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Metaverse: Concept, Advantages, Disadvantages and Application in Education

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Abstract
The term metaverse was first used in the Snow Crash; a science fiction novel by the American writer Neal Stephenson, published in 1992. Stephenson used the term metaverse to describe a virtual reality where the character interacts with others in his avatar, makes purchases, and even defeats his real-world enemies. Of course, the concepts of virtual reality and a world similar to Metaverse were emerged before the Snow Crash in 1984 with the Neuromancer novel authored by William Gibson. In fact, a wide network of virtual environments constantly active and online where people can communicate with each other in the form of their own avatars or with the help of augmented reality glasses. In this regard this article attempts to shed light on the Metaverse: concept, advantages, disadvantages and its application. It was concluded that with the rapid development of new technologies, the boundary between the physical and digital worlds will disappear and the metaverse will become an important public infrastructure that affects various aspects of human life.

Keywords : Metaverse , Web generation , Education , Reality , Virtual Reality

Introduction
There are questions circulating in the mind about how far has mankind developed in the field of technology and related matters and whether it can become a threat to him? Are the features of a different reality that we are governed by technology clearly taking shape? Or will technology and the tools it produced be the magic wand in solving humanity's problems since time immemorial? Will humans live in unreality and infinity and there will be the beginning of the end? Are we unconsciously walking behind technology or are we forced to? It may be that we will never be able to answer such questions, but perhaps time will tell us, and with time, the truth will emerge.

In order to better understand Metaverse, the discussion about this new technology becomes imperative. The metaverse is an ambiguous word in and of itself, divided in itself, as it is an illusion of reality and not reality at the same time. In the researches, it is mentioned that the word Metaverse consists of two parts, meta, which means "beyond" or after in Greek, and verse means the universe or the world, referring to a universe beyond our current understanding., if this terminology could be considered appropriate (Mystakidis, 2022). Metaverse represents the most recent technology advancement after decades of continuous and gradual development in the world of the Web and the Internet.

Metaverse concept

Several researches on metaverses have indicated that there is still significant ambiguity in providing a complete and clear definition of metaverses and what they are, and that may be due to the fact that it will take some time for this technology to reach its full potential (Lee et al, 2021).

But it can be said that Metaverse is a huge social network that includes a combination of virtual reality (VR), augmented reality (AR), mixed reality (MR) and 3D environments in addition to artificial intelligence (AI) technologies that interact with them continuously and effectively in real time , in which an unlimited number of people around the world participate, and it provides a real immersion environment for users and a real feeling, with virtual real communication in environments that are completely similar to real-world environments, and in which various types of functions such as communications, payment, etc. take place (Liew, 2021).

Mystakidis (2022) also stated that Metaverse is a post-reality world, in which physical reality is combined with virtual environments with a connected network that includes continuous and multi-person interactions and contains open-world game play that is based on VR and AR and users are represented with images avatars that interact in real time with an immersive feeling for users.

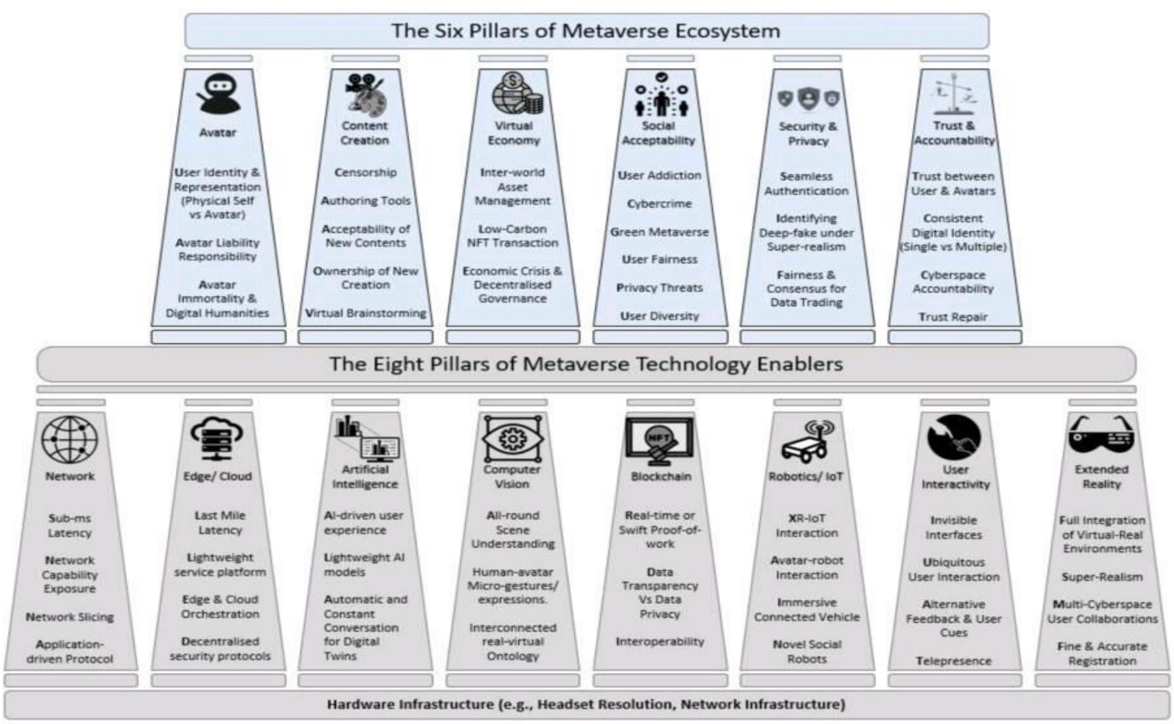
The idea of the Metaverse environment and the type of technology used in it

Metaverse is based on complex and overlapping types of virtual reality (VR), augmented reality (AR) and mixture (MR) technologies, and together form a combination that is called extended reality (XR), and based on three-dimensional technologies to create virtual objects that are closely integrated with physical and human perceptions. Artificial intelligence, Internet of Things, computer vision, sensory sensors, and other technologies such as Blockchain also interact with it to ensure data storage and handling in a way that guarantees protection and privacy for users. Lee et al., (2021) mentioned in his research on Metaverse eight basic technologies on which Metaverse is based, including extended reality, user interaction, and robots Artificial intelligence and other related technologies, as shown in the following figure:

Figure 1. The figure depicts a future roadmap for metaverse three-stage developments towards the surreality , source Lee, L.-H et al (2021)

Web generation supported by Metaverse

As for the generation of the Web supported by Metaverse, it will be an overlap of several generations, but the most prominent of which is (Web 4.0), which is linked to a symbiotic and complementary relationship with the Internet of Things and AI, or as it is called the symbiotic Web, in which the features of real integration and immersion in the virtual world are evident with the activation of decentralized services that help Users to navigate and interact in a large way and they share with them intelligent agents, sensors, and language processing services, all of which together represent a quantum leap in the world of the Web and its services, but did Web (4.0) appear out of nowhere, or it is the data and its stored power since its first entry into computer systems especially Web (2.0) when companies showed interest in data and its collection, which created a huge data force, as a result of which Web (3.0) emerged, as large and quality services for users developed to provide users with a greater role of interaction and harmony by Web (3.0) services, which still shows daily developments, perhaps the Blockchain and Bitcoin are among the most prominent features of Web (3.0). Basically, we can say that Metaverse is the result of big data that has gathered and accumulated over decades of time. Web (2.0) is the main product of data, Web (3.0) has benefited from and stored this data, and Web (4.0) has really utilized this data through technologies. mentioned earlier, and It is possible that there will be another generation or generations of the web fit into the new worlds of metaverse.



Advantages and disadvantages

The popularity of Metaverse increased significantly in 2021, mainly due to announcements by major tech companies. For example, Facebook changed its name to Meta to focus on developing the Metaverse. It was one of the notable events that sparked global debate about the possibilities with the metaverse. At the same time, many other big tech companies such as Microsoft, Epic Games and Nvidia joined the Metaverse group with innovative investments. As the popularity of the metaverse grew, so did advantages and disadvantages of the metaverse.

Among the most important features that Mark Zuckerberg (Introducing Meta: A Social Technology Company, 2021) stated at the time of announcing the changing of the Facebook company's name to Meta, are the followings:

– Interacting and sharing with people and friends, sharing beloved hobbies together in real time, such as video games, and attending their social events without bothering or incurring travel costs, which are sometimes not available in the physical world.

- Reducing congestion, saving times, and avoiding problems resulting from the difficulty and complexity of transportation.

- The presence of various spaces that are similar to or superior to real spaces in which virtual life is practiced. There is a home space, a work space, a play space, and spaces for interaction with the outside world in the Metaverse, which provides many options for users, so they do not cause boredom and routine.

We can add the following advantages of metaverse to the above mentioned:

- Finding appropriate social relationships for certain groups that are often ignored in real life, such as the elderly in nursing homes, or people with special needs in their centres who lack the reality of social communication except to a few limits.

- Attending sports events in particular has another feeling when it takes place with full immersion and the real atmosphere of the match, unlike watching the match on TV, this is a totally different experience. which is not at all like watching the match on TV.

- Finding and selecting partners, such as choosing the right husband or wife in real life through virtual reality, may be a real advantage that can be achieved through via reality through a deep knowledge of personalities and choosing appropriate criteria for each of them that may eventually lead to a successful marital relation.

- Another great feature is the avatar image that reflects the user's personality (Avatar), which allows the user to draw a character that fully reflects his or her personality.

On the contrary, the concerns about the disadvantages of Metaverse stated can be mentioned as followings :

- Privacy is the biggest threat that Metaverse may invade. There is no place to hide and maintain closed walls. People's data has become the property of everyone, whether they like it or not, but privacy laws and the existence of strict standards may help companies avoid deep problems at this point.
- Likewise, isolation, may cause real harm to individuals and societies in physical reality, as each person may become spending most of his daily time in a virtual world and that results in becoming isolated from real world and over time, he may not be able to cope with reality.
- Impersonation possibility in metaverse environment can be another point of concern. It can be predicted that users will use secondary avatars in order to obscure their real avatar. These secondary avatars allow users to hide their true behaviour in the metaverse ((Falchuk et al., 2018)).

Metaverse Applications in education

According to Hirsh-Pasek et al.(2022) digital researchers, educators, policymakers, and designers have an opportunity to lead the way and harness the potential of the Metaverse as a 3D, global, interconnected, and immersive online space in real time, that requires new ways to connect the physical world with augmented and virtual reality experiences.
Some researchers have stated that it can be effectively used in the medical field in the future to give users a more comprehensive, interactive and collaborative education in the medical field (Chen et al., n.d.).

Metaverse also promises great benefits in the field of aviation in particular, as it gives enormous opportunities to interact with aircraft and offers semi-real flight experiences, as well as in the field of maintenance and engineering by means of smart glasses enhanced by virtual objects and units that process speech and different languages for passengers and smart plans to control the atmosphere and flight route in continuous interaction and accurate details (Siyaev & Jo, 2021).

- In the field of science education, metaverses can be used and utilized, for example, in the field of chemistry, as follows:
- Conducting chemical reactions and dealing with them in a semi-real and realistic environment, whether the elements used are radioactive or contain a high level of uranium and radium that there will be a possibility to achieve this in front of eyes of the learners without fear of any harm that these materials may cause in real laboratories in physical reality.
- Transforming abstract concepts that have long eluded students' understanding and realization, and making them embodied in front of them. In the metaverse world, they can see carbon atoms scattered around them or form symmetrical or asymmetrical matrices in various compounds and molecules, accumulating or diverging before their eyes, and this enables them to see the structures of things. And its forms that are not visible in the physical reality, so they know how many carbon atoms surround them in everything, and what is the safe percentage of its

various compositions such as Co2 that they deal with continuously, and this prompts them to rationalize consumption and choose the safest compounds for the individual and the environment, including realizing the real danger it poses. The ozone hole and the emission of harmful gases change the Earth's climate and nature, and here specifically a real metaverse can be formed about the shape of the Earth, with these real threats and how this can be observed with a realistic vision that draws the devastating effects of climate change on humans and living creatures in general, and then helping students to make the effort In the short term to preserve their close environment, and in the long term to preserve the planet as a whole.

– As well as utilizing the Metaverse it in exact sciences, studying living organisms, diving into the human body, knowing precise details that are impossible to reach in the real human body, and perhaps revealing relationships and interactions that were not previously disclosed, and it may be possible to reach further, such as controlling human genes and genetic diseases and controlling These genes, thus preventing the gradual emergence of these diseases. But it may be misused in this field, so that genes and human production are manipulated, unwanted embryos are aborted, one gender is preferred over another, or even interference in human numbers, and other frightening scenarios if they are not controlled and the metaverse worlds are subjected to strict laws that guarantee benefit from them without threat to humanity.

- With the help of metaverse it is possible to present history and defunct cultures, explore the secrets of history and the oddities of the past, search for stories of defunct nations and previous civilizations, and represent them in a realistic manner that suggests human coexistence and contemporaneity with all different eras.

- In art, Metaverse represents a fertile artistic environment for teaching and learning art in its forms, colours, and interpretations. Metaverse residents may one day be able to solve the mysterious puzzles in Pablo Picasso's paintings, and create a new chapter in art by utilizing Metaverse's unlimited artistic imagination that allows creativity and innovation.

Conclusion

The effects of the metaverse appear in positive and negative ways on human lifestyle. Metaverse will have positive aspects, for example, it will create positive developments in the fields of education, medicine and investment, but on the other hand, emerging crimes in this space, especially fraud, data theft, and privacy violations, will create many problems for the victims. did Due to the digital nature of the metaverse, practices in this technology lead to the generation of private, biometric, financial, and even emotional data, raising concerns about security, privacy, and intellectual property. Long-term use of the tools required to use the 3D Internet can cause physical and mental problems for people and disrupt their understanding and communication with the people in the real world.

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A paper titled

"Digital Human Resources Management in Coop. District Dairy Unions"

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ABSTRACT

With the advent of information technology, it has impacted all facets of human activities. Particularly when it comes to any economic activity it has proved its utility in all departments. Use of digital technology has also been used by the District Dairy Unions in all its departments including Human Resources Department. It has made the various activities carried out by the H R Department very easy, accurate, neat, making it possible to use without much difficulty and at a very fast speed. The most important aspect of use of digital media refers to its utility in decision making. Through the development of sound Management Information System, data in various forms is available to the decision makers ensuring accuracy. Communication has become faster. Training has become very easy. Neatness in reporting are the various advantages of its use in any commercial activity.

Keywords: digital media, HR functions, development of MIS, Decision making,

Introduction:

The idea of digital human resource management is becoming more popular in academic discourse. Such concepts, roughly speaking, signify an ever-increasing use of technology and corresponding significant changes in numerous business and societal domains. Finding ways to use technology to support our work across all departments is what digital HR is all about. It concerns how we employ technology to advance our people strategy and benefit the company.

The transition from a business with primarily manual processes to one with technology at the centre of all its internal (employee-facing, operational, and external) functions is known as digital transformation (customer-facing). Digitization leads to transformation. It is not the digitization procedure itself.

Discussion:

Some examples of digitizing HR processes include:

❖ Self-service and e-sign applications let job seekers submit their applications entirely online or through mobile apps, minimising the need to print out physical documents.

❖ HR professionals can use their time more effectively in other processes by automating recruitment processes like job posting.

❖ A wider range of qualified job applicants may be drawn in by using virtual and remote interviews and training, which can lower travel costs and increase employee engagement.

❖ Gamification of learning and training encourages workers to finish their training and advance their skills by using psychological queues.

❖ To achieve strategic objectives, digital HR can also entail utilising more complex technologies, such as artificial intelligence, machine learning, complex automation, and HR analytics.

of Digital H R

❖ **Saves valuable time of HR Professionals:** HR is the idea that by automating simple, low-value tasks, a human resources professional can use that time to work on more complex, high-value tasks. Data entry, applicant screening, and even payroll processing in some organisations can all require hours of attention each week that could be better spent on work that calls for more critical thought, deliberation, and evaluation.

❖ **Increase in efficiency due to use of technology:** By digitising the hiring process, HR professionals can better serve job seekers and reduce friction. This can help keep qualified applicants from getting discouraged and quitting the application process. An HR professional has a better chance of hiring the candidate who best fits the requirements of the role and the company culture if there are more high-quality applicants.

❖ **Technology allows HR to become more data-driven in many of its processes.** HR professionals can set goals for improvement and better understand what, if any, impact is derived from changes to processes or workflows by benchmarking key performance indicators like average cost per hire and time to hire. It enables us to increase the efficiency of our personnel decisions.

❖ **Digital technology allows the organization to adapt to a changing workforce.** Companies can now connect with potential employees more easily than ever and support remote work as needed. Several instances of this pattern include: Social media sites like LinkedIn and

Facebook give job seekers another way to find a company and apply for a position while also giving staff members and teams another channel for communication. Remote teams can now connect and coordinate on tasks and projects more easily than ever thanks to video conferencing tools like Zoom, Dialpad Meetings, GoToMeeting, and Skype. The process of finding and hiring freelance or contract workers has been streamlined by job hiring platforms like nokari.com, etc.

Dairy farming in India has been acknowledged as a tool for socioeconomic change because it benefits rural society in many ways, including by ensuring nutritional security, boosting income, and empowering rural women. It also creates employment opportunities for family members, increases demand for social infrastructure, and gives rural residents a reliable source of income.

As a type of business organization, cooperatives significantly contribute to improving the socioeconomic standing of their members and the communities in which they live. Cooperatives have operated in India as democratic, member-centric organizations with an emphasis on social and economic transformation. Cooperatives have been instrumental in providing a financially sound and socially conscious corporate organisation in modern globalised market. Cotton textiles, sugar cooperatives, and dairy cooperatives all saw success in India. In India, the dairy cooperatives survived and continued to function following the liberalisation and globalisation of the economy. Dairy cooperatives have contributed significantly to the social and economic development of rural India and have also offered key ingredients for enhancing the population's diet and health. In times of economic distress, when other organisations have been put under a lot of pressure, the cooperative model has proven to be the most dependable. Cooperatives have received government support and encouragement in India.

Concept and Development of District Dairy Unions.

Almost in every village the dairy farmers establish a cooperative dairy society and the dairy farmers are the members of the society, which collects the milk from the dairy farmers daily and sends it to the District Coop. Dairy Union which is usually located at the district headquarter. The village cooperative milk unions are the members of the District Coop. Dairy Union which processes the milk collected from the member societies and markets it in various forms e.g., milk, ghee, butter, cheese, sweets like burfy, pedhas, butter milk, sweetened milk etc. The District Union organizes sales of the milk and the other products and the proceeds realised from the sales are shared with the dairy societies at a certain period (usually fortnightly/monthly) after recovering their all costs. These District Coop. Dairy Societies are governed by the Maharashtra State Cooperative Societies Act.

The District Coop. Dairy Unions in their efforts to increase the daily procurement of milk take various steps for the development of the dairy activity in the district on sound footing and in that they educate the dairy farmers about the scientific way to conduct the dairy activity. The

District Coop. Dairy Unions have a large set up and depending upon the requirement they also create required infrastructure at various spots in the district.

In the post globalization industry scenario we find several Multi National Organizations have appeared on the India's industrial canvas and dairy industry is not an exception to it. Now foreign dairy products are freely available in the Indian market. This has resulted in the fierce competition in the market and survival of the fittest is the situation. Therefore, the domestic dairies had to adopt modern advanced technology to reduce the costs of operations and increase the productivity.

Traditionally, several functions in the dairy industry were handled by manual operations. Human resources have physical limitations as against use of machinery coupled with the technology offer increased output at a short time. India has a great pool of IT professionals and they have come out several apps which help various functions to be performed using technology. Following are the areas wherein Human Resources departments functions use advanced technology which have yielded several benefits to the HRM in District Dairy Unions.

Recruitment Section:

Applications for vacancies in various cadres are invited through Website in soft form. Those are scrutinized through an App, eligible candidates are interviewed on line, shortlisted candidates are invited for personal interview when compensation negotiations take place for senior positions and the appointments are finalized.

Day to day Operations:

Attendance is with use of bio-matric system, salary working through digital app, release of increments, submission of various claims, leave application etc. are all submitted through digital media.

Training:

Induction training is conducted in house, when various important communications are sent to the employee through e-mail, and for some specialized training programs which are conducted by the outside agency staff to be deputed is informed on line. Faculty from within and visiting faculty use power point presentation.

Communication:

All communications (including house journals) are sent to the employees through E-mail. All reports are submitted through digital media.

Use of data for decision making:

Dairy has developed Management Information System which provides various data in required form which facilitates the decision making. For various decision making the data required is collected through digital media and is also analysed using Excel format on which various ratios, can be calculated and impact analysed.

Conclusion:

The dairy also uses digital media for its various departments i.e. production, marketing, etc. Needless to say, that the HR Department is very much benefited through the digital media as it saves time, avoid duplication, assures correctness and neatness. Day in and day out research is going on to further improve the digital media for various sectors including the dairy sector.

References:

1) Interview with the HR Head of two District Dairy Unions.

"Green Money"- A Successful Device to Manageability Conceptual

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Abstract

The time whilst the principal intention of the large majority of relationships international become to benefit gain is lengthy gone. The want to defend the surroundings and preserve not unusual place assets is turning into more and more essential in all sectors today. From one stop of the earth to the different, researchers had been relentlessly pressed to broaden novel techniques for reaching practicality. Green coins is described because the monetary assist required for ventures which have a regular protection plan, direct the outcomes of herbal change, make investments assets into infinite reasserts of work, enlarge the inexperienced cover, and every other final efforts related to capability development. This article considers the additives of inexperienced supporting, which includes inexperienced banking, inexperienced insurance, and inexperienced bonds. With the useful resource of cutting-edge composition, it additionally assesses the splendid boundaries and possibilities for Green Cash in non-present-day countries like India and strives to offer clean know-how approximately Green Cash as a amazing viability device.

Keywords: inexperienced cash, beneficial new discovery, inexperienced speculation thing, and care

Introduction

Because of the enlargement of troubles like ozone layer usage, a huge temperature assist, growing degrees of pollution, brutal opposition for few unreasonably priced strengths reasserts, and different herbal troubles, the want to defend the surroundings and protect herbal assets is status out amongst all of the partners. The intention of inexperienced cash is to carry collectively environmental and monetary worries. There isn't any clean definition of "inexperienced cash," however it could be called any monetary help supplied for projects with the predominant intention of elevating public awareness, along with the merchandising of green designs, green strength management, waste reduction, biodiversity protection, projects related to unrestricted strength reasserts, and different associated endeavours. Public vicinity hypotheses fall brief of assembly the necessities for those activities. To meet the developing demands, drives from the non-public regions and cross-line speculation have to be requested. While that is going on, authoritative framework and suitable methodological physical games have to be used to pick out the troubles with social occasion guarantees and the usage of the one's assets.

Tragically, assist for the financial electricity age, strength performance leaders, and inexperienced endeavour matters isn't given because of loss of assets, enrichments supplied to petrol subsidiaries in diverse countries, the tendency for low returns, worries over betrayal and useful resource mismanagement, and different comparable factors. There aren't any applicable moves taken to assist this ideology due to the fact cash and the surroundings are taken into consideration as separate realms. One of the 3 lengthy stretch desires of the 2015 Paris Agreement, collectively with proscribing the upward thrust withinside the international common temperature and elevating the edge for adjusting to the consequences of weather change, is the monetary perspective. By peacefully negotiating, practising, and bringing those factors of view in the real regulatory framework, measures are meant to consolidate those factors of view. In this essay, an attempt has been made to evaluate the function of inexperienced financing as a amazing device of sensibility, in addition to the diverse avenues to be had and demanding situations encountered at the same time as establishing the monetary and environmental projects in India.

Review of literature

Writing reviews is an important part of the evaluation process, helping to understand the previous research done on this subject and providing a framework for defining and evaluating evaluation problems. Offers. It also helps to understand the scope and limitations of previous research and provides insight into perspectives that previous researchers have not addressed. Jeffrey D. Sachs and others (2019) hypothesized that green finance (including green exercises, green hypotheses, green banking, money-related advances, etc.) needs to be accelerated in order to achieve the goals of functional improvement.

According to Sharif Mohd et al. (2018), India is particularly likely to create the green structures needed for green cash. They reviewed the concept of green cash as a way of reconciling the environment and economy, and also examined the various green financial instruments available.

In a 2016 study, Parvadavardini Soundarrajan et al. Green money was presented as a focal point for low-carbon development, regular improvements and changes in financial events related to the financial sector. They also concluded that smart money is the future and that Indian banks should continue to embrace progress experts focused on the three Ps People, Planet and Advantage.

Banks, institutional investors and financial foundations in general are some of the major players driving the promotion of green money, according to Dr. Cartrin Belensman and others. (2016). Investigators argued that the extent to which a strong climate and appropriate targets can be achieved usually depends on the confidence of the latter actors to drive green money improvements.

Dipika (2015) noted the trend of business partnerships and allies to focus more on environmental protection and legislation. Experts believed that green finance would contribute to financial development while protecting the environment. Green credits should therefore be considered necessary as part of responsible new development.

2013 Keerti B.S. Researched latest green cash cases, issues and prospects in India. Experts also spoke about the creation of an environmentalist profession, considering the need for effective equitable management and local performance. This can be achieved by engaging in efforts such as credit support persuasion, cooperative organizations, institutional development, and other creative endeavours.

Tasnim Uddin Chowdhury et al. (2013) examines the role of green money in financial innovation and viability and how it can support activities that minimize environmental impact, such as agriculture, green banking and green design. Understood. Experts needed to renew their interest in sustainable energy and other green initiatives.

Research Goals

- Focus on various forms of green money that help people achieve practical goals.
- Understanding the Different Forms of Green Finance
- Exploring the Advantages and Limitations of Green Money

Research Structure

Research activities interact with nature. Information is collected from any source and compiled from scattered sources such as reports, journals, research articles and sites.

The Importance of Green Cash:

Green Cash is an effective means of enabling us to achieve a balance between the economy and the environment. And everything revolves around funding and promoting initiatives and activities that promote meaningful development.

Meaningful Development:

Includes all steps taken to reconcile environmental concerns with new growth. The idea focuses on preserving common resources for future generations to benefit from.

Green Money as a Valuable Means of Legitimacy

Green Aid builds bridges between environment, money and progress by facilitating projects aimed at sustainable change. In this way, we work to help protect common resources, promote the use of affordable energy sources, and reduce environmental fraud among people. As such, it serves as a useful tool for achieving reasonable progression goals.

Where Green Cash is Available

Green Banking

Manages the promotion of environmentally responsible behaviour using financing commitments. Green money contributes to government support for nature and the financial sector by helping to be environmentally positive. It works by incorporating technical improvements, altering allies' suspicions, and providing a realistic flow of events.
State Bank of India, Punjab Public Bank, Bank of Baroda, Canara Bank, ICICI Bank Ltd, DFC Bank Ltd, Kotak Mahindra Bank, Indusland Bank, YES Bank, HSBC Get-together, IDBI etc. to provide green money Indian bank. provide tissue to customers.

The various practices used as a piece of green banking are kept in the under table.

Sr.No.	Type of green insurance	Explanation
1	Online Banking	Furnishing banking administrations to the clients with the assistance of web. Energizes paperless and exchanges.
2	Green mortgage	The home loan accommodated the acquisition of a green building or for revamping the all-around assembled working to green structure.
3	Green home equity loan	The Credit gave to buy introduce energy-effective hardware at home
4	Home office conversion loans	Advances to make working spot at home and begin home working
5	Green car loan	offers less financing cost for acquisition of non-discharge vehicles

6	Green credit cards	Each time the cardholder makes the instalment, a certain level of the sum is deducted and utilized for climate amicable ventures
7	Energy-efficient loans	Credits for effective administration of energy
8	Alternative fuel Vehicle and Fuelling Infrastructure loans.	Impetuses and advances gave to the transformation of existing vehicles to cleaner and proficient powers

Green Protection

As one of the members of the green financial sector, the protected industry has a major role to play in achieving conservatism goals. Although the insurance industry is not directly involved in environmental damage and has nothing to do with the development of regulations on these issues, it disseminates information about risks and systematically reduces the risks associated with various practices and businesses. It serves as the backbone of the green support by

The Insurance Administration and Promotion Agency of India (IRDAI) recently announced that it will offer a Third-Party Instalment (TP) plan for personal electric vehicle protection at 15.00% from fiscal year 2019-20.

Table 2: Green insurance types

Sr.no	Type of green insurance	Explanation
1	Green vehicle protection	How much insurance instalment will rely upon the miles went via vehicle consequently will decrease the pointless utilization of private vehicles and thus adds to the ecological security
2	Green business insurance	Motivators to the proprietors of the business for the recharging or on the other hand remaking of the harmed structures with climate well-disposed items.
3	Eco-friendly home protection	Gives innovative and upkeep backing to the sustainable power frameworks alongside protection inclusion.
4	Green travel protection	This protection makes up for the impacts of emanation of carbon dioxide on the climate during voyaging by giving piece of the premium paid for the ventures with the plan to decrease fossil fuel by products.

5	Green life coverage	The insurance agency will give a specific rate of the insurance instalment got for eco-accommodating projects.
6	Carbon protection	Gives protection cover to the manor backwoods against the climate related gambles.

Green Bonds

Here, the guarantor of the security uses the proceeds of the security to finance energy efficient products, reforestation, environmental projects, other resources, or financial initiatives to ensure climate security. We promise to support A better methodology is needed that takes into account the fair allocation of funds to green ventures while considering the risks and rewards associated with fixed income investments.

Green bonds help charities and financial foundations increase their generosity to partners and reach a base of funders not solely dedicated to investing in green ventures. In addition, we help investors who need to fund socially responsible projects, achieving the goal of combining financial and social responsibility.

The European Venture Bank and the World Bank issued their first green bonds in 2007. After that, private companies, banks and financial institutions started issuing green bonds. The rules for listing and providing these protections in India are set by the Principal Authority for Protection and Trade of India (SEBI). According to SEBI regulations, the proceeds from these bonds must be invested in green initiatives such as renewable energy, environmental change campaigns, biodiversity conservation, pollution reduction and waste management.

Table 5.3: Types of green bonds

Sr.No.	**Type of green bond**	**Explanation**
1	Green “Use of Proceeds” bond	Secured by assets
2	Green “Use of Proceeds” revenue bond	Secured by projects with income-producing nature
3	Green project bond	Secured by a project’s assets and liabilities
4	Green securitized bond	Secured by a large asset pool

Green Money Benefits

Green cash benefits both the economy and the environment. Their working together benefits both from an economic point of view and from a natural point of view.

1. The Energy Efficiency Panel:

Introducing and harnessing real energy resources requires a variety of initiatives and sponsoring programs that emphasize minimizing energy waste. Thus, persuasive energies are all possible.

2. Environmental protection:

Supporting efficient development initiatives is an important part of green support, so biosafety is an important part of this support. As a result, the idea can help reduce pollution levels, adapt to climate change, eliminate the use of the ozone layer, protect biodiversity, and more. All of these are essential to the survival of living natural elements.

3. Improving Reputation:

More and more partners contribute to society through theory and support organizations that advocate for environmental issues as they need to implement social responsibility initiatives. There is no doubt that even government power is stimulating green action. Green grants are therefore intended to help develop relationships and ensure that they last very long.

4. Support for Attracting Foreign Direct Investment:

Global interest in environmental protection is increasing. In this way, new funders evaluate initiatives considering the social costs and benefits of investing in local groups. Providing eco-friendly options is another direct incentive to visit our country.

Requirements for Green Money

1. Ambiguity of definition:

Green money has no established and agreed meaning. Ambiguous and potentially misleading definitions make it difficult for funders to select the best green companies and discourage interest in green initiatives.

2. No real regulatory framework:

There are no defined guidelines, criteria or regulations for evaluating green initiatives, nor specific green hypothesis methodological exercises. This prestigious introduction may act as an obstacle to the development of green enterprises.

3. Lack of Concern:

Despite the fact that some social gatherings are becoming more open to greener activities, there are many partners who know little or nothing about green money per se. Lack of knowledge and diligence leads to a lower than necessary stock of capital in green effort items. The result is an anomaly in resource demand and supply.

4. Embracing a difficult challenge:

Market participants will use the name 'Green Entrepreneurs' to support their overall business share by leveraging the marketing potential of green enterprise products. will do. In the case of temporary cash income, this ultimately overlooks the prospects for real progress and poses a frightening challenge. and industry groups need to find ways to raise awareness of the need for environmental protection and the various environmental protection hypotheses available. Money and development must work together to generate innovative ideas that attract investors while moving the environment forward.

5. Establishing a true regulatory framework:

Appropriate governance structures should review green money-related projects and protect the benefits of funders. Leading professionals must ensure that the funds raised for each task are, in other words, used in the expected manner.

Enactment of separate regulations to combat resource abuse Strict regulations should be enacted to condemn businessmen who abuse the opportunity to profit from green projects. The use of increased savings should be clearly regulated by law. Appropriate action must be taken if the rules are violated.

Research Support:

To encourage research in green finance that integrates technological advances in the financial sector and helps attract creative green ventures, competent green exercises, and good game plan exercises. should take the initiative. Complete redevelopment and turn of events.

