

Disruptive Technology, Industry 4.0, Advances in Management, Information Technology, and Social Science

Editors:

Lopamudra Ghosh

Amna Mirza

Nasser Khalufi

Sayan Chakraborty

Chandra Shekhar Singh



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Volume First

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Editors' Note

Editing a book with multiple contributions requires a sincere teamwork. The first and foremost responsibility was to choose a contemporary area which is not only as per the modern-day requirement of the business and industry but also appeals to a wide variety of academic streams. Fortunately, we finalized the best suitable title for this book – “**Disruptive Technology, Industry 4.0, Advances in Management, I.T. and Social Sciences**”. As the editors of this book, we had a huge responsibility of collecting, checking, and editing the papers. The process of editing requires a thorough work of giving timely feedback to authors about the changes they need to make to improve the quality of papers. The whole work was a teamwork and not possible without the support of our associates, publisher, and team managers.

We whole heartedly thank all our contributors who have come up with the new ideas and thoughts and not only sent their best piece of work but also edited it as per the requirements of the book and our recommendations.

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-Editors

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Women Entrepreneurship and SHG's- A Systematic Review

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Abstract

Self-help groups as already identified are a very important initiative that helps in the upliftment of the rural poor especially women. By organizing into groups of 15 – 20 members, women can generate microfinancing for each other to help in entrepreneurial development. Women use their skills and finance from SHGs to start their small business ventures and earn livelihoods. Women constitute 50 percent of the population and yet the percentage of women living under poverty is extremely high because of societal customs and taboos that stop them from being independent. Rising poverty levels in rural areas motivated rural women to organize themselves into these groups and begin their entrepreneurial journey. The study would look at the SHGs from a holistic point of view and will try to analyze the various strength, successes, weaknesses, and threats faced by such groups in India. The study would also understand how SHGs lead to women's entrepreneurship in India.

Keywords: Self Help Groups, Women Entrepreneurship Development, Women Empowerment.

I. Introduction

Women are the subjugated gender of the society who were not allowed to study or do jobs up until very recently. 70 percent of India's population resides in rural areas and is dependent upon agriculture and related activities for their survival. However, changing climatic conditions, a bad crop, pest attack, etc sometimes lead to crop failures and loss of income for lakhs of people every year. These people bear the loss alone and their financial conditions deteriorate. Rural women thus identified the need for earning so their families' financial conditions could be improved. Even though social taboos and norms prohibit women from working even today, women have found ways to challenge those stereotypes, come out of their shells and begin earning while handling their other household responsibilities by the side.

SHGs or Self- help groups are nothing but an informal association of people who come together and come up with ways to improve their living standards. These are self-regulated groups of people from similar backgrounds. Mostly rural women form such groups. These women are generally illiterate, without any formal skills, etc.

Once they organize themselves into groups, they pool in money which is used for savings, giving loans to each other, and financing entrepreneurial activities.

Members of SHGs work in collaboration and they help each other in establishing microenterprises. The interest rates charged are also very slim and since the members are well-aware of each other, no collateral is also needed. Self-Help groups have merged as an effective way of delivering microfinance services to the rural poor.

Rural women are generally skilled in handicrafts and cottage industry-related activities. With backing from SHGs, they can convert their skills into profitable businesses and earn money. Such business not only helps in the economic empowerment of women but also instills confidence and helps in their social recognition. SHGs along with microcredit also solve marketing and production-related problems for these new entrepreneurs as all these problems are discussed in groups and their solutions are also found.

However, SHGs also face some challenges like lack of any legal structure which can sometimes lead to conflicts. Lack of knowledge and patriarchal mindset also stop women from exercising full freedom. At last, banks and other financial institutions are often unwilling to provide finance to women mainly because of a lack of trust in their ability and the absence of any security or collateral.

II. Literature Review

A study by Soni (2015) talks about the deteriorating financial status of women in society. Women in rural areas particularly are given fewer opportunities in terms of education and job opportunities. Gender disparity is very evident in society. SHGs are community groups formed by rural women among themselves. The study mainly talked about how women organize themselves into these groups and use their skills to build small businesses or get involved in small-scale entrepreneurial activities to get some financial independence. The study was done using the questionnaire method to measure entrepreneurship among rural women. Results of the study showed a positive relationship between women who were involved in SHGs having entrepreneurial ventures leading to them developing new skills. So SHGs are not just for economic but also social empowerment of women.

Another study on SHGs by Shyamala (2012) revealed that women have been the vulnerable gender since history and SHGs are a way to get women the opportunities that they deserve, Inter-district variations of SHGs through performance index. No previous studies have already indicated that SHGs lead to women's development and empowerment. However, this study is aimed at analyzing the consistency of those claims. To analyze the variations, they undertook a quantitative study for the districts of Tamil Nadu. Out of the twenty-eight districts considered for the study, more than half of them showed promising results. Furthermore, the success of SHGs in terms of employment generation and making rural women socio-economically as well as politically empowered was also discussed.

Terdal (2018) in their study on Self-help groups contemplated that the importance of SHGs lies in the fact they empower women. SHGs play a role in the empowerment of women socially, politically as well as economically. The study identified SHGs as a sustainable way of improving the lives of rural poor especially rural women. In India, SHGs have helped alleviate rural poverty to a great extent.

Kaur (2015) identified SHGs as a successful force in empowering the women in rural areas by providing them with affordable banking and entrepreneurial approaches. The study by Kaur was focussed on understanding the impact of microcredit on the empowerment of women. The study revealed that microfinancing benefits women by providing them with finance for their small business ventures. Women generally lack collateral to give security for taking the bank loan. Here, microfinancing gives them the finance without the need for collateral. The study identified that the present microfinancing institutions are charging high-interest rates causing difficulty for women to take them. The study suggested proper guidance for smooth functioning.

The paper by Bharti (2016) talks about SHGs as an innovative organizational setup to provide women with the right financing options. 15-20 women organize themselves into self-help groups. These are major platforms that allow women to participate in self-development as well as country development. Microfinancing through SHGs has come out to be a profitable instrument leading to the development of rural women.

Senthilkumar et al. (2020) talk about the issue of women's subjugation and the importance of women's empowerment in recent years. The motive of this study was to understand the social effects of self-help groups on women's empowerment. A random testing method was used to understand the status of Self-help groups in India. Such a study is always beneficial in understanding the further development needed in this arena. Such studies help policymakers formulate strategies for the social progress of women and empower them.

Banerjee (2009) in their study contemplated that Self-help groups were created under the SGSY scheme of the Indian government. The government opined that these groups would help in income generation. The objective of this survey is to study the impact of SHG joining on the economic positions of the individuals through the collection of primary data from West Bengal. Out of the women who joined SHGs, 90 percent were previously unemployed. After joining these groups, they became employed and their family income increased. Low-income groups from villages shifted to higher income groups and thus the income disparity was also reduced. So, the results were mostly positively skewed and showed SHGs as a great poverty alleviation tool. However, it was also understood that SHGs do not necessarily always solve the societal problems of society.

Namboodiri and Shiyani (2001) conducted a SWOT Analysis of the SHGs in India. Of course, the SHGs are a sustainable system that helps in the development and empowerment of rural women. The formation of such groups gives each member a

sense of purpose and responsibility. Income-generating activities and loans without the need for collateral or any other security make them extremely beneficial. One of the weaknesses of SHGs is however, they have limited scope for growth. The major threats that most SHGs face is a lack of legal authority and backing.

Rathinam and Akudugu (2014), evaluate how rural empowerment of women occurs through SHGs. The paper considered the role of SHGs in promoting livelihood development in two countries, India and Ghana. The results showed that SHGs empower women and uplift the socially and politically backward.

Bharathi and Masthani (2014), in their paper, studied the functioning of SHGs in Dhramavaram, C.K.Palli of Anatapur District. Anatapur is a drought-prone area of the country. The major occupation is agriculture. Women in rural areas are generally unemployed but willing to work. Women in rural areas enjoy the benefits of SHGs to obtain finance for their small businesses. SHGs are self-regulated bodies where women organize themselves into groups and make money-related decisions. Women constitute half of the population and such SHGs empower them and help in nation-building. The study reveals the reasons for which they wanted to become entrepreneurs, the problems faced by them in the context of carrying out the entrepreneurial activities, and suggestions to overcome the problems

Dutta (2016), talked about women's entrepreneurship in Assam. Women's participation in entrepreneurial activities has been gradually increasing. Women from Assam have set up their small-scale enterprises and run those businesses successfully. Members of SHGs are involved in Microfinancing and work in small-scale industries like cottage or textile-like handloom weaving, piggery farm, poultry, dairy, or handicrafts. The research tries to find the factors that lead to entrepreneurial mindset building among the societies. The study revealed that different factors are responsible for such SHG organizations. However, they also face many problems like financing, marketing, and production problems in their entrepreneurial journey. Social norms and taboos also restrict them from being more successful.

Gupta and Chatterjee (2018), focusing on social entrepreneurship. They talked about poverty alleviation and rural development through the establishment of SHGs. SHGs are nothing but the coming together of the rural people, especially women aimed at increasing their income and improving their living standards. This study identified two women from West Bengal. One of these SHGs was focused on rural areas and the other on urban areas. Studies revealed that SHGs allowed and facilitated these women to build their enterprises and in turn generating employment for other women. They have been instrumental in giving social and economic freedom to women.

Harikrishnan and Karuppasamy (2017) talked about 70 percent of India's population being dependent upon agriculture and related activities for earning a livelihood. Women who were earlier not allowed to go out and work now felt it as their responsibility to contribute to the household income because of poor standards of

living. Microfinancing through SHGs allowed women credit facilities, savings, insurance, and remittance without any technical expertise.

III. Conclusion

SHGs have become very instrumental in bringing about a change and uplifting rural women. The following study showed how organizing rural people into self-help groups has led to rising in entrepreneurship in India. It also analyzed the various threats faced by such SHGs across the country. Since SHGs are formed based on mutual trust, there is always a lack of security. Plus, only a fraction of people can raise themselves using microfinance to micro-entrepreneurship. Besides, the benefits of SHGs are not homogenous throughout the country. It is no doubt that entrepreneurship particularly by rural women is on the rise because of such groups formed by women. The standard of living of such women has increased tremendously and many rural families have shifted from being low-income families to medium or high-income families. However, there is still a long way to go for these SHGs to be able to uplift a larger section of the population. The role of government and their indulgence in the same can provide some solid backing so financial institutions are not hesitant in providing loans at affordable interest rates. Regular Monitoring, as well as an extension of SHGs to urban and suburban areas to help the urban poor, is also required.

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Artificial Intelligence (AI) with Internet of Things (IoT)

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Abstract

Artificial Intelligence (AI) has changed the human being massively in terms of technology; escort the new tools and devices which are very crucial in communication, education and business with the help of "Internet of Things (IoT)". Artificial Intelligence technique needs for its smooth functioning includes deep learning, machine learning, Natural Language Generation (NLG), speech recognition and biometrics identification. All these technologies can be used in the improvement in machines and human interaction with it to facilitate many operations. Artificial Intelligence involves in technology of machines, such as memory machines. Theory of Mind, a psychology concept, relative machines, self-awareness machines etc. These machines boost the experience among human being in different ways in this technology world. Artificial Intelligence has become popular due to its many benefits of ease of use and availability of many devices and is available due to Internet of Things. It provides various types of activities like medical applications, digital assistance and error corrections by job performance.

I. Introduction

Intelligence' is the only word which sets humans apart from other organisms in the entire universe. It is only possible to win the world on the strength of intelligence, intellectual ability, ability to reason, reasoning and analysis. Now man-made computers and machines with Artificial Intelligence (AI) are beginning to compete with humans.

Artificial Intelligence is a breakthrough of the human imagination and continuous experimentation. In 1943, the researchers, Maclock and Pitts, introduced the concept of Neural Network. Isaac Asimov invented robotic technology in the 'Eye Robot' novel in the 1950s¹. At the same time, Alan Turing, the researcher has introduced the concept of the 'Turing Test', an experiment in intellectual exploration of machines in his first research paper, Computing Machinery and Intelligence. John McCarthy, first time introduced the concept of Artificial Intelligence to the world in 1955. He defined the Artificial Intelligence (AI) as the use of science and technology to make intelligent machines. The development of Artificial Intelligence had to wait

¹ https://en.wikipedia.org/wiki/I,_Robot

till 1956 to really gain momentum. At the 'Dartmouth Conference', researchers around the world, resolved to focus more on the development of Artificial Intelligence. "Deep blue" computer, developed by International Business Machines (IBM), also showed the power of Artificial Intelligence technology after defeating world-renowned intellectual Gary Kasparov in 1990.

The rise and the use of Artificial Intelligence

The archetype of Artificial Intelligence (AI) is the embodiment of the human dream machine's that have the ability to provide human potential to the computers. With the help of these computers, many tasks that humans are doing will now become easier, Compilation of information means integration of Internet and software as 'Smart Decision Support System' (SDSS) that is used in hospitals, weather and, agriculture, automotive industry, food processing industry, power generation, communication, air transport, port ship maintenance, mining, pharmaceuticals etc. The use of Artificial Intelligence (AI) technology is becoming widespread in many areas.

The IoT (Internet of Thing) is a system of physical device which are linked to the internet and exchange information and data to improve efficiency, services and productivity. Technology of IoT can be seen in various places like industry, smart homes have become reality and even its influence can be observed on a whole smart city. IoT is possible due to development and innovation of various technologies, sensors, real time analytics, automation, embedded systems, control systems, wireless systems and machine learning (Ali, Nazim, Azeem, Javed, Tariq, Haroon, and Hussain, 2020).

Devices with Artificial Intelligence (AI) enabled are more intelligent and are able to perform particular task which saves lots of time and resources. IoT has been developed in all areas of life with the appearance of AI and makes the life easy for consumers (Qinxia, Nazir, Li,M.; Khan, Lianlian and Ahmad (2021). The main function of IoT is to provide accessible resources with smart, reliable and effective services.

Today, computers offer automatic processes in various sectors in business and technology. It continues to transform the world in all industries 60 years after its introduction. Artificial Intelligence in machines and computer systems imitates intelligent human processes (Jackson, 2019). These create social processes include self-corrections, reasoning, and learning. Its ability to simulate human Intelligence makes it suitable for various applications Mohammad, Sikender Mohsienuddin. (2021).

Computers - Brain – Intelligence

It is not possible for any individual, nation or organization to stop this great influx of technology. According to researcher and technology prophet Ray Kurzweil, by 2045 Artificial Intelligence (AI) will demand the human brain. "IBM has developed a computer which understands human emotions. The company says that Mr. Watson has developed the ability to recognize human emotions by making major

changes to its supercomputer. With these changes he has become faster, and now he can recognize human emotions. Like, Mr. Watson could analyze the mood of a user with a command, the computer's tone analyzer has evolved to a great extent, and Mr. Watson could identify his emotions from a user's writing in the category of Artificial Intelligence. In addition, Watson also incorporates Emotion Analysis and Visual Regression Nation. Watson will perform a thorough analysis of the user typing on the computer. Based on this analysis, he will be able to identify almost all emotion of the user, IBM claims that the computer will follow the user as soon as the user presses the keypad to work on his computer.

Artificially Intelligent Robots

Recently India's first robot teacher was introduced in Bangalore's Indus International school. At present it is teaching to corporate and accompanying to the conventional teaching but the time is not far when it will totally take the place of human teachers with the help of AI.

In China AI based robotics, are working in hospitals for SARS-CoV-2 virus or Covid -19 (stands for coronavirus disease of 2019) treatment and as well as for avoiding infection to others.

In Nagpur robotics are working in hotel named 2.0 for serving food to customers (Jiaying, Xiangjie, Feng, Xiaomei, Lei, Qing and Ivan, 2018),

“Artificially Intelligent robots” act as a connection between AI and robotics. AI programs controlled these robots (Goodman, 2016). Sometime some robots are not Artificially Intelligent. Up till now, industrial robots were being used to be programmed to perform repetitive tasks or movements and do not need Artificial Intelligence. These robots are non-intelligent robots and their functionality is quite limited. With AI algorithms, robots are able to carry complicated tasks easily (Domingos, 2015).

Artificial Intelligence and Automation Industries

Sarmah, Simanta and Shekhar (2019) revealed that in computer science, Artificial Intelligence (AI), sometimes is called “Machine Intelligence” can be explained as intelligence revealed by machines, as compare to human beings natural intelligence. Artificial Intelligence (AI) act is like a driver of the innovative smart world. Global giant companies like “Kodak, Nokia, Blackberry, Motorola, IBM” are suffering a lot due to rapid changes in technologies. AI technology helps in making the present auto enormous like “General Motors, Volkswagen (VW), Toyota, Honda, Tata, obsolete.” Companies with Taxi addressing like Uber were the first one to take advantage of on this new AI technology. Mutually with on demand taxi service and self-driving cars, changes the point of view of people at owning an automobile. Due to Artificial Intelligence technology, companies and their marketplace is shifting. This will affect the auto industry and millions of workers will go to lose their jobs.

Traditional industry is serving as “Mercedes-Benz, Volkswagen (VW) and Bayerische Motoren Werke GmbH (BMW)” works on the expansion of “semi-autonomous driving systems” that support with the driving task to driver. Google intentions are to bring vehicles that are fully automated to market that replace completely the driver and role of driver shifted to car passenger from active driver (SinaNordhoff, 2014).

Artificial Intelligence Google Car, a car with self-driving is the flag bearer clearly and now a day’s many companies are working hard to make the cars with self-driving a standard. Self-driving vehicles provide a huge variety of technologies as “radar, cameras, ultrasound, and radio antennas” to safely navigate on roads. A self-driving car with system of AI needs a constant, nonstop instructions and data stream to make immediate decisions on the basis of complicated data sets with dependable sensors.

The driverless cars with Google support, which get us to our desired destination and they have already made their way on American roads (Yarrow, 2011). As a result, the need for drivers will get over very soon. Hence the day is not do far when these cars will start running on village roads. With the help of Artificial Intelligence, this technology can be improved upon progressively. It has a special ability to remember the usual ways and to change the route based on traffic jam during peak hours and make many such decisions on its own.

Artificial Intelligence provides response to control and organize satellites. To avoid collisions among satellite, AI operations was implemented by Space-X. “The Satellite Innovations Group, Airbus, and the Space Data Association” are making research on applications of these technologies and techniques (Ying-Yi, John, Martinez and Fajardo 2020).

Researchers are trying to make computers today by which they can learn from themselves in the journey of Artificial Intelligence. The concept of Artificial Intelligence has already been developed by humans. However, the entire development of this concept will be deadly to humankind, so humans will not be able to deal with the fully developed Artificial Intelligence technology which may destroy the human race or supersede the human intelligence (HrvojeBelani, Marin Vukovic, Željka Car, 2019).

The research process is trying to make it kind of neural technology, which has not been possible mechanically at present. However, it is difficult to confirm with certainty that such invention will not be possible in future and it will cause real threat to mankind “(Oludare Isaac Abiodun, Aman Jantan, Abiodun Esther Omolara, Kemi Victoria Dada, Abubakar Malah Umar, Okafor Uchenwa Linus, Humaira Arshad, Abdullahi Aminu Kazaure, Usman Gana, Muhammad UbaleKiru (2019))”.

This device was designed for a specific task, assesses the situation around it, adopts it to the situation, and takes the right actions or decisions to perform the task successfully. Artificial Intelligence (AI) is developed based on a variety of factors such as the potential answers to questions, the causes, the information, knowledge,

planning, study, interaction, results, and ability to control the questions generated in this way (Nilsson, 2009).

Although Artificial Intelligence (AI) can produce more intelligent machines than man in the future, there is a large group of scientists who believe that they will never replace humans. Many researchers agree that there is no need to fear from technology and avoid the benefits of the Internet in common public. Secondly, with the help of this wisdom, many complicated questions can be solved with the help of this technology. The human capacity can create huge machines which can do work for us, at the same time the hard jobs which are not possible by humans alone can be executed with the help of these machines (Bach, 2008).

It is not very simple to copy human intelligence; moreover many scientists are still trying to understand the human brain and its capabilities. Hence, many person believe that experiments on Artificial Intelligence (AI) should not to create panic. Logical-working computers stumble after a time, but the brain doesn't. Because it uses creativity in the same way that the brain uses logic.. What do humans do if Artificial Intelligence machines start to have their own opinion tomorrow and will interfere in human life? It can also lead to new questions. It cannot be imagined how Artificial Intelligence can be used in the criminal world (McCorduck, 2004).

Fear of Artificial Intelligence

World-renowned physicist Stephen Hawking and Bill Gates, the founder of Microsoft, have expressed their fears of ending humankind by developing Artificial Intelligence. Increasing of the technology is directly interfering in human life. This world of Artificial Intelligence is mysterious, wonderful; but still, it is scary. In future, there are all the possibilities that Artificial Intelligence (AI) will make human beings a slave. Many researchers are expressing such doubts. In this world of Artificial Intelligence, it is only a matter of time before the 'man' will maintain his position or lose consciousness (Crevier, 1993).

Different opinions about Artificial Intelligence

There are two opinions and few disagreements among the researchers who create Artificial Intelligence. One school of thought says that, Brain is just a Biological Machine. As humans have their limits, which are the limitations of human evolution. However, the threat posed that the machines trained to do their own development could destroy or enslave mankind forever. In the second opinion, the brain cannot be called a machine, it is a complex biological construct. So there is no reason to be afraid of machines. Although both of these opinions differ, there is much to be learned from the brain functioning which both the streams agree (Newquist, 1994).

Human-Brain and Technology

There is a big difference between a human brain and a computer with huge speed. Researchers are trying to create a similar structure by studying the human brain in Artificial Intelligence technology. The human brain can learn, adapt to feedback, and have the flexibility to make decisions and actions when needed. However, such capabilities are not available in traditional computers (Dreyfus, 1992).

The economics and employment-technology cycles

According to Ernst, Ekkehard and Merola, Rossana and Samaan, Daniel (2019), in the near future, the prevalence of sticking to traditional methods of employment will decrease. As a result, economic growth and jobs will be created again. As more products will become available, the prices of goods and services will come to a halt, thereby facilitating lower prices for consumers. The result of all these is the ability of the consumer to save more and spend more. Naturally, this will provide new employment opportunities in the consumer goods market. That is, mechanization which leads to increased production and economic development, and the cycle of job creation continues unabated.

There will be many agitations to reduce computer jobs; the fact cannot be denied that computer revolution has also created many new jobs. This new stream of development has also increased its own competition. There is a need to be 'updated' daily in the information market. Like interacting with your co-worker, some of the communication is now accessible to your computer. The 'intelligence' have smart computers are receiving through modern programming is a result of human endeavors.

The use of Artificial Intelligence in governance

Indonesian President Joko Widodo has begun preparations for the elimination of two ranks of chartered officials, using Artificial Intelligence (AI) for government affairs. In India, such use is unavoidable. As a result, Indian Administrative Service jobs may also be permanently lost. This could be a warning to students who have been studying for many years to become administrative officers “(Zuiderwijk, Anneke and Chen, Yu-Che and Salem, Fadi, 2021)”.

Artificial Intelligence in space

“National Aeronautics and Space Administration (NASA)” scientists are trying to explore that with partnering and pioneer in Artificial Intelligence (AI), companies like “ Intel, IBM and Google” to apply highly developed computer algorithms to issues in space science. According to the “European Space Agency (ESA)” satellites can supply more than 150 Terabytes of data per day. Artificial Intelligence will “decrease costs, extend mission and battery life,” and generate high quality environmental image data (Girimonte and Izzo, 2007).

