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ABOUT THE JOURNAL

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MESSAGE FROM THE GUEST EDITOR

Reasoning without knowledge is meaningless. Explanation without logic has no meaning! Every day we come across countless thoughts around us, but it is difficult to differentiate between conflicting thoughts, truth and falsehood. There is an old tradition of correcting the wrong through arguments. If you are strong then your weak arguments will also be considered very strong. Even today in India, the arguments of the powerful are considered more powerful than a weak.

In a democratic system where the views of the majority are considered appropriate - the logic of the minority stands at the edge of the crowd and sobs. When the voice of the shouting aggressor starts overpowering the sobs of the poor and helpless people, then the experiment of democracy starts failing and the country moves towards dictatorship. When the common man is silent and he stops resisting injustice, then it should be accepted that the country is going towards the abyss.

The basis of education in India is 'employment'. But which type of education will give employment? No one has the answer to this. In the name of employment-oriented education, we have neglected subjects like humanities, language & literature and social sciences. Students are not interested in these subjects, through these subjects provide basic wisdom to understand the country, world and society.

People usually search on social media to understand the issues related to these. Social media is full of lies, propaganda, advertisements and skewed drafted news. Such news and information pollutes the human mind.

This problem is very deep in India. Due to these materials available on social media, tension is increasing in the society. People's ability to think and understand is getting badly affected. In such a situation, we need serious research journals like Jamshedpur Research Review, which not only analyze the issues, but go to the root of the issues and increase the decision-making ability of the readers.

I am very happy that this great magazine has given me an opportunity of play the role of the guest editor of this issue. I am very thankful to JRR management for this. Hope you all like all the articles included in this issue.

Jai Hind!

Guest Editor

Dr. Sanjive Kr Singh
Head
PG department of Commerce & Management
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1 February 2023

INDEX

DECODING THE STRUCTURAL, TEXTUAL, HISTORICAL AND CULTURAL ATTRIBUTES OF CHHAU

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Abstract

This paper aims at decoding the structural, textual, historical and cultural attributes of Chhau, connecting the dots between its native ecology, folklore, mythology and anthropology. Under the post-modern deconstruction trend, it aims at using the modern tools of keyword research methodology for analysis and decoding. The textural and structural contemplations after decoding offer solution to the long debatable questions of classifying its unique design and composition. It reveals the double consciousness of its fabricated native form and content giving it an all India Diversified Unified character beside a native 'Oriya' origin.

It questions the pre-established inflexible cannons of traditional classical drama giving prominence to the ' *Desaj*' folklore and theatre.

On a global level it also tries to re-analyse the orientalist claims of Western fantasy theatre/ magic realism and opens up an aspect to review our native folklore and tribal culture in a wider dimension and light. Most prominently it examines the multi-dimensional metaphysical approach of this folklore dance theatre-Chhau. It cites to its problems of complex composition and also offers solution of an autonomous approach. This paper is a humble attempt to view through Chhau, our native cultures and art forms in a new light.

Introduction

Chhau dance, also spelled Chhou dance, is a semi classical Indian dance with martial and folk traditions. It is found in three styles named after the location where they are performed, i.e., the Purulia, Mayurbhanj and Seraikela.

The dance ranges from celebrating martial arts, acrobatics and athletics performed in festive themes of a folk dance, to a structured dance with religious themes found in Shaivism, Shaktism and Vaishnavism. The costumes vary between the styles, with Purulia and Seraikela using masks to identify the character. The stories enacted by Chhau dancers include those from the Hindu epics the *Ramayana* and the *Mahabharata*, the *Puranas* and other Indian literature. The dance is traditionally an all-males troupe, regionally celebrated particularly during spring every year, and may be a syncretic dance form that emerged from a fusion of classical Hindu dances and the traditions of ancient regional tribes. The dance is amazing and brings together people from diverse socio-economic backgrounds in a festive and religious spirit. After the cultural ceremonial festivities or *Anusthanas* end, the Chhau *mandali* then leaves for their multidimensional majestic dance drama performance. The *Anusthanas* takes place only once a year in the month of *Chaitra* but the post-ritual performance is enacted throughout the year. It is more like a cultural Chhau *Utsav*. Chhau is a *Desaj* dance drama which has an autonomous self-constructed composition, dance style, choreography, and dance steps (*Mudras*) which deviates from the traditional classical norms of dance-folklore theatre.

Most critics view Chhau as fundamentally a notable creation of the Oriya culture. However, some critics like Shyama Prasad Mukherjee claims its roots be originating from Bengal

(Purulia). It is believed to have been originated in Seraikela (Jharkhand) which eventually modified and developed into the two other schools - Mayurbhanj (Odisha) and Purulia (West Bengal). In the medieval India, these three areas were the part of the vast Kalinga Province. The three differ on the basis of their structure and style like the masque which is an integral part of the other two schools is absent in Mayurbhanj Chhau. This project work focuses on the cultural study of Seraikela Chhau.

Etymology

There are different debates and claims regarding Chhau's etymology. It is considered to be have multiple derivations based on its multidimensional characteristics and connotations. Some critics connect it word *'chhahya'* which means shadow; reflective of the notion of using masques. *'Chhadam'* (Sanskrit) meaning camouflage is another masque and costume related etymological notion. Owing to its militant origin (*Parikhanda* and Pike dance) it is believed to be extracted from Marathi word *Chhavani* meaning Barracks.

The most apt derivatisation owes allegiance to its native Oriya culture. According to Kapil Vatsyayan, 1995, "Chhau has been derived from the native vernacular Oriya word ‘Chau’ meaning 'to hide and hunt'. It fits best to all its structural, geographical and textural contemplations".

Genesis/Origin

Some critics trace its history and origin to the greeting militant dance-drama performed by the soldiers of Kalinga on the advent of *Raja* Maansingh (For his welcome by the then king in Seraikela).

- The sculptural carvings at the caves of Khandagiri, Udayagiri, Konark Temple and the fourteenth century *'margol'* or *'pattachitra'* attribute to the *mudras* and *bhava bhangimas* of Chhau. This offers justice to the claim of Chhau being the most ancient *Desaj* theatre dance style (just like Odishi is the most ancient classical dance form).
- Around 261 BC when Ashoka attacked the province Kalinga, its king was Kharavela (who converted from Jainism to Hinduism), is a pioneer in establishing and popularizing the pre-cannons of Chhau - '*Parikhanda*'. It was a martial dance form developed with the purpose of militarizing (preparedness) the local masses in case of any attack. It later came to be known as 'pike dance' eponymous to the soldiers who popularized it among the local villagers. Chhau, is said to be a modified version of this 'Pike dance'. The shields replaced by costume, vermillion covered faces with masks and the dance steps and sword fights still use the same martial pike dance techniques.

Literature Review and Objectives

Chhau, a unique and incredible art form of the Odia folk culture, is such a metaphysical dancedrama genre, which in accordance with its native lifestyle and ecosystem has developed a unique acting method, composition and dance style of its own. If Odissi is an example of pure classical style then Chhau represents the pure native (local) style/pattern. However, deviation from the classical *natya-sutras* is not its weakness rather provides its structure and texture a unique distinctive originality and flexibility. It is the result of this "*Desaj*" trait, that Chhau today has successfully established a recognised identity at the national and international spheres.

Chhau is a distinctive dance drama genre and follows a self-constructed structure (acting/*taal*/dance method) hence it cannot be evaluated on the traditional classical model/codes. Therefore, what to call it and how to classify it, is a debatable and controversial question- is it '*Desaj*' or Classical? Can it be called a Lyrical Ballad or Folk Martial? Is it similar to the Street plays or a Travelogue? Is it religiously aesthetic owing it origins to temples? (Like the religious anthem *Bhaggawat Mela*) Or is it a form of *Nautanki*? (Similar to *Ramleela*). Has it a metaphysical approach? or follows the format of typical folk-theatre ? Attempts have been made by the critics to define and classify Chhau, based on the traditional classical parameters. However, I firmly believe that instead of forcibly trying to fit in Chhau in any of these pre-designed formats or framework, it should be analysed as an independent entity, keeping alive its distinctive originality, form and texture.

Art is the symbolic reflection of a society and its culture, inclusive of both its past and the present. Chhau's structure can be said to be carrying a double consciousness. On a lower scale it is connected to the native lifestyle, agricultural and hunting patterns and ecology but on a larger scale it carries an all-India-unified characteristic (mostly Hindu) owing to its varying plots between the *Vedas, Puranas, Mahakavyas*, Epics and Folklores.

Research Methodology

- Texture and structure, on both the levels Chhau is different from its contemporary dance forms - classical or *margi*. Therefore, the same parameters and methodology cannot be applied for its evaluation and analysis.
- Like its form and structure, the methodology used also needs to be unique and different.
- Since any art form in its texture and structure is the reflection of the consciousness and composition of
- its society.

In the words of 'deconstruction' every artform in a way is a cultural, historical, literary ecological and artistic code (an artifact) of its era which needs to be decoded. Chhau is also an artform therefore its reflected exclusive native-society culture needs to be decoded through decoding its structure and texture for a proper analysis and study. The presented key word project is a humble attempt to analyse "Seraikela Chhau" through its encoded socio-cultural attributes using the post-modern deconstruction tools of keyword extraction to decode a cultural artifact.

Aanushthanik Vidhaans/Pre- Ceremonial Rituals

Chaitra- The thirty-day festive ceremonial rituals or *Aanushthanik Vidhaans* are observed in the month of *Chaitra* every year (the harvest month according to annual crop cycle) connecting it to agrocultural indigenous roots. This pre-ritualistic festival begins on the first day of *Chaitra* month (according to annual Hindu calendar) and is usually completed by the festival of 'Baisakhi' (the harvest festival). This is symbolic of the completion of the annual agricultural cycle. Throughout this month different totems, rituals and religious performances are observed.

Shiv gotra- During the entire *aanushthanik* period (30 days) all the participants are treated equivalent. After the *dharmatakarani* (the priest who is responsible for ritualistic completion and gotra conversion, he may not necessarily be Brahmin) converts them to the Shaivism (*shiva-gotra*) and they become akin to each other breaking the social-hierarchical code. During this thirtyday ritualistic festival all the participants wear '*janeu*' symbolising the caste neutral approach of Chhau. It offers equal representation in all the ceremonial activities and unifies the diversified social fabrication as *bhaktas* (*shaivyas*) in the eyes of God.

Hrishisharshva-The participants of the ceremony lead the lifestyle of a sage throughout the *aanushthanik vidhaans*. They are on strict pure vegetarian *sadhvik* diet. In the period of thirty days, they have just one special meal consisting of "*arvaa* rice"; this one- rice meal is known as *hrishisharshva*. This rice-ritual is believed to have Vaishnavism contemplations. For twenty-five days the participants observe this *sadhvik* life-style and practice the dance drills.

1) *Garagari* - It is observed on day twenty-six of the *aanusthanas* and marks the beginning of the main ritualistic festivities. The last four ceremonies are the most important, the first one being *'Garagari'* is observed by the devotees or participants flipping and rolling over on the ground from their left to right (demonstration of different martial art techniques) traveling to the riverside and

preparing for the holy *'yatraghat'*. It is to be noted that a *Dalit* devotee leads this martial parade, which again highlights the liberal caste-neutral attributes of Chhau.

- Yatraghat: It is the holy procession which takes place after a ritualistic bath '*majjandhara*'. The procession is marked by varying Shaiva and Vaishnava rituals.
- Mangalahat: The holy river water is kept in a red painted pot; Mangalahat. The water from this pot is taken to a *Shivmandir* for invocation to Shiv. On a spiritual level *Mangalahat* is symbolic of Nature and the holy water inside it symbolises female cosmic energy; therefore, the sacred water is called *'Shakti'*: the counterpart of Shiva. Together it symbolically completes the universal balance of nature.
- *Ghatawali*: The devotee carrying this sacred *Mangalahat* is known as *'Ghatawali'*. His face is covered in in red *Kumkum*, similar to the pot he is carrying. He wears *ghungroos*, bangles and *kaner* flowers (Shiva's favourite flowers) He too like the other important ritual bearers belongs to the lower caste usually a *'Teli'*.

2) *Vrindaavani*: The second night of *yatraghat* is called *Vrindaavani*. It is the day twentyseven of the *aanusthanas*. It depicts the dramatic representation of the *Ashoka vatika adhyaya* of *Ramayana*, when lord Hanuman sets the *Ashokavatika* on flames. The devotees enacting Hanuman dance through the different Shiv temples finally leading to *Akharas*. It is interesting to note that the underlying Vaishnavik contemplations is derived from the *Ramayana* but at the same time symbolizes the unification of both (As Hanumana is considered to be the incarnation of lord Shiva).

3) *Garima Bhara*: It is the third night of the main *aanusthanas*, highlighted with the *KrishnaGopi Leela*. This ritual observes a turn from the Martial *Parikhanda shaili* to Traditional Indian Theatre. Along with the elements and theme of militarization, martial arts and *Tandava*, the *Lavasyaa rasa* is incorporated in Chhau's texture. The divine devotion and love-tease intimate relationship between the *gopikaas* and Krishna is presented. The *matki* used during the dance performance is kept overnight in the temple and next day its holy water is sprinkled among the devotees' families.

4) *Kaalika Ghat*: It is fourth day of the main ritualistic *aanusthanas* and marks its end.

5) *Kamana Ghata*: On the last day, the sacred pot called *Kamana Ghata* is carried by a devotee wearing complete black clothes to the *Shivalinga*. After the *Shivabhishek* rituals, the half- filled *Kamana Ghata* is buried beside the *Shivalinga*. Next year during the same annual agricultural cycle in the month of *Chaitra*, this buried *Kamana Ghata* is extracted. It is symbolic of the completion of an annual cycle.

- Totems - The symbolic representation of performed rituals during the *Kaalika Ghata* are traced to spiritual awakening through totems. For example, the corpse revival enactment ritual. During this a devotee enacts to be dead, lying down above the buried *Kamana Ghata* who when touched by any distinguished man (like king) comes back to life. It is symbolic of the buried desires, which when touched by fame/money comes back to life to haunt. It carries a moral connotation of living a *sadhvik* life. In some Chhau *mandalis*, the left water in *Kamana Ghata* when extracted next year is used for monsoon predictions.

Decoding the Texture

Double Consciousness-

There is a dialectical relationship between Chhau's structure and texture. Its form (structure) is *Desaj* and depicts the native rural lifestyle and ecology through different *Chaalis* and *Uflees* (footsteps and mudras).

However, its Texture incorporates elements and themes from the native Oriya Folklore as well as the Hindu Cultural Mythology as a whole (the Epics, the *Puranas*, the *Vedas,* etc.). This gives Chhau's texture an All India Integrated Religious Consciousness.

The amalgamated texture bridges the dots between the regional Oriya and National Identity. In this way, the structure incorporates in Chhau a 'Double Consciousness' and Chhau uplifts itself to being national artifact along with the folklore tribal contemplations.

Peasant Militia

WW Hunter, in his 'Account Of Bengal (Volume XVII)' remarks how in an informal way the martial dance theatre; *Parikhanda* (precursor to Chhau) was being used as a military preparedness and training programme (to counter the enemy attack). This unique political military design was developed by Raja Kharavela (after he lost the Kalinga battle against Ashoka) and remained reserved by the later rulers of Kalinga who popularized it as 'Pike Dance'.

The objective was to create a Second Line of Defence or 'Peasant Militia' by popularizing this martial artistic dance form among the common masses/peasants. A special Society was set up for this unique military skill experimentation. The sculptures/paintings at the Khandagiri and Udayagiri (Odisha) offer evidence to this theory. Chhau in this way successfully fulfilled its social-political-historical-artistic responsibilities. It originated not as a form of mere entertainment but a socio-political artifact to fulfil the rising military skill preparedness.

Thematically, the texture of Chhau can be divided into two major Parts: the *Parikhanda* (*Khela*) and the Multi-dimensional approach (*laasya* oriented).

1) *Khela*-It typically contexts to the *Parikhanda* and refers to the different militant/martial elements used in Chhau. It includes sword fights, shield fights, sharp footsteps, martial drills etc. The most popular *Khelas* in Chhau include- *Astradanda*, *Pandajuri*, *Neemapanda, Meltaal* etc. The plot/scene usually attributes to the *Raudra Rasa* and *Tandava* in a *Khela*.

2) Multidimensional- As they are not advanced form of *Parikhanda*, Chhau has successfully established its multidimensional texture. Other than the *Tandava* (in *Khela*), Chhau in its wide ranging and evolving plotline covers all the eight-*rasa* including *Lasya* or *Sringara* being the most prominent after the *Raudra*. The Vaishnava trait of *Krishna Leelas* and *Ramayana* especially depict the *laasya* content.

The content is symbolici of multicultural social, religious, literary and spiritual consciousness of India. The performances are usually single scene enactments, plotline taken from Hindu Mythology and Scriptures- *Upanishads*, *Vedas*, Epics etc. The Folklores of Sages, Demons, Durga makes its texture mystical.

Chhau's thematically represents the established ecological connection between the nature and the derivative native tribal lifestyle (mostly Oriya). The plot-structure, rituals, acting method, choreography and *Bhangimas* are mostly influenced from natural elements like the butterflies, peacock, crop-cycle, seasons etc. Chhau texturally decodes its complete social-spiritual- ecological multicultural fabrication. It becomes a microcosm for Indian Cultural Consciousness.

Decoding the Structure

Musical Composition and Instruments

The nature of musical instruments is typically native. It includes *Dhol* (four types - *Dhol Ghumsa, Tika, Nagada*); a special kind of flute called *Mahuri*, in the latest trends even harmoniums are being used.

The music played during performance varies according to the texture and acting method highlighting underlined *bhava*. The Musical Composition used is highly influenced the works of folk Oriya Singers (in Seraikela Chhau). It is mostly non-lyrical and more like a symphony based on the *Taal* System. The roots of the musical composition are not based on the classical codes of *Natyashastra* rather on the native folk culture and lifestyle.

The subject matter of the musical composition in Seraikela Chhau is quite diverse integrating elements of nature mythology and native lifestyle used accordingly to the textural patterns.

- Mythology- based on different *Prasangas* from the *Mahakavyas* and *Puranas*-like *Duryodhana Urubhaanga, Parvaati Haran, Chandrabhaga*, etc.
- Natural- based on Naturalistic elements of fables and music of different animals, birds and waves like snakes, peacocks, butterflies etc.
- Local Folklore and Culture- On themes of Peasants, fishermen, maidens etc.

The self-constructed diversified musical composition based on its texture is a fundamental distinction of Chhau.

Dance and Acting Style

The dance and acting style of Chhau is original and distinctive. For the Acting Method it uses mostly *'Aangik Abhinaya'* and *'Chhesta-Kritya Abhinaya'* which focuses mainly on bodily movements especially of the lower body parts like waist and footsteps as during most of the performance the actors' hands are equipped with swords and shields. Dialogues and facial acting or *Mukhaaj Abhinaya* are absent here (Masques are used).

Bharata Muni in *Natyashastra* gives reference to primarily five different types of footsteps but Chhau, deviating from the Classical *Margi* norms encompasses fifty different types of footsteps which are classified as *Chaali, Topka and Uflee*.

- *Chaali* and *Topka* - *Chaali* refers to the different foot-steps used in Chhau influenced from the movements of different animal, birds and naturalistic elements. It is composed of different directional patterns – Ached (*Gomuz Chali*), Linear (*Soor Chali*) and Rotatary (*Sarpit Chali*) depicting different textural contemplations.

During the initial performance the actors remain in the *Mudra* of *Dharaan*. The Chaalis are collectively called *Topka*. The most important *topkaas* include

- Naturalistic movements – *Sagargati* (wave), *Baaghagati* (tiger), *Mayuragaati* (peacock).
- Mythological Movements - *Soor Gati* (Devtaas) and *Kansagaati* (Asuras)

Uflees- These footsteps unit have developed from the movements of agricultural and Native Cultural Rustic Activities. The word *Uflee* has originated from an important rural-lifestyle activity of making cow dung cakes or uflees. The most prominent ones being -

- *Dhaan Katu Koola, Pachura* (wheat harvesting and segregation movements)
- *Maanja* (maidens cleaning utensils)
- *Shikari* (hunters steep move)
- *Dumka, Bhoola, Ghata, Denga*, (to fall, to forget, to throw and to jump) etc.

The *Uflees* and *Chaalis* integrated decide the pace of the dance/performance, which is known as *Bhangi*.

Stage, Costume and Masques

The stage is usually square shaped and at relative height from the ground for clear visibility of the footsteps to the audience. The costume usually carries *dhotis*, Pyjamas and Shields for flexible leg movement and steep upper body postures. The colours coordinates used in the Masques and body paints have special connotations relating to the *rasa* theory and seasonal cycles. In Seraikela Chhau, Pink colour is used for the portrayal of Good characters and Green for odious or evil.

In Seraikela Chhau the Masques used are at close proximity to the native ecology therefore peacock, swan, lion shaped Masques are also in use along with the mythological characters. As dialogues and facial expressions are absent in Chhau being a *Aangik* Dance Theatre. The Masques used play a significant role in identification of the characters. It marks the end of individual identity (owing to their gender, class, caste, physical appearance differentiation) and felicitates the audience as well as the actors to directly connect with the character. The Masques also add to the mystical elements in the play making it more fantastical, magical and effective. Chhau uses a magical setting to depict the socio-political-ecological realistic truth in a very naturalist manner, blurring the lines between fantasy and reality.

Conclusion

After analysing the structure (form) and texture (content, subject and theme) the following conclusions were made:-

- Chhau is a unique Oriya Native Theatre (*Desaj*) form with self-constructed dramatic codes which deviate from the traditional *Margi* (Classical) approach.
- With its evolution and modification over the years, the martial (*Parikhanda*) subject matter got extended taking in context different aspects of natural elements, native lifestyle, mythological and mystical content (mostly taken from the Epics, *Vedas*, *Puranas*)
- Owing to its mystical character, supernatural and ecological themes, it fails to fit the form of Naturalistic Theatre.
- It also fails to fit into the design of Surrealism, lacking the elements of psychoanalysis or Subconscious or dream.
- Though Chhau has enormous components of historical fables Folklores and Myths, it still cannot be totally called Fantasy Theatre. As unlike the fantasy theatre Chhau depicts the socio-cultural reality and was born out of political agenda to help secure and counter the enemy attacks through peasant training cultural programme and not mere entertainment.

On further analysis of Chhau's structure and texture, it was observed that Chhau has attributes similar to that of Magical Realism. It composes of mythical, fantasy, natural-supernatural and metaphysical themes.
The mythical and natural elements are presented through realistic characters in a dramatic way. Using substantial amount of realistic detail and employing magical elements to make a point about reality is an important feature of Magical Realism. Similarly, in Chhau natural, supernatural and mythical elements (seasons, peacock, deer, etc.) are presented through realistic characters. The line between the reality and magical fantasy seems blurred. Chhau too like the Magical Realistic genre breaks the conventional classical codes, formulating a native pattern and form of its own. In this way Chhau both in its structure and texture can be called Magical Realistic Theatre. "By including elements of the fantastic in a Realistic Way is another important way to get to the truth" - Salman Rushdie.”

Just like the Latin American theory of the genesis of Magical Realism, which believes it to be born as an impression against imperialism, Chhau too in that context is born out of the political objective to crush down slavery, imperialism and People Militia (as a second line of defence). It is to be noted that the term Magical Realism is influenced from the German-Italian painting style of the 1920s.

Salman Rushdie remarks that 'Magical Realism is a new name given to an old thing'. With this new contemplation of Chhau being an example of magical Realistic Theatre brings into surface the importance question of re-analysing our native indigenous folklore in a broader light. It can be concluded that the roots of Magical Realism are not essentially connected to a Latin American and African Cultural but to our very own native and tribal Folklores (In case of Chhau being a Magical Realistic Theatre art form essentially to the rich Oriya culture).

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CENTRAL BANK DIGITAL CURRENCY (CBDC): A GLOBAL PERSPECTIVE

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Abstract

With the rapid development of technology, many countries have adopted or intended to implement digital money as a means of exchange. These digital currencies will be held centrally by the nation's central bank and be accepted as legal tender. The introduction of digital currency will make all significant transactions transparent and accountable. CBDC (Central Bank Digital Currency) could potentially pave the way for the rapid and low-cost internationalization of payment systems. The research paper attempts to investigate the three stages of the global trends in digital currencies across nine different countries. India is in the second stage, which is pilot testing the digital currency in the country. The present study further explains the differences between digital currency, cryptocurrencies, and UPI payments.

Keywords Central bank digital currency, Demonetization, Cryptocurrency, UPI payment, RBI.

1. Introduction

Massive amounts of data can now be gathered, handled, and transmitted easily and quickly because of the convergence of improved digital technology and expanded use of the internet. Digital technology has also changed the financial system. Despite the fact that information technology and communication have been improving for a very long time, the last ten years have seen a number of significant developments. The Covid-19 pandemic may have sped up technological development even more (Ozili 2022). As a result of these developments, various central banks and governments have intensified their efforts to explore the prospect of developing a digital form of fiat currency.

CBDC (Central Bank Digital Currency) is a form of digital or virtual currency issued by the central bank. CBDC although has no physical manifestation as opposed to paper currency but could serve as a viable alternative to conventional physical currency. It utilises online accounting and transfer systems to keep track of transactions. Thus, digital money, like its monetary equivalent, serves as both a unit of account and a medium of exchange. When compared to physical cash, CBDC has the advantage of streamlining the entire monetary transaction. In light of these benefits, numerous national governments have prioritised the shift to digital currency, and the popularity of CBDC has surged in recent years.

According to the concept note on CBDC issued by RBI (Reserve Bank of India) in October 2022 “As of July 2022, there are 105 countries in the process of exploring CBDC, a number that covers 95% of global Gross Domestic Product (GDP). Ten nations have issued CBDC, with the first being the Bahamian Sand Dollar in 2020 and the most recent being

Jamaica's JAM-DEX. Currently, seventeen additional nations, including significant economies such as China and South Korea, are in the pilot phase and preparing for potential launches. In April 2020, China became the first large economy to test a CBDC, and by 2023, China hopes to have the e-CNY widely used throughout the country. CBDC is widely viewed as a potential innovation and the next stage in the evolution of sovereign currency." (Concept Note on Central Bank Digital Currency FinTech Department Reserve Bank of India 2022). The global dialogue on CBDC is also encouraged by the Bank for International Settlements (BIS), which assures that central banks will continue to learn from one another and will be able to collaborate on crucial CBDC-design issues.

Nirmala Sitharaman, the finance minister of India, made the announcement in February 2022 that the Reserve Bank of India (RBI) will launch a digital version of the rupee during the financial year 2022–2023. She claimed that a CBDC would help India's economy by giving the country a stable, regulated digital currency to compete with private cryptocurrencies, which would improve the effectiveness of the Indian monetary system while cutting costs. The Reserve Bank of India (RBI) is highly opposed to private cryptocurrencies due to the possible national security and economic risks they pose. Shri T Rabi Sankar, the deputy governor of the RBI, expressed concern in a recent speech that the widespread use of private cryptocurrencies may undermine the government's ability to manage monetary base and interest rates. Thus, CBDC becomes the need of the hour.

1.1 Strengths and Weaknesses of CBDC

The key benefits of using digital currency are greater transaction speed and decreased transaction fees. In contrast to cash-based systems, which require physical storage and security precautions, the digital currency does not necessitate these things; hence, it can be utilised to include previously excluded people in the market (Jamader et al 2022). The usage of digital currency in online wallets and mobile phones is one example of how those without bank accounts can participate in the economy. CBDC help streamlines the production and distribution operations by eliminating the need to physically produce and transport currency notes from one location to another. There is a possibility that the use of digital currency would further revolutionise the remittance sector by eliminating intermediaries and reducing the fees connected with international money transfers. CBDC offers a lot of unique benefits, but they also have a few downsides as well.

Firstly, digital monetary systems may be susceptible to hacking. By targeting these types of centralised digital money systems, hackers can bring down crucial financial networks and ruin the economic foundation of a nation. Secondly, digital currencies have their own handling and storage requirements including internet access and smartphones that must be met. In addition, it is the user's obligation to comprehend the fundamentals of digital currencies, such as how to access a digital wallet and securely store digital assets. A more accessible method is necessary as more individuals adopt digital currency. (Meena Kumari, 2021).

To conclude, CBDC is a significant advancement in the banking and finance sector. It eliminates delays and expenses and facilitates online payment alternatives. Despite the fact that digital currency is still in its infancy, it will unquestionably play a significant role in the future of banking.

2. Literature Review

This section addresses several scholarly articles published on various aspects of CBDC throughout the world The Asian Development Bank Institute (ADBI) published a working paper (Shirai, 2019) that compared the theoretical and practical efficacy of central bank money and private sector money in a number of developed and developing countries. The author believes that some national central banks have expressed concern over bitcoin and other cryptocurrencies due to their extraordinarily fluctuating pricing. Thus, some central banks have explored the use of Distributed Ledger Technology (DLT) and the issuance of their own digital currencies to the general public or banking industry.

On the advice of the Bank for International Settlement, pilot programmes to deploy central bank digital money have been conducted globally (Bhowmik, 2022). Following the enactment of their respective laws, several countries, including India, have begun issuing CBDC. The study also examined the state of digital payments in India as well as the numerous CBDC monetary policy avenues developed by economists exploring CBDC issuances, design concepts, and implementations. Eichengreen, (2022) tried to determine the rationale behind India's decision to issue CBDC. Further, they also evaluate the progress of CBDC in India in relation to other countries.

Xu's (2022) research in China indicated that the China CBDC may be distributed not only by commercial banks but also by internet and technology companies. Furthermore, the author emphasized that the China CBDC will aid in the enhancement of the country's economic monitoring and implementation of policy. The China Banking and Clearing System would also contribute to the development of the international monetary system and the internationalisation of the (Renminbi) RMB the Chinese currency.

Allen et al (2022) presented a summary of China's fintech experience, emphasising payments, money transfers, fintech loans, and its recent CBDC pilot developments (e-CNY). They concluded that the introduction of CBDC has the potential to provide solutions to current challenges inherent to conventional financial systems.

Bofinger and Haas (2020) offered a holistic view of central bank digital currencies. They divided the current ideas for CBDC into two categories: new payment instruments provided to the general public by central banks and new payment networks managed by central banks. They believe that a systematic analysis of CBDC projects is necessary to understand how they might interact with the existing domestic, supra-regional, and global payment systems.

3. Objective Of The Study

In India, the introduction of digital currency as a legal tender is currently in the trial phase. In ight of this, it is crucial that the Government of India conduct sensitivity analyses of legalising digital currency in order to examine the potential benefits and limitations that may emerge (Zeya and Majumder 2020). In light of these concerns, the following are the study's objectives:

- To understand the concept, importance and working of Central Bank Digital Currency.
- To gain an understanding of the perspectives of various countries regarding digital currency issued by their central banks.
- To comprehend the present position of CBDC in India.
- To assess and contrast UPI payments and cryptocurrencies with the e-Rupee.

4. Research Methodology

An in-depth analysis of secondary sources is performed to assess the various models of digital currency and their potential significance and use in India. CBDC-related reviews and articles from the web, print periodicals, and national and international journals are collected and analysed. Additionally, newspaper articles and circulars from international organisations are examined to get pertinent information.

5. Results And Analysis

Digital currency across the world

Many countries have started developing their very own digital currencies to be issued by their central banks. The Central bank will recognise digital money as a valid form of payment and regard it as legal tender. The world is headed toward a future with a digital economy and a future that uses digital currency (Ian Smith 2022).

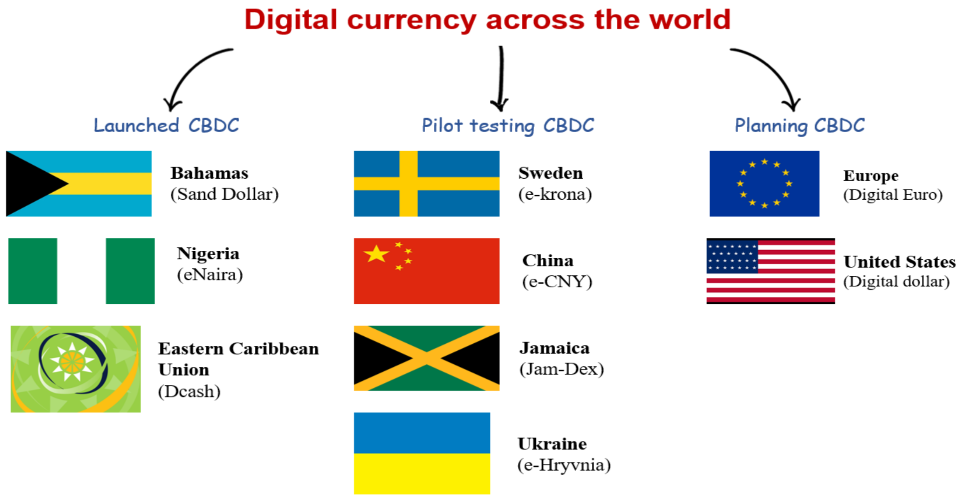

Figure 1 – Digital currency of Various Countries.

5.1.1 Bahamas-The Bahamas launched Sand Dollar, the first digital money to be issued by a central bank, in October 2020. It is a digital representation of the Bahamian dollar (https://www.sanddollar.bs/about). Regular payments and other financial services are encouraged under digital currency. It improved transactional efficiency and decreased the cost of providing services. Sand Dollar's strongest attribute is that it may be used without an internet connection. Once the network is back up, Sand Dollar will update any payments made offline. It provides many benefits, including real-time transaction processing, secrecy protection, fraud monitoring, etc. Bahamian CBDC is exclusively intended for internal use and cannot be used to make payments to anybody outside of the country.

5.1.2 Nigeria- In 2021, Nigeria became the first nation in Africa to establish a CBDC. Nigeria's CBDC, also termed the eNaira, is kept in a digital wallet. In order to access eNaira, often known as NIN, the user must have a national identity number. The technology behind eNaira is the same as that behind cryptocurrency. The primary goal of eNaire is to lower the costs associated with remittance transfers that are incurred when transactions take place worldwide. Money transfers from wallet to wallet to Nigerian recipients are free (Jack Ree, 2021). eNaira is entirely traceable and account-based. eNaira will help to improve financial inclusion, transparency, and informal payments. To encourage its citizens to adopt CBDC, Nigeria has banned ATM cash withdrawals of more than $45 per day and $225 per week. The nation is making an effort to encourage using less cash.

5.1.3 Eastern Caribbean Union- On March 20, 2021, the Eastern Caribbean introduced DCash, an electronic version of the East Caribbean Dollar (ECD). Using DCash with or without a bank account is possible. It is accessible on a smartphone, where a downloaded app is required and a QR code is used for payment. People without bank accounts would visit an agent who had been pre-approved or a non-banking financial institution, which would then confirm the accuracy of the applicant's information before approving a DCash wallet. It facilitates fee-free real-time transactions. It was developed to increase financial inclusion and provide assistance after natural disasters when it is challenging to deliver physical currency to remote populations. The main objectives of DCash are to promote economic growth and develop the digital economy (Ian Smith 2022).Antigua & Barbuda, Dominica, Montserrat, St. Kitts, Grenada and Nevis, the Grenadines, Saint Lucia, and St. Vincent are the seven nations that use Dcash.

5.1.4 Sweden - The Sveriges Riksbank, the central bank of Sweden, is testing the e-krona digital currency. The Swedish central bank will issue e-krona to banks and other financial institutions, who will then distribute it to the general population (Julin 2022). Accenture and the Swedish Central Bank are collaborating on this project. In 2017, the e-korna project was launched which began its trial experiment in Sweden in 2020. The central bank is investigating its pilot project in 2 phases. The first phase is to test the technical capabilities of e-krona and examine its legal ramifications. The second phase involves the investigation of e-krona's offline functionality and integration of all service providers into the e-Krona network. The goal of the central bank's integration of e-krona into the internal system is to enable customers to convert cash from their bank into e-krona and vice versa. Many nations are moving towards cashless societies without considering the difficulty faced by the elderly or people with specific disabilities (Ozturkcan et al., 2022).

5.1.5 China-Since 2014, China has been investigating digital currency. In April 2020, China launched a pilot test of its digital currency, also known as e-CNY or digital renminbi. China's initial trial took place in Shenzhen, Suzhou, Chengdu, and Xiong'an. In 2021, it expanded to include Shanghai, its largest province. China wants to employ the CBDC widely within its own country. (Xu, 2022). Since private mobile payment services like Alipay and WeChat pay to dominate the market in China, it's become challenging for the digital Yuan to get noticed by the public. Feedback from the pilot programme indicates that Chinese consumers have very little interest in switching to e-CNY because private wallets are already available in the market (Allen et al., 2022). China's central bank and government need to put more effort into improving the e-CNY system. China decided to offer digital yuan payment services to guests of the Beijing Winter Olympics (2022) in an effort to encourage more people to adopt e-CNY, however, this was not very successful due to a lack of marketing. China has been conducting digital money pilot tests for the past two years. Around 140 million users opened digital currency wallets as of October 2021. In China, e-CNY transactions have totalled 62 billion yuan. The e-CNY digital currency trial is being expanded by the China Central Bank to new cities, including Guangdong, Jiangsu, Hebei, and Sichuan.

5.1.6 Jamaica-The Bank of Jamaica has introduced JAM-DEX, Jamaica's official digital currency. The first country in the Caribbean to legalize digital currency is Jamaica (JAM-DEX) (Outlook Money Team, 2022). It represents a shift toward a cashless, digital economy. The country has been testing JAM-DEX since August 2021, and it has been successful. It will not be essential for both parties to be in the same location to conduct business using JAM-DEX. The JAM-DEX platform will act as the cornerstone of Jamaica's digital payments infrastructure, facilitating increased transaction velocity, broader financial inclusion, and lower banking costs. Nearly 17% of Jamaican citizens do not have a bank account, which poses a serious obstacle to the introduction of digital currency on a nationwide scale. These citizens significantly miss out on modern socioeconomic opportunities. People without a bank account lack considerable savings and keep their money in hazardous places, mainly at home which raises the danger of theft. By offering financial services to the unbanked, the Jamaican CBDC hopes to aid them in overcoming these problems.

5.1.7 Ukraine- A digital version of the Ukrainian hryvnia called E-Hryvnia has been introduced by the National Bank of Ukraine (NBU). The potential introduction of a national digital currency has been under consideration by the National Bank of Ukraine since 2016. It has commenced the CDBC pilot test. It would be possible to exchange and issue virtual assets using E-hryvnia. E-Hryvnia is the next step in Ukraine's development of an advanced payment system and high-quality infrastructure. Ukraine is working with the crypto etherum scaling platform "Polygon" to develop its own digital currency for its central bank, the E-Hryvnia. Recently in December 2022, NBU prepared and issued a draft concept for "E-Hryvnia," with the goal of successfully performing all the functions of money, complementing the cash and non-cash versions of the Hryvnia (Ernest Hoffman, 2022). Due to the war, the launch of the E-Hryvnia pilot project has been delayed, but Ukraine still plans to implement it by 2024.

5.1.8 Europe - The trial phase of the digital euro was announced by European Central Bank (ECB) in mid-July 2021 with a target to launch the same in the year 2026. In the digital economy, it aims to ensure that individuals continue to have access to the safest form of payment with transparency and traceability. Private Cryptocurrencies like Bitcoin are growing in popularity as the COVID-19 pandemic causes people to move away from cash (Sandner et al., 2020). Consequently, Central Bank Digital Currency (CBDC) is contributing to the development of a digital world. The introduction of a digital Euro would provide monetary stability in the present internet era.

5.1.9 United States- In order to investigate the digital dollar, the White House published a regulatory framework for digital assets on September 16, 2022. The US central bank has partnered with MasterCard, Wells Fargo, HSBC, and Citigroup to introduce its own digital money. The digital dollar will eventually replace the dollar as a US currency (Ricks et al. 2020). Since 5% of Americans do not have a bank account, the US central bank is working to give every citizen access to digital cash. The development of the digital dollar would likely take years, according to many financial analyses. It will function as a legal tender in the same way as a dollar. The United States does not presently have CBDC, although it intends to introduce the digital dollar soon. A large economy like the US must analyse the advantages and hazards of the option under consideration before taking any decision toward the adoption of digital currency.

5.2 eRupee the digital currency of India- The Reserve Bank of India (India's central bank) and the Indian government are taking a new step by introducing a non-tangible currency note that would have the same legal status as RBI-issued paper notes. The only distinction is that one must carry it in the phone wallet rather than physically. This is an institutional shift that will have far-reaching effects on the whole financial system in India. In this case, it is vital to recognise that these types of significant economic shifts do not occur all at once, but rather over time. (Rodrik, 2005). For this reason, it is important to examine the current institutional framework in India, especially in regard to digital means of payment, and to determine whether there are solid grounds to proceed to CBDC, considering the advantages and shortcomings of the current system. In 2016 the demonetisation of Indian currency unlocked many doors and created new opportunities for Digital India. The usage of digital payment methods has been promoted, and users now have more possibilities. India is a country where most transactions are carried out in cash. Cash and bank accounts were the two primary forms of money used in traditional Indian fiscal and monetary systems, which were primarily based on banking institutions. The demonetization of bank notes reduced the amount of currency in circulation, which had a direct impact on illegal finances, corruption, counterfeit money, and support for terrorists in the nation. People have shifted from using physical cash to digital payment options like Paytm and BHIM UPI. In preparation for the launch of its own CBDC, to be called the digital rupee, the government of India has started taking the necessary steps and making the necessary arrangements. In distributing the digital rupee to consumers, banks will serve as a middleman.