Conclusion

The current situation calls for effective progress, and green screens, a key indicator of legitimacy, are of increasing importance. Investors are thinking beyond bets and profits and becoming more compassionate towards society. The discovery of issues around the need to protect the environment and increased funding for green initiatives has opened up multiple opportunities in the green money space. Accurate representation of green money will require the cooperation of policy makers, investigators, environmentalists, governments, financiers and financial institutions. A reputable management framework should be put in place to assess green initiatives and ensure that funders are not misled by green sensibilities. Known for horticulture, India should focus on green energy sources, protection of common resources, strong energy leaders, climate change and other everyday challenges. From this, we can infer that properly calibrated green cash promises serve as a compelling tool for effective new development.

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"A STUDY OF POST-PURCHASE BEHAVIOUR OF ED-TECH SERVICES"

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ABSTRACT-

Post-purchase strategies would set the company apart from competitors and strengthen consumer relationships on an emotional level. The purpose of this study is to assess post-purchase strategies employed by ed-tech businesses and how they impact consumer decisions. In both descriptive and quantitative studies, a mixed research approach would be used, and 112 junior college students (Class of 11 and 12) contributed the data. According to the study's findings, numerous post-purchase elements influence a consumer's decision to buy a product. Additionally, there is a strong connection between the post-purchase and the consumer's next buying behaviour with the references of products or services.

KEY-WORD- Ed-Tech Companies, Post-purchase factor, Consumers (Jr. College students) Stream, 24*7 Customer Support System. Mentorship, Stream.

MANAGERIAL IMPLICATIONS-

This study has offered fresh perspectives on consumer behaviour on the basis of pre-purchase factors of Ed-tech Industry. As a result, it is in need of an efficient, transformative, and integrative approach in these trying times. The futuristic perspective needs to concentrate on ongoing consumer involvement, which is possible with pre-purchase factors.

INTRODUCTION-

The modern technologies have essentially altered everything around us, the race for digital transformation is moving along rather well. Individuals of all ages are rapidly and easily adjusting to the new technologies. These new technologies have a significant impact on communication, food, lifestyle, and other areas including medicine." Ed-tech", or education technology, is the integration of IT tools into classrooms to promote an inclusive learning environment. The classic desktop Computer has given way to more contemporary technology in the classroom, including tablets and robots. This is used to record lectures, take notes, and learn

online. During the COVID-19 pandemic, teachers have been using online learning platforms like Swayam, Vedantu, Byju, and others to instruct students in urban and rural classrooms. Online learning environments and other aspects of digital learning, such as backup services and mobile applications, are all referred to as "edtech" in this application. Compared to those who learnt in a regular classroom setting, digital learners were expected to pursue a particular route of active learning that required more examination. Innovative
courses using cutting-edge technology have been introduced by Indian ed-tech enterprises. This strategy highlights the creative way these courses are taught, using technology to disrupt conventional ways. It also illustrates how crucial it is for education enterprises to be perceived as reputable and credible by clients. The Edtech revolution will affect more than simply the infrastructure of education. The post-purchasing considerations may aid in acquiring loyal clients or clients for any organisation. It is a crucial component that creates devoted clients and encourages repeat business.

LITERATURE REVIEW-

According to the author (Padale et al.), 1542 million dollars will have been invested in India by 2020, according to numerous sources of data. According to the findings of this study, 66% of respondents to an EdTech Research report on technical skilling cited the quality of interactions with faculty as the most important engagement factor. Other factors included placement feedback and reviews (57%), user-friendly technology and interface (41%), recognised certification (37%), and job, placement, or career support (30%). (Rajan, 2022) provides a key aspect of Byju Raveendran's journey and the student team's role in how they founded the firm, produced the product, overcame sales hurdles, and made marketing efforts.
(Morrison et al., 2019) chose a variety of strategies to pinpoint educational technology goods. The attendees included district stakeholders from 54 school districts and around 47 ed-tech enterprises. They find that the districts and vendors lacked a significant source of information about product information. So, as advice, they suggest district and vendor stakeholders need to gather knowledge about effective edtech products . (Lisa et al., 2021) adopted qualitative case study for analysing the TPACK model in Indonesia students. 163 students were the participants in the 5th semester of the English Language Education Study Program of a university in Yogyakarta, Indonesia. One random class selected comprised with 40 pre-service. The outcomes were shown that certain post purchasing factors should be consider such as, lesson activity for every educational technology course, hands-on learning-based teaching-learning activities with digital tools.

Using focus group discussions, (Gadgil and Louw, 2016) evaluated the student engagement and behaviour. All of the course resources, including review questions, maps, textbooks, and notes, were well-liked by the students. This approach helped students understand the difficulties they had when working together. According to (Smith, 2019), survey participants reported greater engagement and pleasure with ed-tech goods. They also made it clear that procurement procedures need to be improved for engagement in the future. The findings have global effects as the ed-tech sector advances to newer ed-tech products. (Mamilla et al., 2013) evaluated the student satisfaction based on university performance with respect to ability of professors. Student satisfaction is seen as the outcome of this comparison. The sample respondents were administered with schedule based on stratified random technique for this study. The availability of Ed-tech services on the market, according to Anderson and Quinn (2022), helps teachers manage students and create and manage resources. The resources and educational activities were very advantageous for students. As a result, real-time interactions between students and teachers occurred, student learning performance was assessed, and prompt interventions were made.

RESEARCH GAP-

1. There aren't many studies in India that look at how people buy e-learning services. The study should also include data analytics to analyse the usage of learning analytics technologies in education (Jain, Lall et al., 2021).
2. Consumers might utilise the study to inform their post-purchase of brand-new services in educational technology.

RESEARCH METHODOLOGY-

The purpose of this study- aims to objectively evaluate, how post-purchase methods work in the Ed-tech industry and how they affect consumer behaviour. A mixed research methodology combining descriptive and qualitative research will be used for this study. This study will look at post-purchase determinants for educational technology services and how they affect consumer preference.

Research Type: This study would be descriptive and quantitative in nature

Objective-

- To study the importance of post-purchase in the purchased design of Ed-tech services.
- To understand the factors among consumers before purchasing any Ed-tech services.

Hypothesis-

H0: There is a relationship between the stream and buying behaviour (post-purchase) of Ed-Tech Services.
H1: There is no relationship between stream and buying behaviour (post-purchase) of Ed-Tech Services.

Data Collection Method-

Primary data from junior college students would be gathered through a questionnaire. The questionnaire would have multiple-choice, open-ended, and questions using the five points of the

Likert scale. Secondary data will be gathered from journal articles, books, periodicals, and magazines that discussed individual investment and practices globally and in India.

Sample Size- 112 Jr. College Student.

DATA ANALYSIS AND INTERPRETITION-

1. According to analysis, 45.5% of all respondents are currently enrolled in 12th grade, and 54.5% are enrolled in 11th grade. In addition, 11.6% of responders came from the Humanities stream, 19.6% from the Business stream, and 68.8% from the Science stream.
2. It is found that 79.5% of respondents would like to buy any Ed-tech services, while 20.5% do not want to buy Ed-tech products. Before making a purchase, 27.7% of respondents said they would want to receive advice from subject experts. In addition, 22.3% of respondents said they would prefer recorded demo classes, and 22.3% said they would like mentorship. According to the research, 81.3% of respondents claimed that college students prefer renown brands in e-learning services, whereas 18.8% of respondents claimed that college students do not.
3. According to the weighted average, junior college students ranked teaching and learning methods as their top preference, at 4.0714, and brand preference came in sixth place at 3.2148. Plans for Subscriptions, they favor the third spot (3.5267). Students favor the fifth position, Mentoring Before and After Counseling, as a factor (3.2410). 24x7 offline version is ranked seventh (3.2053). Following the mode of instruction, students favor the availability of E-books 3.5446. The 24-hour customer support system is ranked fourth (3.4553).
4. By 5.4% of respondents were very discouraged about the offers by Ed-tech companies. 11.6% of respondents were discouraged, 20.5% of respondents were neutral, 50% of respondents were encouraged and 12.5% of respondents were very encouraged about offers of Ed-tech companies. It is shown that 13.4% of respondents said very unlikely get any customer support. 16.1% of respondents said unlikely, 11.6% of respondents were neither unlikely nor likely, 45.5% of respondents said likely and 13.4% of respondents said very likely or they get always customer support (24*7) from Ed-tech companies.
5. It is observed that 12.5% of respondents said that they do not want to recommend any Ed-tech services, 13.4% of respondents said unlikely, 21.4% of respondents were in the commonplace, 37.5% of respondents said likely and 15.2% of respondents said very likely or they will defiantly recommend the product of Ed-tech services.

CHI-SQUARE TEST ANALYSIS AND INTERPRETITION-

1. Chi-square (observed value)- 9.98998

Critical Value-	5.9914
DF-	2
p-value-	.265
alpha-	0.05

99% confidence interval on the p-value

As, per the Chi- square analysis, Critical value is less than Chi square value, So, there is relationship with Stream and Mentorship.

2. Chi-square (observed value)- 7.9583

Critical Value-	5.9914
DF-	2
p-value-	.423
alpha-	0.05

99% confidence interval on the p-value

As, per the Chi- square analysis, Critical value is less than Chi square value,

So, there is relationship with Stream and 24*7 Customer Support System.

As well, there is a relationship between stream and post-purchasing behaviour.

So, the Null hypothesis is rejected.

CONCLUSIONS-

The main goal of this study was to produce a qualitative analysis of educational technology services in light of consumer behaviour of after purchase. The study assesses the development and sustainability of ed-tech services after consumer purchase. In order to determine customer behaviour towards Ed-tech services using a quantitative technique, the impact, whether favourable or negative, is anticipated. The importance of post-purchase techniques enhances consumer intent to spend money in Ed-tech business.

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Change in Philosophy of Sugar Industries from Traditional Approach to Self Sufficient Approch (with Special Reference to Current Ethanol Production Policies of the Government)

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Abstract:

India is called an agrarian country as almost 70% of its population is mainly dependent on agriculture and activities related to agriculture. India has various agro based industries where raw material is directly procured from farmers and processed into finished products. One such agro based industry which is the second largest agro industry is Sugar Industry. Sugar industries are majorly located in the rural areas where it provides employment and also helps in developmentof rural areas. Sugar industry contributes in developing the rural economy as well as the Indian economy. Present Paper focuses on the shift in approach of Sugar Industries from traditional sugar manufacturing approach to the modern approach of manufacturing Sugar along with its multiple by-products and planned usage o frawmaterial sugarcane.The paper also focuses on Government Policies which are making planned production of Sugar as well as Ethanol and other by-products.

Introduction:

India is now the second largest sugar manufacturing country following Brazil which is the world's largest sugar manufacturer. Sugar Industry in India on one hand helps the rural youth in getting employment in activities like cutting of Sugarcane, Transportation of Sugarcane to its factories, jobs in sugar factories and on the other hand is a contributor towards GDP, as it contributes approximately 1% towards GDP. According to statistics given by the department of Food and Public Distribution of Government of India, the sugar industry has impacted more than 50 million sugarcane farmers and 5 lacs of workers are employed in sugar mills all over India. In the year 1903 the first sugar industry was set up in Pratappur and from then it has spread to other parts of the country. The growth rate of sugar industries during the pre-independence period was at a very stagnant rate. Post our independence from the year 1950-51, the Government of India started coming up with five year plans. In the first five year plan from 1951 to 1956 the focus of the Government was on Development of Agriculture. In these cond five year plan the Government of India shifted its focus from agricultural development to Industrial Development. In the Year 1961 an Act was passed for regulating the supply of sugar and prices of sugar for common man.This Act was called the Sugar Regulation of Production Act 1961. This Act levied special excise tax on surplus production of sugar by an industry over the allotted quota, thereby affecting the sugar industry in an adverse way.In the year 1998 the Government of India abolished the requirement of licensing for setting up a Sugar Mill, post this decision a significant growth was seen in the number of Sugar Industries. According to ISMA statistics, the number of sugar factories in operations in 2015-16 were 526 over a period of five years; the number of operating sugar industries has been fluctuating. In the year 2020 - 21 the number of Operating sugar factories declined to 506. However the production of Sugar has increased. According to the estimates published by ISMA sugar production in the financial year 2022 - 23 will be approximately 355 Lakh Tons while its consumption is estimated to be 275 Lakh Tons. The excess manufactured sugar i.e 80 Lakh Tons can be exported to countries all over the world.

OBJECTIVES:

1. To study the traditional approach and modern approach o fSuga rIndustries
2. To Study the current ethanol production guidelines of Government of India

DEFINITION OF SUGAR INDUSTRY:

Sugar Industry – A branch of the food processing industry comprising specialized features that manufacture white granulated sugar from sugarcane and refined sugar from granulated sugar along with various by products like Jaggery, Khandsari, Ethanol, Alcohol, Bagasse, Molasses and Electricity.

TRADITIONAL APPROACH OF SUGAR INDUSTRIES:

Indian Sugar Industries from 1951 to 2010 were following their traditional approach and manufacturing three products from sugarcane which were Sugar, Jaggery and Khandsari. Upto 1957 there were heavy tax imports on sugar industry which saw a decline in the sugar cane supply towards jaggery and Khandsari. The supply of sugarcane for manufacturing Jaggery was approximately 65%, for Khandsari was about 10%, and a mere 6% share was supplied for manufacturing sugar and the remaining 19% was left for chewing and planting. Post 1957 there was a sudden surge in Sugar manufacturing and as a result the output of Jaggery and Khandsari could be seen declining. To control this surge the government passed an Act to control the production and prices of Suga rwhich again affected the sugar industry in an adverse way. The Act was called the Sugar Regulation of Production Act 1961. Due to the adverse effect on the sugar industry in the year 1966-67 the government decided to partially decontrol the sugar industry. A rule was imposed on the Sugar Industries to give away a fixed percentage of sugar to the Indian Government for Public Distribution at a fixed selling price. The price fixed by the government was below the cost of manufacturing which made the sugar industry go into heavy losses. The Part that the sugar industry had kept for them selves was also regulated by the government. This made the sugar industry stagnant and as a resul many suga rindustries became sick and were forced to shut down. As a result, the government started reducing the control in a phased manner and brought dow the percentage to as low as 10% by 2001 and 2002. To further accelerate the growth rateof the sugar industry a committee headed by Dr. C. Rangarajan was set up and according to the suggestions given by the committee have abolished there strictions levied upon the sugar industry. The period from 1951 to 2010 can be called a traditional approach era as a result of these regulations and also due to the ideologies of industries which were focusing on on eproduct rather than others. More over the increasing demand of sugar during this tenure was of concernand hence the government started fixing output quantity of sugar in a five year plan till 2012 shown in the table below:

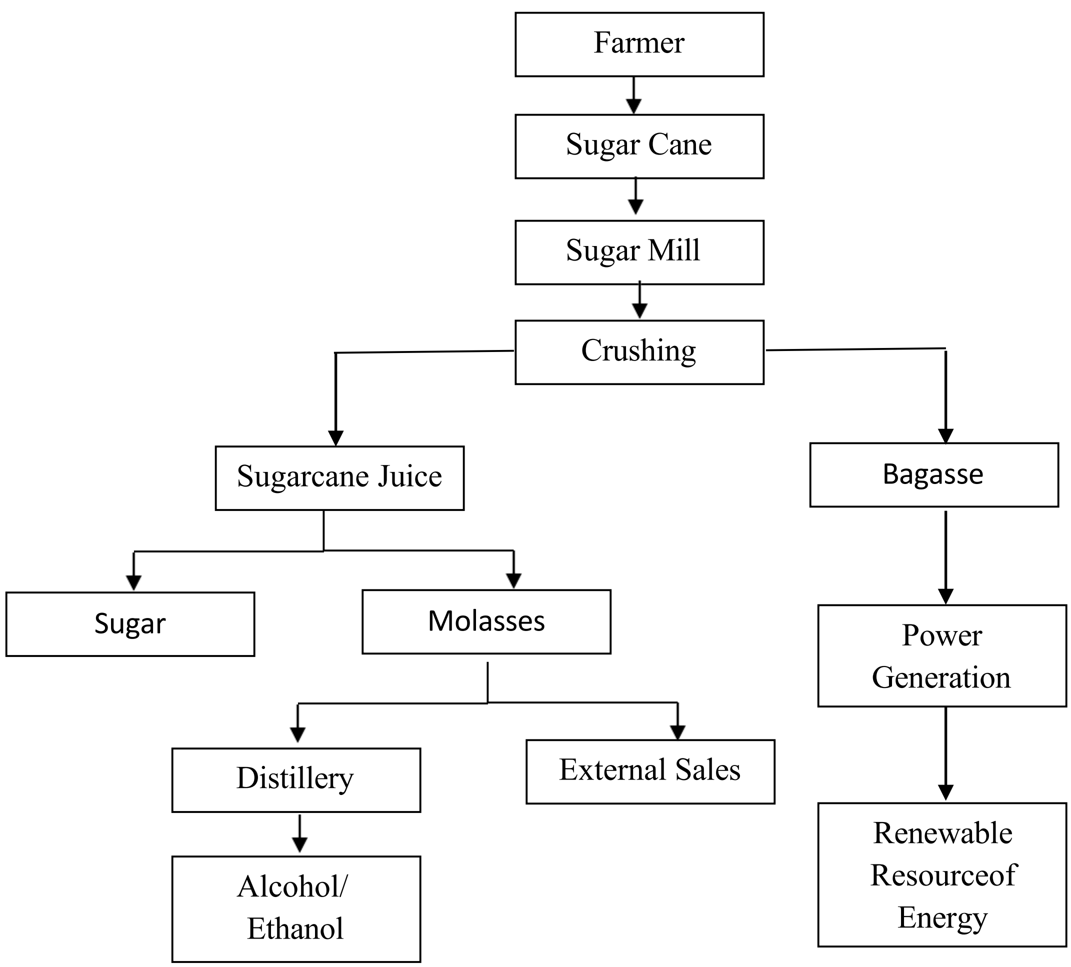
FiveYearPlan	**PlannedOutput (Lakh Tons)**	**ActualOutput (Lakh Tons)**	**NumberofSugar Industries**
FirstPlan(1951-56)	18	19.34	138
SecondPLan(1956-61)	25	30.29	175
ThirdPlan(1961- 66)	35	35.32	200
FourthPlan(1969- 74)	47	39.50	229
FifthPlan(1974-78)	54	58.42	298
SixthPlan (1980 -85)	76	61.78	356
SeventhPlan(1985-89)	102	109.90	414
EightPlan(1992- 97)	143	146	412
NinthPlan(1997-2002)	148	185	434
TenthPlan(2002-2007)	149	170	461
EleventhPlan(2007-2012)	160	195	615

Source : ISMAReport2012

In the pre five year development plan the number of sugar industries were 138 with a limited manufacturing capacity. The plan laid the target to increase the production of sugar. During the five year development plan period the government issued licenses for setting up new sugar factories.

MODERNAPPROACHOFSUGARINDUSTRIES:

Sugar is manufactured from two raw materials one is sugarcane while the other is sugar beet. Sugarcane and Sugar Beet share a 80:20 raw material supplyglobally. In India on the other hand sugarcane is considered to be the onlyraw material for manufacturing sugar. The Sugar Industry post 2010 has undergone various changes. Sugar industries are not just focusing on sugar manufacturing but have also understood the importance of by-products that can be manufactured from sugarcane. Sugar industries in India are not just manufacturing the by-products but are also selling those for additional revenue as well as for writing off the losses occurring due to sugar supply. The process followed by sugar industries can be seen from the below given chart.



Sugarcane is a cash crop which needs less maintenance but at the same time has a veryless shelf life. Sugarcane post cutting hast obesent to sugar factory immediately for crushing, which is why all the sugar factories are located in rural areas. The sugarcane after crushing gives two outputs one is sugar and the other is Bagasse. Bagasse today is used as a material for manufacturing Electricity. This is a new source of energywhich is renewable in nature. Sugar juice after further process gives sugar as output and molasses. Molasses is sold externally fo further rmanufacturing various products. Other part of Molasses is processed in the distillery further which gives two more products which are alcohol or ethanol. Alcohol can be further sold to chemical companies for industrial consumption or can be processed into liquor. Ethanol on the other hand is used for blending in fuel. On an average 90 Kgs of Sugar and 11 Litres of ethanol can be produced from one tonne of sugarcane. Th eremaining fibres are further converted into pulp to manufacture paper. The importance of sugarcane as acrophas increased over the last few years because of vastrange of products that can be manufactured from it. It is a crop with zero wastage. Sugarcane crop is called as ratoon crop. It also does no trequire seeds owing in every season as new cane is cultivated from stubble of crop which is already harvested. Based on the satellite images taken by ISMA in June 2022, the total acreage under sugarcane cultivation is estimated to be around 58.28 Lakh Hectares in 2022 – 23, which is approximately 45higher than2021–22 area coverage which was around55.83 LakhHectares.ISMA estimated sugar production of 399.97 lakh tons which is higher than2021 –22.Inthecurrentfinancial year 2022 – 23 an increase in diversion of sugar into ethanol was higher than the earlier year. Current years estimated diversion is about 45 lakh tons which is higher when compared to earlier financial year, as in the year 2021 – 22 the conversion of sugar in ethanol was 34 Lakh Tons. To further study the increase in manufacturing.

ETHANOL PRODUCTION POLICIES OF INDIA (SOURCE: MINISTRY OF PETROLEUM ANDNATURAL GAS) GOVERNMENT OF INDIA:

India started blending Ethanol in petrol in phased manner from 2001. The Government of India started implementing ethanol Blended Petrol Programme across the country and made it mandatory to blend 5% of ethanol in petrol in 9 states manufacturing highest sugar except the union territories from 2003. In October 2004 ethanol blending was optional whereas in October 2006 again it was made mandatory. In 2008 the Ministry of New and Renewable Energy came up with a nation wide policy to limit the carbon emissions and also to decrease our dependence on foreign crude oil. In the year 2013 – 14 Ethanol blending was done at a mere percentage of 1.53. But after looking at advantages of Ethanol Blended Petrol the blending percentage was increased upto 8.04% in the year 2020 – 21. Oil manufacturing Companies have paid nearly 42,000 crores towards ethanol supply which has resulted in decreasing losses of sugar industries and enabled timely payment to the farmers. CO2 emissions in last seven years has seen a decline due to ethanol blended petrol.

Government has taken multiple steps to increase the production of ethanol from the year 2014.

1. Re-introduction of administered price mechanism where the price of ethanol is not dependent on the demand and supply but rather is decided by the Government of India.
2. The government has opened alternative routes for manufacturing Ethanol
3. Amendment to the Industries Development and Regulation Act 1951 which gives exclusive control of ethanol to the Government of India which has further made ethanol movement smooth across the country.
4. The GST rate on ethanol which is to b eused for petrol blending was reduced from18% to 5% for motivating the oil manufacturing companies.
5. Price Differentiation based on raw material used for productionof Ethanol.
6. With effect from 1st April 2019, ethanol blended petrol programme was extended to the whole of India except the islands of Andaman and Nicobar and Lakshadweep.
7. Interest Subvention Scheme was announced for enhancementof ethanol production
8. The government also published long term policy on ethanol procurement.
9. In the year 2018 – 19 government also allowed raw material other than molasses for manufacturing Ethanol.

Above mentioned steps have helped in increasing the production of ethanol. With a view to achieve 10% blending of ethanol with petrol bythe financial year 2021 – 22 and 20% bythe year 2030 a problem was detected which was limited distillation capacity of sugar industries. To solve this hindrance the Department of Food and Public Distribution has also offered financial support to sugar industries for increasing the capacity of ethanol production.

RESEARCH METHODOLOGY:

The study was based on secondary data like research papers, articles and books published on sugar Industry. Secondary data was also collected from the website of ISMA (Indian Sugar Mills Association), Ministry of Petroleum and Natural Gas and Department of Food and Public Distribution.

SUGGESTIONS:

Despite the financial support being offered by DFPB (DepartmentofFoodandPublicDistribution) many sugar industries in India are still not acquainted with the ethanol manufacturing setup. In the state of Maharashtra which is the second largest sugar manufacturer in India only 80 sugar mills out of 202 have distillery facility and manufacture ethanol. Hence steps should be taken to encourage sugarmill ownersto set up ethanol manufacturing plant. Permission forstarting 100% ethano lmanufacturing plant should be given so that India becomes self-sufficient and our demand for foreign crude oil would decrease as a result. Oil manufacturing companies should make timely payment to the sugar mills so that the sugar mills feel motivated in manufacturing ethanol as it would help the sugar industries to recover their losses.

CONCLUSION:

On one hand the modern approach of sugar industry of focusing on main product as well as by product is a self-sufficient approach, as despite this sugar manufactured in India is in excess of consumption of sugar in India. The modern approach has also not affected our exports of sugar to countries all over the world. On the other hand it has also helped farmers in a positive way.Usage of Ethanol Blended Petrol has also decreased the environmental hazards of CO2 emissions. Ethanol has also solved our problem of storage and sale of excess sugar.

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"Role of Staffing Solutions Companies in IT and ITES Industries in Pune".

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Abstract:
Staffing solutions companies and IT, ITES industries are doing business growth by taking cooperation with each other in Pune. IT is Designing, Developing, Managing, Storing information using Technology and ITES is helping to improve efficiency and taking whole responsibilities of outsources of IT industries. And Staffing solutions companies are providing all type of manpower Domestic and International to both industries, Technical and Non Technical for short period, long period, Contractual base, for theirs smoothness organizations work and employee relation and retention. Reducing employee turnover and helping manpower planning to both IT and ITES Industries.

Keywords:- Relationship between IT, ITES industries and Staffing solutions Companies, Manpower Planning, Employee growth, Role of staffing solutions companies, Business partner of IT and ITES industries, Help of Staffing companies to IT and ITES, Outsourcing Roles.

Introduction-
General Information-
Pune's IT and ITES Industries is a one of the big IT & ITES hub in India.
Staffing Solutions Companies help client's quality resources for long-term basis which saves their money and efforts with theirs great experience. IT and ITES is a booming Industry. In this research paper mentioned opportunities and future plan for this IT, ITES and Staffing Companies.

Major Research Aim –
Find out research gap between previous research and Current situation in Staffing Solution Companies and IT and ITES industries and become a part of these booming

Industries. Increase good relationship between employees and company Managements for theirs growth.
Make respectful relation between IT and Service industries, in domestic and international level in Pune Location.
Many Staffing solution companies are in pune but they don't have coperations.

Point wise work Summery-

1. For this research I have attended seminars, visited to IT & ITES industries & Staffing solutions Companies and asked many questions, gathered proper information. Visited to HR Manager, Company authorized person CEO, Director, HR Recruiters & other concern persons.
2. Doing research from 2013 in Role of Staffing solution Companies in IT and ITES Industries in Pune. It means research period is for 10years from 2013 to 2022.
3. Used Descriptive Analyst Method – Described Company wise and IT and ITES park wise in Pune. Collected data from Industrial Visit and from professional websites, called to HR Manager, Recruitment manager, Staffing companies Manager & owner.
4. Have taken Reference from Research Paper, Thesis, Books from Pune University for Pune location. Review of literature has been divided by two part to easily understand IT and ITES Industries and Staffing solution Companies from 2013.

Review of Literature-

Review of Literatures on IT and ITES Industries–

Role of staffing solutions Companies in IT and Industries has been discussed with number of Papers, Portals, Thesis, visits in IT and ITES Companies and HR Professional blogs.

Pune's IT and ITES industries is one of the great success story in India.

Pune's ranks third in terms of Information Technology exports from Indian cities, it has registered the fastest growth of 11% in IT and IT-enabled services (ITES) exports which grew from ₹34,400 crore in 2015-16 to ₹43,000 crore in 2017-18. As per Hindustan Times.

"IT" is the study, design, development, implementation, support or management of computer based information system particularly software's applications & computer hardware **ITES** is Information Technology Enable Services. It is defined as outsourcing of processes that can be enabled with IT and covers divers areas like **Finance, HR, Administration** etc.

IT and ITES it's a big industry and growing industries in pune and very high employees turnover, IT and ITES industry has required many skilled candidates and due to this Staffing Solutions Companies playing major role to search candidates, to groom them, to give employments in this Industries.

Review of Literatures on Staffing Solutions companies on their own websites and on Professional Recruiter Blogs -

The staffing Solutions Companies in Pune can refine staffing experience by presenting with the best and most suitable applicants for the job roles in the company.

The staffing Companies usually have a big database of resumes of candidates from across various industries and for a variety of job roles that may be technical, non-technical, or managerial for IT and ITES industries.

Staffing Solutions Companies is a multi-fold process. It is cost-efficient and feasible for small and medium scaled companies to outsource this process to the staffing services. The professional staffing consultants can gather a qualified pool of profiles suitable for the job description and other employment criteria mentioned by the company in Pune.

Staffing solutions has a thorough selection process that evaluates the candidate's compatibility with company's work culture or requirments.

The professional staffing Consultancy has access to the best and most widely used online job portals, new technology, professional networking sites, and social media platforms to source the most suitable candidates as per the client's job requirements.

Staffing company in Pune can help by smoothly complete recruitment process. For example or refer list of staffing companies in Pune prepared by GoodFirms or Punelist.com.

Professional blogs and Staffing Company website are get help, ideas or advice from seniors and peers on everyday professional issues. Explore years of insights and documents collected by over a million professionals.

For example-Cite HR professional blogs is a corporate community knowledge log which provides a public moderated platform to the expertise and insights for professional and organizational development.

As per recruiter's opinions if they want to start career in recruitment, they are very much interested with staffing Solutions Companies due to staffing company's Understanding employer, lots of scopes to grow, freedom to share their ideas, Work environment is an incentive to work harder, Relaxed atmosphere, good learning, good for freshers, can get easy higher position in organization due to his smart work & target achiever.

Research Gap-

- No any specific information for GDP from staffing solutions Company in Pune
- Staffing solutions companies are working in good conditions but they don't have any group unit. They are working individual.

- There is no mentioned how to improve candidate's attractions with belief regarding staffing solutions. Staffing companies working with their own policies but they don't have Staffing Group committee.

Industrial visits-

- Visited to Jobizza Staffing Solutions
  Mr. Gaurav Sharma
  Location- Kondhva, Pune
- Teleperformance Ltd IT and ITES Company
  Mr. HR Arti, HR Dinesh & HR Team
  Location Viman nagar, Pune
- Eureka Outsourcing Solutions (EOS ltd) ITES Company
  Ms. HR Madhura
  Location - Kalyani nagar.
- Taurus BPO ITES
  Mr. HR Sujit Panday
  Location – Swarget, Pune
- Connected with IT Companies in Hadapsar
  On phone calls, interviewed and gather Information regarding Staffing Company's relations & its work performance.

Observations-

- In observations after study- 70% Staffing Solution Companies which are working with IT & ITES companies, they have skill full Recruitment staff, Technology to easy find out skill full candidates as per requirements on time and also they have facility to give training to their new candidates for Interview.
- Remaining 30% staffing Companies are struggling to provide man power on time because their low budget. Can't pay portal fees like as Noukri.com, Timesjob.com, and recruiter's Salary. But they are working averagely.
- IT Companies close their requirements with employee reference and staffing solution companies.
- ITES companies are 90%+close their candidates requirement through Staffing solutions companies because they have big employees turn over it takes help of staff solution companies.
- It means yearly or monthly 50% to 90% candidates staffing solutions companies are providing to IT and ITES Companies in Pune.
- In Field work and after Visit to Staffing Solution companies it seems that Staffing companies are struggling with finance conditions because of their income is depend on candidate's joining and Some IT & ITES industries has their own HR department to fulfill their requirements. but staffing solution companies are stand their Grate experience, their very good budget Management.

- No good communication with in staffing solution company's owner, they are working with their own skill & policies.
- IT & ITES companies should provide some training for their HR Department or recruiters because company recruiters don't give on time reply some HR person show carelessness. They should understand that the staffing solution provider is their business partner.
- Staffing solution Companies use their full potential and skills to provide skilled candidates to IT and ITES Industries.

Research Analysis-

Descriptive Data Analysis-

- **IT & ITES Parks in Pune – 2022**

1.	Hinjewadi
2.	Kharadi
3.	Baner
4.	Magarpatta
5.	Aundh
6.	Bavdhan

- **TOP 10 IT & ITES Companies in Pune are established before 2013.**

No.	IT & ITES Companies	Established year	Location
1	Infosys	2002	Hinjewadi
2	Wipro	2011	Hinjewadi
3	Amdocs	2011	Fursungi
4	Zensor Technology	1991	Karadi
5	Tech Mahindra	1986	Hinjewadi
6	IBM	2001	Pune
7	Aegis ltd	2010	Yerawda
8	Persistent	1990	Pune
9	WNS	2002	Pune
10	TCS	1981	Pune

- **TOP 10 Staffing Solution Companies in Pune are established before 2013.**

No.	Staffing S. CompanIES	Established year	Location
1	Talent plus Solution	2012	Pune
2	Maverick Maven	2012	Pune
3	Sigma Recruitment C.	2007	Pune
4	LSC Consultancy	2013	Hadapsar

5	Uniq Place ment	2012	Pune
6	MSA Consultancy	1991	DP Road
7	Lobo Staffing Agency	2010	Yerawda
8	Arvistech Consultancy	1996	Aundh
9	Team Lease Staffing	2002	Pune
10	ABC Consultancy	1997	Pune

Opportunities-

- IT and ITES is a growing industries, it's a very good opportunities to grow our staffing solution business with growing industries.
- Opportunities to make scalable business for staffing Companies.
- Staffing Solutions Companies has a very good opportunity to work with Technical industries with Domestic and International process.
- Become major business partner of IT and ITES Industries in Pune.