Artificial Intelligence and IoT

Ghosh, Chakraborty and Law (2018) found that internet functioning was transferring into Internet of Things (IoT) from Internet of Computers (IoC). Technology is heading towards internet of everything in a Smart Cyber Physical Earth. This technology is not just to save money, decrease human efforts, smart things; it also make human life easy. IoT refers every virtual, living or nonliving object which is connected with each other through some medium of communication. AI is the science of making machine intelligent so that they can perform tasks which needs human mind earlier.

Domb (2019) revealed that smart home system has achieved huge popularity since last decades as it provides comfort and quality life. Microcontrollers and smart phones control usually most of the smart home systems. With the technique of wireless communication, smartphones applications controls and monitors home functions. The Cloud services are being managed home appliances and allow the user to control smart actuators connected with home appliances like fans and lamps. Scanned ID is being sent to cloud system through internet. The Cloud computing shared pool of computing resources and provide various computing services at different levels i.e. from basic to most critical application services.

Prasad (2017) explored that popularity of automation system for houses or offices is growing every day. Automation is not efficient but also provides use of water and electricity economically and decrease lots of wastages. IoT provide people the facility to connect from anywhere, anytime and with anyone with the help of network. AI monitors the consumption of energy and controls the environment in offices, schools, buildings or museums with the help of various types of actuators and sensors that controls humidity, temperature and lights.

Maskeliunas, Cius and Segal (2019) explored that IoT objective is to extend the internet to real world objects and connecting sensing and smart devices to global networks by virtual and physical objects. IoT increase the quality life of people by providing comfort and easy technology. IoT focused on the technologies that bridges social behavior, digital technologies and physical things on the basis of language, speech, computer version etc. Ambient assisted living (AAL) environment provide positive influence on people's health and quality of life, particularly old people.

The mirage of Artificial Intelligence

The future created by Artificial Intelligence (AI) will go beyond this prediction. The fact is that, this change is unusual but cannot be avoided. It is now impossible for the human race to continue on without the machine help. Nevertheless, human have a long way to go in the world of Artificial Intelligence. Instead of pursuing the mirage of Artificial Intelligence, there is a greater need for understanding the machine and also understanding the human intelligence, and develop the Artificial Intelligence (AI) which is truly helpful. In this world of Artificial Intelligence, it is only a matter of time will whether 'man' will maintain his position or lose his consciousness to his own created machine. Companies need to take more effective measures to avoid the

dangers of using technology and it is possible. Humans should no doubt continue to develop Artificial Intelligence to create a better world. Automated technologies, such as the technology which seeks to bring human jobs, should support technologies such as Artificial Intelligence (AI). This technology will increase productivity; therefore, we have to accept and adapt the new AI technology. Artificial Intelligence is becoming popular with new and innovative inventions discovering annually. Hence, the policymakers should think about adoption of technologies with AI in their companies to help in most of the operations in company.

II. Conclusion

The human brain is one of the most complex chemicals in the world. The brain is the wonderful center of many emotions, dreams, thoughts, analytical intelligence, relative experiences and different associations of those experiences. Scientists have to admit that no matter how intricate the machine may be, it is simply impossible to do all these things. Only if Artificial Intelligence demonstrates creativity it will succeed at the human and mechanical level.

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A Research Analyzing the Historical and Geopolitical Dimensions of the Industrial Revolution 4.0: Exploring through the Lenses of International Relations, Socio-Economic Inequality and Regional Economic Integration

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Abstract

The Industrial Revolution 4.0 is opening up huge development prospects for the world economy, while at the same time appearing new or deteriorating existing problems, one of which is income inequality and also socio-economic inequality. The problem of inequality has substantial socio-economic and geopolitical concern worldwide since the considerable social and property stratification of the population leads to aggravation of local, national and even international confrontations in society. According to the recent trend of literature in the field of international relations, regional economic integration, particularly in the period of the Fourth Industrial Revolution, is extremely complex. Every industry standard, every investment rule, every technical arrangement that is implemented necessitates not only significant expertise but also considerable time and effort. Managing this complexity, and doing it at the swiftness of the Fourth Industrial Revolution, demands a novel approach to establishing regional economic integration efforts. This research article studies the foremost technological and socio-economic drivers related to the Fourth Industrial Revolution (Industry 4.0) that have significant impact on income inequality resulting in socio-economic inequality in developed countries (France, Germany, Italy, Spain, UK). Based on the acknowledgement of this trend and the cyclical component of the dynamics of income inequality impacting Industry 4.0 indicators and also by means of Google search data the author of this research article has examined the level of Gini coefficient on 15 years ahead. Structural transformation is a dominant process in shaping and advancing economic development. Without an augmentation of their productive capacity and a shift of resources to higher productivity sectors, nation states will be rendered incapable of delivering on the 2030 Agenda for Sustainable Development. Earlier historical cases of structural socio-economic transformation resulted in the growth of socio-economic productivity, increased rates of employment and higher wages, producing the appropriate socio-economic conditions for more equitable income distribution. But Industry 4.0 – driven by cutting-edge technologies

such as artificial intelligence and robotics – may change the rules of the game for nations embarking on the paths of industrialization, mechanization and automation. This is heightened by higher levels of market concentration that is already visible and evident in industrialized countries.

Keywords: Gini Coefficient; Industrialization; Industrial Revolution 4.0; International Relations; Regional Economic Integration; 2030 Agenda for Sustainable Development.

I. Introduction

The world is inflowing towards the Fourth Industrial Revolution or Industry 4.0. Storage capacity and data growth, arrival of intelligent robots, conversion of web, cloud and mobile platforms, growing networked communication technologies – it refers to the histrionic changes in business and production process. Synchronized with the digital revolution, there are set of socio-economic, demographic, and also financial drivers of this change which are strengthening one another and leading to such core consequences as

- i. Reduction in the number of highly repetitive low-skill jobs and also monotonous medium-skill jobs. In this situation, artificial intelligence will initially disturb clerical work, and then finally affect sales and customer services. The World Bank estimates that increasing use of automation will put 57% of the jobs in the 35 countries in OECD at danger, including 47% of US jobs and 77% of the jobs in China;
- ii. Improvement in the efficiency of existing jobs and increase in the demand for customized human work;
- iii. Increase in the magnitude and probability of risks related to cybersecurity;
- iv. Increase in income inequality resulting in socio-economic inequality – the return to skills is prospective to benefit those who are rich and lower-paid workers will suffer from the underperformance of their income growth.

So, while the Fourth Industrial Revolution is empowering extraordinary levels of innovation and knowledge, it is also conducive of a widening inequality gap. Worldwide income inequality positions at very high levels, whereby the richest 8% of the world's population produce half of the world's total income, while the remaining 92% of people are left with the other half.

Income inequality has been growing in many countries all over the world owing to a range of factors, including: incompetently regulated financial integration, trade liberalization methods, institutional and regulatory reforms that have increased competition in product innovations and factor markets and, of course, technological change, which has favoured high-skilled employees.

Consequently, it raises the question of the inevitability to carry out research and develop economical cum mathematical models, which could make it conceivable to identify the factors promoting economic inequality variation influenced by Industry

4.0 and find out the mechanism of its socio-economic regulation on the basis of correlation analysis, primary components method, non-linear reversion, harmonic and decomposition analysis; calculate values of nowcasting drifts of income inequality on the basis of the data and information received from Google Trends.

II. Theoretical Perspectives

Historical and Geopolitical Dimensions of Industrial Revolution 4.0

The term “revolution” signifies abrupt and radical change. Throughout history, new breakthrough innovations and advanced technologies have brought about many such periods of noteworthy, non-linear change that overpoweringly alter economic systems and social structures. The influx of the Fourth Industrial Revolution is a new period of exactly this type of deep and transformative change.

Looking back, the first reflective shift for human civilization came with the agrarian revolution approximately 10,000 years ago. The domestication of animals, coupled with new farming technologies, enhanced food production, encouraged dramatic population growth and led to a socio-economic upsurge in the practice of capital accumulation through fixed settlements.

This agricultural revolution was followed around 1760 with the First Industrial Revolution, driven by the inventions of steam power, railways and mechanized forms of production. The Second Industrial Revolution took hold in 1890 with the growth in the use of electricity and novel approaches to manufacturing based on assembly lines and mass production. The Third Industrial Revolution developed in the 1960s with the rise in the use of semiconductors and the spread of computers and the internet.

Today, we are facing a Fourth Industrial Revolution. Building on the digital technologies of the Third Industrial Revolution, it is driven by an inclusive range of new breakthroughs not only in the digital realm (such as artificial intelligence) but also in the physical realm (new materials), as well as in the biological realm (bio-engineering). These new-fangled technologies are revolutionary due to the speed, breadth and depth of the much-awaited change they will bring.

The Fourth Industrial Revolution will not only alter and transform the priorities and issues for regional and geopolitical integration within ASEAN but also will require a new-fangled approach to how these policies are fashioned and implemented. Given the implications of the Fourth Industrial Revolution, and the speediness at which it is unfolding, it will be critical for ASEAN leaders to think resourcefully about how they can advance the processes of crafting policy, setting standards and framing regulations at a regional scale. If they do not, the ASEAN region may well find itself on the incorrect side of this global movement of worldwide reset. Rather than thriving in a regional scale, the ASEAN region may find itself being left behind globally.

III. Research Methodology

The methodology used for this study to analyse key questions is as follows: first, the identification of appropriate indicators for the evaluation of technological change and socio-economic implications from Industry 4.0 through the significant impact of income inequality through correlation. Second, the author has adjusted the relevant factors (technology, socio-economic) in the context of the impact of income inequality using high frequency data. Finally, the study now reveals the level of income inequality adjusted by the Fourth Industrial Revolution in developed countries through the use of mathematical methods by decaying the filtering of the estimated time series and seasonal (cyclic) components.

There are two indistinct types of data needed to test the hypothesis of the relationship between the Fourth Industrial Revolution and socio-economic inequality, thereafter predicting the socio-economic inequality rate adjusted with Industrial 4.0 growth. Firstly, the author has decided to explore the socio-economic inequalities based on the Gini Index (World Bank Database) and second, he has looked at the steps of the Fourth Industrial Revolution, in the context of technological change (businesses using software solutions; e-public services through websites; users Google to order goods or services; percentage of people aged 16 to 74; business revenue share in e-commerce; limited annual shipment of multi-functional industrial robots in selected countries) and socio-economic fluctuations (venture capital investments of GDP; employed ICT professionals; human resources in science and technology). The hypothesis is tested on panel data of five developed European countries (France, Germany, Italy, Spain, UK) during the period 2007-2017.

IV. Findings

First, in the context of each country (France, Germany, Italy, Spain, UK) the author described a set of technical and socio-economic indicators that contribute significantly to social and economic inequalities through communication analysis and key components. way. The results of the implementation of this modelling phase and the current trends of socio-economic fluctuations influenced by Industry 4.0 are presented in Table 1. Selecting the appropriate impacts on income inequality is based on the corresponding coefficient, the value of which is statistically validated. weak, medium or intimate relationships.

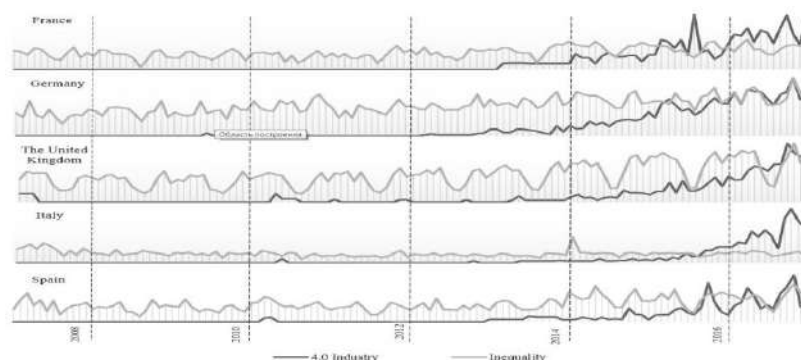
Table 1. Results of the interdependent relationship between the technological and socio-economic indicators and income inequality

| Indicators | Gini coefficient | | | | |
|---|------------------|--------------|--------------|--------------|--------------|
| | France | Germany | Italy | Spain | UK |
| Technological indicators | | | | | |
| Enterprises using software solutions | 0.684 | 0.412 | 0.788 | 0.994 | 0.309 |
| E-governmental activities of individuals via websites | 0.234 | 0.115 | 0.216 | 0.989 | 0.047 |
| Individuals using the Google for ordering goods or services | 0.401 | 0.099 | 0.666 | 0.932 | 0.521 |

| | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|
| Share of enterprises' turnover on e-commerce | 0.246 | 0.741 | 0.740 | 0.944 | 0.147 |
| Estimated yearly shipments of multipurpose industrial robots | 0.276 | 0.276 | 0.270 | 0.671 | 0.071 |
| Socio-economic indicators | | | | | |
| Venture capital investments of GDP | 0.336 | 0.237 | 0.439 | 0.851 | 0.790 |
| Employed ICT specialists | 0.160 | 0.157 | 0.827 | 0.194 | 0.058 |
| Human Resources in Science and Technology (HRST) | 0.888 | 0.835 | 0.853 | 0.899 | 0.410 |

Therefore, based on the data presented in Table 1., it can be concluded that the factors influencing the variability of social and economic inequalities in all considered countries are: technological change - enterprises using software solutions and social and economic reforms - venture capital GDP investment. Specific indications of social and economic inequality in France and Great Britain are the people who use Google to order goods or services and human resources in science and technology. Additionally, almost all the indicators considered other than the employed ICT specialists are important in the study of the diversity of social and economic inequalities in Spain. A particular country is Germany because there are a small number of related features.

The next step is to adjust the dynamics of appropriate technical and socio-economic indicators in the context of the impact of socio-economic inequality on the basis of Google users' queries based on Google Trends. With the increasing use of the Internet as a source of information, new data sources are becoming increasingly important in policy-making decisions. Google Trends helps compile timeline volumes for specific search terms. In this section, the author has created variables such as "Socio-Economic Inequality" and "Industry 4.0" based on Google search data and clearly presents their strengths and variability characteristics in Figure 1. The following figure shows the annual growth of socio-economic problems related to "Industry 4.0" and "Socio-Economic Inequality" and also highlights the important links between these indicators since 2014.



Source: author's explanation and research findings based on the data received from Google Trend.

Figure 1. Socio-Economic Trends of the Relationship between "Industry 4.0" and "Income Inequality" in selected countries, 2007-2017.

V. Discussions

Industrial Revolution 4.0 can increase socio-economic inequality because not everyone benefits immediately from new products, services and opportunities. STI policy can range from a wide range of tools, from regulatory and economic and financial tools, to education policies and new regional policies aimed at supporting innovation. Without abandoning the primary goal of promoting innovation, policymakers can influence the process of change and reduce the risk of rising inequality caused by Industry 4.0.

This guideline refers to the level at which the selected STI policy mix is geared towards sustainable and inclusive development. In this context, providing guidance on STI policy tools (such as research and development and innovation support; tax compensation for research and development and technology recipients; public procurement; the creation of clusters, industrial sites and technical parks; and regional economic integration). All-inclusive regional economic integration policies will focus on prioritizing economic clusters with an aim of reducing inequality between firms, community groups, individuals or regions.

Gender-inclusive innovation policies may be aimed at increasing the participation of women as researchers, inventors or entrepreneurs; in placing women as decision-makers in technology programs; or in developing new technologies, products and services that improve women's lives – in the areas of energy, water and sanitation, health, or financial education. Technical training and vocational training can also equip women to participate in the technical fields associated with Industrial Revolution 4.0.

Youth-integrative education and training policies can also be helpful in equipping future employees with the right skills. Policymakers may consider developing programs to increase interest in technology related to Industry 4.0 and focus on business, marketing and creativity.

VI. Conclusions

This study presented an analysis of the interactions between international relations, Industrial Revolution 4.0 and the potential implications of these inequalities. Industry 4.0 has the potential to help develop the productive capacity of developing countries and contribute to their structural transformation. However, these new technologies must work within the context of sound STI policies that support economic and social transformation before STI gaps in all countries and internationally reach their peak and are irreversible.

In addition, the study explained that Industrial Revolution 4.0 is currently characterized by a high level of market focus in leading companies in several countries. This may result in measurable employment, profitability and technology gap between firms and countries.

Therefore, the STI policy that promotes the adoption and development of Industrial Revolution 4.0 technology must be well aligned with other policy domains in order to support a wider distribution of technology based on strong and dynamic infrastructure internationally, and appropriately positioned globally.

Also, STI policies should support an innovative environment that contributes to reducing inequality in all its diverse areas – within and between countries, in all firms, for generations and between men and women.

STI policy should also consider one of its major problems the provision of guidance on technological change, such as the emergence of Industrial Revolution 4.0, to continuously prevent any adverse effect of socio-economic inequality. Finally, STI policy cannot be developed and implemented without considering its interaction with other policies, including redistribution policies that are aimed at addressing social and economic inequalities.

VII. Implications of the Research

Creating a comparatively equitable world and structural changes are not possible in isolation from today's connected economy and unfluctuating politics. International cooperation contributes to the exchange of information, best practices, lessons learned and building national skills for designing and implementing STI's equitable policies with regard to Industry 4.0. Timely international cooperation can shape STI policies that influence future economic and social processes, before countries are barred from achieving certain technological benefits due to dependence on technological know-how.

Technological change can happen sooner than the implementation of superficial policies. Serious concerns about global questions about governance, equity, and equity arise as the gap between policy making and technological change grows. Therefore, international approaches and forums are needed to better understand the emergence of new technologies and their social, economic and environmental impacts. These issues have been addressed in the recent work of UNCTAD and the Commission on Science and Technology Development. Technological testing, for example, requires consideration of global or regional implications for the distribution of new technologies. They should also involve more stakeholders and support national policy makers in developing their skills to use Industry 4.0 effectively.

In its 73/247 resolution on industrial development co-operation dated 20th December 2018, the General Assembly of the United Nations discusses industrial development cooperation and recognizes the potential benefits of structural reform in Industry 4.0, among other concepts of economic transformation. These effects reflect the role of international cooperation in making Industry 4.0 inclusive and sustainable.

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Impact of the Social Media on Consumer Purchase Behavior for Electronic Goods

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Abstract

In this fast-paced world of advertisement, social media today have taken a lead role in it. Social Networking sites have become the gateway of the brands to promote their products to the new customers. Among those brands, electronic good brands are the among the leading one as it provides a new aspect to the consumer to judge product before buying which helps them making better purchase decisions. Brand name and loyalty on networking thus become very significant for the companies. Through this paper a look at factors which nudge consumer behavior in the favor of brands specifically in electronic goods niche has been brought to attention. Identification of the emerging tool brands employing to promote their product in the market and as well as the effect those tools bring. Also there is a greater impact these tools produce on the behavior of the consumer and their decision making.

Keywords: Social media, Electronic goods, Marketing, Electronics.

I. Introduction

Internet revolutionized the modern world in a way anyone could have ever imagined. It was a long process and a lot of time for the journey of the internet to reach to the point where it is now. There was constant process of evolution from Web 1.0 characterize by read only internet to then Web 2.0 identified by read and write format and now is gradually moving towards Web 3.0. All the Social Media Networking sites are the product of Web 2.0 where websites such as Facebook, YouTube, Instagram and many more came to existence. Today with evolution and integration of smart phones, internet the world has become smaller and connected. No place in the world is far away to connect, and the harmony of these technologies has also changed the way people live their lives (Scholz, et.al, 2018).

Anything and everything are now on internet and just a touch away on our smart phone. One such sector which took a whole new turn is the world of shopping. The industry of shopping is now a touch away with millions of brands coming online across the world. The constant evolution in technology also brought change in the marketing structure of the companies. Integration of social media also transformed the way in which brands communicate with the customer and promote their product (Cuong, 2021).

Today, people spend most of their time on the internet and an average consumer invests a good amount of time researching products before buying them. This also makes the role of influencers and product reviewers much more important and relevant. Social media marketing has become a new emerging job opportunity for the millennial. A large conglomerate of brands, social media, influencers, digital advertising, and social media marketing collude to shape the consumer's behavior with the help of codes and algorithms. Electronic goods are in general considered as a costly purchase and user are always hesitant regarding purchase of such goods through online medium. Brands are organizing and employing various methods to boost the trust of consumer in the brand and the product itself specifically bought online. Product reviewers, in-product service and post maintenance service, etc. are done by the brands to commit to the customers and increase brand loyalty among them (Poturak, &Turkyilmaz, 2018).

II. Literature Review

WOM, Word of Mouth was an effective way for the firms to promote their product and reel in new potential customers towards them. It marked itself as successful marketing strategy used specially by the local brands and firms to promote their product. With change in times and since the inception of internet, WOM is taken over by eWOM, i.e., Electronic Word of Mouth rather than physical one. This approach had more reach ability than the traditional method. While the traditional method was based on a chain system, this was based on the appliances of multimedia

communication and internet. Researches have found positive impact of eWOM on the purchase activity of the consumers and their decision making (Goh, et.al, 2013).

The decision making of the consumers were influenced more by their close ones such as family members. Today eWOM with the help of the social media has taken new form by creating influencers who with their word of mouth try to influence the purchase patterns of their followers. Brands are also adapting to the new format and use popular influencer to promote their products and create a better brand image. eWOM in right direction is absolutely linked to purchase intent and has a larger influence on acquisition intent than advertising. Companies must cheer associates to share their acquaintance or involvement rather than just posting advertisements, particularly in non-transactional simulated groups. Low-engagement ads negatively impact virtual communities, so businesses need to create high-engagement advertisements, such as cybernetic accessories, blogs, and opulent media, to attract potential customers, this also leads to creation of communities of loyal customers who not only prefer brand specific product but also promote it to others (Massie, 2016).

Social Media Marketing (SMM) is one of the newest emerging fields in the advertising world, although it is different from the traditional digital marketing as it specifically equips social media for the purpose of promotion rather than traditional advertising on websites. Under this various approach can be taken up such as Social Media content creation is a new emerging way to promote products. It is defined as creation of content by unprofessional people who dive into this new ecosystem. The video content with pinch of creativity tries to promote products and influence the consumer pattern. Product reviewers are the best example of this form of marketing. These reviewers try the popular product in the market and share their opinion about it through different social media handles and also try to answers the queries of the consumers. Consumers on the basis of the information try to judge the product which will fulfill their needs the most and thus make decisions on purchase of electronic goods (Chu, & Chen, 2019).

One very impactful feature of SMM is that it enables to engage with both loyal and potential customers in a way brand could not imagine. It is also cheap in comparison to the traditional advertisement. Thus, it provides a base for new startup and brands to rise up despite having fewer funds. Social media is one of the best tools for thriving and new business as branding can be done very effectively on the targeted audience. With the help of the algorithms it aims to target audience with the help of social media. It is done by critically analyzing the interest of the users and then promoting products of their own interest and by constantly advertising relevant product, it psychologically shapes the behavior of the customer (Makudza, et.al, 2020).

Electronic goods are considered as durable goods at the same time it is considered as luxurious in nature and are required trust as a brand to be able to sell their product in the market. Brands need to take social media as a marketing tool to create better image of the brand and the role of social media analyst thus have become very important now-a-days. It enables brands to interact with the customers more

efficiently and increases brand loyalty among customers. The one major thing brought by the online shopping is convenience and people can now purchase goods at ease without even moving from their couch. Both the brands and the customer have benefitted by it as internet have increased their reach without increasing their costs (Gupta, et.al, 2021).

