruit is drupaceous.

When present fossil fruit` is compared with the family Pandanaceae it differs in not having multilocular drupaceous fruit with one seed in each locule. The seeds are present on placenta in extant family.

Typhaceae resembles with present fossil specimen in having fruit with single locule and single ovule in it but differs in having fruit dry nut like in nature. The presence of drupaceous fruit in family Cyperaceae is common characters. But fruit of these family does not shows resemblances with the present fossil fruit in having unilocular drupaceous fruit.

The family Apogetonaceae differs from the present fossil fruit in having follicular fruit with one to several seeds and endosperm is absent.

When present fossil fruit is compared with family Potamogetonaceae it resembles in having drupaceous fruit with short stalk but differ in not having outer decaying soft layer in fruit and absence of endosperm.

The fruit of Palmae family when compared with the present fossil fruit. Calamus shows globose, ellipsoid and beaked fruit but the pericarp is thin. Nannohorpes has single seeded small globose or oblong drupe as fruit which measures 1\2 to 3\4 inch in diameter. Pinnanga sp. also has unilocular, single seeded drupaceous fruit. It is ellipsoidal and with fibrous pericarp. The seed is ellipsoidal but differs from the present fossil specimen in having triangular shaped fruit with fleshy mesocarp and smaller in size.

The fossil fruit shows close affinities with two genera of family Oleaceae like Linociera and Olea. When present fossil fruit is compared with genus Linociera shows resemblances with fruit type i.e. Drupe and also with fleshy mesocarp, thin testa, seed ellipsoid usually solitary and embryo

straight, cotyledons flat but differ in having 2- celled ovary and larger in fruit size. So it is different from present fossil fruit. Then present fossil fruit resembles with genus Olea in structure, in having fruit drupe with fleshy mesocarp and seed solitary, ellipsoid slightly pointed and cotyledon flat with bony endocarp and thin testa showing close affinities with genus Olea from family Oleaceae so named as Oleocarpon after the name of genus specific name is intertrappea after the Deccan Intertrappean Beds of India.

DIGNOSIS

Oleocarpon gen. et.sp.nov.

Fruit is small, fleshy fruit, globular, dicotyledonous, drupaceous, unilocular and single seeded. Pericarp composed of outermost smooth epicarp, parenchymatous mesocarp with few intercellular spaces and innermost layer is hard, endocarp, seed solitary, seed coat not fused with pericarp.

Oleocarpon intertrappea

A unilocular large single seeded drupe, 2.33 mm long and 2.03 mm broad in longitudinal in section. Fruit fleshy, globose in shape. Pericarp differentiated into epicarp 0.266 μ, mesocarp is 1.33 μ to 2.66 μ and endocarp 0.399 μ in thickness. Epicarp thick walled, compactly arranged constituting 2-3 layered. Mesocarp not uniform in thickness,

the cells are parenchyamatous with few intercellular spaces endocarp hard. Vascular bundle not seen. Seed large and endospermic.

Holotype -   MOH / SWD/DICOT/ fruit – 3

Department of Botany, S.P.M.College, Nandura

Locality -   Mohgaonkalan, Dist. Chhindwara, M.P. India

Horizon -   Deccan Intertrappean Series of India.

Age   -   Upper Cretaceous.

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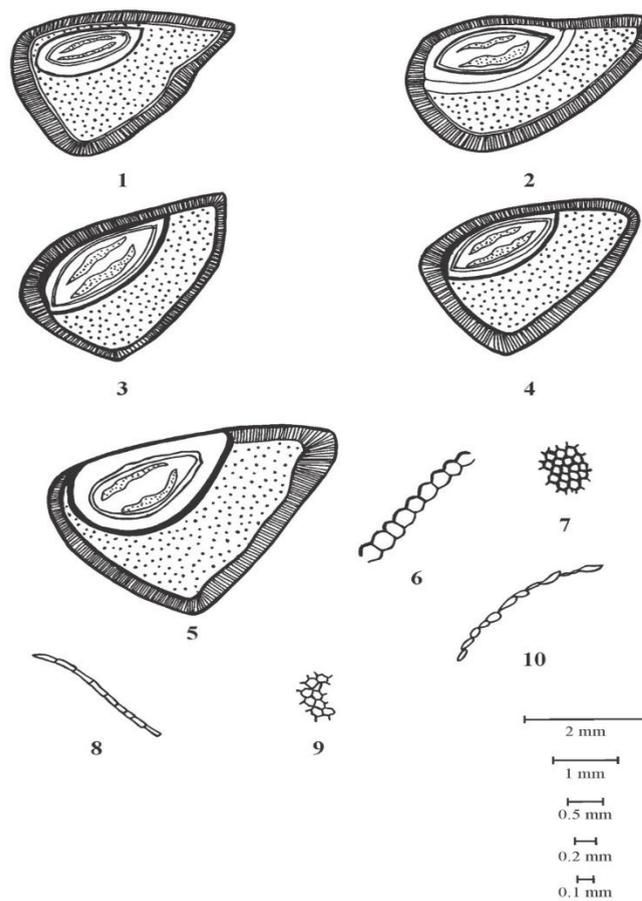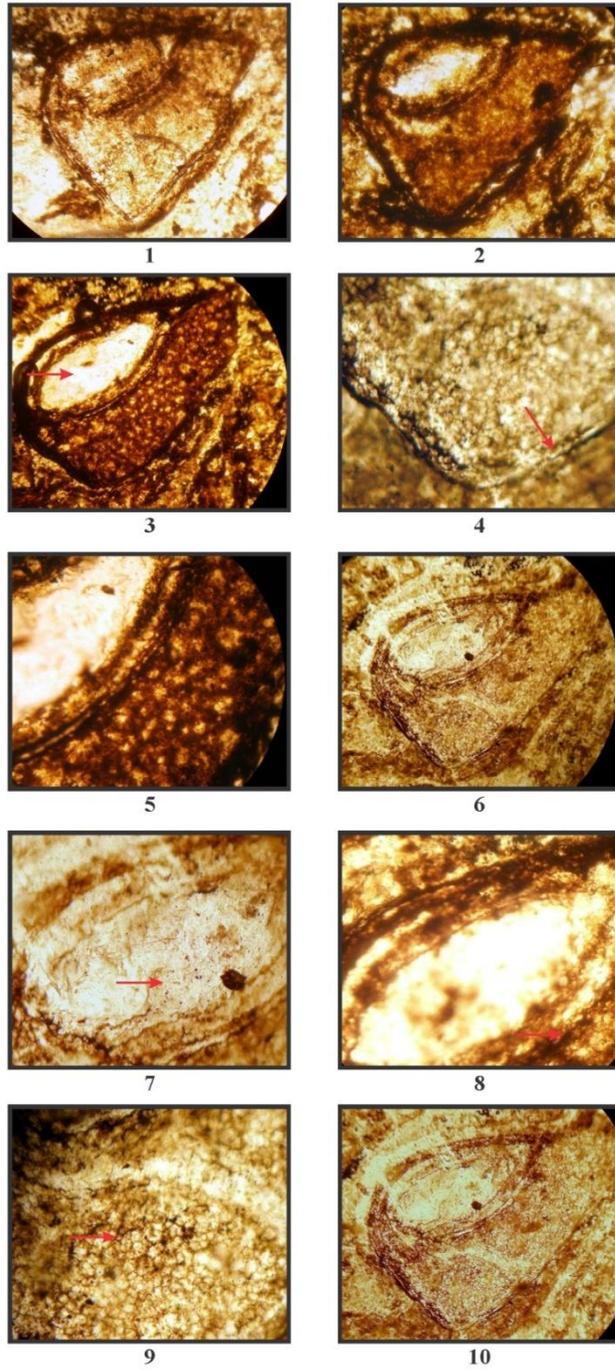
Text Fig. *Oleocarpon intertrappea*

Plate Fig. *Oleocarpon intertrappea*

Oleocarpon intertrappea gen.et.sp.nov.

Explanation of Plate Fig. 1 to 10

1 to 2 : Serial sections of L. S. of fruit showing pericarp and seed with embryo.
X20

3 : L.S. of fruit showing detailed structure of fruit wall. Epicarp (Epi),
Mesocarp (Meso) and Endocarp (Endo) x100

4 : Part of fruit wall showing cells of epicarp x100

5 : Thick walled cells of Endocarp showing its stony nature x100

6 : L.S. Of fruit showing seed with seed coat and embryo x40

7 : Magnified structure of embryo x40

8 : Magnified structure of endocarp and seed x100

9 : Cells of mesocarp x100

10 : Cells of seed coat x100

Oleocarpon intertrappea gen.et.sp.nov.

Explanation of Text Fig. 1 to 10

1 to 4 : Diagrammatic sketch of L.S. of fruit showing pericarp and seed.

5 : L.S. of fruit showing Epicarp. Mesocarp and Endocarp.

6 : Magnified structure of Endocarp.

7 : Magnified parenchymatous cells of Mesocarp.

8 : Cells of outermost layer of epicarp of fruit.

9 : Magnified epidermal cells of embryo.

10 : Cells of seed coat.

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ENHANCED BIOCHEMICAL ACTIVITIES IN FRESHWATER CRAB PARATELPHUSA JAQUIMONTTII (RATHBAN) ON EXPOSURE OF SYNTHETIC PYRETHROID (CYPERMETHRIN)

DR. S. K. PARATE

Department of Zoology,

B.B. Arts, N.B. Commerce & B. P. Science College, Digras

Email: sanjivanil2008@gmail.com Mob: 9921974624

Abstract

Cypermethrin enhanced alternation in the crab, Paratellphusa Jacquemonttii (Rathban) were studied. The crab was exposed to Cypermethrin at a concentration 0.024 mg/lt for 15 days. After 15 days, crabs were released into freshwater to observe the response. Completion of 1, 2, 3, 4, 7, 8, 15 days of exposure and then transfer into freshwater, various parameters were estimated in hepatopancreas and muscle. There was reduction of protein in hepatopancreas as well as muscle and free amino acid content was enhanced in hepatopancreas and muscle for 15 days.