Future Plan-

1. This Research paper can be useful both IT & ITES industries and all Staffing solutions Companies as well as Small big placement Services and all Candidates who want to make career in IT & ITES industries.
2. It is Useful to build belief between Candidates and Staffing Solutions Companies.
3. This research will be useable for training purposes same industries
4. Its helps will be to improve the efficiency and interest of a Staffing Solution companies
5. IT and ITES industries can give other HR related activities to staffing solution Companies due to these skillful co operations from staffing companies.

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9. https://digitalmarketingdeal.com
10. https://itoneinfotech.com
11. https://www.goodfirms.co
12. https://www.betterplace.co.in
13. www.grecruiter.com
14. https://www.pitcs.in

- PHD Coursework in Research Methodology – Neville Wadia Institute Pune

Topic- Research Methodology:- Research Design, Sample, Aim, Data Collection

Thesis - Pune University-

1 A Study Of Impact Of Quality Of Work Life On Working Of Employees In BPO Industry Pune
Researcher- Waghmare Sulbha Bhanudas
Guide-Dhole, Vijaykumar Balasaheb
13-Jul-2021
2. A Study of Business Opportunities and Challenges in Information Technology Sector Pune
Researcher- Baragade, Dileep Baburao
Dharane, Suresh R
11-Aug-2021
3 A Study of the Impact of in House Implementation of Business Intelligence with Reference to Industries in ITES Sector in and Around Pune
Researcher-Ghorpade, Santaji Parshuram
Guide-Kadam Malik S.
28-Jul-2021
4 Talent Management of Women Workforce for Leadership within IT and ITES Firms.
Researcher -Mohapatra, Sweta
Guide-Bhattacharya, Shubhasheesh
1-Sep-2022
5 A critical study for decision support system DSS using HR software solutions for efficient HR policies and strategies for I T industries in Pune
Researcher-Chaube, Sanjeev Dhananjaya
Guide-Prakash H., Karmadkar
2-Aug-2019
6 A study of effective use of information technology in human resource department for harnessing productivity with special reference to information technology _IT_ and information technology enable service _ITES_ organiszations in and around Pune.
Researcher-Bhate, Manasi Sameer
Guide-Deshmukh, Prasanna G
18-Oct-2017
7 Management of Employee Wellness Programs in selected IT and ITeS Companies located at Hinjewadi and Aundh IT Park
Researcher-Dhobale, Rajasshrie Suressh
Guide-Deshmukh, Prasanna G
24-Jan-2013
8 Analytical study of HR problems in software industry _with reference to units in Pune
Researcher- Pinitod, Ashfaqueahmed Saheblal
Guide-Khan, Ahmad Umar

23-May-2017
9 A study on the strategic role of HR in it industry with special reference to select IT/ITes organizations in Pune city
Researcher-Shaikh, Mohsin Rehman
Guide-Khan, Ahmed Umar
25-Apr-2012
10 An Analysis of Approaches For Reducing Attrition Among Women Employees In IT Companies In Pune.
Researcher-Bhoomika Agalgatti
Guide - L. K. Tripathy
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11 A study of organizational communication practices and their role in organizational development with special reference to IT industry in Pune.
Researcher-Ambatipudi Abhilasha Ramakumar
Guide-Shinde Rajashree
14-Jun-2016
12 A Study of Training and Its Impact on Career Growth and Organizational Growth of IT and ITES Industries In Pune
Researcher-Bedekar, Nisha Mahesh
Guide - Bagul, Dhananjay B
22-Jul-2021
13 Impact of Employee Engagement on Retention of Employees a Study of Selected Information Technology and Information Technology Enabled Services Companies IT and ITES In Pune City.
Researcher-Rao, Geeta Kalyankar
Guide-Shaikh, Mohsin
25-Apr-2022

Impact of Work from Home on Employee Performance

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Abstract

The outbreak of COVID-19 has affected working conditions of many by shifting the work from offices to homes for an indefinite period of time. For some, the transformation from offices to homes was easy, whereas for others it has become a roller-coaster ride of sentiments, as they juggle their time between work and family. Not all remote working employees can maintain their performance level up to the mark. This can be due to lack of amenities like fast internet connections or quick interactions with team members that bring distractions at home. Although nobody knows how the future will unfold, most of the employers are still assessing the impact of remote work on employee performance to a certain extent. Some employers were extremely happy with the performance of their employees with offices shutting down and turning to permanent work-from-home arrangements, while other employers were unhappy with the work-from-home concept as there's a drop in the employee performance.

Keywords COVID-19, Remote working, Employee Performance

Introduction

The Covid-19 has affected almost 213 countries and territories across the globe. The on-going Covid-19 pandemic is still transforming how or whether people work for survival. As people had to stay home to stop the spread of this virus, many businesses had to be closed and people had to opt for a work-from-home system in order to continue earning. Companies across the world right now are all set to have fewer employees working in the offices in the future. Many startup companies are also looking at permanent Work-From-Home settings for their employees to improve productivity and performance.

Work from home is described as the method of working outside of physical spaces, enabled by the technology which reduces commuting time and improves the effectiveness and efficiency. It also provides flexibility, autonomy and comfort of working in our own space. Working from home changed the working conditions of employees in three different ways. At first, they are able to save some time commuting to work everyday which gives them time to take care of personal as well as family responsibilities. Secondly, they were not able to receive any real-time-support from their managers or supervisors and thirdly, they work alone in a quieter environment compared to the office set-up. But increased stress, anxiety, inadequate infrastructure, missing work environment/colleagues, impaired manager-employee relationship, unrealistic performance expectations are the downside of a virtual workplace environment. Whereas on the other hand, virtual work is more likely to increase productivity of employees than financial incentives, employees get better work-life balance through virtual work options, feel motivated, get flexibility with timing, and get access to better talent around the globe that significantly increases the average individual performance. Considering the above arguments for the mixed impact of work from home on employee performance, the question arises here is " Is there any impact of work from home on Employee Performance?"

Factors affecting Employee Performance in remote working set-up are as follows:

1. Lack of proper communication between co-workers

Until and unless the workers follow a proper channel of communication among team members who work towards a specific goal together from various locations, it can be quite difficult to ensure the required levels of calibration in their work. Therefore, it can affect the Employee Performance in remote working set-up.

2. Health issues of employees and their family members

Any kind of prevailing health issues of the employee or their family members can also result in a loss of focus on the task at hand which can affect the performance of employees. When the employees experience a double role and need to act as caregivers and attend to the sick family member(s), it can also prove to be emotionally draining. This can also lead to anxiety and depression.

3. Zero to minimum social contact

The employees are confined to their homes with almost zero social interaction as they can no longer work together under one roof. The people who are extroverted in nature and tend to enjoy a social life, it can become very difficult to maintain the same level of performance during work-from-home as there is no physical bonding with colleagues.

4. Lack of access to workspace tools

Lack of access to workspace tools can hamper the work progress and impact the performance of the employees extremely. It is essential to build a collaborative workspace in order to facilitate business processes and sure its growth. It is important to foster effective communication between different teams that need to collaborate while delivering the same task.

5. Disruptions in work-life balance

As the employees have to sit for long periods of time while working online, it might be difficult to attend to the children or do any household chores although they stay at home. It is quite disturbing to keep working as the employees cannot have meals together or talk freely with family members or roommates while others can enjoy their time at home.

Employee performance can be improved in the following ways:

1. Keeping the channels of communication open

Communication is a critical aspect of a successful business, therefore it is the duty of a manager or HR to ensure that the communication between various departments or team members is open, transparent, frequent and consistent as well. It also helps to secure the team members on the same page.

2. Providing support to enhance employees' wellbeing

Poor mental health can have a huge impact on the employee's performance. The managers or HR team should be mindful regarding the challenges faced by their employees. The additional resources like mental health discussions or counselling from an expert can help provide sufficient support to enhance the well-being of the employees.

3. Keeping the teams engaged and productive

A sense of connection and empathy between team members can be missing in the remote working model. Thus, frequent or short meetings in sync with the agenda can be helpful in maintaining attention, focus and energy. The teams should have access to virtual tools and resources in order to stay engaged and productive.

4. Ensuring work-life balance to enhance performance

The employees can lose track of time as they work for 18-20 hours a day and feel burnt out, as there is no significant or distinguished line between work and personal life. So, the HR or Manager should counsel the employees on creating a work schedule and stick to the work-life balance to promote family time and take care of their needs.

5. Using the technology to bridge the gap of communication

Virtual collaboration and communication tools are mandatory for a successful remote working strategy. With proper HR practices in place, the remote working set-up can be made more productive and be little negative on employee performance. Leveraging technology to its maximum capacity can bridge the gap between communication and remote working models.

Conclusions

Over the past few months, many organisations have transitioned their workforce from offices to WFH environments as per the demand. Although Work-at-home may not become a widespread practice, it can be used as a flexible option in special cases which need to be examined. WFH is becoming a new normal now and remote managers should encourage the employees to create a separate dedicated workstation at home to boost performance. Although WFH is different from the office and affects the employees differently, proper measures should be undertaken to keep the employees focused and energised throughout the virtual functioning. Future research needs to study the industry-specific differences and explore the moderating variables like gender, age to understand the concept of WFH for younger and older employees.

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Critical Assessment of Organizational Resilience Stressors in the VUCA-World

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ABSTRACT:

Business Resilience is emerging as a research topic of interest to academia and business. However, the research is nascent and has only started garnering speed now. Though at the conceptual level, Resilience is taken as an ability to bounce back after a setback, it has a much deeper construct at a business and organizational level. This paper aims to identify the stressors that occur at an organizational level through primary research. The curiosity and research gap of interest that guides this paper is the identification of exact stressors in real-time business settings through primary research.

This research paper establishes the key stressors that depreciate manufacturing and service organizational Resilience through focus group discussions with critical leadership members in a design thinking process that aims to build dynamic Resilience. The findings are based on in-depth problem assessments in a Design Thinking Process where cognitive diversity is used through empathy maps to make sense of the complexities that organizations of today experience.

The journey of Resilience building is continuous, and thus work on internal stressors ensures the building of capabilities to deal with Black Swan Events and Perfect Storms in our VUCA-World. Thus, this paper will benefit the research community in furthering the cause of knowledge in the critical area of Business Resilience in the Volatile, Uncertain, Complex, and Ambiguous World. Furthermore, this paper will also help the business community work on the identified stressors established through a scientific process. It will thus enable them to deal with the internal risks of stressors before they reach the inflection point.

This paper identifies facets that stress Organizational Resilience in people dynamics and capabilities. We also state in this research paper that it is not the processes or systems that

were found to be inadequate but the ability to drive them. We also identified that inadequacies in designing stakeholder value during disruptions lead to depreciation in Resilience.

This research was conducted through focus group discussions in Design Thinking, Complex Problem Solving, and Business Model Prototyping exercises in mature Manufacturing and Services Multinational Enterprises. The data provided is a part of the second step of Design Thinking which is the Definition of the Problem. Keywords that appeared in various definitions are used to analyze and determine critical stressors in business organizations across the Supply Chains and Business Value Chains.

Key Words: VUCA, Business Resilience, Resilience, Black Swan Events, Leadership, Leadership Dynamics, Cognitive Diversity, Design Thinking

INTRODUCTION:

Today's businesses are exposed to the unpredictable impacts of a Volatile, Uncertain, Complex, and Ambiguous VUCA-World. The VUCA events manifest as low probability high impact outcomes because of internal stresses, environmental events, or a combination of both. We argue in this paper that should the internal stressors of the organizations be in control, the ability to absorb the impact and recover is assured.

Kinsinger & Walsch (20(Bennet & Lemoine, 2014)(Bennet & Lemoine, 2014)12) state that the term VUCA was introduced in the US Army War College to characterize the Volatile, Uncertain, Complex & Ambiguous multi-lateral world as an outcome of the end of the cold war era. It was then adopted by strategic business leaders to describe the chaotic, turbulent, and rapidly changing business environment that has become the "new normal" (Potsangbam, 2017). Internal Stressors within the organizational dynamics can impair the organization should it reach an inflection point. A VUCA event can further dent the operations drastically should these stressors exist, thus compounding the effect.

VUCA essentials have been characterized in detail (Bennett & Lemoine, What a Difference a Word Makes: Understanding Threats to Performance in a VUCA World, 2014) as Volatile being unstable or unpredictable to understand opportunities and threats and devote resources and stockpile. Volatility is mentioned as when the change is coming, but its magnitude, direction, and length are unknown. A lack of knowledge of the significant event characterizes uncertainty.Many interconnected parts characterize complexity. Ambiguity is reflected through doubt about the nature of cause-and-effect relationships.

In the business world, VUCA events result in an unprecedented impact. These events are described as Black Swan Events (Taleb, The Black Swan: The Impact of the Highly Improbable, 2008) or Perfect Storms characterized by "an unusual combination of events or things that produce an unusually bad or powerful result" (Collins, n.d.). VUCA event results in unmatched disruptions caused by Political, Economic, Social, Technological, Environmental, and Legal facets of the macro environment. This research paper considers internal organizational stressors as business facets that diminish the ability to cope with unpredictable Black Swan Events and Perfect Storms of the VUCA World.

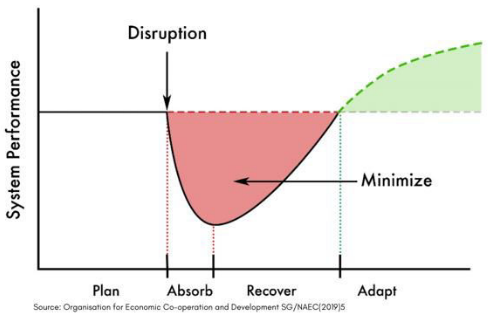
Business Resilience is fast gaining interest in business, academia, and research. However, there has yet to be a consensus on the definition of Resilience. The National Academy of Sciences states, "Resilience is defined as the ability to anticipate, prepare for and adapt to changing conditions and withstand, respond to, and recover rapidly from situations" (Connelly, 2017).We argue that the role of stressors in the Black Swan events is an essential aspect of the study. At the outset, it becomes pertinent to study the aspects of Resilience. Figure 1 describes the Stages of Resilience determined by the OECD (Igor Linkov, 2019). The model determines the Resilience stages as Plan, Absorb, Recover and Adopt. All four stages become critical when considering the interplay of Stressors within the organization. A Black Swan is difficult to predict. (Taleb, The Black Swan: The Impact of the Highly Improbable, 2008). Thus organizations must continue to focus on supply chain stressors and ensure they do not reach an inflection point.

Design Thinking is a Human-Centric, Complex Problem Solving Scientific Process that comprises non-linear stages of Empathize, Define, Ideate, Prototype, Test & Scale. We have used this process to build numerous Resilience models and empirically found Design Thinking Solution Prototyping to clear the test of scientific scrutiny of repeatability and reliability with NPS scores of around 85%. It has also been found effective in our longitudinal research surveys. It is consistent with the aspect of Bricolage and Resource Orchestration.

Thus, the qualitative research question is, which are the priority internal stressors that organizations must focus on to build Resilience in the World of Black Swan Events?

THE METHODOLOGY & ANALYSIS

This study was conducted in five Multinational manufacturing and service organizations of repute that had confirmed the existence of internal stressors. They were a mix of Manufacturing and Service Organizations that support Supply Chains with the participation of two hundred and twenty-two critical members of the organizations. This research is conducted under Non-Disclosure Agreements hence only meta-analysis is presented in this paper, with organizational identities and specific problem statements being protected in line with the contractual agreement.



These organizations engaged in Design Thinking Process to build Resilience capabilities with us. Design Thinking requires accurate ascertainment of Problem Definition, and we used the keywords of thirteen focus group discussions that identified the problems on internal organizational stressors. This project thus conforms to the aspect of qualitative research.

The focus group discussion stage at the point of Defining the Problem Statement depends upon the cognitive and experiential diversity of the participants, who draw insights from Ethnographic tools and the Ichikawa Framework for root cause analysis. The problem statement is then validated with other stakeholders to ascertain its accuracy and used for further solution prototyping. The focus group discussions with the participants in critical leadership positions ascertained the following vital internal stressors with frequencies assigned in line with their occurrences in the thirteen problem statements defined scientifically through the tools mentioned. The findings are detailed in table 1 as under:

Internal Stressors	**Frequency**	**Percentage**
Skills for Process	11	40.74%
Communication & Collaboration	8	29.63%
Leadership	4	14.81%
Customer Centricity Internal & External	4	14.81%
Total	**27**	**100.00%**

Table 1: Frequency of keyword occurrences

The table indicates four key stressors determined in the organizations. Skills that represent the knowledge stock to deal with eventualities are the most compromised. Communication that occurs during collaborations is the next stressor, as there is a tendency among leaders to operate in islands and silos. Leadership emerged as a mediating design role that can apply its collective wisdom to overcome eventualities and embark upon the recovery and growth process. Customer Centricity, both for internal and external customers, emerged for overall stakeholder value creation. The implications of these stressors are discussed in the conclusion part.

CONCLUSION

The above inferences were further put for validation discussion, and we state that the principal reasons for resilience compromise are the capabilities of people and the lack of cross-functional collaboration among the most competent leaders. Thus organizations cannot tap into the collective wisdom and diversity of experience.

Each perfect storm creates an altered world demanding new skills to manage unique scenarios that present as a natural outcome. At this stage, processes need to be steered to deal with these unique situations and necessitate the availability of new competencies and mastery over the intricacies of the defined processes. Lack of competencies stalls process implementation and its effectiveness.

Leadership dynamics ensure influence over disruptions through a mediation role. In addition, collective Leadership capabilities can enhance design & innovation and stakeholder value creation to ensure effective people engagement within the organization and with the ecosystem to enable growth.

LIMITATIONS AND FURTHER RESEARCH

This research is a meta-analysis of professional engagements with Multinationals in India. The findings thus need validation in an International setting, though these organizations operate International Supply Chains. The validity of the findings also needs to be ascertained for small and medium enterprises. Thus, these limitations open dimensions for further research. We also need to establish the reliability of the findings through a more extensive base of organizations.

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A Study of Management Problems in Fish Seed Production Centers

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ABSTRACT:-

Availability of required seeds of the desired species at the right time is essential forsuccessful aquaculture. Also, proper management plays the most important role in fish seedproduction centers. This paper reviews the management strategy as well as the problems of fishseed production centersin Pune district. 6 fish seed production centers of Pune district havebeen randomly selected for this research. Management of breeder fish, feeding, water and healthmanagement in fish seed production center and production of fish cumin are the main technicalcomponents of this process. Source, age, size, feed and weight of the brooder are the maincriteria for choosing a quality brooder.It is very important to give hormones at the right timeand in the rightway toget quality seeds. Stocking density and propermale-female ratio inbrood ponds are another important determinant of fish seed production center management. It I srecommended that the government should make it mandatory for fish hatchery operators to undergo continuous training. Also, loans should be made available at low interest rates to takenecessary measures. These steps should increase fish seed production for viable and sustainable aqua culture development tin Punedistrict.

KeyWords:-Broodstock, Management, Production, Hatchery, Hormones, problems etc.,

INTRODUCTION:-

Fisheries has been growing rapidly in recent times, but Maharashtra ranks sixth in fishproduction. Errors in fish seed production and inadequate supply of fish seeds are the majorreasons for this. Interviews were conducted with hatchery owners, hatchery operators and fishfarmers in Pune district of Maharashtra to find out the current status and problems of fish seedproducing hatcheries. The study revealed that most hatchery owners (40%) collected brood fishfrom their own ponds, followed by local dams (20%) and external ponds (30%) respectively. Itincluded a variety of species such as Catla, Rohu and Cyprinus.Hormones like Ovaprim,Ovatide, Gonopro, Spawn pro were used during breeding. During the study it wasfound thatfish hatchery is facing the most problems. Also the production of fish seeds is not enough thanthe production capacity due to various problems. Also lack of brood pond and capital and sale isa serious problem in the study area. This is leading to insufficient brood stock. Generally we have fish seeds obtained through river collection, dam breeding and hatcheries. Fishseed production has been steadily increasing since 1980. The first fish seed center was established in1955 at Khopoli. In 1957 a major Indian carp was successfully bred. Fish seed production program is being implemented in Maharashtra since 1967. Indian Council of Agricultural Research, New Delhi F.R.P. The breeding kit and its technology were approved in 2005. Atpresent there are 29 fish seed production centers in Maharashtra, where 1235 million fish ofmajor Indian carp can be bred. But there is no facility available to grow most of these fish seedsto the size of fingerlings. Considering the available area of freshwater ponds in the state, therequirement of carp species is around 60 to 65 crore. There are total 42 fish seed centers in thestateout of which13 centers have been closed.

Availability of fish seeds is the main requirement of fish culture. Fish seed production ofcarp species is about 35 billion in 2012 and another 50 billion fish seed will be required in 2030.Most of the fish seed production centers in India do not follow the required guidelines, whichleads to deterioration in the quality of fish seed. 5 to 10 percent of the total cost of fish culture isspent on fish seeds. Use of low quality fish seed results in reduced fish growth and over all yield and less profit to farmers. The study revealed that fish seedofcarp species currently usedforfish culture is generally of low quality. The widespread use of hybrid fish seeds poses a major threat to the aquaculture industry. Pune district has only 1 governmen thatchery, 2 semi-government and 3 private hatcheries. But currently there is no effective regulation for qualitycontrol in hatchery operations and seed trade distribution. As a result, reduced growth, high mortality, poor fertility, diseases usceptibility of seeds and cultivars have been observed. Although the production of juvenile fish has increased in the last few years, it is still difficult tooobtainseedof the desiredsize.The problems in hatchery management and production of hatcheries in Pune district have been studied.

OBJECTIVES :-

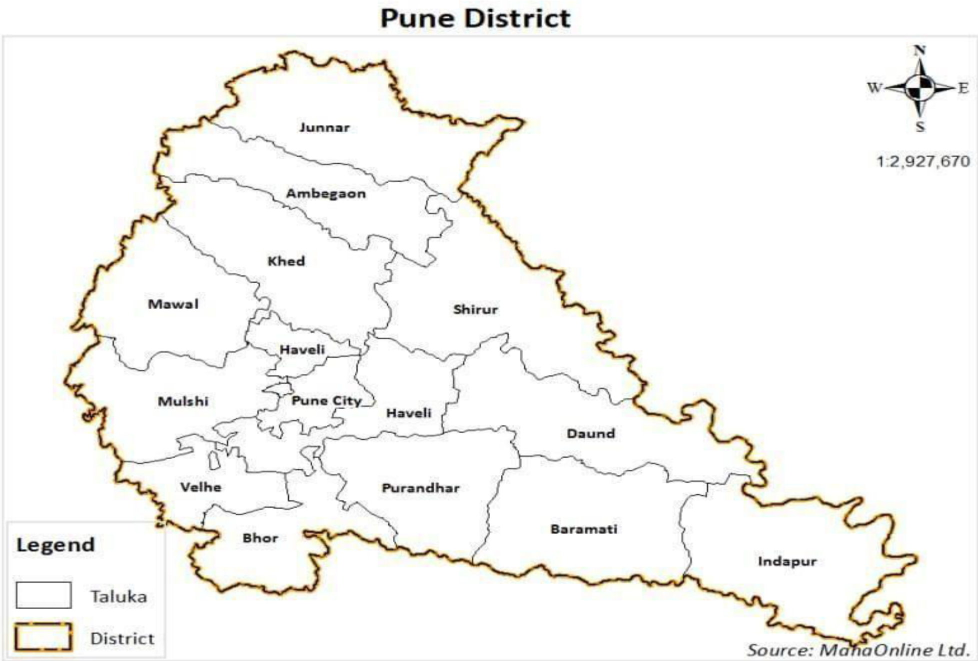
1. To study the management system of fish seed production centers.
2. To study the present status problems of fish seed production centers.
3. Some suggestion to fish centers before seed production.

MATERIALS AND METHODS:-

Pune District :-

The latitudinal extent of Pune district is between 17 degree 54' to 10 degree 24' north latitude and the longitudinal extent is 73 degree 19' to 75 degree 10' east longitude. The geographical area of Pune district is 15,642 sq. km. is Pune district is part of a very hot monsoon terrain and therefore experiences variation in temperature as well as rainfall. The western part of Pune is cold while the eastern part is hot and dry.

Summer : 22° Celsius to 41° CelsiusRainfall : 650 to 700 mm
Winter : 8°C to 25°C



RIVERS IN PUNE DISTRICT :-

Indrayani river, Karha, Kukdi river, Ghod river, Neera, Pavana river, Mandvi, Meena, Bhama, Mutha river, Mula river and also Bhima river are the biggestrivers of thedistrict.

DAMS IN PUNE DISTRICT:-

Khadakwasla, Panshet, Bhushi, Mulshi, Bhatghar, Pimpalgaon-Jog, Varasgaon, Temghar, Bhama-Askhed, Yedgaon, Chas-Kaman, Manikdoh, Thokarwadi, Nazre, Andhra-vally, Gunjvani, Nira-Deodhar, Ujni, Valvan.

PONDS IN PUNE DISTRICT :-

There are total 616 ponds of Irrigation department in Pune district. At the same time, the number of individual farm pond holders is more than ten thousand. According to a survey, about 3 lakh farms have been created inMaharashtra through various schemes.

Research Methods :- Field of Study:-

The study was conducted at different locations. Pune district of Maharashtra has 6 hatcheries and all the hatcheries were studied. The full name of these hatcheries along with owners name and locations are given inTable1.

TableNo.1

Sr. No.	NameofHatchery	Nameofhatcheryoperator	Address
1.	Government Fish Seed Production Centre	Mr.Sunil Kulkarni Sir	Manjri, Hadapsar
2.	Krushi Vidnyankendra, Narayangaon	Mr. Dhanesh Padwal sir Mr. Ashitosh Atakarisir	Narayangaon, Junnar
3.	Krushi Vidnyankendra, Baramati	Mr. Chandrakant Date Sir	Baramati
4.	Tamboli Fish Seed Production Centre	Mr. Firoj Tamboli	Patas
5.	Fish Seed Production Centre	Mr. Bharat Mallav	Bhigvan
6.	Bhimashankar Fisheries	Mr. Ramkisan Borhade	Kanse, Ambegaon

DATACOLLECTION:

In this research essay case study method has been adopted to find out the problems related to fish seed production centers, for this purpose all the fish seed production centers of Pune district were selected as sample.

SOURCESOFINFORMATIONCOLLECTION:-

Theresearcher has usedprimarysource and secondarysourceas follows.

A) Primary sources:-

1. DirectObservation:-

From the point of view of the relevant study, the information was collected by going directly to the localities of the selected districts and closely observe brooder fish seed producers and farmers.

2. PersonalInterview:-

Interview technique is useful for collecting different types of information related to research. Interview helped the researcher to get personal and confidential information abou the research.

B) SecondarySource:-

The secondary material required for the present study was obtained from the fisheries department, as well as government and semi-government organizations. Apart from this, the necessary information and statistics were collected according to the research topic through bibliography, annua lreports, books, various referencesites, magazines, newspapers, etc.

MANAGEMENT AND PRESENT STATUS OF FISH SEED PRODUCTION CENTER:-

1. Current Status of Fish Seed Production Centers:-

There are total 6 fish seed production centers in Pune district where fish seed of carp species are being produced.

2. Existing Facilities:-

✓ Maximum brood stock ponds were recorded in the present study. Circular tank, rectangular tank, over head tank and nursery table, ponds in fish seed production centers, the number of nursery ponds was not satisfactory for keeping chicks.

✓ Also inadequate brood stocking facilities had increased the possibility of in breeding among closely related individuals in brood stock ponds.

✓ Continued use of single mating fish for fish seeding andits adverse effects were found to be lacking.

3. Sources of Brood Fish:-

✓ Successful breeding requires suitable breeder fish.

✓ Hatchery owners stocked brood fish as follows. Most hatchery owners (40%) collected brood fish from their own ponds, followed by local dams (20%) and external ponds (30%), respectively. It included a variety of species such as Catla, Rohu and Cyprinus.

4. Brood fish selection criteria:-

✓ Age and weight of brooders varies from species to species. Some hatchery owners used their own brood fish. Their age is generally 3 to 5 years. But some hatchery operators are using out sourced brood stock, resulting in poor quality fish seed.

5. Agents for Induced Fertility:-

Hormones like Ovaprim, Ovatide, Gonopro, Spawnpro were used during breeding.

6. Problems faced by fish seed production centers:-

✓ Disruption of fish seed storage and lack of storage guidelines are the major hindrances in increasing fish production in reservoirs.

✓ Most hatchery owners are facing some technical economic and social problems.

✓ The owners of the fish seed production center had lack of skilled labor problem.

✓ Also lack of rearing ponds, lack of nursery ponds, problems in water management, lack of credit, lack of marketing facilities, pond leasing and flooding etc.have been experienced.

✓ Lack of technical knowledge was observed

7. Problemsin Sales Management:-

✓ Breeding period of carp species is between March and August. Due to the earlier rain falling Kolkata and Andhra Pradesh, the seeds are available in the market early. As a result ,the rainy season starts in mid-June in Pune district, thus prolonging the breeding period, the required demand is not created due to farmers buying seeds from outside.

- ✓ Hatcheries in Pune district have the capacity to produce the required fish seed, but due to the arbitrary attitude of the local traders there are difficulties in the sales process.
- ✓ The customer base is small due to lack of proper advertising.
- ✓ There is resentment among consumer segments about local fish seed due to rumors spread by local traders.

8. Other Problems :-

- ✓ Lack of government or regulatory body control over private fish seed production centers wa sfound.
- ✓ In many carp seed production centers, brooder fish are not replaced after a certain periodof time. It was also found that there was no record of the brooder fish used in thepreviousyear.
- ✓ Proper stocking of fish bottles in the reservoir in the right quantity and size is the real formula for abundant fish production in the reservoir. But it was seen that more seed wasbeing stored than the storage capacity for extra profit. Therefore, it is clear that there has been a huge reduction in production.
- ✓ Government departments and cooperatives are responsibl for fish production in reservoirs. But they do not have the basic facilities required to grow the required number of fish bottles.
- ✓ According to this study it was revealed that there is a requirement of about 1,432 million fish seeds in Maharashtra.
- ✓ It has been observed from the study that currently fish seed is being imported from other states in Maharashtra. Also, very often imported fish seeds are of low quality and fish farmers are being cheated in the number and species of seeds purchased.
- ✓ 30-40 percent loss in production due to use of poor quality seeds in fish culture.

RECOMMENDATION:-

1. Guidelines for Fish Seed Production Centers:-

- ✓ The fish seed production center will generate self-employment and reduce the current scarcity of fish seeds to some extent.
- ✓ Timely attention should be given to the growth of fish seeds to the size of fish fingerlings. So that such fish stocks can be stocked or stored in there servoir.
- ✓ If the farms in Pune district are used for fish breeding and fish conservation by storing fish seeds, it can contribute to the increase in the total income of the farmers.

2. Brood fish selection criteria:-

- ✓ It is always better to raise brooder fishin joint ponds.
- ✓ Potential win fish should be kept in ponds with plenty of float.
- ✓ Generally fish should be 2 to 4 year sold fo rbreeding.

- ✓ Maintenance of win fish should be started 5 to 6 months before the spawning season.
- ✓ To raise good quality breeding fish, healthy and fast growing fish should be obtained from an unknown source with knowledge of their genetic history. Weed fish of carp species should b estocked in ponds for rearing at the rate of 1500 to 2000 kg per hectare.
- ✓ They should be medically examined from time to time to avoid infection of diseases.
- ✓ Change pond water with oxygenated water every 15 days 2 to 3 months before spawning season.
- ✓ Win fish should be fed with adequate protein supplements at the rate of 1 to 3 percent of their weight. Brooder fishreared in this way matures properly before the on setof monsoon.
- ✓ Closely related fishes are more likely to express deleterious (homozygous) genes and hence the off spring produced from breeding of such fishes show disorders such as low growth, low immunity and low survival. Therefore, the primary role of fish seed production plant owners should be to increase the number of wild fish and avoid in breeding among closely related fish.
- ✓ Male-female ratio should be 1:1 while breeding fish and the age of female fish for breeding should be 3 to 5 years while male should be approximately 2 to 5 years. Brooder fish of differentages should be used for breeding. Doing so reduce the chance of damaging important genes.
- ✓ The fishes should be exchanged from different place and bred with the same species. The quality of fish seed will increase if breeding is done by networking different fish seed production centers and exchanging their seeds.
- ✓ If a brood bank is established, the win fish can be reared properly and timely availability of brooders to fish seed production centers will save time and produce good quality seed.
- ✓ The fish seed production center holders must be trained periodically as well as provided with appropriate certificates.

3. Other Tips :-

- ✓ Preference should be given to local fish seed production centers while purchasing seeds. Doing so will help to overcome the problems that have arise in selling fish seeds.
- ✓ Also, due to near availability of right quality seeds at right time to the farmers, it will help to reduce the rate of seed loss.
- ✓ Measures are expected to be taken at the government level for the purchase of fish seeds. It is also necessary to create effective laws in this regard.
- ✓ For the bad perception that has been created about local fish seed, it is expected to provide proper information to the farmers by conducting awareness programs about fish seed by conducting transparent programs.