There is a substantial influence of social media on the customer product equity. A solid connection among social media and product parity is witnessed. Social media has been defined as the partnership of the media and societal communiqué, in which folks generate and segment facts. Main highlights of social media advertising and the use of Facebook as a labeling prospect. It also protect eddiverseare as of social media marketing: online communiqué, communication, content sharing, convenience and reliability. Additionally, it emphasizes the connection between social marketing and product equity. This correlation shows that it attracts new customers to the company by reminding the customers of the story of the company and their emotional bond with the company. An illustration of the connection between publicizing and brand equity is the linking and communication among the Facebook page and their influence. One such example is Nokia, when it came back after being taken over by the HMD global, the only flourishing factor the company had was I Brand Equity and Brand value it owns before getting shut down (Arekar, et.al, 2018).

There is now increasing powers of the consumers today over the brand than the brand themselves have on their authenticity due to social media. With access to social media consumers now prefer to look for authentic information about the brand beforehand and thus after product service becomes crucial for the brand to remain relevant Faulty product and poor service can dent their authenticity and can also lead to fall in consumer's trust (Janavi, et.al, 2021).

Brand mindfulness refers to the strength of a product's essence in the buyer's attentions also, is a significant part of product value. There is a few degrees of brand mindfulness, going from simple greeting of the product to prevalence, which refers to the disorder anywhere the make comprised is the chief brand appraised by a buyer. The meaning of brand mindfulness has been characterized under brand mindfulness as the way in which regardless of whether and when shopper knows the brand also, brand picture i.e., how the buyer connects the brand with him. This is done through the help of social media and thus changes the consumer's behavior patterns towards that brand (Rishika, et.al, 2013).

Brands today are also very aware of the fact that associating into in order to create a positive image of themselves online. Today youtubers, social media influencers are the people with whom brand connect to promote their product among the young generation. "Brand association has a strength level, and the link to a brand (from the association) will be stronger if it is founded on multiple experiences or exposures to communications, and if it is supported by a network of other ties". Brand connections may symbolize product attributes. It is argued that brand linkages could be beneficial to the company. One can also say that customers by giving them a reason to buy the brand and by giving them a reason to buy it. Consumers' positive attitudes

and feeling towards an influencer are then directed towards the brand making it popular among other customers too. In the establishment and management of brand equity, associations are crucial. In this case, Great brand equity indicates that people have momentous favorable relations with the brand (Ertemel, &Ammoura, 2016).

One of the most crucial factors is brand loyalty after various viewpoints, which are behavior, attitude and choices. Though the behavioral viewpoint, is based on the number of acquisitions of a specific brand, the attitude standpoint includes the preferences and dispositions of consumers towards brands. All the efforts taken in by the brand is in order to create brand loyalty. Brand loyalty is the one which let company thrive even in the difficult times. Electronic industry heavily run on brand loyalty. The definitions of the decision perspective focus on the reasons to buy or the factors that can influence decisions. In addition, defines brand loyalty as a deeply anchored commitment to constantly buy or repeat a preferred product or service in the future, despite the influences of the situation and the efforts of advertising that have the possible to induce change conduct (Perera, et.al, 2019).

Oliver's meaning accentuates the behavioral measurement of brand faithfulness, Arguments are also made that brand constancy is often considered by positive approaches toward a brand and recurrent consumptionsof the same product from the same brand. the long of the time. From an attitude outlook, brand constancy has been defined as "the tendency to be loyal to a focus brand, as evidenced by the intention to buy the brand as the primary option" (Chang, et.al, 2019).

III. Conclusion

Social media have changed the way consumers take decisions regarding electronic goods. Electronic goods considering being expensive, their purchase depends on the trust that consumer put in the brand. Brands taking this it account responded with creating better brand image through social media interacting site such as Facebook, YouTube, etc. In conclusion social media today heavily affect the way consumer take their decisions regarding electronic goods. Product reviewers are one of the most influential factors which shapes the way consumer makes decision. Consumer are thus today based on the information consumer search for buying electronic products, brand names, Social media image, their authenticity and trust, etc. eWOM has become imperative as eWOM will dwarf traditional marketing communication gear as the most effectual way for a business to directly engage with consumers(Erkan, & Evans, 2016).

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Transforming Microfinance with Digitalisation: An Empirical Study of Experts Opinion

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Abstract

Digital financial services (DFS) providing greater financial inclusivity in developing countries. Since the last decade, DFS diversified, innovated and transformed money transaction and bill payments all digitally. Moneylending, credit transfer, cross border remittances, insurance, savings, bulk distribution and other valuable services can be done effortlessly and fast. Digitalization is no longer an option, but a necessity to stay viable in the market. As the markets are evolving microfinance providers are taking steps to embrace digital financing. Digital financing means not only online transactions but also providing loans, services, funds and other monetary services virtually without any physical contact. This benefits both the clients and the microfinance tech providers. As it expands the reaches of the fintech companies, increases their operational capabilities and diversifies their capacities in terms of lower cost services. Digital financing also comes with its own sets of risks and challenges, it may cause a threat than leverages if used for wrongly or for suspicious activities. Sample of 179 respondents was collected from respondents through, a “standard questionnaire,” which was created on five-point interval scale.

Keywords: Digital financial services, Digitalization, Digital Financing, Moneylending, Insurance.

I. Introduction

Humankind has lived with poverty since time immemorial. Some accept it as destiny, some condemn it, some do not bother at all. What we must do is fight it. Fight it by looking for solutions for a better system that aids and helps the poor to lift themselves up from poverty. Digitalization of microfinancing is a recent phenomenon that may revolutionize it for the good and increase the reaches of microfinancing. Microfinancing came into existence as a tool to target small businesses and poor individuals to help them access conventional banking by enabling small loans and services for them.

One of the major components of microfinancing is micro credits, which essentially means lending small loans to clients who can't afford higher interest pays from big loans from traditional banking systems. These poor clients include social marginalized class, oppressed women, geographically isolated areas and places with economic depression. Initially microfinance has its limitations but slowly it was popularized, and now microfinancing can be classified to two types

- Small business and individuals
- Social groups.

Both are dealt with different approaches and different schemes. Specified models are developed understanding the need of the targeted people.

Digitalization is changing the working, operating and processes of microfinancing. The expanding reach of mobile money, FinTech rise and the introduction of Blockchain technology, online platforms and artificial intelligence have all changed the way microfinancing used to function. Digital Financial Services have seen tremendous rise in the last five years. It is estimated that around 3.8 billion people now have a financial bank account be it mobile money, savings or current. Though developing countries one in four people have a bank account, that need to be improved.

Microfinancing is the major driver in this number. People who cannot afford traditional banking as they serve little to no benefits for them. They look for microfinancing that help them taking fast and secure loans with less hassle. They have to worry less about the repayment of the loans as they are lost (not as strict as a conventional bank), the loans are designed especially for them to cater their needs by aiding them to open their business without giving high documentation (Satpathy, et al., 2015).

In rural areas majority of the people live very basic life where they don't have some of the certification that are must to live say for example in posh areas, this happens mainly because of the live far away from the ecosystem of cities. So naturally it becomes important that the loans must come with minimum documentation than traditional banks. Such instances can be solved easily with digitization of microfinancing as id verification can be achieved within some seconds and the person in need can be helped right away (Bisht, et al, 2021).

II. Literature Review

Microfinance helps people with limited education access loans to educate their future generations. Family which are impoverished for generations entrapped in the vicious cycle of poverty unless their enablers that can empower them to break this noxious cycle. Thus, we need to eradicate poverty to exterminate hardship, extreme struggle, hunger, violence and hopelessness. Or else they will be the daily harsh reality for millions of people worldwide. The data of the current economic condition tells that around 3.5 billion of the total population lives under a daily income 2 USD. That itself explains the poor state of the families that live in such income. Their children suffer problems such as malnutrition and no education. With microfinancing combined with the advancement of digitalization we can look for ways to economically aid such families (Kanungo & Gupta, 2021).

Digital microfinancing can minimize economic failures that inevitably doom the future of society despite the immense advancements in technology. The solution to poverty is planned and structure microfinance also known as microcredit. It is a

powerful enabler to enable these poor people to break the vicious cycle of poverty at the very grassroots and thus generate a better hope for the future (Solomon, 2017).

It achieves that by creating solutions and schemes that can help solve the problems faced by the society. It has the power to predict and capture the potential opportunities, with that it also endures the passion and drive to solve the problems faced by the general public. It also takes required risks that comes with the return of loans and try to help the poor communities with less strict policies and loans. The way that Mohammed Younis innovated micro finance industry remarkably to help his countrymen and women in Bangladesh (Ranabahu, et al., 2021). There is a lot of confusion regarding how FinTech Companies make their profits, whether they make little profit or no profit, sometimes people speculate that they try to make profits from the sufferings of the poor and the less fortunate.

Mostly it is a market-based profit model in which profit is decided keeping the wellbeing of the targeted audiences in mind. Thus, microfinancing firms have higher accountability than conventional financing firms. Questions like, how to reach people beyond that classified set of audience? How to break boundaries and reach a global level? How to reach people living in different geographical and social locations? All these are major challenges that we face in alleviating poverty and eradicating socio-economic oppression (Diriker, et al., 2018).

Mohammad Younis was an Economic professor in Bangladesh who gave only 27 US dollars to a bunch of local villagers who were brawling to pay their debts and repay the loans the borrowed. But by selling raw materials in their bamboo furniture businesses, the credit given to the villagers not only helped them repay their loan but the Younis too made a handsome profit. These micro financing loans which were aided to poor entrepreneurs some hope any background in credit handling or money repaying catalyzed them to achieve big feats. This in turn empowered them to break the cycle of poverty and contributes to society becoming something bigger for themselves.

Microfinancing increased from 13 million borrowers in 1997 to 211 million in 2013, microfinance industry increased robustly during the early 2000s (Kakembo, et al., 2021). It was possible due to a number of reasons, as it targets mostly rural areas which had left everyday financial services, it gave loans to small groups of poor people and mostly to women. Women have a reputation in returning the loans better than men. They repay timely and carry the sincerity in making the best out of whatever they are given with. Private sector money was used to grow fundings.

Digital microfinance services to the poorest of the society also ushers numerous anecdotes of the amazing prosperous properties of microfinancing services and economic transformation. In the last half a century, microfinancing has shown positive results and enabled the poorest to achieve greater financial stability than one could have ever imagined. They have reached better ranks than themselves at some instances (Kakembo, et al., 2021).

The ground results of the miracles of microfinancing can only be seen once it gets satisfactory investment. We can help the poor by saving them from their uncertain future of begging on the streets and washing other people's cars or surviving only on limited food. Now dreams can be pursued, sky propelling away from poverty and breaking free of the cycle. The enormity of the global problem of poverty remains at large consider the fact that 2 billion poor adults still lack access to a bank account. As for the 2017 World Bank symposium on microfinance the World Bank has recommended 3 levers to increase the outreach of microfinance in the first ever to adopt. A customer centric approach which gives a deeper understanding of the clients' specific financial needs and their creditworthiness which establishes their credit behavior based on their likelihood to repay rather than their capacity to repay at this is done by specialized applications. The information of the mobile phone and the digital trails of the client the second lever is used in information technology enabled microfinance models to a improve operational efficiency. Be it lower the costs or the increase in the outreach of microfinance (Bokkens, 2021).

When one thinks microfinance, one typically thinks of empowerment, poverty elimination and almost certainly modernizations of the FinTech industry, there has been innumerable number of heated debates about whether Digital Microfinancing Services (DFS) works at all or not. DFS as a concept uplift and alleviate the poor is still doubted by some economists in the world. Also a heated debate on some of the moral compasses of the micro vendors are still going on (Mayoukou, 2020).

Microfinance as a concept is a tool to alleviate poverty and one of the arguments is that, sometimes it does not work as it leaves some of the borrowers worse off. Majority of the studies in the last decades have shown that there are positive results of microfinancing and digital microfinancing for the fact. Though some economists from various universities argue that microfinancing is helpful only to certain social classes and not to the most oppressed. They write that microfinancing puts more pressure to the already burdened workers and they get trapped in the vicious cycle of debts more than it helps alleviating their financial status. Most of them point fingers and lack proper planned approaches to deal with poverty alleviation. Even if the economist has suggested some innovative methodology, it lacks proper testing and there is no data to back their new ideas. Therefore, we get stuck in the squabbles and we get stuck in their chop logic (Mayoukou, et al., 2021).

Talking about one of the major drawbacks of microfinancing, the case of South Africa is perfect to understand how and when microfinancing flops and becomes a threat to empowerment. In south Africa, it is seen that all of the microfinancing borrowing is spent in only in consumption purposes and very little is left on investing in their businesses. This is peculiar pattern that is seen in the country. This mainly occurs because of their mindset and limited education. Their businesses fail because of extreme market competition that lies in very congested locality, they fail to rise their popularity and gain trust of the customers. Thus, after huge consumption and money pumping, they get negative results. Finally, they get burned by the debts of the microfinancing industry and trap themselves in the web of ever-growing increasing

debts. Another factor, that new startups in rural areas fail is because the locality and neighborhood is very poor, thus, enable to purchase their services (Mader, 2016).

Digital microfinance providers compete with other digital finance services. The race to serve the best type of schemes is huge, the industry may not look lucrative to some of the investors but provides steady profits. Even more than that it gives mental peace and blessings of millions of people living under extreme conditions just to get two times meal a day.

A major problem seen in digital microfinancing is that sometimes it fails to reach the absolute low classes of the societies. This mainly occurs because of the facts that highly oppressed classes do not even have a minimal level of education to read basic letters of their mother tongue. In such case, it is extremely difficult to help them start a business or provide them employment as they lack basic understanding of the world. This can be termed as shortcoming of microfinancing. It is often said that microfinancing is only effective to eradicate the creamy layer of poverty and is useless in digging deeper to all social roots. For such strata of society, it is impossible to aid them with digital financing as to operate a smart device people need a minimal level understanding and usage of the device (Dredge, et al., 2019).

III. Objectives

1. To identify the benefits of transforming microfinance with digitalization.
2. To know the risks and challenges associated with digital financing.

IV. Methodology

The study is empirical in nature. 179 respondents participated in the study. The data was collected from them through a structured questionnaire. Mean and t-test application was done to identify the results. The method of sampling was convenience sampling.

Finding of the study

Table 1 displays the gender, where male respondent is 57.54%, and female respondent is 42.46%. The age of the respondents were 25 and 30 years are 39.66%, those between the Ages of 30 to 35 years are 24.02%, and one who are 35 years & above are 36.32%. Looking at the Office, respondents in Front office are 50.84%, and in Back-office are 49.16%. With reference to the Income level of the respondents, Low-income group are 28.49%, Middle-income group are 37.43%, and High-income group are 34.08%.

Table1 Respondent's Details

| Variables | Number of respondent | %age |
|------------------|-----------------------------|-------------|
| Gender | | |
| Male | 103 | 57.54% |
| Female | 76 | 42.46% |
| Total | 179 | 100% |

| | | |
|------------------------|------------|-------------|
| Age | | |
| 25 to 30 years | 71 | 39.66% |
| 30 to 35 years | 43 | 24.02% |
| 35 years & above | 65 | 36.32% |
| Total | 179 | 100% |
| Office | | |
| Front office | 91 | 50.84% |
| Back office | 88 | 49.16% |
| Total | 179 | 100% |
| Level of Income | | |
| Low-income group | 51 | 28.49% |
| Middle-income group | 67 | 37.43% |
| High-income group | 61 | 34.08% |
| Total | 179 | 100% |

Table2 Benefits, risks & challenges of Transforming Microfinance with Digitalization

| Sr. No. | Statements | Mean Value | t-Value | Sig. |
|---------|--|------------|---------|-------|
| | Benefits | | | |
| 1. | Digitalization of microfinance have improved the efficiency of operations | 4.29 | 16.73 | 0.000 |
| 2. | Serving time of the clients have reduced by digitalization | 4.13 | 13.62 | 0.000 |
| 3. | Digitalization of microfinance has made it moved towards global level and met the standards of financing services | 3.91 | 12.39 | 0.000 |
| 4. | Customer's data and financial records are more safer digitally as compared to books and pages | 4.21 | 17.60 | 0.000 |
| 5. | Staff can now publicize new schemes and products easily through digital platforms | 4.07 | 12.55 | 0.000 |
| | Risks & Challenges | | | |
| 6. | Customers are taking time in putting their faith and keeping up with the steps of making payments, and giving their data | 4.33 | 19.34 | 0.000 |
| 7. | Rural people have very less access to smartphones and digital knowledge | 4.11 | 13.38 | 0.000 |
| 8. | Risk for customers is the misuse of their digital data | 4.00 | 13.61 | 0.000 |
| 9. | Client face challenges in accessing their cash and services | 3.19 | 2.46 | 0.010 |
| 10. | Frequent breakdown of digital system is a challenge | 4.30 | 15.25 | 0.000 |

Table 2 displays the Mean values for statement with reference to the “Benefits, risks & challenges of Transforming Microfinance with Digitalization,” Looking at the benefits, the highest mean value of 4.29 is for statement “Digitalization of microfinance have improved the efficiency of operations, the second highest is 4.21 for statement “Customer’s data and financial records are more safer digitally as compared to books and pages.” Regarding the serving time of clients, the statement “Serving time of the clients have reduced by digitalization” shows the mean score of 4.13, the last two statement of benefits “Staff can now publicize new schemes and products easily through digital platforms” and “Digitalization of microfinance has made it moved towards global level and met the standards of financing services” have the mean value of 4.07 and 3.91 respectively. With reference to the risks and challenges, statement “Customers are taking time in putting their faith and keeping up with the steps of making payments, and giving their data” has the highest mean value of 4.33, next comes “Frequent breakdown of digital system is a challenge” with mean score of 4.30. Rural people are taking time in accepting digitalization as shown in statement “Rural people have very less access to smartphones and digital knowledge” having the mean score of 4.11. The last two statements of risk & challenges are “Risk for customers is the misuse of their digital data” & “Client face challenges in accessing their cash and services” with the mean value of 4.11 & 3.19 respectively. T-value of all statements in context of Benefits, risks & challenges of Transforming Microfinance with Digitalization are significant, because t-value statements are found to be positive and significance value also less than 0.05.

V. Conclusion

There are several needs in rural areas that forces them to looks for monetary loaning policies to help survive and live a moderate life. Weddings, childbirth, education, house building, old age, expensive medical treatments, theft, death of the single earner, wildfires, cyclones, floods, expansion of business, land acquiring, repairing furniture, staring a business, unemployment, etc. We need creative and collaborative ideas to meet such needs. Here microfinancing has been proved useful times again. Microfinancing means providing loans and other financial support to the less fortunate and poor classes of the society. Often rural people don’t get enough money when they are in critical need of money, they find themselves with crooked people who help them with money but later threat them with violence and demand their personal holdings. Lower socio-economic class of the society have been exploited for too long. Microfinance solves a lot of their problems by providing them with money which would help them start a business and work in a service. In this way they not only earn themselves a livelihood but also repay the favor easily (Dorfleitner, et al., 2021). T-test has been done to find out the outcome of the research, all the statements are found to be significant as the significant values for all statements is less than 0.05.

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Role of ICT in Effective Dissemination of Technical Education- A Systematic Review

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Abstract

At the point when somebody is outfitted with information, the person is said to have power. Information without a doubt is subsidiary pornography data. Because of this, data researchers, what not those worried about data generation creation. Preparing, safeguarding, and scattering in whatever structure are searching for the best techniques to serve their clients. This will enable clients as they will be learned enough to seek after their day-by-day challenges. Information and communication technologies (ICT) have grown commonplace in all aspects of life. Over the last two decades, the use of ICT has fundamentally altered the methods and processes of nearly every form of endeavor in business and administration. Education is a socially situated process within education, and excellent schooling has generally been associated with solid educators having high amounts of interpersonal contact with students. The use of ICT in training is appropriate for more student-centered learning environments. However, with the world rapidly advancing into advanced media and data, the role of ICT in education is becoming increasingly important, and its significance will continue to develop and produce in the twenty-first century. This paper included a writing survey regarding the use of ICTs in instruction.

Keywords- Ict, Education, Learning, Research, Change, Knowledge.

I. Introduction

Science and innovation establish the significant wellsprings of progress in my society, and they are the two central points adding to a nation's improvement. Specialized schooling, as a necessary piece of general training b situated to secure

essential reality about the innovative hierarchical part of work. Innovation schooling other than direct beneficial movement, progress in science and innovation enters all human undertaking circles, including inventive reasoning. 'ICT is a truncation, which signifies "Advancements of data and correspondence." ICTs are a paragliding term, which fuses all developments for the control and correspondence of every single advanced datum. ICT considers all the electronic improvement livelihoods that exist at this point to help individuals, organizations, and establishments. It is hard to depict ICT because it is hard to keep up with the developments that happen so quickly. ICT is a worry with restricting, recuperating, controlling, and communicating electronic data. it very well may be portrayed as preparing and correspondence offices and features that support guidance, learning, and exercise scope in instruction in an unexpected way. "Many the web projects expect understudies to convey utilizing electronic mail or mailing records or other newsgroups with understudies from different states or nations. The Internet ought to likewise be a fundamental piece of a coordinated instructing framework. It should be viewed as an instrument that supports and upgrades learning without help from anyone else, as implied (Alruwais et al., 2018). ICTs have become inside a concise time frame, one of the essential structure squares of present-day culture". Understanding ICT and mastering the essential skills and principles of ICT are increasingly valued as part of the core of education in many nations, alongside reading, writing, and numeracy. Fortunately, this is not the case; while PCs and their programs play an essential part in current data distribution, other technologies and frameworks embrace the miracle known as ICTs (Toyo, 2017).

'Internet administration, media communications hardware and administrations, data innovation hardware and administrations, media and broadcasting, libraries and documentation centers, business data suppliers, network-based data administrations, and other related data and correspondence activities,' according to a United Nations report. ICTs have undoubtedly changed education, learning, and discovery in the realm of training. PCs and technological applications became more pervasive in the public eye, prompting concern about the need for registering abilities in everyday life. Technology in Schools: Education, ICT, and the Knowledge Society ICTs have been utilized in instruction since their inception, but they have not been widely utilized. Even though PCs were not integrated into traditional subject learning at the time, it was widely accepted that instructional frameworks would have to prepare residents for extended haul learning in a data society supported by revenue in ICTs(A. W and Bala, 2015).

Present School Education System in India

"School training gives the base to the future instruction of a country. There are different schools in India, and numerous new ones are coming up. Various kinds of schools like private schools, live-in schools, government schools, day schools, grade schools, and auxiliary schools work in the country. These days, most of the schools have magnificent offices including the best educators to give quality instruction to youngsters". Countless schools are running in the nation; however, guardians think it is hard to pick schools for their kids because of the immense numbers (Suleiman et al., 2020). Every one of the schools in the nation is administered by the standards of the

separate sheets under which they run. Other than the state sheets, the Central Board of Secondary Education (CBSE), Council for Indian School Certificate Examination, and National Institute of Open tutoring are a portion of the sheets that take care of school assessment in India (Sunday, 2015).