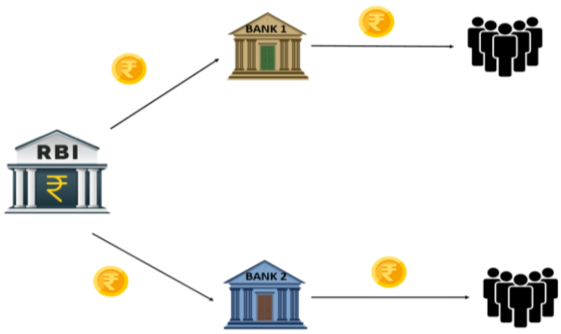

Figure 2 –How banks are used to transmit digital rupee from the RBI to users.

In order to test the market for the risks and rewards of the digital rupee RBI launched its pilot project in the wholesale segment on November 1, 2022. This is limited to the purpose of settling secondary market transactions in government securities. On December 1, 2022 RBI launched the initial pilot programme for the retail digital Rupee. Within a closed user group of collaborating clients and retailers, this pilot initiative will cover four cities namely Mumbai, New Delhi, Bengaluru, and Bhubaneswar. This system will be monitored by the State Bank of India, IDFC First Bank, Yes Bank, and ICICI Bank, and it will enable customers and business owners to transact in electronic rupees (e-Rupee). The e-Rupee would appear as a digital token that serves as legal tender just like traditional currency. The same denominations would be used for the issuance that coins and paper money are currently issued. A digital wallet that is embedded into mobile phones or other devices and uses a QR code similar to UPI will enable the use of e-Rupee. Customers and businesses can conduct e-Rupee transactions by scanning a QR code. It combines elements of both conventional cash and electronic payment systems. After the initial stage of the trial programme, other banks will participate to bring in the digital rupee revolution. The digital rupee will reduce the operating expenses associated with using physical money, facilitate international trade, reduce concerns about money laundering, increase the effectiveness of payment processing, and improve cross-border transactions.

The digital rupee will be different from cryptocurrencies because it will be issued and controlled by RBI. Digital currencies are electronic cash that does not require any locally-developed encryption standards while cryptocurrencies are digital assets on their own autonomous networks. Cryptocurrencies might be risky because of their inherent value and lack of a centralised owner. Further, the value of digital currency remains stable, and its management is typically simpler than that of cryptocurrencies. Unlike UPI, the digital rupee may be exchanged privately between individuals by means of a wallet function, without a bank account. Digital rupees, in contrast to UPI, will offer privacy and security. By the end of March 2023, India will officially introduce CBDC and have it operational on the domestic market. The digital rupee would provide the Indian economy with a "huge lift" and result in a more effective and affordable currency management system (Bilgi 2022). With real-time tracking and ledger maintenance, the digital currency will increase efficiency and transparency. The payment mechanism will be available around-the-clock, and customers can pay directly. Digital rupee transactions would not require a bank account. It would work without the person having a bank account. The introduction of the digital rupee will speed up cross-border transactions, which is its main advantage. Because of the introduction of the digital rupee, the problem of converting rupees into other currencies will no longer be an issue. (Handa, 2020).

6. CONCLUSION

Many countries are considering adopting digital currency and are getting ready to do so. There is a bright future ahead for the use of digital currencies all across the globe. With existing cryptocurrencies and UPI payments, the new digital financial world focuses on digital currency. The present study provides an in-depth analysis of the perspectives of several nations on the subject of digital currency legislation and acceptability within their legal and monetary frameworks. It is discovered that various nations have developed methodologies to regulate the exchange of digital currencies. Some nations are still considering the idea of developing their own digital currency, which may serve as the world's new currency in the near future. Strategically, the implementation of CBDC in India is significant, and the country's fiscal policy is instructive for the world community (Ma 2023). In order to track high-value currency transactions, India has begun the pilot testing of its digital rupee both in the wholesale and retail sectors. India is one of the world's leading economies, thus its role in CBDC research and development is crucial.

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ECONOMIC GROWTH AND EMPLOYMENT LINKAGES: INDIAN PERSPECTIVE

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Abstract

Economic growth is a fundamental requirement for the development of a country. For companies to invest and an economy to grow, stable environments, efficient institutions, functioning markets and access to sustainable financial services are all required. In an economy like India with large surplus labour, importance of an employment oriented growth is obvious. Jobless growth is certainly not the most desirable form of growth. At the same time, an over emphasis on employment generation without any regard to productivity and income of workers is also not desirable, particularly in an economy where productivity and income levels are generally low. Economic growth should result from a suitable combination of employment growth and productivity growth. It implies that employment-oriented growth in a country like India would have, of necessity, to be at a high rate. Economic growth in India has generally failed to strike a desirable balance between growth of productivity and employment. The nation of 1.4 billion people is not creating enough jobs for its expanding population. To boost profits, the organised sector is increasingly, employing contract labour rather than permanent employees. This is true in both the public and private sectors. They cannot obtain a better paying job and will remain poor for the rest of their lives. A big part of the problem is India's inappropriate education system and job-training. We need to create many more jobs in large industries, including large service sectors, but also many more jobs in small industries, both in services and in manufacturing. India's gravest socio-economic problem is that a vast majority of citizens are not able to earn good livelihoods. Their problem is not just employment, it is a problem of appropriate employment which is responsible for insufficient and uncertain incomes, and poor working conditions, in whatever capacity they are employed. The government should also provide technical and vocational education and make sustainable and long-term investments in human capital through quality education, skills and on-the-job training.

Keywords: Economic growth, Jobless growth, Human Capital, Employment, generation, Vocational education, Contract labour.

Introduction

The experience of developing countries clearly demonstrates that the development of an economy has direct bearing upon expansion of its employment potentialities. Gainful employment of manpower with adequate wages not only adds to raise their standard of living but also significantly contributes by way of increased capital formation and creating demands for goods and services which further pave the way for employment of surplus labour through productive channels. Thus it also promotes the national income that is taxed to pay for public services, which again boost the standard of living. Slowdown in the growth of gross domestic product (GDP), a virtual stagnation in industrial production and the risk of losing investment grade rating by international rating agencies like Standard and

Poor's has rattled the government, industry and policymakers. The dominant view as expressed by influential members of the government and other policymakers favours the introduction of major liberalization policies aimed at facilitating the entry of foreign direct investment (FDI) in service sectors like retail trade, insurance, legal and other services as a means of reversing the slowdown. In my opinion, such an approach is flawed. Sustainable growth is not possible without a healthy and growing manufacturing sector; attracting FDI in the services sector would at best play only a minor role. Indeed, India's overdependence on the service sector and the neglect of its manufacturing sector is partly responsible for the deceleration in growth. Results from most research studies show that for India, the service sector cannot be the engine for a sustainable growth of income and employment. Like China, India should also concentrate on the manufacturing sector, for, in the long run, the growth of the service sector would also depend on the manufacturing base.[1] There is therefore the need for a paradigm at the beginning of the 21st century that recognizes that **'**government failure**'** is a much more important problem than **'**market failure**'**. The new paradigm must be based on a clear and non-ideological recognition of the strengths and weakness of the state and the people. A democratic society has enormous potential for entrepreneurship, innovation and creative development. The people, their diverse forms of activity and association such as companies, cooperatives, societies, trusts and other NGOs must be allowed and encouraged to play their due role. The state must focus on what only it can do best and shed all activities that the people can do as well or better. The heavy hand of government in the form of incentive distorting laws, rules, regulations, procedures and red tape, have also corrupted industry and business and other organized interest groups. These must be removed so as to release the energy of the people. The state should confine itself to managing the economy so as to accelerate employment and income growth in a self-sustaining manner, ensure that all citizens receive their basic entitlements of basic public goods and services and empower the poor so that they have equal rights (and responsibilities) with the better of citizens.[2]

In India's segmented labour market, one can still discern at least three demographic groups that are in urgent need of jobs: a growing number of better educated youth; uneducated agricultural workers who wish to leave agricultural distress behind; and young women, who too are better educated than ever before. India is indeed the fastest growing large economy in the world; yet with investment low, credit offtake low, capacity utilisation in industry low, agricultural growth low, and plant load factor low, it is hardly surprising that job growth is low as well. Although growth is relatively high (though slowing for last several quarters), it is the pattern of growth that is the problem. Among many dimensions of this problem is the fact that in the quarter century since economic reforms began, it is not manufacturing that has been the leading sector driving growth. Manufacturing should drive productivity in the whole economy. Services cannot, as services by definition 'service' the distribution of produced goods.[3]

India needs faster GDP growth, of course. But the quality of economic growth matters as much as its quantity. Specifically, growth must translate into good quality jobs. Unfortunately, on that count, we are not doing well.

Jobless Growth -There is unanimity amongst scholars that the organized manufacturing sector registered **'**jobless growth**'** during 1980-81 to 1990-91. While the average annual rate of growth of gross value added during this period was about 8.66%, the corresponding average employment growth was merely 0.53%. The resultant employment elasticity was 0.06. The reasons advanced by scholars for the near stagnation of employment are, however, varied. One of the views is that job security regulations introduced in the late 1970s and strengthened in the early 1980s is the reason for employment stagnation - a view shared by most official economists and policymakers. Some empirical evidence in support of this view has also been provided by Fallon and Lucas (1993). It has, however, been contested by Papola (1994), Ghose (1994) and Bhalotra (1998). It was pointed out by Bhalotra that the pattern of employment growth in factories of different size classes is not consistent with the threshold effect that one would expect of the job security regulations. Her stand has also been supported by Dutta Roy (1998) through econometric models.[4]

Another important point explaining the employment stagnation during the 'jobless growth' period is to be found in the changing composition of industry. It is important to emphasize that the employment stagnation was to large extent due to a very large reduction in employment in just two major industry groups, namely, cotton textiles and food products. "Accounting for a share of about 20% in total employment, cotton textiles experienced a decline of about 3.6% per annum in employment. Similarly, food products group, accounting for the next largest share of 13% in organized manufacturing employment, also experienced a similar rate of decline in employment...... Decline in these two industries was caused mainly by the closures of a large number of mills due to sickness caused by several reasons and rationalization of many of them to overcome obsolescences".[5]

As many as five million jobs were lost between 2004-05 and 2009-10, paradoxically during the time when India witnessed the highest and consistent 8% growth in its economy, throwing a big question whether growth should be linked to employment generation, an Assocham study has said. While, on the one hand, about 13 million youth are entering the labour force every year, on the other hand, the gap for the employment and growth got only widened during the period of study which noted that over-emphasis on services and neglect of the manufacturing were mainly responsible for this "jobless growth" phenomenon. According to the Census India data, the number of people seeking jobs grew annually at 2.23% between 2001 and 2011, but the growth in actual employment during the same period was only 1.4%, leaving a huge gap in the form of unemployment.[6]

The economic slowdown and increasingly jobless nature of growth may force some 12 million people in India to join agriculture because of lack of opportunities elsewhere, reversing the massive movement out of low-paying farm labour, warns a new report. The report by ratings agency Crisil said dwindling focus on labour-intensive manufacturing sectors has slowed job creation in the economy, adding that the "demographic dividend" that the country is banking on to become an economic super power could turn into a "demographic liability" if adequate jobs are not created. "Providing jobs to its fast growing labour force in the current scenario of slowing GDP growth will pose a significant challenge for the economy. The difficulty of this task is compounded by the increasingly jobless nature of growth in recent years," the agency said in a research report. According to Crisil's estimates, only 38 million new jobs will be added outside agriculture between 2011-12 and 2018-19 compared with 52 million in the previous seven years from 2004-05 to 2011-12. While the slowing GDP growth is the obvious reason, falling labour intensity in the economy has added to the problem.[7]

India's employment data are far from robust and not timely enough to enable meaningful policy responses for emerging job market realities. Government officials too have questioned the reality of the Labour Bureau exercise that covers only a few sectors in selected States. Niti Aayog member **Bibek Debroy,** for instance, has said that existing jobs data can be used to claim both "growth-less jobs" and jobless growth, given India's largely informal economy.

Quality of Employment-It is well known that quality of employment, in terms of earnings, regularity of employment, work environment and social security vastly differs between the organized and unorganized sectors. Workers in the organized sector have better wages and salaries, job security, reasonably decent working conditions and social protection against such risks as sickness, injuries, disability and death arising out of hazards and accidents at work and old age. Those in the unorganized sector generally have no protection against these risks, have low earnings, often lower than the modest statutory minimum wages and have no regularity, leave aside security of jobs. An increase in the share of unorganized employment obviously means an overall deterioration in the quality of employment.

Even within the organized sector, an increasing number of jobs are assuming the character of those in the unorganized sector as the result of increasing labour market flexibility in the wake of globalization. A survey conducted in about 1,300 firms spread over ten states and nine important organized manufacturing industry groups (both public and private sectors), undertaken by the Institute of Human Development and sponsored by the Ministry of Statistics of the Government of India, shows that between 1991 and 1998 although the total employment increased by over 2%, most of the increase was accounted for by temporary, casual, contract and other flexible categories of workers. Several other studies at micro level also show that flexibility in the labour market has increased after the introduction of economic reforms in India. In spite of the existence of restricted labour laws, the firms have been able to retrench a large number of permanent workers while several units were closed leading to unemployment of thousands of workers.[8]

According to Centre for Monitoring Indian Economy (CMIE), the nature of employment that plays an important role in determining volatility of the unemployment rate. In India, a large proportion of the labour force does not have a regular job, with most people employed as daily wage workers, agricultural labourers, small farmers and self-employed traders. These people move in and out of jobs fairly rapidly and it is the high proportion of these workers in India that makes the unemployment time-series volatile.

What about the quality of jobs? The Periodic Labour Force Survey (PLFS) indicates 46.5% of the labour force works in the agriculture sector today as compared to 42.5% in 2019. This increase is not just a pandemic effect. Between 2018-19 and 2019-20 agricultural employment increases by 3.4 crore while industry and services employment only grew by 93 lakh. Regular salaried employees to have dropped from 24% in 2018-19 to 21% in 2020-21. The most plausible interpretation of these facts is that the quality and number of non-agricultural jobs on offer has regressed. If so, we may be the only developing country that is pushing people back to agriculture, an alarming indictment of our efforts at job creation.[9]

Traditional models of employment are said to be undergoing a change with **"**loyalty**"** being redefined, both at the employee and the employer ends. With over two years of the pandemic changing the way people work, and with issues like moonlighting, hiring & HR industry experts believe the current scenario is a transition to a new model where gig work would garner a greater share of the pie. Team Lease Digital CEO Sunil Chemmankotil said, **"**Earlier, organisations used to have largest concentric circle as permanent employees and others like consulting, contract & gig workforce were small. In the future, these smaller circles will become bigger. This change will give flexibility and management by objectives rather than loyalist- and time-bound, outcome-based rather than activity based.**"** He also said the future of work will be about paying for skills and not loyalty. **"**Organisations need to understand that there's no loyalty or long-term association in an employer-employee relationship. All such changes will lead to outcomes that emerge from such shifts in attitudes. Different employment models will coexist in organisations which currently have limited choice as attrition levels are high,**"** he said. Industry estimates suggest there were 6.8 million gig workers in 2019-20, forming 2.4% of the non-farm workforce, or 1.3% of the total workers in India.[10]

Skill development has been neglected in the past and needs much faster expansion. Union minister Dharmendra Pradhan said, **"**India is blessed with a demographic dividend. Education and skills have to play an important role in converting our demographic dividend into a transformative powerhouse. There is a need for leveraging skills to boost employability, reap demographic dividend and make our skills ecosystem more vibrant. For India to be more productive and robust, we must make our workforce more educated and skilled. The simplification of labour codes and apprenticeship act has added more vibrancy to our workforce. We are bringing in more reforms to make our workforce more productive.**"** This is the need of hour and hope this gigantic task could be fulfilled at war footing.

Employment and Growth - the Emerging Scenario

Theoretically, growth is said to be the most important factor for reducing poverty and creating jobs, provided policies are designed properly given the socio-economic conditions of an economy. In the context of developing countries, the relationship between economic growth and employment can be interactive and mutually reinforcing. In other words, there are situations in which economic growth improves employment conditions, and the improvement of employment conditions in turn stimulates economic growth; a virtuous circle is generated.

One of the most fundamental problems that has confronted development policy for at least half a century is that of finding ways of ensuring that economic growth is associated with employment patterns which ensure decent livelihoods for the citizenry as a whole. The recent economic growth process in India exhibits a problem which is increasingly common throughout the developing world: the apparent inability of even high rates of output growth to generate sufficient opportunities for **'**decent work**'** to meet the needs of the growing labour force.

A preliminary reading of all these estimates suggests that neither was the euphoria over high employment growth during 1999-2005 justified nor was the subsequent slow growth of employment during the period of highest GDP growth much of a weakening from the employment - growth linkages observed in the past. On the other hand, these trends suggest a need to situate the growth-employment linkage in the context of a dualistic labour market with a small minority of organized regular workers and a majority of low paying subsistence workers. Episodes of high growth as well as low growth are an outcome of a combination of factors such as individual choice of participation in the labour market, seasonal fluctuations and the long-term growth path of the economy.[11]

According to Nobel Laureate **Dr. Paul Krugman**, India's services sector could help propel the country's economic growth in the future as globalisation of services has only just begun. **"**India's growth story is quite unique. Services [have been] propelling growth to an extent that has not been seen anywhere else in the world and the possibilities of service globalisation has only just begun. Globalization of services trade has a huge potential. That's one reason to be especially hopeful of India's progress. It has the first mover's advantage.**"**

India is doing especially poorly is in employment generation. India's unemployment rate is high. In October 2022, it stood at 7.8%. However, what is really worrying is youth unemployment. According to International Labour Organisation (ILO) data, collated and presented by the World Bank, India's youth unemployment, that is, from among people aged 15 to 24 years who are looking for work, the percent that does not find any, stands at 28.3%. This places India in the cluster of troubled West Asian nations such as Iran (27.2%), Egypt (24.3%) and Syria (26.2%), and in a much worse state than most Asian countries such as Indonesia (16%), Malaysia (15.6%), and Bangladesh (14.7%).

India's growth story is more mixed. In 2021-22, its GDP growth was 8.7%, which was among the highest in the world. This is good but, against this, we must offset the fact that much of this is the growth of climbing out of the pit into which we had fallen the previous year. In 2020-21, India's growth was minus 6.6%, which placed the country in the bottom half of the global growth chart. For 2022-23, the International Monetary Fund has cut India's growth forecast to 6.1%. There are two special worries related to this. First, given that most of India's growth is occurring at the top end, with a few corporations raking in a disproportionate share of profits, and unemployment is so high, it is likely that large segments of the population are actually witnessing negative growth. The second worry is not so much about India's dropping rank in the world, as about how India's performance has been sliding compared to its own past performance.[12]

Data from the International Labour Organisation (ILO) suggest that India's employment to population (over the age of 15) ratio has steadily dropped from 55% in 2005 to 43% in 2020. In 2020, it was 52% in Bangladesh, 63% in China and 73% in Vietnam. Specifically women form just 20% of India's workforce, while they comprise between 30% and 70% of the workforce in the other three countries. Further, CMIE data suggest that across manufacturing and services, India lost nearly 1 crore jobs between December 2016 and December 2021.[13]

India has the largest youth population in the world with around 66% of the total population under the age of 35. However, of the 11 million students graduation from college each year, only 20% get jobs relevant to their skill sets. [14]

Conclusion and Suggestions

A high growth rate for the Indian economy cannot be sustained without a vibrant and growing manufacturing sector. A policy aimed at GDP growth based mainly on attracting investment in the services sector will not succeed. Moreover, a thriving manufacturing sector is vital for employment generation. Under these circumstances reforms should be aimed at good governance, transparent and time bound decision making, reduction currency transactions and the rule of law.

Sustained and rapid economic growth is the most effective route to poverty reduction. Growth is most likely to be pro-poor when it is employment-intensive, as it has been in a number of fast-growing East Asian economies. Their success has been based on a combination of outward looking, Labour-intensive industrialization, initially egalitarian income distributions, fiscal prudence, broad-based and effective human development policies and flexible labour markets.

There is no denying that India will have to live with the problem of unemployment for many years to come. The immediate crisis cannot be solved by any measures taken either to curb population growth or to reorient the educational system. Those already born and who are at school will continue to enter the employment market. Only the creation of jobs for the available manpower can help to reduce unemployment in the immediate future. Eradication of unemployment is closely linked with increasing the income of the people and development of the economy and as such the means to solve the evils should be found out. The true solution of both long term and short term is building up the economic infrastructure of the country and laying a sound base for the growth of industries both small and large scale.

Ever since **E.F. Schumacher**, a British economist, published in 1973 his book **'**Small is Beautiful,**'** implying that small units are better in terms of performance indicators and labour absorption, several studies have endorsed the same idea and argued in favour of promoting small units. Stretching the argument a little further, it may be emphasised that small units are the epicentres of pro-poor growth.[15]

The issue of jobs is a global issue that is confronting all major economies today, including the developed ones. We are yet to bear the true impact of automation and other technological disruptions on job creation. It is not about the National Democratic Alliance versus the United Progressive Alliance. It is not about the left wing versus the right wing. As a nation, we have to deal with this serious issue in a mature manner. Let us begin by accepting a few truths, however harsh they may be. Let us then debate and discuss ideas to find solutions, as a true democracy should and would.[16]

The industries need to be very carefully selective. Many of the industries currently chosen to be under PLI (Production linked incentives) are highly capital- and skill-incentive. So the goal of job creation for our massive numbers of unskilled workers is unlikely to be met. Even in Japan and South Korea, where industrial policy has been otherwise successful, it has often mainly helped large firms. But for creating jobs, the focus has to be on small and medium-scale firms.[17]

The 6.3 crore micro, small and medium enterprises - which account for 30% of GDP and employ nearly 11 crore people-have demonstrated this spirit of resilience. With sales in several industries across the MSME sector reaching 90% of pre-pandemic levels, India's small business are scripting a turnaround. A lot of credit for this bounceback goes to the government for its proactive interventions, such as extending the Emergency Credit Line Guarantee Scheme, overhauling the Credit Guarantee Trust for Micro and Small Enterprises and rolling out the Pradhan Mantri Employment Generation Programme to boost self-employment. That said, the largely unorganised nature of our MSMEs, rising interest rates and a deteriorating external environment make it imperative to address their pain points on an ongoing basis.[18]

Academic training is useful, but skills give jobs. India faces this more acutely, because there is larger disconnect between education and the markets. There is need for measured and concerted efforts to ensure that the country's demographic dividend of a young workforce doesn't become demographic crisis in the years to come.

India should therefore prioritise Policies that link GDP growth with job growth. Recent initiatives like **'**Startup India**'** and **'**Skill India**'** are crucial, but insufficient to achieve this vision. Government and private sector must come together to find a sustainable way to create more and better jobs. India should not be a negative outlier among nations in this matter.

India's growth is marked by dualism and the fast growing sectors are unable to provide employment to a majority of our workforce. High-end services are certainly creating opportunities for the well-educated, urban middle and upper class youth but are unable to draw in the masses of our people. Thus the present growth rate and model of development has failed to fulfil the aspirations of millions of people who are poor and job seekers. Hence growth pattern should be inclusive and distributive of gains of the development policy adopted by the government since independence.

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PERCEPTION OF STUDENTS TOWARDS ONLINE LEARNINGDURING COVID-19 OUTBREAK

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ABSTRACT

The COVID-19 pandemic has made a massive effect on all aspects of human lives as it forcedhumans to change their lifestyle. Countrywide urgent lockdowns shut several outdoor activities. Teaching-learning in a traditional and face to face mode classroom was one of them. It was then carried digitally online, just to keep the teaching learning process ongoing. However, there was a need to understand how students perceived this sudden transformation of learning from face to face to totally online. Thus, a study was carried out to know the perception of students towards online learning during the COVID-19 outbreak. In this qualitative study, a total of 57 students of class-XI from various schools of Delhi participated as samples by responding to the provided self-made questionnaire during lockdown. Convenience and snowball sampling methods were utilized, and questionnaire was circulatedthrough digital platforms. Results revealed that online learning did not meet the expectations of students in terms of teaching method, discussions, student-student interactions, and student-teacher interactions. Nevertheless, online learning received both endorsement and opposition from the side of students. 'Time-saving' and 'Comfort' were popularly likedfeatures, while 'Internet-related issues', 'Lack of interaction', and 'non-clarity of concepts' were most disliked features of online learning. The conclusion drawn is that the interaction ofstudents with their teachers and peers must be improved. Internet-related issues are required to be taken care of, and feedback must be timely provided to the students to make the teachinglearning process more interesting and fruitful in online learning.

Keywords*:* Perception, Online learning, COVID-19

Introduction

It was December 2019, when in China, for the first time a severe acute respiratory syndrome related to health problems was reported, and found that it was spreading and causing major public health issues. Consequently, on 11th February 2020, WHO named the disease causedby SARS-CoV-2 as corona virus isease (COVID-19) (Lai et al., 2020), which was further added to the list of the pandemics on 11th March 2020 after the declaration by the WHO Director-General (WHO, Situation report, 2020). COVID-19 found to be a communicable disease, spreads from an infected to a healthy person through droplets (Al Ateeq et al., 2020).Considering the high infectivity of this, countries across the globe laid down nationwide lockdowns. Stringent measures were taken to control the spread of this disease by controlling activities at thousands of places that included social gatherings like, orkplaces, educational institutes, transportation facilities, together with applying travel bans (Bodrud-Doza et al., 2020). With the shutting down of schools and other educational institutes there was serious concern on how to keep the teaching-learning process ongoing. It required educators and student learners to adapt quickly to online classes (Lockee, 2021). Therefore, Online teaching, which is not a new concept, was taken up as an alternative to the face-to-face classroom in this pandemic. The 2011 National Online Learners Priorities Report by Noel-Levitz reported that educationalinstitutes like colleges and universities need to acquaint themselves with their students' perceptions of online courses as this would help them to offer courses that are ready to meet students' expectations (Nwankwo, 2015). Therefore, the perception of the students is an important dimension that can be utilized to organize online classes that nurture the quality of learning.

Review of Literature

Bali and Liu (2018) examined the issues of student perception toward online learning and face to face learning, and found that face to face learning is more amenable as compared to online learning in the context of social presence, social interaction, and satisfaction.

Horspool and Lange (2012) found that tudents presented that the peer communication was occurring much less often. However, the students preferred online courses in terms of avoiding travel time to class and scheduling problems. A study conducted by Rovai, Wighting, and Liu (2005) on university students revealed that students attending fully online classes faced a weaker sense of onnectedness and closenessin both classroom and school-wide communities as compared to on-campus students who were attending face to face classes (Rovai, et al., 2005). Online learning during Covid-19 has come up as a new challenge for many students as seenin the key outcome of the result conducted by Abbasi et al (2020) that the students are not yetready for e-learning. In this study, 77.4% of students expressed negative perceptions about e-learning, out of which 86% of students anticipated e-learning to have little impact on their learning. Face-to-face teaching was seen to be preferred by most of the students over e-teaching. Various studies on the other hand asserted the complete welcoming nature carried by students for online learning. In a study conducted by Khan et al (2021), revealed a positive perception of students towards e-learning for instance having more freedom to connect with teachers and fellow students, engaging with study materials at the comfort and flexibility of space and time, easy access to study resources, and the ease in studying from any geographical location which was not possible in the case of face-to-face classrooms. Many researches revealed that students are carrying both positive and negative perceptions towards online learning as in a study conducted by Hasan and Khan (2020), where out of total of 408 responses, 292 students reported enjoying online learning. Time and place flexibility was found to be the most liked feature of online learning. Poor network and connectivity issues were highly disliked features. A suggesting point made by the study asserted the concept of students' interaction both with teachers and peers recommending the need to bring necessary technical changes in online learning design to facilitate interactions as interaction is the key variable that impacts the quality of online learning. Online classes have been seen to be providing fewer interaction opportunities to the students as compared to conventional face to face interaction. A study conducted by Muthuprasad et al (2020) reported that, about 60% of respondents agreed to the point that online classes are less effective when it comes to communication with the instructor as compared to face to face classes. Dhawan, S. (2020) suggested that creative, interactive, relevant, student-centred, and group-based activities must be the features of the online programs. On the basis of the above review, the present study was carried out with the objective, to know the perception of students towards online learning during Covid-19 outbreak.

Methodology and Questionnaire

A self-made questionnaire was designed using Google Form, to study the perception of tudents towards online learning during covid-19 outbreak. In this qualitative study, 57 students of Class-XI from various schools of Delhi during lockdown participated by responding to it. Convenience and snowball sampling methods were utilised for sample, and questionnaire as a tool for data collection was circulated through digital platforms which consisted of 6 dimensions related to the perception of students towards online learning duringCovid-19. Analysis of Data, Result and Discussion **Dimension-1 : Aspects of online classes that met students' expectations** (Responses inYes/No)

Table- 1

Item No	Statements	Yes	No
1 (a)	Did the online classes meet your expectations?	12 (21%)	45 (79%)
1 (b)	Did the teaching methods for content delivery in online classes meet your expectations?	21 (37%)	36 (63%)
1 (c)	Did the online class discussions meet yourexpectations	10 (18%)	47 (82%)
1 (d)	Did the online student-student interactions meet your expectations?	15 (26%)	42 (74%)
1 (e)	Did the online student-teacher interactions meet your expectations?	18 (32%)	39 (68%)
1 (f)	Did the online study materials shared by your teachersmeet your expectations?	31 (54%)	26 (46%)

Table- 1 holds the responses of the participants with Dimension-1. Most of the students responded that online classes did not meet their expectations (79%), as well as the various aspects of online classes did not meet their expectations such as the teaching method used in online classes for content delivery (63%), class discussions (82%), student-student interactions (74%), and student-teacher interactions (68%). However, for most students the online study materials shared by teachers met their expectations.

Dimension-2: Top most liked feature(s) of online classes

Table -2

Top most liked features of online classes	Percentage
Time saving	14%
Comfort	14%
No travelling or going to school	9%
Flexibility	9%
Online on-spot searching	5%
Study materials	5%
Teaching method (ppts, videos etc)	4%
Nothing	40%

Table- 2 shows that the top most liked features of online classes were that it saved student's time and was based on comfort (14% each). Although 9% of the respondents liked that, (1) they do not have to travel to go to school and (ii) Flexibility of online classes. 5 % like (i) On-spot internet surfing and (ii) Study materials. Only 4% liked the teaching methods used in online classes.

Dimension-3 : The constraint(s) faced in online classes

Table-3

Constraints faced during online classes	Percentage
Internet related issues	44%
Lack of interaction	19%
Non-clarity of concepts	18%
Health Issues	12%
Technical issues	7%

Table- 3 present the analyses that most of the students (44%) faced internet-related issues, 19% of students found online learning to be not interactive or not as interactive as conventional classes at school. 18% of the students complained poor comprehensibility of content and reduced interaction made it difficult to clarify doubts. The continuous attending of online classes has affected the health of many students (12%). Spending hours in front of a screen causes headaches, redness of eyes, eye strain, while some also mention anxiety. Apart from these, technical glitches (12%), distractions due to non-suitable home environments (11%), reduced intrinsic motivation (9%) to study, data pack issues (5%) were also in the list. 5% of the participants answered that they did not find any constraint related to online classes.

Dimension-4: Do you find it worrisome when you have school work related queries, butyou don't receive immediate response from your teachers during this ongoing covid-19 pandemic?

Table- 4 shows that when, participants were also asked to what extent do they find it worrisome when their school work-related query is not immediately responded to by their teachers during this ongoing covid-19 pandemic. Most of them (35%) responded as this case to be 'Yes, very much' worrisome to them. The equal number of participants considered this to be 'to some extent' worrisome. 18% responded 'a lot' and 12% 'a little' worrisome.

Dimension-5: Have online classes been worrisome to you in terms of affordability and accessibility of electronic devices, and internet technology?

Table- 4

Do you find it worrisome when you have school work related queries, but you don't receive immediate response from your teachers during this ongoing covid-19 pandemic?	**Responses**
Yes, very much	20 (35%)
A lot	10 (18%)
To some extent	20 (35%)
A little	7 (12%)
Not at all	—

Table- 5

Have online classes been worrisome to you in terms of affordabilityand accessibility of electronic devices and internet technology?	**Responses**
Yes, very much	10 (18%)
A lot	8 (14%)
To some extent	22 (39%)
A little	9 (16%)
Not at all	8 (14%)

Table- 6

Have online classes been worrisome to you in terms of familiarity with technological tools?	**Responses**
Yes, very much	11 (19%)
A lot	6 (11%)
To some extent	19 (33%)
A little	14 (25%)
Not at all	7 (12%)

Table- 5 shows the responses of participants about the extent of affordability and accessibility of electronic devices, and internet technology being worrisome to them. 39% of the respondents mentioned it has been worrisome ‘To some extent’ followed by 18% responding that it had been ‘Yes, very much’ worrisome. For 16% it is ‘a little’ worrisome, for 14% it is ‘a lot’ as well as ‘Not at all.

Dimension-6: Have online classes been worrisome to you in terms of familiarity with technological tools? Table- 6 shows 19% of the participants responded that they found familiarity with technological tools as ‘Yes, very much’ worrisome. Most of the students (33%) responded that they found it worrisome only ‘To some extent’. For 25%, it was ‘A little’ worrisome, and for 12%, it was ‘Not at all ‘worrisome.

Conclusion

The analyses showed that most students found online learning to be time and energy-saving and based on comfort. However, the overall online classes fail to meet the expectations of thestudents (79%) in terms of teaching method (63%), discussions (82%), student-student interactions (74%), and student-teacher interactions (68%). The study materials shared online by the teachers were found to be satisfactory (54%). Internet-related issues (44%) such as poor connectivity have been a serious trouble forstudents hence becoming one of the major demerits of online learning. Immediate response by teachers (35%) to students’ queries is one important aspect that online teaching-learning systems that must be achieve. Valuable feedback and responses from teachers to students are contemplated as equally important for education in both physical settings as well as online. Accessibility and affordability of electronic devices and internet technology, and familiarity with technological tools make a quality impact on students’ perception about online learning. Therefore, the most liked feature of online learning by students such as timesaving, based on comfort and flexibility must be strengthened while the most constraint giving features of online learning such as internet-related issues, lack of interaction with teachers and peers, non-comprehensibility of concepts, health issues, distractions, etc must be taken note of to evolve online learning in such a manner that these blemishing features can be dispelled. Since online learning became mandatory and most students were new to it, it implies that every course must have one ICT based subject where the basics of ICT are taught to students.If a situation like the current pandemic ever arises again the students will know how to tackle it. The study recorded several ‘lack of interaction’ responses suggesting the need to bring necessary changes in an online learning format that would facilitate peer interaction, as interaction is one key variable that influences the quality of online learning. There is a need to meet students’ expectations of the teaching methods and styles. For this proper teaching methods to make learning more participative for students must be integrated. This would helpbreak any sort of monotony in pedagogy and thus help in achieving the aim of meeting students' expectations of the teaching methods in online classes.

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STUDY OF VISCO-ELASTIC FLUID MOTION IN POROUS MEDIUM UNDER THE EFFECT OF MAGNETIC FIELD

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ABSTRACT

In this paper the analysis of unsteady flow of a Rivlin – Ericksen fluid through porous medium in presence of a uniform magnetic field is presented. Expressions for velocity, temperature, concentration distribution are obtained. The effect of Grashoff number Gr, modified Grashoff number Gc, Hartman parameter M, porosity parameter K, visco-elastic parameter S are discussed on the velocity profile and shown graphically. The effects of Prandtl number on temperature and Schmidt number on concentration are discuss and presented graphically.

Introduction: The flow of an incompressible viscous fluid past an impulsively started infinite horizontal plate. It is also known as Rayleigh's problem in the literature. Soundalgekar[10] first presented an exact solution to the flow of a viscous fluid past an impulsively started infinite isothermal vertical plate. Soundalgekar[11] has studied mass transfer effects on flow past an impulsively started infinite vertical plate. The study of convection with heat and mass transfer is very useful in fields such as chemistry, agriculture and oceanography. A few representative fields of interest in which combined heat and mass transfer play an important role are the design of chemical processing equipment, formation and dispersion of fog, distribution of temperature and moisture over agriculture fields and groves of fruit trees, damage of crops due to freezing and pollution of the environment. This technique is used in the cooling processes of paper. Das *et al*.[4] considered the mass transfer effects on flow past an impulsively started infinite isothermal vertical plate with constant mass flux. Muthucummaraswami *et al*.[8] have studied of heat and mass transfer effects on flow past an impulsively started vertical plate. Waqar[12] have investigated combined heat and mass transfer of third grade nano fluids over a convectionally heat stretching permeable surface. Sheikholeshami and Gargi[14] studied in non-fluids flow and heat transfer between parallel plates considering Brownian motion using DTM. Gebhart and Pera[6] studied the nature of vertical natural convection flow resulting from the combined buoyancy effects of thermal and mass transfer and mass diffusion. Bathaih *et al*.[1] worked on the MHD unsteady Hele – Shaw of viscous fluid. Rathod and Shrikanth[9] have studied the unsteady MHD flow of Rivlin – Ericksen incompressible flow through an inclined channel with two parallel flat walls under the influence of magnetic field. Datta *et al*.[5], have studied the magnetohydrodynamic unsteady flow of a visco-elastic liquid (Revilen – Ericksen) near a porous wall suddenly set in the motion with heat transfer including heat source generating sources or heat absorbing sink. Chakrsborty and Borkakati[3] have investigated the laminar convection flow of an electrically conducting second order visco-elastic fluid in porous medium down an inclined parallel plate channel in the presence of uniform transverse magnetic field. Bodosa and Borkakati[2] have investigated MHD flow and heat transfer of Rivlin – Ericksen fluid through an inclined channel with heat source and sink. Suvarna *et al*.[13] have studied the hydromagnetic flow of Rivlin – Ericksen fluid down an inclined plate. Kunda and Sengupta[7] have worked on MHD flow of Reiner – Rivlin visco-elastic fluid between two coaxial circular cylinder with porous walls and rotating boundaries. In this paper our aim is to investigate unsteady flow of a visco-elastic (Rivlin – Ericksen) fluid through porous medium past an impulsively started vertical plate in presence of a uniform magnetic field.