Keywords: Cypermethrin, Paratellphusa Jacquemonttii, hepatopancreas, muscle

1. INTRODUCTION

Day by day the use of pesticides has increased in agricultural practices. The advantages in the use of pesticides are plentiful, but at the same time it may be harmful to the ecosystem. These pesticides, even when applied to agricultural products may be washed by rains and runoff to the streams, rivers, lakes and ponds during rainy season and adversely affect the non-target aquatic flora and fauna. This may changes the physico-

chemical properties of these water bodies (Harsimran and Harsh, 2014). These in turn interacts with various physiological activities of living organisms like Crab, Fish, and Prawns etc. Biochemical constituents like glycogen, protein and lipid are considered as sensitive indicators of metabolic activities (Chandrakala etc, 2008). Pesticides have been known to influence carbohydrate, protein and lipid contents in crustaceans, viz., M. malcolmsonii exposed to carbaryl (Saravana et al., 2002); B. Cunicularis exposed endosulfan (Shanmugam and Venkateshwarulu, 2000). Tiwari S et.al, 2012) and Monir et al. (2016) have investigated the effects of cypermethrin on fish, but there is little information on the comprehensive effects of cypermethrin during the exposure and post-exposure periods and there have been some previous research on the sub-lethal effects of cypermethrin on lipids, free fatty acids, metabolites and enzymes of protein and carbohydrate metabolism of fish during the exposure and recovery phases (Begum, 2005).

2. *METHODOLOGY*

The freshwater crabs, Paratelphusa Jacquemontii were collected from local fish market. They were kept in large aquaria with continuous aeration and acclimatized to laboratory conditions for two weeks under constant salinity (15 ± 1 ppt), pH (7.2 ± 0.1), and temperature (22 ± 2°C). During experiments other condition were maintained. Eyestalks were ablated and extracts were prepared and injected. The desired concentrations of Cypermethrin were prepared, for normal, eyestalk ablated crab.

Oxygen contents of experimental medium during this period the crabs were fed fish flesh. Feeding was stopped 24 h before the beginning of the experiments, and no food was given during experimentation. Only inter molt (Stage C4), intact, male crabs were used in the present study. Cypermethrin was dissolved in physiological saline (Allayie et.al, 2011). In these experiments, there were 10 and each group was of 10 crabs. Before using Cypermethrin some pilot readings must have been taken on that basis 3 concentrations are decided to use for the result.

- The first group served as normal and received no treatment. A second group served as control, with each crab in this group receiving an injection of 10 ml of physiological saline (Allayie et.al, 2001) through the base of the coxa of the 3rd pair of the walking legs.

- In groups 3–5 respectively, each crab received an injection of 10-7, 10-8, and 10-9 mole Methionine-enkephalin in 10 ml volume.

- Both eyestalks were ablated from all the crabs in groups 6–10.

- The eyestalks were extirpated by cutting them off at the base, without prior ligation but with cautery of the wound after operation.

- Twenty-four hours after eyestalk ablation, these groups were used for experimentation.

- Crabs in group 6 served simply as eyestalkless animals, and

- Crabs in group 7 received 10 ml crustacean Ringer solution and served as eyestalkless controls.

- In groups 8–10 respectively, each crab was injected with 10-7, 10-8, and 10-9 mole Methionine-enkephalin in 10 ml volume.

- Based on preliminary kinetic studies, the crabs were sacrificed for analysis 2 h after injection.

- Hemolymph (500 ml) was aspirated by syringe, through the arthrodial membrane of the coxa of the 4th pair of walking legs.

- The other tissues (hepatopancreas and muscle from chela propodus) were then quickly dissected out, weighed, and analyzed by the procedures outlined below.

- Total carbohydrate (TCHO) are estimated in trichloroacetic acid supernatant (10% TCA w/v) according to the method of Carroll et al. (1956).

Acute toxicity study was carried out to determine the potency of cypermethrin for static but renewal type of bioassay was adopted in the present investigation to estimate the LC50 values. The mortality was recorded for the crab at 24, 48, 72, 96,168,192,360 hrs exposure to cypermethrin were corrected for natural response by Abbott's formula [5]. The LC50 values for 24, 48, 72, 96, 192, and 360 hrs of exposure periods were estimated as 2.032, 1.918, 1.834, 1.634, 1.578, 1.456 and 1.235 ppm respectively.

Table 1: The LC50 values and regression equations for P. Jacquemonttii treated with Cypermethrin.

Exposure period (h)	LC50 (PPM)	Functional relationship (Y)	r2	95% confidence interval for slope coefficient (b)	
				Lower Limit	Upper Limit
24	2.032	y = 1.083x - 0.021	0.996	6.321	30.698
48	1.918	y = 0.988x + 0.003	0.970	15.888	36.776
72	1.834	y = 1.123x - 0.025	0.951	11.665	18.090
96	1.634	y = 0.957x + 0.013	0.968	10.821	62.525
168	1.578	y = 1.002x - 0.000	0.988	19.576	26.553
192	1.456	y = 0.941x + 0.010	0.905	0.636	103.137
360	1.235	y = 0.908x + 0.047	0.910	11.244	28.330

At the end of the treatment period, the cypermethrin treated crabs were dissected and the tissues namely, hepatopancreas, muscle, haemolymph, and eyestalk were weighed (250mg). Statistical analysis of the results was made using a two-way ANOVA test followed by Dunnet's multiple range test (preceded by one-way ANOVA), using IBM SPSS and Statplus 2009 by AnalystSoft Inc.

Pilot experiment for dose effect was performed where Intact as well as Eyestalk ablated Crab were given injection of Cypermethrin dilution doses were given.
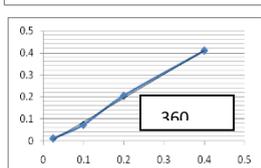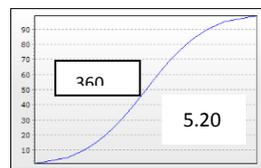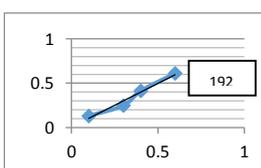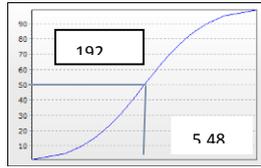
3. *RESULT AND ANALYSIS:*

In the present investigation, an attempt was made to identify the effect of the Cypermethrin on various parameters of hepatopancreas; muscle, haemolymph and carbohydrate were estimated between the control and the experimental groups.

The lethal concentration (LC50) of Cypermethrin:

The lethal concentration (LC50) of Cypermethrin for P. Jacquemonttii was observed for 360 hrs. The logarithm of 50% lethal concentration was obtained by finding the value on the abscissa for straight line which assumes the probit value 5. The concentrations resulting in 50% mortality and slope of the probit line were c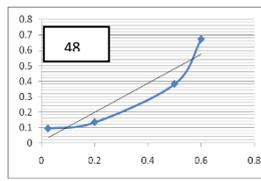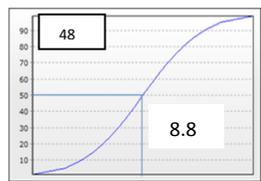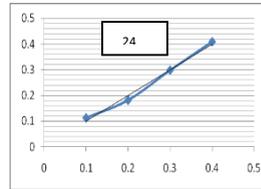alculated for specific period of exposure as described by Finney (1971). The percent mortality data were subjected to probit analysis and plotted against log of dose concentrations resulting in a straight line. The values of LC50, upper and lower confidence limits, slope function, correlations co-efficient square and regression results of Cypermethrin on P.Jacquemonttii were given (Table: 1). The LC50 values for 24, 48, 72, 96 , 168, 192, 360 h of exposure periods were estimated at 2.032, 1.918, 1.834, 1.634, 1.578,1.456 and 1.235ppm respectively (Graph: 1).

Mortality Kill   Probit Kill

Effect of injection of Cypermethrin on Intact Crab

1. Injection of Methionine-enkephalin into Intact Crab resulted in significant hyperglycema and hyperglucosemia is directly proportional to the dose.
2. Physiological saline injection has not shown any effect on hemolymph carbohydrates for doses from 10-9 to 10-6.
3. Doses less than 10-9 mol/crab did not extract a sugar level in blood.
4. Hyperglycemia in above 10-7 to 10-7 where it levels saturating -constant.
5. Significant increase was observerd in hemolymph glucose level within half-hours of injection and reached at maximum level after 24 hours and then declined linearly.
6. Hepatopancreas glycogen and TCHO level in crab with injection of Methionine-enkephalin were significantly lower than those of Control Crab.
7. Decrease in muscle glycogen and TCHO levels were also significant after injecting methionine-enkephalin.
8. Decreased hepatopancreas and muscle glycogen indicate/suggesting the possibility of its mobilization of glucose molecule into hemolymph.
9. Phophorylase activity levels increased in both hepatopancreas and muscle after injection.

Fig 3.1 Dose-probit and dose-mortality curve at 24, 48, 72, 96, 168, 192 and 360 hours for normal intact Paratelphusa Jacquemontii exposed to Fenvalerate.

4. CONCLUSION

It is observed that bilateral eyestalk ablation significantly decreased the hemolymph sugar levels; whereas injection of eyestalk extract into ablated crabs significantly increased the hemolymph sugar levels. Total carbohydrate (TCHO) and glycogen levels were significantly increased in hepatopancreas and muscle of eyestalk-ablated crabs, with a decrease in phosphorylase activity.

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THE ROLE OF CONSTITUTION IN SOCIAL DEVELOPMENT AND LABOUR WELFARE

RAJSHEKHAR MAVINAMAR

Ph. D. Research Scholar
Dept. of Sociology,
Rani Channamma University Belagavi.
rajeshmavinamar@gmail.com
Mob. No. 918050477424
Dr. Ravi S. Dalawai
Research Supervisor of Dept. of Sociology
Rani Channamma University Belagavi.
ravi.soci@gmail.com

INTRODUCTION

*S*ocial development is a broad concept referring to a state of living of an individual or a group, in a desirable relationship with the total environment. It is also an inclusive concept, meaning thereby to seek the development of all sections of the society. The labour class or the working class is one of the largest segments of the society. The Constitution of India, which is a great social document, envisages the overall social development of the people of India. The Constitution aims at social development by such means as social legislation. The social legislations aim at equal distribution of burden and benefits of social development. Labour welfare forms one of the important aspects of social development.

METHODOLOGY OF STUDYING:

This article has been written by using number of studies/secondary data on factory workers, industrial labour, and social welfare.