CONCLUSION:-

This paper analyzes various managers and studies have shown that proper management is a key component of any profitable business. Hatchery operation involves not only physical management but also various scientific and technical management. Brood stock management is very important for fish. To maintain a good hatchery, operators must consider the source of the chicks, their age, weight, male-femal ratio, water quality and pond depth. Which has resulted in poor quality seeds? Spawning is the most technical and scientific part of fish hatchery. The production centers do not get the expected profit if they sell the spawn. So selling fingerling size seeds can make more profit. Prawn farming has not been found anywhere in the pond, sodoing so can generate good profits from the pond throughout the year. Operation studies have also shown that hormones are pushed into the reproductive system at the right time and in theright way. Spawning selection (i.e. brood size and age at spawning) is an important determinantof obtaining good seedquality. Construction of water tanks, jars, roundtanks, aerators, nets, fish ponds etc. requires huge amount of money. Because It is not possible to supply required fish seeds in Maharashtra and availability of fish seeds from other states. Low prices have Created difficulties in sales, Government departments and cooperatives are responsible for aquaculture in reservoirs, but they do not have the basic facilities to raise required quantities offish plants. Adequate breeding stock required for fish seed production is not available. Also, theavailability of fish seeds in the right period is less. At present fish seeds are imported from ther states in Maharashtra. The age of the operator respondent was between 30 and 55 years. However, experts were not available anywhere, so lack of technicall knowledge led to low quality seed production and reduced seed mortality. No measures required for sale. There wereother technical difficulties as well. Fish seed suppliers insist on selling foreign seed claimingthat local fish seed is of inferior quality for extra profit. Based on the findings of this study, further development of the hatcherybusiness should be emphasized.

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Lean Manufacturing in Indian MSME Context

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Abstract

Purpose- Lean manufacturing has been proven as a most important methodology for Japanese industrial growth followed by USA, India and other countries. The focus of lean is not limited large scale enterprises or mass production organizations as in mid of 20th Century. It has spread in diverse industry segments, all functions of the organizations and at all levels. However there is a lack of implementation observed into Indian MSME context. It summarises and integrates the current understanding of lean manufacturing and provides starting point for further discussion, research and practical application in this area.

Research Design- The author draws on their extensive experience with lean gained over 15 years of research in manufacturing, leadership, and consulting in lean transformations in this conceptual paper. Literature available in open domain is used to address specific phenomenon. Starting point is the need for lean manufacturing in MSME's, their challenges, inhibiting and enabling factors and future scope for lean manufacturing. Since the philosophy is driven by people, importance is given on cultural challenges and role of human resource in implementation of lean.

Findings- Critical success factors and 10 key points for future trends in lean manufacturing are given in the paper to help understand and resolves challenges faced.

Keywords- Lean Manufacturing, MSME, Culture, Challenges in Implementation, Critical success factors.

Paper type- View point

Introduction

Lean Manufacturing is a process improvement methodology that aims to eliminate waste and improve efficiency. Lean Manufacturing is based on the Toyota Production System, which was developed by Toyota Motor Corporation to improve the efficiency of its manufacturing operations. Lean Manufacturing is often used in conjunction with Six Sigma and other process improvement methodologies. The methodology is based on the five main principles viz. Identify value, map value stream, create flow, establish pull and seek perfection. The Lean Manufacturing methodology can be applied to any manufacturing or business process. The Lean Manufacturing methodology can be used to improve any manufacturing process, including the manufacturing of products and services. The Lean Manufacturing methodology can also be used to improve business processes, such as the procurement process, the sales process, and the customer service process. The benefits of Lean Manufacturing include improved process efficiency, quality, customer satisfaction, employee satisfaction and improved profitability, competitiveness and sustainability.

It is essentially a synthesis of various management philosophies aimed at making operations as efficient as possible. Just-in-Time (JIT) Manufacturing, Kaizen, Total Quality Management (TQM), Total Productive Maintenance (TPM), Cellular Manufacturing, and other business philosophies are invoked by lean manufacturing. Lean manufacturing tools are a set of techniques and processes used to reduce waste and improve efficiency in the production process. These tools are designed to help manufacturers reduce costs, increase productivity, and improve quality. These tools are used to identify areas of waste and inefficiency in the production process and then develop strategies to eliminate them. There are six major tools used in Lean manufacturing. 1. Kaizen: Kaizen is a Japanese term meaning "change for the better" and is a continuous improvement process that focuses on eliminating waste and improving efficiency. 2. Kanban: Kanban is a visual system used to manage the flow of materials and information within a production process. It uses cards or boards to track the progress of work and identify areas for improvement. 3. Value Stream Mapping: Value stream mapping is a tool used to analyse and design the flow of materials and information required to bring a product or service from its beginning through to the customer. 4. 5S: 5S is a system for organizing and maintaining a clean, safe, and efficient workplace. It involves sorting, setting in order, shining, standardizing, and sustaining the workplace. 5. Six Sigma: Six Sigma is a set of techniques and tools for process improvement. It focuses on reducing variation and eliminating defects in order to improve quality and efficiency. 6. Total Productive Maintenance (TPM): TPM is a system for maintaining and improving the reliability of production equipment. It involves preventive maintenance, operator training, and other activities to reduce downtime and improve quality.

MSME In India

Micro, Small and Medium Enterprises (MSMEs) are businesses that employ fewer than a certain number of employees and have a relatively low volume of annual sales. The definition of an MSME varies by country and by industry. Generally, micro-enterprises are businesses with fewer than 10 employees, small enterprises are businesses with fewer than 50 employees, and medium enterprises are businesses with fewer than 250 employees. In India, Micro, Small and Medium Enterprises (MSMEs) are defined by the Ministry of Micro, Small and Medium Enterprises (MSME). According to the MSME Act, 2006, an enterprise is classified as a micro, small or medium enterprise based on the investment in plant and machinery. Micro Enterprises: An enterprise where the investment in plant and machinery does not exceed Rs. 25 lakhs. Small Enterprises: An enterprise where the investment in plant and machinery is more than Rs. 25 lakhs but does not exceed Rs. 5 crores. Medium Enterprises: An enterprise where the investment in plant and machinery is more than Rs. 5 crores but does not exceed Rs. 10 crores.

Micro, Small and Medium Enterprises (MSMEs) play a vital role in the Indian economy. They contribute significantly to the country's GDP, employment generation, exports, and industrial production. MSMEs are the backbone of the Indian economy and account for nearly 45% of the total industrial output and 40% of exports. MSMEs are also important for providing employment opportunities to a large number of people in India. According to the Ministry of Micro, Small and Medium Enterprises, there are over 63 million MSMEs in India, which employ over 120 million people. MSMEs are also important for providing access to credit and other financial services to small businesses.

The Indian MSME (Micro, Small and Medium Enterprises) sector is a major contributor to the country's economy. It contributes around 8% of the country's GDP. The manufacturing sector is one of the most important components of the MSME sector. It contributes around 25% of the total output of the MSME sector. The manufacturing sector is responsible for producing a wide range of products such as consumer goods, industrial goods, and capital goods. The MSME sector in India has been growing rapidly in recent years. The government has taken several initiatives to promote the sector, such as providing tax incentives, easy access to credit, and other support measures. The government has also set up several schemes to help MSMEs access technology and modernize their operations. The manufacturing sector in India is highly competitive and is characterized by a large number of small and medium-sized enterprises. These enterprises are often characterized by low capital investments, low technology, and low productivity. However, the sector has been witnessing a gradual shift towards higher technology and higher productivity. The Indian MSME sector is expected to continue to grow in the coming years.

Need for Lean Manufacturing to MSME

Lean manufacturing is a production system that focuses on eliminating waste and improving efficiency. It is a set of principles and practices that can be applied to any manufacturing process, from small-scale operations to large-scale production. Lean manufacturing has been successfully implemented in many MSMEs around the world. The main goal of lean manufacturing is to reduce waste and increase efficiency. This can be achieved by streamlining processes, eliminating unnecessary steps, and improving the flow of materials and information. To implement lean manufacturing in an MSME, the first step is to identify areas of waste and inefficiency. This can be done by analysing the current production process and looking for opportunities to reduce waste and improve efficiency. Once these areas have been identified, the next step is to develop a plan to implement lean manufacturing principles and practices. This plan should include specific goals, objectives, and strategies for achieving the desired results. Once the plan is in place, the next step is to implement the changes. This may involve training employees on lean manufacturing principles and practices, introducing new technology, and making changes to the production process. It is important to monitor the progress of the implementation and make adjustments as needed. Finally, it is important to measure the results of the lean manufacturing implementation. This can be done by tracking key performance indicators such as cost savings, quality improvements, and production time reductions. By measuring the results, it is possible to determine if the implementation was successful and identify areas for further improvement.

Lean manufacturing is a set of principles and practices that can help Indian manufacturing companies to reduce costs, improve quality, and increase efficiency. Lean manufacturing can help Indian manufacturers to reduce waste, streamline processes, and increase customer satisfaction. It can also help them to reduce inventory levels, improve delivery times, and increase profitability. By implementing lean manufacturing principles, Indian manufacturers can become more competitive in the global market and better serve their customers. Lean manufacturing can also help Indian manufacturers to reduce their environmental impact by reducing energy consumption and waste.

Below mentioned are benefits for MSME by adoption of Lean Manufacturing Practices

1. Improved Quality: It helps to reduce defects and improve the quality of products. This helps to reduce customer complaints and increase customer satisfaction.
2. Reduced Costs: It helps to reduce costs by eliminating waste and improving efficiency. This helps to increase profits and reduce overhead costs.
3. Increased Productivity: It helps to increase productivity by streamlining processes and eliminating waste. This helps to increase output and reduce lead times.
4. Improved Safety: It helps to improve safety by reducing the risk of accidents and injuries. This helps to reduce costs associated with workplace injuries.
5. Improved Employee Morale: It helps to improve employee morale by creating a more efficient and productive work environment. This helps to reduce employee turnover and increase job satisfaction.

Challenges faced by MSME during implementation of Lean manufacturing

Even though there are numerous benefits to implementing lean manufacturing, it is not an easy task. Because an organisation is made up of various components such as humans involved at all stages and other resources such as machines and processes, there are a few issues to consider.

1. Limited Resources:

MSMEs often have limited resources, which can make it difficult to implement Lean manufacturing. This includes limited financial resources, limited personnel, and limited space availability. Limited resources can be a major obstacle to implementing lean manufacturing. Lean manufacturing requires a significant investment in resources. Companies may not have the financial capital to make these investments like investing in processes to modify physical structure, adopt in alternate and advance technology, or they may not have the personnel available with required competency and in sufficient numbers, to implement the necessary changes. In some cases limited manpower available is too engaged in daily tasks that they cannot think beyond it to improve upon. Additionally, companies may not have the necessary space or infrastructure to support modification in layout to optimize process. Action plan for implementation cannot be executed without enough resources. In some cases limited manpower available is too engaged in daily tasks that they cannot think beyond it to improve upon. All of these factors can limit a company's ability to successfully implement lean manufacturing.

2. Lack of Knowledge:

Many MSMEs lack the knowledge and expertise to properly implement Lean manufacturing. This can lead to costly mistakes and delays in implementation. It is a relatively new concept, and many companies are still learning about it and how to implement it. As a result, there is a lack or little awareness about lean manufacturing among many businesses. Less conscious efforts are put into this factor. This can lead to confusion and difficulty in implementing lean manufacturing processes, as well as a lack of understanding of the benefits that can be gained from it. Companies found limited expertise available in the market is costly resulting in compromising on resources.

3. Resistance to Change:

Many MSMEs may be resistant to change, which can make it difficult to implement Lean manufacturing. This resistance can come from employees, management, and even customers. Resistance to change is a natural reaction when implementing Lean Manufacturing. People may be resistant to change due to fear of the unknown, lack of trust in the process, or a feeling of being overwhelmed by the amount of change. It is important to recognize and address these feelings in order to ensure successful implementation of Lean Manufacturing.

4. Poor Quality Control:

Many MSMEs lack the quality control systems necessary to ensure that Lean manufacturing is implemented correctly. This can lead to poor quality products and services. Poor quality control in lean manufacturing is a common problem that can lead to a variety of issues. Poor quality control can lead to increased costs due to rework, scrap, and customer returns. It can also lead to decreased customer satisfaction and a decrease in the overall efficiency of the production process. It can be caused by a variety of factors, including inadequate training, lack of resources, and inadequate processes. To address this in lean manufacturing, it is important to identify the root cause of the issue and develop a plan to address it. This may include implementing better training, investing in better resources, and improving processes. Inspection is no longer required for qualifying parts, quality should be built in the process and design.

5. Poor Communication:

This usually observed in medium sized organizations who has functional set up available but communication between departments can make it difficult to implement Lean manufacturing. This can lead to delays in implementation and misunderstandings between departments. Poor communication can lead to confusion and misunderstandings about the goals and objectives of Lean manufacturing. It is important to ensure that everyone involved in the process is on the same page. It can also lead to a lack of trust between workers and management, which can lead to decreased morale and productivity. Poor communication can also lead to a lack of clarity and purpose in the production process, which can lead to confusion and inefficiency. Finally, poor communication can lead to a lack of collaboration between departments, which can lead to a lack of innovation and creativity.

6. Lack of Flexibility:

Many MSMEs lack the flexibility necessary to quickly adapt to changing customer demands and market conditions. As industry is expanding with varying demands from customer, it moving from craft manufacturing to mass manufacturing to batch manufacturing and currently high mix low volume. Lean manufacturing the best option available to cater different demands with increasing efficiency. As such, it is not designed to be flexible. Lean manufacturing is focused on streamlining processes and eliminating waste, which requires a certain level of standardization and repetition. This means that it is not easily adapted to changing customer needs or new product designs. Additionally, the focus on efficiency means that there is less room for experimentation and innovation.

7. Poor Planning:

Many MSMEs lack the planning processes necessary to properly implement Lean manufacturing. Lean Manufacturing is a complex process that requires a great deal of planning and coordination. This complexity can be difficult for MSMEs to manage, especially if they lack the resources and knowledge to do so. It can lead to a number of problems, including increased costs, decreased efficiency, and decreased customer satisfaction. Poor planning can lead to an inefficient production process, resulting in higher costs due to wasted materials, labor, and energy. Poor planning can also lead to delays in production, resulting in missed deadlines and unhappy customers. Additionally, poor planning can lead to a lack of communication between departments, resulting in a lack of coordination and collaboration. This can lead to further delays and inefficiencies. Finally, poor planning can lead to a lack of visibility into the production process, making it difficult to identify and address problems in a timely manner.

8. Time Constraints:

Many MSMEs have limited time resources to implement Lean Manufacturing. This is a problem based on priorities. This can make it difficult to properly plan and execute the process. Time constraints are used to ensure that production processes are completed in the most efficient manner possible. It helps to ensure that resources are used efficiently and that production processes are completed in a timely manner. It also helps to reduce costs by ensuring that resources are not wasted on unnecessary activities. Time constraints can also help to improve customer satisfaction by ensuring that processes are completed correctly and on time.

9. Lack of Leadership Support:

Without strong leadership support, Lean initiatives can quickly become derailed. Leaders must be willing to commit to the process and provide the necessary resources for successful implementation. Leadership support for lean manufacturing is essential for successful implementation and long-term sustainability. Without leadership support, it is difficult to create a culture of continuous improvement and to ensure that the necessary resources are available to support the lean initiatives. Without this it is also difficult to ensure that the necessary changes are made to the organizational structure and processes to enable the successful implementation of lean manufacturing. Additionally, without leadership support, it is difficult to ensure that employees are engaged and motivated to participate in the lean initiatives. It is also difficult to ensure that the necessary training and development is provided to employees to enable them to effectively implement the lean initiatives. Finally, without leadership support, it is difficult to ensure that the necessary metrics and measurements are in place to track the progress of the lean initiatives.

10. Poor Training:

In most of the organization required knowledge and understanding about lean is not available internally. Their employees may not understand how to properly implement Lean manufacturing processes without proper training. It is important to provide adequate training and support to ensure successful implementation. Training is required to create awareness about lean and practically implementing it. Since people driven system is focus on lean manufacturing, training is essential element to generate ideas, finding innovative solution. Lack of proper training can lead to inefficient processes, increased costs, and decreased customer satisfaction. Additionally, without proper training, employees may not be able to identify and address problems quickly and effectively. This can lead to further delays and increased costs. Finally, without proper training, employees may not be able to identify and take advantage of opportunities for improvement. This can lead to missed opportunities for cost savings and increased efficiency.

11. Poor Measurement:

Top management is accountable for designing performance system for lean. Without proper measurement, it can be difficult to determine whether Lean initiatives are having a positive impact on the organization. It is important to establish metrics to measure progress and success. This can be attributed to a number of factors. First, it can be difficult to accurately measure the effectiveness of lean manufacturing processes due to the complexity of the system. Additionally, the lack of standardization across different lean manufacturing processes can make it difficult to compare results from different companies. Finally, the lack of data collection and analysis tools can make it difficult to accurately measure the performance of lean manufacturing processes.

Inhibiting factors on lean manufacturing implementation in Indian MSME

The implementation of Lean Manufacturing in Indian MSMEs is hindered by several factors. These include:

1. Lack of Awareness:

Many MSMEs are not aware of the benefits of Lean Manufacturing and the potential it has to improve their operations. This lack of awareness leads to a lack of motivation to implement Lean Manufacturing. Lack of awareness is one of the major inhibiting factors on lean manufacturing implementation in Indian MSMEs. This is due to the fact that many small and medium-sized enterprises (SMEs) in India are not aware of the concept of lean manufacturing and its benefits. As a result, they are unable to take advantage of the potential cost savings and improved efficiency that can be achieved through the implementation of lean manufacturing principles. Lack of knowledge and resources can lead to inefficient production processes, resulting in higher costs and lower quality products. Furthermore, this can lead to a lack of commitment from management and employees, which can further impede the implementation of lean manufacturing.

2. Lack of Resources:

Many MSMEs lack the resources necessary to implement Lean Manufacturing. This includes financial resources such as capital, skilled personnel, and the right technology, infrastructure and support. Additionally, many MSMEs are unable to access the necessary training and support required to successfully implement lean manufacturing. This lack of resources can lead to a lack of understanding of the principles and processes of lean manufacturing, which can lead to a lack of commitment to the implementation process. Furthermore, this can lead to a lack of motivation and enthusiasm for the implementation process, which can further hinder the implementation of lean manufacturing.

3. Lack of Support:

Many MSMEs lack the support from the government and other stakeholders to implement Lean Manufacturing. This includes access to funding, training, and other resources. This lack of support can be attributed to a number of factors, including limited access to resources, lack of knowledge and expertise, and inadequate financial resources. First, Indian MSMEs often lack access to resources that are necessary for successful implementation of lean manufacturing. This includes access to technology, training, and other resources that are necessary for successful implementation.. Many of these businesses are unable to invest in the necessary equipment and technology needed for successful implementation. Additionally, they may not have the funds to hire experienced personnel or to invest in training. Overall, lack of support is a major inhibiting factor on lean manufacturing implementation in Indian MSMEs. This lack of support can be attributed to limited access to resources, lack of knowledge and expertise, and inadequate financial resources.

4. Cultural Resistance:

Many MSMEs are resistant to change and may be reluctant to adopt Lean Manufacturing. This is due to a lack of understanding of the benefits of Lean Manufacturing and a fear of the unknown. Cultural resistance is a major inhibiting factor on lean manufacturing implementation in Indian MSMEs. This resistance is rooted in the traditional mind-set of the Indian business culture, which is characterized by a hierarchical structure, a focus on short-term gains, and a reluctance to embrace change. This resistance is further compounded by the lack of awareness and understanding of lean manufacturing principles among Indian MSMEs. As a result, many Indian MSMEs are reluctant to invest in the necessary resources and training required to implement lean manufacturing.

5. Poor Infrastructure:

Many MSMEs lack the infrastructure necessary to implement Lean Manufacturing. This includes access to reliable power, transportation, and communication networks. Poor infrastructure can lead to delays in production, increased costs, and decreased efficiency. Poor infrastructure can also lead to a lack of access to resources, such as raw materials, skilled labor, and technology. This can make it difficult for MSMEs to implement lean manufacturing processes, as they may not have the necessary resources or expertise to do so. Additionally, poor infrastructure can lead to unreliable power supply, which can further hamper the implementation of lean manufacturing processes. Poor infrastructure can also lead to a lack of communication between different departments, which can lead to delays in production and decreased efficiency.

5. Enabling factors for Lean Manufacturing implementation in Indian MSME's

1. Adoption of Lean Manufacturing Principles:

MSMEs are adopting the Lean Manufacturing principles such as Just-in-Time (JIT) production, Total Quality Management (TQM), Kaizen, 5S, and Value Stream Mapping (VSM). These principles help to reduce waste and improve efficiency. It a set of principles and practices that focus on eliminating waste and improving efficiency in the production process. It is based on the idea that every step in the production process should add value to the product or service. By adopting Lean Manufacturing principles, Indian MSMEs can reduce costs, improve quality, and increase productivity. This can be achieved by streamlining processes, reducing inventory levels, and improving the flow of materials. Additionally, Lean Manufacturing principles can help Indian MSMEs to improve the quality of their products and services by reducing defects and improving customer satisfaction.

Lean Manufacturing principles can help Indian MSMEs to increase their productivity by reducing lead times and increasing throughput. This can be achieved by implementing Just-in-Time (JIT) production systems, which reduce the amount of time it takes to produce a product or service. Additionally, Lean Manufacturing principles can help Indian MSMEs to reduce their energy consumption and improve their environmental performance. Overall, the adoption of Lean Manufacturing principles is an important enabling factor for Lean

Manufacturing implementation in Indian MSMEs. By adopting these principles, Indian MSMEs can reduce costs, improve quality, and increase productivity.

2. Training and Education:

MSMEs are providing training and education to their employees on Lean Manufacturing principles and techniques. This will help them to understand the concepts and apply them in their daily operations. It is important to communicate the benefits of Lean Manufacturing and how it will improve the organization. It is required to involve employees in the process and provide them with a sense of ownership. Post training it is important to recognize and reward employees for their efforts in implementing Lean Manufacturing. Training and education are essential enabling factors for the successful implementation of Lean Manufacturing in Indian MSMEs. Training helps to ensure that employees understand the principles of Lean Manufacturing and how to apply them in their daily work. It also helps to ensure that employees are aware of the benefits of Lean Manufacturing and how it can help to improve efficiency and reduce costs. Education helps to ensure that employees have the necessary skills and knowledge to effectively implement Lean Manufacturing in their workplace. It also helps to ensure that employees are aware of the latest developments in Lean Manufacturing and how to apply them in their work. Training and education are essential for the successful implementation of Lean Manufacturing in Indian MSMEs as they help to ensure that employees are equipped with the necessary skills and knowledge to effectively implement Lean Manufacturing in their workplace.

3. Technology:

MSMEs are investing in technology to automate their processes and reduce manual labour. This will help them to reduce costs and improve efficiency. Technology is an important enabler for Lean Manufacturing implementation in Indian MSMEs. Technology can help reduce waste, improve efficiency, and increase productivity. It can also help to reduce costs and improve quality. Technology can be used to automate processes, streamline operations, and provide real-time data for decision making. Technology can also be used to improve communication between different departments and stakeholders, enabling better collaboration and coordination. Additionally, technology can be used to track inventory levels, monitor production processes, and provide feedback on performance. By leveraging technology, Indian MSMEs can become more efficient and competitive in the global market.

4. Collaboration:

MSMEs are collaborating with other organizations to share best practices and learn from each other. This will help them to improve their processes and become more competitive. Collaboration is an important enabling factor for Lean Manufacturing implementation in Indian MSMEs. It involves the active participation of all stakeholders in the process of Lean Manufacturing implementation. This includes the suppliers, customers, employees, and other stakeholders. Collaboration helps to ensure that all stakeholders are aware of the objectives and goals of the Lean Manufacturing implementation process. It also helps to ensure that everyone is working together to achieve the desired results. Collaboration also helps to identify areas of improvement and develop strategies to address them. This helps to ensure that the Lean Manufacturing implementation process is successful and that the desired results are achieved.

5. Government Support:

The government is providing financial and technical support to MSMEs to help them implement Lean Manufacturing. This will help them to reduce costs and become more competitive. Support from the government is an important enabling factor for Lean Manufacturing implementation in Indian MSMEs. The government has taken several initiatives to promote Lean Manufacturing in the MSME sector. These include:

A. The Government of India has launched the 'Make in India' initiative to promote manufacturing in India and encourage MSMEs to adopt Lean Manufacturing practices.

B. The government has also launched the 'Skill India' mission to provide training and skill development opportunities to MSMEs to help them adopt Lean Manufacturing practices.

C. The government has also set up the National Manufacturing Competitiveness Council (NMCC) to promote Lean Manufacturing in the MSME sector.

D. The government has also launched the 'Digital India' initiative to promote the use of technology in manufacturing and help MSMEs adopt Lean Manufacturing practices.

E. The government has also launched the 'Startup India' initiative to promote entrepreneurship and encourage MSMEs to adopt Lean Manufacturing practices.

F. The government has also launched the 'Stand Up India' initiative to promote entrepreneurship and encourage MSMEs to adopt Lean Manufacturing practices.

G. The government has also launched the 'Atmanirbhar Bharat' initiative to promote self-reliance and encourage MSMEs to adopt Lean Manufacturing practices.

H. The government has also launched the 'Pradhan Mantri Mudra Yojana' to provide financial assistance to MSMEs to help them adopt Lean Manufacturing practices.

6. Skilled Workforce:

The availability of a skilled workforce is essential for the successful implementation of Lean Manufacturing. The Indian government has taken several initiatives to promote skill development in the MSME sector. It requires a highly skilled workforce to implement and maintain the system. Skilled workers are able to identify and eliminate waste, improve processes, and ensure that the system is running efficiently. They are also able to identify areas of improvement and suggest solutions. Skilled workers are also able to provide valuable insights into the system and suggest solutions.

7. Quality Management:

Quality management is an important factor for the successful implementation of Lean Manufacturing. Quality management systems such as ISO 9001 and Total Quality Management (TQM) help MSMEs to ensure that their products meet customer requirements and expectations in a timely manner. It also helps to promote process approach and risk based thinking. Quality management helps to identify opportunities eliminate defects from their roots in the production process, which can lead to reliable product quality. Quality management also helps to ensure that the MSMEs are able to maintain a competitive edge in the market by properly defining requirements of customer in design and planning for quality objective for the organization. It provides a structured approach to all processes to cater customer requirements through Plan-Do-Check-Act Process.

8. Supply Chain Management:

Effective supply chain management is essential for the successful implementation of Lean Manufacturing. MSMEs need to ensure that their suppliers are reliable and can provide quality materials in a timely manner. SCM is a process that involves the coordination and integration of all activities related to the flow of materials, information, and services from suppliers to customers. SCM helps to reduce costs by streamlining the supply chain and eliminating unnecessary steps. It also helps to improve efficiency by reducing lead times and increasing the speed of delivery. Additionally, SCM helps to increase customer satisfaction by providing better visibility into the supply chain and ensuring that orders are fulfilled on time. For example, SCM can be used to reduce inventory costs by ensuring that the right materials are available at the right time. Overall, It helps to reduce costs, improve efficiency, and increase customer satisfaction. By leveraging SCM, Indian MSMEs can become more competitive and successful in the global market.

6. Role of Human Resource in implementation of lean manufacturing practices in MSME

Lean Manufacturing is evolved through Toyota Motor Corporation has people and partners as an important element in their 4-P model. As per their 14 management principles focus given on growing leaders who live the philosophy, respect, develop and challenge people and teams including suppliers

Human Resource (HR) plays a critical role in the successful implementation of Lean Manufacturing practices in MSMEs in India. HR is responsible for ensuring that the organization has the right people with the right skills and knowledge to implement Lean Manufacturing practices. HR must ensure that employees are trained and motivated to adopt Lean Manufacturing practices. They should also ensure that the organization has the right organizational structure and culture to support Lean Manufacturing practices. This includes developing and implementing policies and procedures that support Lean Manufacturing practices, as well as developing and implementing performance management systems that measure and reward employees for their contributions to Lean Manufacturing.

As Toyota production system speaks about Muda of 7 wastes, there is eighth waste of unutilized human potential. There are five mail causes or these waste. Firstly job profiles are limited by work design which limits their creativity to do more. Secondly power for decision making, problem solving and thinking is limited to few people like managers only. This in turn producing opposite results in many cases as manager has very less interaction with actual job on the floor. Thirdly people are reluctant to do more in their job due to some past experiences and they might be groomed in the same way earlier as to do their job only, not interacting with others. Next cause to lack in channelizing the abilities of people to create new work. Lastly there is no assigned cost to people working at lower capacity. Seeing available capacity in the workforce is a key component of Lean cultures. HR has to work in the direction considering all roads leads to customer, everyone needs to learn and improve, to participate, involved in improvement and problem solving. The Common lean principles naturally motivate people to achieve more by feeling positive about themselves and their work and HR has to constantly keep focus on that to create positive work culture.

7. Cultural challenges in Lean manufacturing implementation

Lean implementation entails changing processes, products, philosophy, and people, as well as individuals' attitudes, commitment, behaviour, and perspectives. As a result, local culture must be taken into account. Organizational culture challenges in Lean manufacturing implementation include:

1. Resistance to Change:

Many organizations have a long-standing culture of traditional manufacturing processes and may be resistant to change. This can lead to a lack of buy-in from employees and management, which can impede the successful implementation of Lean manufacturing. This resistance can be attributed to a variety of factors, including a lack of understanding of the benefits of Lean Manufacturing, fear of the unknown, and a lack of trust in the process. Additionally, many MSMEs may be reluctant to invest in the necessary resources and training required to implement Lean Manufacturing. This resistance can be overcome by providing clear communication and education about the benefits of Lean Manufacturing, as well as providing support and resources to help MSMEs make the transition. Additionally, it is important to ensure that the process is tailored to the specific needs of the MSMEs, and that they are given the opportunity to provide feedback and input throughout the process.

2. Lack of Understanding:

Lean manufacturing is a complex system that requires a thorough understanding of the principles and processes involved. Without proper training and education, employees may not be able to fully comprehend the system and its benefits. This is because many MSMEs lack the resources and knowledge to understand the principles and practices of Lean Manufacturing. Without a clear understanding of the concepts, it is difficult for MSMEs to implement Lean Manufacturing effectively. Additionally, many MSMEs may not have the necessary resources to invest in training and education to ensure that their staff are knowledgeable about Lean Manufacturing. This lack of understanding can lead to a lack of commitment to the process, which can lead to a lack of success in implementing Lean Manufacturing.

3. Poor Communication:

Poor communication between management and employees can lead to misunderstandings and confusion about the implementation of Lean manufacturing. This can lead to a lack of trust and commitment from employees, which can impede the successful implementation of Lean manufacturing. It can lead to a lack of understanding of the Lean Manufacturing principles and processes, resulting in a lack of commitment to the implementation process. Poor communication can also lead to a lack of trust between management and employees. Poor communication can also lead to a lack of clarity in roles and responsibilities, resulting in confusion and delays in the implementation process. Finally, it can lead to a lack of collaboration between departments, resulting in a lack of coordination and efficiency in the implementation process.

4. Poor Leadership:

Poor leadership can lead to a lack of direction and focus. Leaders must be able to effectively communicate the goals and objectives of Lean manufacturing and provide the necessary resources and support to ensure its successful implementation. It can be a major cultural challenge for the implementation of Lean Manufacturing in MSMEs. Poor leadership can lead to a lack of commitment to Lean Manufacturing principles, a lack of understanding of the benefits of Lean Manufacturing, and a lack of motivation to make the necessary changes. Poor leadership can also lead to a lack of communication between management and employees, which can lead to confusion and resistance to change. Poor leadership can also lead to a lack of trust between management and employees, which can lead to a lack of collaboration and a lack of innovation. Poor leadership can also lead to a lack of accountability, which can lead to a lack of progress and a lack of results. Poor leadership can also lead to a lack of resources, which can lead to a lack of efficiency and a lack of cost savings. Finally, poor leadership can lead to a lack of focus on customer satisfaction, which can lead to a lack of customer loyalty and a decrease in sales.

8. Critical success factors for implementation of Lean manufacturing practice in MSME in India

1. Leadership Commitment: Lean manufacturing requires strong leadership commitment to ensure that the necessary resources are available and that the implementation process is successful. Leaders must live the philosophy and willing to invest in training and development, and to provide the necessary support to ensure that the implementation is successful.
2. Training and Development: Lean manufacturing requires employees to be trained in the principles and practices of lean manufacturing. This includes understanding the concepts of muda, muri and mura, value stream mapping, just-in-time, and continuous improvement. Training should also include how to use the tools and techniques of lean manufacturing.
3. Process Improvement: Lean manufacturing requires a focus on process improvement. This includes identifying and eliminating waste, streamlining processes, and improving

quality. It also requires the use of tools such as value stream mapping and kaizen events to identify areas for improvement.