The Strategy of ICT in Education

‘There is a need to achieve enhancements in the degree of ICT framework in schools, basically in rural regions. Tragically in rustic networks, understudies are encountering difficulties and are experiencing boundaries inside the course of accomplishing educational objectives. The understudies in class eight cannot peruse the English course readings of class two. Class eight understudies cannot take care of mathematical issues, including essential division, etc. These issues are created inside the training arrangement because of insufficient educating learning techniques and educational systems’. Another significant reason is that educators utilize conventional showing strategies in rural schools, and ICT has not been placed into activity. When the educators would not utilize current and inventive strategies, then, at that point, it is evident that they would experience hindrances inside the course of playing out their work obligations in a successful way and accomplishing educational objectives. Subsequently, the utilization of ICT in training in metropolitan just as in rustic networks is essential (Laronde et al., 2017)

ICT Improving the Academic Exhibition

“In light of the broad utilization of ICTs in training, the need seemed to unwind the fantasy that encompasses the utilization of data and correspondence innovation (ICT) as a guide to instructing and learning, and the effect it has on understudies' scholastic performance. ICTs are said to assist with extending admittance to schooling, fortify the significance of schooling to the inexorably computerized work environment, and raise instructive quality (Marina, 2016). Nonetheless, the experience of presenting diverse ICTs in the homeroom and other instructive settings all around the world in the course of recent many years recommends that the full acknowledgment of the possible instructive advantages of ICT ”. Over the past twenty years, the linear relationship between ICT utilization and understudies' scholastic exhibition has been the focal point of extensive writing. ICT aids understudies in their learning by improving communication between them and educators. Students who utilize ICTs for learning objectives become submerged during their learning time. As a rising number of understudies use PCs as data sources and intellectual instruments, the impact of innovation on supporting how understudies learn will continue to grow (Redecker and Johannessen,2018).

ICT as a Change Agent in Learning Process

ICT includes unmistakable significance inside the arrangement of schooling and in the execution of social exchanges. The utilization of ICT has achieved considerable upgrades in the working of educators, just as different individuals from the instructive establishments. The methodology of ICT inside the instructing learning measures and informative techniques has a beneficial outcome upon the arrangement

of training. The individuals from the instructive establishments can complete their work obligations in a very arranged and reasonable way and feel pleasurable and satisfied (Taylor, 2015). ‘The utilization of ICT advances a great learning climate. Inside the ideal learning climate, the understudies and instructors can deliver peaceful cooperation and work in coordinated effort and incorporation to accomplish educational objectives. Inside the course of regular learning, accentuation is put upon substance. The substance and prospectus are viewed as huge. The instructors must set themselves up well before they come to class to convey their talks’. The utilization of ICT advances free learning and thinks about elective speculations of learning. The regular learning measure puts an accentuation on anticipating the piece of the instructors and leads the understudies through a progression of primary groupings to accomplish the ideal results (Moore, 2017). Moreover, coordinated effort and incorporation are likewise advanced among innovative work units inside businesses and higher instructive establishments. Through the execution of ICT, instructive organizations can build up correspondence terms and create information and data as far as approaches and methodologies placed into activity in other instructive foundations (Ezekiel, 2016).

E-Learning as a Facilitator in Teaching and learning

‘It is without question that Web as an essential part of ICT is becoming essential for powerful educating and learning in all circles of human existence. Its colossal effect on schooling has achieved terms like e-getting the hang of educating, virtual educating/learning, and so forth. The Web is seen as an organization of millions of PCs on the planet conveying and sharing data utilizing the transmission control protocol internet convention. The possessions at the net are so tremendous and require explicit abilities or information to get what the analyst needs. The Web holds extraordinary possibilities in training for the most part and science and specialized instruction specifically (Tait, 2018)

The job of ICT in School Education of India-

Like India, all non-industrial nations on the planet are utilizing ICTs generally to expand admittance to and work on the pertinence and nature of instruction. ICTs can expand all understudies' choices, access, investment, and accomplishment (Kant, 2020). ‘Even though PCs have been presented in schools in India, the instruction framework has to a great extent not been impacted by the potential for inescapable change natural for it. Consequently, a proposed expansion in the spending on ICTs in school instruction from not as much as Rs 1,000 crore in the tenth Five-Year Plan to more than Rs 6,000 crore in the eleventh Plan (working gathering draft report certain ministry of Human Resource Development (MHRD) could mirror a direness to tackle ICTs for fundamental change in the training area’. The service has started a cycle to draft a National Policy on ICT in School Education (NPISE) to guide such gigantic spending. However, the draft is not yet distributed. It is being discussed in a gathering with non-administrative and business delegates. The vital bearing that it is taking raises a few hesitations and concerns.

Impediments to the Use of ICT as Instructional Materials in Science and Innovation

‘Data and Communication Technology (ICT) is not something new in the instructive scene, especially in created countries. In any case, it is new, most especially in an agricultural country like Nigeria. In light of its freshness, it is bound to confront a few hiccups. To be viable in the Plan of things, such hiccups and obstructions should be distinguished and taken care of viz. The most effective method to instruct and prepare proficient educators and laborers is to use digitalized frameworks and offices to keep a serious edge in all circles of human undertakings’. The most effective method to examine the perspective on coordinating, changing, and rebuilding the school educational program via presenting relevant courses that address the changing requirements and assumptions for people and so forth (Kim, 2017).

Advantages of Students Using ICT for Learning

As recently called attention to, the Internet gives understudies the assets they need to learn and their mastery. Also, offer the snares and models that the understudies need to attach to the long haul memory. “Understudy utilization of ICT to learning has certain benefits -Inspirational Factor: For some understudies, the Web can work as a persuading device. Youthful individuals are extremely enchanted by innovation. To further develop learning, instructors need to exploit the Internet's interest, energy, and excitement. The Internet assists you with giving them with extra learning openings that are not promptly accessible in the study hall for currently energetic students”. Cooperative learning: The Internet advances synergistic learning, cultivates conversation, and makes a more intuitive homeroom. Brief correspondence: the Internet announced higher topographical correspondence (Negi, 2017).

II. Conclusion

“Specifically, ICTs have had a minor impact on instructional practice in schools today; nevertheless, the impact will grow significantly in the coming years, and ICT will become a strong influencer among multiple instructional practices. Extrapolating from current exercises and practices, the continued usage and advancement of ICTs in education will unquestionably affect: ICT and demonstrating learning measures; quality and availability of instruction; learning inspiration, learning climate, and ICT use and scholarly execution”. ICT can change the way education is delivered and enable more widespread access to it. It can impact how children are taught and learn. It would give a rich atmosphere and inspiration for displaying learning metrics that appear to significantly impact the most prevalent learning style in schools by giving additional opportunities for students and educators. These options may affect understudy execution and achievement. “A more extended accessibility of best practices and best course material in instructing, which may be communicated through ICT, can encourage better educating and worked on the scholastic success of students. The general writing supports effective ICT integration in education. Educating and learning is an age-long exercise. The techniques utilized in these exercises anyway vary relying upon the age and the conditions at the time. This

review has uncovered that educating and learning should be possible more capably by the utilization of ICT, henceforth using e-instructing/e-learning”. The whole world has been diminished to a town, as found from the writing. The two educators and students can communicate more unreservedly in this present period of data expressway. Notwithstanding every one of this leaps forward, there are many hiccups which the paper recognized and similarly proofed arrangements.

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Strategies for effective vocational training: A qualitative study of high school students of electrical engineering

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Abstract

Vocational training in technical high school education and agriculture needs to be offered as well as organised in a rational, efficient, and systematic way. Educational institutions consider training of the universal specialised component in practical application as well as theoretical study of engineering and farming. The very first attempt has been done already- due projects of education are given a lot of importance by ministries. Several studies have also been done for teaching physics and other scientific subjects by implementation of the professional base components. These studies aim at characterising scientific knowledge into relating the practice and the theoretical areas of the study for determining basic features as per standard training programs of the future specialists in engineering and agriculture. The aim is also to prepare strategies for integrating profession-based approaches in the discipline of teaching based on pedagogical experiments and for creating an integrated curriculum.

Keywords: Vocational Training, Engineering, Scientific Knowledge, Qualitative Study, School students, Integrated curriculum

I. Introduction

More than the issue of unemployment, employability is considered to be a major problem in the domain of engineering education. Thus, the engineering colleges aim at improving employability status of their students and prepare them as good engineering candidates as well as humans so that they may achieve better heights in the personal and professional life and it also contributes towards growth and development of a society. The institutions in India have certain regular initiatives for

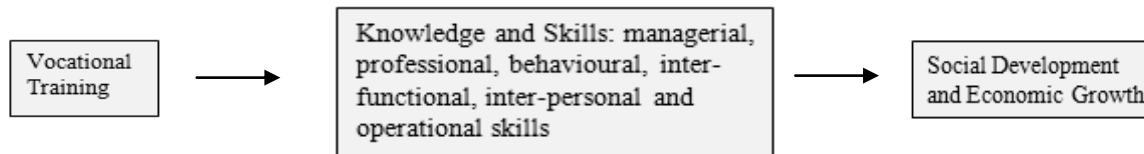
achieving the aim and also looks at undertaking the new initiatives through support of the technical education quality improvement programs. The equity action plans include realistic, specific, time bound and measurable goals offering equal amount of opportunities for all stakeholders in the engineering colleges. The plan aims at making sustainable efforts for transforming everything from good to best and from best to super best making sure success happens in light of the vision, core values and mission of the institution.

Few approaches to the educational reforms include a carrot in place of stick like environmental treatments in place of handling with stringent administration.

Therefore, it's important to look at different aspects to improve the climate of the institute, direct intervention and including the parents also. The other important factors which need to be kept into consideration for improving the academic achievement include the identification of the progress of the students for unsatisfactory and satisfactory. Therefore, particular identification wellness is clear demarcation between the students having a satisfactory academic achievement and the students having unsatisfactory achievements.

The importance of education for the facilitation of economic and social progress has been recognised well. Education helps in improving the analytical and functional abilities and therefore opens the opportunities to individuals and groups for achieving a better access to livelihoods and the labour markets. Better educated laborforce is important when we need to fulfil the requirements of supply for a faster growth. Education isn't just an instrument for improving efficiency but it's also considered to be an efficient tool for augmenting and widening democratic participation along with upgrading overall quality of social life and the individuals (Zbaravska et.al. 2020).

The knowledge and skills are considered to be the drivers of social development and economic growth in a country. The countries having a better and a higher level of skills and knowledge respond better and promptly to the opportunities and the challenges of globalisation. Our country is in the phase of transitioning to knowledge base economy and the competitive edge would be defined by an ability of its people for creating, sharing and using knowledge in an efficient way. The transition would expect India to create a workforce which is knowledgeable and is more flexible, adaptable, multi-skilled and analytical. In this new knowledgeable economy, skill sets include managerial, professional, behavioural, inter-functional, inter-personal and operational skills. The process can be understood with the help of the Figure – 1



Source: Author

Figure 1 Role of Vocational Training in Social and Economic development through skills development

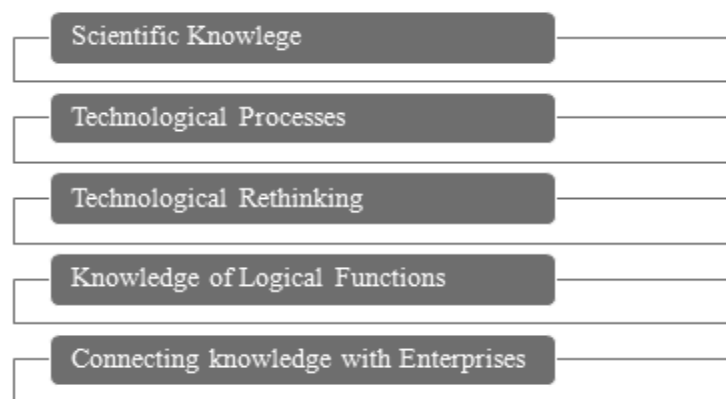
For achieving this aim, India requires flexible training and education system which would offer a foundation for attaining learning tertiary, secondary education and for developing the needed competencies as a means to achieve a lifelong learning. Since education is considered to be a means to bring socio-economic transformation in the society, different kind of measures are taken for improving access to education to marginal sections of society. One such measure is introduction of reservation system within institutions of higher education. According to the constitution of India, different minority groups could also have their own education institutions. A lot of efforts have been taken for improving access and approach to higher education amongst females of the country by establishing different education institutions exclusively for women or reserving seats in current institutions. The rising acceptance of courses of distance learning and expanding of system of open universities also contributes to democratisation of the system of higher education (**Konysheva & Ibragimova, (2017)**).

II. Literature Review

The primary feature of a well-qualified professional is his or her ability for performing professional activities responsibly and skilfully. Only when he or she has such qualities, the professional could become the main figure of the technical and scientific progress. There are certain strategies for enhancing the engineering and agricultural activities. These include integration of Science, production and education. It also includes strengthening the importance of Science in the institutions of higher education (**Cheng & Wu, 2016**). Firstly, as the base for system of engineering staff development and training in agriculture industry, creation of the education scientific production makes it complex for the training and even extremely qualified power professional engineers through usage of innovative technology. The evaluation of specialists with the creation of general qualifying features as well as standards of quality. Strengthening individual approaches, growth and development of the creative abilities of the students and creation of integrated teaching guide and curriculum. Another area is targeted training of the future specialist (**Ermeling & Yarbo, 2016**). It's become extremely important to boost the higher education system through extension of the university contacts with the employers, that in future may lead to a forward looking professional training considering foreseeable trend in the labour market. A very significant aspect of training optimisation in universities is strengthening of practical focus of the development and training, teaching a wide range professionals who have deep single domain knowledge as well as practical

skills. However, other focus in the engineering training in universities is done through professionals but even through the personal aspects which would help graduates in detecting the flexibility, initiatives, self-development, etc. as per the changes in work relationships (**King, 2016**). In this regard, universal cultural specialists training, building humanist personalities as base of the comprehensive development, establishing students civic position, an ability of responsibility actions and collaborations with the other people. Thus, a high adaptation efficiency of graduates would also be offered. The states strategies of teaching in the higher education institutions would help in extending objectives of the individual as well as the society. Fundamental trainings in Mathematics, Physics as well as other disciplines of theory which may supply education structure with the scientific base is important in technical higher education institutions. Good quality training of the power engineering specialists helps in rapid perception of the modern day technology and professional mobility amongst the engineers (**Yermakov et.al. 2019**).

Since engineering graduates deal with the technological processes and the tools based on the physical laws and regulations in the professional activities. Technological rethinking of the process of production, the automation as well as mechanisation, using computer facility demand knowledge in Physics, abilities and skills for competently performing specific tasks of production. Thus, the modern day specialists should be well prepared in advance for the activities regarding the domain of organisations and the enterprises of different types of ownership (**Konysheva & Ibragimova, 2017**). Based on the standard training program analysis, it has been seen that the future specialists in engineering and agriculture need to be competitive in basics of the general theoretical fields like physics including to an extent required for performance of the functions of Physics, specialised disciplines which cover the legislative, content, normal documents for such activities, the peculiarities of the agri production, the present direction and status of the technical and scientific progress in the related domain, economy wide discipline and main branches of industry and prospective ways to optimise and improve the agricultural production, basics for design and planning of the processes of production (**Thompson, Kriewaldt & Redman, 2020**).



Source: adapted from (Konysheva & Ibragimova, 2017).

Figure 2 Components of Vocational Training for Electrical Engineering Students

Thus, for training the graduates who major in the field of power engineering its possible only based on fundamental scientific development and training. This signifies that the students should have an in depth knowledge about fundamental of Science for instance Physics which is the base of scientific as well as technical progress (**Kaigorodova et.al. 2017**).

The efforts for improving quality of the education in institutions is quite challenging as a lot of institutions can't even compete with some of the high-end educational institutions regarding resources with their control. A derange in the benefits and salaries of teaching personnel is another important aspect to be considered. Local cost needs to be borne with the help of more fee from the students for making maximum use. Since the teachers are considered to be the main source to create these kind of practices, thus their own views are gathered with the help of prearranged questions on survey from twin institutes. Teachers have an important part to play for improving education and also the life of each of the students (**Kennedy, 2016**). The total number of faculties who are dedicated dropped off and view of the instructors regarding their profession has now become a job for fee, therefore lacking in terms of social responsibility. Updating and learning in technology and education is very important for teachers. The time available for faculty members for the purpose of self-improvement has also reduced because of more clerical jobs assigned to them for being completed on a regular basis. Most of these students as well as their parents go for engineering because either their neighbours or relatives might have suggested. But they do not choose engineering because they had an interest in it or for learning technology. Students who join the engineering colleges coming from the rural background, do not have the required skills of communication since they complete schooling in the respective state language (**Usak & Masalimova, 2019**). They are generally inhibited from asking questions in the classrooms. Thus, the faculty members need to always be available for any kind of clarifications. The expectations of the students in education has become dependent on marks and thus skills or quality are not as per the situations of real life (**Vermunt et.al. 2019**). The aspect of practical learning from the experiences of real life also need to be taught apart from the other subjects. The main aim of human's life is being happy as well as peaceful in all situations. The subjects like human values and moral science should also be taught in the form of a different subject with current curriculum. The traditional methods of teaching are followed by teachers with the help of conventional methods of brick and mortar which are considered to be obsolete. With the availability of the online teaching facilities, now a days using the method of chalk and blackboard has become obsolete and students are also not interested in listening for an hour. When material is available easily on the internet, students don't require to take notes while attending the classes (**Cheng & Wu, 2016**).

The research industry and facilities ready instructors are not easily available and the graduates in the bachelors as well as master's degree do not have the skills required by the industry. Also, the conventional methodology of teaching and learning is obsolete, and the best techniques need to be recognised and standardised for improving the requisite skills of students and the teachers (**Neupokoeva et.al. 2017**).

The affiliated colleges and universities bundled into the technical universities are now choking educational stream, the freedom of enquiring needed for educating the youngsters is completely missing. Also, the feedback from the industries in terms of curriculum isn't open for commenting for any kind of updates. Some of the core firms in electrical and mechanical domain rarely hire fresh engineers as they do not have the required skills or a direct understanding of technology which is used in industries and cost as well as time for training of company. Even though fresh engineering professional may be easily trained in an industry, still it's quite risky to include them for working on complex machines and electric systems. An ability of the slow learners maybe considered, and an entirely different curriculum could also be introduced for students who are below average as the second grade curricula for speeding up the process of teaching-learning (**Dorozhkin et.al. 2017**).

A teacher has to be full of knowledge where students may acquire as much knowledge as possible. Thus, it's got a fundamental importance for training the teachers of college and enhancing their technical as well as resource capacity. A good idea is to send members of the faculty to the industries for being trained in requisite technology for transferring knowledge amongst the students. Benefits of this format is valid for the students for being placed in their respective industries requiring the learnt technology (**Jehlicka & Rejsek, 2018**).

The teachers need to spot the gaps within the process of learning and teaching and implement efficient pedagogy of teaching. It is imminent to find ways of reflecting value of teacher's education in training, technical skills, renovating the results of teachers making them apply actively their skills and knowledge.

For achieving a good quality teaching, standard certificate of teaching methodologies needs to be made important for teachers. The certification needs to be based on the performance of the theoretical examination as well as teaching demonstration. Some of the latest methods of learning and teaching should be made a part of the certificate courses. It should not happen that all students are taught in the same way and therefore, new practices of teaching are important (**Chen et.al. 2017**). The students need to be taught about enhancing their listening abilities and the way they take notes in the class. Also, faculties need to follow similar methodologies for making classes interesting and giving enough time to students for taking down notes and hints. Few of the emerging methods of learning and teaching include blended learning, collaborative learning as well as projects-based learning methods. The proposed methods for a collaborative learning method are also important here. The method begins with cluster or groups formation. The topics of this should be taught through conventional methods with the help of projectors. When some topic is taught, students are permitted to discuss it with their groups. In case of any doubts post the discussion, they should be clarified by the teachers or the instructors (**Iqbal & Saleem, 2017**).

In education, a shift is being witnessed from teacher centric education to the student's centric education process. Along with technical skills, the industries also require graduates with the managerial skills also, the course curriculum for the

university undergraduates are based on outcomes and implementing latest techniques for training the students for some particular and specialised skills and knowledge is required (**Konysheva & Ibragimova, 2017**).

The actual challenge for improving the technical education comes while ensuring that education system is aware of psychology of slow learner's experience. It is important to work on preventing peer ridicule which results often due to academic excellence. The choice base system of credit is a good initiative that encourages the students to select their subjects as per their interest. However, the total subjects may be reduced for ease of the learners who are slow. Also, apart from regular exercise in the labs, the app related designs could also be made a part of labs through the process of learning and teaching. There are several methods available for improving the experience of learning and teaching, however they are not limited (**Ilyina, et, al., 2019**).

III. Conclusion

The integrated curriculum developed for agriculture and engineering higher education is based on the improved and updated means for training which were assessed in labs conditions as per the different parameters of ease of usage, visibility, durability, reliability, etc. according to the present requirements of technical aesthetics, didactics as well as safety. The conformity of mentioned requirements helps in ensuring successful activity of future experts in technical and the agrarian industries. Implementation of modern-day requirements to professional training and education of the farmers demands development of new system of methodologies for learning Physics. This kind of a system needs to be based on the activity related system and student centric approaches of learning. All the methodological and educational complexes in science need to be developed based on communication technology and new information.

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Role of CSR in Building Trust: A Qualitative Study of Indian Banking Sector

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Abstract

Corporate Social Responsibility is a management concept where companies operate their businesses while keeping the social and environmental factors in concern. CSR emerged in the 1960s as an attempt that links businesses with society. While CSR is beneficial for the community in general, it also helps the company positively. It improves the company's image as well as boosts the morale of the workforce. Business groups across all the sectors of the economy are now taking up the CSR business model as it helps them build a positive image and more trust among the masses. The study indicates that in developing countries, the CSR activities undertaken by banks are not so successful. It is because financial institutions have begun to think of CSR as a marketing tool rather than how they could give back to society. The paper suggests more research into this area should be conducted to analyze how Indian banks can increasingly integrate their business with CSR.

Keywords: CSR practices, Corporate Social Responsibility, Corporate reputation, Banking

I. Introduction

Corporate Social Responsibility or CSR refers to the strategies used by businesses to conduct their business operations in a way that is ethical, society-friendly, and environment friendly too. It is a way to integrate business with society. CSR as a business model emerged in the 1960s. Since the companies consider the social, economic, and environmental implications of their businesses, CSR helps build community to benefit the society.

Indian banking sector dates to the 18th century. It is only recently, with globalisation, that the need for CSR practices has been realized in the banking sector. The various CSR activities that can be undertaken by financial institutions are financial inclusion of the poor of the country, getting the credit facility accessible to the poor populations, reaching the remote areas of the country, socio-economic development of the country by investing in poverty alleviation, health, medical care and investment in the rural as well as infrastructure development.

As per the guidelines by RBI, financial institutions, both public as well as private, now need to undertake activities that include work for children welfare, education, environment, social upliftment of the backward communities, women empowerment, vocational training, community welfare and development. There is a difference observed in the various private and public sector banks concerning CSR activities. Public sector banks mainly focus on rural development, while private banks work for the education and employment of the masses.

CSR activities are beneficial to society and are very important as they help enhance the image of the banks. Institutions that indulge in CSR help build public trust and enhance positive relationships within the firm and outside. Employees are also motivated when their companies indulge in CSR because it promotes giving back to society. Major banks in India are now receiving pressure from non-governmental institutions to satisfy in CSR.