LABOUR WELFARE AND THE CONSTITUTION OF INDIA

The concept of labour welfare is a dynamic concept. Its interpretation depends upon degree of industrialization of the country. Labour welfare includes socio-economic aspects of the labourers. According K. Ashwathappa "Labour welfare also referred to as betterment work for employees, relates to taking care of the well-being of workers by employers, trade unions, and governmental and non-governmental agencies. It is rather difficult to the term labour welfare precisely because of the relativity of the concept."1

The Royal Commission on Labour States, "Labour welfare is a term which must necessarily be elastic, bearing a somewhat different interpretation in one country from another according to the different social customs, the degree of industrialization and educational level of the workers."2

Paper presented at the XII The national Sociological conference on Aug 31 and Sept 01 2018 organized by the Dept. of Sociology, Adhyananga and Directorate of Distance Education, Kannada University, Hampi.

The International Labour Conference at Asian Regional Conference, defined labour welfare as a term which is understood to include such services, facilities and amenities as may be established in or in the vicinity of undertakings to enable the persons employ in then to perform their work in health, congenial surroundings and to provide them with amenities conducive to good health and high morals.3

The Constitution of India, under the following Articles, lays down the mandate for the government to provide for labour welfare:

Art 38. State to secure social order for the promotion of welfare the people:

1. The State shall strive to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice, social, economic and political, shall inform all the institutions of the national life.
2. The State shall, in particular, strive to minimize the inequalities in income, and endeavor to eliminate inequalities in status, facilities and opportunities, not only amongst individuals but also amongst groups of people residing in different areas or engaged in different vocations.

Art. 42 Provision for humane conditions of work and maternity relief:

The State shall make provision for securing just and humane conditions of work and maternity relief.

Art. 43, Living wage, etc, for workers:

The State shall endeavor to secure, by suitable legislation or economic organization or in any other way, to all workers, agricultural, industrial or otherwise, work, a living

wage, conditions of work ensuring a decent standard of life and full enjoyment of leisure and social and cultural opportunities and, in particular, the State shall endeavor to promote cottage industries on an individual or co-operative basis in rural areas.

Thus, the need for labour welfare in all sectors is clearly enunciated in the Directive Principles of State policy. Empowered by the above provisions of the Constitution the government has enacted several labour welfare laws which provides for the setting up of minimum desirable standard and the provision of facilities like health, food, clothing, housing, medical assistance; education, insurance, job security, recreation, and so on. The idea of labour welfare is to enable the worker and his family to lead a good work life and family life. It operates to neutralize the harm full effect of large scale industrialization.

SOCIAL DEVELOPMENT OF THE ORGANISED AND THE UNORGANIZED WORKFORCE:

Out of the total workforce employed in India a majority of them are employed in the unorganized sector. The unorganized sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers.

According to the results of the National Sample Survey conducted in 1999-2000, total work force as on 1 January 2000 was of the order of 406 million. About 7 per cent of the total work force is employed in the formal or organized sector (all public sector establishments and all non-agricultural establishments in private sector with 10 or more workers) while remaining 93 per cent work in the informal or unorganized sector.4

Thus, the unorganized sector plays a vital role in terms of providing employment opportunity to a large segment of the working force in the country and contributes to the national product significantly. The contribution of the unorganized sector to the net domestic product and its share in the total NDP at current prices has been over 60 per cent. In the matter of savings the share of household sector in the total gross domestic saving mainly unorganized sector is about three fourth. Thus social development of the unorganized sector has a crucial role in our economy in terms of employment and its contribution to the national domestic product, savings and capital formation.5

Soon after independence, the government at a tripartite conference in December 1947 adopted the industrial truce resolution. Several legislations were enacted to achieve the objectives of social development. The following Acts have been enacted to promote the conditions of labour and regulate the relation between employer and employee keeping in view development of industry and national economy:

- ➢ The Apprentices Act, 1961
- ➢ The Bonded Labour System (Abolition) Act, 1976
- ➢ The Child Labour (Prohibition & Regulation) Act, 1986

- ➢ The Children (Pledging of Labour) Act, 1933
- ➢ The Contract Labour (Regulation & Abolition) Act, 1970
- ➢ The Employees Provident Funds and Misc. Provisions Act, 1952
- ➢ The Employees State Insurance Act, 1948
- ➢ The Employers Liability Act, 1938
- ➢ Employment Exchange (Compulsory Notification Vacancies) Act, 1959
- ➢ The Equal Remuneration Act, 1976
- ➢ The Factories Act, 1948
- ➢ The Industrial Disputes Act
- ➢ The Industrial Employment (Standing Orders) Act, 1946
- ➢ The Inter-state Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979
- ➢ The Labour Laws (Exemption from Furnishing Returns & Maintaining Registers by Certain Establishments) Act, 1988
- ➢ The Maternity Benefit Act, 1961
- ➢ The Minimum Wages Act, 1948
- ➢ The Payment of Bonus Act, 1965
- ➢ The Mines Act, 1952
- ➢ The Payment of Gratuity Act, 1972
- ➢ The Payment of Wages Act, 1936
- ➢ 'The Sales Promotion Employees (Conditions of Service) Act, 1976
- ➢ The Shops and Establishments Act, 1953
- ➢ The Trade Union Act, 1926
- ➢ The Workmen's Compensation Act, 1923
- ➢ The Weekly Holidays Act, 1942

Whereas, the social development of the organized workforce is achievable through the above set of laws, it is the unorganized workforce which needs the impetus of the law to achieve the desired level of social development as enunciated in various five year plans. Over the years, since independence the governments have been concentrating on establishing industries and enacting laws for the benefits of those employed in these organized industries. However, it is important to forcefully pursue the agenda for social development of the unorganized workers for the following reasons:

1. The unorganized labour is the largest segment of the workforce in India like the agriculture workers, constructions workers, home based workers.
2. Majority of the unorganized workforce do not have continuous employment.
3. Unorganized workers, due to illiteracy are bound to be exploited by the employers.
4. Lack of trade union support due to the scattered nature of employment
5. Among the unorganized workers majority of them migrated population.

'The extent of workforce in the organized and unorganized sectors, and their changes over time could be understood by the information provided by the Ministry of Labour and Employment, Director General of Employment and Training, Government of India and published in the Economic Surveys. Accordingly, the share of organized workforce was about 8 per cent by 1983, which declined to 7.54 per cent by 2004-2005. The corresponding share of unorganized workforce was about 92.07 per cent by 1983, which increased to 92.46 per cent by 2004-2005. The table below explains the above statement:

Table 1: Trends in Employment in Organized Unorganized Sectors in India (in million)

Year	Organized	Unorganized	Total workforce
1983	24.01 (7.93)	278.74 (92.07)	302.75
1987-1988	25.71 (7.93)	298.58 (92.07)	324.27
1993-1994	27.37 (7.31)	347.08 (92.69)	374.45
1999-2000	28.11 (7.08)	368.89 (92.91)	397.00
2005-2006	26.46 (7.54)	358.45 (92.46)	384.91

Source: Ministry of Labour and Employment, Director General of Employment & Training and Economic Survey (various years).

Note: Figures in brackets are percentages to the respective totals.

The government of India enacted the Unorganized Workers Social Security Act in the year 2008, which as per government estimates would benefit 94 per cent of the working class in the country employed in the unorganized sector would get the benefit of health, life and disability insurance, old-age pension and the group accident scheme. The new law can be considered as a beginning for the overall social development of the majority of the working population. As per the Act, every unorganized worker shall be registered and issued an identity card by the district administration, which shall be a smart card Carrying a unique identification number. Through the various beneficial provisions of this legislation the unorganized workers struggles could be mitigated to a large extent. According to Labour Investigation Committee6, there are three main benefits of labour Welfare activities:

a) Educational facilities, sports, entertainment, etc. make the worker feel that the employer is interested in their day-to-day life and therefore, their tendency to grouse and grumble will gradually disappear.

b) Housing, canteens, sickness and maternity benefits, provident fund, gratuity, pensions, etc. make the worker feel that they have a stake in the industry as much as anyone else has.

c) Provisions of good and clean food in the canteens improve their health entertainment reduces the incidence of vices, medical and maternity benefits fret the workers of worries.

FINDINGS OF THE STUDY:

i) It is found that the constitution of India under the Articles number like 38, 42 and 43 laid down the mandate for the government of provide secure a social order for the promotion of welfare of the people, provision for just and humane condition of work and maternity Relief and secured living wages, decent standard of life and full enjoyment of leisure etc., for workers.

ii) It has been observed that after the enactment of the un organized workers social security Act in the year 2008, which as per government estimates would benefit 94 percent of the working class in the country employed in the unorganized sector would get the benefits of health, life and disability insurance, old-age pension and the group accident scheme. The new law can be considered as a beginning for the overall social development of the majority of the working population.

iii) It is observed that the unorganized sector plays a vital role in terms of providing employment opportunity to large segment of the working force in the country and contributes to the National product significantly, it has been over 60 percent. Thus social development of the unorganized sector has a crucial role in our economy in terms of employment and its contribution to the National domestic product, savings and capital formation.

CONCLUSION AND SUGGESTION

From the discussions presented above it can be concluded that the real social development can only be achieved if the objective of our laws and policies is to secure the welfare the unorganized workers who form the major chunk of the working population, Labour welfare improves the quality of labour and its productivity. If the state has to hold on to its tag of being called a welfare state, then it cannot ignore the largest workforce in India. The following are some suggestions for implementation of a better labour welfare programme which in turn would make social development possible.

a. The government must execute all the policies and programmes framed for the; welfare of the labour.

b. In every industry, labour welfare activities must occupy top priority.

c. The trade union and the managements must jointly seek to enforce each other's commitment on labour welfare. There should not be any bargain on labour welfare,

d. The industry must realize that labour welfare is a social obligation.

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Understanding Web Content Management System

Vaishali A. Sindekar

Research Scholar (Shri JJT University, Jhunjhunu, Rajasthan, India)

*A*bstract

*T*his exploration paper intends to help in understanding Web Content Management framework. The CMS has been a helpful device for creating modules and the gadgets in site. Rather than building your own framework for making site pages, putting away pictures, and different capacities, the substance the executives framework handles all that fundamental foundation stuff for you with the goal that you can concentrate on additional front aligned pieces of your site.

Keywords: Content Management System, WordPress, Joomla, Drupal

Content management (CM) is the arrangement of procedures and innovations that help the assortment, overseeing, and distributing of data in any structure or medium. Substance may appear as text, (for example, reports), media records, (for example, sound or video documents), or some other record type that follows a substance lifecycle requiring the executives

A framework which is utilized to deal with the substance is called as Content Management System which comprises of two components: the Content Management Application (CMA) and the Content Delivery Application (CDA). The component of Content Management Application permits the web engineer or creator (who may not be comfortable with Hypertext Markup Language (HTML)) to deal with the creation, adjustment, and expulsion of substance from a site without having the mastery of HTML or web structuring. The component of Content Delivery Application utilizes and accumulates that data to refresh the site.