Formulation of the Problem: We consider unsteady visco-elastic (Rivlin – Ericksen), incompressible, electrically conducting, fluid past an impulsively started infinite vertical plate through a porous medium under the action of a uniform magnetic field. The x'- is taken along the plate in the vertically upward direction and y'-axis is taken normal to the plate. At time $t' \leq 1$, the plate and fluid are at same temperature and concentration in a stationary condition. At time $t' > 0$, the plate is given an impulsive motion in the vertical direction with constant velocity u_0 and at the plate constant heat and mass flux are imposed. Under Boussinesq's approximation, the unsteady flow past an infinite vertical plate is governed by following equations:

$$\frac{\partial u'}{\partial t'} = g\beta\left(T' - T'_\infty\right) + g\beta^*\left(C' - c'_\infty\right) + \nu\frac{\partial^2 u'}{\partial y'} + E'\frac{\partial^2}{\partial y'^2}\left(\frac{\partial u'}{\partial t'}\right) - \frac{\sigma B_0^2}{\rho}u' - \frac{\nu}{K'}u' \tag{1}$$

$$\frac{\partial T'}{\partial t'} = \frac{\kappa}{\rho C p}\frac{\partial^2 T'}{\partial y'^2} \tag{2}$$

$$\frac{\partial C'}{\partial t'} = D\frac{\partial^2 C'}{\partial y'^2} \tag{3}$$

With following initial and boundary conditions :

$$\left.\begin{array}{l} u' = u_0,\ \dfrac{\partial T'}{\partial y'} = -\dfrac{q}{K},\ \dfrac{\partial C'}{\partial y'} = -\dfrac{\ell''}{D'};\quad \text{at}\ \ y' = 0,\ t' = 0 \\ \\ u' = 0,\ \ T' \to T'_\infty,\ \ C' \to C'_\infty,\quad ;\quad \text{at}\ \ y' \to \infty,\ t' > 0 \end{array}\right\} \tag{4}$$

On introducing the following non-dimensional quantities :

$$f = \frac{u'}{u_0},\quad t = \frac{u_0^2 t'}{\nu},\quad y = \frac{y' u_0}{\nu},\quad \theta = \frac{\left(T' - T'_\infty\right)}{\left(\frac{q\nu}{\kappa u_0}\right)},\quad \phi = \frac{\left(C' - C'_\infty\right)}{\left(\frac{j''\nu}{D u_0}\right)},$$

$$Gr = \frac{\nu g\beta\left(\frac{q\nu}{k u_0}\right)}{u_0^3},\quad Gc = \frac{\nu g\beta^*\left(\frac{j''\nu}{D u_0}\right)}{u_0^3},\quad Pr = \frac{\mu Cp}{\kappa},\quad Sc = \frac{\nu}{D},$$

$$M = \frac{\sigma B_0^2\nu}{\rho u_0^2},\quad K = \frac{K' u_0^2}{\nu^2},\quad S = \frac{E' u_0^2}{\nu^2}\ \text{(Viscoelastic parameter).}$$

Now, equations (1) to (3) in non-dimensional form are

$$\frac{\partial f}{\partial t} = Gr\,\theta + Gc\,\phi + \frac{\partial^2 f}{\partial y^2} + S\frac{\partial^2}{\partial y^2}\left(\frac{\partial f}{\partial t}\right) - \left(M + \frac{1}{K}\right) f, \tag{5}$$

$$\frac{\partial \theta}{\partial t} = \frac{1}{Pr}\frac{\partial^2 \theta}{\partial y^2}, \tag{6}$$

$$\frac{\partial \phi}{\partial t} = \frac{1}{Sc}\frac{\partial^2 \phi}{\partial y^2}. \tag{7}$$

The boundary conditions (4) becomes:

$$\left.\begin{aligned} & f = 1,\ \frac{\partial \theta}{\partial y} = -1,\ \frac{\partial \phi}{\partial y} = -1; \quad \text{at } y = 0,\ t = 0 \\ & f = 0,\ \theta \to \infty,\ \phi \to \infty, \quad ; \quad \text{at } y \to \infty. \end{aligned}\right\} \tag{8}$$

We assume the following solutions:

$$\begin{aligned} f(y, t) &= f_0(y)\cdot e^{-nt} \\ \theta(y, t) &= \theta_0(y)\cdot e^{-nt} \\ \phi(y, t) &= \phi_0(y)\cdot e^{-nt}. \end{aligned} \tag{9}$$

Using (9) in (5) to (7), we find

$$f_0'' - (N - n)\,A_1 f_0 = -Gr\,A_1\,\theta_0 - Gc\,A_1\,\phi_0 \tag{10}$$

$$\theta_0'' + n\,Pr\,\theta_0 = 0 \tag{11}$$

$$\phi_0'' + n\,Sc\,\phi_0 = 0 \tag{12}$$

With corresponding boundary conditions :

$$\left.\begin{aligned} & f_0 = 1,\ \frac{\partial \theta_0}{\partial y} = -1,\ \frac{\partial \phi_0}{\partial y} = -1; \quad \text{at } y = 0,\ t = 0 \end{aligned}\right\} \tag{13}$$

$$f_0 = 0, \quad \theta_0 \to \infty, \quad \phi_0 \to \infty, \qquad ; \quad \text{at} \quad y \to \infty.$$

Solving equations (10) to (12) under boundary conditions (13), we get

$$f_0 = e^{-\sqrt{A_2 y}} - Gr\, A_7 \sin A_3 y - Gc\, A_8 \sin A_4 y \qquad (14)$$

$$\theta_0 = -\frac{\sin A_3 y}{A_3} \qquad (15)$$

$$\phi_0 = -\frac{\sin A_4 y}{A_4}. \qquad (16)$$

The final solutions :

$$f = \left(e^{-\sqrt{A_2 y}} - Gr\, A_7 \sin A_3 y - Gc\, A_8 \sin A_4 y\right) e^{-nt} \qquad (17)$$

$$\theta = -\left(\frac{\sin A_3 y}{A_3}\right) e^{-nt} \qquad (18)$$

$$\phi = -\left(\frac{\sin A_4 y}{A_4}\right) e^{-nt} \qquad (19)$$

Where,

$$N = \left(M + \frac{1}{K}\right), \quad A_1 = \frac{1}{1 - nS}, \quad A_2 = A_1\left(N - n\right), \quad A_3 = \sqrt{Pr \cdot n},$$

$$A_4 = \sqrt{Sc \cdot n}, \; A_5 = \frac{A_1}{A_3}, \; A_6 = \frac{A_1}{A_4}, \; A_7 = \frac{A_5}{A_3^{\,2} - A_2}, \; A_8 = \frac{A_6}{A_4^{\,2} - A_2}$$

Result and Discussion : In Figure – 1, the velocity distribution of boundary layer flow is plotted against y for n = 0.1, Pr = 0.71, Sc = 0.4, t = 2, M = 0.2, K = 3, S = 0.4 and different values of Grashoff number Gr and modified Grashoff number Gc, it is found that the velocity decreases continuously with increase in y. It is observed that the fluid velocity decreases due to increasing the Grashoff number Gr and modified Grashoff number Gc. In Figure – 2, the velocity distribution of boundary layer flow is plotted against y for n = 0.1, Pr = 0.71, Sc = 0.4, t = 2, Gr = 2, Gc = 3, different values of Hartmann number M, porosity parameter K, visco-elastic parameter S. It is found that the velocity decreases continuously with increase in y. It is also observed that the fluid velocity increases due to increasing the Hartmann number M, porosity parameter K. In Figure – 3, the temperature distribution of boundary layer flow is plotted against y for n = 0.1, Sc = 0.4, Gr = 2, Gc = 3, M = 0.2, K = 3, S = 0.4, different values of Prandtl number Pr and time t, it is found that the temperature decreases continuously with increase in y. It is also observed that the fluid temperature increases due to increasing the Prandtl number M and time t.In Figure – 4, the concentration distribution of boundary layer flow is plotted of Schmidt number Sc and time t, it is found that the concentration decreases continuously with increase y. It is also observed that the fluid concentration increases due to increasing the Schmidt number Sc and time t.

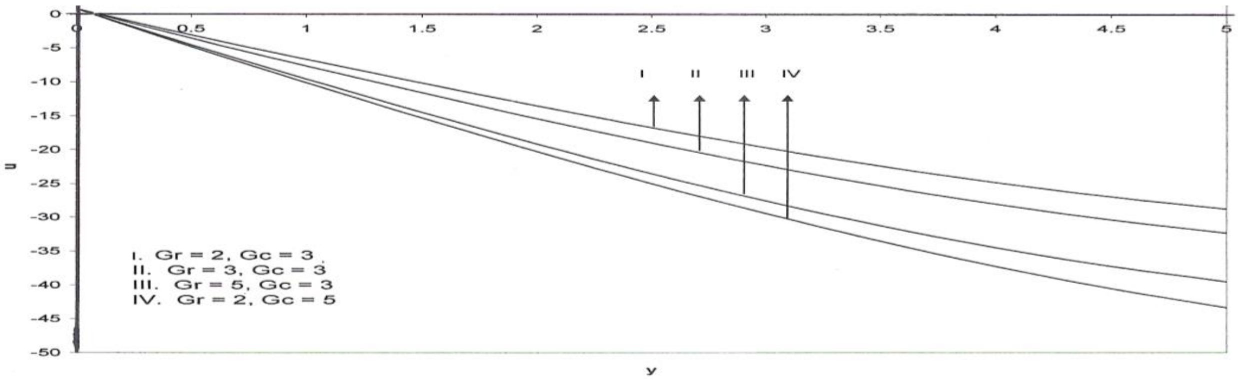

Figure – 1: **The Velocity Distribution for Different Values of Gr and Gc.**

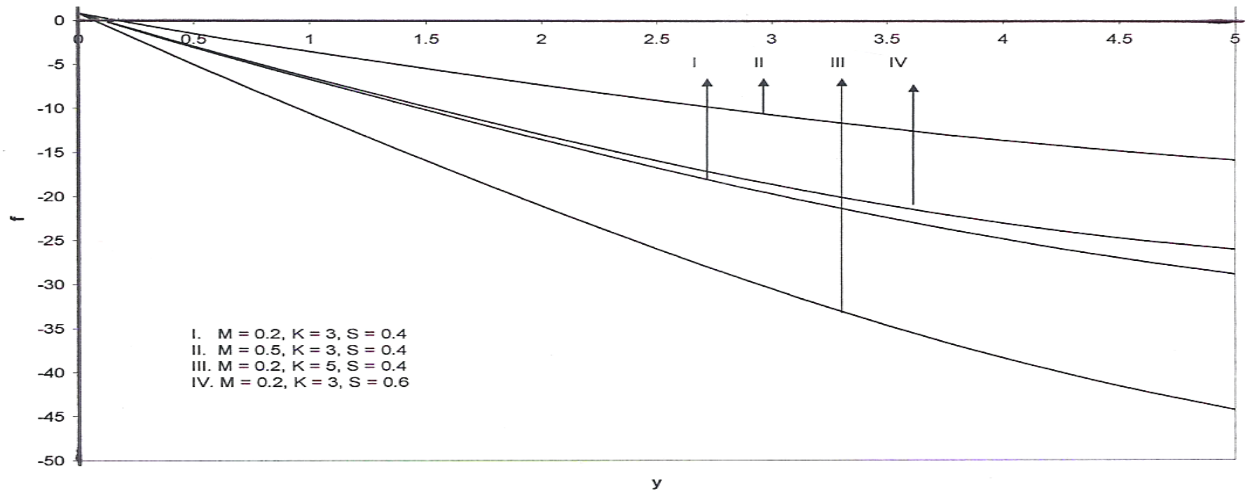

Figure – 2 : **The Velocity Distribution for Different Values of M, K and S.**

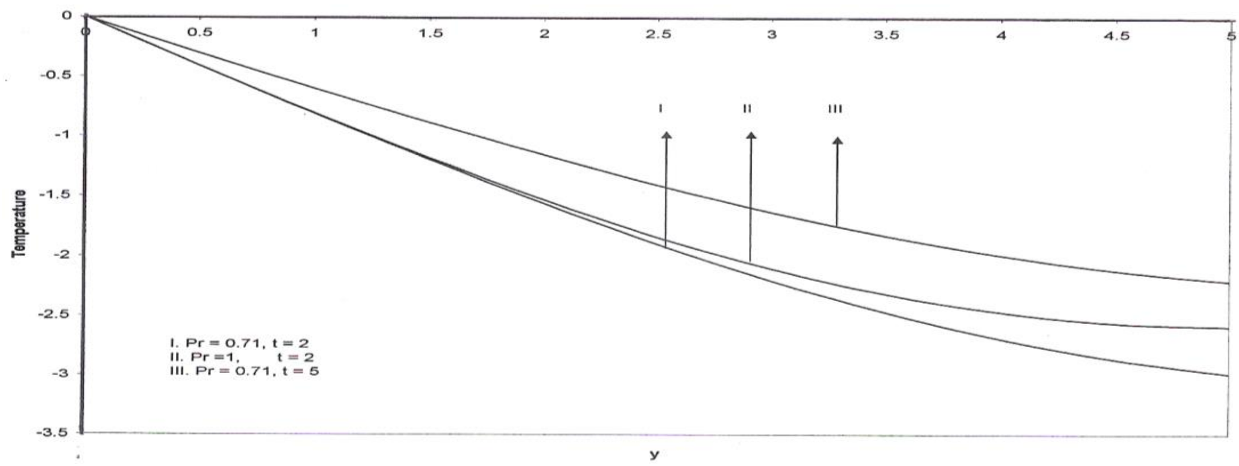

Figure – 3: **The Temperature Distribution for Different Values of Pr and t.**

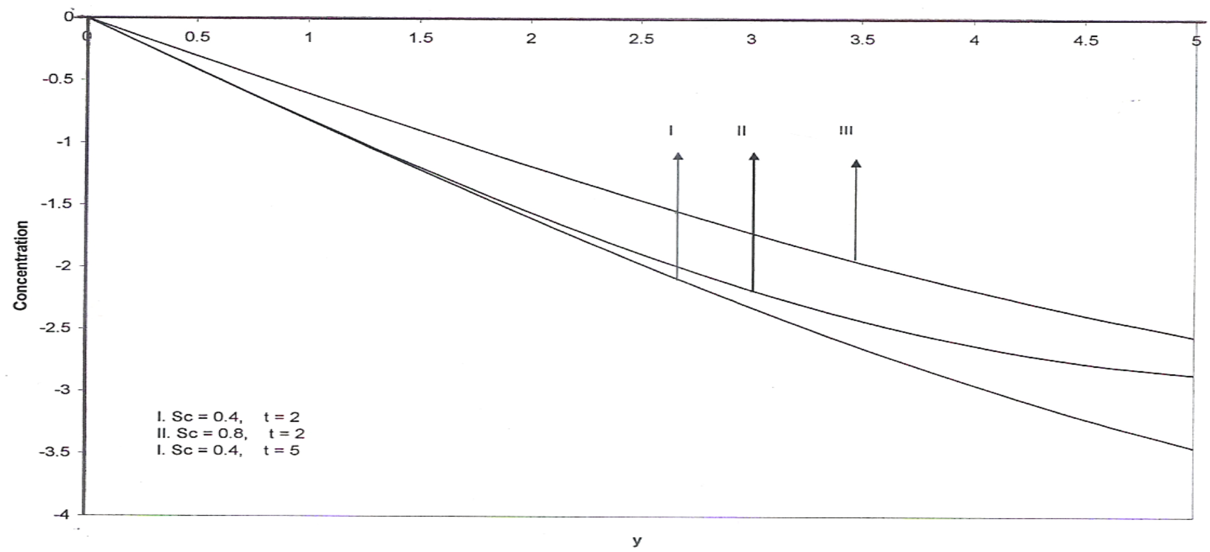

Figure – 4: **The Concentration Distribution for Different Values of Sc and t.**

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BASIC UNDERSTANDING OF ENVIRONMENT AND ITS PROBLEMS

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ABSTRACT:

The term environment is used by many individuals in day to day life. It is a general term which is also used in various fields in specific way. But here the term refers to the social, cultural and natural environment found around us which directly or indirectly affects living beings. The social environment includes society, beliefs of society, social structure etc., and the cultural environment includes morals, language, religion, customs, traditions, ethos, etc. The natural environment includes air, water, land, forest, temperature, weather and mineral resources found in the land. There is naturally a balance among these various components of nature; but this curious and development-oriented human being has polluted the environment by disturbing this balance due to scientific and technological movements and has raised many diseases and problems in front of human beings. Nowadays environmental change is felt by every individual and not only the environmentalist seeing it as a crisis but also the general people feel it as a problem which is posing a threat to humanity. There is definitely some kind of pollution in the environment. It seems as if man is so engrossed in the race for development that he does not have time to look at their environment. People have been forgetting that they have to live on this earth. In this paper basic understanding of environment and its problems have been discussed.

Key words: Environment, Awareness, Environmental Problems

Introduction

Environment and nature are two sides of the same coin. Environment refers to all the objects or forces around us, which affect human life. Human life is surrounded by many conditions and circumstances. Some of these conditions are natural, such as air, water, temperature, weather, land texture, forest, mineral wealth etc. Some conditions are social, such as social structure, social institutions, social groups and social beliefs. Apart from this, there are many cultural patterns such as religion, morality, language, ideals, customs, ethos, inventions etc. Environment is the totality of all these natural, social and cultural conditions.

Environment literally means "surrounding". It means such external conditions that affect the evolution or growth of plants, people and animals. The French word for environment is "Environner" which means "circle or girth". In the broadest sense, the environment is everything that covers living things, above or below the surface of the earth which forms everything around the planet. Environment can be external or a combination of cultural, economic, educational, physical, religious and social conditions that affect the growth and development of an organism.

In the words Wordsworth's: "Environment is everything that influences an individual apart from his genes."

According to Douglas and Holland, the term environment is a word describes in aggregate, all external forces, influences and conditions which affect the life , nature, behavior, growth, development and maturity of the living organism.

In the words of the Environmental Protection Act (1986): Environment includes air, water, food and sunlight etc. Environment affects all living things including plants and trees. A large number of the necessities of life are derived from the environment, rather it can be said that the environment is the life support system. According to Webster's New World Dictionary (1975), the combination of physical, chemical, biological components and economic, social and cultural factors of human beings or a group of individuals are called environment.

All these things show that the environment is a collection of factors from the human origin to its evolution and maturity which are all objects and conditions that affect the human being in any way.

Current Environmental Problems

Since the beginning of life in the world, man has been living in harmony with the environment. Humans have been interacting with the environment since the beginning. But as modernity began, scientific inventions and industrialization have taught humans to use resources sparingly. Due to which the degradation of the environment started very fast. In the last few decades, the human population has increased tremendously and to meet the needs of this large population, there has been rapid development and progress in science and technology and humans have started adapting the physical environment to suit them, as a result environmental imbalances and numerous problems aroused. Some problems are as follows:

(a) Pollution (Air, Water And Ground)
(b) Global Warming
(c) Over Population
(d) Natural Resources Depletion
(e) Waste Disposal
(f) Climate Change
(g) Lack of Biodiversity
(h) Deforestation
(i) Urban Sprawl
(j) Ozone Layer Depletion

The discussions of above points are given below:

(a) Pollution (air, water and ground):

The word pollution is derived from the Latin word "Polluere", which means "filth or pollute". Pollution is the inclusion of undesirable substances in the environment. A deficiency in natural balance is called pollution which is an unwanted change in our surroundings that is the result of human activities and affects air, land and water. With the industrial revolution, it has become a great threat to humanity.

Types of Pollution

- **Air Pollution:** Air pollution can be defined as the presence or release of any external material or gas in the environment which can be harmful to humans, plants, animals or buildings. Air pollution increases the temperature of the earth. Air pollution is caused by gases or particles pollutants. It is caused by natural activities like volcanic eruptions, forest fires or dust storms or by the use of automobiles, pesticides and deforestation and the risk of various health problems such as headache, difficulty in breathing and acid rain etc. increases considerably.
- **Water Pollution:** Water is one of the basic necessities of life. It is an important part of the cells of the body and is necessary for all the processes of life. Only clean water is used to fulfill the needs of life. Pure water has no color, smell or taste. It is a mixture of hydrogen and oxygen. Water is a universal solvent. Water pollution refers to the abundance of harmful substances (such as industrial waste products, dust, biological properties, etc.) found in water. It means such a change in the biological, chemical or physical characteristics of water and its use is harmful for human being which is called water pollution. This has caused many health problems in humans and animals, such as cholera,

jaundice, chronic fever, dysentery and many stomach problems. Causes of water pollution include waste from household items, soaps and detergents, human waste, used water, insects, pesticides, oil grills, petrol and related items, heavy dust, hot water and radioactive waste etc.

- **Soil Pollution:** Earth is the solid part of the earth's surface. Soil is the uppermost layer on the earth's surface. Four to five percent of the earth's surface is covered by soil. Soil pollution is mainly caused by solid waste. Some chemicals such as sulfur and lead are released into the air and subsequently contaminate the soil. Soil pollution refers to changes or additions to the natural nature of the soil, which not only affects the appearance of the soil but also human, animal and plant. In addition, the surface of the earth and the ground water are also dirty. A major part of land pollution comes from houses, livestock sheds, industries and agricultural sectors. It includes ash, glass, paper, cloth, plastic, rubber and metal, fruit and vegetable peels, cow dung and other uses. Solid waste has increased soil pollution. The beauty and attractiveness of the natural environment has been destroyed and the land has been damaged. Where garbage is piled up, animals like dogs, cows, donkeys, rats, etc. make the place unsanitary and the number of flies, bacteria or mosquitoes increases, causing diseases like cholera in humans. Many diseases arise and an unhealthy society is formed.

(b) Global Warming:

The continuous increase in the average temperature of the earth is called global warming. Global warming is a long-term increase in the average temperature of the Earth's climate system. This is an important aspect of climate change and has been demonstrated directly by measuring the various effects of warming. The term was first used by the United States Press International (1969). Global warming is caused by the increase in the amount of greenhouse gases such as (CO_2), carbon dioxide and methane in the atmosphere which not only increases the temperature of the earth, but it can also create conditions of famine and drought. Rather, the rise in sea level due to melting glaciers will also threaten coastal areas and landlocked countries below sea level. In 2018, the IPCC (The Intergovernmental Panel on Climate Change) presented its report on global warming in which these fears were expressed.

(c) Over Population:

Population growth is one of the most important issues in the current environmental problems. Overpopulation is such a dangerous situation that the current human population is more than the Earth's carrying capacity. Overpopulation is caused by a number of factors such as mortality rates, better medical facilities, lack of costly illusory problems are some of the main reasons that lead to massive increase in population. The continuous technological advancement has affected humans in many ways. As a result of the provision of better medical facilities, life expectancy and population have increased. In the last fifty years, the population has boomed tremendously and it has turned into overpopulation.

(d) Depletion of Natural Resources:

On the one hand population increases and on the other hand natural resources decreases. Scarcity of a resource is seen when its consumption or use is faster than its substitutes. Natural resources are those resources whose existence is not interfered with by humans. These are of both renewable and non-renewable types. Scarcity of natural resources is a term used in relation to water use, agriculture, germs, fuel, fields, fishing and mining. Our land can produce a limited amount of water and food which is falling short of current needs. In the last fifty years, the environmental destruction started by humans to fulfill their needs. It is destroying the forests and wild animals which is appearing in the form of a huge amount of nuisance and pollution.

The following are the causes of scarcity of natural resources.

- Population growth
- The process of tiling
- Business of trees and timber
- Over use of natural resources.
- Pollution.

(e) **Waste Disposal:**

Waste disposal is a serious and important problem of the present time. Generally, these wastes are either in liquid or solid form which has a negative impact on human health, life and environment. The term solid waste, sewage includes waste water, hazardous waste and electronic waste. The main causes or sources of solid waste are domestic, commercial industrial, municipal and agricultural wastes. There is an increase in population, comfort and luxury goods and continuous technological development and waste management is not being done. A very important reason for this is the improper use of waste.

(f) Climate Change

Climate change refers to the significant and worrisome changes in temperature, precipitation, wind flow patterns, and other natural measures of climate over decades or substantial periods. The most important cause of global warming and environmental climate change is the accumulation of greenhouse gases in the atmosphere and especially the negative changes in the environment as a result of the burning of biological (germ) fuel by humans. To deal with this problem United Nations has created an international forum called the IPCC (The Intergovernmental Panel on Climate Change). According to IPCC, until 1950, there were more natural causes on climate change, but between 1951 and 2010, the most important cause of global warming has been human influence. Due to climate change, floods in different countries, Tsunami, Earthquake, etc are the common problems arise. Most recently, in late 2019 and early 2020, Australia experienced the most dangerous wildfires and an estimated one billion animals died. The negative aspect of environmental or climate change is that there are countries around the world that are more vulnerable to it. It is born from natural calamities. According to the IPCC, the average temperature of African countries has exceeded the global average temperature.

(g) Lost of Bio-diversity

Loss of Bio-diversity refers to the existence of humans, plants, animals, birds, living things, food and living things and all other types of living things. All living beings on earth are closely related. If even one species ends, then its clear effect can be seen on other species. Human existence also depends on other biological species. Their absence is a threat to the existence of humans. The system of this planet is arranged in such a way that every living organism has a role to play. Lost of Bio-diversity also known as biodiversity loss refers to the loss of a species, an ecosystem, a geographic area, or the land as a whole. But at the present time, due to anthropogenic processes, precious species of animals and plants, their natural environment and geographical location are under severe threat. Man who harms biological diversity is unaware that his livelihood is also connected with these organisms. Environmental scientists estimate that 150 to 200 plant and animal species are disappearing every day in our world. Some causes are:

- Climate change
- Deforestation and habitat loss
- Over exploitation
- Invasive Species
- Pollution
- Industrialization

To ensure biodiversity, trees should be planted as much as possible, sewage from factories and houses should not be discharged into the water, toxic gases and smoke emitting objects such as vehicles should be reduced.

(h) Deforestation

The process of loss of forests due to human activities or natural processes is called deforestation. According to the United Nations UNFCCC, the main cause of deforestation is agriculture, which is responsible for approximately 48% of deforestation. In addition, commercial agriculture is a variety of economic and non-economic activities such as logging, fuel. Forests are being cleared by humans. Experts say that the history of forest cutting is very old but since 1852 it has accelerated.

According to the Food and Agriculture Organization (FAO-2002) of the United Nations (UNO), 13 mha of forests are being cut down every year and this is going on all over the world. One of the main reasons for this is the growing population. Deforestation has two causes. One is natural and the other is human. Natural factors such as forest fires or vector-borne diseases can cause deforestation. But it is human activities that are responsible for global deforestation. According to the State of World Forestry report published by FAO, agricultural expansion is responsible for 80% of global deforestation. This trend is notable in South America, Africa and Asia, and the remaining 20% of forests are cut down for the construction of infrastructure and urbanization such as roads and dams are seen. Deforestation is harmful to biodiversity. The forest is home to many rare and delicate species. 80% of plants and animals live in forests. By destroying the natural environment around the forests for their own benefit, man is endangering all these flora and fauna. Due to which there is a significant negative impact on the natural balance. The causes of deforestation are:

- 80% of deforestation is caused by agriculture.
- 33% of forests are cut down by farmers in developing countries for agriculture.
- Commercial and industrial agriculture (crops and livestock) accounts for about 40% of forest loss.
- 40% of deforestation is due to construction of infrastructure.
- Mining activities account for 5-10 percent.
- About 15% of deforestation is due to urbanization.

(i) Urban Sprawl

Urban sprawl is also called suburban sprawl. The concept of urban sprawl has come into existence in view of the need to accommodate the rapidly growing population in the city. It is also increasing due to the continuous increase in human aspirations. At present day, people desires to live in metropolitan areas. From the beginning, people have been migrating for better places.. But in the present time, urbanization is becoming a very important and serious problem. According to the United Nations Population Division, 29 percent of the world's population in 1950 lived in urban areas. By the end of the 2000, it was 49 percent. Urban population in India was 29% in 2007. Urban radiation has always been negatively criticized as a cause of environmental degradation and loss of quality of life in urban areas.

(j) Ozone Layer Depletion

On the sides of the earth there is a layer above the upper surface i.e. the sphere, which prevents the harmful rays of the sun from reaching the earth, it is called the ozone layer. This is a rare gift given by nature to human life. Because it prevents the ultra violet rays from the sun from coming to earth. Its characteristic is that it absorbs the rays from the sun. If these rays come directly to our earth, then all the living beings will be victims of various types of disease. The ozone layer absorbs about 97-99% of UV rays.

The ozone layer was discovered in 1913 by Charles Ferry and Henri Buisson. It is 20-30 km above the surface of the earth. According to environmental and climate experts, the cause of ozone layer depletion is Chloroform Carbon (CFC) which is used by humans in their comfort and luxury items like cars, refrigerators and air conditioners etc. This is very bad for the ozone layer. Apart from this, Halogen Methyl Chloroform etc. are also the cause of depletion of ozone layer. In 1987, a document called the "Montréal Protocol" was created at the international level to address the depletion of the ozone layer. In this, 36 countries, including the United States, agreed to protect the ozone layer by reducing the use of CFC gas by 50 percent. In order to protect the ozone layer, the governments of different countries, industrial organizations and every individual must take serious responsibility to protect the earth and the environment, and for this, by eliminating unnecessary comfort and convenience, vehicles, and the use of refrigerators, AC, Car etc. should be minimized. The environment has to be moderated by planting more and more trees. So the life of every soul on this earth can be safe.

Need of Environmental Awareness

Awareness is the ability to directly perceive, knowledge and things. In a more precise way, it can be said that "awareness is a state in which something is understood." Another definition states that awareness is a state in which a person is aware of some information, when this information is directly available to determine the direction of the wider movement. The state of awareness is linked to the conditions of experience so that the representational structure in awareness mirrors the structure of experience. The quality or state of being aware about the object and comprehension of what is happening or existing.

In other words environmental awareness means "conscious knowledge or interest on the part of an individual". Therefore, environmental awareness means knowledge about the state of the environment, interest and concern about environmental degradation, its conservation and participation in various social activities to help prevent environmental degradation. Without awareness or involvement of local level people, the environmental problems cannot be solved successfully. Environmental awareness can be promoted through environmental education. It leads to improvement in knowledge, awareness, skills, values, attitudes and sensitivities towards environmental concerns. Realizing the importance of environmental awareness, the Indian government has enshrined environmental protection and its importance in the Constitution and mandated inclusion of environmental education in the school curriculum by the Supreme Court of India. Another meaning of environmental awareness is to be aware of the natural environment and to like or choose items that benefit the earth instead of harming the earth. For example, safe and non-harmful materials used in its construction, energy and water conservation, complete recycling of materials, and awareness campaigns and policies implemented for the environment. Environmental awareness simply means awareness or knowledge towards the environment. Not necessarily, but positive attitude towards the environment, actions, necessary skills as well as having an environment-friendly mind is also necessary. At present environmental awareness is needed to maintain environment conducive for better and natural life of the people. The problem arises due to urbanization; industrialization etc can only be dealt by creating the awareness in the people of the world. However some movement and policy played a very significant role for this cause.

CONCLUSION

Environment is everything that surrounds an animal, humans, plants and directly or indirectly affecting it. Environment is the sum total of all those external conditions and influences which affect the life and development of an organism. Previous few decades it is felt that environment have been changed due to the modernization and life style of the human beings which created many problems such as pollution (air, water and ground), global warming, over population, natural resources, depletion, waste disposal, climate change, lack of biodiversity, deforestation, urban sprawl and ozone layer depletion. Therefore, concern and awareness towards the environment has become a necessity nowadays, which can cause concern and loss of life for the earth and human life. The biological and non-biological objects present in the human environment and its environment along with the evolution of civilization and wanted to bring a happy color to the environment, but unfortunately it did not happen and human development made the environment monotonous. Since man is in the industrial age and where development has brought immense comfort and comfort to humans, the pollution of the environment has also increased. Nowadays, in this situation of increasing environmental, air, land and water pollution etc., there is a dire need to make the environment human-friendly as well as make ourselves environment-friendly. Because a healthy society and environment can be created when human needs and natural resources are balanced. Therefore, it is very important to create awareness among people, social groups and especially students about inclusive environment and its problems and protection. Life can be improved which can be possible through environmental awareness.

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SOCIO –ECONOMIC CONDITIONS OF WOMEN WORKER IN THE UNORGANISED SECTOR

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ABSTRACT
"Unorganised workers consist of those working in the unorganised enterprises or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment/ social security benefits provided by the employers ". We have attempted to take a dig at the conditions of the worker and women worker at large in the unorganised sector. We have realised that there is vicious cycle as far as poverty and unorganised sector is concerned. Wage discrimination and poor working conditions have been highlighted and proper and suitable suggestions have been. Social security measures and suitable health, security and food security. Timely nutritional awareness programmes would also be helpful. Attempt has been made to suggest a body to be framed which could frame guidelines and take evasive actions as and when required. India's aim to attain the economy of 5 trillion-dollar economy would only be achieved when the unorganised sector would be patronised. It's of pertinent importance we give a face to millions of faceless and identity to many who are nameless.

Introduction

The very term unorganized worker has been coined under the Unorganized Workers' Social Security Act, 2008, as a home based worker, self-employed worker or a wage worker in the unorganized sector and also includes a worker in the organized sector who is not covered by any of the given Acts mentioned in Schedule-11 of Act i.e. the Employee's Compensation Act, 1923 (3 of 1923), the Industrial Disputes Act, 1947 (14 of 1947), the Employees' State Insurance Act, 1948 (34 of 1948), the Employees Provident Funds and Miscellaneous Provision Act, 1952 (19 of 1952), the Maternity Benefit Act, 1961 (53 of 1961) and the Payment of Gratuity Act, 1972 (39 of 1972).

As per the survey carried out by the National Sample Survey Organization in the year 2011-12, the total employment in both organized and unorganized sector in the country was of the order of 47 crore. Out of this, about 39crores were in the unorganized sector and the balance of 8 crore in the unorganized sector. It is quite visible that s workers in the unorganized sectorconstitute more than 90 percent of the total employment in the country. A large chunk of unorganized workers are home based and are engaged in occupations such as agriculture, constructions, Industry etc.

Understanding the concept of the Unorganised Economy:

The very use of the term 'organised' and 'unorganised' being used in India is internationally known as 'formal' and 'informal'. In the Indian context the enterprise concept (i.e., to define and understand the unorganised sector) and the employment concept (i.e., to define unorganised employment) lack in conceptual clarity and uniformity across the sub-sectors of the economy.

Following are the contradicting concept being floated

- Central Statistical Organisation uses the term organised enterprise as small units with ten or more workers with power or 20 or more workers without power for the manufacturing sector.

- However, the absence of similar statistical data till now prevented this definition being extended to the service sector.
- Employment in the unorganised sector has hitherto been derived as a residual of the total workers minus workers in the organised sector as Reported by the Directorate General of Employment and Training (DGET).
- The DGET figures, however, fail to capture the informal/unorganised employment in the formal/ organised sector - a phenomenon, which is becoming increasingly significant in the Indian economy.

The 55th Round Employment Survey of the National Sample Survey Organisation (NSSO), it has paved way to apply a uniform definition of both the sector concept and the employment concept to distinguish the organised/ formal from the unorganised/informal. Using the following two key definitions the Commission separated the unorganised sector from that of the organised sector as well as unorganised employment from that of organised employment (NCEUS forthcoming). The organised/ unorganised terms are used interchangeably with formal/ informal and as such they are consistent with the international definition as recommended by the ILO

First, we define the unorganised sector in the following way:

"The unorganised sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers" Second, we define unorganised or informal employment as follows:

"Unorganised workers consist of those working in the unorganised enterprises or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment/ social security benefits provided by the employers".

Some Facts

- The informal economy employs about 90 per cent of the India's work force and 95 per cent of its women workers.
- About 50 per cent of the national product is accounted for by the unorganised economy.
- A high proportion of socially and economically underprivileged women of our society are concentrated in informal economic activities.
- Many of these women workers are primary earners for their families for sheer survival. Low-income women workers, especially in the informal sector form one of the most vulnerable groups in the work force.

The reasons for their vulnerability are:

(a) Irregular work,
(b) Low economic status,
(c) Little or no bargaining power,
(d) lack of control over earnings,
(e) Need to balance paid work with child care
(f) and household work,
(g) Little or no access to institutional credit,
(h) training and information, and
(i) Lack of assets.

These women find themselves vulnerable, caught between unorganised work and household responsibilities, and lacking access to support in the event of seasonal or life-cycle contingencies. Though they are contributing a lot to the income/saving of the family and to the GDP of the country, their contribution is not recognized. Sometimes they are subjected to many social evils like gender discrimination, domestic violence and sexual harassment at work-place. Despite the existing laws like, 'Prevention of Domestic Violence Act of 2005'; 'Sexual Harassment Act of 2013'; they are subjected to different kinds of exploitation. Therefore, it is time to address their issues, evolve policy measures, initiate reforms and institutional changes for their emancipation and empowerment.

The employees with informal jobs generally do not enjoy employment security (no protection against arbitrary dismissal) work security (no protection against accidents and illness at the work place) and social security (maternity and health care benefits, pension, etc.) and therefore any one or more of these characteristics can be used for identifying informal employment

Literature Review:

Women has an inferior status in Indian family. The economic dependence of women has pushed them into the vulnerability both within and outside the family (Kalyani, 2016; Neetha, 2004; Padma, 2002; Wadhera, 1976). In India, women play a vital role in supporting the family as well as in the economy. (Kalyani, 2016). Even though the average earnings of women in the informal sector are low, still the female workforce contributes largely to gross domestic product (GDP). This is because women engage in multiple activities in the home as well as in the unorganized sector. It is evident that women workers contribute the most to global economy.

Women's contributions in organized sector employment have been increased up to 17 percent only (Rustagi, 2003). Most women within the informal sector are placed in the lower level of the hierarchy. A careful analysis between education and women's share in the unorganized sector highlights that education is a primary factor that helps women to earn better and enhance their capacities.

National Sample Survey Organization (NSSO) suggests that around 30 million workers in our country keep migrating constantly and women workforce has increased by 25.94 million since the year 2000 (NSSO, 2002). The same NSSO report on the informal workers in India clearly highlights t the decline in the number of regular workers and significant increase in the number of casual workers (NSSO, 2012). Good number of the Indian labour force works in the unorganized sector, out of which women constitute very big share. The unorganized sector workers are vulnerable to organize themselves to take care of their common interest due to factors like scattered size of the entity, the casual employment, ignorance and illiteracy.

ILO (2014) led the Employment and Social Protection Task Team (ESPT) and initiated joint advocacy on the plight for Domestic Workers to collectively promote workable condition for domestic workers. Going further, ESPT had conducted public debate on the rights and equality issues of domestic workers which included safety, security, working conditions, wages, social protection, employer's expectations and employer-employee relationships. It was argued in the Public debate that a major sense of social co-responsibility must be developed towards assuming responsibility, society as a whole, for the process of taking care of the labour force; and towards unpaid care work between men and women, in accordance with the change that has already taken place regarding unorganised worker.

John K. (2013) in his work entitled "Domestic Women Workers in Urban Informal sector," highlighted poverty as main cause why many women are engaged in domestic work. The reasons for entering in domestic work were domestic issues including rural and male unemployment; disputes within family, ill treatment and early loss of parents have resulted in their abandoning the house to work as domestic worker. Women those who are underprivileged or those with alcoholic husbands are compelled to work for the survival of their children and to support their family.

Sharma (2006) states that there are no established standard norms that could decide working conditions for domestic workers. They work from till 18 hours a day while live-in domestic workers are on call 24 hours each day.

Sinha S. (2002), in the chapter, "women in unorganized sector: Mapping Needs" has stated common features of female workers in informal sector which are marked by hard work and long and sustained working hours, poor hygiene condition, low and unstable income, lack of assets, vicious cycle of debt hence borrowing at exorbitant rate of interest, low bargaining power, bad working condition, absence of social security protection etc. The characteristics of unorganized sector workers itself describes the problems faced by women in unorganized sector. Further, the author has stated importance of insurance in the life of women workers in unorganized sector as crises are recurrent fact in the lives of the unorganized sector workers and each factor leaves them more vulnerable if the insurance schemes was available to them, they would be able to cover this over a longer period, so that they could pay for it during the times in which they were earning.

As per Charmes (2000), there is an overlap between working in the unorganised economy and being poor: a higher percentage of people working in the unorganized sector, in comparison to the organized sector, are poor. There is a positive co-relation between working in the unorganized sector and poverty: Majority of people working in the unorganized sector are poor compared to those who are employed in formal sector. Further, this overlap is gender biased. Maximum women are in unorganized sector are poor compared to that of men. Unorganized workers basically lack the social protection benefits which are available to the organized sector, such as worker benefits and health insurance. They also work under irregular and casual contracts.

Objective of the study

The basic aims of the study are to understand the socio-economic condition of women workers in the unorganised sector, nature of their work, their working condition, wage pattern and difficulties faced by them at their work-place and to suggest ways to improve their status in future. The specific objectives of the study are:

- To know the socio- economic background of women working in unorganized sector especially in construction, agriculture, and domestic sectors;
- To find out the nature of work and working condition of women working in the unorganised sector;
- To study the wage patterns and causes of discrimination in wages of women working in unorganized sector;
- To find out what type of facilities are available to women labourers and to study their living condition; and
- Finally, to suggest ways for their betterment in future

Research Methodology

We are mainly relying on the secondary data. We would be analysing the data of the NSSO and ILO. Our inference would be also on the other relevant data highlighting the unorganised sector

Key Facts (Source: NSS, Employment-Unemployment Survey)

The proportion of non-agricultural worker in the unorganised sector has risen from 32 per cent to 36 per cent between 2011-2021.

The agriculture sector consists of almost entirely unorganised workers who are mainly the self-employed (65 per cent) and the casual workers (35 per cent).

Even in the non-agriculture sector almost 72 per cent of the workers are in the unorganised sector, an increase of 4 percentage points from 68 per cent in 2011.

These workers are mainly the self-employed (63 per cent). The rest of the workers in the non-agriculture unorganised sector are more or less equally distributed between the regular (17 per cent) and casual categories (20 per cent).

Only about 0.4 per cent of the unorganised sector workers were receiving social security benefits like Provident Fund, and this proportion had not changed since 1999-2000. The unorganized / informal sector in India is largely dominated by self - employed. In 2009-10, about 60 per cent of total workers in rural areas and about 57 per cent of total workers in urban areas were self-employed. The gender ratio of informal sector reveals that comparatively more females were engaged as self-employed than males. In the rural areas nearly 78 per cent of the total women informal non-agricultural workers were self-employed whereas nearly 54 per cent males were self-employed. Similar conditions were seen in case of urban areas as well. In the urban areas, nearly

65 per cent of total informal women workers were self-employed and about 55 per cent males were self-employed.

Working Condition of Female In Informal Sector

- Women work in the unorganized sector mainly for economic independence. Most Indian women by and large undertake "productive work" only under economic compulsion.
- 'Daily payment' is the most common mode of payment for unorganized women workers in the sample area. It is found that 23.6 per cent female unorganized workers receive daily payment for their work.
- Regular monthly salary is given to 36.5 percent unorganized female workers. Piece rate payment is the mode of payment for 4.4 per cent female unorganized workers. About 11.9 per cent workers avail weakly payment.
- Data on workplace of the unorganized workers reveals that 5.7 per cent rural and 13.6 rural women workers have no fixed workplace.
- Larger proportions of rural women (41.1 %) are working at their own residence and are carrying out mainly home-based works.
- Availability of safe drinking water and separate toilet facilities for women workers are indicators of decent condition at the work place. All the non-agricultural female wage workers in the sample households responded that they have drinking water facilities at their work-place
- Gender discrimination at the workplace is subtle and is reflected in the nature of work performed, valuation of the skills and the technology used by men and women. Generally lower wage rate jobs are assigned to women and higher wage rate jobs are assigned to men.
- Many women workers are exploited by the fellow male workers, owners as well as by the customers.
- The women are reluctant to complain with any of the formal bodies fearing loss of jobs and embarrassment caused in revealing the matter

Socio-Economic Characteristics of Women Working In Unorganised Sector

- Age: Overall, majority of unorganised women workers (60 per cent) are from the young age group of 18-35 years. About 35 percent are middle aged between 36 and 50 years. Only 4 percent are in 51-60 years age group. Just one percent is above the age of 60 years. Across the regions, not much variation is noticed worth indicating.
- Marital Status: Majority of the women workers (76.1 %) in the study area are married, whereas only about 20 percent of them are unmarried. About 1.40 and 1.80 percent are widowed and divorced respectively. Just 0.60 percent women have been deserted by their husbands.
- Family type: Majority of Women workers (85.90%) are from nuclear families and the rest (14.10) percent are from joint families. Across regions, proportion of nuclear families varies between 87.08 percent in North-East to 84.60 percent in the East.
- Family Size: Survey findings reveal that overall, a sizable proportion (36.70%) of women worker's household consist of 5-6 members. Across the regions the percentage being almost similar. Households with 7 and more members are between 11.30 percent in North to the highest at 16.21 percent in the West.
- Dwelling units: The survey found about 29 percent of the women workers live in dwelling units with concrete roofs, 23.83 percent of the women workers live in dwelling units with tiles roof and 15.1 percent of the women workers live in dwelling units with grass roof.