In India, integrating CSR with business operations is seen merely as a tool for marketing. Banks use CSR only in tangential ways like making donations to trusts, NGOs, or sponsoring events. Banks must have a clearly defined CSR policy. They must connect CSR with their business operations rather than implementing them in an ad-hoc manner. Furthermore, socially responsible behaviour is expected from Indian banks because our country is still developing with a dire need for economic upliftment of a large population. Hence, more initiatives towards community welfare must be taken such that banks can ensure sustainability in society.

II. Literature Review

Pratihari and Uzma (2018) conducted a study to understand bankers' perception of CSR strategies. The study showed that bankers perceive CSR as a moral obligation that the banks need to follow for the benefit of society. They believe that it is an extra but required effort beyond the banking operations that all banks must undertake as a gesture towards the community. They also stress the fact that CSR initiatives help banks establish a positive image and reputation among customers. It helps in building a bond of trust within the bank's management. Besides, the quality of service offered also improves with the CSR strategies in place. So, the banks that integrate CSR with businesses often have the edge over those that do not.

The study by Gul et al. (2017) focussed on what a firm-level administration system means for Corporate Social Responsibility. The review utilized an enormous number of firms that were recorded at the Pakistan Stock Exchange. They attempted

to research the diverse impact of corporate administration on CSR across the different firms – small, medium, and large. The review suggested that a firm chooses CSR rehearses dependent on corporate administration and proprietorship construction of the organization. Results additionally recommended that medium-measured firms are bound to include CSR exercises.

The study by Bala (2014) was aimed at understanding and analysing the CSR practices. About 145 firms were considered for the study, among which 51 were 51 MNCs, 20 PSCs, 65 PICs. The data generated through the study revealed no significant difference in the CSR practices between these three types of firms. Factors like community welfare, employee development, safety, natural resource protection, working under law, and compliance are the central CSR practices followed by these firms. The difference between these firms lies only on the priority of following CSR practices.

Guerrero (2016) researched the Corporate Social Responsibility Practices in the financial organizations of Ibague. A subjective and quantitative exploration was directed and dissected the construction as well as CSR standards. He broke down the financial tasks regarding CSR. The aftereffects of the review showed that CSR standards had not surpassed the edge of simple consistency with lawful arrangements. In this sense, the things identifying with CSR limited-time occasions, assets for social and natural causes, and the report about CSR were likewise appraised as moderate appraisals.

Corporate Social Responsibility is often directly linked to Corporate Reputation. The study by Lorena (2018) conducted a literature analysis of all the existing academic papers and found that banks should concentrate their standing procedures to pass on unwavering quality and to build up the initiative of their supervisors, considering shopper fulfilment and confidence to accomplish the most extreme advancement of their standing assets. The review gave an inside and out portrayal of CSR practices and how they help develop a decent standing. CSR gives banks an edge over others. With respect to banks focusing on effectively creating CSR arrangements, this review features the positive connections among CSR and notoriety. The study by Perez and Bosque (2015) analysed the bank customers and identified similar patterns of expectations in both savings as well as commercial banks. Customers in both the banks expect customer-oriented CSR practices. The paper also suggests new managerial strategies that go well with the CSR. The authors also try to anticipate CSR image based on various factors like how well the company follows the CSR practices, motivation behind the CSR strategies and credibility.

The study by Barlett (2005) focussed on connection between CSR announcing and notoriety with the instance of Australian banks. The contextual analysis researched how significant banks in Australia react to worries through CSR. The discoveries recommend that while the reception of CSR announcing is connected to higher standing files, it isn't really taken on as a procedure by individuals from the whole business to resolve inquiries of legitimacy.

The study by Bihari and Pradhan (2011) talked about the corporate social responsibility practices in the Indian banking sector. It was also aimed at finding out the impact of such strategies on the performance and image of the bank. The findings of the study suggested that Indian banks have started employing more CSR practices along with their routine business operations. Including CSR has positively impacted their business to build their image and goodwill. Work done for the society always gives back good results.

The research by Brio and Lizarzaburu (2017) sought to study the influence of CSR on Corporate reputation. The study was conducted for the financial sector of Peru but also told that there is lack of research in this regard in the banking sector in emerging countries. The four major banks of Peru were analysed, and the study suggested that CSR helps in building a corporate reputation as well as boosts investor's confidence.

The study by McDonald (2015) investigates the impact of CSR as a long-term strategy that can help in regaining the lost reputation and to shape public's opinions about the firm. Banks involving in CSR activities positively influence customers' perception of value of bank and thus relationship with customers is improved. For employees too, CSR activities help in improved relationship with the management of the banks. The study also suggested that CSR activities in developing countries is scarce. CSR exercises as the mix of social, natural, and moral worries with the normal business tasks to help the public. It is a method for rewarding the public. For banks, enjoying CSR can give them an upper hand over the others. Corporate Social obligation is an apparatus that builds intensity among the banks. Since CSR has a ton of positive advantages like upgraded public standing and picture, further developed connection with the representatives of the bank, fortified local area, many banks enjoy CSR activities to push forward. According to the review by Sustainability Survey of Financial Institutions, 68% of business banks notice expanded standing and believability which inspires them to take part in CSR rehearses.

The study by Perez and Bosque (2012) is qualitative research on the role of CSR in the corporate identity of banking service providers. The results of the study showed that even though companies are increasingly integrating CSR practices in their operations, some aspects of its management detract from its success. Six of the biggest and the most important banks of Europe with proper CSR practices in place contribute about 62.75 per cent of the total assets in the national banking industry.

The study by Trotta, Cavallaro and Care (2013) proposed that an expanding number of researchers have started to check out the idea of corporate standing and Corporate Social Responsibility. Study uncovered the positive advantages of CSR in the financial area since it gives bank an upper hand over the others. The review recognizes corporate standing as an insightful part as it depends on the discernments and assumptions for partners. CSR then again is illustrative in nature since it depends on the activities of the organization.

The study by Sneekes et al. (2016) found that banking industry focussing mainly on the behaviour of management. The study proposes that when managers engage in CSR practices then the banks' earnings also improve, and their economic performance improves. Consumers also build trust with the banks when the banks practice CSR.

The research by Dhingra and Mittal (2014) suggests that Corporate Social Responsibility practices have become more important in the global world. The conduction of banking operations with ethical, society and community development programs benefit the society as well as the business. With increasing need for economic development across the world, banks should take an important role in eliminating or reducing poverty to ensure an equitable society.

III. Objectives of Study

1. To find the factors determining role of CSR in building trust
2. To ascertain the significance of the factors determining role of CSR in building trust

IV. Research Methodology

The present study is descriptive in nature in which the factors determining role of CSR in building trust have been studied. The sample size of the study is 160. The data were collected with the help of a structured questionnaire on a five-point scale and analysed with the help of the mean values and t test.

Table 1 presents demographic profile of the respondents on factors determining role of CSR in building trust. There are 47% males and 53% females in the study. Among the respondents 42% earn income of Rs. 50,000-100,000 per month, 32% earn Rs. 1,00,000-2,50,000 per month, 20% earn Rs. 2,50,000-5,00,000 per month and 6% earn Rs. 5,00,000-10,00,000 per month. The 16% of respondents are 20-25 years of age, 26% are 25-30 years of age, 36% are 30-45 years of age, and 22% are 45-60 years of age. The 28% of respondent's occupation is Business, 45% are in job, 23% are teachers and 17% are doing social work.

Table1: Demographic Profile of the Respondents

| Variables | Number of Respondents | % age |
|-------------------------|------------------------------|--------------|
| Gender | | |
| Males | 75 | 47% |
| Females | 85 | 53% |
| Total | 160 | 100% |
| Income per month | | |
| 50,000-1,00,000 | 67 | 42% |
| 1,00,000- 2,50,000 | 51 | 32% |
| 2,50,000- 5,00,000 | 32 | 20% |
| 5,00,000-10,00,000 | 10 | 6% |

| | | |
|-------------------|------------|-------------|
| Total | 160 | 100% |
| Age | | |
| 20-25 | 26 | 16% |
| 25-30 | 42 | 26% |
| 30-45 | 58 | 36% |
| 45- 60 | 34 | 22% |
| Total | 160 | 100% |
| Occupation | | |
| Business | 44 | 28% |
| Job | 59 | 37% |
| Teaching | 26 | 16% |
| Social work | 31 | 19% |
| Total | 160 | 100% |

Table 2 shows the opinions of the respondents. It is observed that ‘CSR benefits the society and helps in building the community’ with the mean value of 4.19. It is followed by ‘Banks need to behave responsibly and should undertake activities for the welfare of the society’ (4.15), ‘CSR improves the reputation of the businesses and thus boost the confidence of the investors’ (4.13), ‘The CSR activities should be integrated with the regular activities of the business’ (4.12). Further, ‘CSR activities are specifically helpful in building the image of the banks’ (4.11), ‘Banks who undertake CSR activities always have an advantage as compared to those who don’t’ (4.08), ‘CSR activities indirectly also help in improving the earnings of banks’ (4.07), ‘CSR activities help the banks in winning the trust of their customers’ (4.06) and ‘Banks often respond to major concerns through their CSR activities’ (4.02) were also considered important. Reasons like ‘Welfare activities for the society renders good results’ (4.01) were also viewed as important.

Table 2: Determining Role of CSR in Building Trust

| Sr. No. | Role of CSR in Building Trust | Mean Score |
|----------------|---|-------------------|
| 1. | CSR benefits the society and also helps in building the community | 4.19 |
| 2. | CSR activities are specifically helpful in building the image of the banks | 4.11 |
| 3. | The CSR activities should be integrated with the regular activities of the business | 4.12 |
| 4. | Banks need to behave responsibly and should undertake activities for the welfare of the society | 4.15 |
| 5. | Banks who undertake CSR activities always have an advantage as compared to those who don’t | 4.08 |
| 6. | CSR activities help the banks in winning the trust of their customers | 4.06 |
| 7. | Banks often respond to major concerns through their CSR activities | 4.02 |
| 8. | Welfare activities for the society renders good results | 4.01 |

| | | |
|-----|--|------|
| 9. | CSR improves the reputation of the businesses and thus boost the confidence of the investors | 4.13 |
| 10. | CSR activities indirectly also help in improving the earnings of banks | 4.07 |

Table 3 shows the results of t-test. It is found from the table that the significance value for all the statements is below 0.05. Hence, all the statements regarding factors determining role of CSR in building trust are significant.

Table 3: Significance for Determining Role of CSR in Building Trust

| Sr. No. | Role of CSR in Building Trust | Mean Score | t-Value | Sig |
|---------|---|------------|---------|-------|
| 1. | CSR benefits the society and helps in building the community | 4.19 | 8.542 | 0.000 |
| 2. | CSR activities are specifically helpful in building the image of the banks | 4.11 | 7.102 | 0.000 |
| 3. | The CSR activities should be integrated with the regular activities of the business | 4.12 | 7.040 | 0.000 |
| 4. | Banks need to behave responsibly and should undertake activities for the welfare of the society | 4.15 | 6.304 | 0.000 |
| 5. | Banks who undertake CSR activities always have an advantage as compared to those who don't | 4.08 | 5.903 | 0.000 |
| 6. | CSR activities help the banks in winning the trust of their customers | 4.06 | 6.428 | 0.000 |
| 7. | Banks often respond to major concerns through their CSR activities | 4.02 | 6.201 | 0.000 |
| 8. | Welfare activities for the society renders good results | 4.01 | 6.727 | 0.000 |
| 9. | CSR improves the reputation of the businesses and thus boost the confidence of the investors | 4.13 | 7.552 | 0.000 |
| 10. | CSR activities indirectly also help in improving the earnings of banks | 4.07 | 6.877 | 0.000 |

V. Conclusion

Corporate Social Responsibility is nothing but integration of business operations with ethical, environmental-friendly, or society-friendly policies that benefit the society. Banking sector in India is also including sustainability in their business model and involving CSR practices in their business activities. However, in developing countries like ours, the level of CSR policies adopted still does not stand at a satisfactory level. The study also revealed that out of the banks that do claim to include CSR in their business model, often make false claims about their actions. CSR has become a major marketing tool or a stunt to improve the political image of the banks. The study has identified that CSR practices not only help in improving the corporate image of companies but also improved relations with employees, customers and various other share and stake holders. Hence, more banks must genuinely adopt CSR and voluntarily disclose about their policies. As the countries' major financial

institution, working for the society, alleviating poverty, ensuring equitable system of governance and environment security.

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Factors determining the effectiveness of digital marketing in changing marketing environment: An empirical study

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Abstract

Several studies have been done for studying the factors which affect the online marketing strategies meant for business development. The results of these studies reveal that the commitment for product and service and homogeneity of products had a prominent relationship between high click rate for online marketing links. Digital economy helps in contributing decisively to the rising competition, especially with the involvement of digital transformation to the new models of technologies where online marketing is one of the most important parts of growth as well as user loyalty. Digital and internet marketing are some of the most significant factors in the campaigns that retain as well as attract the users of the internet. Researches aim at identifying the ways which help the users in gaining and retaining the customers with the help of digital marketing. These studies show some of the most significant actions in order to achieve user recruitment as well as loyalty with the help of digital marketing from opinions of the consulted experts.

Keywords: Online marketing strategies, online businesses, internet marketing

I. Introduction

Growth of internet in the past few decades can be considered to be one of the most used examples for explaining globalisation. In today's age of information and increasingly networked global economy, E-commerce or electronic commerce is

considered to be one of the primary instruments for fostering growth of businesses, movement of labour and the inter-personal relationships. Digital marketing isn't just one transactional tool. It also helps in generating the changes at micro-economic and commercial level that in turn requires changes in the theories and practices of marketing (**Baye, Santos, 2015**).

From the historical perspective, it's evident that different companies need to adapt the business practices with the progress and availability of the latest technologies, new techniques of management and the ever-evolving landscape of communication. The rapidly spreading computing power within different devices has also helped in fostering creation of digital economy or the latest economic and socio-political system which is characterised by the intelligent space which comprises of the information accessing tools and the processing of communication and information capabilities.

While these techniques are quite popular for providing useful data and information for the clients, its growing fame amongst the users isn't reflected necessarily in the academic research. These researches which are done also depict quite a discouraging picture.

Digital marketing has become quite popular these days. Since it got a successful start, a lot of new entrepreneurs who are setting up their business with the help of internet have made digital marketing as an important part of the method of earning income. They mainly commit to be full time internet marketing companies. There are a lot of benefits of being online and this effect has also impacted the merchandisers in a way that the performance-based tools of marketing are measured with the help of online marketing tools and programs.

For catering to the rapidly growing process, a lot of researchers have explored the success of digital marketing processes. However, some of the studies have understood only the basic characteristics of digital marketing to be the purest pay of marketing tool. There's been no benchmark metrics on the way tools of marketing need to be employed for the promotion of products online. The requirement of online buyers is changing with each passing day and it is important for the businesses to understand this requirement and act accordingly. Digital marketing helps them in doing just that (**Pauwels, Aksehirli, Lackman, 2016**).

II. Literature Review

Advanced showcasing has been common in the web market over late years. Since its fruitful beginning from Amazon which had spearheaded this new showcasing apparatus, some new web business people have made on the web promoting as a feature of their pay procuring technique by submitting as to it as full time on the web. The advantage doesn't stop at being an on the web, the impact has affected the merchandiser in such a way that presentation-based showcasing is currently estimated through the internet showcasing program (**Yang, Shi, Wang, 2015**).

To provide food for this fast development, numerous analysts have done examinations on the accomplishment of on the web promoting and uncovered reality behind it. Notwithstanding, as per scientists, a few specialists have just perceived the essential ideas of web-based advertising as an unadulterated compensation of execution promoting apparatus. There has been no measurements benchmark on how the promoting apparatuses are to be utilized in advancing the item on the web. All things considered, numerous online fizzled, in light of the way that there are no excuses, as it didn't fulfil the measurements in this quickly evolving prerequisite of online purchasers (**Bosch, Sang, 2017**).

Concentrates additionally expressed that an excess of assumption what's more, endeavoured to control online have come about in a make free mentality; as the online differ on the monotonous administrative methodology of the vendor. Ended energy and disappointment in expanding specialty market from online too brings about a web-based advertising disappointment. Aside from this, a portion of the explanations behind low transformation rates in web-based advertising were helpless design plan of site route, unclear perception of item and helpless item portrayal. In spite of this, the contextual investigations and conversation on the disappointment or accomplishment of the web-based program, numerous online, shippers or analysts have underestimated the comprehension of the internet-based client also, neglected to discover their insight about the online program (**Seggie, Cavusgil, Phelan, 2017**).

The connection between the online projects, on the web and online client has in this manner been removed and may bring about the disappointment of the web-based program. The comprehension of the activity completed by the web-based client is the significant measurements that all online or dealers ought to stress, particularly to those online who acquire their trust for money. The activity examined here included clicking, perusing, purchasing or in any event, finishing up a structure (**Bates et al., 2017**).

The subject of this exploration will talk about the web-based client's activity also, the explanation for the activity. In the event that the three parties (the online, online network and publicist) might want to profit from the on the web program, it was important to plunge into how web guests settle on choices on web-based buys also, what drives them to do as such. The comprehension of the client's activity will prompt more helpful perspective on the web based promoting achievement factor (**Choudhary et al., 2017**).

Internet promoting was a straightforward type of publicizing through a site. Practically speaking, on the web publicizing was tied in with getting your site in front individuals who were keen on your item or administration. About web-based promoting, investigates characterized web based promoting as on the other hand as method for drawing in clients to the site – a type of traffic securing. One significant advantage of web based promoting versus customary promoting is the range of people in general without the restriction of geology or time. The traffic on a particular site was here and there more than the number of inhabitants in a country which may be hardly feasible by some other conventional promoting implies. The intuitive media

quality that dwells in web-based promoting conveys an amazing effect on the web guests who had indistinguishable interest paying little heed to their changed foundation (Aswani, et al., 2018).

Unquestionably the serious benefit of internet publicizing was regularly less expensive than the conventional publicizing techniques like papers, magazines, radio, and so on with the presentation of internet showcasing, the on the web publicizing world had advanced further to pay for execution module which was a definitive expense effective method of publicizing an item. chosen media devices for distributing and publicizing organizations, organizations, foundations, affiliation and numerous different types of elements that exist in the public eye. The consequences of these investigations show the way in which the internet-based presentation of commercials works in influencing European buyer conduct. It uncovers that there are for sure both dormant and marking impacts while the click rates on the actual commercials are negligible (Dotson et al., 2017).

Because of intricacy of comprehension people according to the viewpoint of individual factor and brain science, this exploration set more accentuation on the factor of social impact. What lied in the social impact is the web subculture or cyberculture in other word. The cyberculture is a culture endemic that has given to the ascent of online networks from 1960s to 1990s, Cyberculture is borderless and hard to precisely characterize. The people group might range from the virtual world to actual world, all being interceded by a PC organization. Sign of the cyberculture incorporate different associations interceded by the PC organizations, for example, web journals, games, interpersonal organizations, virtual universes (Oberoi, Patel, Haon, 2017).

One of the significant triumphs of interpersonal organization is Face book. The intrinsic conduct of a customer has a lot depended on the way of life and climate where they were developed. The item showcasing efforts was continually confronting a test due to the scatter improvement of a singular's qualities, confidence, conviction, view point of item and purchasing conduct (Jayaram, Manrai, Manrai, 2015).

Because of the effect of globalization today, purchasers are acclimated with the homogenous worldwide impact despite its boundary and morals. One of the driving motors to the globalization impact is the web. Online buyers are enjoyed their own apparent helpful climate in the web world. At the end of the day, the on the web buyer might act distinctively in the web commercial center than in genuine real life. This wonder is all the more properly tended to as the cyberculture impact. The cyberculture impact has produced a way of life that instigates a significant part of the hasty internet-based buy expectation on account of the purchaser inclinations for item ascribes are essentially connected to their way of life (Xu, Frankwick, Ramirez, 2016).

III. Objectives of the Study

1. To find the factors determining the effectiveness of digital marketing in changing marketing environment
2. To ascertain the significance of the factors determining the effectiveness of digital marketing in changing marketing environment

IV. Research Methodology

The present study is descriptive in nature in which the factors determining the effectiveness of digital marketing in changing marketing environment have been studied. The sample size of the study is 160. The data were collected with the help of a structured questionnaire on a five-point scale and analysed with the help of the mean values and t test.

Table1 Demographic profile of the respondents

| Variables | Number of respondents | % age |
|-------------------------|------------------------------|--------------|
| Gender | | |
| Males | 78 | 49% |
| Females | 82 | 51% |
| Total | 160 | 100% |
| Income per month | | |
| 50,000-1,00,000 | 66 | 41% |
| 1,00,000- 2,50,000 | 44 | 28% |
| 2,50,000- 5,00,000 | 32 | 20% |
| 5,00,000-10,00,000 | 18 | 11% |
| Total | 160 | 100% |
| Age | | |
| 20-25 | 52 | 33% |
| 25-30 | 49 | 31% |
| 30-45 | 41 | 25% |
| 45- 60 | 18 | 11% |
| Total | 160 | 100% |
| Occupation | | |
| Self- employed | 51 | 32% |
| Salaried | 85 | 53% |
| Retired | 24 | 15% |
| Total | 160 | 100% |

Table 1 presents demographic profile of the respondents on factors determining the effectiveness of digital marketing in changing marketing environment. There are 49% males and 51% females in the study. Among the respondents 41% earns income of Rs. 50,000-1,00,000 per month, 28% earns Rs. 1,00,000- 2,50,000 per month, 20% earns Rs. 2,50,000- 5,00,000 per month and 11% earns Rs. 5,00,000-10,00,000. The 33% of the respondents belongs to age group of 20-25 years, 31% belongs to age group of 25-30 years, 25% belongs to age group of 30-45 years and 11% belongs to

age group of 45-60 years. The percentage of respondents whose occupation is self-employed is 32%, who are salaried is 53% and who are retired is 15%.

Table 2 Mean Value of the measurement of factors determining the effectiveness of digital marketing in changing marketing environment

| Sr. No. | Factors determining the effectiveness of digital marketing in changing marketing environment | Mean Score |
|----------------|--|-------------------|
| 1. | Digital marketing has made the marketing environment safe for consumers | 4.18 |
| 2. | Digital marketing helps in saving time and money of the businesses | 4.19 |
| 3. | Digital marketing techniques helps in reaching out to a larger audience at once | 4.15 |
| 4. | Digital marketing techniques provide all the important information about a brand and its product or service | 4.11 |
| 5. | Digital marketing helps businesses in keeping up with the latest trends of the market | 4.12 |
| 6. | Consumers these days prefer dealing with businesses which are active on digital marketing platforms | 4.05 |
| 7. | Businesses which exist on digital marketing platforms have better chances of increasing their customer base | 4.10 |
| 8. | Digital marketing platforms help the businesses in building their brand effectively | 4.06 |
| 9. | Digital marketing techniques helps the businesses in easily keeping in touch with the customers and solving their queries and concerns at the earliest | 4.02 |
| 10. | Digital marketing techniques help the businesses in increasing profit | 4.03 |

Table 2 shows the opinions of the respondents. It is observed that Digital marketing helps in saving time and money of the businesses with the mean value of 4.19. It is followed Digital marketing has made the marketing environment safe for consumers (4.18), Digital marketing techniques helps in reaching out to a larger audience at once (4.15), Digital marketing helps businesses in keeping up with the latest trends of the market (4.12). Further Digital marketing techniques provide all the important information about a brand and its product or service (4.11), Businesses which exist on digital marketing platforms have better chances of increasing their customer base (4.10), Digital marketing platforms help the businesses in building their brand effectively (4.06), Consumers these days prefer dealing with businesses which are active on digital marketing platforms (4.05) and Digital marketing techniques help the businesses in increasing profit (4.03) were also considered important. Reasons Digital marketing techniques helps the businesses in easily keeping in touch with the customers and solving their queries and concerns at the earliest (4.02) were also viewed as important.