4. Measurement and Metrics: Lean manufacturing requires the use of metrics to measure progress and identify areas for improvement. This includes tracking key performance indicators such as cycle time, lead time, and cost.

5. Culture Change: Lean manufacturing requires a shift in the organizational culture. This includes a focus on continuous improvement, customer satisfaction, and employee engagement. It also requires a commitment to collaboration and teamwork.

6. Technology: Lean manufacturing requires the use of technology to support the implementation process. This includes the use of software to track and analyze data, as well as the use of automation to streamline processes.

9. Future scope for Lean Manufacturing in Indian MSME Industry

Adoption of Industry 4.0 Technologies:

The Indian MSME industry can benefit from the adoption of Industry 4.0 technologies such as artificial intelligence, machine learning, and the Internet of Things (IoT). These technologies can help to automate processes, reduce costs, and improve efficiency. Industry 4.0 is the fourth industrial revolution, which is characterized by the use of advanced technologies such as artificial intelligence (AI), the Internet of Things (IoT), and robotics. It is a concept that has been gaining attraction in recent years, and it is expected to revolutionize the way businesses operate. By leveraging these technologies, businesses can reduce costs, increase efficiency, and improve customer service. Additionally, these technologies can help businesses to better manage their supply chains, improve their production processes, and reduce waste. The adoption of Industry 4.0 technologies can also help Indian MSMEs to become more competitive in the global market. By leveraging these technologies, businesses can gain access to new markets, increase their production capacity, and reduce their costs. Additionally, these technologies can help businesses to better manage their data and analytics, which can help them to make better decisions and improve their operations. Finally, the adoption of Industry 4.0 technologies can also help Indian MSMEs to become more efficient in their lean manufacturing processes. By leveraging these technologies, businesses can reduce their lead times, improve their quality control, and reduce their waste. Additionally, these technologies can help businesses to better manage their inventory and production processes, which can help them to become more efficient and productive.

Automation:

Automation is a great way to eliminate waste. Properly configured and programmed equipment produces parts with tight tolerances and can provide automatic alerts if the process deviates from upper- or lower-tolerance limits. This eliminates scrap and rework, two of lean manufacturing's most horrific sins. Even the most skilled operators cannot match automation's efficiency and repeatability on routine or semi-routine processes. Automation can also help reduce the need for manual maintenance, need for manual repairs, manual testing, manual tracking, manual documentation manual scheduling, manual reporting, manual auditing resulting in better compliance. Automation can also help reduce the need for manual training, manual customer service, inventory management and manual data.

Lean Supply Chain Management:

Lean supply chain management is the application of Lean Thinking to the end to end supply chain. Lean Supply Chain Management extends the application of Lean upstream into the management of suppliers, downstream in to the management of the distribution network and upwards in to the overall integration and management of the supply chain. There are four elements of lean supply chain. Integration refers to the management of communications and information between the stakeholders in the supply chain. Providing timely and effective interactions across the entire supply chain. Think of it as the brains of the supply chain carrying the messages to every part of the chain. Operation of supply chain is a skeleton of a manufacturing process, Procurement for your inventory and distribution and logistics to cater to the customer. Lean supply chain management can be used to reduce inventory levels, improve delivery times, and reduce waste

Lean Quality Management:

Quality management system and lean manufacturing are complementary to each other and mutually reinforcing. Both are intended to improve production processes of the organization whereas run by two different departments, resulting in waste of resources. In order to improve performance of ISO 9001 standard in synergy with Lean thinking, Lean Normalization can be applied. It allows quick and effective implementation of ISO standard.

Data Analytics:

Data analytics can help to optimize processes in the Indian MSME industry. Data analytics can be used to analyse customer data, identify trends, and make informed decisions. Data analytics is a powerful tool that can be used to improve the efficiency. By leveraging data analytics, manufacturers can identify areas of improvement and develop strategies to reduce waste and increase productivity. Data analytics can also be used to identify trends in customer demand, enabling manufacturers to better anticipate customer needs and adjust production accordingly. Additionally, data analytics can be used to monitor the performance of machines and processes, allowing manufacturers to identify potential problems before they become costly issues. Finally, data analytics can be used to identify opportunities for cost savings, such as reducing energy consumption or improving the efficiency of production processes. By leveraging data analytics, MSMEs can become more competitive and increase their profitability.

Key points for future trend in Lean Manufacturing in MSME in India

1. Focus on Process Improvement:
Lean manufacturing is all about eliminating waste and improving processes. This means that MSMEs should focus on streamlining their operations and processes to reduce costs and increase efficiency.
2. Embrace Automation: Automation is a key component of lean manufacturing and MSMEs should look to invest in automation technologies to reduce manual labor and improve productivity.
3. Utilize Data Analytics: Data analytics can help MSMEs to identify areas for improvement and develop strategies to optimize their operations.
4. Leverage Technology: Technology can help MSMEs to reduce costs, improve efficiency and increase customer satisfaction.
5. Adopt Sustainable Practices: Sustainable practices such as energy efficiency, waste reduction and recycling are essential for MSMEs to remain competitive in the future.
6. Invest in Training: Training is essential for MSMEs to ensure that their employees are up-to-date with the latest trends in lean manufacturing.
7. Develop a Lean Culture: A lean culture is essential for MSMEs to ensure that their employees are motivated and engaged in the lean manufacturing process.
8. Establish Collaborative Relationships: Establishing collaborative relationships with suppliers and customers is essential for MSMEs to ensure that they are able to access the best materials and services at the best prices.
9. Utilize Lean Tools: Lean tools such as value stream mapping, 5S, and Kaizen can help MSMEs to identify and eliminate waste and improve efficiency.
10. Implement Continuous Improvement: Continuous improvement is essential for MSMEs to ensure that they remain competitive and successful in the future.

Conclusion

The implementation of Lean Manufacturing in the Indian MSME industry has the potential to revolutionize the way businesses operate. This is due to the increasing demand for cost-effective and efficient production processes, as well as the need for improved quality and customer satisfaction. It can help reduce costs, improve efficiency, and increase customer satisfaction. Lean Manufacturing can also help MSMEs become more competitive in the global market. With the right implementation and support, Lean Manufacturing can be a powerful tool for MSMEs to increase their profitability and sustainability.

In the future, it is expected that Lean manufacturing will become an integral part of the Indian MSME industry. The government of India has also taken steps to promote the adoption of Lean manufacturing in the MSME sector, such as providing financial assistance and tax incentives. Additionally, the increasing availability of technology and automation solutions is expected to further drive the adoption of Lean manufacturing in the Indian MSME industry., leading to improved efficiency and cost savings. With the right support from the government and other stakeholders, Lean Manufacturing can be a game-changer for the Indian MSME industry.

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An Analytical study on challenges faced by working women in hybrid work culture with reference to selected IT Companies in Pune City.

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1.0 INTRODUCTION

The Covid-19 pandemic has been a turning point in our society, especially in the healthcare and business (lockdowns and e-working) sectors. For some European countries (Finland, the Netherlands, Luxembourg, Austria), the move to an e-working operating environment was not entirely new and had already been underway in the pre-pandemic era (Eurostat, 2021). As a recent Eurofound (2020) survey reveals, most European Union employees reported a positive experience with teleworking during the first phase of Covid-19, but very few of them wish to work in this way all the time and would prefer a hybrid working option. A hybrid workforce can be defined as a workforce distributed partly across different locations and partly in traditional cubicles and factory spaces. This means that this model of working is characterized by flexibility and choices. Recently published data highlight the fact that more than one-third of respondents want to extend the working-from-home period to at least 1-2 years, and 28.57% want to continue with hybrid e-working (Beno et al., 2021).

While often confused, hybrid and flexible working are two very different models. Flexible working, when it works well gives employees the option to work flexible hours to help work fit around their lives. Often for parents, this involves starting later to drop children off at school or finishing earlier to pick them up.

Hybrid working involves splitting work between multiple locations. At the moment this may be the home and the workplace — but this is not always necessarily the case. This can offer employees more flexibility in terms of *where* they work, but not necessarily *when* they work.

As we see more and more businesses adopt this model, it's important that HR and business leaders remember this. They still need to work with women within their organizations to ensure they have the flexibility they require — regardless of whether they are offering a hybrid working model.

STATEMENT OF THE PROBLEM

In a hybrid working future, organizations need to ensure the workplace does not become the default seat of power. This could happen if business leaders choose to regularly go into the workplace and use this for the majority of decision-making. If this becomes the case, then cultural and behavioral norms — along with entrenched biases — will need to be challenged to ensure that the remote workers are not at a disadvantage. Research indicates that showing face at work leads to career advancement because it is a strong signal of an individuals' commitment to their job, their team, and their organization. Business and HR leaders need to be aware of this, because if we follow the research, women have shown a greater preference to work from home than men. This is supported by a recent CMI poll, which found that 69% of mothers want to work from home at least once a week after the pandemic, versus just 56% of fathers. This means they will be more likely to suffer the implications of a lack of face time — and could be locked out of decision making and overlooked for promotion. This, in turn, could have long-term ramifications for gender diversity in the business. If fewer women progress to leadership roles, their perspective can become underrepresented at management and board level, slowing down or even reversing some of the progress we have seen in recent years in gender diversity at leadership levels.

Objectives of the study

A. To understand the need for implementation of hybrid work model of work in an organization

B. To study the challenges faced by working women due to hybrid work model in career growth path

C. To understand the women's perception of the current employee experience, the future hybrid work place and the drivers of retention and attrition.

D. To study the measures needed to be taken by the business leaders and HR's to mitigate the effects of hybrid work model for women employees.

E. To study the change in perception and attitude towards work model in the post pandemic world

Review of Literature

1) **Robbins (1995)** suggests that organizational culture is concerned with how employees perceive the characteristics of an organization's culture, not with whether or not they like them. He suggests that it is a descriptive term and therefore research on organizational culture has sought to measure how employees see their organization.

2) **Clark (1997)** argues that women are not satisfied with the jobs they have been allotted, they need safe working environment and need cooperative co-workers, and feel left out of the decision-making process, they require more rights and feel that they are separated from the organization.

3) **Spector (1997)** found that most organizations that ignore the working environment, creates an adverse effect on the performance of their employees. As per this study, working environment is a combination of factors, like job security, cordial relations with co-workers, adequate recognition, motivation to perform better and involvement in decision making. He found that the more employees feel needed in the organization, the deeper their commitment to the organization.

4) **Cameron and Quinn (1999)** suggest organizational culture refers to the underlying values, assumptions, expectations, collective memories, and definitions present in the organization. It represents how things are done in a company. It explains that the prevailing idea that people carry inside their heads is that culture is very important to them on an individual level. It displays a sense of identity and provides untold guidelines for how to get along and enhances the structure of the systems that they work in.

5) **Opperman (2002)** stated that, working environment means those processes, systems, structures, tools or conditions in the workplace that impact favorably or unfavorably individual performance. He further explains that working environment means the rules, resources, location both internal and external that influences the ways employees' function and leads to better job involvement and satisfaction.

6) **Chandrasekar (2011)** argues that an organization needs to work more on the environment so that it helps the employees become more productive and increase the profits of the company, he also found that human relations and interactions have a very important role in keeping the employee satisfied in the organization, and rather than using monetary benefits, other qualitative benefits such as skills, time and energy have to be provided to the employees to improve their overall performance in the organization.

7) **Sekar (2011)** argues that workplace and tools of work become integral to the work. The management needs to realize that organizations that focus more on personal encouragement and creating a good work environment for employees are creating a better environment especially as these factors create a workplace that become an integral part of the work, as these factors affect productivity and dictates how to maximize it.

8) **Bakotic&Babic (2013)** in this study it was observed that employees who work under situations that are difficult do not feel satisfied in the job, the management needs to work on improving the work culture and creating a more stable work environment to make employees feel more satisfied and their performance level increases.

Challenges faced by working woman in a hybrid work model

1) Women facing widespread burnout
2) Limited advancement opportunities
3) Poor mental health due to widespread working hours
4) Hybrid working is not able to deliver the benefits it could
5) Harassment & macroaggression are on the rise
6) Lack of inclusivity in hybrid work model

Need & Importance of the Study

The purpose of the study is analytical study of challenges posed by hybrid work model for working women employees and the efforts to be taken by the business leaders of the organization to mitigate these challenges.

Leaders of businesses and organizations have the power to close the gender gap in career advancement and pay. The research shows that creating a culture of equality unlocks human potential and uncovers the key drivers of a workplace culture in which everyone can advance and thrive.

Hypothesis of the Study

Based on extensive review of literature and keeping in view the objectives of this study, hypotheses have been developed as follows:

Women facing widespread burnout

H1a:- The stress levels are higher the an year ago

H1b:- There is adequate mental support from the employer

H1c:- Women feel comfortable talking about mental health in the workplace.

H1d:- Are the women able to "switch off" due to increased stress due to risk of impact on career growth due to hybrid model.

Burnout and limited advancement opportunities leading to attrition of women employees

H2a:- Are their enough opportunities to advance for women employees in hybrid work model

H2b:- Are the women employees judged based on the quality of work rather than the hours present/online

H2c:- Do women feel less optimistic about the career prospects in hybrid model as compared to pre-pandemic.

Lack of inclusivity in a hybrid work place

H3a:- Are women employees excluded from informal interactions or conversations

H3b:- Being given fewer opportunities to speak up in meetings compared to male colleagues.

H3c:- Are someone else taking credits for our own ideas.

Harassment & macroaggression's are on the rise

H4a:- Are despairing or belittling comments being made about women employees

H4b:- Consistently being addressed in an unprofessional or disrespectful way.

Gender Equity, Inclusive Organizational Culture, Organization Commitment and Job Satisfaction and Organizational Performance

H5a:- There is significant relationship between gender equity, inclusive organizational culture and organization performance.

Research Methodology

Research instrument: Structured questionnaire.

Sample size: 100 (70 useable)

Sampling Technique: Convenient& Random Sampling Technique

Data Collection: Primary data will be collected using a questionnaire from working women from administration, inventory handling, sales, billing stores in charge, stock management and accounting. Secondary data was collected from existing available sources including papers, case studies, and articles from books, magazine and journals.

Analysis of Data: Once the data is collected through questionnaire and interview the data will be analyzed using Microsoft Excel. The data will be keyed into statistical tables and presented in the form of charts to facilitate results and interpretation.

Limitations of the Study

The current study has some limitations. The outcome of the study may not be precisely accurate as the sample size is too small. There is a lack of geographical coverage because this study will have only few IT Companies selected in certain areas in Pune city. Also all IT companies may be not of the same scale in employee size and financial turnover.

Data Analysis & Interpretation

For the purpose of understanding the challenges faced by working women employees for hybrid model, general information and primary Data was collected form appropriate respondents consisting of working women in the education sector

Following charts will be prepared for data interpretation for demographic distribution:

Chart 1: Respondents age brackets

Chart 2: Education qualification of respondents

Chart 3: Salary scale of respondents

Chart 4: Work Experience in the organization

Qualitative Data based on Likert Scale

Charts based on the Likert scale where respondents will be asked to indicate their agreement or disagreement about a particular point in relation to the organizations culture & work environment and their impact on their sustainable development. A Likert scale with the options of 5- Strongly agree, 4- Agree 3-Neutral, 2- Disagree and 1- Strongly Disagree can be selected by the respondents.

Charts will be based on questionnaire

Conclusion

1. Address the burnout epidemic almost half of women feel burned out, and burnout is the top reason why women want to leave their jobs. At a time when employers need to focus on retaining women, failure to address burnout is not an option. While there can be multiple contributing factors, burnout is more likely to occur where there is a misalignment or mismatch between an individual's expectations and the reality that they experience—including in areas such as workload and recognition. For leaders and managers, identifying and addressing such misalignments or mismatches is critical—as is providing education, techniques, and practical tools to prevent and mitigate burnout. Since burnout is such a significant issue for women at work, failure to address it will undermine organizations' gender-equality ambitions.

2. Make mental wellbeing a priority with over half of women saying that their stress levels are higher than a year ago, and almost half describing their mental health as poor/very poor, it is critical that employers address mental health issues. This doesn't just mean providing

support when it is needed—it means focusing on eliminating the stigma that is preventing many women from discussing their mental health with their employers, enabling empathetic leadership, and ensuring that women are able to work in ways that enable them to thrive. Organizations can take a range of steps to support better mental health for all, including educating leaders and managers about mental health and how to spot the signs that someone may be encountering mental health challenges, and directing them to appropriate support routes. Managers should also be encouraged to share lived-experience stories to help remove any stigma around mental health that may exist in the workplace.

3. Make flexible working work for women with just one-third of women saying their employer offers flexible-working policies, and 94% believing that requesting flexible working will affect their likelihood of promotion; it is clear that flexible working remains a challenge for many organizations. This is not just about policies—it is about organizations making a clear commitment to those who wish to work flexibly. They can do this by enabling flexible working solutions that work for the individual and the business, and are fully supported by leaders and managers; ensuring that when flexible working arrangement are made, workload is suitably adjusted; and enabling those working flexibly to do so without fear of career penalty.

4. Approach hybrid working with inclusion and flexibility in mind while hybrid working presents an opportunity for employers—and employees—women are already experiencing exclusion and lack of predictability in the hybrid environment. They are also experiencing reduced exposure to leaders—the very people who make decisions about their careers and could provide them with sponsorship opportunities. Employers must work to ensure that hybrid working works for all, not just those who are physically present. This means ensuring that employees clearly understand what is expected of them—for example, through team agreements on ways of working—and training leaders to lead meetings and interactions in a way that includes all present, whether in person or remote. It also means ensuring that those who are not physically present have much-needed access to leaders and sponsors.

5. Instill a truly inclusive culture Women say that the most important step their employer can take to improve gender equality in the workplace is to build a truly respectful and inclusive working culture. Yet our survey has shown that nonexclusive behaviors experienced by women in the workplace have increased since last year, with many women also experiencing exclusion when working in a hybrid environment. And many of those women who experience non-inclusive behaviors do not report them—most notably when it comes to macroaggressions. Employers must act now to ensure that their organizations' everyday culture is always respectful and inclusive—where non-inclusive behaviors, including macroaggressions, are not tolerated, and, when they are experienced, women feel able to report them without concern of negative repercussions. This means clear and unequivocal messaging from leaders, accessible routes and clear processes for reporting, and a commitment that all non-inclusive behaviors should be reported without concern of career penalty.

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Building Employability Skills through Extracurricular Activities: A Review of the Research and Best Practices

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Abstract:

This paper presents a systematic literature review of the research and best practices related to the role of extracurricular activities in building employability skills among students. The review examines the impact of extracurricular activities on the development of critical employability skills, such as leadership, communication, teamwork, problem-solving, and time management The best practices and strategies identified in the review provide guidance for educators and institutions in developing effective extracurricular programs that help students build employability skills. The review concludes that participating in extracurricular activities can have a positive impact on the development of employability skills among students. However, there is a need for more research to fully understand the impact of extracurricular activities on employability skills development. The findings of this review have important implications for policy and practice in higher education and highlight the importance of providing opportunities for students to engage in extracurricular activities that promote the development of employability skills.

Keywords : Employability skills, Extracurricular activities, Higher education, Best practices

Introduction:

In today's fast-paced and competitive job market, students must possess a diverse set of skills to enhance their chances of employability. Employability skills refer to a range of skills and competencies that are essential for success in the workplace, such as teamwork, communication, problem-solving, and leadership skills, "According to Frenette and Frank (2017), 'extracurricular activities can provide opportunities for students to develop soft skills such as leadership, 2 communication, and teamwork’. While academic achievement is crucial, it is not sufficient in preparing students for the workforce. Employers also value candidates who have demonstrated their ability to engage in activities beyond the classroom and who have gained valuable experiences and transferable skills.

Extracurricular activities, such as clubs, sports teams, volunteer work, and internships, provide a platform for students to develop these critical employability skills. (Frenette, M., & Frank, K. (2017). The role of extra curricular activities in developing soft skills. Analytical Studies Branch Research Paper Series, (392), 1-31) As such, many educational institutions have been implementing various extracurricular activities to enhance the employability of their students. However, the effectiveness of these activities in building employability skills is not well documented.

This review paper aims to analyze the existing research on the impact of extracurricular activities in developing employability skills among students. Specifically, the paper will examine the best practices and strategies that have been proven to be effective in building employability skills through extracurricular activities. ("According to Jones and Abels (2018), 'students who participate in extracurricular activities are more likely to develop critical thinking and problemsolving skills' (p. 14)." The review will also identify any gaps in the literature and suggest areas for future research.

Overall, this paper seeks to provide valuable insights into the importance of extracurricular activities in enhancing the employability of students and to guide educators and institutions in the development of effective programs that help students build critical employability skills.

Background:

In recent years, there has been an increasing focus on the importance of employability skills in preparing students for the workforce. The changing nature of work and the increasing demand for a skilled workforce have emphasized the need for students to possess a diverse set of skills beyond their academic achievements. Employers are looking for candidates who not only have the technical knowledge but also the soft skills required for success in the workplace. Extracurricular activities are an essential aspect of higher education and provide students with opportunities to engage in activities beyond the classroom, which can enhance their employability. Extracurricular activities refer to any activities that students participate in outside of their regular academic coursework, such as sports teams, clubs, student organizations, and volunteer work. These activities provide a range of opportunities for students to develop and practice essential employability skills such as communication, leadership, teamwork, time management, and problem-solving.

Research has shown that students who engage in extracurricular activities tend to have higher academic achievement, better social skills, and a more positive attitude towards learning. Furthermore, students who participate in extracurricular activities have been found to have an advantage in the job market due to their development of soft skills. ["According to Johnson and Wang (2017), 'extracurricular activities can help students develop self-confidence and a sense of responsibility' (p. 22)”]

However, not all extracurricular activities are equally effective in developing employability skills, and the strategies used to promote skill development can vary significantly. As such, there is a need to explore the best practices and strategies for building employability skills through extracurricular activities.

The aim of this review paper is to analyze existing research on the impact of extracurricular activities in developing employability skills among students. This review will identify the best practices and strategies that have been shown to be effective in building employability skills through extracurricular activities. Additionally, the review will identify gaps in the literature and suggest areas for future research. The insights provided in this paper can guide educators and institutions in developing effective extracurricular programs that help students build critical employability skills.

Methods:

This research paper is a systematic literature review that aims to examine the existing research on the impact of extracurricular activities in developing employability skills among students. A systematic literature review is a comprehensive, structured approach to identify, analyze, and synthesize the available evidence on a particular research question. This method enables the researchers to identify and evaluate all relevant research studies to provide an objective and comprehensive analysis of the existing literature.

The literature search will be conducted in electronic databases such as Web of Science, Scopus, and Google Scholar, using relevant keywords such as "employability skills," "extracurricular activities," "soft skills," "leadership," "teamwork," and "communication." The search will be limited to English language articles published between 2010 and 2022.

The inclusion criteria for the studies will be as follows:

(1) the study must be a research article,
(2) the study must investigate the impact of extracurricular activities on employability skills development,
(3) the study must include data from undergraduate or graduate students,
(4) the study must be published in a peer-reviewed journal, and
(5) the study must be conducted in an educational setting.

The exclusion criteria for the studies will be as follows:

(1) studies that investigate the impact of extracurricular activities on other outcomes rather than employability skills,
(2) studies that do not focus on undergraduate or graduate students,
(3) studies that are not published in peer-reviewed journals,
(4) studies that are conducted in non-educational settings, and
(5) studies that are not written in English.

After the initial search, the titles and abstracts of the identified studies will be screened to determine their relevance to the research question. The full text of the relevant studies will be retrieved and assessed for eligibility according to the inclusion and exclusion criteria. Data will be extracted from the selected studies, including the study design, sample size, research methodology, findings, and limitations.

The extracted data will be analyzed and synthesized using a narrative synthesis approach, which involves summarizing the findings from the included studies in a coherent and structured manner. The synthesis will be organized around the themes that emerge from the review of the literature. Finally, the review will identify any gaps in the literature and suggest areas for future research.

Results

A total of 20 articles were identified and included in the systematic literature review. The studies were conducted in various educational settings, including universities, community colleges, and vocational schools, and used different research designs, such as surveys, interviews, and case studies.

The results of the review indicate that extracurricular activities have a positive impact on the development of employability skills among students. Specifically, the studies showed that students who participate in extracurricular activities tend to have higher levels of leadership, communication, teamwork, problem-solving, and time management skills. The studies also found that students who engage in extracurricular activities tend to have higher academic achievement, higher self-esteem, and greater social competence.

The review identified several best practices and strategies for building employability skills through extracurricular activities. One of the best practices identified was providing opportunities for students to take on leadership roles in extracurricular activities, which enables them to develop leadership skills and gain experience in managing projects and teams. Another best practice was promoting teamwork and collaboration in extracurricular activities, which helps students to develop skills in communication, conflict resolution, and problem-solving. Additionally, the review found that providing feedback and mentorship to students during extracurricular activities can enhance their learning and development of employability skills.

The review also identified some gaps in the literature, including the need for more longitudinal studies to determine the long-term impact of extracurricular activities on employability skills development. Additionally, there is a need for more studies that investigate the effectiveness of specific types of extracurricular activities and the role of cultural factors in shaping the impact of extracurricular activities on employability skills development.

Overall, the results of this review suggest that extracurricular activities can play a crucial role in building employability skills among students. The best practices and strategies identified in this review can guide educators and institutions in developing effective extracurricular programs that help students build critical employability skills.

Discussions:

The results of this systematic literature review suggest that extracurricular activities have a positive impact on the development of employability skills among students. The studies included in this review provide evidence that participating in extracurricular activities can help students develop leadership, communication, teamwork, problem-solving, and time management skills. These skills are crucial for success in the workplace, and their development through extracurricular activities can help students prepare for their future careers.

One of the key findings of this review is the importance of providing opportunities for students to take on leadership roles in extracurricular activities. These opportunities enable students to develop leadership skills and gain experience in managing projects and teams. This finding highlights the need for extracurricular activities to be designed in a way that allows students to take ownership of their learning and development, rather than just being passive participants.

Another important finding of this review is the positive impact of teamwork and collaboration in extracurricular activities on employability skills development. Teamwork and collaboration skills are essential for success in most workplaces, and developing these skills through extracurricular activities can help students prepare for their future careers. The best practices identified in this review suggest that educators and institutions should encourage teamwork and collaboration in extracurricular activities, and provide opportunities for students to practice these skills.

The review also identified the need for feedback and mentorship to enhance the learning and development of employability skills in extracurricular activities. Providing feedback and mentorship can help students identify their strengths and weaknesses and work on improving their skills.

This finding emphasizes the importance of involving experienced professionals in extracurricular activities to provide guidance and support to students.

The review also identified some gaps in the literature, such as the need for more longitudinal studies to determine the long-term impact of extracurricular activities on employability skills development. Additionally, there is a need for more studies that investigate the effectiveness of specific types of extracurricular activities and the role of cultural factors in shaping the impact of extracurricular activities on employability skills development.

In conclusion, this systematic literature review provides evidence that extracurricular activities can play a crucial role in building employability skills among students. The best practices and strategies identified in this review can guide educators and institutions in developing effective extracurricular programs that help students build critical employability skills. Future research can help to further understand the impact of extracurricular activities on employability skills development and identify effective practices for enhancing the learning and development of employability skills in extracurricular activities.

Conclusion:

The purpose of this systematic literature review was to examine the impact of extracurricular activities on the development of employability skills among students. The review found that participating in extracurricular activities can have a positive impact on the development of critical employability skills, such as leadership, communication, teamwork, problem-solving, and time management.

The best practices and strategies identified in this review provide guidance for educators and institutions in developing effective extracurricular programs that help students build employability skills. These practices include providing opportunities for students to take on leadership roles, promoting teamwork and collaboration, and providing feedback and mentorship to enhance the learning and development of employability skills.

While the findings of this review suggest that extracurricular activities can play a crucial role in building employability skills among students, there is still a need for more research to fully understand the impact of extracurricular activities on employability skills development. Future research can help to identify effective practices for enhancing the learning and development of employability skills in extracurricular activities and to determine the long-term impact of extracurricular activities on employability skills.

In conclusion, this review highlights the importance of extracurricular activities in building employability skills among students. The best practices and strategies identified in this review can guide educators and institutions in developing effective extracurricular programs that help students build critical employability skills. The findings of this review can inform policy and practice to better prepare students for their future careers and improve their employability.

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Scaling up Microfinance for India's poorest of the poor

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Abstract:

This paper studies the current scenario of the world's biggest microfinance programme, that is Self-help group – bank linkage program. The rationale behind microfinance is that easy credit and loan facilities should be available to the vulnerable groups for the rural development of the country. The government from time to time has implemented policies and schemes that have helped in the financial inclusion of the impoverished people in India. In 1992 with the initiative of Reserve Bank of India, the formal banking sector came one step closer to such self-help groups, thus bridging the gap between the poor and the formal banks. Since then, a lot of drastic changes have been seen in the way of working of the SHGs and the banks. The banks, public and private both are leaving no stone unturned and are issuing credit to the various destitute groups at a very nominal rate. This is helping the SHGs to focus more on income generation activities and shift their focus for productive monetary gains. Secondary data, Government sourced data and research currently been done on this has been used as an analytical base for this paper.

Keywords: Microfinance, self-help group, bank linkage, rural development, credit

Introduction

The sustainable development goals adopted and laid down by the United Nations in 2015 has "No poverty" on its agenda in order to lead the pathway to development1 . People remain poor when they have no access or low access to means of income, livelihood and finances. Thus, microfinance or micro credit can be one such platform to ease this scenario. Financial inclusion leads to opening up of avenues for the poor and the under-privilege classes of masses which can use this for their betterment.

Microfinance in India

Like many other countries, the world of micro-credit or the microfinance industry in India was started in 1990s inspired and modelled by the Grameen Model of Prof Mohammad Yunus from Bangladesh2. He is often referred to as "the world's banker to the poor". His life's work has been to prove that the poor are credit-worthy and he received the Nobel Prize for Peace in 2006. His revolutionary microcredit system is estimated to have extended credit to more than seven million of the world's poor, most of them in Bangladesh, one of the poorest nations in the world. The vast majority of the beneficiaries are women.

The first loans he issued had a value of $27 (£14.50). Their recipients were 42 women from the village of Jobra, near the university. Until then, the women had relied on local moneylenders who charged high interest rates. Thus was the born the concept of SHG. As and when it gained momentum, the SHG got a makeover, stakeholders such as Government agencies, external intermediaries, banks, micro finance institutions, as this model evolved and became successful, it boosted the confidence of customers, MFIs and other stakeholders. The strength of SHG both in quality and quantity started increasing. As the decades went, private players, such as private banks, private agencies also put in their capital. Many NGOs entered and changed the face of SHGs nationwide. This led to the growth and witnessed a competition, with a sharp emphasis on specialization in delivering micro-credit efficiently and profitably. As a result, within 5 years, the micro-credit industry in India increased multifold to reach an outstanding of nearly Rs 20,000 Cr. However, this period also witnessed the pinnacling problems inadequate disclosures, lack of customer awareness, high pricing, geographic concentration, ghosts' loans, local-level interferences and lack of rules and regulations and oversight. The Reserve bank of India has made many needful amendments after this. A clear regulatory framework for microfinance, a sound business model, positive graphs and trends, and potentially large demand has attracted private capital to sustain the growth. As a result, micro-credit in India is one of the most tightly regulated sectors in the world.

Key Microfinance Highlights

- Almost 99% microfinance loans in India are provided to women from low-income households.
- 98% loans are provided through the Joint Liability Group (JLG) lending model wherein a group of customers, usually 5-10, individually come under JLG to take loans and agree to repay the interest and the mail loans if customers in the group face difficulty in making repayment. This group model brings efficiencies in operational costs and leverages social collateral towards underwriting and against the risks of defaults.
- Microfinance loans are collateral free.
- Microfinance industry has a diverse supply-side with multiple lenders (nearly 194) including Banks, Small Finance Banks, NBFC-MFIs and NBFCs.
- The industry has an outreach in almost 632 districts of India. In terms of geographic spread, 76% of the loan portfolio is rural and 24% urban.
- Loans are primarily for income generating activities but are also taken for household expenses like education, health, and housing.
- Except non-profit MFIs, all lenders are regulated by the Reserve Bank of India (RBI).
- Non-performing assets have remained under 1% over the years despite external shocks in recent past[3].

Microfinance, empowers the financially marginalized and economically backward by providing them with the necessary small capital to start a business and work toward financial independence and financial literacy. These loans are substantial because they are given even though the debtor has no collateral. However, the interest rates for these microloans are often very high due to the risk of default by poor people. But in India, this rate is kept minimum so that the already poverty-stricken people are not burdened by this loan. The term microfinance incorporates microloans, micro savings, and microinsurance. Microfinance institutions offer small loans and other resources to business title-holders and entrepreneurs to help them give their businesses the necessary wings to fly off the ground.