An individual can utilize a format just as wizard and different instruments to make or alter web content with its web distributing highlight. Reports including electronic and examined paper can be organized into HTML or PDF utilizing design the board highlight for the site. The substance can likewise be refreshed to new form utilizing correction control include. Content Management Systems have extra highlights, for example, ordering, looking and recovery. A Content Management System files all information accessible on the site. Individual would then be able to scan for information utilizing catchphrases, which the CMS framework recovers. [2]

A Content Management System comprises of various subsystems that cooperate with one another:-

- Collection
- Management
- Publishing

Content Management System is the quickest method to make substance and update the site. It offers opportunity to make new pages in a single tick, and inert unused pages, without agonizing over unsettling influence in the plan. A site holder need not to pay each time he needs to adjust the substance of his site. It likewise sets aside cash and time.

In the Content Management application, content director might have the option to deal with the creation, alteration, and evacuation of substance from a Web website. It might happen that content administrator even doesn't think about the information on HTML (Hypertext Markup Language) or may not be specialists as a Webmaster. In the Content conveyance application, site is refreshed to utilize and CDA components agrees the data to refresh the site.[1]

Literature Survey

1. *Swati Gupta, AshimaGambhir, MeenuVijarania (2016)*

Author said in this paper that Content management System is an assortment of cutting edge web devices to help make, transfer and oversee online substance. The primary reason for content administration framework is to give the ability to numerous clients with various authorization levels to deal with a site or segment of the substance. Creator checked on the three Content Management strategies Wordpress, Drupal and Joomla. The Overview of every procedure has been contemplated. The Comparison of three CMS methods have been done dependent on two models in particular based on fame and based on highlights

2. *NadireCavus a *, TeyangZabadi(2014)*

This paper focuses around the examination specialized devices of six open source learning the board frameworks (LMS). It compares the whiteboard/video administrations, conversation gatherings, document trade/inner mail, online diary mail, and genuine live talk highlights of each of the LMS's. this paper takes a gander at the specialized tools features in six mainstream open source LMS to thoroughly analyze discoveries. The examination of the six open source LMS shows that Moodle and A Tutor have the best specialized tools with easy to use interface. Data is effectively open on the Moodle and A Tutor site pages, Ilias additionally makes information promptly accessible to expected customers.

3. *Rima Vyomeshbhai Shah(2012)*

Writer said in this article A substance the executives framework (CMS) is a PC framework or an application that permits distributing, altering, or adjustment of substance, just as site upkeep, from a focal page. The client can undoubtedly coordinate another layout, which is fundamentally the HTML and CSS files, into this application. Once it is incorporated, the client can undoubtedly arrange and alter the page content utilizing the rich word processor without managing the HTML or the CSS code.

Result and Conclusion

A web content administration framework (WCMS) is a product framework that gives site creating, cooperation, and administration devices intended to permit clients with little information on web programming dialects or markup dialects to create and oversee site content effortlessly .So, a site engineers will have the option to set up an excellent website if he has great capacity to deal with the substance. Web Content Management framework permits engineer to distribute content to the web without having propelled information on web innovation or programming of any kind. Presently, web content can include text, pictures, sound and video. Additionally a cutting edge WCMS can likewise incorporate work process highlights like making, putting away, and updating of website

pages.. So a scientific methodology of a capacity on a set can be useful to oversee content and will distribute an elevated requirement and incredible site. Likewise, there is future extension to examine the money related administration of CMS in Maintenance and managing huge measure of information.

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5. 5.Rima VyomeshbhaiShah , "BUILDING A WEB CONTENT MANAGEMENT SYSTEM"

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E-books management open source software's: Best tool in covid19 lockdown to create personal Electronic library

Mr. Hemant Fransis Jadhav

Librarian, KES Anandibai pradhan Science College, Nagothane

Affiliated to University of Mumbai

Email –hfjadhav@gmail.com

*A*bstract

*T*his *Technology has made revolutions in society. In this revolutions new gazettes and software's are emerged E-books reader and E-books managers are one of them. To create your personal electronic library or to manage your electronic collections, e-books management software and e-books readers are necessary. There are so many e-books management and reader software's are available on Internet. There are some open source software's and some licensed versions. In this research paper researcher has trying to study on various open source e-books management software's and e-books readers on the Internet. The researcher is trying study on various e-books file format.*

Keywords- E-books management Software, E-books readers, E-library, covid19

INTRODUCTION

A national lockdown has going on from March end. All the Schools, Colleges, Universities have closed. There is no any chance for going to library and reading books in physically and there is no chance to issuing books from educational as well as public library. E- Books will become a best friend of yours in this covid19 pandemic. Books are useful to ward off the negative vibes and stay positive in this lockdown period. To engage

you and stay psychological fit Ministry of Human Research Development (MHRD) and Ministry of culture has provides free e-books for reading, College and universities libraries are providing e-books collection to their users. Free copy right books also available on the Internet. For managing this books there are some e-books managements and e-books reader's software's are available.

E-books

An electronic book, also known as an e-book or e-books, is a book publication made available in digital form, consisting of text, images, or both, readable on the flat-panel display of computers or other electronic devices.

Definition

Morgan (1999) defines e-books as being the hardware/software combination specifically designed for reading, in contrast with e-texts written in hyper-text markup language and viewable on a computer.

Balas (2000) also cautions readers not to confuse e-texts with e-books and stresses that e-books must be read on an e-books reader or with special software.

Hawkins (2000) expands the definition of e-books to include the contents of any book made available in electronic form through four different methods: downloadable, dedicated e-books; a dedicated e-books reader; web accessible e-books; or a print-on-demand book.

E-books can be read on regular computers and cell phones; they are usually read on hardware devices that are known as e-book readers. E-books readers are popular because they give users more options when reading – options that mimic the experience of reading a physical paper book. When reading on a reader, users are able to perform actions like make notes, highlight text passages and bookmark pages. The e-readers usually have other great features like built-in dictionaries and options for changing font sizes and styles, which also can add to a person's reading experience.

File format of e-books

First users should know about the e-books file format. E-book reader and manager software are support different e-books file format. Followings are file formats which are useful to understand for e-books management.

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Epub is most widely adopted e books file format. It is developed by International Digital Publishing Forum. Epub is free to use, Open standard and vendor independent. This format is support color images, SVG graphics, interactive elements and full videos. The file format extension is .epub for storing books

MOBI-

It was originally is mobi pocket reader format but has since been adopted by several difference readers as well. Amazon purchase mobi pocket format in 2005 and later discontinued the mobi format from 2011. The file format supports bookmarks, notes, corrections and java scripts. This file format is not open standard and not publically available. This file format prevents copying and illegal viewing.

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The AZW file type was developed by Amazon for use with their range of Kindle e-books readers. The proprietary format is used for e-books that require DRM protection.

AZW3 - Kindle Format 8 (KF8) is Amazon's newer version of AZW. It supports HTML5 and CSS3 which were not supported through the standard AZW format. Android and iOS can both read AWZ, and it's also readable on popular e-books management apps like Calibre and Alfa.

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The other common proprietary e-books format which you're likely to stumble across is IBA. It is the format used for books created in Apple's iBooks Author app. This format is only used for books written in iBooks Author. This format is only used for books written in iBooks Author.

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LRS, LRF, LRX

This file format support to board band e-books. Board Band e-books is a propriety e book file format develop by sony and canono. LRS files are XML files that can be edited and follow the BBeB Xylog XML specification. They represent the source code of each BBeB e-books. LRF (unencrypted) and LRX (encrypted for DRM purposes) files are compiled/compressed versions of LRS files that are actually used by e-books readers. While the LRS format is openly available to the public, the LRF and LRX formats are not and remain proprietary.

FB2

Fiction Book is an open XML-based e-book format which originated and gained popularity in Russia. The Fiction Book format does not specify the appearance of a

document; instead, it describes its structure. All e-books metadata, such as author name, title, and publisher, are also present in the e-books file. This makes the format convenient for automatic processing, indexing, and e-books collection management, and allows automatic conversion into other formats.

DJVU

It is a computer file **format** designed primarily to store scanned documents, especially those containing a combination of text, line drawings, indexed color images, and photographs. It can store more than 100 black and white scans in less than a megabyte.

LIT

LIT was Microsoft's proprietary e-books format. When DRM-enabled, the books were only readable on the Microsoft Reader app.

RFT

This Format is compatible with every e-reader on the market. It has an advantage over TXT because of its ability to retain special characters and its support for reflowing and text formatting.

Free e-book manager and e-reader software's

An e-books management system is a process where the reader manages in an easy, interactive, and efficient way his own purchased online books and free copy right books available on the internet.

Following are some e-books manger software and e-book readers

A. Icecream e-book manager and reader

Ice cream e-books reader is free open e book reader software. Its transfer your windows screen into Top notch e books reader. This e book reader allow to users to resume reading where you left it. Ice-cream e-book reader has bookmark facility.

Key features of Ice cream e-book reader-

1) Icecream e-book reader support PDF, MOBI, DJVU file format books
2) This e-books reader has copy, translate and search functions.
3) These e-books readers also have Intuitive scrollbar for quick navigation.
4) Its provide facility like text annotation.
5) It has night mode feature.
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This software is support to windows PC. This software is developed by Adobe Inc. This is free open e-books reader software. This software is help user to view, organize, and manage your e-books, journals, magazines, and other electronic publications.

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2) This software is creates a custom bookshelves.
3) This software has printing facility
4) This software is a multilingual support.
5) This software has full screen view

C. Calibre

This is free open source software for windows users to manage virtual library. This software also used to retrieve missing metadata in e-books.

Key features of Calibre e-books reader
1) This e-books reader has editing facility.
2) Users can easily browse e books collections through cover, title, tags, author, Publisher
3) This software gives chance to download all the metadata for an e-book (metadata such as title, author, publisher, ISBN, tags, cover or summary)

D. Alfa E book Manager

This is free open source software with limited function for windows. It allow to users to organize both paper and electronic books together in single library.This software provides more functions.