Occupation & Income Profile Of Women Working In The Unorganised Sector

- In the unorganized sector, women are engaged in almost all kinds of activities such as; livestock, forestry, fishing, plantation, construction, retailing, beedi - making, bangle making, pottery, embroidery, stitching etc.
- Most of the women work as casual labourers in agriculture, construction, brick-making, coir, or as own account workers in handloom weaving, basket weaving and vending fish/ vegetables.
- Survey data clearly shows that about 22.0 percent women working in the unorganised sector are agricultural work.
- The remaining 78 percent are engaged in non-agricultural activities.
- Within the non-agricultural activities, about 37.1 percent women are working as own account workers followed by 23.0 percent women working as regular salaried employee, 15.1 percent women working as helper in domestic enterprises (without salary/wages) and only 1.7 of them are working as employers.
- Low income/wage has a dampening effect on female labour force participation rates, with participation rates higher among low-income households largely due to economic necessity. With rising household incomes, participation rates of women start to drop off.

Challenges Faced by the women

The difficulties faced by the women workers in the unorganised sector are many. Their work is marked by irregular employment, uncertain terms and Condition, lack of service rules with regard to their specific responsibilities, rights and obligations and inaccessibility to social security benefits. Though they constitute a majority of the workforce in the unorganised sector, they are subjected to various forms of discrimination, inequitable pay and harassment.

Major challenges faced by the women working in the unorganised sector are as under

- highly volatile and insecure employment
- Irregular and low wages
- Lon and sustained working hours
- Lack of hygiene
- Lack of proper working conditions
- Exploitation.
- Wage discrimination

Suggestions

- Regulation of Working Conditions
- States should take the basic responsibility towards provision of certain minimum conditions of work, including minimum wages and social security.
- Awareness of the social security scheme initiated by the government.
- Strict implementation of the proper working conditions
- Registration of all the informal sectors
- Informal sector should be gradually brough under the ambit of formal organisations.
- Conscious strategy of 'levelling up' the informal sector rather than 'levelling down' the formal sector.
- Nutritional awareness and security
- Information on balanced diet, additional food requirements during pregnancy, lactation and for growing children, cooking methods to preserve nutrients, family budgeting etc. are to be provided to these women.
- Mass media should be used to communicate the social message relating to women’s equality
- Formation of the union for the Unorganized female Workers for Collective bargaining
- Wages should be monitored by the government.
- Women workers should be facilitated to skill development

programmes to enhance their skill level.

- The researcher would like to suggest that there should be a SEBI, IRDA like institutions which could guide and take both proactive and punitive decision regarding unorganised sector.

Conclusion

We need to understand the need to ensure socially acceptable conditions working conditions based on the fundamental principles of moral philosophy and human dignity and rights, which have also been accepted as international covenants by bodies such as the International Labour Organisation and others concerned with human rights and development. In practice they have been followed at varying pace in different countries dictated by, among other things, social norms and the resultant national ethos governing development and human dignity. We have also seen that there is a relationship between poverty and unorganised sectors. The plight of the women are evident from the facts and data covered in the article. The very characteristics of workers in the informal sector can be surmised in one phrase 'presence of decent work deficit'. Poor infrastructure and lack of basic services resulting in poor working Condition. Improvements in working condition are very much required. It can be achieved through better infrastructure and better basic services to all the unorganised worker especially women.

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APPLICATION OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT: A CONCEPTUAL STUDY

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Abstract

This present study proposes a conceptual framework of artificial intelligence (AI) technology application for human resource management (HRM). Based on the theory of the six basic dimensions of human resource management, which includes human resource strategy and planning, recruitment, training and development process, performance management, salary evaluation, and the employee relationship management, is combined with its potential corresponding AI technology application. Finally, the practical implication and future study are supplemented. This AIHRM conceptual model provides suggestions and directions for the development of AI in enterprise human resource management.

Keywords: Six dimensions of human resources management, artificial intelligence technology,

INTRODUCTION

With the development of Artificial Intelligence (AI) technology, a new generation of labor, such as the human intelligence of artificial intelligence, has become the key factor for enterprises to survive and transform in a changing environment (Ertel, 2018). Since Google's Alpha Go system has won an overwhelming victory in the battle with South Korean player Lee Sedol, artificial intelligence has attracted attentions of both researchers and practitioners (AlphaGo, 2016). Artificial intelligence, also known as machine intelligence, is an interdisciplinary science that mimics human capabilities and intellectual behaviour. Elaine Rich defines AI as "Artificial Intelligence is the study of how to make computers do things at which, at the moment, people are better" (Rich, 1983). In the process of simulating the information process of human consciousness and thinking, it can quickly retrieve the database, extract information, answer our doubts efficiently, and provide the best answer directly and rationally. Artificial intelligence theory and technology applications are also expanding, and many artificial intelligence tools, such as artificial neural networks, intelligent decision systems, and fuzzy sets, are used in various fields (Holland, 1992). Among them, the applicationAI has been gradually applied to enterprise management decision making, taking on and helping managers to speed up their tedious and repetitive daily work. It provides powerful database and analytical support, allowing managers to get out of mechanical work and engage in more valuable work (Partridge & Hussain, 1992). According to the Accenture strategic report, for coordination and governance, problem solving and collaboration, employee and community, strategy and innovation work, the utility and impact of intelligent systems can change the manager's work contents. Artificial intelligence can undertake and help managers speed up their daily tedious and repetitive work. It can also provide powerful database and analytical support, so that managers can get away from the repetitive work and get devoted to more valuable work. Human resource management refers to a series of human resources policies and corresponding management activities of enterprises. These activities mainly include the formulation of corporate human resources strategies, recruitment and selection of employees, training and development, performance management, compensation management, employee mobility management, employee relationship management, employee safety and health management (Noe et al., 2006). In the process of human resource management, the use of artificial intelligence technology can bring greater economic benefits. Improving the efficiency of human resource management through the application of AI technology has become an important trend in the future development of human resource management.

Literature Review

Artificial Intelligence-The status quo of artificial intelligence technology can be analysed from three levels, the basic support layer, the platform framework layer and the domain technology layer (Brooks, 1991).

The Basic Support Layer-The three major factors in the success of this layer of AI technology are big data, computing power and new models. Big data provides fuel for the development of AI. In recent years, the new enhanced algorithm model has greatly improved machine learning capabilities. A typical representative of this aspect is deep learning. It performs well in tasks such as supervised learning, unsupervised learning, and intensive learning.

Platform Framework Layer- Internet companies such as Google, Facebook, Microsoft, Baidu and Amazon, as well as universities such as the University of California at Berkeley and the University of Montreal in Canada have launched their own deep learning framework. Advanced deep learning technologies are expected to be applied with a small amount of customization and deployment, greatly reducing the burden on developers and businesses.

The Technology Layer- Artificial intelligence technology has been applied to various fields. At present, more mature technologies include face recognition technology applied in the airports and payment, such as Alipay. Natural language processing programs computers to process and analyse large amounts of natural language data. Related technologies have been widely used in translation software (such as correct translation), search engines, question and answer systems (such as knowledge), sentiment analysis and automatic answering; speech recognition and so on. For example, voice assistants represented by Apple Siri, Microsoft Cortana and Google Now has be setup on the user's mobile phone and computer. Smart speakers represented by Amazon Echo, already have tens of thousands of family-users. Speech recognition technology is one of the core technologies of these devices.

Six Dimensions of Human Resource Management- The six dimensions of human resource management are interconnected and interact to form an effective human resource management system, among them:

a. Human resource planning is the starting point of human resource management. It mainly helps the organization to predict the future needs of personnel and the basic qualities of personnel through the plan.
b. Recruitment and deployment, with human resource planning as input, is equivalent to the organization's blood, providing nutrition to the organization, solving organizational staffing and staff matching issues.
c. Training and development, the theme is "education";
d. Performance management is the core of the six dimensions. It is also the main input for other dimensions.
e. Compensation management aims to motivate employees to solve problems in the company.
f. Employee relationship management aims to manage personnel and help the company form an effective cycle of rational allocation of human resources (Noe et al., 2006).

Diagram 1: Six dimensions of human resource management

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AI Study in Human Resource Management

The development of Human Resource Information System (HRIS) has provided a foundation for AI application. HRIS With the development of human-computer interaction functions of AI, there is also possibilities for managers to improve management efficiency by using AI. "HRIS is a procedure for collecting, storing, maintaining, retrieving and validating data needed by an organization about its human resources, personnel activities, and organization unit characteristics"(Kovach & Cathcart, 1999; Lippert & Michael Swiercz, 2005). HRIS can assist the strategic planning with information for labor force supply and demand forecasts; dealing with applicant qualifications; development with information on training; and evaluating performance with information and so on. However, compared with AIHRM, the information system is more dealing with data input and storage; the intelligence decision assistance function is still limited. The artificial intelligence can further strengthen the business analytic abilities of the system to provide further references output for decision making. Data mining methods are also proposed for scanning the e-resume. Expert systems are proposed to solving the knowledge management in the enterprises. The controversy on whether AI can replace the human resources is also discussed (Turban & Frenzel, 1992; HRPA, 2017). There is still a research gap between the AI technology application studies in HRM fields.

Conceptual AI Application Model For HRM

The design of the "AI+HRM" model framework is mainly to assist the human resource managers to make better decisions more efficiently facing large amount of information. The framework answers how the AI can be combined with Human Resource Management. The corresponding relations among the human resource management, AI detailed technology, and the formed Intelligent System are described and explained, as shown in Figure 3.

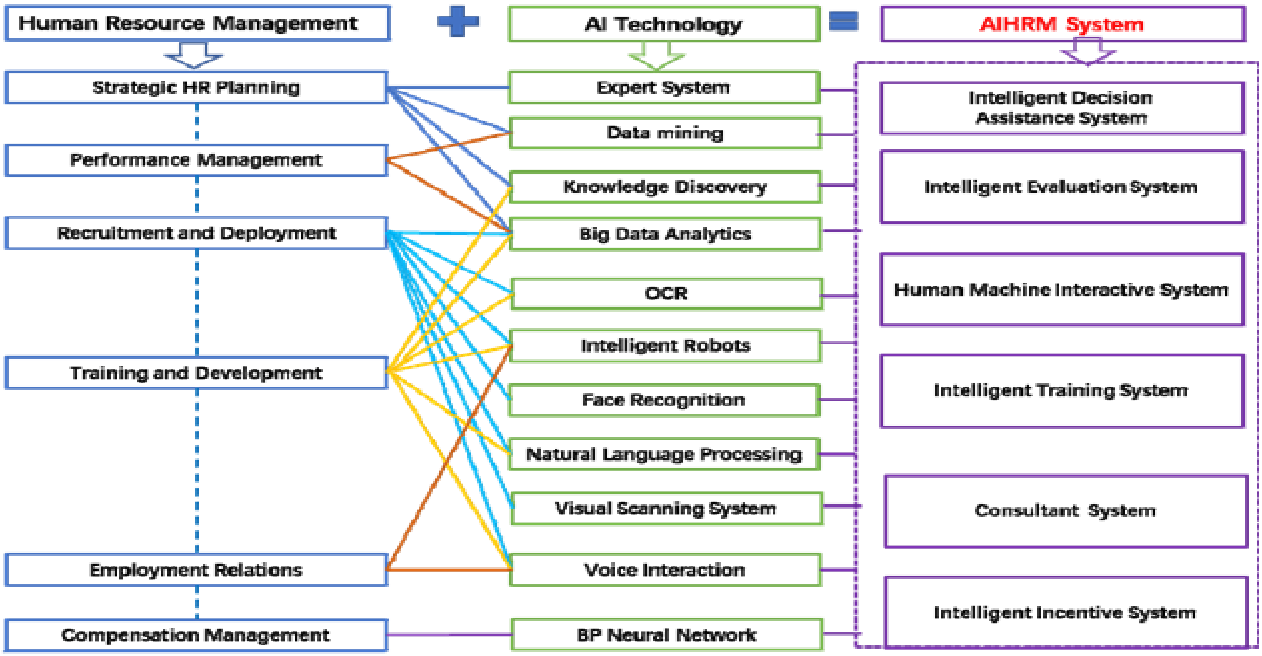

Diagram2: A conceptual model for artificial intelligence application in human resource management.

Human Resources Strategy and Planning:

Human resource strategic planning is the starting point of HRM. Managers use artificial intelligence technology as an auxiliary decision-making system, which can carry out strategic planning more comprehensively. First, technologies such as data mining and knowledge discovery are needed to collect global information and combine with existing internal and external information. After summarizing the information, we can understand the current rationality of the human resources situation and forecast, evaluate and adjust the company's future management. Relying on the statistical and modification functions of the intelligent decision support system, the report is finally provided with various required information.

Recruitment and Deployment:

As an important part of the system, the recruitment process includes review, screening resumes, interviewing candidates, matching suitable positions, etc. Ideal Corp, a software company that uses artificial intelligence to automate recruitment tasks, its CEO Somen Mondal says that the biggest impact of artificial intelligence is to automatically screen candidates and reduce bias. Artificial intelligence can learn the qualifications for successful employees in a particular position and apply this knowledge to select qualified candidates and score and rate candidates. According to Mondal, the company used artificial intelligence software to recruit, with a 71% reduction in recruitment costs and a threefold increase in recruitment efficiency (Denise, 2017).

First, the Optical Character Recognition (OCR) is used to identify paper resumes and pictures, or use the big data method to filter electronic resumes, analyse resumes, and combine the characteristics of resume and text information extraction techniques, through matching, correlation analysis and statistical analysis. The database can be converted into a structured resume in seconds and push the candidate's resume to the company accurately and quickly. At the same time, through the analysis of resume and job matching, the system can recommend suitable positions to candidates, especially for some high-end talents. In this process, AI has the characteristics of screening the candidates without prejudice (Hutson, 2017).

During the interview process, the company set up a recruitment model and the robot asks questions to the candidate. The enterprise can set the corresponding problem of matching posts and the keyword extension problem from candidates' answers. For example, if the candidate has engaged in data development related work; the robot will query the operation flow, and query which database to use according to the answer. The answer can be evaluated by collecting the keywords and similar word meanings. If the interviewer has doubts, he can re-watch the video. Artificial intelligence converts a 15-minute video interview into a set of 20,000 data points for facial movements, intonation and word selection. The system can help the interviewer greatly improve the efficiency of the interview without reducing the quality of the interview.

Face recognition techniques can be used in the exam to determine if the candidate is consistent with the document, thereby preventing others from taking the test instead of the candidate (Jain & Li, 2011). The use of natural language processing technology eliminates the need for typing, and the conversion from speech to text does not require much time, which will greatly improve the efficiency and accuracy of the recruiter's work. In addition, the system can also choose a reasonable interviewer by using the voice test method to carry out effective recruitment. After that, the big data method is used to collect candidate information, screen vacancies, match the interview results of the hired personnel, analyze their personality characteristics, advantages and disadvantages, and match the corresponding positions through analysis of personality and IQ/EQ test. At the same time, employees can be tested regularly (such as the annual). Using artificial intelligence can help managers to identify new employees with the greatest potential for success and deploy them in the right team. The intelligent system can also help employees to matching the right supervisors, recommend learning opportunities and career paths, and even suggest that they are at risk of leaving. It can also help to re-match jobs for employees who have a willingness to change jobs.

Training and Development

In the process of continuous development, both internal development and external impacts continue to push employees forward. Using a variety of artificial intelligence technologies, it can be more comprehensive to help enterprises to form a learning organization culture, which avoids the ordinary teaching design model based on the traditional gap analysis of the ability model. (Human resources managers need to conduct research and identify gaps of employees and group them through various analysis methods such as questionnaires, interviews, job observations, assessments, and job data analysis.)

First, training instructors can be artificially intelligent. During the training process, the robot training instructor can use the visual scanning system to observe the daily learning status of each student, accurately calculate the average value of all students' attention, and then retrieve the teaching events of different stimulation levels through data analysis. The instructors can also adjust the level of relaxation and the teaching rhythm according to students feedback. The curiosity of these students who interacts frequently with robots is also enhanced (Oshima et al., 2012). In addition, through big data analysis, enterprise training can extract the part of employees who need to learn from the vast knowledge base, form a customized employee curriculum, comprehensively test and locate the staff level through technical means, and intelligently promote tailor-made courses.

In the training process, artificial intelligence technology can help the students to automatically record training data. The intuitive data is analysed to show the degree and effect of employee learning, which saves time for training managers and allows managers to quickly learn about training results. In addition, companies can use voice technology, learning content database, and core algorithm to achieve a fast and efficient learning experience. AI teachers can not only improve the quality of learning and learning efficiency, but also significantly reduce the operation and management of online and offline training. AI teachers can also become an all-round assistant, from statistical learning data to outputting high-quality learning reports; from supervising students to learning automatic rankings. AI teachers will redefine the basic logic of instructional design. The employees can simply enter the learning objectives, the archives and learn key points, and the course will be completed automatically by the AI teacher. In order to realize the core work from the definition of learning methods to the definition of problem-solving knowledge transfer, the "intellectual" construction will become the core content of the AI era curriculum designers.

Performance Management

In performance management, the performance appraisal model can be embedded into the system with collecting and analysing the information about employees' work performance. Using the intelligent decision support system, some scientific evaluation methods, such as 360-degree performance evaluation methods, can be used more automatically and quickly (Otley, 1999). These assessment methods are programmed and entered into the decision support system to more effectively count employee evaluation results.

At the beginning of the year, the business objectives of each department of the company can be setup. The system can evaluate the individual performance targets, access control punch card system records, resignation system, department manager score, personal score, peer score, customer score and make other comprehensive analysis and evaluation. With the AI assistance, the decision makers can analyze the achievement of each indicator, propose the defects of the failed indicators, formulate and implement practical new indicators, and propose upgrade plans. The future performance objectives can also be setup with forecasting the future trend.

Compensation Management

Compensation management, or salary management is a dynamic management process which determines, assigns, and adjusts employee compensation principles, strategies, levels, structures, and factors that with the guidance of organizational development strategies (Henderson, 2003).

AI application can assist to facilitate fairness of the compensation management. BP neural network is a supervised artificial intelligence technology based on biology, neurology, psychology and statistics. It can imitate the human brain nervous system, establish a regular computing model, and integrate multiple neural network nodes (Richard & Lippmann, 1991). BP neural network system can be used to design an intelligent decision support system to form a fair salary evaluation system with the input of the big data.

Employee Relationship Management

Employee relationship management includes corporate culture and labor relations, coordinating the relationship between employers and employees. In terms of labor relationship management and communication management, artificial intelligence technology can be used as an auxiliary system to solve many complicated process stereotypes, undertake management tasks, and act as performers, assistants, and consultants.

The assistant primarily supports the manager and his team, such as recording, scheduling, reporting, or maintaining a scorecard. Examples of artificial intelligence applications in this area include the "Virtual Assistant System", which organizes meetings by reading and composing emails, coordinating participants, and managing calendars. In the process, these intelligent systems will gradually improve relevant knowledge and expand service areas by absorbing the experience of themselves and their colleagues. These systems extend the definition of workplace artificial intelligence and become the so-called "advisor system".

Future Study and Practical Implications

The future trend of the AI for HRM is still the collaboration of human and machine with the existence of confliction. The McKinsey Global Institute believes that "more than 30% of activities in 60% of occupations can be replaced by artificial intelligence"(Chui & Francisco, 2017). According to a research report from the

University of Oxford, in the next 10 to 20 years, half of the 702 jobs in the United States will disappear under the influence of IT, and nearly 47% of US employees will be employed. Based on these data, how to elevate the competitive intelligence of human resource managers and deploy the human resources efficiently may be very difficult to handle with.

How to collaborate the human and machine with using the developing technologies is also an important question. The large-scale rise in unemployment rate also will cause opposition and resistance. In detail, in each dimension of human resource management, there are worthy researching questions to be answered. For example, the process design for the matching between job seekers and providers based on HR model and AI. The intelligent performance evaluation system combined with the AI algorithms and performance evaluation standards (Dom, 2018).

Conclusions

This study proposes a conceptual AI framework for HRM, based on the six dimensions of HRM and status quo of AI technologies. Human resource strategy and planning combined with data mining and knowledge discovery can form a corresponding intelligent decision support system; The recruitment process is combined with face recognition and natural language processing technologies to establish an interview system; During the training and development process, intelligent robots and visual scanning technologies can assist people to teach and learn; The performance management procedure can be utilized with data mining technology, forming an intelligent incentive system; An intelligent salary evaluation system can be constructed by applying neural network system; Finally, the employee relationship management can be assisted with robot and voice interaction technologies to form a corporate advisory system. With the cases analysis on recruitment of leap.ai and online training of Baidu, the recruitment dimension and training dimension with AI are further explored. Finally, the practical implication and future study are supplemented. This AIHRM conceptual model provides suggestions and directions for the development of AI in enterprise human resource management.

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CHANGING HUMAN RESOURCE MANAGEMENT RELATIONSHIP IN THE DIGITAL ECONOMY

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Abstract

The era of digital technology began in the twenty-first century. Wherein the use of digital technology in the project has caused an acceleration of the process. Employee mobility has therefore grown as well. Every corporate organization's activities are now related to digital technology in the modern day. As a result, employees have begun to adopt a digital working style, which is regarded as the emergence of a new economy in the twenty-first century that we refer to as the digital economy. Through the use of technology, this economy keeps individuals and their work connected, allowing for continued digital communication between employers and employees. As a result, they experience a professional connection rather than an emotional one. Because of this, employee productivity has improved, and they are working harder than ever to maintain their current levels of productivity and quality so that they can hold their jobs for a long time. Otherwise, if an employee does not place sufficient attention on his quality and productivity, another individual is chosen in his stead since digital platforms have made the entire globe available as a platform. Similar to this, if employee quality and productivity rise, they would seek for other companies that can offer them high salaries and superior facilities. Because of this, it is also proving to be difficult in today's digital economy to keep employees in one location for an extended period of time because of how much employer-employee relationships are changing. **Research Methodology –** the present study is based on the conceptual research method wherein various research papers and articles have been reviewed. It aims to analyse the changes in the changing human resource management relationship with the digitalisation and modernisation of the economy.

Keywords- Employer-employee relationships, Digital economy, Human Resource Management, Transforming technology, Internet, Artificial Intelligence

Introduction

Digital economy Platforms for human resource management are revolutionising the global labour market. The companies that currently own, operate, and use this platform have opened up new horizons by fusing technology with their core competencies. By enabling those services to provide services with the most up-to-date technology, employer-employee relations are thereby being redefined. As a result, workers can see significantly positive initiatives in terms of job security and other working conditions as compared to other contract workers and workers. The digital economy provides its workers with unmatched flexibility in terms of set working hours. Consequently enabling the majority of the workday to be broken up, improving workers' well-being and resiliency. Employees with extremely poor or low economic conditions might benefit from such assistance programmes and adjust their work practises to enhance their sources of revenue, which will help their financial situation. In order to save expenses, businesses are currently turning staff to contract workers rather than reinstating them on a regular basis. They receive poor pay, perks, and facilities as a result, and given this reality in the present, a new framework and policy discussion are urgently needed so that employer-employee relations may be appropriately defined in the digital economy as well. On-demand work's characteristics might be politely expressed. Although in human resource management, an employer-employee connection is necessary for both parties to be complete. The corporate environment and the nature of labour are changing as a result of the digital economy. Robotics, machine learning, big data, and production, distribution, and consumption restrictions pushed by technology, as well as platforms for automated and intelligent systems, all pose risks to the workforce. In light of the fact that a sizable portion of the work is now completed automatically without human involvement, the influence of the digital economy on the labour market is apparent, changing both the amount and quality of employees. The digital economy has altered how individuals live their lives; therefore an employer looks for specialised workers that are innovative, technically more skilled, and proficient to fulfil their jobs. As a result, in the current situation, employers look for employees based on their talents, and an employer-employee relationship is developed based on how effectively and imaginatively the employees are able to do duties in the employer's view. In a similar vein, from the perspective of an employee, how much pay and other perks does the employer provide the employee in exchange for the job that is performed by him, taking into account his talent and the task that would be accomplished. As a result, in the digital economy, connections between employers and employees are built on the guiding principles of collaboration and mutual benefit. As a result, in the present, human resource management shows how effectively and imaginatively individuals are capable of performing technical job as well as how much pay and perks businesses may offer them in exchange for completing their task.

Digital Economy

Like a traditional economy, the digital economy operates. But the term "digital" has emerged as the driving force behind the economy, giving it a new dimension and course. As a result, the economy has undergone a tremendous transition, and as a result, we can now view the world from a different angle. Because the economy had reached a stop and no other means or medium other than digital ones were available to operate it, the Corona period also made a significant contribution to the transformation of the economy and to the introduction of digitization into the economy. Because of this, the Corona era may also be seen as making a significant direct and indirect contribution to advancing the digital economy. The digital economy is given the designation of a digital economy in distinction from the general economy since it experiences low points.

The fourth major wave of industrialization – As it transforms the economy, the digital economy is seen as the fourth significant wave of global industrialisation. As a result, the economy now takes on a brand-new shape that departs significantly from conventional practises. As a result, the economy is showing signs of a new culture emerging.

Rise of mechanized civilization – Even though digital economy is a fully technological economy, it is also regarded as a new type of mechanical society. When it comes to technology and internet-based economies, this is seen as having a worldwide foundation. This economy entirely breaks away from the established economy and ushers in a new era of machines. Where technology is used to drive the economy.

Big data explosion – The data-based technology that we employ, like the Internet, to put it simply, governs labour and economy in the new technology economy. As a result, internet and data usage in the digital economy has begun to increase somewhat. This demonstrates how crucial data is to the technical economy; without it, the functioning of the economy would seem to be impossible.

Robotics market – Because a digital economy is entirely reliant on technology, it may be run by machines. The economy understands the need for robots to fulfil these demands since they can do jobs flawlessly and sustain quality for extended periods of time. As a result, the need for robots in the digital economy will rise quickly in the future, making it simpler to execute activities requiring technology.

Artificial Intelligence – Artificial intelligence appears to be required in the technology age to control machines and robots. So that he may move his job forward by making a broad choice in accordance with the demands of his task, allowing the routine work to be finished automatically. This calls for the development of a mechanical artificial intelligence that is capable of carrying out a person's everyday chores independently of a projecting.

Objective of the Study

The shifting employer-employee interactions are largely a result of the digital economy.
Currently, it serves as a crucial foundation for the present in order to satisfy future demands.

We alter all we do to accommodate the wants of the new generation rather than altering it to take advantage of chances. So that the employer-employee relationship may be revived in a fresh way and they can work with renewed zeal. As a result, a new approach and atmosphere are developed within the company; as a result, a pleasant working environment is formed, and the employees are more motivated to support the company. In order to grasp what may be its goals and how we might benefit, we need to understand the following aspects, which are explained when we study it.

Exploring the use of new technology – The goal of the digital economy is to provide new technologies to the economy so that it may be expanded into other realms. This digital economy is built on a whole new set of technologies, ones that are absolutely unrelated to the old economy. The people that work here are likewise involved in highly technological jobs and interact virtually with their employers rather than in person.

To find out workplace environment with positive energy – In modern economy, efforts are made to maintain a healthy work atmosphere so that, with the help of new technology and energy, employees may begin a fantastic career alongside their business. That they can contribute favourably to the economy. The employee-employer connection is strengthened and thrives when there is positive energy in the workplace.

Inclination and honesty of employees towards the organization – The workplace is upbeat and lively, and in addition to having outstanding employer-employee relations, the staff members themselves maintain an honest and pro-company attitude. As a result, the employees stay with the company for an extended period of time, benefiting the employer by providing them with a solid team of seasoned personnel. The better they can do their duties.

The rising of productive employee– Employees stay with the same company for a long time because of the positive employer-employee connection and work environment. Because of this, they become more experienced and productive when they work longer hours. Both the employer and the employee profit from this in direct and indirect ways since the employer makes money and the employee gains power by receiving a wage and other advantages.

More potential resource management– Relating to an employer as an employee Due to the positive workplace atmosphere, employees stay with the company for an extended period of time, and other experienced employees with greater work aptitude are also drawn to the company. This has a positive impact on the organization's effectiveness and management. This results in both direct and indirect benefits for the business, as they gain good reputation and a highly effective team at the same time.

Importance of the Study

In the digital economy, employer-employee interactions are very important and they matter tremendously. Any economy must have economic activity in order to function, and this activity is fuelled by the exchange of commodities and services, which makes it feasible to conduct financial transactions. As a result, an economy's cash flow is predictable. In the digital economy, the economy is run through new technologies and digital media; as a result, there is a need for people working based on new technologies and digital mediums, since they are skilled in a specific art and can do their responsibilities successfully through technical knowledge. They are distinct from conventional employees because, just as a regular worker completes the task using physical force, these workers do it using their technological expertise. These workers are educated and skilled as a result, which keeps the need for them high in the expanding economy. Because they must be trained according to the organization's working style and an atmosphere must be created for them to adapt to the working style before beginning the job, keeping them in one location proves to be a difficult challenge for the employer. They exist. It turns out to be quite expensive for any firm. Because of this, employer-employee interactions are crucial in the evolving digital economy. The fact that a better employer-employee connection results in less conflict and more employee involvement in the firm is one of the key characteristics of the employer-employee relationship. It is possible to have open communication between the employee and the recruiters, which makes it extremely simple for an employer to create staff development plans. Employee productivity also increases as a result of their continued satisfaction with the company. The following examples help us highlight the significant effects of a robust digital economy for both companies and employees.

Reduction in conflicts between the recruiter and the employee – Work will be done in the digital economy with the aid of technology and the Internet. Because of this, there is continuous transparency within the company, and both employers and employees have complete faith in one another. As a result, there is less tension between the boss and the employees, and their connection is improved. By making tasks clearer, the digital economy lessens conflict.

Better employee engagement – The workers' connection with the organisation and level of involvement in their job are maintained as a result of openness and explanation in the work. Because of this, business operations are highly smooth and employee-employer relations are excellent.

Better productivity increase – A positive employer-employee relationship lessens conflict within the workplace, allowing the employer to focus entirely on upcoming tasks and the welfare of the employees as a whole, while also ensuring that the employee is happy with the organization's openness and the compensation he receives in exchange for his workforce. Boost your focus on your task in order to boost employee productivity and work efficiency.

A better understanding of skill sets among employees – prospering in the digital economy with a technical foundation. As a result, in order to perform his function, every employee must possess technical knowledge and comprehension.

Impact of the Study

Within a few months, the digital economy will be distinct from the mainstream economy. The digital economy is seen as being tied to digital media and technology, much as the general economy is seen as a traditional economy connected to the ground. Despite the fact that both have the same goal, their working processes and capacities differ. This is why it has a different impact than the economy as a whole. This presents certain difficulties, but it also offers some opportunities that are distinct from those found in the mainstream economy. Even though employers and employees are the two sturdy wheels that make up an economy and because economies can function when they move at the same pace, these possibilities and difficulties affect both employers and employees. Because of this, a digital economy offers us both the following difficulties and greater prospects.

The economy that is currently expanding is referred to as the digital economy. The digitalization of the economy is another name for the digital economy. In which technical advancements in the economy are made, and where Internet-based digital technologies are transforming the economy. It is currently moving forward really quickly. According to the Organization for Economic Co-operative and Development (OECD), after Corona in the whole world, 60% of internet usage has started increasing in the digital economy. This shows how fast digitization is progressing in the world. According to The Economic Times, there has been an increase in 22 million fixed line and broadband connections in India, which reflects India's progress in the economy and also helps India to dominate as the world's 5th largest economy at present. Similarly, according to the Economic Times, countries in Europe have also seen a lot of growth. According to the Mobile Broadband Index, 4G mobile data in India has grown by 31% and the average monthly data has registered a growth of 26.6% in the last 1 year. Looking at the current conditions, it can be clearly said that the digital economy is growing very fast. The main credit for this goes to the appointment and the employees because it has been possible due to their tireless efforts. At the same time, in the changing digital economy, this has been possible due to their best relationship improvement and unshakable decisions and it is likely to increase significantly in future also.

Conclusion

We can observe the evolving form of the employer-employee interaction in the digital economy. In a conventional economy, the link between the two parties was created immediately at the site of employment can occur. As a result, early in the economic cycle, employer workers worked at a single location. The relationship between the employer and the employees is currently as strong as it was in the conventional economy because to workplace diversity and the new trend of working from home. Due to the fact they are completely connected via new digital and electronic methods of communication and continue to do business as usual. Currently, communication and digitalization are used extensively across all industries, as shown by studies on internet data usage and new connections from recent years. This information is credible since the internet is a kind of digitalization in and of itself. It is the foundation of the economy, and a new type of economy has emerged thanks to the Internet. The personnel are equipped with digital skills and taught to run this new economy, giving the digital economy its name by allowing us to do our chores using technology. They continue to communicate online with their company as a result of the ever-changing environment. Finally, we can state that although the employer-employee relationship has not changed in the new digital economy, it has acquired a new dimension that is already extremely evident and complies with legitimate norms with transparency.

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PROBLEM AND CHALLENGES IN IMPLEMENTATION OF CROP INSURANCE SCHEME IN INDIA (A CASE STUDY OF JHARKHAND STATE)

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ABSTRACT

We all know that India is an agrarian country. More than 65% of people are dependent on agriculture for their livelihood in India. It contributes 17-18% to GDP. So it is important to provide stability in their income. The agricultural sector is most unstable due to natural disasters like claimant change, floods, drought, etc. One of the most effective mechanisms to minimize agricultural risk is to have the best insurance system. Crop insurance is started in India since 1972. In this study, we discuss the problems and challenges in the implementation of crop insurance in Jharkhand state. With reference to the Kisan Fasal Rahat Yojana which is implemented in Jharkhand in 2020 by replacing Pradhan Mantri Fasal Bima yojana (2016) because of several problems such as lack of transparency, high premium rate, non-payment/delayed payment of claims to farmers. There are many gaps to be filled for proper implementation of crop insurance.

Keywords: (Crop Insurance, Kisan Fasal Rahat Yojana, Pradhan Mantri Fasal Bima yojana)

Introduction

India is an agrarian country. The history of **Indian agriculture** started from Indus Valley Civilization Era and even before that in some parts of Southern India. Agriculture has been the backbone and most important sector of Indian economy. More than 65% of people are dependent on agriculture for their livelihood in India. It contributes 17-18% to GDP.

In many counties agricultural products are comes in most exporting category to generate revenue. Increases in agricultural productivity are necessary for self-sustaining economic development in most developing countries. After being known the importance of agriculture, many initiatives taken for its development have often failed to deliver full benefits Low incomes, low capital-labor ratios, and the general insecurity of agricultural production characterize this sector in developing countries. There is often a dichotomy between the urban and rural sectors of the economy, not only in terms of technology, but especially in terms of access to services such as transportation, medical facilities, educational facilities, insurance services. Agriculture has always been a risky business. Unlike the industrial sector, it is subject to the vagaries of nature. The uncertainty of crop yields is therefore one of the fundamental risks that every farmer in all developing countries has to face, to a greater or lesser extent. In most of these countries, the overwhelming majority of farmers are poor and have extremely limited means and resources, so they cannot bear the risks of crop failure. It is true that much of the current uncertainty in crop production in these countries could be eliminated by technical measures-assured irrigation, judicious land use, crop rotation, and mixed cropping-and by improvements in marketing and institutional development. However, the co-variability of risks limits the effectiveness of traditional measures. The modern insurance sector can play an important role here and significantly improve farmers' financial security. In many countries, the state provides assistance or support to the agricultural sector in the event of a natural disaster as part of public policy. In some countries, this is done on an ad hoc basis, while in others there are formal regulations and even laws for this purpose. Agricultural insurance is a more efficient tool and an effective institutionalized mechanism to deal with this problem. It helps streamline relief efforts and reduce direct and indirect costs to the national economy.

Crop insurance in India.

The first nation-wide crop insurance scheme was the Comprehensive Crop Insurance Scheme (CCIS) introduced in Kharif, 1985-. This scheme was based on an area approach and area units were identified for the purpose of assessing indemnity. This was replaced by National Agriculture Insurance Scheme (NAIS) in Rabi 1999-2000, which was further changed to the Modified National Agricultural Insurance Scheme (MNAIS) during Rabi 2010-11 (Annexure 1). Apart from these schemes, several other pilot projects such as Seed Crop Insurance (1999- 00), Farm Income Insurance Scheme (Rabi 2003-04) and Weather Based Crop Insurance Scheme (Kharif 2007) were implemented from time to time. In April 2016, Pradhan Mantri Fasal Bima Yojana (PMFBY) - an area based scheme and Restructured Weather Based Crop Insurance Scheme (RWBCIS) was introduced.

PMFBY

Recognizing the limitations of the existing crop insurance system, which could not meet the needs of farmers, the NDA government announced a new crop insurance program. The PMFBY program was introduced from Kharif 2016 with the aim of providing adequate insurance coverage and financial support to farmers in case of crop failure.

Features of (PMFBY)

(i) Sum Insured**-** The sum insured is equal to the Scale of Finance (SoF) for that crop as fixed by District Level Technical Committee. The sum insured for the individual farmer is now equal to per acre funding formula multiplied by the area of the declared crop that the farmer is proposing to insure. The funding formula takes into account the cost of cultivation based on soil quality, irrigation costs and facilities, and fertilizer, seed, and labor costs, which vary from district to district

(ii) Premium rates: The premium rates payable by farmers for food crops and oilseeds (FCOS) are fixed at 2% of the sum insured or the actuarial rate, whichever is lower, for the Kharif season and 1.5% for the Rabi season. For commercial/horticultural crops, a premium rate of 5% is set to be paid by the farmer. The difference between the premium rate and the insurance rate to be paid by farmers shall be shared equally by the central government and the state government as premium subsidy

(iii) Crop yield estimation: at village level, at least 4 crop inspections are required for major crops and 8 for other crops. Data from RST/satellite imagery will also be used in optimizing the sample size of CCEs.

(iv) Use of modern technology: CCEs lack reliability and speed in estimating crop yields. To improve the quality of data and enable faster assessment of applications, the use of mobile technology with GPS was recommended. The cost of procuring handheld devices/smartphones is to be shared equally by the center and the state, with the central government providing a cap on total funds. The use of technologies from remote sensing, aerial photography, satellites, etc. would reduce manpower and infrastructure requirements. It is estimated that by using a mix of modern technologies, the number of CCEs can be reduced by about 30 percent.

(v) The role of private players: the state-owned Agriculture Insurance Company (AIC) of India is involved in the new crop insurance scheme along with other government and private insurance companies. The implementing agency (IA) will be selected by the state governments based on a cluster concept comprising 15-20 'good' and 'bad" districts based on the risk profile and with reference to the proposal to be made. IA will be selected through competitive bidding for a period of up to 3 years.

(vi) Timeframe for loss assessment: the deadline for receipt of yield data is within one month of the last harvest. Processing, approval, and payment of final claims will be based on yield data and must be completed within three weeks of receipt of yield data.

(vii) Timely release of premium subsidies to insurance companies: The government (both central and state) must release 50 percent of the premium subsidies to the insurance companies at the beginning of each crop season based on the fair estimates submitted by them and settle the balance of the actual premium subsidies for the season once the final figures are submitted by the insurance company.

(viii) Publicity and Awareness: sufficient publicity should be done in all villages of the notified districts through fairs, exhibitions, SMS, short films, electronic and print media and documentaries. The crop insurance portal should be updated regularly with all published essential information.

(ix) Some of the limitations of these schemes are as follows

- Low penetration of agricultural insurance.
- Premium and sum insured related issues.
- Delay in assessment and settlement of claims.
- Complex system because of many participation agencies.

Present crop insurance in Jharkhand. Kisan fasal rahat yojana.

In the state there are 38 lakh farmers and approximately 38 lakh hector lands are cultivable.The Jharkhand state government has announced a new scheme called Jharkhand State Crop Relief Scheme (JRFRY) to safeguard both public funds and farmers' welfare. The scheme aims to provide financial assistance to farmers, especially in case of crop damage due to natural calamities and accidents.

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The Jharkhand State Crop Relief Scheme (JRFRY) is not a crop insurance scheme but a compensation scheme for farmers in case of crop damage. This is intended to provide security and some financial assistance to farmers in case of crop loss due to natural calamities. This scheme applies to both landowners and landless farmers. Under this scheme, farmers do not have to pay a crop insurance premium and receive direct financial support from the government in the event of crop losses.