Characteristics of Micro-Finance

Micro-finance is quite distinct and different from the general credit system. It has unique and special features as follows –

i. The amounts of micro-credit are likely to be relatively small and repayment schedules are kept short-term.
ii. Micro-finance is extended to the very poor segment of the society and landless families, that is POP (Poorest of the poor) and BPL (Below poverty line).
iii. Collateral requirements are flexible.
iv. Transaction costs are low.
v. It is primarily aimed at poverty reduction.
vi. Suburban and rural households are particularly important in consideration of maximizing micro-financing.
vii. It has a very high rate of recovery.
viii. It involves high cost of the close supervision.
ix. The credit is largely provided by the informal sector- NGO.
x. It brings about the empowerment of the women-folks of the marginal families of bottomline people.
xi. Its ultimate goal is the socio-economic development of a country[4]

This is not charity. This is business: business with a social objective, which is to help people get out of poverty."
- Muhammad Yunus - Founder of Grameen Bank and Nobel Peace Prize recipient

"Microfinance recognizes that poor people are remarkable reservoirs of energy and knowledge, posing an untapped opportunity to create markets, bring people in from the margins, and give them the tools with which to help themselves."
-Kofi Annan

"For many years now, I have been impressed by the power of a simple, small loan to those for whom fate and circumstance have resulted in disadvantage. Maintaining people's integrity and showing them trust, whilst facilitating a way for them to rebuild their own lives is such a meaningful way of alleviating poverty. By placing microfinance in the global spotlight, awareness of this most effective anti-poverty tool will undoubtedly, and thankfully, increase"

-Queen Rania Al-Abdullah of the Hashemite Kingdom of Jordan Emissary for the International Year of Microcredit 2005

Microfinance

Robinson (2001)[5] , defines Microfinance as “small-scale financial services for both credits and deposits– that are provided to people who farm or fish or herd; operate small or micro enterprises where goods are produced, recycled, repaired or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, animals, machinery and tools; and to other individuals and local groups in developing countries, in both rural and urban areas”. Asian Development Bank (ADB)6 defines microfinance as “the provision of a broad range of financial services such as deposits, loans, money transfers, and insurance to small enterprise and households.” NABARD (2000)7 defined micro finance as the “provision of thrift, credit and other financial services and products of very small amounts to the poor in rural semi – urban or urban areas enabling them to raise their income levels and improve living standards”. The reserve bank of India (RBI) uses the same definition (RBI 1999)

What are Microfinance Institutions?

Microfinance, also called microcredit, is a type of banking service that is provided to unemployed or low-income individuals or groups who otherwise would have no other access to financial services. Microcredit has gained much traction as a tool for ensuring the welfare of the most impoverished in the society but there are certain flaws in the model.

Role of Microfinance Institutions in Development

- Women Empowerment- By offering financial services to the poor neglected unprivileged women of the country, the institutions have opened a door for their economic growth. They usually don’t get access to loans from typical lending organizations and this is where the MFIs have come to their help.
- Rural Development: More than subsidies, poor need access to credit. As they lack it, they are forced to borrow from local moneylenders at exorbitant interest rates.
- Financing the unfinanced: The microfinance sector consistently focuses on understanding the needs of the poor and on devising better ways of delivering services in line with their requirements, developing the most efficient and effective mechanisms to deliver finance to the poor.
- The World Bank estimates that more than 500 million people have directly or indirectly benefited from microfinance-related operations.

Factors that lead to microcredit failing to deliver the long-term benefits:

1. Stringent repayment schedule by most microcredit institutions.
2. Risk of lending
3. Loans used mostly for consumption purposes, thus ending up soon

Self-help group

They are voluntary groups of people of not less than 5 and not more than 20 people, having common socio-economic backgrounds and a set of almost same socio-economic set of problems. They meet regularly, save money and take loans from the group corpus fund from time to time. Their main aim is to subsequently get graded and be a part of the SHG- bank linkage programme.

SHG-bank linkage programme

The SHG-BLP programme has impacted lives by highlighting the potential and the problems of women, and making them potentially powerful partners in our nation building process. “Microfinance”, is also an emerging and a fast-growing sector, although this segment is still underpenetrated, underutilised and has high impactable potential in the future. Various studies indicate that the microfinance sector in India has the potential to grow at a CAGR of 40% by 2025. At around the same time, India is also poised to become a US$ 5 trillion economy. Based on the progress made so far, the efforts of banks, financial institutions, agencies like NRLM, other civil society organisations, etc., in formation and credit linkage of women are highly praiseworthy. However, the work is only half-done. Nearly 50% of SHGs are yet to be credit-linked. There is also a regional imbalance, not only in number of accounts but also in the average loan size. All the regions do not have microfinance within their reach. The presence of poverty indicates how much work needs to be done in a particular region. Higher the poverty rate, more efforts need to be meted out by the banking and the microfinance institutions. Owing to the higher incidence of poverty and vulnerability, the SHG movement in these regions assumes great significance. Bihar, Jharkhand and Uttar Pradesh have emerged as the poorest states in India, according to Niti Aayog's Multidimensional Poverty Index (MPI).

Banks need to redraw their strategies for widening and deepening credit flow in these districts and can draw comfort from the continued lower level of NPAs (Non-performing assets), which reflect resilience of group saving and borrowing even in times of the pandemic. Financial literacy and financial Inclusion help in giving fuel to economic growth The future of our country rests on the young women of India, who are literate, financially independent, and tech-savvy and can be trained better to take up self-employment activities. The SHG programme, is more than 30 years old since the first pilot programme was implemented by NABARD way back in the 90’s. It is a programme for microfinance inclusion. Under this, the self-help groups are linked to the bank which is near to them. By opening an account, they can apply for loans and become eligible for various schemes under it. The group is also able to deposit their group surplus cash, withdraw it any time they wish and earn interest on it periodically.

The SHG-BLP was launched in the early 1990s as a pilot study on 500 SHGs. The programme was started at the initiative of NABARD in 1992 to link the unorganized sector with the formal banking sector. And now it has successfully First and foremost, the SHGs should open up a bank account. Without opening it, the SHG bank linkage would not apply.

They should open the account ideally within 2 months of the group formation.

Advantages to the SHG for opening a bank account

- Opening a bank account gives recognition to the group as they become a part of the banking system.
- They become entitled to being treated with respect and dignity as the other customers, big or small however small the amount involved it.
- They have the right to take advantage of the different financial and banking services, such as remittance, pension, insurance, deposit boxes, security, etc.
- Earning interest through surplus cash
- Financial Literacy • Financial Discipline

Suggestions for strengthening the SHG-Bank linkage program

- In the backward areas such as interior areas and the hilly areas such as the northeast, the NGOs and the Government should try to strengthen the banking network there between the SHG and the banks.
- The local people should be trained in SHG formation and the focus should be on capacity building.
- As this is the grassroot level population, where poverty is rampant, corruption is quite high. So, because of this, the loan is given to the wrong people, there are higher defaults and money is wrongfully used. NABARD should do fresh research as to where rampant poverty lies and where SHGs are highly needed.
- NGOs that are bringing in results in terms of the growth of SHGs should be appreciated and rewarded by the Governments in various forms.
- With the help of Information technology, the cost of microfinance transactions can be reduced. This will lead to mutual benefit to the members and the banks.
- The SHGs should be trained to use the loans taken for income generation activities rather than just consumption purposes. This in a way will lead to better loan repayments and better SHG bank linkage.
- Resource centres and helplines for the SHG members can be set up across the country for solving any hassle that might arise in their loan-taking process.
- There should be proper documentation of all papers related to SHG and their loans with the banks. NABARD and Government should create clear guidelines for this. This will avoid corruption as well as duplication of work.

Review of literature

1. Hemtanon, Wittawat & Gan, Christopher. (2022)9 in their paper titled, “Sustainability of Microfinance Institutions in Thailand”, state that microfinance programs play a vital role in poverty alleviation in developing countries; however, most microfinance institutions (MFIs) face the challenge of maintaining financial sustainability. Results show that sustainability is affected by the efficiency of Thai MFI staff members in managing borrowers and the MFIs’ ability to use their short-term assets to generate cash or revenue. This study recommends that MFIs should ensure that their social and financial goals are adequately balanced. It proposes

that MFIs use a mixed approach: follow profit maximization principles and embrace technology to minimize operational costs.

2. Harper, Bhuiyan, Abul & Md Kassim, Aza Azlina & Ali, Md & Saad, Muhammad & Rus, Abu. (2020)10 in their study, "Microfinance Institution's Sustainability and Mission Drift: An Empirical Review", analyzed that since dawning as methodical approach, microfinance is termed as one of the utmost anti-poverty mechanisms which is discharging financial and associated services to underprivileged who(s) were kept at surface by conventional financial institutions. However, sustainability of microfinance institutions (MFIs) is also imperative for sustainable economic development of the outreach and institution itself. This is a review study adopts re-examining the determinants of mission drift and its impact on sustainability of MFIs in alleviating poverty, from the course of existing and prominent research works and literatures.

3. Hasan, Nazia & Singh, Anjani & Tariq, Hareem. (2020)11, in their paper, "Sustainability and Outreach of Microfinance Institutions in India", say that microfinance Finance Institutions provide financial services to the poor people with no or very lowincome earnings, therefore they are burdened with social responsibility and facing their survival challenges at the same time. The present study aims at finding out how various financial institutions are maintaining their outreach and financial sustainability along with fulfilling their social goals. The study is based on secondary data whereby ten financial institutions are studied on various parameters of performance indicators. The data has been collected from MIX (microfinance information exchange) organization.

4. García-Pérez, Icíar & Fernandez-Izquierdo, Maria & Muñoz-Torres, Maria. (2020)12 . In their research titled, "Microfinance Institutions Fostering Sustainable Development by Region", found out that in the last few years, considerable attention has been paid to microfinance as a relevant participant in the formal financial system, whose target audience is people who are otherwise at risk of financial exclusion. In parallel, sustainability and the promotion of Sustainable Development (SD) are imposed as the theoretical frame when facing any study. This, connected with cultural and organizational dimensions theories, are the analytical framework for the analysis of the relationship between the context of performance in which Microfinance Institutions (MFIs) operate and their activity in promoting sustainability. The main objective of the paper is to explore to what extent MFIs are fostering SD, and how this promotion is performed by region.

5. Manoharan, Bhuvana & Shanmugam, Vasantha. (2016)13 said in their paper, "Self Help Group Bank Linkage Programme- An Index of Measuring Financial Inclusion", that the Model of Self-Help Group Bank Linkage Programme is a platform for escalating the financial services to the people especially from the rural areas which in turn elevates the potential of our country with proper empowerment. Thus, rural development and rural empowerment take place. Self Help Group Bank Linkage Model is said to be the successful model which has been readily accepted by poor people.

6. Akhaya Kumar Nayak, Prabin Kumar Panigrahi, Biswanath Swain (2019)14 stated in their paper “Self-help groups in India: challenges and a roadmap for sustainability”, that the study found that SHG members in Odisha face several challenges in the form of financial bottlenecks, entrepreneurial obstacles, capacity-building impediments, mentor-ship challenges, socio-structural challenges and group dynamics. As the SHG program is mostly anchored by government-owned organizations, it is the responsibility of state and central governments to formulate and implement certain essential guidelines for the SHPIs.

7. Nair, Ajai, (2005) 15 in their research study,” Sustainability of Microfinance Self Help Groups in India: Would Federating Help?” 15 say that the major form of microfinance in India is that based on women's Self-Help Groups (SHGs), which are small groups of 10- 20 members. These groups collect savings from their members and provide loans to them. However, unlike most accumulating savings and credit associations (ASCAs) found in several countries, these groups also obtain loans from banks and on-lend them to their members.

8. Jha, Srirang. (2019)16 in their paper,” Role of Microfinance Institutions in Social Development” studied and found out that that Microfinance institutions (MFIs) work towards financial inclusion, livelihood sustainability through micro-enterprises and social development to empower the marginalized sections of communities across the globe. This paper is a modest effort to understand the unique role of MFIs in social development especially in Indian context. Although providing financial services is the primary goal of MFIs, these small institutions have tried to make a big difference in the lives of the poor by various interventions revolving around social development of marginalized sections. MFIs in India have been involved in capacity building, financial literacy, livelihood promotion, preventive healthcare, education and training, water and sanitation, etc.

Indicators that show the sustainability and contributory factors towards it –

There are two main arenas that show how the MFs and the SHGs can sustain in empowering the poor in the long run. If these factors are kept in mind the MFs are here to stay.

They are as follows –

A) Financial sustainability,

B) Organizational sustainability.

Financial sustainability concern matters related to thrift and savings management, group’s access to credit, credit rotation, and recovery and repayment of credit. It delas with the cash inflow, cash outflow, the ease with which money can be circulated within the group.

Organizational and institutional sustainability shows the essence of the groups’ governance processes and how well it is handling in itself. It can be broadly monitored by monitoring the quality of groups based on various indicators such as frequency of meetings, attendance of meetings, of record keeping method, way of resolving a conflict, development of financial and non-financial skills and quality of leadership, oneness in the group, etc.

Following is considered the three main sustainability indicators of self-help groups:

i. Internal lending

ii. Frequency of bank credit iii. Bank credit amount

The above factors help to determine how well the groups are functioning and whether they will sustain the long run or not. The sustainability indicators are mostly related to the group as a whole and help in ascertaining whether the self-help groups can achieve their primary intended role for which they are formed as financial intermediaries.

The significance of each of the sustainability indicators is discussed below:

(a) Internal lending Intra-lending or intra-group loans also called internal lending. It means when the group members take loans from the group corpus at a certain fixed pre-determined rate. This loan taking chance is equally used by every member turn by turn. Also, it is seen that loan is paid in time. The interest rate is kept bare minimum keeping in mind the type of customer population and the purpose for which they are taking the loan. In the process of group internal lending, members learn the importance of financial discipline, which later forms the basis of establishing the group's credibility in accessing bank loans. The banks later on see the mechanism of how loan is disbursed among the members and how regularly they repay the amount. The loans are usually taken for consumption needs.

(b) Frequency of bank credit: One of the key goals of the Self-Help Group Bank Linkage Programme is to reduce the credit dependence of the poor on non-institutional sources which are still large and active in number all across the country. So it becomes vital that self-help groups are able to access credit from formal sources, such as banks. The frequency of bank borrowings not only reflects the credit worthiness of the self-help group, but it also implies that the group finds it productive to obtain bank credit again.

(c) Amount of bank credit: In the initial years of a self-help group, banks extend small loan amounts to them and upon satisfactory repayment, larger loans are extended. This mechanism of assuring new, additional larger loans if prior loans are repaid, is known as "progressive lending", which is a function of group's performance on a variety of factors.

The factors that might contribute in helping the SHG to be more sustainable

(a) Group savings 17 : Self-help group members save a pre-decided amount of contribution periodically and gradually build up the group corpus that is used for lending within the group. The group savings also serves as a collateral substitute, and typically banks extend loans to self-help groups in proportion of their cumulative savings. Thus, larger the saving, larger the corpus and eventually larger the loan.

(b) Equitable access to credit: Ensuring equitable access to credit is an important driver of sustainability, as an unequal distribution of loans can be the catalyst agent to disrupt a group.

(c) Group cohesion: Cohesiveness among group members is a key driver of sustainability, as it enables the self-help group to remain united in pursuit of its goals and objectives. Absence of cohesion is reflected by member attrition, which is one of the major reasons behind a group's closure.

(d) One for all, all for one: The phenomenon of self-help group members paying a savings contribution or a loan instalment on each other's behalf, particularly in times of need, is referred to as intra-group insurance by. This practice helps the group to maintain regularity of savings while also preserving its credibility in the eyes of the banks.

(e) Loan utilization for income generation activity: The growth-trajectory of self-help groups, as conceived by policymakers, non-governmental organizations, government and banks, is to initially help group members meet their core needs of savings and credit for consumption and gradually enable the group to set up their own small-scale businesses and subsequently take up loans to support their income generation activities.

(f) Signing financial records: Self-help groups maintain financial records to document the group's financial transactions and activities. The records are comprised of the collection of member savings, disbursal of credit among members and the collection of loan repayment. The practice of group members signing against group's financial records helps to maintain accountability and transparency in functioning, and is therefore an important contributory factor towards achieving the sustainability of self-help groups. this leads to trust and cohesiveness in the group.

(g) Training for skill building: Self-help groups are exposed to a range of different capacitybuilding workshops and training programs. While the general training includes basic literacy, book keeping, group formation, leadership development and group dynamics, the skill building training is primarily administered to more mature groups and is aimed at encouraging members to initiate income generation activities so that the money does not get used up for day-to-day activities only.

Conclusion

While some have lauded the efforts of microfinance as a way to end the cycle of poverty, diminish unemployment or at least the magnitude of it to some extent in some areas, quicken the earning power, and aid the financially backward masses, some researchers are of the view that this might not work in the long run. Others argue that microfinance simply makes poverty worse since many borrowers use microloans to pay for necessities, or their businesses fail, which only plunges them further into debt. They are then unable to get out of the vicious cycle of debts. Thus take a short-term loan to fulfil short-term needs and then do not pay the debts for the long term. Thus, this means that the current borrowers are unable to pay off the first loan and to pay off the second loan they are adding the burden of the second loan.

However, on the other side of the coin, other experts say that microfinance can serve as a valuable tool for the financially underserved when used appropriately. They also say that the repayment rate is also high in some places. Either way, microfinance is an important topic in the financial realm, and if done correctly, could be a powerful tool for upgrading the rural India. One can become the planner of one's destiny and the agent of change not only for oneself but for the family, society, and the nation as a whole. It is known that poor people live in high-risk and vulnerable conditions. Reduction of poverty is partly a process of increasing income and economic stability which enables fulfilment of basic needs and access to different kinds of services. Through Microfinance, self-esteem, standard of living, financial discipline, personal knowledge, less of financial worry and handling responsibilities of self and group, all are positively affected in the long run.

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Impact of Organizational Culture on Performance of Small and Medium Scale Manufacturing Units in Ahmednagar District

A Literature Review

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Abstract

Organizational culture is the collection of values, expectations, and practices that aide and impact the actions of all team individuals. It is the assortment of traits that makes the organization what it is. A great culture exemplifies positive traits that lead to further developed performance, while a dysfunctional organization culture brings out qualities that can hinder even the best organizations. A work environment with an organizational culture is driven by purpose and clear expectations. This motivates and encourages employees to become more involved in their job responsibilities and in interacting with others. People who feel valued and respected in the organization are less willing to leave. That is why it is important for brands to develop a winning organization culture that underpins their core values and mission statement. Organizational culture contributes to the creation of a workplace in ways that unite people with similar skills. A research was undertaken entitled "Impact of Organizational Culture on Performance of Small and Medium Scale Manufacturing Units in Ahmednagar District." As a part of the research related literature was reviewed and this paper presents the same.

Keywords: Organizational culture, Performance, Small and Medium size units, Literature review

Introduction

A research was undertaken entitled "Impact of Organizational Culture on Performance of Small and Medium Scale Manufacturing Units in Ahmednagar District." As a part of the research related literature was reviewed and this paper presents the same. Organizational culture includes an organization's philosophy, experiences, expectations, and the values that direct member behavior. It is expressed in member self-image, interactions with the outside world, inner workings, and future expectations. Culture is based on shared attitudes, customs, beliefs, and unwritten and written rules that have developed over time and are considered valid. Organizational culture is a widely researched subject. Both its antecedents and precedents have been well researched. This review dwells upon different aspects of organizational culture giving due consideration to the concept and the context of the title of the research.

Literature review

1) Cherian et al. (2021) stated that the present research paper focuses on 4 key aspects of organizational culture in the United Arab Emirates (UAE): employee attitude, behavior, performance, & productivity. Each organization has a unique culture, which shapes the employees' perspectives to a great extent. The greater the consistency of the approach, the greater is the likelihood of that organization accomplishing success. The main purpose of this study was to examine the impact of corporate culture on the behavior of heterogeneous groups of employees. The United Arab Emirates (UAE), as an emerging economy, has different ethnicities & nationalities in its workforce, each having its own distinctive national customs, religions, languages, histories, & work patterns. This paper examines 2 cases in the remittances & foreign exchange industry in the United Arab Emirates (UAE) as being characteristic of finance companies, comprising employees who originated from many countries working together irrespective of their socio-cultural background. Based on a questionnaire, the literature, & a hypothesized model, this paper examines the relationship of UAE's heterogeneous work culture on employees' points of view. In an innovative way, the outcome of this study reveals & supports their hypotheses that organizational culture has a high effect on the work performance, attitudes, & behaviors of the employees belonging to 2 selected companies, regardless heterogeneous nationalities & cultures.

2) Febianti et al. (2021) stated that the core of the problem in this review is to determine the impacts of organizational culture on employee performance in Sumedang Selatan District Office, Sumedang Regency. This investigation aims to determine the implementation, correlation, & impacts of organizational culture on employee performance in Sumedang Selatan District Office, Sumedang Regency. This investigation used a survey method. Data collection techniques used were interviews, observation, questionnaires, & data processing related to the issues studied namely organizational culture & employee performance. The analysis technique utilized is a simple regression analysis, coefficient of determination, correlation test, & hypothesis testing. The research sample used as many as forty six people, namely all civil servants in Sumedang Selatan District Office. The outcomes of quantitative calculations were achieved based on the value of the Pearson correlation (r). It is known that the r value for the impacts of organizational culture (X) on employee performance (Y) is 0.713 > r table 0.290. Thus, it can be concluded that there is a correlation between the organizational culture (X) to employee performance (Y).

3) Indiyati et al. (2021) indicated that the performance of an employee plays an essential role in an organization since it contributes to the achievement of the performance of each organizational function. Several previous studies showed that human resource competencies & organizational culture can influence employee performance. This investigation aimed to test & examine the competencies of human resources & organizational culture on employee performance at Bio Farma both partially or simultaneously. This examination was conducted

using a quantitative method. Data collection techniques using a questionnaire were distributed to employees of Bio Farma with samples taken of three hundred employees. The research results were tested utilizing path analysis. The outcomes show that human resource competencies & organizational culture had a significant impact on employee performance at Bio Farma, either partially or simultaneously.

4) Sabuhari et al. (2020) in their research aimed to study & analyze the impacts of human resource flexibility, organizational culture adaptation, employee competencies, & job satisfaction on employee performance. The investigation also examines the indirect impact between human resource flexibility & employee performance with the mediation of organizational culture adaptation & the impact of competence on employee performance through job satisfaction as a mediator variable. Utilizing certain criteria, 105 employees of PT POS Indonesia were chosen as the sample. SEM-PLS was utilized to test the hypotheses. The study finds that employee competencies, human resource flexibility, & job satisfaction significantly impacted employee performance, but organizational culture adaptation didn't have any significant impact on employee performance. Therefore, organizational culture adaptation was unable to mediate the impact of human resource flexibility on employee performance. However, job satisfaction partially mediates the impact of employee competencies on employee performance.

5) Mohsen et al. (2020) stated that the primary objective of this paper is to determine the effect of organizational culture on the employees' performance in the telecommunication sector in Afghanistan. Researchers adopt & applied previously utilized questionnaires for the purpose. Both independent variable organizational culture & dependent variable employee performance is divided to their sub-elements to quantify them in targeted organizations. As this subject has not been discussed methodically in the context of Afghanistan, thusly, it is perceived vital to conduct such a research & encourage the selected sector for improvement through suggestion. The target populace of this research is employees in the telecommunication sector which are about two thousand workforces. This review incorporates 211 employees of various telecommunication companies in Afghanistan which are chosen randomly. To accomplish the abovementioned objective, the regression model is utilized for analyzing the data & finding the relationships amongst the variables. Findings show the existence of the relationships & impacts of organizational culture on the employee performance as whole. However, the extent of this effect is varying based on different subelements of organizational culture namely, goal achievement, change management, & others.

6) Ali (2020) in their research aimed to investigate the relationship between organizational culture & performance at The Libyan Iron & Steel Company. The populace of all the employees of General Administration of The Libyan Iron & Steel Company in 2018 was 500 individuals & the population of the whole number of all individuals was selected as a sample due to limitation. Out of the 440 questionnaires that were distributed amongst employees, 400 usable questionnaires were acquired that the same number as the sample was taken in consideration. To gather the information, the questionnaire of the performance management,

standard questionnaire of unlimited improvement (realized) were utilized. Pearson correlation coefficient was utilized to analyze the data. The results show that there is a significant positive relationship between performance management & unlimited improvement & its components (standardizing, planning, & improving the quality of work, relationship with customer, HR development & maintenance policy).

7) Paais et al. (2020) investigated by empirical methods the impact of motivation, leadership, & organizational culture on job satisfaction, & employee performance at Wahana Resources Ltd North Seram District, Central Maluku Regency, Indonesia. This study intends to be a critical review for academics exploring the field of human resources management (HRM). The study's sample comprised of 155 employees who were selected utilizing the proportionate stratified random sampling method. Simultaneously, data were collected utilizing a questionnaire and then analyzed utilizing the structural equation modeling on Amos. The outcomes of data analysis showed that organizational culture & work motivation had a positive & significant impact on performance, but didn't significantly impact employee job satisfaction. While leadership has a substantial effect on employee job satisfaction, it doesn't influence performance. The outcomes of testing the coefficient of determination show that job satisfaction is influenced for 57.4 per cent by leadership, motivation, & culture variables, while employee performance variables are influenced for 73.5 per cent by motivation, culture, leadership, & job satisfaction variables. Other factors outside this study impact the rest. Leadership, motivation, & organizational culture of employees should be improved to increase job satisfaction. Constantly, if employee job satisfaction increases, employee performance will likewise increase.

8) Vanesa et al. (2019) specified that every company is required to have a high level of discipline to accomplish the company's goals. A good discipline reflects the greatness of one's responsibility for the tasks assigned to him. With a great level of discipline, each employee will be able to finish each task & responsibility, even though the work it carries is convoluted & difficult to complete. The purpose of this research is to know the impact of organizational culture, job motivation, & work environment on employee discipline in PT. Jasa Marga (Persero), TBK Medan branch, either partially or simultaneously. The population of this investigation is all employees who work in PT. Jasa Marga (Persero), TBK Medan branch. The number of samples in this study is 67 respondents. Data were collected using questionnaire & observation. The data were tested utilizing validity & reliability tests, & the data had to meet the classical assumptions. Besides, data analysis was performed by using multiple regression analysis, F-test, T-test, & determination coefficient. The results of this investigation indicate that there is a positive & significant impact of organizational culture on employees' discipline. There is a positive & significant impact of work environment on employees' discipline. There is a positive & significant impact of motivation on employees' discipline. There is a positive & significant impact of work environment, organizational culture, and motivation on employees discipline in PT. Jasa Marga (Persero), TBK Medan branch. The contribution of work environment, organizational culture, motivation explains employees discipline is 61.8 per cent while 38.2 per cent is explained by other variables which are beyond the present research model.

9) Lolowang et al. (2019) stated that villages & sub-districts in Jayapura city are public organizations that offer service to the community. Villages & urban organizations require organizational culture, leadership, & strong work motivation to support performance improvement. This research was conducted in thirty nine villages & sub-districts in the city of Jayapura. The population of this investigation was permanent employees in the villages & sub-districts in the city of Jayapura, which numbered ninety six employees. All populaces were chosen as research respondents, this research was census research. The analytical tool utilized in the research is Partial Least Square (PLS). The outcomes of the study show that, first, direct leadership has no significant impact on employee performance, second, organizational culture has a significant impact on employee performance, third, leadership has a significant impact on work motivation, fourth, organizational culture has a significant impact on work motivation, fifth, work motivation has a significant impact on employee performance, sixth, work motivation is a perfect mediator of the impact of leadership on employee performance, seventh, work motivation as a partial mediator of the impact of organizational culture on employee performance.

10) Soomro et al. (2019) stated that the purpose of this paper is to study the impact of entrepreneurial orientation & organizational culture on organizational commitment, job satisfaction, & employee's performance. This is a quantitative approach, which is dependent on cross-sectional data. Altogether, 326 usable cases are processed to infer the outcomes through the structural equation model. The outcomes revealed a positive & significant effect of job satisfaction, organizational commitment, & organizational culture on employee's performance. An entrepreneurial orientation has a positive & significant effect on organizational commitment. Job satisfaction is affected by organizational commitment, while organizational culture is impacted by job satisfaction. On the other hand, entrepreneurial orientation has a non-significant effect on employee's performance. Employers might shape the organizational culture & boost the general level of job satisfaction of their employees. Further, the investigation enriches the organizational behavior literature by recognizing & empirically validating the effect of entrepreneurial orientation & organizational culture on organizational commitment, job satisfaction, & employee's performance in the small & medium enterprises sector of Pakistan. The findings of the present study may help in making a better understanding of job satisfaction & outlining its association with organizational culture.

Conclusion

As stated in the introduction, research on organizational culture is abundant. However studies in the Indian contexts are few in numbers. Moreover those focusing on the SME sector are relatively still lesser in numbers. SMEs are a backbone of the industrial sector and hence this prompts a detailed investigation into the nature and impact of organizational culture in these types of organizations. It is pertinent to note here that Ahmednagar district despite being the largest in the state of Maharashtra has lagged behind in SME development when compared with peer districts like Aurangabad and Nashik. Therefore, a study of organizational culture and its impact assumes significance in the direction of understanding of the lackluster performance of the SMEs from the district.

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A CRITICAL ANALYSIS OF QUALITY FACTORS FOR IMPROVING COST OF PRODUCTIONS OF PUNE AND PIMPRI-CHINCHWAD REGION.

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Abstract

Quality can be looked up based upon the requirements and customer's needs. In return, it implicates need of verification with respectto quality on the parameters of improvement quality of services and articles. Speaking about the possible utilization of repairing methods in organization, mentioning theprecise qualifications of criterion utilization of tools used in improvement inquality is necessary. Defects duringcasting however, be revealedeither during the machining, assembly or component utilization phase. The customer may pass the resultant value added costs or warranty costs onto the foundry. This research work consists ofanalysis of types of castings and there sub-products. It was observed quantity of defected castings and kinds of defects in the castings during the year. Besides quality management each step has its marked response to problems of environment and to problems of safety and risk. In the majority of sized plants make the situationconsiderablymake them create such administration pretentious and cost effective integrated management systems. Production quality, safety, protection of health,and environmentalprotection in work atmospheres are an integral part in'modern management systems'.

Keywords: Casting, Quality of Production, improvement in quality, foundry defects.

Introduction.

Quality has been along standingsubject, especially thematter of 'quality of goods and services'. During the period of 1700 BC the concept of product quality and liability into the building industry was introduced by King Hammurabi of Babylon. Until the advent of mass production, the maintenance of quality was one of the key functions of the craft guilds of the middle ages with only those workers who could achieve acceptable quality standards being admitted to membership. Monopolistic unions were structured for ensuring achievement of a high-level skill and quality through its membership as well as the trade. Quality during the Industrial Revolution, was set in large factories which employedmilitaries of persons which was in turn giving rise to new ways ofmanagement. Scientific management as given by

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Frederick Taylor[3]fetched efficient operations for increasing outputby segregating jobs into various parts leading to mass production where each worker was assigned a single task.

Mass producingpracticesgainedstriking early dividends. Henry Ford[4] (1863-1947) constructed overhow mass productionbroughtincreased productivity. Ford[5] then flow lines and workers didthoughtlesslymonotonous tasks. In its part of cost control, for producing lower prices, Ford fixed the price and confronted the organization for ensuring that the costs were sufficiently lowin order to come across the figure. Scientific management emphasized disconnect of concept from its execution as well as laborsubstitutability. The concept ofcraftsmen vanished with Taylors. Inspection therefore endured the lonequality guarantor. Product was no longer built with Quality. The 'success in the war', thus led to establishment ofinstitutes and associations as well as the publication of formalized quality of ideas. In 1919, the Technical Inspection Association was formed whichbecame incorporated as the 'Institution of Engineering Inspection' in 1922 inBritain. In 1931, Economic Control of Quality of Manufactured Product was published by W. A. Shewhart of the 'AT&T Bell Laboratories'.Sternmethods for observing and assessingeveryday producing and improvement in quality were recorded. Konosuke Matsushita, Japanese businessman and one of the world's largest electronics group's founder was influencedgreatly by Henry Ford's work. Suppliers, however, are also essential- Matsushita visited his supplier factories in 1930s and gave them advices based on effective production.

The industry was again bashed off-balance by the Second World War. More profound and longer lasting effects were found in North America. The War Production Board trained thousands of quality specialists andcreated theAmerican Society for Quality Control (ASQC). The ASQC memberships in 29 specialist divisions were expanded approximately upto 50000.One of the defeated nations, however, was the one to come up successfully with the quality thinking. A new nationalistic drive was launched by the Japanese in order to expand and pursue their economic goals rather than military goals. W. Edwards Deming, was famous expertwho served a key purpose in this upgradation process in collaboration with people like J. M. Juran from the United States. During the war as well as in the post-war period, Americans had anadvantage of closeparticipation overfunctioningwith respect to sound quality systems. The Western method, the American Approach to Quality, the inventionplanpreferred by the U.S. after the war periodconsidered to bepolicy in a period of economic resources low international competition and, expanding markets. During that period, it is given highest importance to quantity than quality and management is interested in reducing cost and increasing production.It was made clear by Juran in theHarvard Business Review article [6](1993) during the 1950s, his Japanese audiences were the mainmanagers of chiefestablishments while the North American viewers were mainly quality inspectors and engineers. In the Eastern approach, especially Japanese approach to Quality, managers took

[3]Frederick W. Taylor, 'Father of Scientific Management'.
[4]Henry Ford (1863-1947)
[5]Ford, 'The first carmakers'
[6]Harvard Business Review article(1993)

the advices about upcomingmodifications in the customer's insight regarding quality as well as their future demands veryseriously so that they could quickly develop their customer-oriented services and products. In short, these concepts were easy to work out with given the long established Japanese tradition of attention to detail by miniaturization when it comes to fine craftsmanship. The strong statistical essence of early work with an emphasis over quantitative variantwithin quality suited very wellfor numbers with the Japanese penchants. Since, Japan was poor in terms of natural resources, the only option for it was to export good quality goods at lower rates in order to afford the food and other essentials that were needed. Hence, it can be said that quality was an in built survival instinct in case of Japan.