Key feature of Alfa e books Manager
1) It helps to browse collections using cover, title, author and publisher.
2) This e-book reader is powerful e-books search and sorting tool**.**
3) Built-in e-books reader and audio player support most popular formats.
4) View e-books with realistic 3D-models.
5) E-books converter tool.

E. eXtreme Books manager

This e-books reader is advanced e-books management software that can import information for e-books, audiobooks, and physical books.

Key futures of eXtreme Books manager

1) This e-books manager is organized e-books collection using covers, titles, tags, authors, publishers.
2) This e book manager has e-books search and sorting facility.
3) Easily import and export data using XML files.
4) It helps to extract titles, ISBN codes and comic issues from TXT files.
5) Its provide facility like scan your entire hard drive or ISBN barcode in search of digital or audiobooks.

F. Lucidor

Lucidor is computer program for reading and handling e-books. Lucidor supports e-books in the EPUB file format. This e-books reader catalogues are in OPDS format.

Key features of Lucidor

1) User can organize e-books in localcase.
2) This e-books reader has advanced search tool.
3) User can search for and download e-books from the internet.
4) Users can easily convert RRS feeds and WebPages into e-books.
5) Users can easily customized library appearance by changing themes.

Conclusion

In technology revolutions the e-books reading culture has increased in society because of books are easy available, easy to carry and easy to read. It is necessary to reader to organize their e collections in order to give a reading experience and improve the accessibility of favorite content. Users can easy manage their collection on windows PC, tablets and mobiles. E book manager has provided facility like bookmark. Users can browse collections according to cover, author, title and publisher. To stay positive and away from the negative vibes in covid19 reading of good books is very necessary. This e-books manger and reader are helps you to e-books reading and manage e collections.

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Mr. Hemant Fransis Jadhav

SERVICE SECTOR IN INDIAN ECONOMY: SOME ISSUES

DR. H G JAMBAGI[1]
MOB. NO. 917903365484

Abstract

Service sector is recognized as tertiary or residual sector in the development of Indian economy. It has developed as the main and fastest-growing sector in the global economy in the last decades. The present study makes an analysis of some issues of service sector in Indian economy. The paper also makes an analysis of Indian service sector through examining its growth and contributions in the economy. The paper also highlights reform measures that will enable the services sector to not only to grow at a fast pace but also create quality employment and attract investment. The study confirms that service sector has grown at the significant rate in comparison to other sectors. Its growth rate is found to be higher than growth of overall GDP. As a service sub-sector, trade is dominant all in terms of its contribution in Indian GDP. The employment percentage in service sector as well as in industry sector is rising while in agriculture, it is falling continuously. A large proportion of Indian population is still engaged in agriculture sector and the next largest employer is service sector where trade, hotels & restaurants and community, social and personal services are the significant generator of employment. Thus, service sector which is dominant in terms of its growth and shares serves as an engine of growth for Indian economy. It is important for a developing country like India with a large and young population to generate quality employment and move up the value chain.

I. INTRODUCTION

Service sector also known as tertiary or residual sector is essential for economic growth in any economy including India. It has emerged as the largest and fastest-growing sector in the global economy in the last two to three decades. On the basis of this observed development pattern of countries, some economists like Fisher (1939) Clark (1940) Rostov (1960) and Kuznets (1971) have suggested that development is a three stage process. The dominance of the services sector in the growth process is associated with the third stage of development. However in India the acceleration in growth in

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[1] Assistant Professor of Economics, Government First Grade College, Hunnur, Tq. Jamkhandi, Dt: Bagalkot, Karnataka, Email: jambagi77hg@gmail.com, Mobile:09535881272

recent years has been due to the dynamism of the service sector while the contribution of industry has tended to stagnate over the last two decades. Service sector now contributes almost 59 percent to India's GDP and has contribution to more than 60 percent of India's growth during the period of the last decade and a half. Firstly, Fisher classified the economy into primary, secondary and tertiary sector. Later on Kuznets introduced the term 'services' instead of tertiary, there by bringing the sector into economic discussion (Kuznets, 1972). The aim of this paper is to provide an overview of the Indian services sector.

The present paper is divided into five sections. The second section presents the growth of service sector in India, its share in GDP and its contribution to GDP growth. The comparative growth of different sub sectors of the service sector has been analyzed in the third section. The share of service in employment has been discussed in the fourth sections. Finally, policy implications for Indian service sector have been illustrated in the section fifth.

II. Sectoral Growth Rate

The Indian economy has grown at a robust rate during the last few years and a striking feature of this growth performance has been the strength of the service sector. Table first shows that on an average, service sector grew slower than industry between 1950 and 1990. The growth of service picked up in the 1980s, and accelerated in the 1990s when it averaged 7.5 percent per annum, thus providing a valuable proportion to industry and agriculture, which grew on an average by 5.8 percent and 3.1 percent respectively. The slowdown in the Ninth plan (1997-2002) was confined to agriculture and industry with the services registering a remarkable rate of growth of 7.9 percent per annum. The expansion of services accelerated further in the years after 2002-03. During the Tenth five year plan period (2002-07), services grew at a rate of 9.3 percent per annum and Eleventh five year plan period (2007-12), services grew at a rate of 9.7 percent per annum. It is also observed that more or less similar during the Twelfth five year plan period (2012-17).   Table 1 and above discussion clearly reveals the fact that what the Indian economy has witnessed in recent period is a services led growth.

Table 1: Sectoral Growth Rates during the Planning Period (Percent per annum)

Sector	1951-80	1981-90	1991-2000	1992-97	1997-2002	2002-2007	2007-2012	2012-2017
Agriculture	2.1	4.4	3.1	4.8	2.5	2.5	3.7	4.0
Industry	5.3	6.8	5.8	7.3	4.3	9.3	7.2	7.6
Service	4.5	6.6	7.5	7.3	7.9	9.3	9.7	9.0
Total GDP	3.5	5.8	5.8	6.6	5.5	7.8	7.9	8.0

Source: Planning Commission of India

III. Contribution of the Service Sector to India's GDP

After India's independence, for more than a decade share of services in the GDP was less than 30 percent. Table 2 shows that overtime the share of services in GDP has

increased while that of agriculture has declined. In the last decade, the share of services has surpassed the combined share of agriculture and industry, making it the most important provider to the country's output. In 2009-10, services, industries and agriculture correspondingly accounted for 57.3 percent, 25.7 percent and 16.9 percent of India's GDP. During 2010-11, service, industry and agriculture sectors correspondingly accounted for 57.7 percent, 27.8 percent, and 14.5 percent of India's GDP. In 2011-12, service, industry and agriculture correspondingly accounted for 59 percent, 27 percent, and 13.9 percent of India's GDP. During the period of economic reforms the share of service has increased very rapidly.

Table 2: Decadal average of the year on share of the different sectors in India's GDP for the period 1950-2010

Sector	1950/51-1959/60	1960/61-1969/70	1970/71-1979/80	1980/81-1989/90	1990/91-2000/01	2000/01-2009/10	2010/11-2013/14
Agriculture	55.3	47.6	42.8	37.3	30.9	21.8	19.73
Industry	14.8	19.6	21.3	22.3	23.3	24.5	27.32
Service	29.8	32.8	35.9	40.3	45.7	53.7	52.95

Source: Economic Survey, 2011-12, published by GOI, Calculations from National Income Accounts, CSO, MOSPI. The calculations are made on GDP at constant prices, constant at 1999-00 and 2004-05

IV. Contribution of Services Sub-Sectors to India's GDP

There are variations in growth and performance of different sub-sectors of services. Business services (including IT), communications and trade have grown faster than the overall services sector growth in India. Others such as real estate, legal services, transport, storage and personal administration and defence services have grown-up at the same rate as the overall services sector growth (see Gordon and Gupta 2003). Existing literature shows that services such as IT, telecommunications and financing services have contribute to the high growth of the services sector. Hansda (2001) and Joshi (2008) has pointed out that the increase in the export demand of IT has led to high services growth in India. Table 3 shows that the share of different subsectors of services in the GDP and services sector has changed overtime. After the economic reforms of the 1990s, the share of all the services subsectors in GDP has increased. The share of financing, trade and transport sectors in total services sector has increased while that of community, social and personal services has declined.

Table 3: Decadal Average of the Year on Share of the Services Sub-sectors in Total Service Sector and GDP (in percent)

Particulars	1970/71-1979/80		1980/81-1989/90		1990/91-2000/01		2000/01-2009/10	
	Share in Services	Share in GDP	Share in Services	Share in GDP	Share in Services	Share in GDP	Share in Services	Share in GDP
Community, social & Personal services	**35.1**	**12.6**	**33.2**	**13.4**	**30.3**	**13.9**	**26.1**	**14.0**

Public administration & defense	14.3	5.1	15.2	6.1	13.2	6.2	11.2	6.0
Other services	21.0	7.5	18.0	7.3	16.7	7.6	14.9	8.0
Financing, insurance, real estate & business services	**20.3**	**7.3**	**22.0**	**8.9**	**26.2**	**12.0**	**27.3**	**14.7**
Banking & insurance	5.9	2.1	7.6	3.1	10.7	4.9	12.0	6.5
Real estate, ownership of dwellings & business services	14.3	5.1	14.5	5.8	15.5	7.1	15.3	8.2
Trade, Hotels & restaurant	**30.2**	**10.8**	**29.3**	**11.8**	**28.5**	**13.0**	**29.4**	**15.8**
Trade	28.0	10.0	27.3	11.0	26.2	12.0	26.7	14.3
Hotels & restaurants	2.1	0.8	2.0	0.8	2.2	1.0	2.6	1.4
Transport, storage & communication	**14.5**	**5.2**	**15.5**	**6.2**	**15.0**	**6.9**	**17.3**	**9.3**
Railways	4.5	1.6	3.9	1.6	2.9	1.3	2.1	1.1
Transportation by other Means	8.3	3.0	9.5	3.8	9.6	4.4	9.8	5.3
Storage	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.1
Communication	1.6	0.6	1.7	0.7	2.3	1.0	5.3	2.8

Source: Calculations from National Income Accounts, CSO, MOSPI.
Note: The calculations are made on GDP at constant prices, constant at 1999-00 and 2004-05.