This scheme is launched in December 2020 by replacing existing PMFBY which is running allover India.

Reasons behind replacement.

- Providing financial assistance to farmers affected by crop cultivation due to unforeseen natural calamities or events.
- Strengthening the income of farmers to continue agricultural work.

- Ensuring financial impact for agricultural work.
- Food security, crop diversification, & to pave the way for rapid growth and competitiveness in agriculture.

Amount of Relief provided by this scheme

- In event of 30-50% loss: Rs. 3000/ acre max. upto 5 acres
- In event of >50% loss: Rs. 4000/ acre max. upto 5 acres . (Loss estimation through data of Crop Cutting Experiment)

Review literature

- RAI (2019) in its research paper -Pradhan Mantri Fasal Bima Yojana: An Assessment of India's Crop Insurance Scheme‖ points out that insurance companies and regulators need to take a hard look at the effectiveness of the PMFBY scheme. Claims are not being honored and insurance companies are making large profits without passing on the benefits to farmers.
- Joshua, Kwame and Benjamin (2019) in their research paper -Willingness to pay for crop insurance in Tolon District of Ghana: Application of an endogenous treatment effect model‖ showed that factors such as gender, age, contact with agrochemical dealers and extension visits significantly influenced farmers' awareness of crop insurance. Awareness was higher among younger farmers and female respondents.
- Singh, Nirvikar (2019) pointed out in their research paper "Punjab's Agricultural Innovation Challenge" that the root cause of Punjab's economic problems is described in the introduction as a governance deficit. This is an India-wide (and perhaps even global) problem, but it is particularly acute in Punjab compared to many other Indian states. This is probably due to the recent history of conflict, which has weakened effective political competition.

Research problem

From the above reviews, it is evident that most of the research studies are related to the history of crop insurance, analysis of specific crops, functioning in different parts of India and performance of different crop insurance schemes. In addition, research has been carried out on risk management and agricultural insurance issues both at the global level and in India. From the above, it is evident that there is a research gap in the previous literature related to farmers' household characteristics, awareness, attitude and satisfaction towards crop insurance which has not been studied by the previous researchers. Hence the study is conduct to analyze some problem and challenges.

Objective of the study

- To study problems in participation of farmers in crop insurance.
- To know what are the major challenges to motivate farmers to secure their crops.
- Difference between PMFBY and JRFRY with arguments.

Research methodology

The study is based on secondary data taken from the official portal of PMFBY and JRFRY. the information obtained from official portal are analyze through some mathematical tools by comparing yearly data. i.e. 2016-17,2017-18 , 2018-19& 2019-20. With 2021JRFRY data.

Table 1: Pradhan Mantri Fasal Bima Yojana Of Jharkhand State

Year	Farmers Applications Insured (Lakh)	Area Insured (Lakh ha)	Sum Insured	Farmers Share in Premium	Gross Premium	Reported Claims	Paid Claims	Farmer Applications Benefitted (Lakh)
			Rs. Crore					
2016-17	8.793	3.718	2,002.21	39.630	271.41	31.09	31.09	0.598
2017-18	11.955	2.902	1,495.20	28.262	211.93	47.18	47.18	1.392
2018-19	12.936	6.295	3,496.91	20.127	413.05	499.53	21.11	0.577
2019-20	10.921	6.451	3,739.05	2.792	356.02	25.46	-	-

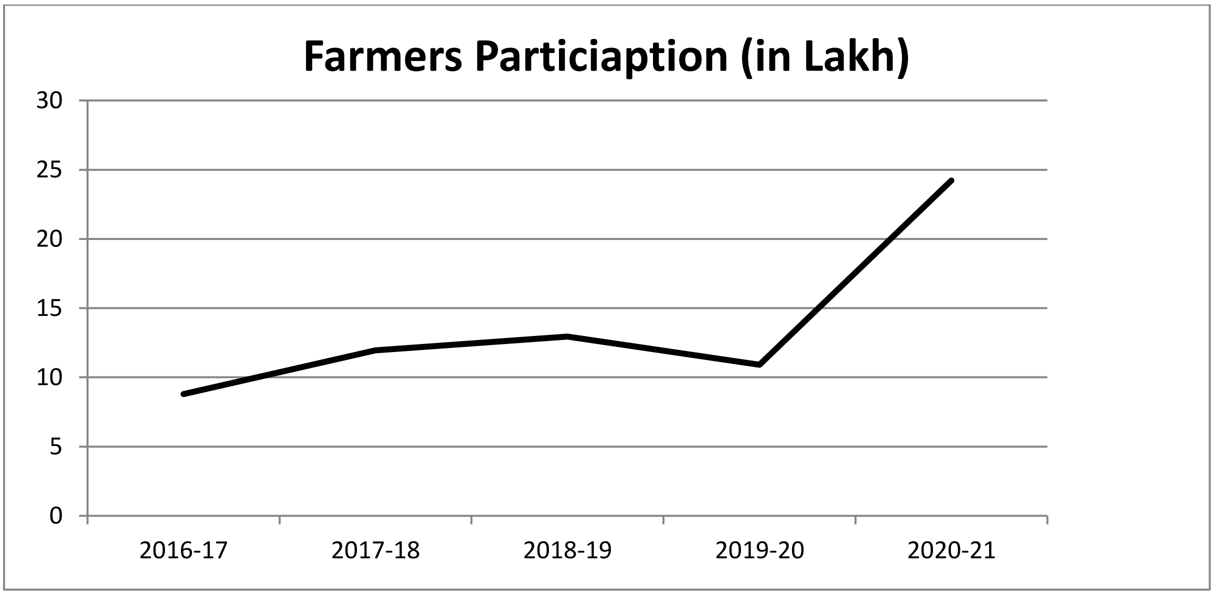
(Source PMFBY Official portal)

Table 2: Kisan Fasal Rahat Yojana of Jharkhand State 1st Implemented Year Data.

Year	Farmers Application s Insured (Lakh)	Area Insured (Lakh ha)
2020-21	**24.22**	**11.91**

(Source KFRY Official portal)

Table 3: Data Analysis, Interpretation & Findings



1. According to the data given by the different portals its clear view there is a deficiency in the participation of farmers there is approx 38 lakh in the state only approx 30% of farmers have participated in pmfby but when the replacement of scheme the number of farmers participation increase to almost 60% of the total which is impressible. That means one of the most important challenges of increasing the awareness among the farmers was increased.
2. 2nd important trust issue of farmers relates to the premium paid by them to secure their crops which were 1.5% to 5 % in pmfby but

now the premium is omitted in kfry which motivates the farmers to secure their crop.

3. 3rd the satisfaction of farmers in earlier by pmfby there was a district level committee to calculate the area-wise sum assured to meet the farmers needs but now in kfry the sum assured is already deiced In event of 30-50% loss: Rs. 3000/ acre max. up to 5 acres and In event of >50% loss: Rs. 4000/ acre max. Up to 5 acres which are not enough to meet farmers' needs.
4. There are different problems in the implementation of both schemes, pmfby in other states running well than that are ground-level problems this scheme fails to satisfy farmers' needs. On the other hand, kfry is providing some relief to farmers but the amount is not enough to meet the farming expenditure. Farmers need a proper insurance scheme to secure their crops. A relief scheme only provides relief, not satisfaction.
5. When it comes to a government scheme they always need a proper channel for creating awareness among the farmers, a proper implementation agency, and a proper committee to analyze the damage, if they really want benefits for farmers otherwise the crop insurance was running in India from 1972 but still it is not able to satisfy farmers need.

Conclusion

Crop insurance is running in India since independence through different schemes by different governments some are relief schemes some are insurance but it still fails to meet the desired result. Lack of transparency, awareness, and unsatisfied insurance claims. The role of government is to reach the ground level to understand what the gaps are. And attract to encourage for farming by providing them back support to stable their income.

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SISTER NIVEDITA'S CONTRIBUTION TO EDUCATION AND EMPOWERING WOMEN IN INDIA

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ABSTRACT

Sister Nivedita was an eminent and notable personality of our country. Her great level of devotion compelled Vivekananda to give her the name "Nivedita".The word Nivedita is used to refer to someone who is highly dedicated to the almighty god. She worked for woman education and her educational plan was based upon the idea of Nationality. She took part in altruistic activities. She worked to improve the lives of Indian women of all castes. She was pioneer of India's education and woman empowerment. Her educational contribution & empowering the women was always remarkable to India.

Key words: Sister Nivedita, Swami Vivekananda, Education, Women Education, Empowerment, India, Indian Society

Introduction:

Sister Nivedita born as Margaret Elizabeth Noble; 28 October 1867. Sister Nivedia was an Irish teacher, author, school founder, social activist and also disciple of Swami Vivekananda. She spent her childhood and early youth in Ireland.She came across Swami Vivekananda in the year 1895 in London. When Vivekananda initiated her into the vow of Brahmacharya on March 25, 1898 Margaret Elizabeth Noble became Sister Nivedita. She has dedicated lots of hard work as a educators and social reformers in India.

Nivedita was an inspiration for all women in our country. She was not born in India but she dedicated her all devotion for progress of India. Her all activities encircled all the fields of human life, culture, education, arts, science, literature, spirituality and scores of others. She was a motivating force for people in all walks of life.

Educational Contribution of Sister Nivedita:

Sister Nivedita dedicated lots of work for Indian women education and her empowerment remarked to Indian society. She has always realized to work for Indian women and she dedicated her life to the Indian education, culture and social life.

Nivedita established a girls' school on 13 November 1898, on the day of Kali Puja, at 16 Bosepara Lane in the Bagbazar area of North Calcutta. The school was inaugurated by Sarada Devi, in the presence of Swami Vivekananda and some of the other disciples of Ramakrishna. *Sarada Devi blessed and prayed for the school saying "I pray that the blessings of the Divine Mother may be upon the school and the girls; and the girls trained from the school may become ideal girls."*

The school which was a branch centre of the Ramakrishna Mission since 1918, the school was transferred on 9th august, 1963 to the Ramakrishna Sarada Mission, Dakshineswar & henceforward it has been known as the branch centre of that organization.

Nivedita wanted to educate girls who were deprived of even basic education. Sister Nivedita was a pioneer in girls' education and provided health services to the poor. She was instrumental in various altruistic activities. Her aim was to bring about an improvement in the lives of Indian women belonging to various social classes and castes, she tried to bridge the gap and put an end to the caste distinctions. According to her Education was a life-oriented process having a soul and forming a unity. She has constructed a curriculum to based on the modern principles of thought and action, and her education was a life oriented process having a soul and forming a unity. Nivedita has remarked some most important and specific factors of education-"*Education has to deal with the various factors, the imparting of social processes, the assimilating of certain kinds and quantities of knowledge, the development of the man himself. Of all these it is the last which is incomparably the most important."*Nivedita believed in self-education and her teaching principle was to follow the child's mental growth and her method of education was scientific, psychological and dynamic based. Nivedita's school where the subjects initially taught were English and Bengali both language and literature, mathematics, social and natural sciences and handicraft. Different creative and interesting activities like games, singing, drawing, modeling, story-telling, composition etcetera were provided her classroom. Nivedita's always believed in self-education and she also supported strict discipline in educational environment. She had written different writing and she given her ideas on the method of teaching in various subjects. Nivedita's used to say: "Mere head knowledge will not do"True education is a unity, a dynamic force, covering the whole life of a man.

"Sister Nivedita, who was greatly influenced by Swami Vivekananda, contributed significantly towards women's education"-said Raghaveshanandji Maharaj of Ramakrishna Ashram of ooty. Speaking at a programme organised at Bakkeshwar Kalyan Mantap in Davangere on Saturday to mark the 150th birth anniversary of Sister Nivedita, she said that though Sister Nivedita hailed from a foreign country, she loved India unconditionally. She created awareness among the people about women's education by going door to door. She even set-up many model educational institutions to achieve her goal. Halsuru Ramakrishna Math– Tyageeshwaranandji Maharaj said that born as Margaret Elizabeth Noble in Ireland, Sister Nivedita was influenced by the ideals and philosophy of Swami Vivekananda; she extensively studied Indian culture and philosophy. She came to India when she was 33years old and died when she was 44 years old. Such worked relentlessly and she became a role model to Indian Society.

Swami Sharadeshanandji of Harihar Ramakrishna Mutt said that there must be no foreigner like Sister Nivedita, who has loved India; she worked selflessly for the development of Indian Society. In November 1895, Sister Nivedita met Swami Vivekananda for the first time, who had come from America to visit London and stayed there for three months. She was attracted to the universal principles of Vedanta and to Vivekananda humanistic teachings. Accepting him as her guru (spiritual teacher) before he left England in 1896, she worked for the Vedanta movement in England until she went to India in 1898. Her great level of devotion compelled Vivekananda to give her the name Nivedita ("Dedicated One"). And she went to India primarily to help Vivekananda realize his plans to educate women, and she opened a small school at Calcutta (now Kolkata) in Bengal, where she tried to blend Indian traditions with Western ideas.

Vivekananda principles and teachings influenced her and this brought about a visible change in her. Seeing the fire and passion in her, Swami Vivekananda could foresee her future role in India. 25 March 1898, was the holiest and most unforgettable day of Nivedita (Margaret) life. That was the day on which her guru dedicated her to God and to the service of India.

Empowering Women of Sister Nivedita:

Sister Nivedita was the heart of Indian womanhood. Most of the Nivedita's works such her educational thoughts, her speeches, her books, letters, short stories abound her deep concern for upliftment and empowerment of women in India. Her lectures and various discourses gave people direction on how to lead their lives. Throughout her life, she worked hard for serving the people and society at large. The life and work of Margaret Elizabeth Nobel, known better as Sister Nivedita (The dedicated one) has been chronicled well. She was one who renounced her motherland, and all the mores that she was accustomed to for the cause of India. Her greatness manifested in myriad dimension, Nivedita had close associations with the newly established Ramakrishna Mission because of her active contribution in the field of Indian Nationalism. She had to publicly dissociate herself from the activities if the Ramakrishna Mission under the then president, Swami Brahmananda.She was very close to Sarada Devi, the wife of Ramakrishna and one of the major influences behind Ramakrishna Mission and also with all brother disciples of Swami Vivekananda.

Nivedita made notable efforts to serve the poor of Calcutta and Bengal during times of plague, during the plague epidemic in Calcutta in 1899, Nivedita nursed and took care of the poor patients. Vivekananda death in 1902, Nivedita turned her attention more towards India’s political emancipation. She objected strongly to the partition of Bengal in 1905 and as part of her deep involvement in the revival of Indian art. Supported the Swadeshi (“our own country”) movement that called for the boycott of imported British goods in favour of domestically produced handmade goods. She continued to give lectures in India and overseas, promoting Indian arts and the education of Indian Women.

Interest in Nivedita’s inner thoughts was first kindly through the Bengali translation of her biography the actual discovery of a large cache of letters written by Nivedita set the stage for the publication of these volumes. The letters were in the custody of Srimat Anirvan, a Vedic pundit and yogi.The project also had the blessings of Swami Abayananda of Belur Math, better known as Bharat Maharaj. He was the only man living, who knew Nivedita personally giving his thoughts on what she was like and what she thought. Deciphering the handwritten letters was a stupendous task. Before his death the Maharaj passed on the original letters along with some more unpublished ones to the Belur Math. Among her last letters were those Nivedita wrote to Francis Legger, the sister of Josephine Macleod, on a bas-relief that was planned for the Vivekananda temple at Belur.

Her famous books are Kali the Mother, The Master as I Saw Him, Cradle Tales of Hinduism, An Indian Study of Love and Death, Myths of the Hindu & Buddhists, Notes of Some Wanderings with the Swami Vivekananda, Religion and Dharma, Select essays of Sister Nivedita, Studies from an Eastern Home, The Web of Indian Life.

Cradle Tales of Hinduism (1907) is a collection of stories by Sister Nivedita. It is an introduction to Hindu mythology; retells the stories from Puranas, Ramayana and Mahabharata and other Hindu sources and she attempts to highlight the role of women in developing the man into a superman. ***The Master as I Saw Him:*** Being pages of the life of the Swami Vivekananda is a 1910 book written by Sister Nivedita. The book covers Nivedita's experiences with Swami Vivekananda, whom she met in London during November 1895. The book was simultaneously published from England and India, and ***The Master as I Saw Him*** is now considered to be a classic text. Her multifaceted character and intense love for India which springs to life through this compilation of some letters 886 letters which have been published recently by Advaita Ashrama,the publication wing of the Ramakrishna Math. The letters also hold a mirror to the India of those times through the eyes of Nivedita.The present Advaita Ashram edition-with 85 newly discovered letters was published nearly 35 years after the first publication of her letters in two volumes. The letters are written to eminent people within India and abroad between 1897 & 1911.Nivedita wrote the letters almost like a diary to her family, friends and acquaintances across the globe. The recipients include eminent thinkers, philosophers, Nobel laureates, newspaper editors, poets (like Rabindranath Tagore) and scientists. Nivedita’s letters, many books was proved that she was an eminent teacher, great educator and also writer in India.

Conclusion: Sister Nivedita was a dynamic, passionate; Nobel hearted women in our country. Her lectures and various discourses gave people, direction on how to lead their lives throughout her life; she worked hard for serving the people and society at large. Her book Kali the Mother so impacted and influenced Abanindranath Tagore that his depiction of Bharat Mata is thought to have been inspired by reading it. Several schools and colleges have been named after her and in 1968 the Indian Government issued a postal stamp in her memory. Sister Nivedita passed away on October 13, 1911 but she remains one of the most influential female figures of Modern India. Her contribution will live memorable to people of India.

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ROLE OF MICROFINANCE IN FINANCIAL INCLUSION THROUGH SELF-HELP GROUPS

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Abstract

The improvement of the Indian financial system is correlated with the improvement of its human assets. An ultimate solution for the growth of manpower is a tough task. But finance can solve this problem. As a trouble solver Microfinance (MF) in India has performed a significant role in this regard. Microfinance has in many ways facilitated India to attain a goal of reducing inequality of income and wealth. Microfinance has brought about the growth and development of the financially weaker section of the economy. Some growth-generating factors have been analyzed in this paper (study period), specifically SHGs. The self-help group is one such medium of microfinance via which finance facility is acquired withinside the shape of small loans. This paper's main objective is to analyze microfinance's growth in financial inclusion, especially through SHGs. This paper's major findings and recommendations are recommended for rural penetration and field supervision of self-help groups on a huge scale.

Keywords: Microfinance, Financial inclusion, Self-Help Groups, Financial Literacy, Inclusive Growth, NABARD

Introduction

The concept of microfinance isn't new however its gradual rise as a famous poverty alleviation tool may be respectively new to almost each one of all us. Informal credit scores and financial savings establishments for the poor have been working for many decades for those who were usually neglected due to the development of financial institutions, credit through co-operatives, and commercial banks, Micro Credit originated the giving of small loans to rural poor via self-help groups, non-govt. the organization, & microfinance institutions.

The Self-Help Group's movement is the fastest-developing microfinance program in India. Self-help groups are economically homogeneous & small affinity businesses of the voluntarily rural poor coming collectively;

a) To save a small quantity regularly.
b) To mutually agree to make contributions to a common foundation.
c) To meet their emergency needs.
d) To boom financial Knowledge.
e) To discover ways to get entry to financial decisions.
f) To crack conflicts via collective leadership and mutual discussion.
g) To deliver collateral-free loans on terms decided by the group.

Financial inclusion is the delivery of simple banking services at an affordable cost to the vast sections of disadvantaged and low-income groups. It consists of getting the right of entry to a formal financial system such as financial institutions, markets, and instruments, like financial savings, loans, remittances, and insurance services, at affordable prices. Financial Inclusion can be thought exclusion from the payments system like not having access to a bank account and exclusion from formal credit markets. Access to formal banking offerings has been available through intermediaries, including Self- Help Groups (SHGs) and Microfinance Institutions (MFIs). National Bank for Agricultural and Rural Development (NABARD) promotes and nurtures these groups. The policymakers had been focusing on the financial inclusion of Indian rural and semi-rural areas primarily for the most important pressing needs-

a) Stop gaps and leaks in public subsidies and welfare programs – A substantial amount of money that is meant for the poorest of the poor.
b) Not reach them. All the efforts require an inexperienced and affordable banking system that can reach out to all. Therefore, there was a push for financial inclusion.
c) Creating the habit to save money in the formal banking system.
d) To boost capital formation in the Indian economy through banking facilities.
e) The unbanked population has been vulnerable to depending on casual channels of credit like family, friends, and moneylenders. The availability of sufficient and transparent credit from banking channels shall permit the entrepreneurial spirit of the masses.

Objectives of the Study

1. To examine the impact of Micro Finance on the growth of the nation through self-help groups (SHGs) – bank linkage programs with support from the biggest financial institution, viz, NABARD.
2. To understand the impact of self-help groups on the saving habits of beneficiaries.

Review of Literature

Bilai Bilgin (2018) worked on the topic “Microfinance-Evolution, and Microfinance - growth in India” and analyzed the Microfinance- evolution, & Microfinance growth in India. It said that Microfinance uplifts and improves the living conditions and status of the poor, especially in rural regions of India. The microfinance enterprise is growing and evolving with time and might cause large financial benefits to our country. It is a very tool to achieve financial inclusion in India and poor households of the nation including services of saving accounts, transfer of money, loan facilities, and insurance facilities.

Audil Rashid Khaki, and Mohi-ud-Din Sangmi (2018) in their work on “Microfinance and Self-Help Groups: An Empirical Study” studied the efforts withinside the area of microfinance within side the district of Anantnag by SHG-Bank Linkage program and it was found that it has made an extensive impact on the of microfinance in India of the SHG members of that area or region. This contribution turned into visible in phrases of raised earnings and savings levels, higher housing facilities, sanitation levels, educational improvements, employment generation, & better health facilities.

Sandhya P, S, Sri Ranjini S. (2018), in her work “The Impact of Microfinance through Self Help Groups (SHG): A Study of the Economic Status of urban women working in Production & Manufacturing Industries in Mysuru District”. The authors’ withinside the study concluded that women of the poor section are helped financially by self-help groups by providing credits. This has increased the financial savings of women in poor areas. The Respondent’s responses confirmed that the business of small scales has increased, making them independent economically and raising their income. Microfinance results in the achievement of microenterprises. All this has led to raising living standards and the number of self-generating activities has come up. The living conditions of rural women have shown improvements changes in the social and economic status have been seen in women through self-help groups.

Asha Bhatia, and Ankit Agarwal (2016), in their work on the subject “A Contemporary Study of Microfinance- A Study of India’s Underprivileged”.

Concluded that microfinance is much needed in the present times. It can help to fight against the problems of poverty in our country. Microfinance can also be a great relief in raising the living standard of our country's people. Not only has this, but the facility of microfinance also helped in providing employment & financial inclusion in the nation. Thus, is the most efficient & powerful tooled available to us for development and growth?

Alka Mittal (2016), in her work on "Current Scenario of Microfinance Industry in India," highlighted & focused on the position and status of microfinance in India. It was concluded that the microfinance industry is a significant & effective tool for uplifting the living condition and status of poor people but it is still not so sufficient in India. Though the potential of the Microfinance Industry in India is very high and is expected to expand at high speed in the country. The microfinance Industry of India is taken to be one of the largest microfinance industries in the world. It can provide help to the poorest sections of the country.

Research Methodology

The paper uses an exploratory research technique based on past literature from respective journals, reports, newspapers, and magazines covering a wide collection of academic literature on Goods & Service Tax: According to the study's objectives, the research format is descriptive in nature. Available secondary data have become extensively used for the study. Secondary data is used which is collected from various annual reports of NABARD.

Impact of Micro Finance in Growth through Self Help Group Bank Linkage Program

The SHG Bank Linkage program (SHG- BLP), launched in 1992 as a pilot project, SBLP has grown in reach and fold to become the world's largest community-based microfinance program. SBLP covers nearly 14.20 crore families as on 31 March 2022. SBLP programs provide financial empowerment to the rural poor. Financial empowerment provides poor and rural people with social and economically empowered. Micro Finance tasks have performed a major role in making credit scores accessible. As per the Global Findex Database 2021 of the World Bank, India's gender gap in financial inclusion was reduced by 3 percentage points in three years. It declines from 9% in 2018 to 6% in 2021. The gender gap may get in addition declined as there has been a net addition of 6.7 lakh savings linked SHGs during 2021-22. Table 1 suggests that 2019 to 2022 Self-Help Groups are enhancing their situation year by year. According to the data south region's condition is better than the other region, But North Region and North Eastern Region lag behind the rest, making them independent economically and raising SHG 36,89,236, and the highest saving amount of 1470084.74 in the entire region.

Table – 1 Region-wise progress report of saving Linked SHGs with Banks (2019-20 to 2021-22)

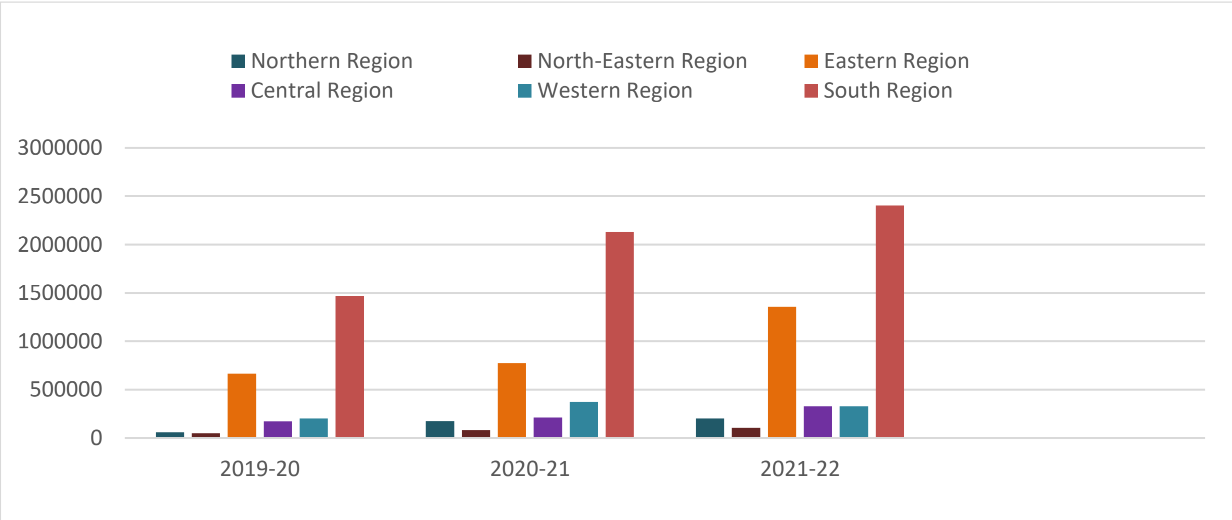
Region	2019-20		2020-21		2021-22	
	No. of SHGs	Savings Amount	No. of SHGs	Savings Amount	No. of SHGs	Savings Amount
Northern Region	5,77,122	59,550	6,09,808	1,74,345	6,80,143	1,99,582
Northeastern region	5,56,899	48,141	6,33,714	83,126	6,80,845	1,06,441
Eastern Region	28,11,130	6,64,333	31,22,424	7,74,912	32,43,980	13,58,595
Central Region	11,35,083	1,71,217	13,45,575	2,11,870	13,53,564	3,25,696
Western Region	14,73,853	2,01,880	15,50,176	3,74,023	16,88,451	3,27,691
South Region	36,89,236	14,70,085	39,61,703	21,29,485	42,44,070	24,06,043
TOTAL	**1,02,43,323**	**26,15,206**	**1,12,23,400**	**37,47,761**	**1,18,93,053**	**47,24,048**

Source - Annual Report of NABARD 2021-22

Impact of Self-Help Groups (SHGs) on Saving Habits

Effortlessly savings will change the situation of women. Individuals also are organized for unfavorable conditions from saving habits. SHG Bank Linkage program is an effective contribution to economic upliftment and financial inclusion is a must for those who are at the bottom of the pyramid. A demonstrated platform initially conceived for growing the outreach of banking services among the poor has since graduated from a program for the promotion of livelihoods and poverty alleviation. All major parameters like the increment in saving amount through SHGs with saving bank accounts. Increasing savings have shown positive growth during the past three years (Graph – 2). The below graph shows the region-wise per self-help group saving habit. According to the data southern region is increasing which is a good signal for saving habits. If the saving habit increases, the socio-economic condition of beneficiaries will increase.

Fig 1:- Region-wise Amount of Savings Linked per SHGs (2019-20 to 2021-22)



Source-NABARD Annual Report 2021-22

Challenges Faced through Self-Help Groups:

1) Risk of fraud- In the antique self-help group, cash is safe because their honor no longer permits them to manipulate it, But the risk remains in the new self-help groups.
2) Lack of capital- There is a possibility of sinking money in the self-help group because of a shortage of capital.
3) Lack of management skills is the basic and big issue in self-help groups they may manage the group efficiently when the group size is small.
4) Another trouble faced by self-help groups is limited financial strength which creates trouble to borrow funds from outside.
5) Members of the self-help groups are mostly illiterate and much less qualified, due to which they're missing in beginning the business and proceeding further. This indicates that self-help group members no longer have professional knowledge.
6) Marketing is important to sell their product and SHGs are lacking in marketing because is very tough for financially self-help groups to spend money on marketing.

Findings and Recommendations:

(a) Encourage rural penetration: Encouraging MFIs for beginning new branches in areas of low microfinance penetration by providing financial assistance will increase the outreach of microfinance in the state. This will also increase the rural penetration of microfinance in the state.

(b) Proper rules and regulations: It is important to make policies and legal guidelines for self-help groups to avoid any kind of risk.

(c) Supervision of field: Field visits (self-help group meetings) may be followed as a medium for tracking the situations on the ground and corrective action if needed.

(d) Interest rates analysis: It has been found that Micro Finance Institutions are applying different patterns of charging interest rates, and a few SHGs are also charging additional charges and interest-free deposits.

(e) Reduce Operating Costs through Technology: Microfinance Institutions should use new technologies, IT tools, and applications to reduce their running costs.

(f) Micro Finance Institutions are appearing alternatively to banks, providing an entire variety of products will enable the poor to availability all services.

(g) In absence of adequate funds, the increase and the attainment of MFIs end up restricted, and to overcome this trouble MFIs should look for other sources for funding their loan portfolio.

Conclusion

Financial Inclusion is an important step to offer all facilities directly to the beneficiaries, For the reserve bank of India, the Government, political will, and bureaucracy make sure to do some important steps for the unbanked masses. SHGs make contributions to solving the problems of inadequate housing & urban services as an integral part of poverty alleviation programs. The task lies in locating the extent of flexibility withinside the credit instrument that would make it match more than one credit requirement of the low-income borrower without enforcing an unbearably high cost of monitoring its end-use upon the lenders. A promising solution is to offer multipurpose loans or composite credit scores for income generation, housing improvement, and consumption support. Consumption loan is discovered to be particularly essential in the course of the gestation period between starting up a current economic activity and deriving positive income, "Fortune at the bottom of the pyramid".

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IMPACT OF GENDER, STREAM AND PARENTAL QUALIFICATION ON DIGITAL LITERACY OF HIGHER SECONDARY STUDENTS OF DARBHANGA CITY

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Abstract:

The main purpose of this study was to know the Impact of Gender, Stream and Parental Qualification on Digital Literacy of Higher Secondary Students of Darbhanga City**.** For the assessing the digital literacy of higher secondary the researcher was constructed and standardized the digital literacy scale for higher secondary students. The reliability of this this was 0.83. The objectives of this study were to study the impact of gender on digital literacy of higher secondary students of Darbhanga city, to study the impact of stream on digital literacy of higher secondary students of Darbhanga city and to study the impact of parental qualification on digital literacy of higher secondary students of Darbhanga city. For the data collection the researcher was used the above scale. For data analysis the descriptive and inferential statistics was used. After the data analysis the researcher was found that there is significant impact of gender on digital literacy of higher secondary students. There is significand impact of stream on digital literacy of higher secondary students, it also found that there is significant impact on digital literacy of higher secondary students with their parental qualification.

Key Words: Digital Literacy, Stream and Parental Qualification

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Introduction

Now as far as digital literacy is concerned, it means reading, writing and understanding things through technology and the Internet. Yes, in place of paper and pen, computer screen and mouse and key pad are used. Along with this, through this medium you can make a video, upload a message in your voice. Therefore, in today's era, students should make good use of their time, for this they have to make them realize the importance of internet. They can open a digital library for the students where they can access every book using a login ID and password. Unlike real libraries, this online library does not have space and time restrictions. And students can do this whenever they want to know about any information. Now all the information about how to search on the Internet for this should be given to the students. For this, the knowledge of proper keywords is very important**.**

Digital Literacy:

- Digital literacy means having the skills you need to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media, and mobile devices.

- Digital literacy refers to someone's ability to use IT and digital technology to find, evaluate, create and communicate information.
- Digital literacy refers to the skills required to achieve digital competence, the confident and critical use of information and communication technology (ICT) for work, leisure, learning and communication.

Digital Skill: There are following skill is needed for use of digital learning platform for effective and safe learning.

- Basic Knowledge of Digital Devices
- Use of Internet Technologies
- Understanding of Technical Terms
- Coding
- Creating Digital Content
- Social Media
- Word Processing
- Data Analysis
- Preparing and Giving Presentations
- Knowledge of Copyright and Plagiarism

Rationale of the Study

The importance of digital literacy can be felt on a large scale in the country, where every little thing in the country is being connected to the Internet and if people have a good knowledge about it, then people will definitely want to give their participation in it. To promote the field of digital, the government is focusing on "STEM" education (Science, Technology, Engineering, Mathematics) And it is believed that in future only the youth who have been educated from these four areas will be entitled to good jobs and positions in most of the fields, so you can estimate the importance of digital literacy from the fact that how much it is for the people necessary. The researcher has reviewed a lot of studies related to this field and found that the digital literacy of learner is play the key role in the teaching learning processes in the present time. Because this is era of science and technology. NEP-2020 is emphasis on ICT integration in teaching learning processes. SSA (Sarwa Siksha Abhiyan) also emphasis in ICT (Smart Classroom) in every school. Saubari & Baharuddin (2016) highlighted that the digital literacy can less your burden for knowledge seeking approach. Salma Jan (2018) "Gender, School and Class wise differences in level of Digital Literacy, Aggarwal (2018), Pratap & Singh (2018) study on digital literacy of school students , Nilsook & Kaeophanuek (2018)study on digital literacy of students, Mohalik et al (2018) study on digital literacy of teachers, B.S & Singh(2018) study on digital literacy of college students , Noh (2017) study on digital literacy of college students, Adeoye (2017) study on digital literacy of university students , Sharp (2017)study on digital literacy of online courses students, Guzeller &Kilic (2017) study on use of inter net , Zuhu and Zhang (2016) study entitled study on digital literacy of primary school students, Devivam (2016)study on ICT literacy of B.Ed students. , Sandhya and Minikutty(2015) study on ICT literacy of Higher secondry students, Mabayoje (2015)study on ICT literacy of Secondry students , Mustafa and Mahmud (2014)study on ICT literacy level of UG students, Umar and Jalil (2012) study on ICT level of students.On the base of above researches the researches feel that to know the factor influence the digital literacy of learner and what is the status of digital literacy in secondary school student.

Objectives of Study:

1. To study the impact of gender on digital literacy of higher secondary students of Darbhanga city.
2. To study the impact of stream on digital literacy of higher secondary students of Darbhanga city.
3. To study the impact of parental qualification on digital literacy of higher secondary students of Darbhanga city.

Null Hypothesis

1. **H_{01}** There is significant impact of gender on digital literacy of higher secondary students of Darbhanga city.
2. **H_{02}** There is significant impact of stream on digital literacy of higher secondary students of Darbhanga city.

3. **H_{03}** There is significant impact of parental qualification on digital literacy of higher secondary students of Darbhanga city.

Methodology:

- **Methods**: In this present study the descriptive survey methods will be used.
- **Sample:** 150 higher secondary students of Darbhanga city was a sample of this study. This sample collected through stratified random sampling technique.
- **Population:** The all higher secondary students of Darbhanga city was a population of this study.
- **Statistical Technique:** t-test, F-test were used in this study for the analysis of the data.
- **Tool:** The digital literacy scale will be used by the researcher which is constructed and standardized by the researcher.

Delimitation:

- Only higher secondary students of different schools of Darbhanga city was in concluded in this study.

Section-A Descriptive Analysis

Table No. 01; Digital literacy of Higher secondary students with respect to gender

Gender	N	Mean	Standard Deviation
Male	73	111.03	18.666
Female	77	104.79	19.010

Digital literacy of Higher secondary students with respect to gender- It can be seen in table no. 01 the mean (M) of digital literacy of male and female higher secondary students are 111.03 with SD 18.666 and 104.79 with SD 19. 01 respectively. It can confirmed from the figure no. 01. Since the mean score of male students greater than the female students. But the male and female students have average level of digital literacy according to the norm table.

Table No.02: Digital literacy of higher secondary students with respect to Stream

Stream	N	Mean	Standard Deviation
Arts	74	97.77	18.505
Science	76	117.62	13.778

Digital literacy of higher secondary students with respect to Stream. It can be seen in table no. 02 the mean (M) of digital literacy of Arts and Science stream higher secondary students are 97.77 with SD 18.505 and 117.62 with SD 13.778 respectively.. Since the mean score of science stream students greater than the arts stream students. According to norms table the science stream students high level of digital literacy but arts stream students have low level of digital literacy.

Table No.03 Digital literacy of Higher secondary students with respect to Parental Qualification

Parents Educational Qualification	N	Mean	Standard Deviation
Illiterate	21	116.52	15.019
Schooling	85	103.18	19.671
Graduation	24	118.29	13.560
Post-graduation	20	105.90	18.685

Digital literacy of higher secondary students with respect to Parental Qualification-It can be seen in the table 03 that mean of digital literacy of the students whose parents were illiterate, schooling, graduate and post-graduate are 116.52, 103.18, 118.29 and 105.9 respectively. However, the standard deviation of these students is 15.01, 19.67, 13.56 and 18.68 respectively. Hence, it can be concluded that students whose parent have illiterate and graduate level of educational qualification have found high level of digital literacy.

Section-B Inferential Analysis

Objective- 01 to study the impact of gender on digital literacy of higher secondary school students of Darbhanga city.

H_{01} There is no significant impact of gender on digital literacy of higher secondary school students of Darbhanga city.

Table 04 Showing mean difference in digital literacy of male and female students

Gender	N	Mean	Standard Deviation	t-test	df	*p*-value
Male	73	111.03	18.666	2.026	148	0.045
Female	77	104.79	19.010			

It can be seen that from the table no.04 Obtained t- vale was found 2.026, which is greater that the t-tabulated value 1.96 at 0.05 level of significance with df 148. Hence t-value is significant and null hypothesis is rejected. Thus it can concluded that there is significant impact on digital literacy of higher secondary students with respect to gender. Since the mean score of male students greater than the female students. But the male and female students have average level of digital literacy according to the norm table.

- Objective- 02 To study the impact of stream on digital literacy of higher secondary school students Darbhanga city.
- H_{02} There is no significant impact of stream on digital literacy of higher secondary school students Darbhanga city.

Table 05 Showing mean difference of arts and science students in digital literacy

Stream	N	Mean	Standard Deviation	t-test	df	*p*-value
Arts	74	97.77	18.505	7.464	148	0.00
Science	76	117.62	13.778			

It can be seen that from the table no.05 Obtained t- value was found 7.464, which is greater than the t-tabulated value 1.96 at 0.05 level of significance with df 148. Hence t-value is significant and null hypothesis is rejected. Thus it can concluded that there is significant impact on digital literacy of higher secondary students with respect to stream. Since the mean score of science stream students greater than the arts stream students. According to norms table the science stream students high level of digital literacy but arts stream students have low level of digital literacy.

Objective- 03 To study the impact of parental Qualification on digital literacy of higher secondary school students Darbhanga city.

H_{03} There is no significant impact of parental qualification on digital literacy of higher secondary school students Darbhanga city.

Table 06 showing analysis of variance on different level of parent education and digital literacy of their school going children

Parent Education Qualification *(I)*	Parent Education Qualification *(J)*	Mean Difference *(I-J)*	*p-value*
Illiterate	*Schooling*	13.347	0.015*
	Graduation	-1.768	0.988
	PG	10.624	0.242
Schooling	*Graduate*	-15.115	0.002*
	PG	12.392	0.112

Table No 0 7 F value

Source of Variable	Df	Sum of Squares	Mean Square	*F*-Statistic	*p-value*
Between *(PEL)*	3	6129.144	2043.048	6.230	0.001
Error	146	47878.349	327.934		
Total	149	54007.493			

PEL - Parent Education Level*

It can be seen from the table no.06 the obtained F-Value was found 6.230 , which is greater than the F-tabulated Value 3.03 at 0.05 level of significance with between group df 3 and within group df 146. Hence, F-value is significant and null hypothesis is rejected. Thus it can be concluded that there is significant impact on digital literacy of higher secondary students with respect to parental qualification. After getting significance difference in F-value it is necessary to conduct the post hoc analysis to identify the group which varies significantly. Table 07 showing post-hoc analysis for analysis of variance by Tukey's HSD method.The mean difference is significant at 0.05 level

Table No. 07 reveals at the post hoc analysis stage the p-value found 0.015 which is less than the at 0.05 level of significance. Hence the P-value is significant and null hypothesis is rejected. Thus it can be concluded that there is significant difference between digital literacy of Illiterate parents child and schooling parents child. Table No.07 reveals at the post hoc analysis stage the p-value found 0.988which is greater than the at 0.05 level of significance. Hence the P-value is not significant and null hypothesis is not rejected. Thus it can be concluded that there is not significant difference between digital literacy of Illiterate parent's child and graduation parents child. Table No.07 reveals at the post hoc analysis stage the p-value found 0.242 which is greater than that at 0.05 level of significance. Hence the P-value is not significant and null hypothesis is not rejected. Thus it can be concluded that there is not significant difference between digital literacy of Illiterate parent's child and post-graduation parents child. Table No. 07 reveals at the post hoc analysis stage the p-value found 0.002* which is less than the at 0.05 level of significance. Hence the P-value is significant and null hypothesis is rejected. Thus it can be concluded that there is significant difference between digital literacy of Schooling parents child and graduation parents child. Findings reveal at the post hoc analysis stage the p-value found 0.112 which is greater than at 0.05 level of significance. Hence the P-value is not significant and null hypothesis is not rejected. Thus it can be concluded that there is not significant difference between digital literacy of schooling parents child and post-graduation parents child.