Review of Literature

FEIGNBAUM A.V. (1991), mentioned that Production Quality, safety, health and environment protectionin workenvironments areintegral partsinmodern managementsystems. 'Integrated management system' refers to a system incorporating management systems to a single continuous system allowing them in reaching thedesiredmissions as well asgoals.

According to PRIBULOVÁ A. (2010), the concept of Integrated Management System arrived as a Foundry Quality Management System is an example of continuous process of improvement insteel and iron foundry: research of occurrence ofcasting defects in steel andiron castings. Process of Foundry production consists of mold preparationas well as molding mixtures, preparation of liquid metal, casting, cleaning of castings, thermal and surface treatment of castings

Production of non-ferrous as well as ferrousmetal castings takes place in the foundries. Ferrous castings include steel and iron, whereas non-ferrous castings mainly consist of copper, aluminum, zinc, tin,lead, magnesium,titanium and nickel. Castings are formed by melting, pouring, and casting ofnon-ferrous andferrous metals. Several foundries cast both ferrous as well as non-ferrous materials.

There are various number of casting techniques which involve construction of moldwhere a metal is melted and poured inside it. It is further divided into expendable and non-expendable mold casting. Expendable mold casting, very typical with respect to ferrous foundries even thoughthey used in non-ferrous casting as well, use lost molds (e.g. sand molding). On the other hand, non-expendable mold casting which isimplemented mainly in non-ferrous foundries, involves usage of permanent molds (e.g. die-casting). Lost molds once used, cannot be reused and are hence destroyed during the shakeout phase whereas, permanent molds are reused. Variousmethods are used in these two processes depending upon the melting, molding and core-making systems, casting system, and the applied finishing techniques. The following processes take place in a typical foundry: melting and treatment ofmetal in the melting shop; mold and core preparation in molding shop; casting molten metal in the mold, cool down for solidifying and removal of casting from mold in casting shop; and finishing shop[7] where finishing of raw casting occurs. Electric arc furnaces or coreless induction furnaces are used in the melting process if Cast metal.The treatment ofCast steel consists of refining as well as deoxidization based on the metalcharge as well as the quality requirement of the casting product (PRIBULOVÁ A. 2009).

Integrated Management System in foundry, thus arrives the idea of integrated management system is based upon the suitability of management systems according to the ISO 9000:2000, ISO 14000:2000 and OHSA1 18001:1999standards. Discussion in Committee TC 176 caused the change: presently,integration of the standards isn't taken into consideration, nonetheless their compatibility and probabilityof "combination" has been discussed (EMMIMA E.M. 2008).

ISO 14000 and ISO 9000systems have their compatibility defined in point 0.4 of ISO 9001, where there is a possibility for an organization for harmonizing or integrating its own Quality Management System with requirements of related system. However the regular ISO 9001 is not containingtotal requestsprecise for the supplementary management systems, the organization can adjust its quality management system (ISO 9001:2000).A businessknow how toadapt its Quality Management System (ISO 9001:2000) regardless about the fact that ISO 9001 doesn't consist of all requirements particularly for other systems of management.

The three above mentioned management systems have numerous similarities between them which are as follows:

a. Commitment of organization's management.
b. Control of documentation and records.
c. Politics and goals of the management.
d. Orientation to customer.
e. Responsibility, authority, communication.
f. Management review.
g. Representative of Management.
h. Source provision (human, financial, material, information).
i. Analysis of casting defects
j. Competence, education and training.
k. Internal audits.
l. Metrology.
m. Monitoring and measurement.

Quality can be perceived on the basis of costumers' needs and requirements. It, in return, involves need of verification according to this, i.e. quality inspection. Separations in quality criteria take place for investigation of all phases of formation and utilization of products: preproduction, production and after production phase. Each phase, is characterized

[7] ENERGY AND ENVIRONMENTAL PROFILE OF THE U.S.METALCASTING INDUSTRY 1999.

by information sequence regarding quality as well as the quality features that occur in assuredmethods. Effectgatherednorms inmanufacturemight be utilizedor intended foractiverequest of various types in analytical tools.According to OTT D. (1997), moldingflaws mayhave a negativeeffect over the bottom-line of a foundry.

Identification of problem formations' sources has been made possible by Ishikawa's diagram (also known as the "fish bone diagram") which is generally a diagram for cause and effect. According to SIEKANSKI K. (2002), it also helps in identifying a sequence of problems causingchallengesin thenextphases: research, therapy and diagnosisselectwhile making easy solutions for problems.

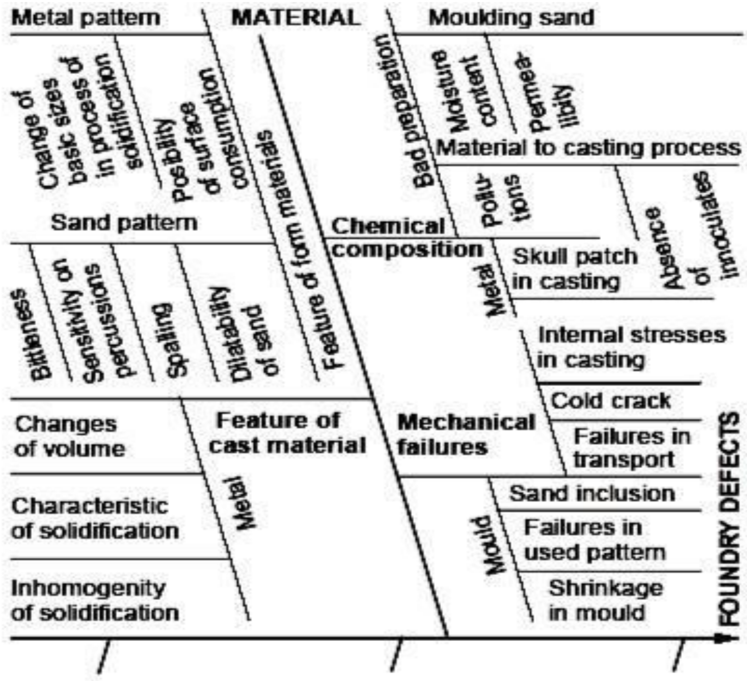

Figure: Ishikawa´s diagram for problem of non-conformances (*Source: SIEKANSKI K. 2002)*

The most common castings defects

Casting process may come up with various defects which in turn reduces the total output of it alongside increases their production cost. Thus, it is important to consider and understand their causes, the imperfection or output that is obtained which is very contradictory to the quality requirements.

There are basically three types of Casting Defects[8] :

1. **Major defects**, that can't be rectified, which results in denial of the moldingultimately leading toentiredamage;

[8] PRINCIPLES OF FOUNDRY TECHNOLOGY 2008

2. Rectifiable Flawswhichmay be treated, howeverthe repair cost may not be a justification for the attempt ofsalvage;
3. Minor defects, that undoubtedly allow economic salvation of the castings thereby leaving a reasonable profit margin.

Reasons for such defects:

- Unsatisfactory or Unsuitable raw resources utilized in maincreating,moldingorcasting; Applyinginacceptablecasting or moldingexercisethrusingleemployee(s) or incorrect instructions by the supervisor;
- Usage ofinappropriateequipment,tools, patterns orappliances; and
- Improper management policytechniques, out of orderorganization and lack of training orpoor work discipline.

According to Garvin, "Quality is an oddlydicey concept which is easy for visualizing, yet irritatingly challenging when defining."

The quality usuallyexpresses notions of vague factors which aren't readilytied down or measured. Quality expresses a positive implication whatsoever it is directed to. In its own right, it can be a compelling value and is robust enough in pertaining towards products,service standards, innovations, and people's caliber …. Everyone at every level can do something about it and feel satisfied about making a difference.Providing quality service and making quality products that work can be identified with from ones' own experience. (Pascale, 1991)

Quality can be evidently defined through several approaches such as:

- Peters, (1989), mentioned about Quality means delighting the customer ,
- Feigenbaum, (1983) mentioned that it is well-defined as being about value.
- Crosby, (1979) says conformance tospecifications, standards or requirements.
- Peters and Waterman, (1982) mentioned about Quality as excellence.
- Juran, 1989, explains its fitness for use.
- Parasuraman et al.,(1985), says that Quality deals with meeting or exceeding customers' expectations

Each approach when defined with quality has strong pointswith respect to generalizability, comfort ofutilityas well as measurement. Hence, the superiority as conformance to criteria method is further significant in an environment for engineering in influenced individual service industry along side being of countless value to emphasize productivity and efficiency. Quality as superiority is perceived to be equally valuable to a motivational expedient in a 'general call to arms'when it comes to quality management movement. Work forces may yield superiority in functioning for an association whose mission and vision reports highlight over existence the greatest.

Besides all of the above, every approach has its own disadvantages. Hence, a quality vision for conforming to standards each and every time is very unlikely being as effective when compared withproves to be 'Quality as excellence'whenappealing employee assurance towards quality. However, quality as excellence is very difficult to measure or operationalize.

Objectives of Research

1. To understand the impact on cost of production.
2. To work on the quality factors to reduce the wastage of raw material.
3. To understand the different factors responsible for wastage.
4. To irradiates the factors that affect cost of production.
5. To establish the quality concepts in the process.

Hypothesis

Based on the objectives following hypothesis can be worked on

H_1: There is a significant relationship in cost of production that leads to Quality Assurance.

H_0: There is no significant relationship in cost of production that leads to Quality Assurance.

Data and Methodology

a. Population and sample size: There are around 80 firms in and around Pune and Pimpri-Chinchwad region. Randomly a few firmsaround 20 manufacturing units has been taken in to accounts. A Structured Questionnaire is designed comprising of 19 questions selected to understand Quality and Works managers was taken from Primary data collection.

b. These determinant were put on to a scale of five-point Likert Scale, where 1 being never used to 5 being extensively practiced.

c. Reliability of data: A 19-items questionnaire was framed and circulated among the Quality Assurance and Production Managers/Works Managers.

d. In order to understand the questionnaires reliability, Cronbach's alpha test was run on 5 manufacturing units, which is considered as Pilot study.

e. Hypothesis testing can be carried out understand the reliability, applicability by performing $Chi^{2,}$ T-Test, Z-test and other tests were carried out.

Conclusion.

The paper presented, identifies the importance of Quality factors for cutting short of wastages and damages in the manufacturing process and implementation of the same is difficult task to be carried out.

The main finding of the research paper is:

Firstly, most of the manufacturing units are having ISO 9000:2000 standards.

Secondly, the manufacturing units differs in implementation of Quality factors in the production processes.

Thirdly, some of the units are following TQM and Kaizen models but others are not.

Limitation and scope for further research:

The study was performed on selected manufacturing units of Pune and Pimpri-Chinchwad firms. Further studies can be focus on same type of manufacturing firm but for other areas.
The period of study was executed during the month of April-May.

Firms that use the tools process management like failure mode, and effect analysis and quality functions deployments can further be studied like tools like Kaizen, TQM and the hurdles to implementation of the same methodology can be studied further. Due to COVID-19 pandemic scenario most of the firms suffers Lock-down, this could be another constraints before the researchers.

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A Role of construction workers in Unorganized Sector

Ph.D. Scholar –

Miss Shital Shinde

Abstract -:

The Indian economy is characterized by the existence of a vast majority of informal or unorganized Laboure employment. As per the economic survey 2007-2008 93% of India's workforce include the self employed and employed in unorganized sector.

The ministry of Laboure Government of India has categorized the unorganized Laboure force groups in terms of occupation,nature of employment, specially distressed categories & service categories.

Under the terms of Occupation -:

Small and marginal farmers, landless, agricultural laboures , share croppers, fisherman those engaged in animal husbandry, beedi rolling ,labelling and packing. Building and other construction workers, leather workers, weavers, artisans, salt workers , workers in brick kilns and stone quarries , workers in saw mills , oil mills etc. come under this category.

Introduction -:

Under the term of Nature of Employment -:

Attached agriculture labors bonded Laboure's, migrant workers , contract and casual laborer's come under this category.

Under terms of specially Distressed category -:

Today tappers,scavengers, carriers of head load drivers of animal driven vehicles, loaders and unloaders come under this categories.

Under term of service category -:

Midwives domestic workers,fishermen and women, barber, vegetables and fruit vendors news paper vendors etc. belong to thiscategories.

In addition to these four categories there exists a large section of unorganized labour force such as Building and other construction workers. Building or other construction work means the construction, alteration repairs maintenance or demolition of or in relation to.buildings,streets,roads, railways, tramways, airfields, Irrigation, drainage, embankment and navigation works , food control works , generation, Transmission and distribution of power. water work oil and gas installations, electric lines,wireless, radio,telephone,telegraph and overseas communication ,dams,canals,reservoirs,water course, tunnels, bridges,viaducts, aquaducts,pipelines,Towers etc.

Literature Review -:

Provision in the Building and other construction workers Act. The government of Maharashtra has created the Maharashtra Building and other construction workers rules 2007 .Using the power provided by section 62 and section 40 of the Building and other construction workers.

Building and other construction worked welfare cess Act 1996 on 1st May 2011, Triple Maharashtra Building and other construction workers welfare Board formed the triple board is approved .

Building and other construction workers welfare cess Act 1996 and the labour Ministry issued by the union government . According to the notification dated September 26,1996 the cess is levied at 1% of the cost of construction except the cost of the land .

Various schemes provided by labour commissioner office to construction workers -:

A] As per the Building and other construction workers
(Regulation of Employment and condition of service Act 1996)

1) The Board may provide immediate assistance to beneficiary in case of accident.
2) Make a payment of pension to the beneficiaries who have completed the age of 60 years .
3) Sanction loans and advances to a beneficiary for construction of a house not exceeding such amount and on such terms and condition as may be prescribed .
4) Pay such amount in connection with premium for group insurance scheme of the beneficiaries as may be prescribed .
5) Give such financial assistance for the education of children of the beneficiaries as may be prescribed.
6) Meet such medical expenses for treatment of major ailment be prescribed .
7) Make payment of maternity benefit to the female beneficiaries.
8) Make provision and improvement of such other welfare measures and facilities as may be prescribed.

B] The board may grant loan or subsidy to a local authority or an employer in aid of any scheme approved by the State government for the purpose connected with the welfare of building workers in any establishment.

C] The board may pay annually grant in aid to a local authority or to an employer who provides to the satisfaction of the Board welfare measures and facilities as may be prescribed.

The board may grant loan or subsidy to a local authority or an employer in aid of any scheme approved by the state government for the purpose connected with the welfare of building workers in any establishment.

The board may pay annually grant in aid to a local authority or to anemployer who provides to the satisfaction of the board welfare measures and facilities of the standard specified by the Board for the benefit of the building workers and the members of their family; so however that the amount payable as grant in aid to any local authority or employer shall not exceed.

a) The amount spent in providing welfare measures and facilities as determined by the state government or any person specified by it in this behalf or
b) Such amount as may be prescribed whichever is less.

Provided that no grant in aid shall be payable in respect of any such welfare measures and facilities where the amount spent there on determined as a foresaid is less than the amount prescribed in this behalf.

Methodology -:

This specific study monitors the quantitative methods and descriptive design.
An interview schedule was equipped based on the objective of the study. Direct personal interview technique is used to collect data from the building construction workers at Pune city.

Objective of the study -:

1) To study the problem of building construction workers at pune city.
2) To know the physical problems of building construction workers.
3) To study the problem related to the registration process and face some issues related to the procedure of beneficiaries
4) To understand the economical problem faced by building construction workers.

Findings -:

1] The building construction place is not providing the maximum facilities such as health and safety measures to the workers.
2] In primary stages registered workers given mid-day meal at work place.
3] In some building construction workplace are arranged safety week for the workers to aware about safety at workplace .
4] The average age of the workers was found be 32-40 years .

Conclusion -:

The government and labour commissioner office provides safety, medical educational schemes for the construction workers. Numerous issues such as hazardous work environment health, education, economic and skill up gradation need to be undertaken as welfare activities.

Most of construction workers are nit aware about the various schemes which is mostly affected of there lifelihood condition.

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To Study the effect of employee motivation on work performance

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Research Guide

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Abstract:

Motivation is necessary as human nature needs some sort of inducement, encouragement or incentive in order to get better performance. Motivation of employees is one function which every manager has to perform along with other managerial functions. A manager has to function as a friend and motivator of his subordinates. Motivation as a meaningful construct is a desire to satisfy a certain want and is a central pillar at the workplace. Thus, motivating employees adequately is a challenge as it has what it takes to define employee satisfaction at the workplace.

Keywords: Motivation, Productivity, Performance, Morale

Introduction:

Motivation is an important factor which encourages persons to give their best performance and help in reaching enterprise goals. A strong positive motivation will enable the increased output of employees but a negative motivation will reduce their performance. A key element in personnel management is motivation.

Motivation is the word derived from the word ‘motive’ which means needs, desires, wants or drives within the persons. It is the process of inspiring people to actions to achieve the goals. In the work goal background the psychological factors motivating the people’s behaviour can be- Job-Satisfaction, Achievement, Term Work, Need for Money

An individual’s motivation is influenced by biological, intellectual, social & emotional factors. Every person has activities, events, people, and goals in his or her life that he or she finds motivating. By using intrinsic satisfaction & extrinsic factor organization can inspire employee motivation at work.

Review of literature

1. Impact of Employee Motivation on Employee Performance

European Journal of Business and Management ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.23, 2014 (Irum Shahzadi, Ayesha Javed, Syed Shahzaib Pirzada, Shagufta Nasreen, Farida Khanam)

Employee motivation is considered as a force that drives the employees toward attaining specific goals and objectives of the organization. Now days, it is one of the sizzling issue in organizations since every wants to make best use of their financial and human resources. Main purpose of this study is to inquire that what kind of factors influence employ motivation in Pakistan and finding up to which extent motivation affects the employ performance. Data is collected from 160 teachers of Government and private schools by using self-administered questionnaire. Regression analysis is applied to find the effect of employee motivation on employee's performance involving four variables employee motivation, employee performance, intrinsic rewards and employee perceived training effectiveness. The results of this study show that significant and positive relationship exists between employee motivation and employee performance. It is also concluded that intrinsic rewards has a significant positive relationship with employee performance and employee motivation. This study concludes that employee perceived training effectiveness has a negative relationship with motivation. It is also proved from to their responses, they were provided with the training courses but this training was not implemented by them in their routine teaching as they considered it to be ineffective. They were not satisfied with the training provided to them and this affected their motivation to teach.

2. **Effect of Motivation on Employee Performance:** A Case Study of South Nyanza Sugar Company Limited International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2016): 79.57 | Impact Factor (2015): 6.391 (Eve Achieng' Goga1 , Dr. Wallace Nyakundi Atambo2)

Employee motivation is of critical importance with respect to employment relationships, but decisions related to motivation policy are difficult due to cost and ability of the company to attract and retain as well as control the behavior and attitudes of employees. Past studies do not clearly indicate the link between motivation policies and employee performance. The sugar industry is not an exception to this. This study focused on the effects of motivation practices on employee performance. The study focused on the sugar industry particularly the sugar industry in Kenya and more specifically Sony Sugar Company Limited. The study objectives were to establish the effects of basic pay, health compensation, bonus compensation, and employee recognition programs on the performance of SONY Sugar Company Limited. The research adopted a case study design with a focus on Sony Sugar Company Limited in Awendo sub county, Migori County - Kenya. The target population was 1008 employees of Sony Sugar Company Limited. The study sample size was 100 respondents who were selected using stratified random sampling technique. The study further employed questionnaires as a data collection tool and the reliability of the research instrument was tested using Cronbach's Alpha coefficient and test re-test reliability coefficient. The research used both primary and secondary data which was then analyzed using descriptive statistics which involves the use of means, standard deviation, percentages and mean weights. Inferential statistics involved the use of regression and correlation analysis. The study established that all the motivation practices under study are adapted at SONY Sugar Company Limited to a moderate extent. However, employee recognition was highly rated as the company relies on it to influence employee performance. On the effect of the motivation practices on employee performance, the study established that health compensation practice is highly rated as it influences performance to a great extent. Bonus compensation was on the other hand rated least but at moderate extent. The regression results showed that all the Independent Variables have an effect on the Dependent Variable. Consequently, the study concluded that health compensation, bonus pay and employee recognition programs have a statistically significant effect on employee performance at SONY Sugar Company Limited and therefore the study recommends that these compensation practices be maximized to boost employee performance in SONY and across the sugar industry at large.

Types of Motivation:

When a manager wants to get more work from his subordinates then he will have to motivate them for improving their performance. They will either be offered incentive for more work, or may be in the space of rewards, better reports, recognition etc., or he may instill fear in them or use force for getting desired work.

1. Positive Motivation:

Positive motivation or incentive motivation is based on reward. The workers are offered incentives for achieving the desired goals. The incentives may be in the shape of more pay, promotion, recognition of work, etc. The employees are offered the incentives and try to improve their performance willingly.

According to Peter Drucker, the real and positive motivators are responsible for placement, high standard of performance, information adequate for self- control and the participation of the worker as a responsible citizen in the plant community. Positive motivation is achieved by the co-operation of employees and they have a feeling of happiness.

2. Negative Motivation:

Negative or fear motivation is based on force or fear. Fear causes employees to act in a certain way. In case, they do not act accordingly then they may be punished with demotions or lay-offs. The fear acts as a push mechanism. The employees do not willingly co-operate, rather they want to avoid the punishment.

Though employees work up-to a level where punishment is avoided but this type of motivation causes anger and frustration. This type of motivation generally becomes a cause of industrial unrest. In spite of the drawbacks of negative motivation, this method is commonly used to achieve desired results. There may be hardly any management which has not used negative motivation at one or the other time.

3. Intrinsic Motivation:

Intrinsic motivation means that the individual's motivational stimuli are coming from within. The individual has the desire to perform a specific task, because its results are in accordance with his belief system or fulfills a desire and therefore importance is attached to it.

Our deep-rooted desires have the highest motivational power. Below are some examples:

- **Acceptance:** We all need to feel that we, as well as our decisions, are accepted by our co-workers.
- **Curiosity:** We all have the desire to be in the know.
- **Honor:** We all need to respect the rules and to be ethical.
- **Independence:** We all need to feel we are unique.
- **Order:** We all need to be organized.
- **Power:** We all have the desire to be able to have influence.
-

4. Extrinsic Motivation:

Extrinsic motivation means that the individual's motivational stimuli are coming from outside. In other words, our desires to perform a task are controlled by an outside source. Note that even though the stimuli are coming from outside, the result of performing the task will still be rewarding for the individual performing the task.

Extrinsic motivation is external in nature. The most well-known and the most debated motivation is money. Below are some other examples:

- Employee of the month award
- Benefit package
- Bonuses
- Organized activities

Importance of Motivation

Motivation occupies an important place and position in the whole management process. This technique can be used fruitfully for encouraging workers to make positive contribution for achieving organizational objectives. Motivation is necessary as human nature needs some sort of inducement, encouragement or incentive in order to get better performance. This suggests the importance of motivating employees. Motivation acts as a technique for improving the performance of employees working at different levels.

Motivation of employees is one function which every manager has to perform along with other managerial functions. A manager has to function as a friend and motivator of his subordinates. Motivation is useful in all aspects of life and even our family life. The same is the case with business. This dearly suggests that motivation is extremely important. It is an integral part of management process itself.

Motivation is a helpful instrument in the hands of management in exciting the workforce. Motivation increases the willingness of the workers to work, thus increasing effectiveness of the organization.

- · **Best utilization of resources**

- · **Reduction in Labour Problems**
- · **Sizeable increase in production and productivity**
- · **Better Image**

The Effect of Motivation on Employee Productivity:

Motivated employees are inclined to be more productive than non-motivated employees. Unmotivated employees are likely to spend little or no effort in their jobs, avoid the workplace as much as possible, leave the organization if given the opportunity and produce low quality work. On the other hand, employees who feel motivated to work are likely to be persistent, creative and productive, turning out high quality work that they willingly undertake.

1. **Motivated Employees Are More Productive :** If employee will be satisfied and happy then he/she will do his /her work in a very impressive way, and then the result will be good, on the other hand motivated employee will motivate other employees in office.
2. **Decision-Making and Practical Expectations:** It is important to engage employees in the decision-making process, but create realistic expectations in the process.
3. **Job Description, Work Environment and Flexibility:** Employee doing the right job for his personality and skill set, and performing well at the job greatly increases employee motivation and satisfaction. A safe and non-threatening work environment is necessary to maintain a high level of employee motivation. Flexible human resource policies, flexible time, work from home, childcare leaves contribute to have happier and more motivated workers.
4. **Pay and Benefits:** Keeping employees motivated with good benefits is easy. Where to draw the line at generous benefits that motivate all employees, versus raises and larger salaries to retain and attract the best workers and keep them happy and motivated to be working for you, are more difficult.
5. **Company Culture:** Creating a positive and employee-friendly company culture is a great motivational tool.

Conclusion:

A motivated employee is a valuable asset, who can deliver immense value to the organization in maintaining and strengthening the business and revenue growth. This paper concludes that the employee motivation is important to obtain organizational success.

Motivation can be properly or improperly achieved and can either hinder or improve productivity. Management must understand that they are dealing with human beings, not machines, and that motivation involves incentivizing people to do something because they want to do it.

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National Agriculture Market (e-Nam)- An Easily Adopted Technology.

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Abstract–

This research paper emphases importance of using e-NAM is an all India electronic trade peNAMortal.National Agriculture Market (e-NAM) which provides a national market creation network for agricultural produce taken to the existing APMC market. Small Farmer Agribusiness Consortium (SFAC) is the lead agency for e-NAM implementation under the Ministry of Agriculture and Farmers Welfare, Government of India.

Aggregation of APMCs across the country through an online forum platform to facilitate pan-India trade in agricultural produce works to provide better prices through a transparent auction process based on product quality with timely online payments.

Promotes uniformity in the agricultural marketing sector by simplifying processes in markets, eliminating information gaps between buyers and sellers and promoting real time price discovery based on actual demand and supply.

Keywords- Electronic markets, price discovery, market efficiency, agricultural markets, India, market innovation,challenges,
processes,

Introduction-

The Union Ministry of Agriculture has developed a special software for market committees in the country under the name National Agriculture Market. Some basic norms have also been formulated for the smooth functioning of all market committees. According to this, the concerned state has expressed the need to change the market committee laws. Also, it is necessary to provide complete information about the families of traders and farmers applicants through the local market (mandi) system in the state. At present there are important plans to connect 585 wholesale market committees in 12 states online, to provide funds of Rs. 30 lakhs to each of these market committees for equipment and facilities, to double the income of farmers in the country by 2022, and online agriculture market is one of them. At present, farmers have to pay many types of fees to sell their agricultural produce in market committees. For that, this is a great option for farmers to sell their agricultural produce through online agricultural market.

Conceptual background

The scheme was launched in the country by the Prime Minister on Thursday 14th April 2016 on the birth anniversary of Dr. Babasaheb Ambedkar.the main objective of the National Agricultural Market is to create a national market for agricultural produce through an e-platform network. Farmers should be able to sell their produce anywhere in the country. At present, farmers sell their produce in the Agricultural Produce Market Committee. Different states of the country have different tax regimes likin dependence. As a result, this system is considered to be a disordered system for the sale of goods by farmers

Integration of APMCs across the country through a common online market platform to facilitate pan-India trade in agriculture commodities, providing better price discovery through transparent auction process based on quality of produce along with timely online payment.

The Objective of Research Study

1. To study the conceptual background of e-Nam
2. To study the Benefits of National Agricultural Market to Various Constituents.
3. To study the Importance of e-NAM technology.
4- To study the challenges faced by e-nam.
5- To study the Registration & implementation Procsee e-name.

Research methodology -

For the present research study the data pertaining to the above objective ons collected and review the literature on the topic concerned. The literature was the collected by visiting various libraries. Some government offices where also visited for getting office record. and the secondary data is also collected from various website reference book, reset journals are related to commerce,management,marketing and agriculture.

Benefits of National Agricultural Market to Various Constituents

Farmers:

Farmers can sell their own produce without any middlemen so they will benefit from better investment.

Merchant: Traders can easily trade from one Maharashtra State Agricultural Production Board to another Agricultural Marketing Board anywhere in India through this portal and also have easy access to the national market for local and secondary trade.

Buyer : Buyers can buy goods from any type of market. And the cost of mediation while purchasing goods is reduced due to this portal. There is no need to rely on a middleman to buy goods.

Exporter : Small and large sellers of goods as well as exporters can sell their goods through the National Agriculture Market. This portal gives maximum benefit to the exporters.

Customer : NAM helps customers to get the information and price of the product they want to buy in an easy way. Customers are not cheated.

Market : This system has benefited the traders to monitor and regulate the commission agents, creating transparency in the transactions done.

As the auction process is done electronically, the use of manpower is reduced.

Supply chain : NAM aims to improve marketing aspects of agriculture sector. With one license and single point levy for the entire state, the entire state becomes one market and the fragmentation of the market within the same state is eliminated. This will help improve the supply chain of goods and reduce wastage of time.

Importance of eNAM Technology

eNAM is done online through a mobile application. In this app traders and farmers can use eight languages to bid and complete transactions on the app MIS dashboard was introduced in February 2018 to provide information about the performance of each market in terms of commodity arrivals and traders.

Various digital facilities are available in the payment network such as Debit Card Internet RTGS Nefty Mobile Payment BHIM App. eNAM will enable and facilitate online transactions for all stakeholders on the platform, including farmers, traders and Farmer Producer Organizations (FPOs). eNAM's platform enables agricultural participants to make fast and secure transactions.

Mobile phone gate entry, integration of farmer database and e-learning module are available. Agents mostly use eNAM mobile app for trading on behalf of farmers. The crucial operation of gate entry from e-NAM mobile app helps farmers to do advance gate entry on mobile app, which will greatly reduce the time for farmers to reach the market and bring greater efficiency and facilitate smooth arrival recording. A new feature has been introduced for farmers at the gate, where they can see the progress of buying and selling their lots and the real time bidding progress of the price will also be visible to the farmers on their mobile app.

Challenges faced by E-NAM are as follows

1- It is difficult to ask the farmer traders and commission agents as well as all state agriculture departments and stakeholders to go online.

2- Quality machines are not available for scientific classification and there is problem in quality and test grading of goods.

3- Lack of technical skills and internet facility is seen in agriculture departments of Maharashtra state.

4- Lack of technical expertise and internet facility in state agriculture departments has delayed setting up grading/testing facilities.

5- The main purpose of online auction portals or to help in price discovery appears to have been completely defeated.

6- Convincing and persuading stakeholders to use the reward platform is a problem and confusion at many places.

7- A large share of the trade reported in the e-NAM portal was actually carried out offline and values were entered into the portal to look like genuine online transactions.

8- Farmers and traders fear getting caught in tax evasion if transactions are done online.

9- Inspection of the product is the fear of getting a low price and the commission agent is afraid of being excluded from it eventually.

Registration & implementation Procsee e-name?

For Merchants-

If you are a trader

Select “Registration Type” as “Trader” .and select appropriate “APMC” or State Level. Provide your passport size photograph. And in that type email id to get login id and password. Log in to the dashboard by clicking on the icon at www.enam.gov.in through the system.

For Farmer-

Registration can be done by clicking on http://www.enam.gov.in/web. For that visit the following website http://enam.gov.in/NAMV2/home/other_register.html

If registering as farmer then select required APMC by selecting farmer registration type.

Enter your current email id as you will get login id password in it.

After registration you will receive a temporary login ID password via email.

Log in to the dashboard by clicking on the icon at www.enam.gov.in/web.

After login a flashing message will appear on the dashboard click to register.

After completion of KYC it will be sent to your selected APMC for approval.

Once the submission is successful, a submission email is received. You get Farmer Permanent Login ID (eg: HR866F00001) password from APMC.

FPOs/FPCs can register on e-NAM portal through website (www.enam.gov.in) or mobile app or provide following details at nearest e-NAM Mandi:

- Name of FPO/FPC

Name, Address, Email ID and Contact No. Authorized Person (MD/CEO/Manager)

Bank Account Details (Bank Name, Branch, Account Number IFSC Code)

For Market-

States (State Agricultural Marketing Boards) willing to integrate their mandis with NAM should further amend their APMC Act.

State Board of Agriculture Single Trading License is considered legal throughout the state.

E-auction system e-NAM is circulated for single point charging and price discovery of market charges across the state and access to avail transport services.

Following are some of the benefits e-Nam

e-NAM is an option for farmers to trade directly through a mobile app or through a registered commission agent.

e-NAM is connected to 1000 markets in two Union Territories and more than fifty lakh farmers in 18 states are members of e-NAM.

e-Nam is useful for buying quality products in the market in bulk at one place and ensuring transparency in financial transactions.