V. Employment in the Services Sector

There has been a lot of debate on employment generating capacity of services sector. It has been argued that employment growth in services sector has not be commensurate to the income growth in the sector (Bosworth and Maertens, 2010) or the increase in its share in India's GDP (Kocher *et. al.* 2006). The change in the production structure from agriculture to services has not been reflected by a proportionate change in the occupational structure (Bhattacharya and Mitra 1990). As a result, services-led growth has been a jobless growth (Banga, 2005 and Bhattacharya and Sakthivel 2004). Over the years, the percentage of people employed in agriculture has declined and employment in services has increased, though the broad pattern of employment has remained the same with agriculture having the highest share. Table 4 explores that percentage share of services sector in total employment is increasing since 1972-73. Though the employment percentage in agriculture sector is highest in comparison of other sectors yet its share is declining continuously. However, the services sector is the second largest employer after agriculture for Indian population.

Table 4: Sector wise percentage share in employment

Year	Agriculture	Industry	Service
1972-73	73.9	11.3	14.8
1977-78	70.9	12.6	16.5
1983-84	68.6	13.8	17.6
1987-88	64.9	17.0	18.1
1993-94	64.5	14.3	21.2
2004-05	57.0	18.2	24.8
2007-08	55.9	18.7	25.4
2009-10	51.3	22.0	26.7
2014-15	45.7	24.0	30.3
2018-19	42.4	25.6	32.0

Source: Various rounds of NSS data on employment and unemployment

VI. Conclusions and Policy Implications

The present paper makes an analysis of Indian services sector through examining its growth and contributions in the economy. The study confirms that services sector have grown at the significant rate in comparison to other sectors. Its growth rate is found to be higher than growth of overall GDP. Rising share of this sector in GDP over covers the poor performance of agriculture sector. As a service sub-sector, trade is dominant all in terms of its contribution in Indian GDP. The employment percentage in service sector as well as in industry sector is rising while in agriculture, it is falling continuously. A large proportion of Indian population is still engaged in agriculture sector and the next largest employer is service sector where trade, hotels & restaurants and community, social & personal services are the significant generator of employment. Thus, service sector which is dominant in terms of its growth & shares serves as an engine of growth for Indian economy. The paper highlights reform measures that will enable the services sector to not only to grow at a fast pace but also create quality employment and attract investment. It is important for a developing country like India with a large and young population to generate quality employment and move up the value chain. India needs private investments in key infrastructure services such as transport, energy and telecommunications.

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JUDICIAL ACCOUNTABILITY IN THE SABRIMALA TEMPLE ISSUE

SHITAL V CHAUDHARI
RESEARCH SCHOLAR
SHRI J.J.T.UNI, JHUNJHUNU,
RAJASTHAN
Guide Name : Dr.Vinod
Kumar

ABSTRACT

Article 17 pertains to untouchability and prohibits discrimination on the basis of impurity. She stated that, in the context of the Article and the Constitution in general, untouchability refers to caste and does not extend to discrimination on the basis of gender. Like Justice Chandrachud, she referred to the Constiuent Assembly Debates to establish how the founder intended to use the term untouchability. Unlike Justice Chandrachud, she concluded that untouchability does not extend to gender.

See, every individual is allowed to believe many things. I am free to believe, I myself is a god. Our PM can believe, he is an emperor of India. Our Chief Minister can believe, he is the King of Kerala. No one can question one's personal beliefs. But imagine, if a law is made by Indian Parliament allowing PM as the unquestionable King of India or CM as inviolable dictator of the state? It becomes a law and law is meant to be enforced, unlike belief that can't be enforced upon others. Naturally, the law will be questioned and it's for this purpose, Judiciary exists as a forum to discuss the validity of such laws.

Keywords

Judicial accountability, Judicial over rich, sabrimala temple Verdict.

INTRODUCTION

At the outset let me note that I have the greatest respect for India's Supreme Court which has been instrumental in preventing India from becoming a Pakistan. So it is with

reluctance that am writing about a disagreement with one of the Supreme Court's recent judgements, on Sabarimala.

In the meantime, till this issue is resolved, one would hope the Kerala government will continue to enforce the judgement, but with sufficient restraint so as to prevent any injury or harm.

I must begin by stating that I have no religion – in fact, I oppose all religions. I consider religion to be divisive, at times inhumane, and generally lacking in respect for reason and scientific evidence. But I also defend everyone's right to their beliefs and forms of worship, so long as they do not physically harm anyone.

My anti-religion position does not represent our party's view. Our party has no view on any religion or on any religious matter that does not involve physical harm. We have nothing to say as a party about Sabarimala temple's custom of not allowing women in a particular age group to enter. The Supreme Court's judgement, which has made an issue out of a non-issue, has taken us by surprise.[1]

I'm summarising below our party's main objections to the Supreme Court's judgement.

First, the government and Supreme Court are our servants, paid by us – the citizens – in accordance with the social contract we gave to ourselves through our Constitution, to perform one key job: to defend our private property and freedoms – including our freedom of belief no matter how absurd.

It will be an impudent misuse of the power that we entrusted our servants on 26 January 1950 for them to start telling us what to believe or how we may believe. Social or cultural or religious change is totally outside the scope of the functions that we gave the government or the Supreme Court.

We believe the Supreme Court should urgently reconsider this judgement. At the same time, we don't want the Parliament to make any further laws in this matter as that would amount to further interference in religious affairs. At the same, time, we ask the Modi government to hand back all temples to the community and repeal all religious laws, thereby nipping this evil of socialist statism in the bud.[2]

OBJECT OF THE STUDY

1.To Observe beliefs aren't an enforceable option. All are free to believe many things.

2. To study judicial accountability of judiciary in sabrimala verdict.

HISTORY

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[1] https://www.scobserver.in/court-case/sabrimala-temple-entry-case/plain-english-summary-of-judgment-ee5ae148-9597-479f-84d7-35d398ed5e68

[2] Read more at:
https://economictimes.indiatimes.com/news/politics-and-nation/sabarimala-verdict-a-timeline-of-temple-entry-issue-ahead-of-sc-verdict-today/articleshow/72049026.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Here is a brief timeline of the Sabarimala Temple Case:

1990- A petition was filed in the Kerala High Court seeking a ban on entry of women inside the Sabarimala temple.

1991- The Kerala High Court had upheld the restriction of women of certain age entry inside the holy shrine of Lord Ayyappa.

2006- A petition was filed in the Supreme Court by the Indian Young Lawyers Association seeking entry of women between 10 to 50 years.

2008- The matter was referred to a three-judge bench two years later. January 2016- The court had questioned the ban, saying this cannot be done under the Constitution.
April 2016- The United Democratic Front government of Kerala led by Chief Minister Oomen Chandy informed the SC that it is bound to protect the right to practice the religion   of   Sabarimala   devotees.
November 7, 2016- The Kerala Government had told the Supreme Court that it was in favour of allowing women ins ..
2017- The Supreme Court referred the case to the Constitution bench.

September 2018- A five-judge bench of Supreme Court allowed the entry of women of all ages in the revered shrine. The state government sought time to implement the verdict, however even after the entry was allowed a large number of followers camped outside the shrine prevent the entry of women of all ages.

February 2019- The order was reserved by the Apex court. The order expected to be announced today is like ..

OPINION OF JUSTICE

Chief Justice Misra's opinion

CJI Dipak Misra, speaking on behalf of Khanwilkar J. & himself observed that religion is a way of life intrinsically linked to the dignity of an individual and patriarchal practices based on exclusion of one gender in favour of another could not be allowed to infringe upon the fundamental freedom to practice and profess one's religion. He stated that the exclusion of women between the ages of 10-50 years practiced by the Sabarimala Temple denuded women of their freedom of worship, guaranteed under Article 25(1).

Further, he held that the devotees of Ayyappa did not pass the constitutional test to be declared a separate religious identity. He said that they are Hindus. Thus he held that the temple's denominational right to manage its own internal affairs, under Article

26(b), was subject to the State's social reform mandate under Article 25(2)(b). Article 25(2)(b) provides that the State can make laws to reform Hindu denominations. Specifically, Article 25(2)(b) allows the State to make any law that opens a public Hindu institution to all '*classes and sections*' of Hindus. Justice Misra interpreted '*classes and sections*' to include the gendered category of women. He concluded that the Sabarimala custom of excluding women is subject to State mandated reform.

He also held that the exclusion of women between ages 10-50 by the Sabarimala Temple cannot be an essential religious practice. He held that if the *Ayyappans* are Hindus, the practice of excluding women cannot be held to be an essential religious practice.

He struck down Rule 3(b) of the Kerala Hindu Places of Public Worship (Authorisation of Entry) Rules of 1965. He said that is both in violations of the Constitution and *ultra vires* to Sections 3 and 4 of its parent Act. Sections 3 and 4 of the Act were written with the specific aim of reforming public Hindu places so that they become open to all sections of Hindus. Rule 3(b) achieves the opposite -- it allows public Hindu places of worship to exclude women on the basis of custom. Hence, CJI Misra concluded that the rule not only violates the Constitution, but also stands in conflict with the intention of the parent Act.

Justice Nariman's opinion

Justice Rohinton Nariman delivered a concurring opinion. He held that the worshippers of Ayyappa do not constitute a separate religious denomination. He labeled them as Hindus who worship the idol Ayyappa. Thus he held that the Sabarimala Temple's denominational freedom under Article 26 is subject to the State's social reform mandate under Article 25(2)(b).

He declared that the exclusion of women from the temple effectively rendered their right under Article 25 meaningless. He emphasised that Article 25(1) protects the fundamental right of women between the ages of 10-50 years to enter the Sabarimala Temple and exercise their freedom of worship. He stated that there was sufficient material to conclude that the exclusion of women from Sabarimala violated Article 25(1).

He concluded that the *Ayyappans'* custom of excluding women, between the ages of 10-50 years, from the Sabarimala Temple was unconstitutional. He also struck down

Rule 3(b) of the Kerala Hindu Places of Public Worship (Authorisation of Entry) Rules of 1965 as unconstitutional.

Justice Chandrachud's opinion

In a separate and concurring opinion, Justice D Y Chandrachud held that the exclusion of women between the ages of 10-50 years by the Sabarimala Temple was contrary to constitutional morality and that it subverted the idelas of autonomy, liberty, and dignity. He held that the morality conceptualised under Articles 25 and 26 of the Constitution cannot have the effect of eroding the fundamental rights guaranteed under these Articles. Justice Chandrachud concurred with the opinions delivered by CJI Dipak Misra & Justice Nariman to hold that the *Ayyappans,* or worshippers of Lord Ayyappa, did not satisfy the judicially enunciated requirements to be considered a separate religious denomination. He held that the exclusion was not an essential religious practice.