Major Findings:

1. There is significant impact on digital literacy of higher secondary students with respect to gender.
2. There is significant impact on digital literacy of higher secondary students with respect to stream.
3. There is significant impact on digital literacy of higher secondary students with respect to parental qualification
4. There is significant difference between digital literacy of Illiterate parent's child and schooling parents child.
5. There is not significant difference between digital literacy of Illiterate parents child and graduation parents child
6. There is not significant difference between digital literacy of Illiterate parents child and post-graduation parents child.
7. There is significant difference between digital literacy of Schooling parents child and graduation parents child
8. There is not significant difference between digital literacy of schooling parents child and post-graduation parents child.

Conclusion

On the basis of the above major findings it may be concluded that the gender play significantly role on digital literacy of higher secondary students. The stream of higher secondary students also influence the digital literacy level. The science students have batter digital literacy level then arts stream students. The parental qualification also significant influence the digital literacy of their child. It also concluded that significant difference exist the digital literacy of Illiterate parents child and schooling parents child, literacy of Illiterate parents child and graduation parents child, Illiterate parents child and post-graduation parents child, Schooling parents child and graduation parents child and schooling parents child and post-graduation parents child.

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AN APPROACH OF PAPERLESS TRADING AND ECONOMY: A PARADIGM TO DIGITALIZATION

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Abstract:

Companies are evolving their methods of documentation, filling out, and handling in the current day. Changes in the documentation paradigm from paper-based to paperless or electronic are necessary to bring about these changes. The paperless economy and paperless trade have been made possible thanks to digital India. The paperless economy or paperless trading has been studied and is the subject of various books. However, the researcher has provided an outline of paperless trading as well as the paperless economy in this study. The essay explains how our economy is shifting toward a cashless society and paperless trading. The researcher has discussed how to transition to a cashless and paperless economy utilizing UPI, plastic money, mobile wallets, and blockchain for paperless commerce in banking, financial services, insurance (BFSI), supply chain management, health care, and trade facilitation. This article discusses the overview, problems, and opportunities of a paperless economy and trading.

Keywords: Paperless economy, Paperless trade, Digital India, UPI, Plastic Money, Mobile Wallet, Blockchain, Trade Facilitation.

Introduction

Previously, there was a barter system in India. People in the Barter System use fewer monetary transactions. Marketing entails the exchange of goods. A single item or product can be purchased in exchange for another item without delay. It is a multilateral exchange in which two parties engage in the buying and selling process. The reason for this cashless transaction is a lack of money at a specific time. The Indian government has proposed similar concepts to support paperless and cashless transactions. However, the reason is not a lack of money but rather to ensure the ordinary person's security and a corruption-free society. Direct cash transactions may result in money looting, much paperwork, and a shortage of money on demand; time is a major constraint that limits the use of financial transactions as well. By implementing a paperless and cashless (PC) financial transaction system, these drawbacks can be avoided. This PC system has been operational for a while and is Internet-powered.This is the age of the smartphone; with one app, we can conduct PC transactions at any time, and PC transactions are secure and cost-effective from a financial and non-financial standpoint.

Digital India is the name of the government of India's most visible initiative. It was started on July 1st, 2015 with the goal of transforming India into a knowledge-based society and economy. Small businesses and store owners now accept cashless payments using services like Paytm (Gujrati, 2017).

In various processes of businesses, the technology of digitalization is used. There is a buzz about Digital India in today's generation. The Government of India has brought this for modernization. Prime Minister Mr. Narendra Modi has promoted digitalization at a peak. It has an impact on both the private and public sectors. Society is moving towards the use of technology and use less paper.

Institutions are attempting to devise cost-cutting measures with the economy in a recession and budgets stretched thin. Paperless classrooms save money for the department by reducing the expense of paper and toner while preparing students for todays technologically advanced workplace. The department, and ultimately whole industries, will be able to prove the idea of "becoming green" with the help of data on paperless technology, feedback, and cost savings.

Literature Review:

Preeti Garg, in (2016), study, “Introduction of Cashless Economy in India: Benefits and Challenges” investigated how Indians felt about the implementation of a cashless economy. According to the report, a cashless economy will help reduce illicit financial transactions, forgeries, and fake money, as well as aid in the battle against terrorism, cash-related robberies, and the expansion of our nation's economy. The report also highlighted the drawbacks of cybercrime, high rates of illiteracy, people's attitudes, and a lack of efficiency and transparency in digital payment systems.

Mitchell. A.D. et al. (2017) the study has focused on the importance of the digital economy into which the countries should integrate, and digital trade will help improve their prospects for economic gains. The researcher has traced that cross-border paperless digital trade has been facilitated with the help of provisions made by the international trade agreements that the government implements in domestic frameworks. The study suggests that government and international trade institutions should actively promote various initiatives for digital trade facilitation.

Oliveira. J et al. (2021), the paper focuses on digitization and paperless office program (DPOP) implementation in 5 sectors using the country-scale approach. The result shows that DPOP has a positive effect on companies and increases their profit. This also favors improving the image of the companies, reducing costs, and having a sustainable perspective. This study offers new views on how businesses employing DPOPs may promote dematerialization and minimize paper usage. It is also unique since it takes a country approach to cover various areas.

Gupta. S (2015), has attempted to resolve the environmental issues by recognizing the relevance of a Paperless society, and the potential of information technology and computers has been highlighted. The Green Movement initiatives have been taken up but are still at the going stage. The vision of a Paperless Society can be fulfilled by joining hands together.

Boopathy A.V. (2020) has compared the UPI model and the traditional online payment model, which is more used than net banking and card payments. For paperless and cashless transactions practice E-wallet is also a vital payment method. This study states that the relationship between organizations and end users toward cashless-paperless transactions will be enhanced in the future by a rise in countries' socio-economy.

Vikmani. A et al. (2019) have focused on using UTS (Unreserved Ticketing System) for a paperless online ticket booking system adopted by the Indian railways. The researcher has given attention to the awareness level about the usage of UTS among people regarding the online booking of tickets. TAM model has been adopted, and results show that trust is the most crucial role compared to risk. To increase the trust of consumers, sound strategies are needed.

Civelek. M et al. (2018) the usage of digital documents is now commonplace and, in some places, even required due to the advancements in information technologies. The continued use of paper-based procedures demonstrates the need for drastic and all-encompassing improvements in this sector, including investments in infrastructure, adherence to the law, creative goods, and new technologies. To eliminate paper papers from international trade, standardised platforms must be developed to connect all parties involved. Fresh hope for this integration has been raised by the development of blockchain technology, which can guarantee document integrity without requiring a third party to serve as a trusted third party. This study used blockchain technology to approach digitized international commerce and finance documents.

Objective

1. To understand the concept of paperless economy and paperless trade.
2. To inspect the several cashless payments and paperless trade methods in Indian economic development.
3. To analyse the opportunities and challenges of a paperless economy and paperless trade.

Methodology

The study is descriptive in nature. Secondary data has been collected from journals, articles, websites, UN Global Survey, and research papers.

Discussion and Result

1. Cashless economy

The phrase "cashless economy" is used to describe an economy where there is no flow of cash. All transactions must be carried out electronically, including those involving electronic clearing, direct debit, credit cards, debit cards, and payment systems like India's IMPS, NEFT, and Real Time Gross Settlement (RTGS). According to the concept, cashless economies have little to no paper money and mostly rely on digital or plastic currency. Although the Indian government has made some efforts in recent years to move India toward a cashless economy, physical currency transactions remain to account for most of the economic activity in India. In India, most individuals choose cash transactions over electronic payments. Customers are given several bonuses and discounts if they do their transactions digitally to promote a cashless economy in India. A cashless economy is one in which digital transactions, such as those performed using digital wallets, net banking, mobile banking, debit cards, and credit cards, are utilized to replace conventional payments with cash or coins (Gujrati, 2017).

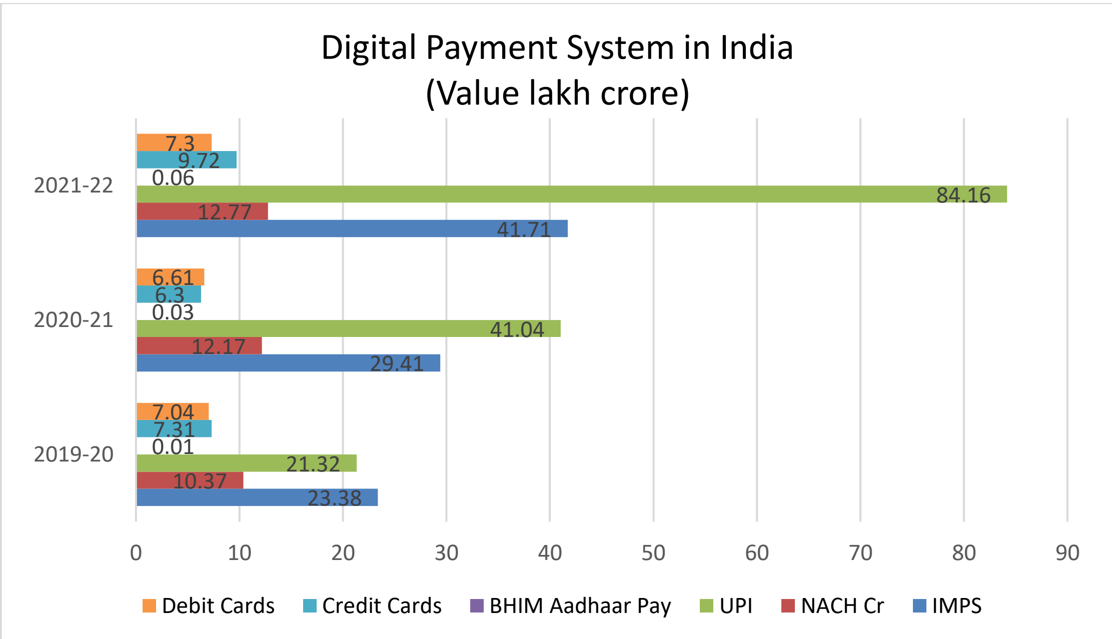

Fig. 1 Source: RBI

The paperless or cashless economy in India has increased, which is shown in figure 1. UPI has tremendous growth as compared between the years 2019-20 to 2021-22. In 2019-20 UPI value was 21.32 lakh crore which increased in the year 2020-21 to 41.04 lakh crore, and in 2021-22 it reached 84.16 lakh crore. IMPS has also increased. In 2019-20 the value of IMPS was 23.38 lakh crore which grew in the years 2020-21 to 29.41 lakh crore and in 2021-22 to 41.71 lakh crore. Likewise, other digital payment has been raised; whether NACH, credit cards, or debit cards, all have shown an increase in their values.

1.1 **UPI-** With the use of the Unified Payments Interface (UPI), one mobile application may handle merchant payments, multiple bank accounts, and effective fund routing (of any participating bank). It also provides "Peer to Peer" collect requests that can be arranged and paid for conveniently.

1.2 **Plastic Currency-** Debit, credit, and prepaid cards are all examples of plastic money. The latter can be real or fake and can be issued by banks or non-banks. The three primary uses for cards are withdrawals from ATMs, online transactions, and swiping at point-of-sale (PoS) terminals at merchant facilities such stores, restaurants, and gas stations.

1.3 **Mobile Wallet-**A mobile wallet is a virtual wallet that can be accessed using a phone. One can keep money on their mobile device to make payments both offline and online. Using a credit card, debit card, or net banking, one can make an online money transfer into one of these wallets. These can be used for shopping and paying bills online.

2. Paperless Trade

2.1 **Blockchain-** Blockchain, which is a decentralised, unchangeable record, may track assets and record transactions in a company's network. A blockchain network enables almost anything of value to be recorded and sold, reducing risk, and increasing efficiency for all parties. Data is a company's lifeblood. A blockchain network can monitor transactions, accounts, payments, and more.

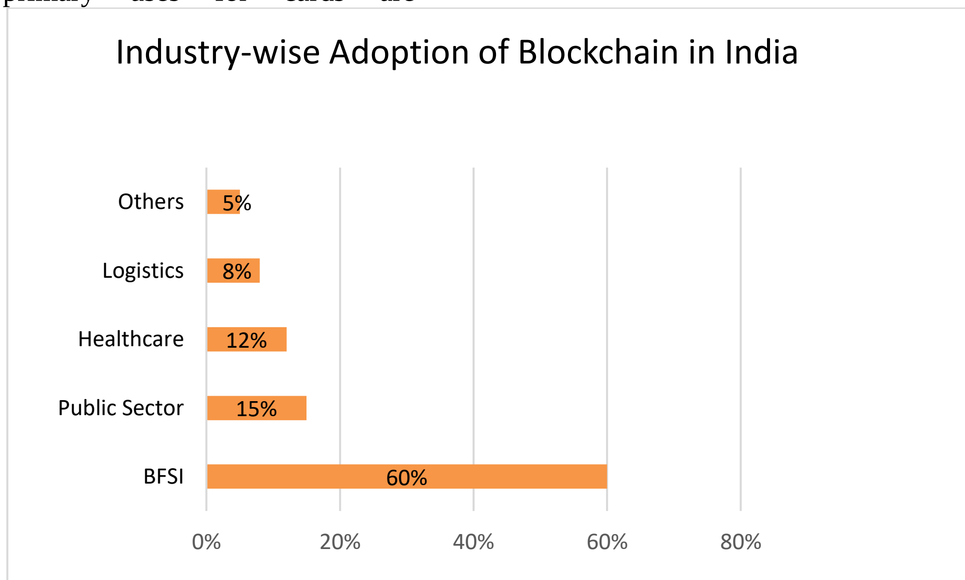

Fig: 2 Source: NASSCOM

Blockchain has been adopted in various sectors. In the finance and insurance sector, it has been used by 60%, meaning blockchain is most used in the finance and insurance sectors. 15% is used in the public sector, 12% is used in the healthcare sector, 8% is used in the logistics sector, and in other sectors, it is used by 5%.

Finance-Blockchain technology gains more advantages as financial instruments become more digital, allowing for previously unheardof levels of connectedness and programmability across commodities, services, assets, and holdings. This includes digital assets, smart contracts, and programmable money. These highly enhanced tools will alter how the commercial and financial markets operate, enhancing the value of every interaction.

Supply Chain Management- By adopting a blockchain supply chain, parties can manage the supply chain more successfully by keeping track of data like price, date, location, quality, certification, and other crucial elements. By leveraging blockchain technology to make this data accessible, a business can increase its visibility and compliance about outsourced contract manufacturing, which can also help it solidify its position as a pioneer in ethical manufacturing. It can also improve the material supply chain's traceability, reduce losses from the grey and black markets, and reduce losses from counterfeit and grey market goods. There might, however, still be room for a greater variety of connections. In blockchain-based supply networks, four key parties perform roles; some of these participants are absent from more conventional supply chains. Registrars provide unique IDs to network actors. Organizations, that develop standards systems such as Fairtrade for environmentally friendly supply chains or blockchain rules and technical specifications. Certifiers, are those who certify individuals for involvement in supply chain networks. Actors, a recognized auditor, or a certifier must certify participants, such as producers, sellers, and buyers, in order to retain the system's credibility (Steiner and Baker 2015).

Every product may have a digital presence on the blockchain so that all pertinent parties can have immediate access to the product profile. Access can be restricted by security measures so that only those having the proper digital keys can use a certain product (Saberi et al, 2018). A variety of information may be gathered, including the product's condition, kind, and the standards that must be followed when developing a product (Tian, 2017). A product's information tag serves as an identification that connects tangible goods to their virtual identities in the blockchain (Abeyratne & Monfared, 2016).

Health care- The blockchain's decentralised, open, and permissionless features might provide a special answer for the healthcare industry. A more comprehensive range of applications for the technology opens the way for wearables and the advancement of medical research, among other elements of healthcare. According to a recent Deloitte poll, the traditional industry is actively looking at new ways to use the blockchain to meet its pressing needs. The healthcare industry is expecting more from blockchain developments (Deloitte, 2018). Blockchain technology can potentially reduce the hazards associated with unlicensed and counterfeit pharmaceuticals, which are becoming more prevalent. It is possible to create smart contracts for medications, including device monitoring, with integrated GPS and chain-of-custody reporting, and then identify pill containers (Bell, 2018). The pharmaceutical supply chain and developing techniques to thwart fraudulent drugs are two further applications of blockchain technology. The informed consent procedure can be integrated while protecting the privacy of each patient's individual health information by allowing patients to manage their own identities.

Trade Facilitation-The term "trade facilitation" refers to a particular set of laws that streamline and facilitate the movement of goods into and out of nations for international trade. All facets of border processing, from the electronic interchange of cargo-related information to the standardisation and simplicity of trade documentation to the availability of administrative appeals of border agency decisions, are thus included in trade facilitation. Examples of paperless trade facilitation measures include the implementation of an electronic/automated customs system, the availability of an internet connection at border crossings for Customs and other trade control agencies, the implementation of an electronic single window system, and the electronic submission of documents. When examining how ICT is utilised in trade, the first three steps are part of a four-step process (Wang et al., 2014).

Paperless Trade Facilitation Measures	2015	2017	2019	2021
Automated Custom System.	Fully Implemented	Fully Implemented	Fully Implemented	Fully Implemented
Internet Connection Available to Customs and Other Trade Control Agencies.	Fully Implemented	Fully Implemented	Fully Implemented	Fully Implemented
Electronic Single window System.	Partially Implemented	Partially Implemented	Partially Implemented	Fully Implemented
Electronic Submission of Customs Declarations.	Partially Implemented	Partially Implemented	Partially Implemented	Fully Implemented
Electronic Application and issuance of Import and Export Permit.	Partially Implemented	Partially Implemented	Partially Implemented	Fully Implemented
Electronic Submission Of Air Cargo Manifests.	Fully Implemented	Fully Implemented	Fully Implemented	Fully Implemented
Electronic Application and issuance of Perferntial Certification of Origin.	Planning Stage	Planning Stage	Planning Stage	Partially Implemented
E-Payment of Customs and Duties and Fees.	Fully Implemented	Fully Implemented	Fully Implemented	Fully Implemented
Electronic Application for Customs Refunds.	Partially Implemented	Partially Implemented	Fully Implemented	Fully Implemented

Fig: 3 Source: UN Global Survey on Digital and Sustainable Trade Facilitation

2 Paperless work in Indian Railway

Indian Railways switches to electronic storage in favour of manual files. Over 58 Indian Railways institutions, the Piyush Goyal-led Railway Ministry replaced manual files with more than 72,000 digital ones in just six months. The national transporter has adopted a paperless work environment as a result of RailTel's adoption of the NIC e-Office, which reduces the amount of paper used daily. Phase 1 of the initiative saw RailTel establish over 50,000 users and train executives to operate the platform in these 58 institutions. The National Informatics Centre (NIC) created NIC e-Office, The Central Secretariat Manual of e-Office Procedure served as the foundation for the initiative (CSMeOP). The e-Office promotes a paperless workplace, which lowers operating expenses and the environmental impact. The biggest challenge, though, is getting users to accept the new paperless working style and break the habit of using the manual file system.

Opportunities of a Cashless Economy:

Reduced Maintenance Costs: Estimated exchequer wealth is currency's logistics and supply chain. It costs a lot to print, store, and move, distribute, and recognize counterfeit money. Because the economy depends on financial institutions, many concentrated tax evasion cases exist.

Transparency in Transactions: It goes without saying that electronic transactions or the use of plastic money always leave behind a digitally impermeable record that is useful to both the customer and the government. It will stop the production of illicit wealth.

Lower Transaction Costs: Digital business reduces waiting times and handling costs. It will boost feasting and output rates if correctly carried out, nurturing the economy.

Hygiene: In India, it is common to find notes that are soiled, tobacco-stained, and full of germs. There are several instances in our lives where we unintentionally or intentionally give and receive bacteria in the shape of rupee notes. This might be avoided if we go to a cashless economy.

Higher revenue: a cliched benefit of transparency tax collection will rise as more transactions are made. Thus, increasing the government's revenue, which in turn will be transformed into programmes and policies for public welfare.

Financial Inclusion: A desire for a cashless society will encourage people's financial ties. It will demand that the government link every home to a banking and cashless society.

A cashless society would prevent counterfeit money and dirty notes, lowering the expense of maintaining ATMs. Customers are served quickly and efficiently, without interruptions or lines, and without being required to interact with bank employees.

Challenges for India in Going Cashless:

In a country with 1.3 billion inhabitants, not everything is ideal and not everything is nice. Going cashless must take the form of an exponential curve rather than a digital step signal, with a gradual climb in the early stages and a fast march in the latter ones. That could make the entire process seem paradoxical. India is a sizable nation that requires systematic and methodical reform.

High Cash Dependency: Nearly all of India's B2C transactions involve a high cash dispersion 12.04% of the GDP is made up of all market cash flow, which is a significant proportion for developing nations. This proves how serious our need for money is and how challenging it takes time.

Lack of Digital Infrastructure: The spread of the internet and smartphones is the first and most important condition for a digital economy. Only 30% of customers use smartphones, despite a billion mobile payments (not users). Over 70% of the 370 million mobile internet users reside in cities, compared to 70% of Indians who live in the countryside. Skepticism in Merchants: Small-scale distributors and users are sceptical about using plastic money; therefore, they need to be persuaded of its benefits. The general level of understanding of Indians on the use of plastic money cannot be expected to suddenly change. In order to advance the digital economy, the government plans to establish incentive and awareness-raising programmes.

High Merchant Discount Rate: This is the percentage the bank or card processing company deducts from each purchase a business makes. These depend on volume and become more affordable if the commercial successfully sells a significant number of products, which is favourable for major dealers.

The current demonetization initiative has alarmed the filthy prisons for holding money, fuelled the economy, and forced individuals to reconsider your trading and dealing strategy. The devaluation drive was initially intended to be a method to confront the issue. Black market and counterfeit currencies, but even then,
It's obvious that the description has changed. It is now a method of endorsing.

Cashless transactions between citizens are a fantastic idea for the nation. However, the issue is whether India is prepared for it or how likely the government is to take the opportunity. India will transition to a cashless society by 2020 amount of illicit funds.

Recent estimates indicate that India's shadow economy accounts for nearly one-fourth of its GDP and operates like a parallel dimension that gradually robs energy and matter from our measures (economic ecosystem).

It should be emphasised, nevertheless, that only 10% of the black money in India is kept in cash; the remainder is either stored in market fluctuations, gold, stocks, or real estate. Only a few months after demonetization, it will be possible to assess whether it was successful in reducing counterfeit and black money. However, everyone agrees that the country will benefit from the digital economy.

Trade without paper has several difficulties. Paperless trade measures, supporting regulations, and single electronic windows are not yet universally set up and run. The UN polled 120 nations about a variety of 38 trade facilitation and paperless trading-related policies. It then calculated an average implementation score from a subset of factors applicable to all survey countries; a score of 100% indicates that all elements have been fully implemented. According to the most current 2017 report, 61% of trade facilitation and paperless trade initiatives are being implemented on average.

Limitations of the Study

This paper is a conceptual based paper on the paperless economy and paperless trading. Data is gathered from a secondary source. Others may get primary data on the paperless economy and paperless trade. And due to the hindrance of time, this paper focuses on some concepts of paperless economy and paperless trading.

Future of the study

Future research may focus on gathering data through primary sources. Other researchers may focus either on the paperless economy or paperless trading. The researchers can also concentrate on paperless work going on in other areas. This is now a days is essential and beneficial in a sustainable way which is another way to focus upon.

Conclusion:

The modern method of cashless payment and paperless trade are secured ways to reduce individuals' time and lower the use of paper works. It encourages the scope of digital India. The countries must integrate into the paperless economy and trade and improve aspect for economic gain from these two.

Demonetization provided a unique platform for digital payment adoption as an alternative to cash for Indian consumers. A cashless economy will reduce black money and counterfeit currency, fight against terrorism, decrease cash-related robberies, and improve our country's economic growth.

In this context, UPI plays a game-changing role for India. Recently UPI launched some new unique features for credit card holders by which credit card holders also used UPI for fast payment direct bank to bank. UPI also launched UPI LITE for small transactions, which can be used without an internet connection, and one more new feature found by UPI, which is UPI123. These are game-changing features for the Indian economy. In the future, the role of Indian cashless-enabled services like UPI will expand its business in other countries, and many countries have signed MOU with India. So, we can say that in the future, India's UPI can compete with VISA and MASTERCARD at the international level.

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EEFECTS OF EMOTIONAL INTELLIGENCE ON PERSONAL FINANCIAL PLANNING OF HOUSEHOLDS

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Abstract

The prime objective of this study is to investigate relationship between emotional intelligence and personal financial planning of households. We have examined the direct and indirect effects of emotional intelligence being independent variable on financial planning of investor being dependent variable of the study. We used both primary and secondary sources of data collection as per the requirement. Convenient sampling technique has been applied to collect data from survey. Furthermore, descriptive statistical tools have been used to analyze primary data. The major findings of the study suggest that there is positive relationship between emotional intelligence and financial planning. Investors with a high EI aptitude are competent enough to control and manage their personal financial activities in an effective and efficient manner and a vice-versa. Sample size of the study is inadequate due to time and monetary constraints. For effective data collection and data analysis only head of the family that represents entire household's responses has been recorded. Future study can explore individual family member's contribution towards personal finance.

Keywods: Emotional Intelligence, Financial Planning, Households Investment, Financial awareness, financial system etc.

INTRODUCTION

In today's modern era the need of household's investment behavior is taking greater importance amongst the stakeholders because of few unrealistic conventional finance assumptions which has been proved irrational and illogical. Consequently such baseless theoretical assumptions have modified over the period of time. In this sequence personal finance of household is one of the emerging issues in the finance field. There are several factors that affect the financial decisions of household investors such as mental and physical health, emotional intelligence, personality traits, demographic variables (age, gender, education etc.) motivation, financial literacy, risk appetite, investment goals etc.

Hence we have observed many such other factors that little or more play an influential role for determining optimum portfolio of household investment. Therefore, it becomes quite significant to develop proper knowledge about household's investment strategies and habit. Furthermore, we must explore innovative tools and techniques to overcome upon investment hindrances and to increase household's participation rates in formal financial market. Most importantly regulators, policy makers and govt. must take cognizant to develop adequate organized financial setups to incorporate all the residents including marginalized section of the society under the same umbrella. Because we have came into notice that due to inadequate better to say negligible formal financial services many unbanked or under banked population of the country have to depend on informal means of financial structures, for instances, Chit funds, Nidhis, Ponzi schemes etc. these are nothing but leakages for the formal financial market.

WHAT IS EMOTIONAL INTELLIGENCE

Salovey and Mayer in 1990 defined emotional intelligence as it is subject matter of social intelligence which incorporates the capability of a person to guard and monitor self and others moods and feelings and to apply such knowledge to take rational and meaning decisions.

In similar fashion (Gardner, 1993) stated that emotional intelligence is a subset of social intelligence which is combination of people-intra personal and inter-personal intelligence. According to him intra personal intelligence refers to a person's own intelligence in managing self also capacity to signify difficult and highly differential mix of emotions. On the other hand, inter-personal intelligence refers to a person's own intelligence in managing with other's person and it is the capacity to observe and build differentiations amongst other person, especially their moods, motivations, intentions and temperaments.

Historically a world renowned Academician Daniel Goleman in 1995 contributed to popularize the term emotional intelligence in his famous book, emotional intelligence: why it matter more than intelligence quotient? In this master piece he regarded emotional intelligence as novel and pioneering concept which helps to measure a person prospect to succeed in their life. Further, he pointed that there is a direct relationship between emotional intelligence and actions of an individual. Higher the emotional intelligence higher will be the capability to deal self and others emotions in most effective and efficient manner, resulting to ensure happy life of a person.

According to (Cherniss, *2010*), the notion of emotional intelligence is basically based on following ground:

- Emotions or feelings are playing a vital role in both workplace and non-work place connections.
- It has been found that people are differing at the ability to understand, perceive, apply and manage their feelings/emotions.
- Degree of variability in emotional intelligence is important to the extent as the case may be.

Furthermore, the expression emotional intelligence is a mixture of two construct emotion and intelligence. These two indivisible attributes imprint key impact on a person life. Let us describe these two terms one by one, the term emotion refers to a level of consciousness which stimulate feelings/moods. Whereas, the term intelligence is regarded as the ability of a person to learn from present or past circumstances in their life. Hence, emotional intelligence is nothing but it is the ability of a person to understand, control and use their feelings and of others too.

PERSONAL FINANCIAL PLANNING OF HOUSEHOLDS

Personal financial planning of a person is described as the scientific process to control and manage personal wealth that considers budgeting, savings, investment, insurance, tax planning, retirement planning etc.

Largely it is all about talking decision about how to use personal financial resources to maximize personal wealth through productive investment or creating optimum portfolio. It has been found that the task of financial planning is necessary for all irrespective of age, gender, financial status, literacy level etc.
In nutshell, we can classify entire concept of personal financial planning in to seven major categories which are as follows:

- Personal liability management
- Budgeting about income and expenses
- Tax planning
- Savings and investment planning
- Insurance planning
- Retirement planning
- Real estate planning

A PERSON WITH HIGH AND LOW EMOTIONAL INTELLIGENCE

- **Rationality in behaviour of individual: it is known that** Emotional intelligence derive to develop insightful thought among individual that helps them to behave rationally in the society.
- **Satisfying social goals and objectives:** As we know that human beings are regarded social animal, whatever they are or they do they are simply answerable to the society as a whole. An individual with higher level of emotional intelligence behave in a similar fashion as they expects other person to behave with them.

Rationale of the study

Personal Finance Planning facilitates to uplift the standard of living and help to maximize personal wealth of households or individual which are very much important to live a person's life happily. In this context a person must learn such skill that helps them to take effective and efficient financial planning.
Present study mainly focuses regarding enumerating such factors that influence personal financial planning of households for instance, emotional intelligence, personality traits, motivation and financial literacy, risk appetite etc.

Research gap

On the basis of rigorous literature review, we found that majority of the researches are done in western countries particularly in USA, UK and other nations of Europe. But very limited studies are related to India that discussed two major theme together i.e. emotional intelligence and personal finance of households. A wide range of research gap was noticed, therefore, it gives an immense opportunity to the research to conduct such study.

Conceptual Framework of the Study

Objectives of the study

- To understand the basic concept of emotional intelligence and personal financial planning of households.
- To examine the effects of emotional intelligence on investment behavior of households.
- To identify the sustainable investment portfolios of households.

Research methodology

This study is descriptive by nature with a view to explore various dimensions of emotional intelligence in connection with personal financial planning of investors. To build a theoretical framework data from both primary and secondary sources has been used in this study. Primary data is collected using convenient sampling technique from Delhi/NCR region. For secondary data is concerned existing literature from distinguished published and unpublished reports, research paper, articles, books, newspaper, websites etc.

Review of literature

Mayer et al. (2009) explored the concept of Emotional Intelligence and opined about it scientific viability also incorporated the Goleman view on significant role of EI in one's life.

Popp (2005) studied the four branch model of Emotional Intelligence (EI) which has been developed by Mayer and Salovey in 1997. The theory gives a meaningful base to understand individual distinct abilities associated with processing of emotional information in to productive investment decisions.

Salovey and Mayer (1990) provides a structure of emotional intelligence to develop a hypothetical skill in such a way to integrate conventional and modern approach of EI for better decision making also focused on mental health of individual to examine EI. Shiv et al. (2005) have examined in a laboratory test that how a normal person with stable mind (mind management) makes rational investment decisions over other person with unstable mind. The finding of the study suggested that there is positive impact of emotion while creating portfolio of investment. Novarro (2005) this study particularly has given emphasizes on the role of institutions to facilitate personal financial decision making of a household. In this study the survey of Consumer Finances has been used. Where in data pertinent to household finance has been analyzed.

Gambetti and Giusberti (2012) have examined in their research that households take financial decisions based on dispositional propensity to employ emotion, for instance happiness, anger, anxiety, sadness, depression etc. they found that trait anger of an investor provokes them to make investment decisions while trait anxiety in investor demotivates them to invest. They employed survey questions to figure out investment decisions in real life of an investor, stock trend predictability and risk preference, and three theoretical situations to gauge the participants' risk attitude. Data of the study are reliable with cognitive models of emotions that actually highlight practical utility and extend the knowledge of the relationship between personality traits and real life investment decision-making of an investor.

Munir et al. (2020) they have investigated the impact of emotional intelligence on investment behavior of household investor in Pakistan with a moderating role of financial literacy and gender. Based on previous literature a structured questionnaire has been designed to collect data using random sampling techniques. For analysis point of view data was collected from 300 respondents (households). In this study they have considered exploratory factor analysis to check factor loading, discriminate validity and Convergent validity. Further to test the hypotheses moderation analysis has been used. The finding of the study suggest that there is a significant impact of emotional intelligence on the investment decisions of household with a moderating role of financial literacy and gender wise participation.

Data Analysis And Findings

Table 1: Age and Gender

Age in Year	Frequency	Percent	Gender	Frequency	Percent
25-40	16	51.6	Male	24	77.4
40-50	12	38.7	Female	7	22.6
50-75	3	9.7	Total	31	100.0
Total	31	100.0			

Source: Field survey, 2022

Table 2: Education

Education	Frequency	Percent
Illiterate	4	12.9
Literate	10	32.3
10th	2	6.5
12th	2	6.5
Graduate	10	32.3
Post graduate	3	9.7
Total	31	100.0

Source: Field survey, 2022

Table 2 shows that 12.9% of the total sample size is illiterate, here illiterate means those who did not take any formal education, but any how they know little bit to read and write. On the other hand 32% are literate who had taken formal education but they had to quit their study due to various personal reasons. 32% are graduates.

Graph 1

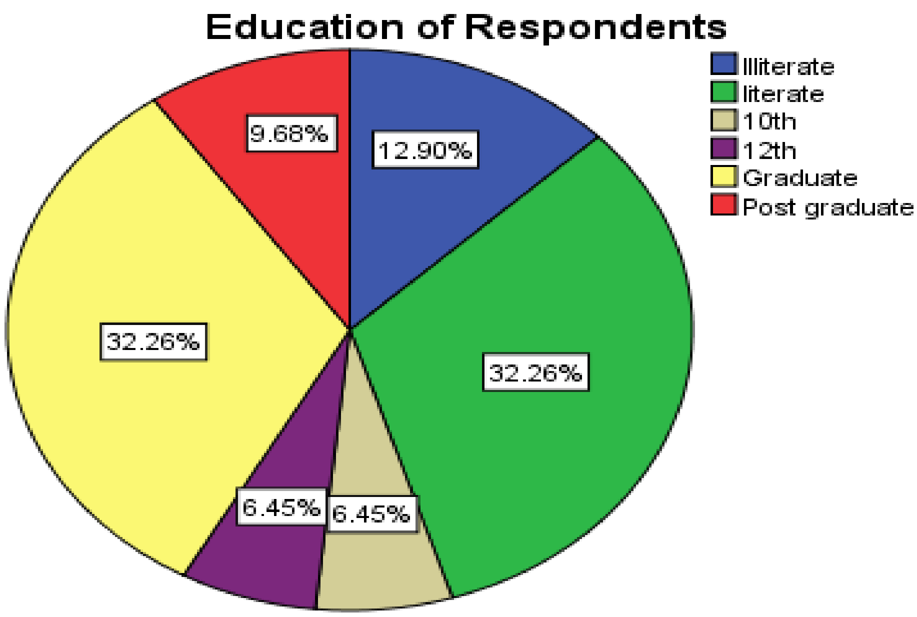

Table 3: Occupation

Occupation	Frequency	Percent	Nature of Occupation	Frequency	Percent
Self-employment	9	29.0	Regular	22	71.0
Private company employee	9	29.0	Contractual	4	12.9
Shopkeepers	5	16.1	Part time	4	12.9
Housewife	5	16.1	Temporary	1	3.2
Government Sector Employee	3	9.67	Total	31	100.0
Total	31	100.0			

Source: Field survey, 2022

Table 4: Residential

Status of Residence	Frequency	Percent
Owned	25	80.6
Rented	4	12.9
Parental	2	6.45
Total	31	100.0

Source: Field survey, 2022

Residential status of respondent is important because it give positive feelings to the member of the households that they are in safe position. Therefore, 81% are having their owned house and 6% are having parental house, whereas 13% are living in rented house.

Table 5: Marital status

Marital status	Frequency	Percent	Dependents	Frequency	Percent
Married	29	93.5	None	5	16.1
Unmarried	2	6.5	1-3	4	12.9
Total	31	100.0	4-6	16	51.6
			6-9	5	16.1
			More than 9	1	3.2
			Total	31	100.0

Source: Field survey, 2015

Table 6: Originally belong to which state in India

States originally belongs to	Frequency	Percent
Uttar Pradesh	11	35.5
Delhi	10	32.3
Bihar	4	12.9
Haryana	2	6.5
West Bengal	1	3.2
Punjab	1	3.2
Other	2	6.5
Total	31	100.0

Source: Field survey, 2022

Actually in Delhi most of the people are migrated from different parts of India, largely from Uttar Pradesh and Bihar as it is also supported by the above table. Where in 35% of the populations are from Uttar Pradesh and 32% are itself from Delhi and 13% are from Bihar.

Table 7: Income

Yearly income (in Rs.)	Frequency	Percent
Below Rs. 1, 00,000	13	41.9
1,00,000-2,00,000	13	41.9
2,00,000-3,00,000	1	3.2
4,00,000-5,00,000	1	3.2
Above Rs. 5,00,000	3	9.7
Total	31	100.0

Source: Field survey, 2022

Above table reveals that majority of the sample is fall under low income bracket which is just in between Rs. 1, 00,000 to 2, 00,000 p.a. roughly 42%. For such kind of strata formal financial services are not substantially available. Hence, in order to personal finance management is concerned they have to mainly depend upon informal financial services which unregulated and uncontrolled by govt. agencies.

Summary of Findings

- 52% of sample is in the age group of 25-40 year and 39% are above 40 years.
- Out of them 77% male and 23% are female.
- 13% respondents are illiterate who can't even read and write. 32% obtained graduation degree and 10% are having post graduate qualification.
- Only 9% respondents are employed in government sector jobs, 29% in private sector jobs and rest are either engaged in self-employment or some other economic activities.

Limitations of the study

- It's cumbersome to cover wide area of personal finance that primarily spread in formal and informal sources of finance of households. Hence selective things have chosen to carry out the study.
- For effective data collection and data analysis is concerned only head of the family that represents entire household's responses has been recorded.
- Sample size of the study is inadequate due to time and monetary constraints.

Conclusion

Similar to previous researches this study also believe that behavior of investor not rational most of the time as one of the key assumption of traditional finance due to asymmetry of information, transaction cost, taxes and other factors. There is sufficient evidence to prove that when it time to take personal financial decisions, emotional intelligence and personality of the investor play a significant role. Everyone should learn to apply their emotional and cognitive intelligence which help them to take rational/logical better to say productive decisions with an ultimate goal to maximize personal wealth and this target is surely achievable if someone created a right portfolio. This study mainly considers a households demographic, personality attributes and emotional intelligence as an independent variable to examine the effects of its on investment decisions or behavior of households.

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SOCIAL ENTREPRENEURSHIP: A STUDY ON CHALLENGES AND STRATEGIES WITH SPECIAL REFERENCE TO WOMEN ENTREPRENEURSHIP IN INDIA

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Abstract:

Due to economic liberalisation and globalisation, women entrepreneurs in India are gaining prominence. Opportunities for women to gain economic independence have expanded thanks to policies and institutions that encourage and support the acquisition of entrepreneurial skills and the pursuit of vocational education and training. However, just one-third of business owners are female. It used to be that a woman's place in the workforce was strictly restricted to the home; now, however women are widely acknowledged as agents of social change and pioneers in a variety of fields. Nonetheless, their entrepreneurial potential and talent are underutilised due of their lesser standing and the attitude of society. The country might reach new heights if its potential was fully realised by ensuring everyone had access to equal resources and legal protections. The concept of "social entrepreneurship," which combines volunteer work and business strategy, is a powerful one. For social entrepreneurs, societal well-being is more important than financial gain. The primary objective of this paper is to investigate the current state of women social entrepreneurs in India, examine the obstacles they confront, and provide solutions.