Table 3

| Sr. No. | Factors determining the effectiveness of digital marketing in changing marketing environment | Mean Score | t-Value | Sig |
|----------------|--|-------------------|----------------|------------|
| 1. | Digital marketing has made the marketing environment safe for consumers | 4.18 | 8.418 | 0.000 |
| 2. | Digital marketing helps in saving time and money of the businesses | 4.19 | 8.034 | 0.000 |
| 3. | Digital marketing techniques helps in reaching out to a larger audience at once | 4.15 | 7.380 | 0.000 |
| 4. | Digital marketing techniques provide all the important information about a brand and its product or service | 4.11 | 5.916 | 0.000 |
| 5. | Digital marketing helps businesses in keeping up with the latest trends of the market | 4.12 | 6.310 | 0.000 |
| 6. | Consumers these days prefer dealing with businesses which are active on digital marketing platforms | 4.05 | 6.313 | 0.000 |
| 7. | Businesses which exist on digital marketing platforms have better chances of increasing their customer base | 4.10 | 7.155 | 0.000 |
| 8. | Digital marketing platforms help the businesses in building their brand effectively | 4.06 | 7.386 | 0.000 |
| 9. | Digital marketing techniques helps the businesses in easily keeping in touch with the customers and solving their queries and concerns at the earliest | 4.02 | 6.233 | 0.000 |
| 10. | Digital marketing techniques help the businesses in increasing profit | 4.03 | 6.394 | 0.000 |

Table 3 shows the results of t-test. It is found from the table that the significance value for all the statements is below 0.05, hence all the statements regarding the factors determining the effectiveness of digital marketing in changing marketing environment are significant.

V. Conclusion

Businesses understand the significance of digital marketing and drive the ongoing development as well as implementation. However, it can be inferred from studies that there are a lot of gaps in the skill development regarding monitoring and assessment of digital marketing techniques. The gap would weaken the businesses strategically since it signifies that they will be having an erroneous or incomplete understanding regarding the efficiency of the interventions. For taking complete advantage of evolving the digital ecosystem, the businesses should be trained properly for understanding and using the key indicators of performance which are specific to the environment. Further, it is also important for them to integrate such measures with the other traditional measures for effectiveness of the marketing environment.

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Role of Information and Communication Technology in Retail Innovativeness

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Abstract

Retailers need to operate within competitive environment so that innovations could become the source for sustainable competitive edge. Studies have been done for exploring the connection between the retail innovativeness and technological advancements and solutions of information and communication which are implemented by the store chains. Also, the researchers have tried to test existence of prominent differences in the perception of the consumers and the behavioural intentions that exist between the retailers who may be perceived as the high innovators and the ones considered to be low innovators. Resultantly, the differences between consumer behaviours are considered to be low and high innovators which may be understood through strong relation between the retail innovativeness and technologies implemented by stores. Innovation and the advancements in ICT cause prominent and constant changes in retail sector. It has become a very crucial part of operations of the retail companies and they also influence the success of these stores.

Keywords: ICT, retail innovations, consumer behaviour

I. Introduction

The advancements and innovations in the Information Communication Technologies cause a good number of changes in retail industry. It has become quite crucial for operations in the retail sector and it also has a huge impact on the success of the retail companies. The retailers need to understand the technological advancements and they also need to manage the retail opportunities as well as challenges for staying competitive in digital retail market. Therefore, studies have been done for discussing the impact of ICT on retail sector and also shows the

significance of information and communication technology for survival as well as success of the retail sector.

Basically, information and communication technology include technologies which deal with processing, acquisition, distribution and transformation of information. The most significant ICTs in retail sector are E-commerce, internet, electronic payment system, identification of radio frequency system, EPOS (Electronic Point of Sale) system, mobile applications and smartphones, social media, internet of the things, augmented reality, etc. Such technologies substantially impact the business model, strategies, process and the operations in the retail companies. Further, these studies assess the interactions that happen between globalisation and information and communication and consequences of globalisation procedure for the retail sector. Information and communication technologies impact the process of globalisation substantially. Technological innovations like internet represent some of the primary drivers for globalisation since they help in boosting the global developments. The other drivers for globalisation may also be supported by information and communication technology. Such drivers include the multi-national enterprises, production and multinational trade, international foreign and finance direct investment, etc. On the contrary, globalisation also plays the role of a driver for technological development mainly by offering favourable environment and by improving diffusion of the innovations in information and communication technologies. Thus, the relation between ICT and globalisation may be described to be mutually reinforcing. Through the impact on globalisation, ICT indirectly also influences retail sector. Besides this, the trends of globalisation like liberalisation of the trade practices, global sourcing, megacities and urbanisation and scarcity of natural sources and changes in the global climate have significant implications for business environment for the retailers.

II. Literature Review

In ongoing many years, the development processes in advertising channels have happened with focused energy and speed, especially clarified by progresses in innovation that permitted the reception of more productive hierarchical arrangements. Alluding to promoting channels, the idea of development should be viewed as an essential movement for both modern and circulation firms to obtain an upper hand along the dissemination channel, and as a changing course of the monetary capacity of the dispersion frameworks. Because of these cycles, an expanded intensity for all organizations in the channel has arisen. Innovation – specifically, ICT -, social changes and new personal conduct standards of the last interest, have animated advancements in retailing (**Bourreau and Doğan, 2018**).

As a general rule, improvements in ICT have changed the retail business. ICT in a general sense affects the manner in which organizations work. Retailers are altogether changing their plans of action because of mechanical developments, for example, the Internet and online business. Also, the job of the customary actual retail location is compromised because of the development of on the web, omnichannel and multichannel retailers. Client centricity and the association of clients are likewise

turning out to be increasingly more significant for retail organizations. Moreover, ICT impacts and supports the inventory network and coordination activities of retail organizations (**Bu, Lin and Zhang, 2016**).

Advances, like RFID (radio-recurrence ID) frameworks, are significant for the powerful and effective coordination and correspondence in (particularly worldwide) supply chains. Another significant mechanical advancement that influences the retail business is web-based media. This innovation has changed how collaborations and correspondence among clients and retail organizations happen and impacts the shopping conduct of customers (for example administration and item surveys via online media sites). In addition, ICTs, for example, online media and web-based business, empower retailers to accumulate important client, deals and market data and information (**Chaparro-Peláez et al., 2016**).

Information mining advances can break down this information and the subsequent experiences can be utilized to customize advertising exercises and to upgrade administrative dynamic and the coordination of retailers. Consequently, the top-notch data that can be produced by ICT frameworks can prompt an upper hand for retail organizations (**Chitra, 2015**).

Online business addresses the best and significant advancement concerning ICT in the retail business. It significantly changes how items and administrations are sold. Also, internet business has ramifications for the shopping conduct of retail clients, as it empowers clients to shop whenever and at any spot. As per specialists, the one-of-a-kind qualities of online business are answerable for its prosperity and prevalence. These attributes incorporate, for instance, worldwide reach, intuitiveness and omnipresence. What's more, the reception of internet business prompts various advantages for retail organizations, like upgraded cooperation and correspondence with clients, further developed consumer loyalty and accommodation, expanded reach, improved in general proficiency, the expansion of the item combination and the decrease of fixed expenses. Subsequently, the serious situation of retail organizations can be altogether affected by internet business (**Falk and Hagsten, 2015**).

Notwithstanding, there are additionally a few issues and difficulties as to web-based business. Explicit items (for example clothing and high value items), for instance, are hard to sell on the web, as most clients need to truly attempt such items before they get them. The expanding straightforwardness (for example item surveys and value correlation sites) and the developing contest in the retail business are likewise outcomes of the rise of internet business (**Grewal, Roggeveen and Nordfält, 2017**).

Plus, ICT is so expansive in the overall economy that it has basically changed the business environment of retailers. The Internet and its business use have adjusted whole endeavours and enhancements in ICT have cleared new paths for associations to team up across open and corporate limits. Moreover, information and correspondence development joins associations, suppliers, customers and various

accomplices of organizations from one side of the planet to the other and all things considered, clears out geological cut-off points (**Hsiang-Ting Su, 2018**).

Close by the undeniably worldwide inventory chains, mechanical advancements and improvements additionally lead to the developing significance of organization externalities (for example computerized administrations and items and web-based business sites), the dematerialization of utilization (for example music downloads), the expanding significance of administrations, the expanding straightforwardness in the retail business and the strengthening of clients (**Hübner, Holzapfel and Kuhn, 2016**).

Considering the tenacious and quick mechanical changes and their effect on the retail business, it is squeezing for the accomplishment of retail relationship to be flexible as to business strategies, activities and plans. In addition, electronic business on an extremely essential level impacts the certified climate of retailers, as it works with the market segment for new contenders (for example online business places). The Internet and electronic business likewise increment the force of the retail clients, as these progressions redesign and work with the consent to data about things, associations, costs and affiliations (**Jorgenson and Vu, 2016**).

Retail associations should think about this change and need to change their game plans and strategies to the extending customer centrality. When in doubt, improvement and information are transforming into the new relentless instruments in data-based economies and retail associations need to refresh their business frameworks to expand the benefits (for instance overhauled coordination, correspondence and efficiency) that can result from the usage of ICT (**Li, Xu and Zhao, 2015**).

ICT offers a few crucial chances for retail organizations. As indicated by the writing, the main advantages and chances of ICT are: worked on outside and inside correspondence, expanded market reach, further developed client connections, further developed administrative dynamic, worked with admittance to data and information and upgraded effectiveness (**Notomi, et al., 2015**).

Nonetheless, there are additionally difficulties of ICT that should be tended to by retailers. These issues and difficulties include: data over-burden, protection, security and trust issues, absence of ICT framework, expanding straightforwardness and contest, expenses of ICT reception and organization externalities, absence of preliminary and social experience and absence of preparing and information (**Pasnoorwar, 2016**).

It is fundamental for directors of retail organizations to be adaptable and to know about mechanical advancements in the retail business to have the option to respond as needs be. The administration of retail organizations needs to put resources into new computerized abilities to profit from the chances that ICT gives. Additionally, it is significant for retail directors to make and keep a solid physical and computerized (for example web-based business and web-based media) presence of the retail location, to discover ways of working on the trust of the clients concerning on

the web stores and electronic instalment and to adjust their methodologies to the developing client centricity (**Ramanathan, Subramanian, and Parrott, 2017**).

To summarize, advancements in ICT, particularly the Internet, web-based business, RFID frameworks, information mining and online media, are essentially impacting the stock chains, plans of action, advertising systems, coordination and other significant parts of retail organizations. Accordingly, the intricacy, instability, contest and straightforwardness in the retail business are expanding considerably (**Wang, Sanchez Rodrigues and Evans, 2015**).

Retail affiliations can profit from the potential outcomes that ICT offers, yet additionally need to discover manages the difficulties and issues that go with ICT. It is essential for the constancy and achievement of retailers to see immense mechanical new turns of events and degrees of progress, to get them and to take advantage of them (**Hsiang-Ting Su, 2015**).

III. Conclusion

Thus, ICT like web-based media, E-business, RFID framework just as information mining, have helped in totally altering the retail area. The inventory chains, plan of action, Marketing procedures and coordination of the retailers and the other basic credits of the retail area have helped in totally changing generously on account of the advancements in the data and correspondence area. Subsequently, intricacy, unpredictability, rivalry and straightforwardness in the retail area are on an ascent. The retailers face critical freedoms with respect to ICT and they additionally need to deal with the difficulties. The endurance and achievement of the retail goliaths relies mostly upon their ability of distinguishing, understanding and taking advantage of the imaginative advances which importantly affect the retail area.

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Contribution of Disruptive Technologies in Industry 4.0

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Abstract

Thanks to technological advancements, manufacturing low-cost, high-quality goods is still a necessary aspect of today's economy. Advances in information technology, as well as their combination, have elevated manufacturing processes to new heights. Industry 4.0, smart factories, digital manufacturing, and industrial automation are the latest buzzwords among industry insiders and academics. These new technological revolutions will undoubtedly alter industrial settings and many other aspects of society. Industry 4.0, as a changing production environment, combines modern technology with digital surprises. Firms have recently aimed to acquire a competitive edge in their commercial activities by connecting to the Industry 4.0 paradigm. Furthermore, firms confront hurdles in meeting ever-changing client needs while also maintaining sustainable manufacturing processes. This paper is focused on how disruptive technologies contribute to industry 4.0.

Keyword: Disruptive technology, Artificial intelligence, Industry 4.0

I. Introduction

Germany, like the rest of Europe, has experienced problems with product quality and pricing. The German government has realized that industrial change is required to compete with Eastern nations with lower manufacturing prices, such as China. In 2011, Germany created the concepts that would lead to the fourth industrial revolution. This change is being driven by the Internet and CyberPhysical Systems (CPS), which enable digitalized production and intelligent factories. The fourth industrial revolution, known as Industry 4.0, has influenced not just the manufacturing industry but also everyday life. Although the technologies linked with Industry 4.0 are expected to deliver benefits in various sectors, including economic and social, there are some concerns regarding job security.

(AMSHOFF et al., 2015) said that in the second decade of the 21st century, the world was very nearly the Industry 4.0 worldview, which turned into a worldwide peculiarity with a center of modern change, restoration, and progress. The converging of robotics and the actual world through the presentation of new advancements in modern regions is known as Industry 4.0. . All in all, it is a technological

transformation that influences all parts of creation, including administrators and upkeep. It is not quite the same as every past insurgency. Industry 4.0 addresses the digitization of modern worth chains, which have become unmatched for financial and social advancement as of late. From one viewpoint, it permits firms in high-wage nations to stay responsive and cutthroat. Then again, at the authoritative, human, and fundamental levels, innovative work units are identified with creative seriousness (De Propriis and Bailey, 2020). Industry 4.0 is an information-driven assembling framework that is altering the way individuals live and work. (Accordingly, people, in general, are hopeful about the drawn-out maintainability of the program and the fate of top-notch laborers on the planet economy.) Indeed, Industry 4.0 is quickly acquiring notoriety to expand usefulness and invigorate monetary turn of events. Also, it guarantees the drawn-out suitability of modern firms (Melnyk et al., 2019). It likewise expects to expand the adaptability, versatility, and flexibility of modern frameworks. Industry 4.0 is another section in the modern turn of events. Different arising or ruinous advances like the Internet of Things (IoT), computerized reasoning (AI), 3D printing, and colossal information consolidate to make advanced arrangements. Industry 4.0 is characterized by the inescapable utilization of savvy protests in exceptionally reconfigurable and organized modern item administration frameworks. All current creation/administration frameworks and plans of action (esteem chains) were made by the Industry 4.0 peculiarity, which highlights the requirement for overhaul and digitization of exercises (Li et al., 2020).

II. Literature Review

“(Agostini & Nosella, 2019). Industry 4.0, or the fourth Industrial Revolution, is quickly transforming enterprises worldwide, with outdated manufacturing and production methods undergoing a digital transformation. Industry 4.0 (I4.0) refers to the cross-organizational integration of physical objects, human actors, intelligent devices, production lines, and processes to create a system in which all operations are integrated, and information is communicated in real-time.” I4.0 is profoundly dug in the Third Industrial Revolution, which is set apart by quick advances in Information Technology (IT), hardware, and digitalization, with Advanced Manufacturing Technologies (AMTs) at its heart. PC helped organizations utilize innovations (AMTs) to create their merchandise. It is a PC-supported innovation for controlling and observing modern exercises, prompting more noteworthy adaptability, more limited creation cycles, quicker reaction to changing business sector prerequisites, and better control and precision of creation processes (Bongomin et al., 2020).

(Thames & Schaefer, 2017) says that Humanity is going through a series of unique systemic alterations that show a phase shift to a new socio-economic formation. Disruptive technologies are the main drivers underlying the developments. They profoundly alter the production base while also having a profound impact on people's lifestyles and activities. From a broad perspective, dangerous innovation is a specialized creation that gets underway another mechanical cycle to advance modern frameworks. Ruinous advances incorporate the innovation of the inner ignition motor to supplant towed vehicles, the acquaintance of semiconductors with supplant vacuum gadgets, and the improvement of computerized photography to supplant customary

film and film cameras. The transition to new products and consumer practices requires destructive technologies.

(Melnik et al., 2019) Emerging inventions and the disruptive technologies that spawned them develop distinct hierarchical structures compared to ecosystem hierarchy. Individual cells in a tree's ecosystems also feed higher-level biological components, resulting in ecosystems such as leaves, branches, plants, forests, continental ecosystems, and the planet's biosphere. Similarly, lesser disruptive technologies lead to innovations, which lead to more significant shifts. Disruptive innovations, which profoundly alter the nature of man-nature metabolism, are at the very top of this inventive pyramid (Ulusoy et al., 2021).

“(Nagy et al., 2018) found that The original components for building the Internet of Things include advances based on the personal computer, mobile phone, Internet, Wi-Fi, renewable energy, 3D printer, digital technologies, artificial intelligence, RFID tags, GPS, robotics, and cloud technology. Each of these occurrences constituted a watershed moment in the evolution of human civilization. Because of their magnitude and variety, we refer to the outcomes of these inventions as phenomena”. The phrases mobile phone and 3D printer, in particular, refers to a wide range of things and technologies that are continually changing in space and time. Before each of the developments mentioned above (from the personal computer to cloud technologies) gained industrial maturity, the Internet of Things could not have existed (Fonseca, 2018). The latter entails at least two conditions: first, achieving considerable low cost, which guarantees the profitability of mass manufacturing and usage, and second, achieving a massive scale of application of critical products.

(Jayashree & Reza, 2020) Industry 4.0 is currently considered fledgling since it varies from prior industrial revolutions in terms of pace, scale, complexity, and disruptive impact. As a result, having a previous understanding of the pace and magnitude of the changes brought on by Industry 4.0 is a must for the sake of success. People's inequities will become more visible as a result of Industry 4.0, Companies and governments all across the world are adopting new technology in their unique ways. African countries, for example, are adopting Industry 4.0 at a far slower pace than European nations. Being aware of the changes and the rate at which they occur is essential for survival in the Industry 4.0 age. As a result, ensuring that any technological advancements reach and benefit everyone is an excellent chance. This is due to the exponentially disruptive nature of industry 4.0 technology (Roblek et al., 2016).

(Puplampu et al., 2020) Historically, technical advancements have been viewed as the primary drivers of long-term economic growth and productivity gains. They have also been related to shifts in jobs and employment, although this no longer holds in the Industry. 4.0. “This is due to the fusion of technologies that are known to be exponentially increasing and disruptive in a way that is projected to produce quick and huge disruption across all industrial sectors in terms of demand for vocations and skills.” In recent years, advances in disruptive technologies and industrial

improvements have converged around industry 4.0, which is known by several names in different countries.

(Roblek et al., 2021) Industry 4.0, as a changing production environment, combines modern technology with digital surprises. Firms have recently aimed to acquire a competitive edge in their commercial activities by connecting to the Industry 4.0 paradigm. Furthermore, firms confront hurdles in meeting ever-changing client needs while also maintaining sustainable manufacturing processes. As a result, businesses plan to apply Industry 4.0 to create a more innovative and sustainable corporate environment. In line with the Industry 4.0 concept, Malaysia's government is launching several measures to promote cutting-edge technology in the industrial sector (Puplampu et al., 2020). Malaysia has also recognized the relevance of future industrial systems in ensuring competitiveness and long-term sustainability. It is unclear how firms will use Industry 4.0's disruptive technology, and its influence on the industrial chain is unknown. In the context of Malaysian industries, the study emphasizes the impact of intelligent technologies on competitive advantage, which might assist in widening the paradigm's notion (UTTERBACK & ACEE, 2005)

(Habtay & Holmén, 2014) founded that Industry 4.0 enables product value addition by integrating current and diverse technologies into industrial manufacturing processes. Using intelligent methodologies, Industry 4.0 fosters the growth of human function in all activities. Disruptive technologies have massive implications for existing industrial structures, resulting in substantial organizational process innovations that enable firms to succeed strategically via planning, teamwork, and real-time decision-making. These cutting-edge technologies will aid in the creation of a flexible framework in which modular lines alter available frames in various product categories on the fly. By producing quality and cost-effective goods, Industry 4.0 improves organizational performance, profitability, and adaptability.

"As indicated by (Agostini and Nosella, 2019), different ideas like servitization, publicly supporting, round economy (sharing economy), green economy, and bioeconomy are interrelated with Industry 4.0. More limited conveyance times, more proficient and mechanized cycles, better caliber, creation adaptability, productive and customized articles and the expansion of countless ideas are today the signs of Industry 4.0". Almost certainly, if the world experiences critical computerized progress, it will bring esteem. Industry 4.0 gives prospects to non-industrial countries, yet it likewise brings its administration, given the tremendous difficulties these progressions pose to organizations, modern frameworks, and government strategies. Scholastic and corporate gatherings have demonstrated revenue in researching the importance and thought of Industry 4.0, making it one of the main subjects in this day and age because of computerized achievements in the advancement business.

(Majumdar et al., 2018) Industry 4.0 encompasses a wide range of technologies, from actual mechanical production to complex mechatronic systems. Advanced computers, electronic control, collaborative robotics, real-time communication, augmented reality, and information technology are all used in production systems. The titles of these technologies alone are enough to convey their complexity. On the one

hand, these technologies' integration and real-time use with production and business processes add to the complexity.

On the other hand, newer and more advanced technologies play a role. This adds to the intricacy of the situation. Information will be exchanged not only between people but also between every potential coupling of humans and robots.

Thanks to the fast growth of communication and information technologies (ICT), we now live in a linked digital world defined by increasing mobility and on-demand access to information, thanks to the fast growth of communication and information technologies (ICT). At the same time, we must deal with various global concerns, such as environmental protection, health enhancement, and poverty alleviation. Stakeholders want corporations to pursue more open and responsible ways, to achieve comprehensive economic growth, social advancement, equity, respect, and environmental awareness. This climate has put pressure on Industry (the economic sector that produces and delivers material things through mechanized and automated processes) to adapt to these difficulties and hazards while also taking advantage of newly available possibilities.

III. Conclusion

The favorable outcome of destructive technologies serves as a strong motivation for their adoption. However, both good and bad effects are possible, especially in reading the information, creative destruction, etc. Technology, blockchain, virtual, and augmented reality are just a few of the powerful destructive technologies. Humanity has entered a transitional phase towards a new socio-economic structure. It is defined by the dramatic greening of energy generation and material processing, the development of autonomous cyber-physical production systems, and the personalization of human social development.

The destructive panorama of Industry 4.0 in the industrial sector is limitless, like the light in the morning. This indicates the growing acceptance of the word "4.0" in science and business circles. The tremendous power of Industry Disruption 4.0 in any industrial area comes from the incorporation of destructive technologies. This post focuses on how destructive technologies for various industrial sectors contribute to Industry 4.0.