Justice Chandrachud further emphasised that physiological characteristics of women, like menstruation, have no significance or bearing on the entitlements guaranteed to them under the Constitution. The menstrual status of a woman cannot be a valid constitutional basis to deny her the dignity and the stigma around the same had no place in a Constitutional order. Significantly, Justice Chandrachud also dealt with the argument that the exclusion was a form of untouchability prohibited under Article 17 of the Constitution. He observed that a perusal of the Constituent Assemble Debates would show that the makers of the Constitution had deliberately chosen to not give the term *untouchability* a specific meaning. He concluded that this was to ensure that it was not understood in a restrictive manner and must therefore be given an expansive meaning. He further held that Article 17 is a powerful guarantee against exclusion and cannot be read to exclude women against whom social exclusion of the worst kind has been practiced and legitimized on notions of purity and pollution.

Justice Malhotra's dissenting opinion

Justice Indu Malhotra delivered a dissenting opinion. She argued that constitutional morality in a secular polity, such as India, requires a '*harmonisation*' of various competing claims to fundamental rights. She said that the Court must respect a religious denomination's right to manage their internal affairs, regardless of whether their practices are rational or logical.

She held that the Sabarimala Temple satisfies the requirements for being considered a separate religious denomination. She therefore held that the Sabarimala Temple is protected under Article 26(b) to manage its internal affairs and is not subject to the social reform mandate under Article 25(2)(b), which applies only to Hindu denominations. Note that Article 26, denominational freedom of religion, is subject to '*public order, morality and health*'. Justice Malhotra held that 'morality' (constitutional morality) must be understood in the context of India being a pluralistic society. She stated that the State must respect the freedom of various individuals and sects to practice their faith.

She held that the fundamental right to equality guaranteed to women under Article 14 cannot override Article 25, which guarantees every individual the right to profess, practice and propagate their faith.

She held that Rule 3(b) does not stand in conflict with its parent Act, the Kerala Hindu Places of Public Worship Act. She emphasised that the rule '*carves out an exception in the case of public worship*'. She held that the rule was consistent with Article 26(b) of the Constitution.

CONCLUSION

My opinion is that its indeed a **LANDMARK PROGRESSIVE JUDGEMENT.**

I welcome it whole-heartedly as well as got myself reassured that we have a strong judiciary that prevents us from falling into primitive orthodoxy.

Now why I believe its a progressive judgment?

I have previously written an answer why ladies have the right to pray in this temple

So essentially I believe, the apex court of this country has well sensed the basic concepts of the worship and understood how human-made customs of a period is currently outdated and primitive that not just violates the constitutional rights of a woman, but also make them look inferior or second class, in front of a deity whom we all believe as god.

Legal Part

Many people who believe in this age-old customs say the court has interfered into the rites and traditions of this Hindu temple. And this is often exaggerated as outsider interference into Hinduism.

Well, that's definitely a wrong narrative. While discussing the case, Hon. Supreme Court made it very clear, they are not into any rites, rituals or beliefs of any people. This was made as a verbal observation by Justice Chandrachud that the court is not into a theological mandate, rather checking its validity on basis of the constitutional provisions

As Sabarimala Hearings Continue, SC Mulls Relevance of Essential Practices Doctrine

Essentially it means, the court is not checking on one's beliefs in rituals or rites or customs etc. Rather checking how such customs or traditions validated under the much larger law of the nation.

The debate in our Supreme court isn't on the traditional belief of having women of menstruating age (10–50 years) into the temple. Rather the debate was on the constitutional validity of a legislation-

Section 4 of THE KERALA HINDU PLACES OF PUBLIC WORSHIP ACT 1965 that was passed Kerala Legislature to validate Hindu entry to all temples across the state by merging multiple acts of Travancore, Cochin and Madras Legislation over Malabar temples.

This section gives the power to temple authorities to legally enforce exclusions into the temple

And based on this provision, *Rule 3(b) of the Kerala Hindu Places ofPublic Worship (Authorisation of Entry) Rules, 1965* was framed those specifically disallowed certain class of people to temple at certain time-frame which were used to interpret as females of menstruating age group between 10–50 years from entering into Sabarimala

So here, **the question was the legality of this law, not a mere belief.** Yes, this law was constituted out of a traditional belief, but essentially the center of the debate was the validity of this law made by a Government which was formed on basis of Indian Constitution.

What Supreme court did was, it measured and evaluated, how far this law made by Kerala Govt is valid? And it clearly observed that law is made ultra vires to provisions of the Indian constitution, by looking at all sides of the law.

So this wasn't a belief question, rather the validity of a law passed by our legislature.

REFRENCE

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ENHANCED BIOCHEMICAL ACTIVITIES IN FRESHWATER CRAB PARATELPHUSA JAQUIMONTTII (RATHBAN) ON EXPOSURE OF SYNTHETIC PYRETHROID (CYPERMETHRIN)

Dr. S. K. Parate

Department of Zoology,
B.B. Arts, N.B. Commerce & B. P. Science College, Digras
Email: sanjivanil2008@gmail.com Mob: 9921974624

ABSTRACT

Cypermethrin enhanced alternation in the crab, Paratellphusa Jacquemonttii (Rathban) were studied. The crab was exposed to Cypermethrin at a concentration 0.024 mg/lt for 15 days. After 15 days, crabs were released into freshwater to observe the response. Completion of 1, 2, 3, 4, 7, 8, 15 days of exposure and then transfer into freshwater, various parameters were estimated in hepatopancreas and muscle. There was reduction of protein in hepatopancreas as well as muscle and free amino acid content was enhanced in hepatopancreas and muscle for 15 days.

Keywords: Cypermethrin, Paratellphusa Jacquemonttii, hepatopancreas, muscle

1. INTRODUCTION:

Day by day the use of pesticides has increased in agricultural practices. The advantages in the use of pesticides are plentiful, but at the same time it may be harmful to the ecosystem. These pesticides, even when applied to agricultural products may be washed by rains and runoff to the streams, rivers, lakes and ponds during rainy season and adversely affect the non-target aquatic flora and fauna. This may changes the physico-chemical properties of these water bodies (Harsimran and Harsh, 2014). These in turn interacts with various physiological activities of living organisms like Crab, Fish, and Prawns etc. Biochemical constituents like glycogen, protein and lipid are considered as sensitive indicators of metabolic activities (Chandrakala etc, 2008). Pesticides have been known to influence carbohydrate, protein and lipid contents in crustaceans, viz., M. malcolmsonii exposed to carbaryl (Saravana et al., 2002); B. Cunicularis exposed

endosulfan (Shanmugam and Venkateshwarulu, 2000). Tiwari S et.al, 2012) and Monir et al. (2016) have investigated the effects of cypermethrin on fish, but there is little information on the comprehensive effects of cypermethrin during the exposure and post-exposure periods and there have been some previous research on the sub-lethal effects of cypermethrin on lipids, free fatty acids, metabolites and enzymes of protein and carbohydrate metabolism of fish during the exposure and recovery phases (Begum, 2005).

2. METHODOLOGY

The freshwater crabs, Paratelphusa Jacquemontii were collected from local fish market. They were kept in large aquaria with continuous aeration and acclimatized to laboratory conditions for two weeks under constant salinity (15 ± 1 ppt), pH (7.2 ± 0.1), and temperature ($22 \pm 2°C$). During experiments other condition were maintained. Eyestalks were ablated and extracts were prepared and injected. The desired concentrations of Cypermethrin were prepared, for normal, eyestalk ablated crab.

Oxygen contents of experimental medium during this period the crabs were fed fish flesh. Feeding was stopped 24 h before the beginning of the experiments, and no food was given during experimentation. Only inter molt (Stage C4), intact, male crabs were used in the present study. Cypermethrin was dissolved in physiological saline (Allayie et.al, 2011). In these experiments, there were 10 and each group was of 10 crabs. Before using Cypermethrin some pilot readings must have been taken on that basis 3 concentrations are decided to use for the result.

- The first group served as normal and received no treatment. A second group served as control, with each crab in this group receiving an injection of 10 ml of physiological saline (Allayie et.al, 2001) through the base of the coxa of the 3rd pair of the walking legs.
- In groups 3–5 respectively, each crab received an injection of 10-7, 10-8, and 10-9 mole Methionine-enkephalin in 10 ml volume.
- Both eyestalks were ablated from all the crabs in groups 6–10.
- The eyestalks were extirpated by cutting them off at the base, without prior ligation but with cautery of the wound after operation.
- Twenty-four hours after eyestalk ablation, these groups were used for experimentation.
- Crabs in group 6 served simply as eyestalkless animals, and
- Crabs in group 7 received 10 ml crustacean Ringer solution and served as eyestalkless controls.
- In groups 8–10 respectively, each crab was injected with 10-7, 10-8, and 10-9 mole Methionine-enkephalin in 10 ml volume.

- Based on preliminary kinetic studies, the crabs were sacrificed for analysis 2 h after injection.
- Hemolymph (500 ml) was aspirated by syringe, through the arthrodial membrane of the coxa of the 4th pair of walking legs.
- The other tissues (hepatopancreas and muscle from chela propodus) were then quickly dissected out, weighed, and analyzed by the procedures outlined below.
- Total carbohydrate (TCHO) are estimated in trichloroacetic acid supernatant (10% TCA w/v) according to the method of Carroll et al. (1956).

Acute toxicity study was carried out to determine the potency of cypermethrin for static but renewal type of bioassay was adopted in the present investigation to estimate the LC50 values. The mortality was recorded for the crab at 24, 48, 72, 96,168,192,360 hrs exposure to cypermethrin were corrected for natural response by Abbott's formula [5]. The LC50 values for 24, 48, 72, 96, 192, and 360 hrs of exposure periods were estimated as 2.032, 1.918, 1.834, 1.634, 1.578, 1.456 and 1.235 ppm respectively.

Table 1: The LC50 values and regression equations for P. Jacquemonttii treated with Cypermethrin.

Exposure period (h)	LC50 (PPM)	Functional relationship (Y)	r2	95% confidence interval for slope coefficient (b)	
				Lower Limit	Upper Limit
24	2.032	y = 1.083x - 0.021	0.996	6.321	30.698
48	1.918	y = 0.988x + 0.003	0.970	15.888	36.776
72	1.834	y = 1.123x - 0.025	0.951	11.665	18.090
96	1.634	y = 0.957x + 0.013	0.968	10.821	62.525
168	1.578	y = 1.002x - 0.000	0.988	19.576	26.553
192	1.456	y = 0.941x + 0.010	0.905	0.636	103.137
360	1.235	y = 0.908x + 0.047	0.910	11.244	28.330

At the end of the treatment period, the cypermethrin treated crabs were dissected and the tissues namely, hepatopancreas, muscle, haemolymph, and eyestalk were weighed (250mg). Statistical analysis of the results was made using a two-way ANOVA test followed by Dunnet's multiple range test (preceded by one-way ANOVA), using IBM SPSS and Statplus 2009 by AnalystSoft Inc.