Keywords: Social Entrepreneurship, liberalization, globalization, entrepreneurial skills, societal well-being, workforce

Introduction:

An entrepreneur is someone who sees a business opportunity, gathers the means to pursue it, launches the company, and bears final responsibility for its success or failure. The term "entrepreneur" refers to a person who initiates and develops a commercial venture, while "entrepreneurship" describes the method used by such person. Those who venture out on their own tend to have a strong drive to succeed. To set himself apart from the average businessman, an entrepreneur must possess qualities such as a strong drive for success and the ability to think beyond the box.

Entrepreneurs that focus their innovative thinking on societal issues and find workable solutions are sometimes referred to as "social entrepreneurs." These are the folks who care about helping others who have been marginalised or who lack the resources to grow on their own. These are the people who aren't afraid to put themselves out there in the hopes of making a good impact on the world. They are not interested in generating a profit, but rather improving people's lives through their business. Through the creation of eco-friendly goods and the provision of aid to the underprivileged, they contribute to the betterment of society. While making a profit is a priority for most business owners, that doesn't prevent them from making a beneficial difference in the world. For social entrepreneurs, societal well-being is more important than financial gain. That's right; social entrepreneurs are business people just like you and me, but they're motivated by a desire to improve society, culture, or the environment in addition to making a profit for themselves.

Business or nonprofit organisations founded by one or more women are considered examples of women's entrepreneurship. Women's roles have shifted as literacy rates, urbanisation, industrialisation, and home value consciousness have increased. Women Urban middle-class social entrepreneurs often feel pressured to demonstrate their competence and experience. They had to show their loved ones and the community that becoming social entrepreneurs was not a "last choice" because they were unable to find a better paid or more prominent job elsewhere.

Objective of the Study

- To study the prevailing status of Women Social Entrepreneurs India
- To analyse the Problems or challenges faced by Women Social Entrepreneurs in India
- To provide solution to prevailing challenges for social entrepreneurship in India.

Research Methodology

Descriptive methods are used in this research paper. Secondary data sources are used to compile data. The current research study draws on a number of previously published articles and studies, as well as a number of books, all focusing on social entrepreneurship as a topic.

Review of Literature

According to research by Ganiger (2013), some of the biggest challenges women face include: being exploited by men in their families and communities because they are too attached to their families; a lack of self-confidence caused by a lack of education and training; facing stiff competition from men when it comes to mobility and networking; and not receiving financial support from their families. There has to be an effort on the part of the government and society to provide orientation and skill-based training, as well as help with preparing project reports and launching new businesses. They need to meet and talk to prosperous businesspeople.

According to the results, women aspire to make a positive change in the world (Nieva, 2015). Women in Saudi Arabia who start businesses to help others tend to have the experience and education to know what they need and how to get it. In Saudi Arabia, social entrepreneurs are making significant contributions to improving people's lives, fortifying communities, and making a beneficial influence. Women social entrepreneurs in the nation confront difficulties al entrepreneurship into most immediately after launching their businesses. Incorporating social existing entrepreneurship curriculum at K-12 and tertiary institutions helps students acquire transferable skills that can be used to the corporate and social worlds. To help get the word out about and funding for new social companies, the public and private sectors should work together. It's past time for public and private organisations to join together to make America a better place for social entrepreneurs.

According to the research article "A study of Social Entrepreneurship in India" (Rawal, 2018), social entrepreneurs in India have the potential to alter the country's social landscape. The research set out to answer questions about social entrepreneurs' roles and responsibilities, as well as the difficulties they face and the ways in which they've contributed to finding solutions. India's never-ending societal issues make it an attractive market for social entrepreneurs. What matters most to them is making a positive difference in the world. They are more equipped to socially innovate and provide novel solutions to society's pressing issues. Increases in social entrepreneurship have benefited the job market, higher education, and health care access. Even while the rate of social entrepreneurship growth is slower than in industrialised countries, the government has recently begun to recognise their importance and influence, and has begun to take steps to address the problem. It is the businesses created by social entrepreneurs that are responsible for the social improvement of economically depressed places. The government of India is turning to venture capitalists and angel investors for the money they need to support the country's burgeoning social entrepreneur scene.

According to a study titled "Female Social Entrepreneur Movement in Indonesia" (Yudoko & Rudito, 2018), researchers discovered the driving force for the emergence of so many social companies founded by women. Some people chose it because they are constantly reminded of the plight of others, while others did it because they themselves had to overcome social and economic disadvantages. However, some people see these social and economic phenomena as a threat to the development of society in general, prompting them to launch a business as a means of effecting change.

A survey of women business owners in India (Kumar, 2015) found that women are a key factor in India's economic growth and development. Social norms that discourage innovation from women and governmental indifference stand as the greatest roadblocks to women's business success. Some of the biggest obstacles to their growth include a lack of direction in life, difficulties with job and family responsibilities, a lack of personal property or independence, a lack of knowledge regarding their abilities, and a work culture that is overwhelmingly controlled by males. Women business owners should be constantly supported, encouraged, motivated, inspired, and collaborated with in order to educate them on the many options available to them.

(Singh and Singh 2017) they arrived at the conclusion that social entrepreneurship is a growing industry that gives young people a chance to make a positive impact on society and the economy. The political background, and more especially the political challenges that have plagued India ever since independence, has had a profound effect on the development of social entrepreneurship in the country. Many enterprising Indians are working to bridge the gap between egalitarian laws on paper and the realities of Indian society (the prevalence of the caste system).

According to a recent study (Zai & Kumar, 2019), it has been determined that India is a male-dominated country, with women both economically and socially dependent on men. Women business owners faced several challenges, including a lack of education, social barriers, legal norms, prohibitive manufacturing costs, a male-dominated society, limited management capacity, a lack of self-confidence, etc. Although there are undoubtedly many successful women business owners in the United States, this number has to be double-checked with actual business owners. Women's interest in business is thought to be growing rapidly in recent years, making now an especially exciting time to be an entrepreneur. As a business owner, a woman faces a plethora of challenges, including those related to money, promotion, health, and personal life. At times, governments and financial institutions need to enact concrete guidelines for women business owners.

Women entrepreneurs and women social entrepreneur- a difference

Women who start their own businesses are known as "women entrepreneurs." These businesswomen are the driving force behind new ventures, and they are the ones who take the initiative to gather resources, take calculated risks, turn a profit, overcome obstacles, create jobs, and run their operations with complete autonomy. The goal, first and foremost, is financial success.

The term "women social entrepreneur" refers to women who work to enhance their communities and the lives of others by, for example, giving access to training or paid work that benefits the greater good of society, or by donating money or other resources to support those in need. They do not operate with the goal of making money. She juggles a social goal with an innovative business model. They serve a group of people who are financially unable to support themselves but who are otherwise unworthy of assistance. They hope to effect widespread, life-altering change for the better. Women in the social entrepreneurship space are more likely to employ other women, prioritise helping women, and give financial rewards to women in their immediate families.

- **Ela bhatt:** The Self-Employed Women's Association (SEWA) was created by her in 1972. Women selling veggies on the side of the road were seen by her gathering trash as she passed. She was committed to helping these women, so she sought out and discovered a unique trade union for low-income, unorganised, self-employed women who work as vendors, hawkers, and labourers.
- **Priya Naik:** Samhita Social Ventures was established to serve as a meeting ground for non-governmental organisations (NGOs), businesses, donor organisations, and academics in an effort to facilitate greater collaboration and productivity.
- **Shaheen Mistri:** Teach for India was started because its founders saw that not everyone in India could afford a good education. So, she fixes the lack of education by starting a fellowship programme and an alumni movement. In these programmes, fellows from well-known universities and workplaces teach children from low-income families and learn about India's real problems.
- **Sheetal Mehta Walsh:** Founded Shanti Life, a company that helped solve the problems of inadequate finance facilities that plagued Indian entrepreneurs. Rural business owners can obtain microfinance from Shanti Life at the industry's most competitive interest rate. In addition to that, it offers women farmers amenities and bathrooms that are environmentally friendly.

Types of Women entrepreneurs

- **Affluent Entrepreneurs:** Affluent businessmen's daughters or wife are wealthy entrepreneurs. They possess the capital and all other resources required to launch a company venture and assume risk.
- **Pull factors: -** These women are college educated and reside in urban areas; they may or may not have previous job experience; and they are prepared to face the risk of launching a new business with the help of financial institutions and commercial banks. In order to achieve economic autonomy, starting a new firm might be a daunting task.
- **Push factors: -** These ladies start businesses as a means of getting out of debt. Like widows and single mothers. In order to make ends meet, they have no choice.
- **Rural Factors: -** These ladies are from the country and they've decided to get into business since they have the skills and resources necessary to succeed. They like to engage in ventures that need little in the way of initial capital, risk, or specialist knowledge on their part.
- **Self Employed Entrepreneur: -** They are educated ladies who are impoverished. They select little and small businesses that are easy to operate and sufficient to support their family.

Why Social Entrepreneurs?

- **Address Social Problems:** Entrepreneurs with a social emphasis work to solve societal issues. To solve societal issues, they go ahead with novel solutions by coordinating existing resources into new institutional frameworks.
- **Change Agent for Society:** People who engage in social entrepreneurship serve as agents of change in society, inspiring others to make contributions that further the evolution of humankind. In addition to their role as powerful catalysts in society, they also play a transformative role in the social sector.
- **Bring the Changes:** They make it their goal to improve society in some way, thus they commit to actively seeking out and seizing upon novel chances to improve their practises through a cycle of invention, adaptation, and discovery.
- **Enhanced Responsibility:** They take risks regardless of the availability of

funds, and they demonstrate more accountability to their constituents.

- **Improve human Lives:** People are drawn to social entrepreneurs like Muhammad Yunus, who was awarded the Nobel Peace Prize, for many of the same reasons that they find business entrepreneurs like Steve Jobs to be so compelling. These extraordinary people come up with brilliant ideas and, despite the fact that the odds are stacked against them, are successful in developing new products and services that significantly improve the lives of other people.
- **Contribute for Inclusive Society:** In addition to this, they are playing an essential part in the inclusive healing and rebuilding of communities on a grass-roots level.

Women Social Entrepreneurs and Development:

- **No profit Motive:** There has been a dramatic upheaval in India's development sector, and one of the most notable changes is the emergence of social businesses that are run completely for profit and are no longer limited to "non-profit" or "low-profit" endeavours. These for-profit social companies are able to earn sufficient revenue to maintain their operations without the assistance of donations or subsidies.
- **Social Impact Investing:** India's social entrepreneurs are being supported, praised, and celebrated for their ability to solve the country's most complex and pressing developmental needs. The Impact Investors Council (IIC) estimates that over USD 9 billion has been invested in over 600 impact firms in India, which have a cumulative impact on over 500 million people. In India, the Impact Investors Council (IIC) is the preeminent trade group for its field. Its goal is to create an asset class known as impact investing in order to attract private capital and close the country's social investment gap.
- **Deepening Social Innovation Movement:** Entrepreneurs in the social sector have evolved into key players in India's economic growth and progress. All throughout the world, these businesses are reaching out to one another in search of strategic partnerships to help them address their individual challenges. Their innovative spirit has been bolstered by the government's fast digitalization ambitions and heavy reliance on technology.
- **Government Support:** The climate for social entrepreneurship in India has improved thanks to the government's encouragement of new businesses and the forthcoming introduction of the Social Stock Exchange. In order to help social entrepreneurs, raise more money and increase their impact and reach, the Securities and Exchange Board of India has developed the framework for a Social Stock Exchange.
- **Sustainability Approach:** The issue of environmental responsibility is not lost on either corporations or governments. The business models of social entrepreneurs have always incorporated sustainability principles. Government and large corporations are not only eager to learn from and be inspired by these start-ups' innovative business models, but also eager to lend a hand as they expand.

Challenges faced by Women Social Entrepreneurs:

Women business owners encounter unique challenges throughout their businesses' life cycles. Being a woman in India presents unique challenges for female business owners, including those specific to the balancing act of motherhood, societal obligations, and the office setting. Both superiors and subordinates tend to have stereotypical views on women, such that they are weaker than males, should not be placed in dangerous or stressful situations, should "adapt," etc. The burden on rural women is far greater. They are urged to be passive by the males around them. Humanity's attitude

toward her and the limitations under which she must live and work are not particularly accommodating. Subtle changes in routine might be met with resistance. Taking up a business endeavour is never easy, but when societal considerations are factored into the equation, the stakes become even higher.
As the causes of a problem might differ amongst groups of people, so can the methods for fixing it. In reality, entrepreneurial activity inside communities is widespread around the globe. Inadequate education and health programmes, ecological dangers, declining faith in political institutions, persistent poverty, high crime rates, and so on are just some of the challenges people face all across the world. However, social entrepreneurs in developing nations have to scale their ideas to a much larger population with a much smaller budget. As a result of living in a society dominated by males, female professionals face increasing barriers when trying to build professional networks on par with their male counterparts. Upon venturing into business for themselves, women in India face a few distinct challenges. In addition to these fundamental issues, women business owners also encounter the following challenges;

Family ties, social mores, and abuse: Women have an emotional and physical connection to their families, which makes them the primary carers for the home and the in-laws. This is supported by the Indian method of rearing both male and female children, which emphasises the importance of a woman's place at home and makes it difficult for her to leave the house for employment. Women are socialised to be nurturers and family pillars from the moment they are born until the day they are laid to rest, while males are taught to provide for themselves. Traditional norms and women's inability to drive are major obstacles to women's freedom of movement in India. Sometimes, the norms and traditions of Indian civilizations might get in the way of women's success and advancement. In addition to stifling male entrepreneurs, the interplay of different religious and social traditions creates additional barriers for female business owners. They have more community challenges in rural areas. People constantly look at them with suspicion. People still tend to be wary of lone business travellers who arrive late at hotels and ask for rooms.

Women in lower-level positions often appear uneasy when men evaluate them for reasons outside of their professional competence. This is why, despite her many absences from the house, she always makes a point of quickly returning to her loved ones. It's not easy to walk around freely among strangers or even acquaintances. It's going to be challenging for her to keep her head down and keep her business afloat while she's dealing with this. Since few if any women are willing to do the heavy lifting of brokering deals, distributing goods, and collecting funds, males must fill those roles. Most middlemen will take advantage of them while seeming to help. Because of their added profit margin, fewer customers buy and the business makes less money. Women business owners sometimes lack the self-assurance that is essential to becoming a successful leader in the business world. They have to make an effort to organise both the family and the business. Sometimes, in order to strike a balance between the two, she needs to put her entrepreneurial advocate on the back burner.

Lack of Education and allied Skills: Female education in India is much behind male education. Largely as a result of early marriage, partially as a result of son's better learning, and partially as a result of poverty, educated women receive either less or insufficient schooling compared to their male equal. High education in India implies finding a good husband, and dowry is seen as an issue in this context. Some families worry that if they let their daughter go to college, she will leave home. Therefore, even if she is provided with education, it may only be at the most fundamental level, which may be insufficient for her to provide adequately for herself and her family. As a result, women business owners aren't aware of the advancement of new knowledge, new methods of production, trade, and other government backing that will improve their success since they lack the proper education. Reduced output is a direct result of insufficient knowledge and skills. When developing nations lack the infrastructure to provide high-quality technical training for their citizens, a skills gap and labour shortage result.

Lack of Finance: When it comes to capital-raising and securing other financial necessities for their businesses, women entrepreneurs often prove to be formidable opponents. Financial institutions like banks and credit unions are hesitant to lend money to women borrowers because of the higher risk of failure associated with lending to female entrepreneurs. In addition, they are having money issues as a result of stockpiling unfinished goods, raw materials, and unpaid orders. Businesses established by women often fail due to a lack of raw materials, or at the very least, the lack of sufficient raw materials. The high cost of raw materials and other necessary inputs makes it difficult for women business owners to start or grow their businesses. The high cost of manufacturing, a result of several factors including ineffective administration, is a stumbling block for women business owners. There is a high cost of manufacturing, and one reason for this is that women-owned businesses are slower to adapt to new technologies and ways of doing things.

Low Risk Bearing Capacity in Stiff Competition: They have to work hard to stay alive at a market where the affray is excessive, where they are up against the coordinated part and their male counterparts. Fear of chauvinism and repression, both subtle and overt, comes from all corners of a woman's life, including her family, friends, and the general public. Assuming that women in India are naturally weak, shy, and mild, the individual attempts to conceive of unneeded concern and affray if they discover that the contrary edge it is a female. They are unwilling to take the necessary allowance risk for their business. They are less able to take risks in business since they require external education, training, and funding.

Legal and social procedures: Given the prevalence of unethical practices in government offices and the lengthy procedures required for various permissions, electrical energy, water, and shed allotments, it can be a daunting challenge for a woman entrepreneur to fulfil the legal formalities necessary for starting a business. Humanity generally assumes she must act femininely and, if she resists, she is told her behaviour is stereotypically masculine. It is also hinted that the population will not tolerate working under a female leader. They disrupt work and call for new leadership. Women business owners have unique challenges when trying to run a successful company while raising a family.

Strategies for Social Women Entrepreneurship

- The aim of this strategies is to raise consciousness about the value of entrepreneurship as a means of creating rather than searching for employment.
- With the hope of inspiring people to see the possibility for increased financial security, social standing, and public acknowledgement.
- Government and society should help people get started in careers that interest them and teach them the skills they need to succeed.
- Helping women to create project studies for their own planned units and guiding them through the process of following through on the initiative to launch a new business.
- Offering advice and direction, raising consciousness, advancing professional standing, and altering mindsets in favour of business creation.
- Improving one's sense of self-worth and ability to express oneself effectively is the focus of this training.
- Instruction in specialised trades, cutting-edge technology, and scientific disciplines.
- Management, leadership, marketing, budgeting, and decision-making courses.
- Contact with established businesspeople willing to share their wisdom.

Conclusion:

Literature implies that sustainable development seeks to address systemic problems including poverty, inequality, and insecurity that are prevalent throughout the world's poorest nations. There is a pressing need to shift the focus of social entrepreneurship away from the developed world, where it has been mostly practised, and toward the poor world. There is already some empirical study on the link between social entrepreneurship and sustainable development, but additional research is needed to fully grasp the subject. If we want to have a whole picture of social entrepreneurship, we need more study. More empirical studies focusing on the long-term and comparing different cases are needed to shed light on this developing field.

Following India's independence, laws were passed ensuring women's equal rights to participate in the political process, and they also received equal chances and rights in the fields of education and work. Only a minority of women have profited from government-sponsored development programmes. Fewer than 5% of women, those in the urban middle class, have profited from development efforts, therefore most women are still untouched by change. Women are eager to enter the corporate world and make a positive impact on economic development. Women entrepreneurs are gaining attention and policymakers are working to support them. We urgently want an upsurge in entrepreneurial activity. Women entrepreneurs need to be trained to thrive in the local economy while also being prepared to adapt to the ever-evolving demands of global markets.

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ENVIRONMENTAL AWARENESS AMONG PRE SERVICE TEACHERS

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Abstract

Environmental education is the most important thing for a student to respond to existing environmental issues. Through environmental education can help children develop more environmental awareness. In the world scenario, is causing a lot of problem due to excessive human intervention in the environment, like global warming, ozone layer depletion, acid rain, famine, climate change, drought, pollution of water and air etc., awareness of living and nonliving environment must be developed in children during the primary level. For children to have natural thinking, teachers need to be environmentally friendly. In such a context the investigator decides to conduct the study. **Aim-** The present study investigates the Environmental awareness among pre-service teachers. **Method-** The investigation was carried out using questionnaires (Afeef and Shafi 2021) adopting surveys. Method. **Sample c**onsist one hundred pre-service teachers in Malappuram district Kerala state. **Results-**Analysis of the mean scores of pre-service teachers on the basis of gender and stream (Arts and science) reveals that samples based on gender among pre-service teachers do not differ significantly in their environmental awareness but the sample based on steam among pre-service teachers differ significantly in their environmental awareness.

The groups based on gender of pre-service teachers do not differ in their environmental awareness. The group based on a stream of pre-service teachers differ in their environmental awareness. Arts students require more orientation on environmental awareness.

Key words: environment, awareness, pre service teachers

Environmental education is the most important thing for a student to respond to existing environmental issues. Environmental education can help children develop more environmental awareness. The world scenario is causing a lot of problems due to excessive human intervention in the environment, like global warming, ozone layer depletion, acid rain, famine, climate change, drought, pollution of water and air etc. Awareness of living and non-living environments must be developed in children during the primary level. For children to have natural thinking, teachers need to be environmentally friendly. Today every country is facing serious environmental degradation. In this context the future citizens of the country who are the present generation of students should develop a basic understanding of natural resources and conservation of our environment. Every human being has a responsibility to protect our planet, ie Earth. National curriculum framework for education (NCFSE) 2000, highlighted the need for environmental concern at all levels of schooling. Environmental education has been integrated suitably into social science and science and technology. In such a context the investigator decides to conduct the study.

Objectives:

To study whether there exist any significant difference in environmental awareness of pre-school teachers for the sub sample based on,

- Gender
- Stream (Arts and Science)

Hypothesis:

1. There exists no significant difference in the environmental awareness of pre-service teachers based on sub-sample gender.
2. There exist no significant difference in the environmental awareness of pre-school teachers based on subsample streams (Arts and Science).

Method:

- Participants: A total of 100 (hundred) pre-school teachers from Malappuram district were selected as the sample.
- Instruments: In the study the investigator used a five point scale questionnaire (Afeef and Shafi 2021) consisting of 25 items to find out theronmental awareness of pre-service teachers. The tool was prepared on the basis of pre-pilot study.
- Procedure: Each item of the tool provides five choices, i.e. strongly agree, agree, no opinion, disagree or strongly disagree. Each subject was to choose any one of these five choices. Appropriate score was given to positive and negative statements. The data collected were subjected to statistical analysis. Basic descriptive statistics and tests of significance of difference between two means (t-test) were used as statistical techniques.

Results:

i. **i. Mean difference in the scores of environmental awareness scores of pre-service teachers based on sub-sample gender.** The difference in the mean scores of environmental awareness of pre-service teachers based on sub-sample gender was found out. For this purpose, the mean and standard deviation of environmental awareness scores of between male and female pre-service teachers were subjected to two tailed tests of significance of difference. The results of the t-test are given in Table 1.

Table-1-Test of significance of difference in the mean scores of environmental awareness scores of pre-service teachers based on sub-sample gender.

Variable	Gender	N	Mean	Std.Deviation	t-value
Enviironmental awareness of pre-service teachers	Male	71	83.1126	6.556447	0.005166
	Female	29	83.1034	8.657551	

Table 1 reveals that there is no significant difference between the male and female pre-service teachers in their environmental awareness. The critical ratio for the test of significance of difference in the environmental awareness of male and female pre-service teachers is found to be 0.00516 which is less than the table value 1.96 at 0.05 level of significance. This reveals that there exists no significant difference in the environmental awareness of pre-service teachers based on sub-sample gender.

ii. Mean difference in the scores of environmental awareness scores of pre-service teachers based on sub-sample streams. The difference in the mean scores of environmental awareness of pre-service teachers based on sub-sample streams was found out. For this purpose, the mean and standard deviation of environmental awareness scores of arts and science pre-service teachers were subjected to two tailed tests of significance of difference. The results of the t-test are given in Table 2

Table-2- Test of significance of difference in the mean scores of environmental awareness scores of pre-service teachers based on sub-sample streams.

Variable	Stream	N	Mean	Std.Deviation	t-value
Enviironmental awareness of pre-service teachers	Arts	43	84.82	73.49	2.2417
	Science	53	81.58	28.17	

Table 2 reveals that there is no significant difference between the arts and science pre-service teachers in their environmental awareness. The critical ratio for the test of significance of difference in the environmental awareness of arts and science pre-service teachers is found to be 2.2417 which is less than the table value 1.96 at 0.05 level of significance. This reveals that there is significant difference in the environmental awareness of pre-service teachers based on sub-sample streams.

Findings & Conclusion

Based on the analysis of the data the first hypothesis is accepted and the second hypothesis is rejected.The groups based on gender of pre-service teachers do not differ in their environmental awareness. The group based on a stream of pre-service teachers differ in their environmental awareness. Arts students require more orientation on environmental awareness. There must be a program to make all students environmentally aware.

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COVID-19 AND HUMAN RESOURCE MANAGEMENT: EMERGING CHALLENGES AND OPPORTUNITIES

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Abstract

The focus of the study is on the Covid-19 difficulties that human resource management (HRM) must confront when managing employees in an organisation. The information for this study came from a review of reliable information on meaningful perspectives on Covid-19 problems. Therefore, controlling human resources in any organisation is extremely important for human resource management. Tragically, the pandemic spread has made it even harder for human resource management to deal with workforce concerns that were already difficult. The main goal of this study is to understand the unique workforce challenges that human resource management in an organisation faces and to then suggest strategies for resolving those issues.

Keywords: COVID-19, stakeholder, strategic human *resource management, HRM, pandemic*

Introduction

The COVID-19 outbreak is ultimately a global disaster. Leadership in human resources (HR) have been crucial to the response in organisations all around the world. The COVID-19 has reached a turning point with significant consequences for HR internationally. In this article, we discuss the COVID-19's effects on HR research, including outlining several crucial research issues for Human resources management (HRM). The majority of organisations work really hard to assist their staff in adjusting to and subsequently coping with the significant changes taking place in the workplace and social surroundings. For instance, prior to the coronavirus pandemic, the majority of employees spent a significant amount of time in their places of employment or within the physical limits of their organisations, but now they are forced to swiftly adapt to remote work environments. The majority of workers, especially those who find it difficult to function effectively at home, are unable to find other convenient work locations, which makes working remotely challenging.

At the beginning of the field's development, the arrangement of organized human resource deployments and operations intended to enable the organisation to achieve its goals". They claimed that "the factors influencing decisions about HR practises, the complexion of human capital resource pools, the specification of the required human resource behaviours, and the effectiveness of these decisions given various business strategies and competitive situations" were all included in the field of strategic HRM (Wright and McMahon, 1992). Unfortunately The deadly virus,exposed how narrowly focused such study has been when it comes to addressing how organizations systematically employ people. since the Coronavirus pandemic, some businesses have faced an ongoing challenge of unprecedented dimensions, forcing them to enter and directly handle uncharted territory while changing or altering their entire workforce in various departmental areas or sectors in ways never previously seen.

The Impact of Covid-19 in Work Context

The Covid-19 pandemic has compelled quarantine orders to be issued for the entire world. All humans now experience phobia as a result of this outbreak. timely, governmental directives to avoid making physical contact with others. The services sector, along with all other sectors, has been negatively impacted by Covid-19, which has an effect on all business sectors worldwide. The service sector is typically regarded as an economic powerhouse. The majority of employees now experience work differently because to COVID-19. It compelled businesses all across the world to change the way work is planned and organised. The possibility of rifts developing between staff groupings has also grown. For instance, there are differences between people who can work from home and others who cannot, people who were kept on the payroll and people who were furloughed, and even people in various business units who were affected differently by the pandemic. In the framework of COVID-19, conventional conceptions of HR practises or high-performance work systems need to be modified. Instead of classifying these activities under the umbrella of other as has been far too frequently done in previous research, strategic HRM research needs to move toward the more sophisticated conceptualization and measurement of HR practises like flexibility, job design, etc (Boon et al., 2019).

According to our opinion, COVID-19 emphasises the significance of keeping in mind the diverse effects of strategic HRM across various employee categories in terms of how and where they operate. These modifications also call into question the ideas supporting and findings gained from conventional HRM research. When HR flexibility has been taken into consideration, the emphasis has mostly been on HR processes, with values being disregarded. Key research questions still revolve around how culture and organisational ideals affect how work affects outcomes like individual performance.

An Organization Point of View

The majority of HRM research has placed a strong emphasis on shareholder value as a key goal, and the COVID-19 outbreak has exposed the consequences of this concentration. Multiple stakeholders, like as shareholders, employees, trade unions, management, and the government, were included in the seminal framework. They also took into account a wider range of outcomes, such as societal advantages, personal happiness, and economic value. Organizations need their workers to be productive in order to reduce expenses and boost profits, but for that to happen, workers need to feel secure in their jobs. In order to ensure employees' productivity, job security must be provided. Employee productivity, according to organisational psychology, is reliant on job stability. When a worker's job is uncertain, they are least productive, and when it is secure, they are most productive. Employees with job insecurity are unsure about whether they will keep their current position or lose it. Of course, this will also have an impact on how confidently employees execute.

Societies should be recognised as significant stakeholders in strategic HRM research. Numerous localities all over the world have been impacted by COVID-19. Organizations may create significant, long-lasting improvements in ways that governments cannot when they commit to the local community as well as financial stakeholders. Research that connects strategic HRM with corporate social responsibility is especially encouraged in this field. Like a wise How has corporate volunteerism helped local communities lessen the effects of COVID-19? Research should look at how strategic HRM practises influence employee and community behaviours, and how the combined effects influence organisational outcomes. Organizations are also at the forefront of influencing employee and consequently community vaccination efforts and inclusion conversations. Overall, the COVID-19 problems highlight for HR practitioners—and should for strategic HRM researchers—the necessity of balancing the needs of many stakeholders. It is noteworthy that current requests in strategy research to broaden the stakeholder perspective reflect this awakening in strategic HRM (Hitt et al., 2020).

Integrating Strategic and Systematic Reactions

The clash between HR's traditional employee-centered or welfare capitalist functions and its manifestation as a strategic business partner has grown as HR practices shift toward a more strategic focus. Despite the fact that the strategic business partner model has been essential to the HR function's strategic orientation (Ulrich, 1996). This model's oversimplified use has drawn criticism for separating thinking from doing and artificially dividing labour into transactional and strategic areas. Transactional or tactical HR work has lost value, is frequently assigned to line managers, and is now centered in centers of excellence. HR work is now highly appreciated (Prichard, 2010). Also criticized for using "limited and classical notions of strategy presuming pre-determined consensus and a linear sequential path from formulation to implication," strategic HRM research implies that HR strategy is established as a one-time structural intervention (Harney and Collings, 2021,). A dynamic and fluid approach to strategy was necessary due to the pandemic's rapid rate of change. Therefore, COVID-19 offers an appropriate setting for research that examines how senior leadership teams strategize and how HR strategy has developed in that setting.

This can be seen in a shift away from assessing HR effectiveness according to technical standards set by the profession and toward assessments of other stakeholders. The majority of firms are unsure about their next wise course of action in this pandemic crisis, and uncertainty is there for all stakeholders. Employers and employees are the key parties involved and are both dealing with uncertainty. Employers are worried about the limits connected to reduced working hours, while employees are worried about potential job losses as a result.

Conclusion

All people had a fear of Pandemic COVID-19. Lockdown and quarantine orders have a negative impact on all enterprises around the world, especially big businesses. Organizations need the support of their employees more than ever to get through the crisis, but they can only get that support in the real world with the help of human resource management. The task of human resource management becomes much more difficult during a crisis since companies rely on it to spread the most recent information about organisation and employment. We emphasise HR's crucial contribution to the COVID-19 pandemic's operational and strategic success. We shed light on several important implications for strategic HRM study. The epidemic primarily emphasises the need to deepen our understanding of how workplace setting affects employee behaviours and actions. It also highlights the necessity to think about more than just shareholders and take into account factors like employees, consumers, and communities. Conflicts between HR's operational and strategic duties are shown. In this post, we consider how COVID-19 may affect future scientific paper on strategic HRM and identify the most important research concerns.

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THE ADVANCEMENT AND APPLICATION OF GRAPH THEORY IN CONTEMPORARY WORLD

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Abstract

In mathematics, graph theory is one of the important fields used in various models. This structural structure of different objects or technologies leads to new developments and changes in the current world in these areas. The field graph theory began in 1735 with the famous Koinsberg Bridge problem. This paper provides a description of implementations of graphical theory in a number of heterogeneous areas but focuses mostly on information science, electrical engineering, linguistics, physics and chemistry, computer network science, biotechnology and graphical theoretical applications. Several articles focused on graph theory have been studied concerning scheduling principles, engineering technology implementations and an outline.

Key words and phrases: Computer science, Electrical Engineering, Linguistics, Physics and Chemistry, Graph theory.

Introduction

A diagram consisting of many points and lines that unite several pairs of these points can be easily represented for several real-world contexts. The points might, for example, show individuals with lines who join couples with friends; or the points could be contact centers with lines showing connection connections. Notice that one is primarily concerned in such diagrams whether a line connects two defined points or not; the way they are connected is immaterial. The definition of a graph is a statistical **Abstract**ion of conditions of this kind. Graph theory principles are commonly used in various fields to research and model different applications. This includes studying molecules, building chemical bonds and studying atoms. In sociology, for instance, graph theory is used to calculate the popularity of actors or to investigate processes of diffusion. The theory of graphs is used for biodiversity and conservation, where a vertex represents areas in which some species live and where edges represent migratory or moving paths between areas. This data is important for examining the breeding habits of disease, parasites and for investigating the effect of migration on other animals. This knowledge is important. In the field of computer science, graph theory concepts are widely used. The graph theory uses algorithms such as Breadth First Search, Depth First Search, Topological Sort, and BellmanFord, the algorithme of Dijkstra, Minimum Trees, the Algorithm of Kruskal and the Prim's.

1. History Of Graph Theory

The root of the graphic principle began with the Koinsber bridge dilemma in 1735. This dilemma leads to the Eulerian graph principle. Euler analyzed the Koinsberg Bridge problem and created a structure to solve the problem known as the Eulerian graph. A.F Mobius offered the concept of a total graph and a bipartisan graph in 1840, and Kuratowski showed that they were planar of leisure problems. The principle of tree (Gustav Kirchhoff introduced a linked graph without cycles in 1845 and used graphical technical concepts for the measurement of current in electrical networks or circuits. In 1852, the popular four-color issue was discovered by Thomas Gutherie. Then in 1856, Thomas, P. Kirkman and William Hamilton, researched polyhydra cycles and developed, by observing trips which visited a number of locations exactly once, the idea called the Hamiltonian graph. In 1913, H. Dudeney spoke about an issue of puzzles. Eventually, Kenneth Appel and Wolfgang Haken addressed the four-color dilemma only after a century. This period the birth of graph theory is considered. To research the trees Caley learned specific analytical forms from the differential calculus. And has several consequences for theoretical chemistry. This leads to enumerative graph theory being invented. Anyway, in 1878, Sylvester introduced "Graph," where he drew an analogy from "quantum invariants" to algebra and molecular-diagram covariants. In 1941 Ramsey experimented on the colours, leading to the identification of a subset of graphic science named severe graphic theory. In 1969, Heinrich's computers solved the four-color mystery. The analysis of asymptotic graph connectivity has led to a random principle of graphics.

Applications of Graph Theory

Graph theory principles are commonly utilized in diverse fields to research and model different applications. This includes studying compounds, building bonds in chemistry and studying atoms. In sociology, graph theory is similarly used for example to calculate the popularity of performers or to investigate processes of diffusion. Graphic theory is used in biology and conservation where the vertex describes the areas in which animals occur and the edges reflect the direction of migration or travel through regions. This knowledge is critical for examining breeding trends or monitoring the propagation of diseases and parasites and for investigating the effect of migration on other animals. Theoretical graphic principles are commonly utilized in research operations. For example the dilemma of the tour sales person, the shortest stretch in a weighted graph, obtains optimal work and men match and finds the shortest route from two vertices in a diagram. It is also used for modelling transport networks, networks of operation and game theory. A digraph is used to describe the finite game method. The vertices here mark the locations and the edges represent the movements. Graph theory is widely employed in research and technology. Any of the following are given

Computer Science. For the analysis of algorithms such as: Dijkstra Algorithm, Prims Algorithm, Kruskal Algorithm theory is used in computer graphics. Anwendungsbereiche such as Graphs are used to describe the calculation flow. Graphs are used to portray contact networks. Graphs reflect the organization of results. Graph transformation schemes operate on the manipulation of graphs on the basis of rules. Graph databases ensure secure, continuous storage and querying of organized graph data. Graph theory is used for finding the shortest route or network direction. Google Maps shows different places as vertices or points, and the roads are seen as corners and the idea of the chart is used to find the shortest path between two nodes.

Electrical Engineering. Graph theory is used in electrical engineering in the construction of circuit links. This relations are referred to as topologies. Certain topologies include sequence, bridge, star and parallel topologies.

Linguistics. Graphs are mostly used for the parsing of a language tree and a language tree grammar in linguistics. In lexical semantitics the semantitic networks are used, particularly for computers, and the modelization of word sense is simpler when a word is interpreted in relation to the word. Phonological methods (e.g. optimal theory that is based on grid diagrams) and morphology (e.g. finite state morphology utilizing finite-state transducers) are popular in linguistic research as a diagram.

Physics and Chemistry. Chemistry graphs are used to model chemical compounds. Any sequences of cell samples may be omitted in statistical biochemistry in order to overcome contradictions between two sequences. This is modelled as a graph in which the vertices reflect the sample sequences. An edge is drawn between two vertices where there is a conflict between the sequences. The goal is to delete potential vertices (sequences) in order to remove all disputes. In short, graphic theory has a special influence in several areas and is already spreading over many days. The following section analyzes the uses of graph theory in computational sciences in particular. Chart theory is used in physics and chemistry to analyze molecules. The 3D layout of complex artificial atomic systems can be quantitatively analyzed by collecting statistics on graph-theoretical features in relation to atom topology. Graphs are also used in statistical mechanics. In this area, diagrams may describe local relations between the interacting sections of a system and the physical process dynamics on those structures. Graphs also express porous media micro channels in which the vertices reflect the pores and the borders represent the smaller pores. Graph is also useful in building both the molecular structure and the molecular grid. It also allows us to demonstrate the cnnection between atoms and molecules and helps us to compare the structure of a molecule with another.

Computer Network. The ties between linked computers in the network obey the concepts of graph theory in the computer network. Graph theory is often used for protection of the network. We will use the vertex coloring algorithm to paint the map in four colours. Vertex Coloring Algorithm may be used to delegate a maximum of four distinct frequencies to any mobile network GSM (Grouped Special Mobile).

Social Sciences. In sociology, graph theory is also used. For example, to explore the dissemination of rumor or to calculate the credibility of actors by the use of tools for social network analysis. Friendship and knowledge graphs describe whether or not individuals meet one another. Some individuals may affect the behavior of others in influential diagrams. In collaborative graphs model, two individuals operate together in a similar context, for example participating in a film together.

Biology. Nodes in biological networks are bimolecular such as chromosomes, proteins or metabolites and edges that link the nodes signify interactive, physical or chemical interactions between the bimolecular concerned. In transcriptional regulatory networks, graph theory is used. It is seen in metabolic networks as well. Graph theory is also useful in PPI (protein interaction) networks. Characterizing drug goal partnerships. drug target interactions.

Mathematics. Operational analysis is the essential area of mathematics. Graph theory offers numerous practical organizational analysis uses. Like: Minimum route expenses, A issue with the schedule. Graphs reflect the roads between the towns. We may construct hierarchically organized details such as a family tree with the aid of a sort of graph.

4. Conclusion

Programmers and designers, graph theory is an extraordinarily rich field. Graphs can help solve some very complicated issues, such as lower costs, visualization, program analysis, etc. To calculate an optimum traffic routing, network devices, such as routers and switches use graphics. This paper focuses mainly on presenting the recent developments in the field of graph theory and its various applications in the field of engineering. In particular, the concept of graph theory is outlined in an overview. Researchers in different streams, such as engineering, social science, general sciences etc., benefit from this. There is a wide discussion of each domain application, which is very beneficial to any researchers.

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SYNCHRONISING TECHNOLOGICAL BREAKTHROUGH WITH EDUCATIONAL PROCESS: OPPORTUNITIES AND CHALLENGES

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Abstract

Since the output of any educational mechanism finally interacts with the demands of the outer world which is dynamic in nature. The extent of upgradation in the educational process as per the latest development in its ultimate environment determines the quality of education. Technology synchronization with educational processes refers to timely integrating all technological software and hardware tools into all spheres of the teaching and learning process. Techno-pedagogical analysis of technology is a prerequisite for technology integration into the teaching-learning process. Therefore, there are systematic efforts in terms of planning, design, evaluation, and research to be adopted for the purpose to get effective consequences. The technological breakthrough is manifesting in the form of hardware, software, and courseware ranging from manual to automation to artificial intelligence. Each of them has the potential for challenges and opportunities both when their developed version will be synchronized with the teaching-learning process. Presence and absence of it, appropriate and inappropriate integration, later and sooner, failure and success in this regard are creating a dichotomy of good-quality and poor-quality education. Therefore, there is a need for very expert research and development activities to be evolved for the optimum result. In this endeavor, there will be many challenges like insufficient financial resources, insufficient quality human resources, social attitude towards technological upgradation, inertial attitude, improperly trained teachers due to lack of training opportunities and rigid traditional models of teaching and learning, and lack of basic infrastructure like software/hardware. While the opportunities like increasing access to mass learners, improving the relevance and quality of education, enhancing better teacher training programs, flexibilities in terms of time and distance, etc. Hence, this paper attempts to understand the opportunities and challenges facing the integration of technological breakthroughs with the educational process.

Key Words: Synchronization of technology, Technological breakthrough, Educational process

Introduction:

The development of technological innovations helped to change almost every part of our lives so as the educational aspect. Integration of technology is now a driving force in every field of life. The quality of education depends on various things and technology is one of them. Many means and measures have been taken to improve the quality of education. The development of technology helped to think educationists integrate it into the educational process. To integrate technology into the educational process there is a pre-requisite of techno-pedagogical knowledge. Before the digital age initially content knowledge was given more focus, then Shulman (1986) coined the term Pedagogical Content Knowledge (PCK). He talked about the integration of the pedagogical process into educational activities. He emphasized that for an effective teaching-learning process teachers must have pedagogical knowledge.