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A Qualitative Study on Government Initiatives for Empowerment of SC and ST Communities in India

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Abstract

This exploration paper underlines the strengthening of underestimated networks in India; in India in rustic, just as metropolitan regions, there exists an impressive extent of the minimized networks; the hindered individuals, booked standings, planned clans, other in reverse classes, laborers, minority laborers, socio-monetarily in reverse areas of the general public, destitution stricken individuals are the classifications of people that go under minimized networks. The minimized networks are going through a battle to achieve strengthening. They have perceived the meaning of training; they want to accomplish instructive capabilities and proficiency abilities and might want to upgrade their day-to-day environments by acquiring a decent business opportunity. SC and ST want to upgrade their proficiency to peruse, compose, and take care of mathematical issues. Hence, they comprehend the everyday undertakings and are ready to execute banking exchanges successfully like a store or pull out of cash. There are obstructions throughout the strengthening of the underestimated gatherings, and then again, factors have been elevated to prompt their strengthening.

Keywords-Empowerment, Marginalized Communities, Capacity Building, Skill Development, Finance, Education, SC, and ST.

I. Introduction

The drive of empowerment in its present procedure is imaginative, yet it is commonly utilized in current discussions on improvement. It may be called upon in fundamentally any establishment, in passing on with regards to fundamental freedoms, about fundamental necessities, about money-related security, about limit working, about capacity headway, or the conditions of a recognized local area proceeded with presence. "Strengthening insinuates the itemizing of abilities in individuals or social occasions to contribute successfully in provoking their prosperity. Theoretically, fortifying should be a collaboration that assists individuals with securing the executives, heading and association of their own lives through a progression of data, guidance, care, bringing achievement and fusing the solicitation to carry out bigger control". Empowerment is considered a cycle in which individuals can maximize their effectiveness and take advantage of the opportunities and opportunities available to them without or despite the constraints of course of action and StateState (Tripathy et al., 2016). Strengthening is also defined as the development of increasing individual,

relational, or political power so that individuals, families, and networks can try particular activities to change their circumstances. As a result, empowerment recognizes societal transformation via the reorganization of power, authority, and influence. Strengthening through the improvement of the local area, political and social rights of citizenship is vital among the several strategies sent to reach this aim; it is a method for seeking strengthening inside the vote-based political interaction.

Educational levels frequently assume a significant part in portraying the social, financial, and social advancement of a country's generally speaking advancement. The Right to Education act legitimizes each kid's right to get quality training. In a non-industrial nation like India, most individuals have towns as their environment (Verma et al., 2018). In any case, the rustic spaces of the nation face numerous constraints and downsides due to the shortfall of mindfulness, instruction, and education. The schools in towns frequently face specific difficulties that influence the nature of training, including appropriate study halls, instructive assets, and sufficient instructor preparation, just as the absence of medical care offices, disinfection, and latrines. The 'Constitution of India' emphasized equality, freedom, justice, and a fraternity to its inhabitants, in general, to ensure its kin's well-being sustainably or achieve a sustainable turn of events. Even though India became autonomous after independence, due to its divided socio-economic structure, the doors to development were closed to most of the population. Only a small number of people from the privileged class could access all food sources. Dr. B.R. Ambedkar makes a strong case for this in his article, which is still relevant today as far as Indian culture is concerned. He mentioned that Indian culture is a rank-based civilization, with the station as the primary social class (Banu and Rawal, 2015). The current study aims to delve into the lived experiences of Scheduled Caste/Scheduled Tribes representatives in their unique work environments and society, as well as to comprehend their perspectives on the significance and accomplishment of reservation (confirmed activities taken by the Government of India to improve the lives of the financially, socially, and politically more vulnerable and underserved).

II. Literature Review

(Dongre, 2018) Social improvement in a reasonable manner is ceaselessly treated as a lean toward focus over the financial and political movement of the general populace. Instead, it would be reasonable to say that without social advancement, we cannot manage humanity's monetary and political movement. Keeping this idea alive, methodology creators in India since the start of procedure execution after freedom zeroed in extra totally on orchestrating endeavors and plans for accomplishing socially good turn of events.

As a result, the Indian Government must consider a broad social game plan framework in step with accelerating social changes in order to eliminate a wide range of isolation, provide an induction to resources for all, drastically reduce sexual direction irregularity, and place a greater emphasis on the destruction of position, which is the primary cause of all isolation in India, in order to establish a socially viable structure in the real sense.

(Ranjithkumar, 2016) “India has been managing various issues in their day-by-day undertakings and battling for the necessities of day to day life which is effectively gotten to by others. The Government professes to have put forth a relentless attempt to overcome any barrier towards the method of advancement and reasonable development of local ancestral area overall. Various approaches also, programs have been defined since autonomy to address the ancestral issues. However, it appears to be insufficient to inspire SC and ST, who have been living under the shadow of underdevelopment for many years”. The organizational strategy ought to zero in on clans' ancestral advancement and economic advancement with their rich culture, customs, customs, and language, as an ancestral character lies with their particular culture and customs which they have acquired from their precursors.

(Sivakumar et al., 2020) The complete populace of the Scheduled Caste in the nation is around 67.8 million of them all out populace. ‘Consequently, the StateState is turning out to be progressively significant with regards to ancestral development. The integrated scheduled Development program is executing all the public authority upheld formative plans and government assistance plans to advance the everyday environments of the ancestral populace in the review region’. However, the advantages of every one of these government assistance programs are not arriving at the ancestral populace capability. It could be because of the absence of mindfulness among the ancestral populace of the review region on the government assistance plans executed by the ITDP.

(Manimekalai et al., 2020) ‘Residents are falling behind because of many variables including geological and social separation, lacking well-being offices, and failure to accomplish food security, absence of command over assets and resources, absence of training and abilities, hunger, insufficient admittance to asylum and clean drinking water, weakness, wrongdoing, and savagery. These difficulties will make their lives a troublesome errand’. Considering these issues, the public authority looks to help the schedule cast through different government assistance plans.

This article inspects the ancestral networks' financial status, and the governments' public authority plans to help the ancestral communities. It presumes that ST's social and financial status is not worked on even after forming a different StateState. The state will make a new arrangement in favor of ST the immature individuals.

(Saha & Debnath, 2016) “There were likewise some different elements except for training, which also emphatically impact the respondents' strengthening status. Education is one of the main methods for enabling ladies and giving information, abilities, and self-assurance which are important to make them be full accomplices in the advancement cycle”. From the above conversation, one might say that the ladies' instructive status, for example, female proficiency and instructive achievement in different fields of schooling, are expanding with the entry of time with the assistance of various administrative positive drives which vital to drives the strengthening of the Scheduled Caste ladies in the review region.

(Samarakoona and Parindurib, 2015)‘The lived encounters of the trashed ranks with regards to the changes made accessible by the public authority of India for their Socio-Political Empowerment. The review intended to acquire a comprehension about the respondents' remarkable encounters of standing-based derision at their working environment and to catch their apparent significance and the accomplishment of reservation strategy just as a few different drives taken by the Government of India for enabling the underestimated castes’. Also, ladies' and men's encounters could be concentrated independently to find if their encounters fluctuate or come comparable in the comparable settings. In any case, the consequences of the review have significant ramifications as far as giving a rude awakening of the degree to which the arrangements planned by the public authority for elevating the societal position of the minimized or weakened have been practical or fruitless.

(Festino, 2015)‘Financial freedom or financial confidence of ladies advances ladies strengthening neediness, poor well-being, oppression ladies and sexual orientation imbalance, however, and so forth limit the openings for ladies, which at last makes hindrances for ladies strengthening. For the initial time throughout the entire existence of Indian arranging, an endeavor has been made to move past strengthening and perceive ladies as specialists of supported financial development and change’. The current paper endeavors to examine the recent concerns and issues of ladies and the continuous State intercessions to engage them. Wiping out sexual orientation segregation in friendly, instructive, monetary, and political circles would assist with expanding the capacities and status of ladies in the public arena. The Government should attempt to advance more noteworthy cooperation of ladies in the choice-making process at different levels.

(Kumar, 2017)Education is one of the main ascribes for a country's by and significant financial, social, social, and specialized advancement. Shockingly, the instructive freedoms for the oppressed are frequently subdued and are low on quality. “Long stretches of segregation and minimization of these networks before has driven them to be separated from the standard populace. Such underestimated networks regularly require imaginative and comprehensive plans for their improvement. The legislature of India has thought of different plans to help such networks and furnish them with equivalent freedoms, yet the overall populations are frequently ignorant of such plans”. On the off chance that a destitute individual cannot come to school, then, at that point, the school should go to him. This is applicable and has importance until the current day, which can be wholly rehearsed for the human turn of events (Raghavendra, 2016).

(Thorat et al., 2016)“The Government of India molded this viewpoint that arrangement plans and undertakings with the essential inspiration driving accomplishing government help of the classes explicitly, Scheduled Castes, Scheduled Tribes, and Other Backward Classes by various sources like reservations and executing government assistance plans for the updating of these three organizations. This has been a standard methodology of the Government that is highlighted bringing the Scheduled Castes and Scheduled Tribes at standard with the general populace”. This investigation paper's critical inspiration is to grasp the public authority help plans

for the Scheduled Castes, Scheduled Tribes, and Other Backward Classes. The execution of plans has provoked improvement in guidance, business openings, dwelling, strategies for transportation, financial assistance, etc. The monetary progression of these organizations is accomplished by decreasing the conditions of desperation and improving correspondence with different get-togethers of individuals.

III. Conclusion

Advancement of the Scheduled Castes is the shared liability of the Central just as the State Government and Union Territory organization. The State Governments have separate offices to take care of the government assistance of the Scheduled Castes, Scheduled Tribes, and Other Backward Classes. Their managerial setup, in any case, changes from one State to another. To improve the prosperity and progress of these networks, there has been the foundation of several plans. The primary factors that should be highlighted to strengthen the underestimated networks are schooling and proficiency, well-being and family government assistance, work and business, ladies and youngster improvement, country advancement, and metropolitan turn of events; headways there would positively achieve the strengthening of the minimized networks. Other than the distinguishing proof of elements that strengthen the underestimated networks, certain factors end up being hindrances like destitution, joblessness, lack of education, disparity, well-being, and government assistance (Vaid, 2014).

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A Qualitative Study of Challenges and Opportunities in the Implementation of Cryptocurrency in India

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Abstract

The world of cash and money is evolving right in front of our eyes. Digitized resources and innovative monetary channels, tools, and frameworks are establishing new norms for monetary exchange and shaping alternative capital channels. Rather than depending on conventional monetary organizations that confirm and ensure your exchanges, cryptographic money exchanges are checked by the client's PCs signed into the money's organization. Because the currency is guaranteed and encoded, expanding the cash supply at a predetermined algorithmic rate becomes impossible. All clients know about the algorithmic rate. Like this, since every calculation has a rooftop limit, no digital currency can be delivered or "mined" past that. However, there are more than 1000 digital currencies in the market. A significant improvement in several online customers has started computerized express thoughts and made every other business endeavor wonder Cryptocurrency to works of art with the financial activities like shopping, advancing and supplanting. Digital money refers to tangible and intangible items exchanged electronically in various applications and organizations, such as online social games, virtual universes, and shared organizations. In recent years, the use of virtual money has expanded to include a wide range of contexts. In this paper, we will discuss the benefits and challenges cryptocurrency is facing in INDIA are.

Keywords: Cryptocurrency, challenges, opportunities, cryptographic money, digital, bitcoin, blockchain

I. Introduction

There is no uncertainty that the time of data and correspondence enhancements has made numerous magnificent potential outcomes in various fields. The financial and business areas are among those that increase from these enhancements and web associations. A developing amount of web clients has put computerized world ideas into movement and made new venture marvels. As a final product, recent purchasing and selling trends, exchanges, and financial necessities have arisen.

"Crypto cash is one of the astonishing financial constructions that have arisen lately. Digital forms of money are one more idea in the worldwide economy. They have just been working for around five years, yet they have effectively stood out enough to be noticed (Vora, 2015). Especially after 2013, they have seen emotional changes in their trade rates."Cryptographic cash (or computerized money) is a complex asset intended to fill in as a trade model by utilizing cryptography to follow exchanges and oversee the formation of additional cash units. "Cryptographic types of cash have delegated a subset of mechanized financial structures, just as a subset of option money-related structures and virtual money-related guidelines (Dourado and Brito 2014). From that point forward, a few more advanced monetary standards have been made. Cryptocurrency (CC) can be characterized as any mode of trade, aside from genuine cash, that can be utilized in numerous monetary exchanges (whether virtual or genuine exchanges (Moore and Christin, 2013).

"India, which has a population of more than one billion people, has seen an economic revival in recent years. The country's progress has been so rapid that the IMF considers it the fastest developing emerging economy (DeVries, 2016). More than 40% of the country's population contacts telecommunications and internet service providers."A country rich in thrillers, records, and subculture, it is also not to lag in phrases of technological development. Bitcoin and different virtual currencies have been in use inside the country for a few years. This article examines the state of the Indian virtual money area. Small-scale Bitcoin exchanges have been taking vicinity inside the kingdom as early as 2012. It was still early in Bitcoin's development, and the best crypto experts had been interested in it. By 2013, Bitcoin had received a level of cognizance that became spreading all through several countries. That same year, some groups started to accept Bitcoin payments. "A vintage pizza enterprise named Colonial in Mumbai's Worli neighborhood have become the first café management in a long time to accept Bitcoin bills" (Belk, 2014). ." Prime Minister Narendra Modi" announced the beginning of a demonetization process on November eight, 2016. The government's decision to demonetize about 86 percent of America's paper foreign money united states sent shockwaves all of the manners throughout India's subcontinent. Individuals with various money wished every other manner to hold it without triggering excessive taxes charges and a slew of government investigations. It has emerged as a commonplace exercise for people to collect vast quantities of Bitcoin or other virtual currencies and then promote them later.

(FAUZI et al., 2020) stated that ‘digital forms of money have acquired much consideration since the most recent quite a long while. The ascent of cryptographic money inside this decade since the origin of Bitcoin in 2009 has overwhelmed the market. Cryptographic money is expected as the future cash that may supplant the current paper money around the world. In giving generous aid and view to the scholarly field and clients, this paper will talk about the changes in cryptographic money like the security of its innovation, low exchange cost, and high venture return’. Cryptocurrencies are digging in for the long haul. This paper has surveyed the openings in cryptographic money regarding the security of its innovation, low exchange cost, and high speculation return.

(Al-Amri et al., 2019) referred that Cryptographic money is drawing in consideration of scholarly and non-scholastic analysts as an elective design of cash. Due to the development of cryptographic money research, it is crucial to esteem the current exploration of cryptographic money and distinguishes potential future examination regions. “The discoveries uncover that specialists continue investigating the arising cryptographic money reception wonder. In any case, there is as yet a potential for future examination. Cryptographic money runs dependent on blockchain innovation, a decentralized stage, where exchanges are put away in the open record, straightforward to members. Digital forms of money it has some reception difficulties and limits that should be tended to”.

(Ma & Fang, 2020) stated that its application in schooling is somewhat new, however, expanding rapidly. This paper presented the common blockchain strategies and attributes momentarily. ‘Then, at that point, ongoing uses of blockchain in training were summed up extensively, particularly those regarding learning record attendant, declaration issue and the executives, and decentralized schooling biological system. At long last, specialized and non-specialized difficulties were discussed. Even though many issues difficulties exist, like the development, support and the executives of cryptocurrency innovation framework and stage, the application, possession and security insurance of understudies' learning information, and so forth, there is no question that, from traditional essential and optional schools to colleges and instructive regulatory organizations’.

(Mahmoud et al., 2019) The blockchain is the foundation of Bitcoin cryptographic money. It has sparked much interest in the research and development community. ' A blockchain is a distributed ledger often maintained by a group of people known as diggers in Bitcoin. This critical development allows digital currencies like Bitcoin to operate independently without intermediaries such as banks. However, the blockchain may be used for purposes other than recording digital currency transactions. At the same time, the designer(s) have made substantial assumptions that allow it to operate in conjunction with the use of an impetus convention, resulting in a significant departure from traditional academic thinking.

(Priya and Arabinda, 2018) defined that Bitcoin is cryptographic money computerized cash which was established in 2008. “It is a type of money with no actual structure, made and held electronically. It can be utilized to purchase things

electronically, and in that sense, it is the same as regular dollars. It is intended for secure monetary exchanges that require no focal position, no banks, and no administration controllers. It is straightforward to set up. In India, it has not been regularized and has no obvious consistency structure for bitcoin”.

Notwithstanding, there is no apparent consistency structure. A few security issues are related to it, and numerous nations have kept it unlawful. It has currently put its impression in India with huge ascend as of late. In India, it has not been regularized and has no clear-cut routineness structure for bitcoin.

The cosmos of currency and money is shifting before our eyes, according to (Anil Kumar, 2018). New ideal models for monetary exchange and manufacturing alternative capital channels are emerging due to digitized resources and inventive monetary channels, devices, and frameworks. As far as the difficulties in acknowledgment are concerned, digital currencies need to confront different administrative challenges. Thus, what is to come is not on par with what it is seen’. The issue of safety and administrative consistency should be tended to as different legislatures, and banks have as of late prohibited the utilization of their frameworks to purchase cryptographic forms of money.

According to (Mubarak and Hosmani, 2021), "the massive growth in the number of online customers has activated virtual word concepts and created another business wander, digital money, to function with monetary exercises like purchasing, to sell, and exchanging." In recent years, the use of virtual money has grown unavoidable in a wide range of settings. Virtual cash is not entirely controlled and managed. Subsequently, a large portion of the nations has not conceded this money in their financial exercises’. This paper examines about cryptographic money presents legitimacy just as the future government moves sway on these currencies. The beginning of digital money is a framework for electronic exchanges" given a distributed organization, where exchanges would be checked and recorded by hubs, or figuring frameworks, that are essential for the organization, subsequently making such exchanges decentralized.

(Xin Li and Chong 2017) stated that Cryptocurrencies were explored as financial assets. “They analyzed the adjusted real factors the extent that the Hurst type by using the Detrended Fluctuation Analysis (DFA) and R/S Analysis, of the four most standard advanced monetary forms situated by their market capitalization. The assessment was coordinated on high-repeat returns data with evolving slacks”. These arrangements outfit scholastics and mechanical experts with information about the development and characteristics of these four well-known cryptographic types of cash. They may, in like manner, be significant in making models of assessing computerized monetary standards.

(Andrew, 2016) defined that there are different contenders to cryptographic cash that are endeavoring to give an option compared to cutting-edge cash. Apple, with their item Apple Pay, is a significant adversary (Chapron, 2017). ‘They are changing its establishment and gear to permit clients to charge their accuse or Visas related to their

iTunes account with their telephones. Conventional charge card organizations, for instance, Visa and MasterCard, are pleased to join Apple Pay's system since they are allowed to keep up with their consumptions'.

(Adam, 2017) stated that crypto will consistently battle to rival these notable names. PayPal has been tremendously successful as an eBay payment method, and it may be shifted to a more handy position. 'Companies like Apple, Google, and Amazon have whole marketing monetary plans with a presence in the handy application sector, providing them significant benefits thanks to Bitcoin's rather inconspicuous participant. There is the central position or any money-related establishment to live charge (possible weight). It is an even better sort of digitalization of financial trade when stood out from online trade anyway banks, Visa, ATM and at last, it tends to be used in all countries across the globe.

(Baek & Elbeck 2015) defined that virtual monetary administration and expressly virtual monetary forms are uncommonly continuous consider object monetary framework. There are various perspectives of virtual monetary forms and their usage in the monetary system. "Our investigation showed and confirmed epic shakiness of computerized monetary standards exchange rates at levels normally higher than entire documents, products, and money pair. "Cryptocurrency gives an extra, solid, and engaging model of installment procedures that might help organizations and organizations in expanding their benefits." It likewise offers other installment techniques, notwithstanding cash, permitting customers to manage money-related exchanges like procuring, selling, migrating, and exchanging without trouble."

(Cocco et al., 2017) said that the predetermination of the cryptocurrency thought appears to be hopeful, with more opportunities to carry significant upgrades and development to the e-Business and e-Payment space names. 'Cryptographic cash will keep on advancing because of the fast headway and improvement of advancement. Since our examination, there have been created ventures to improve and grow the computerized cash idea'. A developing assortment of suppliers is tolerating expense in different sorts of cryptographic cash. Many individuals are getting more mindful of the chances and openings that CC may likewise offer.

(Ciaian et al., 2016) defined that crypto cash is one of the tremendous money-related constructions that have arisen as of late. Cryptographic forms of money are one more idea in the worldwide economy. They have just been working for around five yea. However, they have effectively stood out enough to be noticed. Especially after 2013, they have seen emotional changes in their trade rates. Cryptographic cash (or advanced money) is a current asset intended to fill in as a trading vehicle by utilizing cryptography to follow exchanges and administer the production of additional cash units. "Cryptographic types of cash have delegated a subset of modernized money-related structures, just as a subset of option financial structures and virtual financial norms (Kethineni et al., 2017). Bitcoin, the most famous advanced cash, was made in 2009 as the principal decentralized computerized money.

(Hong, 2017) The significant improvement in several online clients has initiated digital phrase ideas and made every other commercial enterprise marvel, from Cryptocurrency to paintings with monetary exercises like shopping, promoting, and replacing. ‘Digital money refers to significant and theoretical matters used electronically in a few programs and companies, including informal online groups, online social video games, virtual worlds, and shared agencies. Recently, the use of virtual money has spread extensively in quite a few contexts. It is a type of money with no actual structure, made and held electronically. It can be said that it is illegal exercises, theories and nature of this money Anonymity and important hypothetical base as advanced cash is obscured and uninvestigated monetary item Regulation and tax collection issues are not satisfactory’. As well as undefined lawful status-Full of illicit and problematic movement, the questionable status of autonomous and decentralized cash. Unlawful or vague in many nations of the world (Kethineni et al., 2017).

II. Conclusion

“Cryptocurrency offers a new, powerful and alluring model of installment techniques that can support organizations and administrators incomes. It additionally gives an elective technique for installment, aside from genuine cash, that empowers clients to do monetary exercises like purchasing, selling, moving, and trading without any problem. Moreover, the certainty and trust pace of utilizing digital currency is discernibly high as it very well may be found in a few cases that have been expressed in this paper other than the overview results. Be that as it may, clients have not understood the full image of utilizing cryptographic money. Indeed, numerous cryptographic money structures do not merit that quite a bit of trust yet”. Many worries, challenges, and issues occur in various cryptographic money phases, which are well depicted in the sections above. Clients must avoid the danger of using digital money until it is generally well-managed and controlled.

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Role of Digital Marketing in Growth of E-commerce Business in India: A Quantitative Investigation

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Abstract

It plays a very important part in the modern day e commerce system. It makes businesses faster as well as accurate. Online marketing is way more affordable as compared to the conventional methods of offline marketing. However one big benefit of conducting marketing online is the convenience it offers which may be monitored as well as tracked easily. In place of conducting costly customer research, it may be possible to quickly consider consumer rates as well as measure success of the marketing campaigns and that too in real time. Thus, it helps the businesses in planning their activities more efficiently. Several papers have been done for highlighting the significance of online marketing in this modern era. It has been seen that digital marketing has completely revolutionised and changed the whole business scenario in a good way. It helps with promotion of brands and products and uses multiple electronic devices for the same.