Pilot experiment for dose effect was performed where Intact as well as Eyestalk ablated Crab were given injection of Cypermethrin dilution doses were given.
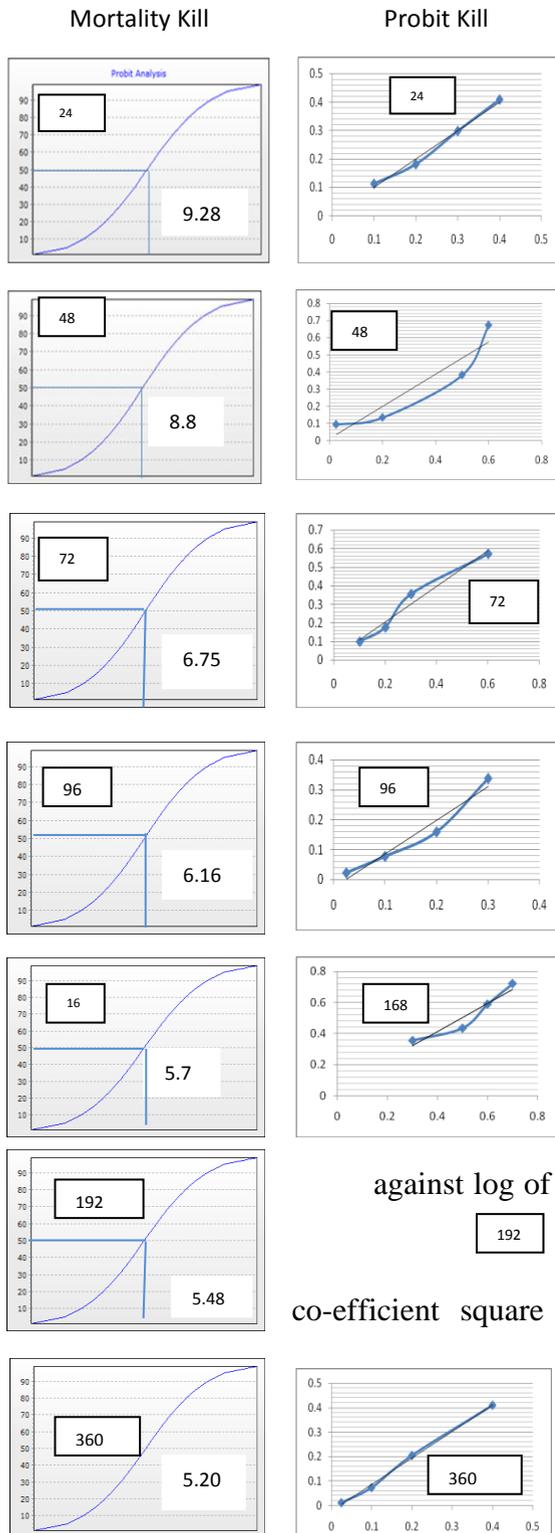
3. RESULT AND ANALYSIS:

In the present investigation, an attempt was made to identify the effect of the Cypermethrin on various parameters of hepatopancreas; muscle, haemolymph and carbohydrate were estimated between the control and the experimental groups.

Mortality Kill **Probit Kill**

The lethal concentration (LC_{50}) of Cypermethrin:

The lethal concentration (LC_{50}) of Cypermethrin for P. Jacquemonttii was observed for 360 hrs. The logarithm of 50% lethal concentration was obtained by finding the value on the abscissa for straight line which assumes the probit value 5. The concentrations resulting in 50% mortality and slope of the probit line were calculated for specific period of exposure as described by Finney (1971). The percent mortality data were subjected to probit analysis and plotted against log of dose concentrations resulting in a straight line. The values of LC_{50}, upper and lower confidence limits, slope function, correlations co-efficient square and regression results of Cypermethrin on

308

P.Jacquemonttii were given (Table: 1). The LC_{50} values for 24, 48, 72, 96 , 168, 192, 360 h of exposure periods were estimated at 2.032, 1.918, 1.834, 1.634, 1.578,1.456 and 1.235ppm respectively (Graph: 1).

Effect of injection of Cypermethrin on Intact Crab

1. Injection of Methionine-enkephalin into Intact Crab resulted in significant hyperglycema and hyperglucosemia is directly proportional to the dose.

2. Physiological saline injection has not shown any effect on hemolymph carbohydrates for doses from 10-9 to 10-6.

3. Doses less than 10-9 mol/crab did not extract a sugar level in blood.

4. Hyperglycemia in above 10-7 to 10-7 where it levels saturating -constant.

5. Significant increase was observed in hemolymph glucose level within half-hours of injection and reached at maximum level after 24 hours and then declined linearly.

6. Hepatopancreas glycogen and TCHO level in crab with injection of Methionine-enkephalin were significantly lower than those of Control Crab.

7. Decrease in muscle glycogen and TCHO levels were also significant after injecting methionine-enkephalin.

8. Decreased hepatopancreas and muscle glycogen indicate/suggesting the possibility of its mobilization of glucose molecule into hemolymph.

9. Phophorylase activity levels increased in both hepatopancreas and muscle after injection.

Fig 3.1 Dose-probit and dose-mortality curve at 24, 48, 72, 96, 168, 192 and 360 hours for normal intact *Paratelphusa Jacquemontii* exposed to Fenvalerate.

Effect of injection of Cypermethrin in Eyestalk ablated Crab.
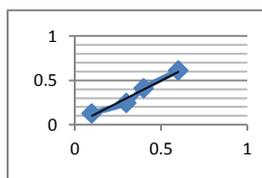
The role of eyestalks and involvement of Methionine-enkephalin in the regulation of hemolymph sugar level was studied. It is observed that bilateral eyestalk ablation significantly decreased the hemolymph sugar levels; whereas injection of eyestalk extract into ablated crabs significantly increased the hemolymph sugar levels. Total carbohydrate (TCHO) and glycogen levels were significantly increased in hepatopancreas and muscle of eyestalk-ablated crabs, with a decrease in phosphorylase activity. Injection of eyestalk extract into ablated crabs resulted in partial/complete reversal of these changes. Injection

of Methionine-enkephalin into intact crabs significantly increased the hemolymph sugar level in a dose-dependent manner.

1. Bilateral eyestalk removal caused a significant decrease in hemolymph carbohydrate level.
2. Increased in TCHO level of hepatopancreas and muscle in eyestalk ablated crab. The increase was greater in muscle.
3. Glycogen level in hepatopancreas increased significantly in eyestalk ablated crab.
4. Glycogen level in muscle was also same as that of hepatopancreas increased in eyestalk ablated crab.
5. Tissue phosphorylase activity level decreased significantly in eyestalk ablated crabs. (Hepatopancreas & muscle).
6. Injection into eyestalk ablated crab did not significantly change hemolymph carbohydrates as compare to Ringer injected and eyestalk ablated crab.
7. Total carbohydrate level did not change significantly in eyestalk ablated + injected crab.
8. Total glycogen from hepatopancreas and muscle did not change in eyestalk ablated + injection crab.
9. Phosphorylase 'a' & 'ab' did not change significantly in the eyestalk ablated crab with Methionine-enkephalin injection.

4. CONCLUSION

It is observed that bilateral eyestalk ablation significantly decreased the hemolymph sugar levels; whereas injection of eyestalk extract into ablated crabs significantly increased the hemolymph sugar levels. Total carbohydrate (TCHO) and glycogen levels were significantly increased in hepatopancreas and muscle of eyestalk-ablated crabs, with a decrease in phosphorylase activity.

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About the Editors

Prof. Kishor Manikrao Waghmare is well known author in Library and Information Science discipline. He is working as librarian in Anandibai Raorane Arts, Commerce and Science College Tal. Vaibhavwadi Dist. Sindhudurg. He has been working as librarian since last 12 year of service and having outstanding knowledge in library and information science discipline especially in library software for library automation and library department digitization of services and facilities.

He is lifetime member of Library and Information Science discipline associations in India and Abroad such as, SALIS, ILA, etc.

He has published 26 research articles in the international level conference and seminar over all in India / abroad and 45 articles in the national level conference and seminar overall in India.

The education and qualification of Author is M.A., M. Lib. I. Sc., M. Phil., MBA- (HR), NET, SET and currently pursuing Ph.D. The author has completed his all College degrees from Pune University, Pune (MS)

Author has submitted two minor research projects in library and information science discipline in the year 2012-2013 and 2017-18 in Mumbai University.

Author has published three books at International level by International level publishers and all books are available online shopping websites.

Author is very active in social work in India and Abroad through so many societal Non - Government organizations (NGO). In the lockdown period of Covid 19 – Corona virus, he has arranged so many educational activities for keep awaken and active to every teachers, professors through involving in Online F.D.P., CAS Webinars, Ph.D. synopsis preparation webinars, Online Webinars on awareness about Covid 19, one day online International Multidisciplinary Conference etc. all online programs were conducted by him.

Author was working and affiliated to University Grant Commission's INFLIBNET SOUL project as delegated post of assistant technical officer for SOUL library software installation and provide training to library staff in the Maharashtra and Goa States. In this period he has installed and made so many libraries' automation and digitization.

Author has excellent knowledge of library automation due to 105 SOUL software has been installed and given training to handling and operating SOUL library software to staff as SOUL clients.

Advocate Mrs. Manisha Kishor Waghmare is a Professional lawyer and she is working as lawyer since last ten years as private lawyer in Mumbai High Court and Kankavli District Court.

Author has completed M.A., L.L.M. and currently pursuing Ph. D. in Law discipline from J.J.T. University, Rajasthan, India. Author's all educational qualification has been done from Pune University, Pune (MS). Author has completed her L.L.M. degree education in N.B.T. Law College, Nashik.

Author having speciality in Family Law, Civil Law and Criminal Law. Author is believing in giving proper legal justification every Indians.

Author is very active in social work in India and Abroad through so many societal Non - Government organizations (NGO).

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