Pedagogical knowledge helps teachers to deliver content knowledge effectively. With the emergence of technology, many changes happened. Based on Shulman's (1986) PCK, Mishra and Koehler (2006) developed a framework called Technological Pedagogical Content Knowledge (TPCK). It is focused on the integration of content knowledge, pedagogical knowledge, and technological knowledge to achieve educational objectives effectively. Further researchers like Harris, Mishra, & Koehler, 2009; Koehler, Mishra & Yahya, 2007 confirmed that for a successful teaching-learning process, the knowledge of the TPCK framework among teachers is important. Although technologies can be powerful means to improving the teaching-learning process, the teacher remains the most important factor in student learning outcomes and must be aware of student progress in order to intervene directly with his/her students (Johnson, et. al, 2016). The technological breakthrough helped to integrate it with the educational process. The technological breakthrough is manifesting in the form of hardware, software, and courseware ranging from manual to automation to artificial intelligence. Each of them has some challenges and opportunities both when their developed version will be synchronized with the teaching-learning process. Technology synchronization with educational processs refers to timely integrating all technological software and hardware tools into all spheres of the teaching and learning process.

Some of the most Significant Technological Breakthroughs in recent years

Technology is always in a state of flux as it is so much rapid and dramatic. There have been several technological breakthroughs in recent times that are having a significant impact on education and training. Some of the most are as follows:

Artificial Intelligence and Machine Learning: AI and ML have huge potential to transform education and training in several forms. It has the ability to analyze students' data and their activities to create a personalized learning experience that is oriented to individual students. It can be useful to grade assignments, and tests and can provide feedback to learners. It can be used to analyze learners' data and their future performance assisting teachers to point out students who may be facing difficulties and diagnose early to prevent academic difficulties.

Virtual and Augmented Reality: It has the ability to create an immersive learning environment that can engage students and provide a more lively and outstanding learning experience. VR and AR technologies can provide learners effective and interesting atmosphere. It is also plays important role in the remote learning experience which allows learners to engage in courses and activities from remote areas too. It can be used to create realistic simulations and circumstances that allow learners to practice and apply their learning in a safe environment.

Online Learning Platforms: The emergence of online learning platforms has changed the teaching-learning process significantly. The importance of online learning platforms was seen during the Covid-19 period worldwide. During this period online learning platforms played a crucial role to avoid the learning loss of students. Its rise has made learners to access educational resources and complete courses from anywhere across the globe. The importance of this platform has many reasons like flexibility, accessibility, cost-effectiveness, scalability, interactivity, and many more.

Adaptive Learning: It is a technology-enabled approach to education and training that uses data and algorithms to adjust the pace, content, and learning difficulties to specific students' requirements and preferences. This has the ability to provide customized learning experiences that are directed to the personalized needs of students. It creates an opportunity for learners to increase their engagement with the learning materials by increasing their motivation which leads to improved learning output and ultimately helps to reach their academic goals. To make assessment more efficient and effective, this technology can use data to assess learners' progress so that it can be adjusted as per learning objectives.

Mobile Learning: It refers to the applications of Smart devices like smartphones and tabs etc to support the educational process. After the launch of 3g, 4g, and recently 5g technology, the application of smart devices in the teaching and learning process gained huge momentum. The nature of its flexibility allows students to learn as per their momentum and time frame.

During the Covid-19 period, there was huge demand and supply gap for smart devices because of lockdowns in various countries. To avoid the learning loss of students the respective governments were basically dependent on online platforms, and to meet this the use of smartphones was one of the most useful devices. Mobile devices are easily available and accessible for education and training. It has accessibility to rural and people with different disabilities too which makes it more feasible.

5G technology: The application of 5G technology in the educational process has the potential to bring many changes. Due to its high-speed connectivity, low latency, and increased bandwidth, it can be hugely beneficial for the immersive learning environment. Several collaborative tools can facilitate on a real-time basis using 5G technology in the educational process. It can be hugely supportive of Virtual Reality and Augmented Reality, AI-based programs, Online Learning Platforms, etc. to provide optimum benefit to learners using such technologies.

Opportunities for technological breakthroughs in the educational process:

The fast-changing world is characterized by vast changes in the educational aspiration of learners, changes in curricula, multiple entries, multiple exit approaches, and encouragement of interdisciplinarity and multidisciplinarity. The emergence of technology has created many opportunities in the educational process. It has created vast accessibility, tailored learning, amplified engagement, improved learning experience, etc. as follows:

Technology can help to reach mass-level learners. It has accessibility to education and training, making it easier for learners to reach high-quality learning resources and learning environments from across the globe at convenience.

It has the ability to provide a personalized learning environment for learners. It can analyze learners' data and their responses to develop customized learning experiences that are personalized to individual learners. These technological breakthrough has such a huge potential they can predict students' performance, can assist teachers to identify specific problems which students are facing which leads to planning appropriate measures.

These technologies can make the learning process highly interactive and has the ability to engage learners which leads students to respond in an effective manner. Making learning interactive and interesting increases students' academic productivity better. The findings of several studies confirmed that interactive learning sessions play a vital role in effective learning. It develops a positive attitude towards learning leading to increased academic achievement.

It can facilitate learners on a real-time basis. It can be used to provide real-time feedback and assessment which can be helpful for students to ascertain particular areas which need improvement. Virtual reality, Augmented reality, Artificial Intelligence, and other technologies can make learning interactive as well as it has the potential to make an inclusive learning atmosphere.

These days, technology has become a vital part of our life and is affecting our teaching and learning activities. The role of these technologies in our day-to-day life become prevalent as these technologies give an individual many assistances and opportunities (Sahin 2011). For instance, with the help of the internet, one can get lots of educational information. With the help of information and communication technology (ICT) learning and teaching process becoming more affecting than the traditional method. Studies approve that when teachers integrate technology into the teaching process, their students become more interested in the subject matter (Schrum et al, 2007; Sweeder and Bednar, 2001). In relation to it, the use of computers and educational technologies may help increase students' learning outcomes (Margerum-Leys and Marx, 2002).

Challenges of technological breakthrough in the educational process:

However, the synchronization and implementation of technological breakthroughs in the educational process also raise some important challenges like attitudes towards technologies, equitable access, insufficient and improperly trained teachers, outdated curriculum framework, cost of deploying and maintaining new technology, Privacy, and security of learners data, etc. as follows:

Technological breakthrough has benefitted in several ways to achieve learning objectives. Artificial Intelligence and Machine learning, Virtual, and Augmented Reality, Online Learning Platforms, Adaptive learning, Mobile learning, and 5G technology, etc have been playing an outstanding role in making the teaching-learning process effective, still respective stakeholders do not want to adopt these technologies easily. Although it has tremendous potential, they need clear strategies for creating, implementing, and proper database management. Several studies confirmed that teachers often think technology is a hurdle and its training is an obstacle. In such situations, it remains a major challenge to acquire technological skills and synchronization with the existing system (Cameron and Noll, 2005). People do not accept change easily. Teachers' attitudes and beliefs are crucial factors in determining the role and effectiveness of technology in classrooms. Attitudes and beliefs about both educational technology and pedagogy, in general, will ultimately influence how teachers implement technology (Johnson, et. al, 2016). A positive attitude is essential for the effective integration of technology into the educational process. Generally, teachers like to stay in the inertial stage and do not want to be updated.

The most basic step toward effective technology integration is widespread access to resources necessary to run educational technology programs. Except in developing countries, most students do not have regular and reliable access to educational technology. Irregular access to the computer makes it very difficult for educators to integrate technology into existing lesson plans. Routine access to the hardware (i.e., laptops or tablets), software (e.g., reading and writing software, internet browsers), and internet connection is a fundamental requirement (Johnson, et. al, 2016). Due to the lack of above mention resources, it is difficult to integrate technological breakthroughs.

Improperly trained teachers due to a lack of training opportunities and rigid traditional models of teaching and learning are one of the important challenges towards synchronizing technological breakthroughs. All the resources depend on human resources. To get the optimum benefit of technological integration into the educational process, it is necessary to have properly trained teachers. Most of the teachers are either not trained or not being provided with such exposure. As technology is always in a state of flux, so it is not enough to provide a one-shot training program rather it should be regularly. Johnson, et. al (2016) cited Ertmer et. al (2012), that inadequate professional development and training is one of the most important reasons for the lack of technological integration in the classroom. To achieve effective use of technology, teachers must change their paradigm shift from the teacher-centered classroom to the student-centered classroom (Adams & Burns, 1999; Bitner & Bitner, 2002; Hannafin & Savenye, 1993; Harris & Grandgenett, 1999; Mandinach & Cline, 2000) cited by Johnson, et, al. (2016).

For the successful integration of technology with the educational process there must be an updated curriculum framework. Standards of content materials and related digital curriculum resources that are associated with and backing digital age learning and work are required in technology integration activities. Planning, teaching, and assessment need to be centered on the needs and abilities of learners. Continuous assessment of teaching, learning, and leadership, and evaluation of the use of educational technology and digital resources should be taken into consideration (Ziphorah, 2014).

The huge cost to adopt technological breakthroughs is also a big challenge. Adopting these technologies requires a huge amount of money which is not easy work. It is not limited to just buying new technologies but also requires a huge amount for its maintenance. Cost-effective technology is an important consideration for technology in the educational process, as it helps to ensure accessible and affordable technology for all so that it should not create financial barriers for technology to be used properly.

Concluding remarks: Synchronizing the changes in technologies have mechanical and ethical aspects. Both must be taken into account with high sincerity by the policymakers and its executives. Therefore it is important to consider the ethical and privacy implications of using technological breakthroughs in the educational process as well as the potential for biases and discrimination in the algorithm used. It is crucial to ensure that this technology is used responsibly and ethically so that it should not violate the privacy and security of its users. It is also important to take into consideration of goals and values of education from the perspective of students, teachers, and society. It should be ensured that both teachers and students should have the basic knowledge to adopt these technologies in an appropriate manner. There should be a database of development and subsequent educational implications of it and it should be open and accessed to all stakeholders of education so that well in time pre-active preparation be planned and executed in terms of finance and capacity building.

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STUDY OF SRI RAMAKRISHNA PARAMHANSA'S SPIRITUAL THOUGHTS AND ITS IMPACT ON SOCIETY

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Abstract:

The biggest aspiration of the Indian populace has long been the realisation of God. While Vedic sages were focused on revealing the divinity concealed beneath natural phenomena, the Upanishads fearlessly declared the spiritual oneness of the microcosm and macrocosm. What are the objectives of philosophy and religion? There are numerous views on this in bothEastern and Western cultures. As a contrast to the goals of Western philosophy, which are said to be truth, rational imperative, and goodness, the objectives of Eastern philosophy, particularly Indian philosophy, are the realisation or Darshana of the Eternal Truth. The idea that God-realization should be the goal of all ideologies and religions was promoted by a key spiritual figure in modern times. He was able to grasp both the fundamentals of Eastern and Western thought. Realizing that God is the only thing that can provide mankind, which suffers from a dominant predisposition toward pleasure-seeking driven by ever-expanding means and ways of physical comfort and satisfaction, fresh hope and light is a spiritual ambition. Sri Ramakrishna is the perfect embodiment of this exalted ideal. The majority of the activity in this research is also motivated by religious beliefs or the need to build systems that promote social reform.

Keywords: God-realization, Ramakrishna Paramhansa, spiritual thought, philosophies and religions, social reforms.

Introduction:

Man is a wise creature. Once his physiological and psychological needs are met, his rational side can advance. Philosophy, including metaphysics, is a pinnacle of this evolution (Swami Harshananda, 1987). Religion and philosophy's goals This is viewed differently in Eastern and Western cultures. Eastern philosophy, especially Indian philosophy, aspires to realise the Eternal Truth, whereas Western philosophy aims for truth, rational imperative, and goodness.

It's the goal of Indian philosophy. Enlightenment aims to unite subject and objects with Reality or God. Indian Philosophy is great because all its schools yield to the Truth (Edgar, 1952). Non-Indian religions emphasise doctrine over mystical experiences. Although these societies have mystics, religious authority often suppresses mysticism. Nearly all Indian religious systems reduce God to a transcendental state. One modern spiritual authority said God-realization should be the goal of all philosophies and religions. He understood East and West.He claimed that the objective of human life is to realise God and that everything else is useless and an impediment to this goal. His life and teachings are dedicated to God- realization (Armstrong, 1993). God-realization is India's top goal. Upanishads asserted the spiritual oneness of microcosm and macrocosm, while Vedic sages revealed the divinity behind natural phenomena. Brihadaranyaka Upanishad depicts Vamadeva, a realised soul. After realising "I am Brahman," he or she became one with reality and said, "I am Manu and the Sun" (Brihadaranyaka Upanishad, 1950). Most Christian mystics were monks and nuns who lived for God. Charles de Foucauld said: "My religious mission begins with my faith: God is huge. Once I learned there was a God, I could only live for him." God is unlike anything else. These mystics immersed themselves in God, which offered them joy and comfort. St. Theresaof Avila said storms pass like waves. Due to the Lord's presence, the good weather returns. Lord Jesus Christ, the adoring divinity of mystics, embodies God's love and human devotion to God (PB Editorials, 2022). Sufi saints found fulfilment in loving and merging with God. "Remember God so much that you are forgotten," urges Jalaluddin Rumi. Let the caller and call become one. Rumi's portrayal of God is Advaitic nondual. When your soul, the flame, the spark, unites with holy fuel that is so clean and powerful, it culminates in enormous illumination: God's enlightenment. More light. Sufi saints experienced God-realization in transcendental moments and shared it through enticing words (PB Editorials, 2022; D‘Costa, 1990).

Knowing God involves gradually ceasing past activities. All doubts disappear after seeing God. He's worry-free. Once realised, God is in all beings. In man, He's more apparent (PB Editorials, 2022). The late 21st century has been a turning moment for humanity. The outmoded value system is crumbling, generating instability. In the impending new circumstance, a person is attacked by unconstrained technology. Because they can't handlethe quick changes around them, they suffocate in the lack of a permanent ideal. The modern human is like a rudderless ship on the wild seas, unable to find significance in anything they do. Technology undermines human nature and makes people bland, anxious, and pessimistic. Political and socioeconomic situations breed mistrust and enmity amongst nations, cultures, races, communities, and religions. Tribalism resurfaces and brings out the worst in individuals. In our study, we saw many religions as separate wells that draw spiritual wisdom and nutrition from the same all-powerful source and have an effect on society.

Research design and methodology:

This research will be conducted primarily in libraries. One must first undertake in-depth research on the many forms of pertinent research published on the subject to establish a holistic perspective. If necessary, we are considering the possibility of conducting interviews with well-known and experienced members of the sector and soliciting their opinions on the subject. The scriptures of the Ramkrishna Sevasram from different geographical locations have received particular attention. We know that primary data are incredibly rare in this kind of research. As a result, we will rely on secondary information from books and articles that are relevant to this subject. We can consider interviews and expert interviews to be main data when gathering their opinions. The major source for this study will be "The Gospel of Sri Ramakrishna," as it is the most trustworthy source of Ramakrishna's ideas. The teachings of Swami Vivekananda are particularly important because he is regarded as Ramakrishna's disciple and follower with the largest following.

Ramkrishna Paramhansa's teachings:

India's spiritual tradition has produced many spiritual giants. The wonderful Ramakrishna. He exemplified realism, universality, love, and purity. Ramakrishna, who grew somewhere outside Calcutta, always felt drawn to spirituality. His inclination worsened with age. As a young temple priest, he yearned for God and practised meditation and other spiritual pursuits. Ramakrishna constantly thought about God. He often merged with Infinite Reality in spiritual moments. His Vedantic notion of the unity of all existence was more than a hypothesis. He saw and knew. Ramakrishna sought the divine through many Hindu systems. He, too, pursued the route of Islam and then Christ meditation, which led him to the same spiritual reality. According to his own experience, all religions have the same goal. He learned about the great Sikh founders, their many followers, and the Buddha's life and teachings. Sikhism and Buddhism reinforced his belief that all religions share spiritual truth. Ramakrishna loved everyone. He said people are God's highest representation. The Ramakrishna-inspired monastic order became India's first to serve humanity. The Ramakrishna Order emphasises serving God in humans. His universality, childlike innocence, genuine sincerity, broad comprehension of spiritual andhuman things (through direct awareness, not books), and remarkable power to influence lives were notable attributes. Ramakrishna's lessons on spiritual concepts were simple and interwoven with parables and metaphors.

Influence of spiritual personalities on Ramkrishna Paramhansa:

Sri Ramakrishna's god-addled family in Kamarpukur arranged for him to marry Sarada, a Jayrambati country girl. Sri Ramakrishna continued and even enhanced his spiritual activities after marrying. He wanted to meet God completely. With the help of multiple Gurus, he followed the Hindu scriptures' various paths to God. Bhairavi Brahmani, a spiritual adept and text expert, initially appeared as a teacher in Dakshineswar in 1861. With her help, Sri Ramakrishna finished all Tantrik disciplines. Three years later, Totapuri arrived. He assisted Sri Ramakrishna to achieve Nirvikalpa Samadhi, a Hindu spiritual experience. Six months passed while he was non-dual and unaware of his body. Sri Ramakrishna relived Hinduism's three millennia of spiritual interactions. Ramakrishna's delicate body was soon harmed by spiritual practise, and he returned toKamarpukur to recover. His family and old friends saw a shift in him because he had become a thoughtful, far-gazing gay man. Ramakrishna married his mother because he believed it was the Divine Mother's will. He stated the girl may be three kilometres away in Jayrambati. Saradamani, a 5-year-old, stood out from other girls her age. The girl prayed for a tuberose- scented personality. Later in Dakshineswar, she prayed to God to make her purer than the fullmoon, which had dark streaks. Ramakrishna enjoyed the wedding party.

Ramkrishna Paramhansa's influence:

People around him were shocked to see a man they once mocked evolve. The young priest became a God-follower, an ascetic, a saint, a man of realisation, and a Prophet. Ramakrishna attracted people of diverse faiths, intelligence, and socioeconomic backgrounds, like a flower attracts bees. Everyone was uplifted by his generous sharing of spiritual wisdom. The Master wasn't happy. He longed for young individuals who hadn't yet seen the world and were willing to serve God and others. Longing overpowered him. He disliked worldly talk. He compared them to a mixture of milk and water, with water predominating, and said he was tired of trying to make thick milk from them. When his pain was at its worst, he'd climb a nearby building's roof and yell, "Come, my lads!" I'm lost. I need you! Love for a mother's children, a friend's best friend, or a lover's beloved is intense.

Most influential was Vivekananda. Narendranath Dutta was captivated by how Ramakrishna combined Tantra, Yoga, and Advaita Vedanta. Vivekananda formed Ramakrishna Order and Mission. Kathamrita's saint meets a sinner. Author cites Girish Ghosh and Ramakrishna's contacts. The two had one of the classic's most dramatic interactions. Ramakrishna influenced Girish Ghosh when he was unpopular because he used women from questionable families in theatre. Ramakrishna angered many disciples by seeing Chaitanya Lila.

Dr. Mahendralal Sarkar, Ramakrishna's homoeopathic doctor, was sceptical. He soon spent hours with the saint, neglecting his other patients. He read extensively. Ramakrishna said, "Much knowledge is ignorance." The universe is God's everywhere-awareness. Kathamrita discusses action and life's most critical issues. In the Kathamrita, Ramakrishna says no faith should be mocked because it cites Christ and the Bible. M won't understand God as long as she has "shame," "hatred," and "fear," says Ramakrishna. Mukherjee says the saint's teaching was lyrical, musical, and brilliant because he used music, poetry, story, and comparison. Ramakrishna illuminated psychological, spiritual, and practical difficulties with simple illustrations. Ramakrishna put music and spiritual passion above everything else. Mukherjee says no other holy text has such a polyphonic, unparalleled melody. "Ramakrishna was neither a formal philosopher nor poet," the author writes (Swami Narayan, 2021).

Contemporary influence:

Sri Ramakrishna's simplicity and spirituality drew many to him. Ramakrishna's realisation moved even Tota Puri and Bhairavi Brahmani. Bhairavi first declared Sri Ramakrishnaheavenly. Vaishnavacharan and Pandit Gaurikanta Tarkabhushan supported her. 1870: Gaurikanta seeks spiritual instruction at Dakshineswar. Pandit Narayan Shastri adopted Ramakrishna's sannyasa and spread his fame throughout Rajputana. Pandit Padmalochan Tarkalankar, the court's chief pundit, saw Ramakrishna as God-incarnate. Krishna Kishore, Ramakrishna's disciple from Ariadaha, provides spiritual guidance. The saint supported East Bengali Tantric sadhanas Chandra and Girija. Under Ramakrishna's influence, even Tota Puri's perception of the ultimate reality underwent some modification. During this time, Ramakrishna met Arya Samaj's Dayananda Sarasvati, Bhagavandas Babaji, and the Kalna Vaishnava saint.

Impact and influence on the Societies:

Keshab Chandra Sen was more important. Keshab and several Brahmos after him popularised Ramakrishna through speeches and writings. Brahmans gave Bengali intellectuals of the 19th century Ramakrishna. As later Brahmos thought, Ramakrishna was not the leader of Hindu religious orthodoxy.

Ramakrishna influenced Keshab. Jivanveda, Keshabcharit (1885), and Life and Teachings of Keshub Chander Sen support this claim (1887). Mozoomdar said Ramakrishna affected Keshab's catholicism. After the Cooch Behar marriage, Keshab instantly embraced Motherhood of God. Paramahamsa's compassion, companionship, and example turned the Motherhood of God into a cultural theme for Mozoomdar. 1879 was spent witnessing progress. Keshab introduced it to the Brahmo Samaj renaissance.

Vijaykrishna Goswami, another renowned Brahmo, said the Paramahamsa inspired Keshab to cook his food and instil renunciation in the Samaj. Keshab released Ramakrishna's teachings in Bengali as Paramahamser Ukti in 1878. His mindset shifted over time. The rationalist leader was religious. In a short time, he founded the Church of the New Dispensation (25 January 1880) on the Motherhood of God, religious unity, and the absorption of Hindu polytheism into Brahmoism (Mozoomdar, 1887). Brajendranath Seal, at the 1937 Calcutta Parliament of Religions, established the following distinction between Keshab and Ramakrishna: Keshab's Navavidhan signified eclecticism or synthesis, unlike Ramakrishna's syncretism. Suniti Devi, Maharani of Cooch Behar, recognised Ramakrishna's effect on her father Keshab in a chat with Francis Younghusband on March 27, 1936. Keshab's mother frequented Dakshineswar (Christopher, 1886).

Starting in 1875, many Brahmos converted to Ramakrishna's beliefs and promoted his message through writings and speeches. The Indian Mirror, Sunday Mirror, New Dispensation, Dharmatattwa, Sulabh Samachar, and Paricharike deserve special mention. The Indian Mirror reported on 12/11/1881 that Paramahamsadeva brought Love and Devotion to Calcutta's educated classes. The newspaper reported on August 19, 1886, that Ramakrishna had transformed some young people's morality. Calcutta graduates and undergrads competed for his followership; others were ascetics. Ramakrishna's students adopted sannyasa after his death, under Narendranath's supervision. According to the Dharmatattwa of August 31, 1886,more than 100 people attended Ramakrishna's cremation at Baranagore. A unique rite was held at the Navavidhan temple four days after his cremation (20th August 1886). Young monastic and lay followers were Brahmos or atheists. Several years of documents show that (1875-86). Ramakrishna's influence grew swiftly among Calcutta's elite. The Englishman, an Anglo-Indian journal, wrote on August 20, 1886, "the late Paramahamsa was held in the highest regard by all Hindus." His devotees included university graduates and students, and educated Hindus admired his teachings. Men and women of different castes, creeds, and classes stood mesmerised before Ramakrishna for hours, listening to his words. Many houses centred on him and sang devotional tunes. Ramakrishna wanted to meet famous people and see interesting things (Swami Nirvedananda, 1978).

In 1875, educated Bengali gentlemen began to gather around Sri Ramakrishna, who was so different from them in education, culture, and lifestyle. Ramakrishna has no east or west education. He knew the first three letters of the alphabet and could sign Ramakesto. He looked homey. Ramakrishna wasn't your normal monk. He didn't follow shastra standards or wear saffron robes. His wife and he lived together. His simple lifestyle wasn't monastic. Mahendranath Gupta, known as M or Master Mahashaya, said Ramakrishna wore a white dhoti with a red border, used polished shoes and hookahs, and slept in a cot under a mosquito net. Master Mahashaya is Mahendranath Gupta. Third, his Bengali wasn't Sanskritized or anglicised. It resembled Bengali peasant language, nevertheless. He looked and talked like a peasant. He's been called "the commonest of the common" He was of the people, smelled of the earth, and spoke like a country bumpkin. His world was rural. Brahmins are Bengal's highest social caste (Life of Sri Ramakrishna, 1883).

Ramakrishna charmed the influential people of Calcutta and the neighbouring suburbs with his captivating and enlightened demeanour. Ramakrishna's life was "religion in practise," saidMahatma Gandhi. All who met him were drawn to him because he totally matched his words and deeds, led a deeply spiritual life, and could convey the most profound philosophical thoughts in clear, simple language. Bankimchandra Chatterjee's writings and Surendranath Banerjee's orations produced a patriotic and nationalistic atmosphere in Bengal in the 1870s. He may win over this generation. In the 1970s and 1980s, Bankim and Surendranath surpassed Keshab Chandra Sen as Bengali youth's idol. Bankim and Surendranath were renowned Bengali politicians. In an age of rising nationalism, educated people no longer worshipped the anglicised babu. Because of a more modern babu notion. Younger Bengalis in and around Calcutta, who were aware of their dignity as Indians, didn't find an echo of their heart in Brahmoism or Christianity. They expected Ramakrishna, the leader of Neo- Hinduism, to be the foretold saviour. Ramakrishna is credited with introducing tolerance, social responsibility, liberalism, and dynamic spirituality to Hinduism. His followers were to immerse themselves in the world, pray for people in need, and help them without expecting anything in return (Mukherjee, 1987; Mukherjee, 2015).

Conclusion:

Ramakrishna was born when Bengal and India were experiencing tremendous turmoil. Westerners and Indians challenged Hinduism intellectually during Ramakrishna's time. In Bengal, idol worship came under pressure, and many people abandoned Hinduism for Christianity or atheism. Ramakrishna and the Ramakrishna Mission impacted India's Hindu renaissance. Ramakrishna influenced modern Indian history. His life and teachings influenced Bengal's and India's 19th-century cultural revival. Max Muller, Mahatma Gandhi, Jawaharlal Nehru, Sri Aurobindo, and Leo Tolstoy have recognised Ramakrishna's contribution to humanity. Franz Dvorak and Philip Glass show Ramakrishna's influence (Banks, 1962; Hemant and Singh, 2018).

Sri Ramakrishna was the world's most revered mystic. He was a direct person who showed young enthusiasm as he presented complex spiritual themes through parables, stories, and anecdotes. His statements came from a deep confidence in the Divinity and a real experience with God. His encounter stemmed from his deep faith. He said every living thing should seek God. After practising Hinduism, Islam, and Christianity, he proclaimed that these were all methods to attain God. His disciple Mahendranath Gupta wrote Sri Sri Ramakrishna Kathamrita, which means "The Nectar of Sri Ramakrishna's Words." Gupta taped his conversations. To remove the perception that he was a Brahman, he started eating Shudrafood (Swami Nirvedananda, 1978).

What's spirituality then? Spirituality is a popular issue for counsellors, sociologists, neuroscientists, business executives, specialists, and campaigners. It makes reasonable that spiritual sources vary in fervour. We've explained over 30 definitions. As an example, we give her the Diary of Humanistic Brain definition: "Spirituality" is a manner of being and meeting that develops via acquaintance with an amazing measurement and certain definable features that portray that to oneself, others, nature, life, and anything one finds decisive." The Latin root spiritus meaning "breath of life" 6 Spirituality is a worldview and lifestyle focused on the soul (Banks, 1962; Hemant and Singh, 2018).

Krishna says in the Bhagavad Gita, "When ethics die and bad habits reign, I encourage humanity." He does this often. When our developing, conditional cosmos needs another correction, a downpour of intensity occurs. Change travels faster than a man's two parallel pursuits, whether spiritual or material. On the physical plane, Europe has been the base of today's transformation. Asia has been the source of spiritual change throughout world history. Modern man requires a fundamental transformation. Due to the likelihood that, when material thoughts are at their peak of wonder and power, man would forget his divine origin due to his growing dependence on the issue and be reduced to a money-making machine, something must be done to achieve change. The voice has been heard, and social affair realism's poweris rising. The power has been activated, which will remind mankind of its true identity and birthplace in Asia. Humanity will remember. Our cosmos is built on the order of tasks. A single nation should not own everything. We're absurd! The infant thought his doll would be the most covetous treasure in the universe. A nation that excels in material power believes that this is the only thing that will be desired, that this is the only thing implied by progress, and that if there are other nations that couldn't care less to have this power, they are unfit to live and their presence is pointless. Another nation may think that the tiniest tangible human advancement is meaningless. The voice that once told the world that having everything under the sun and above it wouldn't help a man if he lacked spirituality came from the Orient.

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IVAN ILLICH'S REVOLUTIONARY PERSPECTIVE ON EDUCATION

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Abstract:
Ivan Illich was born on September 4, 1926 in Vienna Austria.His father came from an aristocratic and Christian family and his mother's family was Jewish.His family secretly fled from Hitler controlled Austria to Italy. At the age of 24 he graduated from the University of Salzburg with a Phd in history on work of the popular historian Arnold Toynbee.Theologian, educator and social critic Ivan Illich sought bridges between culture and explored bases of people's views of history and reality. The book that brought Ivan Illich to public attention was De schooling Society (1971),a radical critical discourse on education as practical in "modern" economics. Universal education through schooling is not feasible.

Key words: conventional, misconceptions, traditional, commodity, affordable ,poverty

Introduction:

According to Ivan Illich, conventional schools have influenced the negative impact of the students.He believed that conventional schools misled students about the content and process of real education.Some misconceptions are instilled in the students,thus traditional schools stand in the way of creative development of the students.This institutional process is degrading people and causing lack of self-confidence.According to Illich, educational facilities are not becoming accessible and affordable to the people.As a result, sincere and personal relationship is not developed between everyone. Professional organizations treat education as a commodity.Schools are monopolistic businesses where the production and distribution of knowledge serves as the business objective of education.At present this education is reserved for the elite.Every individual is unique in education,Illich believes that recognition of a person's own values will makehim or her auspicious.In this sense learning is the activity of each individual.Learning occurs as a result of group living as acollective result of its environment and events.Ivan Ilych believedthat the material loss of human beings was responsiblefor poverty and crisis in the school-type educational system.So he recommended in De schooling.He suggested the formation of new type of traditional educational institutions.He felt that the character and management of educational institutions would have to change radically if the present monopoly of traditional schools was to be revolutionized.He reiterated that traditional techniques alone are not enough and non-traditional teaching methods are necessary.

TOOLS FOR CONVIVIALITY:

Tools for conviviality (1973) was only two years after deschooling society. In this new work Illich generalized the themes that he had previously applied to the field of education. He wrote extensively about the 'technocratic disaster' of industrial and consumerist societies, developing political and economic ideas such as "counter productivity" and" radical monopoly." He proposed education as a key factor in achieving a better society.

Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision. Industrial tools deny this possibility to those who use them and they allow their designer to determine the meaning and expectations of others. Most tools today cannot be used in a convivial fashion.

Tools faster conviviality when:-

a) They can be easily used, by anybody, as often or as seldom as desired.
b) They are used to accomplish a purpose chosen by the user.
c) The use of such tools by one person does not restrain another from using them equally.
d) They do not require previous certification of the user.
e) Their existence does not impose any obligation to use them.
f) They allow users to pursue their own goals in their own unique ways.
g) They allow the user to express meaning in action.

In a convivial society, users help each other to achieve a high skill level with convivial tools and formal training can be kept to a minimum.

De schooling Society: An Evaluation:

In this work De schooling society, Illich begins by collaborating what according to him education ought to be. According to Illich, education should provide the opportunity for an individual to explore once potential and use initiative and judgment to develop one's faculties and talent to the fullest. Lifelong learning means certificates for doing ordinary things, it is an extension of the curriculum into ordinary life rather than a recognition that real, critical or skills learning takes place throughout life in unstructured ways never approved by Officials. The learning accredited by the lifelong learning movement is the infantilising of people by accrediting ordinary experiences rather thanlearning. One possible reason for the lack of implementation of Iillich's ideas is that he sees an involvement by the government as bringing about a new way of learning. He talks about this in Chapter 6 of the book' Learning wabs'. In other places he also promotes the ideas of learning venchers given by the state to people to spend an any kind of education they see fit.He suggests that government will need to legislate to ensure that employment practices cease to favor those with officially approved certificates and test solely on actual competence regardless of how it was gained. Illich is concerned with human relationships at fundamental level.

He sees schooling, the man, compulsory, public schools as providing an induction into a way of life which is consumerist, packaged, institutionalized and impoverished.

He claims it is patently false to claim that most learning is the result of teaching. On the country the teacher in a modern school is in fact acting in three roles: as custodian of societies rituals as therapist and as reacher Illich proposes instead a learning society,where skills training is widely available and divested of the ritualistic elements of schooling and where is citizens freelyassociate to develop a critical education, perhaps guided by 'masters.' Illich sees in modern schools a false myth of salvation. He points to the fact that however much money is poured into public schooling it always requires more and the output does not increase.It is chasing the myth of unlimited progress. He sees educational credentials as an element in this, one gets credentials to enter on the next level but credentials don't measure competence so much as attendance at the school.

LEARNING WEBS:

Illich's practical vision for learning in De schooled society is built around what he calls 'learning wabs' .Illich envisages three types of learning exchange, between a skilled teacher and a student, between people themselves engaging in critical discourse and between a 'master' and a student. Illich also considers the De institutionalization of resources. He proposed that resources already available in society be made available for learning. He suggests that such a network of educational resources could be financed either directly by community expenditure or by a system of vouchers which could be spent on free market providers of this kind of facility. Illich is not, as we have noticed, an anti authoritarian free schooler. He notes that rigorous drill instructions can be a very effective way of learning a new skill, such as learning how to speak a new language. But for Illich, drill instruction is an exchange free of hidden curriculum of schooling, which overlays straightforward acquisition of skills and engagement with critical studies with so much more. We have looked at the role of the teacher as preacher, therapist and custodian of society's rituals. Illich's programme is practical and thought out. He proposes new institutions of a convivial nature to replace the manipulative ones of the crrent schooling system. In these new institutions there is no discontinuity between 'school' and the world.

Conclusions:

The implications of Illich's call for deschooling are a total subversive of modern society. It is a call for a profound revolution in how we think and how we live our lives. Illich does not adopt an anti scientific or anti technologist viewpoint, though he trades close to sounding anti scientific at times. So we would suggest that the best use of Illich's work on deschooling society is not so much as a handbook for political reformers but as a handbook for those who are looking to find ways to build authentic human lives.

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THE MAKING OF NINETEEN EIGHTY-FOUR: ORWELL, HEMINGWAY, AND CENTRAL PARIS

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Abstract

Mr George Orwell has been a regular subject of study for the world academicians. His life and work inspire no less than Goethe, Shakespeare, or Dante. Yet his life is marked different from them in the way that he has been involved as a war correspondent during the World War II, and this involvement that has also brought him face to face with another living wonder of his times, Mr Ernest Hemingway, is shortly covered in this essay, along with references to certain important historical occasions like The Tehran Conference of 1944 and bittersweet figures like Stalin, Roosevelt and Churchill.

Keywords: Orwell, Goethe, Shakespeare, Dante, World War II, Hemingway, Tehran, Conference, Stalin, Roosevelt, Churchill.

So much has already been said about Mr Orwell's *Nineteen Eighty-Four*, and the process has truly found a certain continuum which resists a pause in the process. Thus, this essay is not focused on the historical, psychoanalytical, allegorical, or metaphorical aspects of the novel. These aspects now seem to appear by themselves whenever a mention of the novel is made anywhere, leave apart the question of analysing the novel or treating it basing on its concealed fundamentals. The ground on which scholarships might be extended to the study of Mr Orwell's contribution to language and literature, would surely engage centrally two of his timeless masterpieces, *Animal Farm* and of course *Nineteen Eighty-Four*, and important it is to also point out the philological, socio-cultural, and political contributions he has made through his works. Stan Carey observes in *Macmillan Dictionary blog*:

Few writers have had such an influence on English language or literature that their name has become a byword for some quality of their work. These eponyms include Dickensian, Kafkaesque, Machiavellian, and Orwellian.[1] Not one or two, but seven thousand five hundred and twelve[2] results of academic works like research papers, chapters, or essays are shown by JSTOR while I have searched on the eponymous website with terms like *1984*

George Orwell, and absolutely that cannot be the end of a list of researches on his masterpiece, *Nineteen Eighty-Four*. Apart from this striking discovery, more striking would probably be the multitude[3] of other interpretations and critiques of the eponymous work remain to be stated here. Among many reports[4] of the meeting between Mr Orwell and Mr Hemingway, some are very interesting, and essentially so relevant to the idea how certain architectures and events inspire timeless works in literature. *Lawrence Journal-World*[5] publishes on October 25, 1993 instances of Mr Hemingway being a visitor to the Hotel Paris Ritz several times, and to cite another note here, his novel *The Sun Also Rises*[6] refers to the same hotel[7], Paris Ritz. The next discovery is more important, as Carlos Baker— author of the first Hemingway biography *Ernest Hemingway: A Life Story*[8]— mentions that Mr Orwell and Mr Hemingway met in the same hotel, the iconic Paris Ritz[9]. This meeting was a meeting for a lifetime, a single moment that two giants of world literature shared in the heart of Central Paris, and it happened only for once. One Indian-born British and the other an American born-and-made, both went into the warzone bold but incognito as correspondents to document the fresh and first-hand accounts of the War from the front itself— could this suggest us more about their personalities as well the characters they cemented with amazing traits in their respective works? Could this meeting be a precursor to the coming of the two landmark achievements in literature; Mr Orwell's *Nineteen Eighty-Four*[10] coming in the year 1949, and Mr Hemingway's *The Old Man and The Sea*[11] coming in the year 1952? Meanwhile, it would be a cruel escape from duty if I don't mention two doubtless facts regarding them both, that is, Mr Hemingway was always known for his resistance and Mr Orwell had already been into not giving up on life! This meeting is very less discussed in our literary circles, for which we miss certain critical backdrops to the making of the two abovementioned timeless masterpieces. The meeting happened around the middle of the year 1945, and Mr Orwell, who obviously was very much alert about his fear of being assassinated[12]— there are even reports of Mr Hemingway sometimes providing Mr Orwell with a point 32 snubnosed revolver[13] while in Paris itself, for his safe passage[14]— resorted to a remote Scottish farmhouse in the year 1946, inside which he worked on his upcoming novel *Nineteen Eighty-Four*[15], with the fresh memory of a meeting with a senior, a contemporary, a distant compatriot, a soldier, a journalist, writer, spy, and most importantly a figure who has rebelled against the wrongs in the world— the undefeated[16] Hemingway!

The possibility of the personality of Mr Hemingway and his thoughts being one of the many inspiring factors behind the making of the novel *Nineteen Eighty-Four* cannot be quickly denied. It evokes in mind— as one instant resort— images of Mr Hemingway's attitude towards true and honest journalism[17] being a possible prototype for the character of Winston Smith in the novel. Robert McCrum mentions in his article in *The Guardian*[18] that Mr Orwell himself claimed a partial inspiration for the novel was the *Tehran*

Conference of 1944, where the Allied leaders met, and he was also convinced that at Tehran, Stalin, Roosevelt, and Churchill plotted to divide the world![19] Whatever might have been his views regarding the degradation of world peace, it's worth mentioning that Mr Churchill himself read the novel twice as he mentioned it to his doctor[20].

However, along with all other aspects of the novel— the concern for freedom of speech, the totalitarian atmosphere, the suppression of the dissent, the undiagnosed ways of deception by governments, the mechanical imposition on humans, the unquestioned injustice, and so on— the novel is basically a source of revolutionary inspiration for the generations after Mr Orwell. Maybe, how he had visions for a peaceful and compatible world implied through the strange deconstructive methods as used by him in the novel, the latest generations, looking at the severities and sufferings of this current world, might attempt to further his project of 1984 through 2084, 3084 and so on— speaking paradoxically— till the world seems right!

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झारखण्ड सरकार
GOVERNMENT OF JHARKHAND
गणतंत्र दिवस
की हार्दिक शुभकामनाएं और जोहार
रमेश बैस
राज्यपाल, झारखण्ड
हेमन्त सोरेन
मुख्यमंत्री, झारखण्ड
आइए, गणतंत्र दिवस के शुभ अवसर पर हम संविधान में निहित आदर्शों और मूल्यों के प्रति अपनी प्रतिबद्धता सुनिश्चित कर देश व लोकतंत्र की प्रगति में योगदान दें।
जनहित में जारी
सूचना एवं जनसंपर्क विभाग, झारखण्ड सरकार