Conclusion-

eNAM is all inclusive which benefits not only the farmers but also every merchant exporter concerned with transparency in transactions. e-Nam helps farmers get the best price for their produce. This is one of the revolutionary schemes launched by the central government which is technologically beneficial and works in favor of every element.
National agriculture market (e-Nam)-an easily adopted technology.

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A review of internet marketing:
Tools,Benefits &Implementation Challenges

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Abstract

Purpose: In this digital era, the marketing and advertising strategies have changed, especially with the advent of internet, resulting in the need to catch the marketing trends. The marketers have shifted from traditional marketing to internet marketing. Hence, this study aims to understand the internet marketing conceptually and the development of internet marketing along with the challenges and opportunities for marketers to utilize the power of internet marketing.

Methodology: A qualitative analysis is used in this research to contextualize and explicate the quintessence of internet marketing and the tools used by the marketers.

Findings: The internet marketing is a subset of the digital marketing. The internet marketing is used by the marketers from small businesses to big organizations and it has many benefits. However, there are some challenges to implement the internet marketing.

Practical implications: The evolution of the internet, the concept of internet marketing along with the benefits and challenges of the internet marketing are analysed from the extant literature.

Originality/value: This article represents an overview of the internet marketing for academics and practitioners to get the glimpse of the happenings in this incessantly evolving field.

Conclusion: The internet marketing strategy is an integral part of the marketing strategy of any business though it has some challenges to overcome to implement the strategy.The use of the internet as communication channel is inevitable.This is still evolving and will give more benefits not only to businesses but also to the customers.

Keywords: Internet marketing, Digital marketing, Marketing trends, Communication channel, Marketing communication

1. Introduction

In today's competitive, turbulent, and disruptive world, only traditional marketing techniques may not work to survive the businesses. Marketing managers need to understand and monitor the changing environment so that they can evaluate and modify the marketing strategies to meet the customer demands.In such a challenging time, the marketers prefer to use digital marketing methods over traditional methods to identify and understand the customers' preferences.The digital marketing is de facto useful to the customers as a platform to know the product or service in detail.It has become an integral part of the strategy of many companies; even small businesses also practice it (Afrina, Yasmin & Sadia, Tasneem & Kaniz, Fatema. 2015) (P. Sathya, 2017). Also, B2B market is not exception to it. Internet marketing has evolved and developed in the context of B2B market to improve the business processes, for increased supplier involvement and for the improved customer service (Eid, Riyad. 2005).Emerging B2B markets also have interest to adopt the internet marketing strategies and the adoption is positively linked to organizational innovativeness, perceived relative advantage, compatibility (Shaltoni, Abdel. 2017).The digital marketing can help to gain new customers and retain the existing as it can create an integrated, measurable,and targeted communications. The attribute of the digital marketing campaign inheres in the measurability of the efforts in terms of the results (Jeevan, Priti. 2017).So, the objective of the internet marketing is to expand and retain the customer base, improve on the return on sales and the most important is to create a positive image of the company (Sozinova, Anastasia & Fokina, Olga. 2015).

It can be said that the most effective marketing tool is to use internet as a communication channel.It has changed the way consumers behave and thereby creating new buying patterns (Aleksandar, Grubor & Jaksa, Olja. 2018). It can be said that the internet is incontrovertible communication channel, an advertising channel and ultimately a marketing channel (Jianwei Hou, Cesar Rego 2002).The internet and the other similar entities are connected and continue to form a network which will affect the future of marketing immensely as the customers and the service providers are also affected simultaneously (Roland T. Rust 2020).

2. Objectives of the Study

This article seeks to contextualize and explicate the quintessence of internet marketing and the tools used by the marketers. The implementation of the internet marketing to set up the internet as a communication channel has some limitations and opportunities. This article throws light on those challenges along with the gist of difference between the traditional marketing and the popular internet marketing.

3. Literature Analysis and Synthesis

The term ‘Digital marketing’ was coined in 1990’s and the evolution of digital marketing started off. The digital marketing is defined as “the application of the Internet and similar digital technologies in conjunction with traditional communications to achieve marketing objectives” by Chaffey and Ellis-Chadwick (2012: 58).Digital marketing is sometimes referred as ‘Online marketing’ or ‘Internet marketing’ or ‘Web marketing’(Shaltoni, Abdel. 2017) (P. Sathya, 2017). Though these terms are used interchangeably, the internet marketing is a subset of digital marketing. Essentially, the internet marketing uses the internet to connect to the audience. Internet marketing includes techniques such as search engine marketing (SEM), search engine optimization (SEO), pay per click and email marketing whereas digital marketing extends to the channels which do not require the internet, such as multimedia messaging services (MMS), short messaging services (SMS) etc. (Jeevan, Priti. 2017), (Atshaya, S. and Rungta. 2016).

Chaffey, D., Mayer, R., Johnston, K. and Ellis-Chadwick, F. (2000: 8), define the internet marketing as “Achieving marketing objectives through applying digital technologies”.They alsomention that internet marketing practice may include usage of a company website along with other online promotional techniques such as interactive advertising, search engine marketing, e-mail marketingetc. to acquire new customers and maintain the relation with the existing customers.

So, there is no agreed definition of the internet marketing, but it is defined in various ways by many authors but definitely it is a subset of the digital marketing (Sturienė, Urtė. 2019) (Popa, Adela. 2015).

3.1 Evolution of ‘Internet’

The internet has existed since late 1960’s (Chaffey et. al. 2000: 26) (Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. J. A. M. 1997) but the evolution of the digital marketing was kicked off in 1990’s (Umamaheswari, B. & Kumawat, Vijeta. 2021).

3.2 Internet marketing Vs Traditional marketing

In this digital era, almost all the marketers prefer to use modern-day digital or internet marketing techniques for the marketing campaigns and to generate leads and to make customers aware of brands. The customers’ habits of spending have been influenced by the ability to shop on the Internet (Wei-Shang Fan & Ming-Chun Tsai 2010). The internet helps marketers to acquire, convert and retain the customers (Roberts, M. and Zahay, D. 2012: 29). Hence it is obvious that marketing discipline has new set of rules as compared to a decade ago, owing to the popularity and the power of internet marketing. The following table (Table 1) summarizes the essential characteristics of the internet marketing and traditional marketing available in the extant literature.

Table 1. Internet Marketing Vs Traditional Marketing

Characteristic	Internet Marketing	Traditional Marketing
Cost	Low cost is required for internet as a communication channel.	Relatively higher cost is incurred.
Value creation	Information is an asset	Information existed as a support element
Product characteristics	It can showcase the product features by using animation, video, sound etc.	It has limitations to convey the product features effectively by virtue of its way of communication.
Campaign	Agile way of development of the campaign, creation and the sharing are much easier.	Rigid and time-consuming way of development and also reaching the customers.
Measurement of effectiveness	Measurability of the results of the marketing effectiveness is the essential characteristics.	The measurement of the results is difficult.
Communication direction	The communication is bidirectional. The customers can also interact with the brand such as sharing the feedback.	The communication is unidirectional, only from brand to the customers.
Communication medium	Internet based media such as website, online chat etc.	Non-internet based media such as phone calls, print, letters etc.
Customers	It can reach the Customers globally.	It has limitations and good for local Customers.
Customers targeting	Customers targeting is possible owing to its nature design of the communication channel.	Generally carried out for specific Customers from its development to selling a product or service.
Internet accessibility	Advertisement can reach to internet connected users at any time - 24x7 access	Advertisement can be accessed without internet connectivity.
Customer trust	Some customers do not trust online content owing to frauds and the frequency of advertisements.	Some consumers may trust traditional advertisements over internet content.

Source: adapted from Borges Tiago, Maria & Tiago, Flávio (2012), P. Sathya, 2017, Afrina Yasmin & Sadia Tasneem & Kaniz Fatema, 2015

3.3 Drivers and barriers

The digital industry growth is supported by the advancement in handset technology and the extended usage of the internet (Kiradoo Giriraj, 2016). This has resulted in expansion of the product offerings and the interaction with the customers through websites, social media etc. (Angela MADAN and Mihai Ioan ROSCA 2022). The omnipresence of the internet has proved as a successful method of communication amongst the organisations and the clients (Niavand, Hossein and Mahesh, R 2018). The internet enables the customers to gain the access to information and hence they become 'active co-producers of value' (Zhang, Jansen, andChowdhury 2011). The customers can search the products, gain the user and expert reviews even before entering the store by using the Smartphones and hence it affects the shoppers perceptions early in shopping cycle (Shankar,Venkatesh, Jeffery Inman, Murali Mantrala, Eileen Kelley, and Ross Rizley. 2011).

The website with good interface plays an important role to increase customer's satisfaction and retention and thereby it could help to improve the revenue(Fang, X., & Salvendy, G. 2003). In fact, the customers will browse the website to buy the products if internet customisation is planned along with the due care in the website design and a good internet marketing strategy is in place (Wei-Shang Fan & Ming-Chun Tsai 2010). A website creates a direct communication between the consumer and the organisation thereby making the products available directly to the customers. However, product characteristics play an important and major role in the success of the marketing strategy (Kiang, Melody & Chi, Robert. 2001).

3.4 Challenges

The following table (Table 2) summarizes the challenges faced to implement the internet marketing.

Table 2. Challenges to implement the internet marketing

Sr. No.	Challenges	Description	Reference
1	Problem of integrity	Marketing campaigns lack a comprehensive marketing framework. Integrated marketing efforts are missed while employing many online and offline promotion channels.	Soheila Bostanshirin, (2014), Abdo, S.Y. (2018)
2	Lack of face-to-face contact	No personal interaction between buyer and seller takes place, specifically some products require the physical touch and face to face discussion.	Soheila Bostanshirin, (2014), Abdo, S.Y. (2018), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
3	Security and Privacy	Some customers fear that the data (such username, passwords, credit card numbers etc.) collected by the company or the website may be shared to others, or the data can be accesses by the hackers.	Soheila Bostanshirin, (2014), Abdo, S.Y. (2018), Wang, Huaiqing& Lee, Matthew & Wang, Chen. (1998), Kimiloglu, Hande. (2004), Roland T. Rust (2020)

4	Lack of trust	Some customers still do not trust the the online privacy and security of the data and other aspects such as the product quality and believe that online frauds may take place.	Soheila Bostanshirin, (2014), Abdo, S.Y. (2018), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
5	Mismatch in the products ordered and delivered	Some customers suspect if they will get exactly what they order online.	Abdo, S.Y. (2018)
Source: Compiled by author			

3.5 Potential Benefits of Internet Marketing

Marketing activity can be done through internet as distribution, transaction, and communication channel for the complex consumer market (Peterson, R. A. et. al. 1997).
The distribution of the digital marketing communication is at a faster rate and can reach to huge number of target audience every time as compared to traditional marketing communications (Jeevan, Priti. 2017).

Table 3. Potential Benefits of Internet Marketing

Sr. No.	Opportunities	Description	Reference
1	Reaching more customers	Small businesses are empowered to reach many customers simultaneously, national and even international customers. All geographical barriers are eliminated.	Soheila Bostanshirin, (2014), Abdo, S.Y. (2018), Larisa Kapustina et. al. (2020), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016), Sabaitytė, Jolanta &Davidavičienė, Vida. (2018)
		Drives sales growth	Sturienė, Urtė. (2019), Chen, Chen-Yuan & Shih, Bih-Yaw & Chen, Zih-Siang & Chen, Tsung. (2011)
		Expanded markets	Yazdanifard, Dr. Rashad & Fadzilah, Wan & Wan Yusoff, Wan Fadzilah & Pour, Azade &Froget, Ludovic. (2012)

2	Cost-Effective Advertising	Cheaper channel of communication - the cost of online presence, advertising campaigns and the interaction with the customers is significantly low.	Chaffey et al., 2000, Soheila Bostanshirin, (2014), Abdo, S.Y. (2018), Kiang, Melody & Chi, Robert. (2001), Borges Tiago, Maria & Tiago, Flávio. (2012), Yazdanifard, Dr. Rashad et. al. (2012), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
3	Developing a Social Media Presence	Developing presence on social media and attract more customers.	Abdo, S.Y. (2018)
4	Communication	Improved product, price information is available. Online technical support and interaction with the customers.	Kiang, Melody & Chi, Robert. (2001), Borges Tiago, Maria & Tiago, Flávio. (2012) Niavand, Hossein and Mahesh, R (2018), Larisa Kapustina, Olga Gaiterova, Natalya Izakova, and Maksim Lazukov, (2020)
		Helps to build and maintain the relationship with the existing and potential customers.	Sturienė, Urtė. (2019), Yazdanifard, Dr. Rashad et. al. (2012), Kimiloglu, Hande. (2004), Chen, Chen-Yuan & Shih et. al., Santanu Kumar Das, Dr. Gouri Sankar Lall (2016), Sabaitytė, Jolanta &Davidavičienė, Vida. (2018)
5	Transaction	Human errors are reduced, flexible pricing can be offered, and the optimized inventory is maintained.	Kiang, Melody & Chi, Robert. (2001)
6	Distribution	Lower cost of the delivery, reduction of waiting time to deliver the digital products/ services.	Kiang, Melody & Chi, Robert. (2001) Borges Tiago, Maria & Tiago, Flávio. (2012)

7	Creating Brand Recognition	When the impactful marketing campaigns are carried out, the products are recognised, and the brand is created and recognised.	Abdo, S.Y. (2018), Sturienė, Urtė. (2019), Yazdanifard, Dr. Rashad et. al. (2012), Paquette, Holly (2013), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
8	Trackability	The number of customers visiting websites, their behaviour, marketing campaign success etc. can be tracked easily.	Soheila Bostanshirin, (2014), Kiang, Melody & Chi, Robert. (2001), Larisa Kapustina et. al. (2020), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
9	Personalization	As the internet can track the customer behaviour, this data is used to understand the customer preferences and the products or services are tailored to meet the customer expectations.	Soheila Bostanshirin, (2014), Kiang, Melody & Chi, Robert. (2001), Kimiloglu, Hande. (2004), Roland T. Rust (2020)
10	24/7 availability	The businesses are open round the clock, the customers can access the information, shop the online at their convenient time.	Soheila Bostanshirin, (2014), Kiang, Melody & Chi, Robert. (2001), Santanu Kumar Das, Dr. Gouri Sankar Lall (2016)
		The customers can easily retrieve the relevant information on the web, maximising their utility. It becomes a hassle-free and time-economic activity.	Kimiloglu, Hande. (2004) [30], Larisa Kapustina et. al. (2020)
Source: Compiled by author			

3.6 Impact of Internet marketing on firms' performance

The digital marketing helps to reach the international customers and make the customer aware of the products or services. It helps to grow the number of customers and hence the profitability of the business (Kiradoo Giriraj, 2016).

Borges Tiago, Maria & Tiago, Flávio (2012)found that customer relationship management (CRM) and supply chain management (SCM) as compared to knowledge management (KM) has a greater impact on the internet marketing of a firm in the digital environment in European companies. They also concluded that there is a strong positive relationship between EIS subsystems (CRM, SCM and KM) and the internet marketing and internet marketing has a positive impact on the performance of e-business.

The tourism industry can also be benefitted by using the online marketing to reach the customers and make them aware of the tourist sites and tourism services (Raouf, Raad. 2018). The digital marketing is an integral part of the marketing strategies of the businesses. It has generated the opportunities for the growth and development of the businesses (Dr. Neeta Aurangabadkar Pole 2021).

The internet marketing has a positive impact on the sales growth, it helps to strengthen the brand image and bolsters the relationship with the existing and the potential customers. This impact criterion consists of short-term effect, long-term effect, and alternatives (Sturienė, Urtė. 2019).

The businesses find the internet marketing useful to communicate to the business partners and customers, solve the business problems effectively by collating and disseminating the information obtained through advanced information technologies Kimiloglu, Hande (2004).
Innovation capability and the performance of Small and Medium-sized Enterprises is influenced by internet marketing orientation. Internet marketing orientation helps the businesses to understand about the customers, competitors etc. and hence to improve the performance (Norzalita A. Aziz & Nor Asiah Omar 2013).

3.8 Tools

The websites, SEO, email marketing and Facebook are the most popular digital marketing tools (Sturienė, Urtė. 2019).

The social media as a marketing tool can help the retailers to increase brand awareness by being creative while interacting with the customers (Paquette, Holly 2013).
The marketing promotion through the social media such as Twitter, Facebook, LinkedIn etc. has become important as the customers not only use the social media but rely on social media for the shopping decision (Shankar,Venkatesh, Jeffery Inman, Murali Mantrala, Eileen Kelley, and Ross Rizley. 2011).

The visibility of the website can be increased by using SEO (Search Engine Optimization) techniques and the power of internet community along with the use if social networking sites. This helps to increase website visits by the customers and hence improve the customer interaction (Chen, Chen-Yuan & Shih, Bih-Yaw & Chen, Zih-Siang & Chen, Tsung. 2011).

Following are the online marketing tools mostly used:

3.8.1 Social media marketing (SMM)

The social media can be used for the product customization, interaction with the customers etc. So, it can be used for communication and promotion of the value and for the creation of the value (Popa, Adela. 2015). This tool has become popular with the increased popularity of Twitter, Facebook, LinkedIn, YouTube etc. (Santanu Kumar Das, Dr. Gouri Sankar Lall, 2016).

The social media is possible place for customer engagement and building brand awareness but marketers have to be careful about the information while engaging with the customers as the social media is customer driven and it can easily backfire (Ryan, D. & Jones, C. 2009: Pg 169).

3.8.2 Email marketing

It is used to deliver the commercial message to a group of people using email. The message can be customised and can be delivered to targeted audience (Santanu Kumar Das, Dr. Gouri Sankar Lall, 2016) but such emails are considered as spam and unwanted by some recipients and there is slight difference between whether emails are considered to be providing some value or annoying (Popa, Adela. 2015). It is the most effective tools and efficient also because it can be used to reach many customers within few seconds (Hossain, Md Shamim & Rahman, Mst. 2017).

3.8.3 Search Engine Marketing (SEM)

This tool helps to advertise the business or related website by using pay per clicks (PPC), search engine optimization (SEO) or other related services on the search engines to get the more targeted audience (Santanu Kumar Das, Dr. Gouri Sankar Lall, 2016) (Popa, Adela. 2015).

3.8.4 Affiliate marketing

Advertisers involve third parties to generate the potential customers for them. These third parties use their network to get the customers and receive the compensation according to the intended action taken by the customers which can be feedback, an email submission etc. (Santanu Kumar Das, Dr. Gouri Sankar Lall, 2016).

4. Contribution/ Practical implications

In today's digital age, the emergence and development of internet has changed the marketing strategies. The businesses must get the better off the competition to remain in the market and be customer centric. This article indicates the significance of the internet as a communication channel and thereby the internet marketing strategies to acquire the customers and to convertand finally to retain them. Also, the challenges and opportunities of the modern internet marketing are pointed out. Marketers need to pay the attention to these challenges to find the way out in the fierce competition.

The detailed analysis of the extant literature in this field of internet marketing is done and considering this research, this study contributes to the discussion on the internet marketing and its adoption in such challenging business environment and encompasses the necessity of internet marketing across the globe.

5. Limitations and Scope related to Further Studies

An effort has been made to include the chronological development of the internet and relevant technologies, but it is also noticed that there are some differences in opinion on the launch years of the technologies. An attempt is made to review all relevant literature, but it is not guaranteed that everything is referred. Further research can be done to understand the effect of internet marketing on firms' performance considering other factors.

6. Conclusions

It can be said that the internet is incontrovertible communication channel, an advertising channel and ultimately a marketing channel. The internet and the other similar entities are connected and continue to form a network which will affect the future of marketing immensely as the customers and the service providers are also affected simultaneously.

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The Effect of Pandemic on the Tourism of Sinhagad Fort and Methods to Increase Footfall at the Fort.

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Abstract:

Fort is a historic fort located in Pune, Maharashtra, India. It is one of the most popular tourist destinations in the region, known for its stunning views, rich history, and challenging trekking trails.

However, like many other tourist destinations around the world, Singhgad Fort has been severely affected by the COVID-19 pandemic. This research paper focuses on the impact of the COVID-19 pandemic on tourism on Sinhagad Fort. The pandemic has severely affected the tourism industry, resulting in reduced footfall and loss of revenue for local businesses that rely on tourism. This paper identifies the economic challenges faced by sellers and shopkeepers on Sinhagad Fort due to the pandemic and proposes steps to increase footfall in the post-pandemic era.

Additionally, the paper explores the impact of electric vehicle zones on sustainable tourism on Singhgad Fort. Sustainable tourism is critical for the preservation of natural and cultural resources, as well as the economic development of local communities. Sinhagad Fort has taken several steps towards promoting sustainable tourism, including waste management, renewable energy, and water conservation. The introduction of electric vehicle zones is a significant step towards reducing the fort's carbon footprint and promoting sustainable transportation.

The paper concludes with recommendations for increasing footfall and promoting sustainable tourism on Sinhagad Fort.

Introduction:

Singhgad Fort is an ancient fortress located in the western Indian state of Maharashtra. The fort has a long and rich history, and it has witnessed many battles and conquests over the centuries. It was originally built by the Yadava dynasty in the 12th century, but it was later captured and expanded by the Maratha Empire.

The archaeological significance of Singhgad Fort lies in its historical and cultural importance. The fort has several monuments and structures that date back to different periods of its history, such as the gates, bastions, temples, and palaces. The fort also has a museum that houses a collection of artifacts related to the fort's history.

Archaeological excavations and surveys have been conducted at Singhgad Fort, which have revealed a wealth of information about its past. These excavations have unearthed ancient artifacts, coins, pottery, and other objects that shed light on the fort's cultural and social life. The archaeological discoveries at Singhgad Fort have helped researchers and historians had better understand the history and heritage of Maharashtra and India as a whole. According to a report by the Maharashtra Tourism Development Corporation, Pune receives around 7.5 million visitors annually, and the tourism industry contributes significantly to the city's economy.

Sinhagad Fort is one of the top tourist attractions in Pune, and it is estimated that thousands of tourists visit the fort every year. It is challenging to provide an exact figure as the revenue generated by the fort is likely to be influenced by various factors, such as seasonality, ticket prices, and the number of tourists visiting the site.

Objectives of the research:

1. To examine the effect of the COVID-19 pandemic on tourism on Sinhagad Fort.
2. To identify the economic challenges faced by local businesses and communities due to the pandemic.
3. To propose steps to increase footfall in the post-pandemic era.
4. To explore the impact of electric vehicle zones on sustainable tourism on Sinhagad Fort

1. Methodology:

The study draws on both primary and secondary data sources, including interviews with local tourism stakeholders, surveys of tourists, and an analysis of existing literature on the subject..

2. Introduction:

Sinhagad Fort is a historical fort located near Pune, Maharashtra, India. The fort is situated on a hilltop at an altitude of 1,350 meters above sea level and offers breathtaking views of the surrounding landscape. The fort has a rich history dating back to the 17th century when it was known as Kondhana Fort. It was famously captured by the Maratha warrior TanajiMalusare in 1670, and since then, it has been an important symbol of Maratha pride and bravery.

Today, Sinhagad Fort is a popular tourist destination for visitors from all over the world. It is a perfect destination for history enthusiasts, nature lovers, and adventure seekers alike. Tourists can explore the fort's ruins, which include ancient temples, gates, and bastions.

They can also take a stroll through the fort's picturesque surroundings, which include lush green hills, sparkling waterfalls, and panoramic views of the surrounding countryside.

Tourists can also enjoy a range of adventure activities at Sinhagad Fort. These include trekking, rock climbing, rappelling, and paragliding. The fort's rugged terrain and challenging trails make it an ideal destination for outdoor enthusiasts.

One of the most popular attractions at Sinhagad Fort is its food. The fort is famous for its delicious local delicacies, including the lip-smacking 'bhakri' and 'pithla', a traditional Maharashtrian dish. Visitors can enjoy these local delicacies at the fort's many food stalls and restaurants.

2.1 Tourists visiting Sinhagad Fort generally spend on the following:

1. Entrance fee: Visitors to Sinhagad Fort need to pay an entrance fee to access the fort.
2. Food and drinks: Tourists may purchase food and drinks from local vendors and restaurants located near the fort.
3. Souvenirs: Tourists often buy souvenirs such as postcards, keychains, flags and other items as a way to remember their visit to the fort.
4. Transportation: Tourists spend on transportation to reach the fort, such as hiring a taxi or renting a car or paying ticket fare to the electric buses.
5. Activities: Depending on the time of year, tourists may be able to participate in activities such as trekking or camping.
6. Accommodation: Some tourists may choose to stay in nearby hotels or guesthouses while visiting the fort.

2.2 Impact of the Pandemic on Tourism on Sinhagad Fort:

The tourism industry in India has been hit hard by the COVID-19 pandemic. Many popular tourist destinations, including Sinhagad Fort, have seen a significant drop in the number of visitors due to the pandemic. The fort has been closed to tourists for most of the pandemic, resulting in a loss of revenue for the local community and businesses that rely on tourism

The impact of the pandemic on tourism on Sinhagad Fort has been significant.

The fort was closed to tourists during the lockdown period, resulting in a complete halt in tourist activity. Even after the restrictions were lifted, the number of tourists visiting the fort has been significantly lower than in previous years due to fear of contracting the virus. This has resulted in a loss of revenue for local businesses that rely on tourism, such as hotels, restaurants, and souvenir shops.

The economic challenges faced by sellers and shopkeepers on Sinhagad Fort due to the pandemic include:

1. **Reduced Footfall:** The pandemic has led to a significant decline in the number of tourists visiting the fort, resulting in reduced footfall for sellers and shopkeepers. With fewer

customers, businesses are generating lower revenues, which is a significant economic challenge.

2. **Supply Chain Disruptions:** The pandemic has disrupted global supply chains, resulting in shortages of goods and services. This has made it difficult for sellers and shopkeepers to obtain the products they need to sell, which can lead to a decrease in the variety of products available for purchase.

3. **Increased Costs:** The pandemic has led to an increase in the cost of goods and services, which can impact the profitability of businesses. This can be due to factors such as increased transportation costs, higher commodity prices, or higher labor costs due to social distancing requirements.

4. **Decreased Tourism Spending:** Due to the pandemic's economic impact, tourists are spending less on leisure activities such as shopping. This decrease in spending can impact the sales of sellers and shopkeepers at the fort, resulting in lower revenues.

5. **Government Regulations:** The pandemic has resulted in various government regulations, such as lockdowns and restrictions on business operations. These regulations can impact the ability of sellers and shopkeepers to operate their businesses and generate revenues.

2.3 Need for Sustainable Tourism Development

Sustainable Tourism is a growing trend in the travel industry, with an increasing number of tourists seeking eco-friendly travel options. SinhagadFort too has implemented sustainable tourism practices such as waste management, renewable energy, and water conservation. In addition, the fort has recently introduced electric vehicle zones to reduce carbon emissions and promote sustainable transportation.

Tourism can have a significant impact on the environment, economy, and local communities. Sustainable tourism aims to minimize negative impacts and maximize positive impacts through responsible travel practices.

Sinhagad Fort has recognized the importance of sustainable tourism and has implemented several initiatives to reduce its environmental impact. The introduction of electric vehicle zones is a significant step towards promoting sustainable transportation and reducing carbon emissions.

Electric vehicle zones have several positive impacts on sustainable tourism on Sinhagad Fort by following ways

1. **Reduced Carbon Emissions:** The primary benefit of electric vehicle zones is the reduction of carbon emissions. Traditional vehicles emit harmful pollutants into the environment, contributing to air pollution and climate change. By promoting electric vehicles, the fort can significantly reduce its carbon footprint and contribute to a cleaner environment.

2. **Improved Air Quality:** The reduction of carbon emissions results in improved air quality, which benefits both tourists and locals. Improved air quality can lead to fewer respiratory issues, allergies, and other health problems.
3. **Enhanced Visitor Experience:** Electric vehicles are quieter and smoother than traditional vehicles, providing a more comfortable and enjoyable experience for tourists. This can lead to increased visitor satisfaction and encourage repeat visits.
4. **Reduced Traffic Congestion:** Electric vehicle zones can reduce traffic congestion, resulting in a more efficient and streamlined transportation system. This can benefit both tourists and locals by reducing travel time and improving overall mobility.

Sustainable tourism is critical for the preservation of natural and cultural resources, as well as the economic development of local communities. Sinhagad Fort has taken several steps towards promoting sustainable tourism, including waste management, renewable energy, and water conservation.

4.3 Schemes and initiatives to promote tourism on Sinhagad Fort

The government of Maharashtra has implemented several schemes and initiatives to promote tourism on Sinhagad Fort, including:

1. **Swadesh Darshan Scheme:** The Swadesh Darshan Scheme is a central government scheme aimed at developing theme-based tourist circuits in the country. Under this scheme, the Maharashtra government has identified and developed the Pune-Aurangabad Nashik circuit, which includes Sinhagad Fort as a major tourist destination. The scheme has helped in developing tourism infrastructure and promoting local arts, culture, and handicrafts.
2. **Maha Tourism Development Corporation (MTDC):** The Maharashtra Tourism Development Corporation (MTDC) is a government agency responsible for promoting tourism in the state. MTDC has undertaken various initiatives to promote tourism on Sinhagad Fort, such as providing facilities for adventure tourism, cultural events, and eco-tourism. MTDC has also developed accommodation facilities and restaurants near the fort to cater to tourists.
3. **Financial Assistance:** The government of Maharashtra provides financial assistance to entrepreneurs and businesses involved in the tourism sector. The assistance is provided in the form of loans, subsidies, and tax incentives to encourage investment in the tourism sector. This initiative has helped in developing tourism infrastructure and promoting tourism-related businesses on Sinhagad Fort.
4. **Development of Forts:** The government of Maharashtra has recognized the potential of forts as tourist attractions and has initiated various programs for the development of forts. The program includes restoration, conservation, and beautification of forts, including Sinhagad Fort, to attract tourists.
5. **Online Promotion:** The government of Maharashtra has launched an online promotion campaign to showcase the tourism potential of the state. The campaign includes promoting tourist destinations such as Sinhagad Fort through social media, digital platforms, and other online channels. This initiative has helped in creating awareness about the tourist attractions in the state and attracting more tourists.

Conclusion

The government of Maharashtra has undertaken various initiatives to promote tourism on Sinhagad Fort, including the Swadesh Darshan Scheme, MTDC initiatives, financial assistance, development of forts, and online promotion campaigns. These initiatives have helped in creating awareness about the tourist potential of Sinhagad Fort and attracting more tourists to the destination. By continuing to invest in tourism infrastructure and promoting the destination through various initiatives, the government of Maharashtra can further increase tourism on Sinhagad Fort and contribute to the economic development of the region

Suggestions:

Sinhagad Fort is an important cultural and historical destination in Maharashtra. The COVID-19 pandemic has severely affected the tourism industry, resulting in a drop in footfall and loss of revenue for local businesses. To increase footfall in the post-pandemic era, it is essential to implement safety protocols, create a strong online presence, develop new experiences, and partner with local businesses.By taking these steps, Sinhagad Fort can once again become a thriving tourist destination. To increase footfall in the post-pandemic era, following steps can be taken:

1. **Promote the Fort as a Safe Destination:** The first step is to promote Sinhagad Fort as a safe destination for tourists. This can be done by implementing strict hygiene and safety protocols, such as mandatory mask-wearing, temperature checks, and social distancing measures. These measures can help instill confidence in visitors and encourage them to visit the fort.
2. **Create an Online Presence:** With the pandemic accelerating the shift towards digital platforms, it is essential to have a strong online presence. This can be achieved by creating a website, social media pages, and listing on travel portals such as Tripadvisor and MakeMyTrip. This will help increase visibility and attract potential visitors to the fort.
3. **Develop New Experiences:** To attract new visitors, new experiences need to be developed. This can include adventure sports, cultural events, and historical tours. By diversifying the offerings, the fort can appeal to a wider audience, resulting in increased footfall.
4. **Partner with Local Businesses:** Sinhagad Fort can partner with local businesses to create packages that offer a complete tourism experience. For example, tourists can be offered a package that includes a trek to the fort, a stay in a local hotel, and meals at a nearby restaurant. This will help promote the local economy and provide visitors with a seamless experience.

6. Conclusion:

The research finds that Sinhagad Fort has immense tourism potential, but there are significant challenges that need to be addressed to make it a sustainable and profitable destination.

The COVID-19 pandemic has had a significant impact on tourism on Sinhagad Fort, resulting in reduced footfall and loss of revenue for local businesses that rely on tourism.

The economic challenges faced by sellers and shopkeepers on the fort include reduced footfall, supply chain disruptions, increased costs, decreased tourism spending, and government regulations.

In the post-pandemic era, steps such as increasing safety measures and promoting sustainable tourism practices can help increase footfall to Sinhagad Fort.
Government schemes such as providing financial assistance and promoting domestic tourism can also help revive the tourism industry.

With concerted efforts by the government and the local community, Sinhagad Fort can emerge as a successful and sustainable tourist destination in the post-pandemic era.

However, sustainable tourism practices such as waste management, renewable energy, and water conservation, coupled with the introduction of electric vehicle zones, can help reduce the fort's carbon footprint and promote sustainable transportation. These initiatives can also enhance the visitor experience, reduce traffic congestion, and contribute to the economic development of the local community.

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