Keywords: Digital Marketing, Online Marketing, E-commerce

I. Introduction

Digital marketing can be defined as the process of promoting the brands and the products through one or multiple form of electronic media. Online marketing many a times known as digital marketing, web marketing, internet marketing, etc. The term "Digital marketing" has become quite popular gradually and specific in a few nations. It's prevalent in a lot of countries. It is basically the sub-category of marketing that employs digital technology for placing as well as selling the products. Digital media or line media is pervasive and the consumers also get an access to the information anywhere and anytime they like. The use of internet is exploding across the globe and digital is in teasingly becoming a significant source of the competitive edge in the B2B as well as B2C format of marketing. A lot of attention is paid to a lot of opportunities presented by digital marketing with very less attention to real challenges that the companies and organisations are facing today (**Alhizzawi , 2019**).

Digital marketing is mainly an umbrella concept for marketing the products and services with the help of digital technology, especially the internet and also includes mobile phones along with display ads and other such digital marketing modes. Internet is an attractive mode of communication.

It allows exchanging the currency and even more importantly it allows exchange of the value of products and services. The business on internet may gain value through attention, time as well as advocacy from the consumers. For users, value may be addressed through entertainment, utility and enlightenment.

Content marketing is considered to be a very powerful way of creating value. The strategies of digital marketing build on as well as adapt principles of conventional marketing, tapping the opportunities as well as challenges which are offered by digital mode. The strategies of digital marketing need to be constantly evolving as well as iterating. Since internet allows near instantaneous data collection and feedback, the digital marketers need to constantly optimise as well as improve their efforts of digital marketing.

E-marketing provides a platform for users wherein they may compete with each other irrespective of their size through an effective strategy of e-marketing. Conventionally, the small size retailers struggle for matching the finesse of fittings and fixtures of the bigger competitors. Online, crisp and well thought out sites with smoother consumer journey along with fantastic service is the most important thing and not the size.

Even micro businesses may develop their strategies of e-marketing for less cost and may also potentially substitute the unaffordable and expensive channels of advertising like television radio, yellow pages, magazines and billboards (**Batinić, 2015**).

II. Literature Review

Web advancing is the exhibiting of things or organizations over the Internet. It in this manner incorporates imaginative and particular pieces of the Internet, including plan, headway, publicizing, and arrangements. Web displaying doesn't simply include creating or propelling a webpage page, nor is it basically a standard ad on another website. Web passes on voice and video close by text to attract clients (**Kaur, 2017**). Web displaying also implies the situation of media along different periods of the customer responsibility cycle through web crawler advancing (SEM), webpage plan improvement (SEO), banner commercials on agreeable locales, publicizing through email, and Web 2.0 techniques. The Internet has conveyed various exceptional benefits to advancing, like, lower costs for the course of information and media to an overall group. The exceptional idea of web displaying is its instinctive nature, to the extent giving second response and getting responses. Web publicizing furthermore joins the chiefs of cutting-edge customer data and electronic customer relationship the board (ECRM) structures (**Girchenko, Ovsianikova, 2016**).

Business is alluded to every one of the exercises including the buy and deals of labor and products promoting, deals, instalment, satisfaction, client care and so on Electronic trade is performing business with the utilization of PCs, organizations and business empowered virtual products (something other than web based shopping) **(Paranjape, 2018)**.

There are substitute perspectives for online efficient correspondence, business cycle, organization and on the web. Electronic exchange is use of the web and the web to execute business. In more express words it is portrayed as, painstakingly engaged business trades between and among affiliations and individuals. All trades brought through by modernized development are painstakingly engaged trades happening over web and the web **(Shaik et al., 2018)**.

Right when these trades incorporate the exchanging of critical worth (e.g., cash) across progressive or individual cut off points as a compromise for things and organizations, they are named as business trades. It joins inside cycles that help associations buying, selling, enlisting, orchestrating and various activities isolated from business trading with various associations.

Mechanized Marketing industry in India is spread to essentially all the business regions. A part of the uses of E-Marketing are shopping and solicitation following, web banking, portion systems and content organization. The power of modernized displaying licenses geophysical obstacles to evaporate making all buyers and associations on earth potential customers and suppliers. It is known for its ability to allow business to bestow and outline a trade wherever and at whatever point. Progressed advancing industry in India is a flourishing calling today. In a country with a fast improvement economy, it is depended upon to have an incredibly high gigantic advancement in Digital advancing calling **(Wang and Kim, 2017)**.

The advancement in the mechanized exhibiting designs is having a very impressive impact on advancing and notice. The higher point of view of Digital Marketing industry in India can't be done if short see of the past modernized advancing bits of knowledge isn't made.

Today, computerized showcasing industry in India is developing at its pinnacle, is as yet ceaseless. Many variables are liable for this development. The utilization of specialized instruments has extraordinarily changed in the year past. Nobody at any point thought to have a dependable arrangement on the web. The beneath figure demonstrates the computerized promoting measurements. The conviction was that internet based data is virtual data loaded with lies. Nobody could pay attention to any internet based ad not to discuss buying food, furniture or garments **(Inversini and Masiero, 2014)**.

The story has really changed. Everything from promoting to arrangements ought to be conceivable on the web. This is a direct result of the trust that has been restored back to online correspondence in India. This has really helped the advancing drives. The disturbance is from the correspondence organizations. Negligible cost of handset is presently open making it achievable for India to have around 600 million

web customers which finally sets out a fascinating business opportunity to propose to a creating people (**Karjaluo, Mustonen, and Ulkuniemi, 2015**).

Also, the headways in the modernized publicizing industry in India clear in the elevating shift from lack of definition to character. Correspondence on the Internet at present looks more physical rather than the lack of definition of character previously. In like manner, promoting information's is moving along in a comparable line with redirection.

People of India required a charming soul reliably. This targets their premium into the advancing information. A couple of components have been found to add to the improvement of cutting edge advancing in India. Before now, web usage was simply inferred for the rich. There is by and by an amazing change in the lifestyle of the common laborers. The Very bigger part as of now moves toward the web in India. Web and 3G entry improved the publicizing circumstance for the two clients and the sponsors. It was observed that changes of lifestyle and lifestyle had extended the level of use, quality and besides the case of use (**Andrew, 2016**).

The idea of use in the metropolitan spots of India is on a high side. This is because bigger part doesn't have energy for shopping. Beside fights to get cash, people need different things to be done at their own solace.

The advanced showcasing industry has presented different computerized advertising channels which assists advertisers with focusing on the right crowd and draw in them towards the item or administration being promoted. It is this blast in advanced promoting that requires the requirement for a brand to make a strong web-based presence and task a picture couple with the stage being utilized just as their vision and mission. Consequently, comprehend not exactly what advanced advertising can offer your image or business yet in addition the extent of different computerized promoting channels and how best you can use these channels of computerized showcasing (**Jain and Yadav, 2017**).

For an advanced showcasing effort to be unshakable and proceed just as expected, you must perceive the computerized promoting channels through which your image or business should be advertised; for only one out of every odd channel or computerized showcasing stage is important for organizations and brands across ventures and markets. The right computerized showcasing channel for your image or business additionally relies upon your image's business objectives. On the off chance that you will probably create leads for your business and you're a B2B brand, it bodes well to utilize stages that are business driven and have highlights that will assist you with producing leads (**Guilbeault, 2018**).

You can without much of a stretch arrangement an effective web based showcasing procedure affordable for you by the utilization of advanced promoting that offers a cheap method in contrast with other publicizing channels like radio, TV and that's just the beginning. An all-around arranged and very much oversaw computerized showcasing effort can contact an enormous crowd at a lower cost than the conventional advertising strategies (**Kenzhegul et al., 2019**). Show up at different

conceivable outcomes by changing to an automated displaying exertion inside a little endeavour. Be found where your groups are looking for you. You will see long stretch outcomes by using mechanized advancing. Progressed promoting gives consistent results inside no time. Time is important for us every one of us, why waste even a Nano second. Progressed promoting offers you an opportunity to see the number of visitors to your site, what is the change rate, what is the zenith trading time, the quantity of allies has added you in a day and anything is possible from that point

(**Muacevic et al, 2018**). Modernized advancing permits you a chance to make associating with campaigns using different kinds of media. These missions can become well known online on cordial stages, giving beginning with one individual then onto the following, consequently obtaining social cash. Brand building is what every business endeavour to accomplish and automated promoting cultivates your picture by propelling it on a couple of stages, the more well-known your picture goes, the really standing your picture will obtain as per web crawlers similarly as customers (**Dhara, Pankaj and Ketan, 2016**).

III. Objectives of the Study

1. To find the role of role of digital marketing in growth of E-commerce business in India
2. To ascertain the role of digital marketing in growth of E-commerce business in India

IV. Research Methodology

The present study is descriptive in nature wherein the role of digital marketing in growth of E-commerce business in India was analysed. The sample taken for the study is 140. The information was gathered with the assistance of an organized poll on a five-point scale and investigated with the assistance of the mean qualities and t test.

Table1 Demographic profile of the respondents

| Variables | Number of respondents | % age |
|---------------------|------------------------------|--------------|
| Gender | | |
| Males | 78 | 56% |
| Females | 62 | 44% |
| Total | 140 | 100% |
| Profession | | |
| Automobile Business | 41 | 29% |
| Logistics Business | 43 | 31% |
| Retail business | 29 | 21% |
| Apparel business | 27 | 19% |
| Total | 140 | 100% |
| Age | | |
| 20-35 | 39 | 29% |
| 35-50 | 56 | 40% |
| 50-65 | 45 | 31% |
| Total | 140 | 100% |

Table 1 presents demographic profile of the respondents on role of digital marketing in growth of E-commerce business in India. There are 56% males and 44% females in the study. Among the respondents 29% are into automobile business, 31% are into logistics business, 21% are into retail business and 19% are into apparel business. The 29% of the respondents are 20-35 years of age, 40% are 35-50 years of age, and 31% are 50-65 years of age.

Table 2 Mean Value of the factors affecting the role of women empowerment through women entrepreneurs in India

| Sr. No. | Role of digital marketing in growth of E-commerce business in India | Mean Score |
|----------------|---|-------------------|
| 1. | Digital marketing helps in retaining the customers | 4.00 |
| 2. | Digital marketing is the lifeline of E-commerce in India | 4.01 |
| 3. | It is very important for businesses to choose the right digital marketing tool in order to succeed | 4.04 |
| 4. | Marketing products through offline mode is an obsolete method of marketing | 4.08 |
| 5. | Every large corporation as well as top brand has adopted some or the other digital marketing strategy | 4.10 |
| 6. | Digital marketing gives the desired results in a very short span of time | 4.03 |
| 7. | Digital marketing helps in increasing brand awareness | 4.14 |
| 8. | Digital marketing has outranked all the other marketing tools | 3.98 |
| 9. | Digital marketing also helps in attracting traffic to the website of the business | 4.16 |
| 10. | Digital marketing helps businesses in quickly adapting to the changes in consumer behavior | 4.07 |

Table 2 shows the opinions of the respondents. It is observed that Digital marketing also helps in attracting traffic to the website of the business with the mean value of 4.16. It is followed by Digital marketing helps in increasing brand awareness (4.14), every large corporation as well as top brand has adopted some or the other digital marketing strategy (4.10), and Marketing products through offline mode is an obsolete method of marketing (4.08). Digital marketing helps businesses in quickly adapting to the changes in consumer behavior (4.07), It is very important for businesses to choose the right digital marketing tool in order to succeed (4.04), Digital marketing gives the desired results in a very short span of time (4.03), Digital marketing is the lifeline of E-commerce in India (4.01) and Digital marketing helps in retaining the customers (4.00) were also considered important. Reasons like Digital marketing have outranked all the other marketing tools (3.98) were also viewed as important.

Table 3

| Sr. No. | Role of digital marketing in growth of E-commerce business in India | Mean Score | t-Value | Sig |
|---------|---|------------|---------|-------|
| 1. | Digital marketing helps in retaining the customers | 4.00 | 6.190 | 0.000 |
| 2. | Digital marketing is the lifeline of E-commerce in India | 4.01 | 5.938 | 0.000 |
| 3. | It is very important for businesses to choose the right digital marketing tool in order to succeed | 4.04 | 6.131 | 0.000 |
| 4. | Marketing products through offline mode is an obsolete method of marketing | 4.08 | 5.625 | 0.000 |
| 5. | Every large corporation as well as top brand has adopted some or the other digital marketing strategy | 4.10 | 6.107 | 0.000 |
| 6. | Digital marketing gives the desired results in a very short span of time | 4.03 | 6.083 | 0.000 |
| 7. | Digital marketing helps in increasing brand awareness | 4.14 | 7.632 | 0.000 |
| 8. | Digital marketing has outranked all the other marketing tools | 3.98 | 6.331 | 0.000 |
| 9. | Digital marketing also helps in attracting traffic to the website of the business | 4.16 | 7.912 | 0.000 |
| 10. | Digital marketing helps businesses in quickly adapting to the changes in consumer behavior | 4.07 | 6.877 | 0.000 |

Table 3 shows the results of t-test. It is found from the table that the significance value for all the statements is below 0.05, hence all the statements regarding role of digital marketing in growth of E-commerce business in India are significant.

V. Conclusion

With each passing day, digital marketing in India is growing evidently. It has become quite evident that digitization is happening at a fast pace. All the surveys and reports which are done across the world are proving that digital marketing would grow even better in the coming years. The younger generation of India is tech friendly and mobiles will soon reach the 3 billion mark worldwide. These studies have been done to analyse the significance of online marketing in this modern era. It has been seen that the importance of digital marketing for businesses is indispensable and it has helped the growth and development of the modern India.

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Service Quality in Airline Industry in India: Review of Extant Literature and Research Agenda

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Abstract

To enhance the profit and competition in the industry, the airline needs to understand the customer's desires and what opinion he has. Companies are now days started focusing on building long and strong connection with customers by offering high level of satisfaction that will automatically leads to loyalty among customers and retain them for life long. Significant decline in demand for air travel, rising cost and worldwide economic shutdown are also some of the hurdles face by Airline industry. Satisfaction of customer is not enough in Airline industry as even satisfied customer may also show interest in competitors. Hence, organization should therefore along with offering of greater level of satisfaction, should also be focus on increasing loyalty among customers and build relationship with them. An important finding observed during analysis was that, though the satisfaction has a significant impact on the customer retention, however, the strength of relationship is not so strong. It means that satisfaction alone cannot help in retention of the customer, as even though the customers are satisfied they may switch to the other airlines for a higher satisfaction.

I. Introduction

The main purpose of this study is to measure the service quality level of domestic airlines and to identify service quality gaps of domestic airlines. In addition to this, the study also finds the impact of service quality on customer satisfaction and impact of customer satisfaction on customer retention in case of aviation sector in India. It is found that measurement of service quality is one of the most popular topics of research in the areas of management and Social Sciences. There are in a number of studies on service quality assessment for banking, hospitality, telecommunication and airline sector. The behavioral intentions as well as the satisfaction of customers are in positive relationship with the service quality of airline services. As per the mediation analysis, between behavioral intentions and the service quality of airlines, satisfaction of customer acts as a mediator. Product as well as quality of employee must also be improved in order to improve the service quality of airline. To enhance the service quality, it is required to induce knowledge as well as awareness in the employees of airlines, along with this; customer relation management needs to be improved to enhance service quality (Shah et. al, 2020).

Air carriers frequently made air traffic analysis and know that due to tourism movement of passengers are increasing, which means there will be high demand of air service and have to maintain service quality due to high competition. This Airline business is quite unsteady and extremely competitive as all airlines try to have comparable fare charges and same type of regular flyer programs. In such situation, service quality is an essential factor that has impact on satisfaction of passenger,

choice and loyalty for airline. Low carriers fare is one of basic challenges or obstacles faced by the old or traditional full service carriers and it causes reduction in service quality given to the customer. The service quality and the extra focus on service delivered to the customers leads to the global enhancement of the Indian airline industry (Suhartanto and Noor, 2012). Growing expectation and reducing loyalty level among customers forced companies to come up with unique and different method of enhancing service quality and the same is with the case of Airline industry also. Hence, many airlines changed their marketing strategies particularly related to service quality so that they can compete in global market efficiently.

II. Literature Review

Fadhilla et. al, (2019) concluded that satisfaction of customer is the outcome of different ways and efforts taken to attract customers. This satisfaction of customer relies on the detail of product or service performance in giving the value that is related to customer expectation. The customer is declared as unsatisfied if the value is lower than their expectations. From this research work, it is found that the variable customer loyalty is affected by fairness in price, service quality as customer satisfaction. This is fortified by the outcome of evaluation in this study and previous research work showed positive as well as significant influence between the fairness in price, service quality as customer satisfaction on Customer loyalty.

Lim & Tkaczynski (2017) investigated that this study has made significant understanding with reference to service quality and the airline expectations of international students. It is found in the study that the market of international students is unique in its expectations of airline service quality and therefore should not be treated identically as other passengers of airlines such as elderly people, travelers, or businessperson. It is confirmed by the research that the expectations of service quality of airlines is diversified and in case of international students it is indicated by five factors categorized as core service, ancillary service, employee service, cabin facility, and service indicators.

Baker (2013) found from a study that air service administration with data in terms of “service quality” and its outcome of consumer’s pleasure. Since “service quality” contentment happens when client’s beliefs are fulfilled or surpassed, making extra practical clients beliefs in terms of the assurance that aviation industry give might boost the standard of professed, “service quality”. Hence, aviation sector must provide facilities, which they are able to provide. By following this policy, the administration will be able to distinguish their trademark from the other aviations with respect to “service quality”. Aviation industry ought to look for expansion policies that improve optimistic purposes in their behavior. These policies ought to incorporate assemblies and consumers expected facility standards, trading productively with displeased consumers and facing consumer grievances optimistically.

Singh (2016) examines a study that showcases a structure for standardizing the service quality of complete service national aviation sector in Indian perspective. It begins with the acknowledgement of service quality features of Indian local aviation

sector. After acknowledgement of features and conclusion changes (air taxis), analytic hierarchy process chain of command was organized preserving in mind entire goal of recognizing standard air service, which was preserved at the highest degree in the ranking. After that, parallel preference loads of each major basis, sub basis and domestic preference loads of conclusion changes in terms of each sub basis were regulated by set wise juxtaposition. Ultimately these loads were incorporated to give the universal preference result (complete contentment result) for each air service.

Deepa et. al, (2020) revealed that satisfaction of customers is significantly as well as positively affected by five dimensions of AIRQUAL model, five dimensions are airline tangibles, terminal tangibles, personnel services, empathy, and image. Important theoretical participation given by this study is to identify the variables driven by the industry and determined the forecasters for airlines service quality (ASQ) for considering the behavior of customers. This will improve and enhance the efficiency service quality in air transport industry. In airline industry, service quality is an important elements and very much desired. System of providing good quality services in any airline firm makes an impression about that airline that leads to loyalty and satisfaction in its customers.

Hasan, et al. (2019) The main cause for the growth of AIRQUAL as a service quality measurement scale was that the present balances of service quality were expanded and implemented in various nations and traditional situation. The quality of services viewed by clients varies in various traditional situations and therefore the features of service quality should be limited to particular cultures. As an outcome, most of the measurement scales expanded to examine service quality are for personal traditional situation. Therefore, significant scales must be engaged in thesis studies to fetch novel features that are fixed within the traditional situation. Numerous reports have taken into consideration that the fare of air services as structured for contentment and faithfulness for air services as small amount travelling services initially finish on the basis of fare charges. Further, the trademark impression is framework of AIRQUAL model affects the judgmental process of travellers hiring air services. The factors of air service charges and trademark effect have been taken into consideration for consumer contentment and faithfulness to the air services.

Alsini, (2017) examined the study by adopting AIRQUAL model. With the perception of entire quality, significant association with is found by terminal tangibles and empathy dimensions. Investment needs to be done by the airlines to improve aircraft as well as the facilities at the terminal. Waiting time by customers at the time of boarding the flight also comes under the total travel experience. Therefore, this is a reason that airline should be concerned about by providing clean, air-conditioned and comfortable facilities at the terminal. All these services and its quality influence the satisfaction level of customers and make them loyal towards that airline. Experiencing good service quality makes customers giving good feedback to other travelers and stops them to switch between the companies in air industry.

Trinh (2017) found that However, AIRQUAL model is used to estimate air Service Company in Northern Cyprus but this balance is deficiency of legitimacy, as it does not succeed all the important steps needed to legitimize a tool. Due to this issue, the AIRQUAL cannot be implemented in other nations. To attend to this issue, a study legitimized the AIRQUAL by succeeding all the measures planned by. This extensive measure facilitates a perfect evaluation of the consumer views of “service quality” in performance. Consequently, the air service quality in this study is estimated by utilizing AIRQUAL sculpt based on SERVQUAL model.

Alotaibi (2015) conveys that the qualitative data given by the concentrated teams hence had a supreme influence in structuring the upcoming quantitative study. This report facilitated a simple hypothetical source for quantitative research of service quality by setting up numerous budding implicit classes that comprise participative features of 'quality', The four concentrated team meetings have facilitated a precious qualitative approach into both the basic aspects of “service quality”, and the practical optimisms and pessimisms of the AIRQUAL tool. The procedure of decrease of the AIRQUAL scale is unusual to this research.

Hossain, et al. (2011) says that the aircraft service quality has grasped much notice from both academicians and practitioners. Different researches have used SERVQUAL, AIRQUAL, the Kano Model, etc. for estimating the client “service quality” in the air service segment. Nonetheless, an evaluation of the air service quality review presents a deficiency of report about the utilization of latent semantic analysis (LSA) in revealing the fundamental aspects influencing the quality of service facilitated by the air service industries. The objective of the research is to investigate the common “service quality” features related to the air service sector by finding the remarks facilitated by the travellers of different air service industries throughout the universe. Travellers are under no stress to put across their apprehension, judgments or idea for development of service quality. Hence, we propose that the clients’ remarks are indication of their outlook of quality of service that they have previously experienced.

Ganiyu (2016) asserts that the consequences particularly disclose that viewed service quality is optimistically linked to both flyers pleasure and faithfulness. The relation between traveller pleasure and faithfulness towards the air services was also discovered to be optimistic. The interceding result of consumer pleasure between professed service quality and client faithfulness is also discovered to be optimistic and partly assisted. In terms of the discoveries of this research, we end that professed service quality does impact on traveller happiness, and also faithfulness towards the air services. Hence, advancement of service quality is a complementary aspect to continual variation and aggressiveness in the aviation sector.

III. Conclusion

Service quality in airlines has been a popular area of interest of the scholars and academicians. It was found from the model validation and second order CFA that the five dimensions of service quality successfully and strongly predict the overall

perceived quality. The perceived quality positively influences the customer satisfaction and customer satisfaction positively influences the customer retention. There is also a partial mediation of customer satisfaction between perceived service quality and customer retention. An important finding observed during analysis was that, though the satisfaction has a significant impact on the customer retention, however, the strength of relationship is not so strong. It means that satisfaction alone cannot help in retention of the customer, as even though the customers are satisfied they may switch to the other airlines for a higher satisfaction. It has also been found that the higher income group and higher age group have better satisfaction and retention. The airlines need to address of the younger passengers to make them more satisfied and loyal towards their airlines with the existing service qualities also, their higher income and age group is supporting them.

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Measuring Reasons of Cognitive Dissonance in the online purchase: An Empirical Study with Special Reference to Electronic Products

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Abstract

The cognitive dissonance theory holds huge significance in the behavior of the consumers and the businessmen take a lot of interest in assessing the post buying behavior of the consumers. A lot of papers explore the factors which cause cognitive dissonance in the purchase behavior of consumers specifically amongst the buyers of consumer goods. Some of the reasons are religious value, status of the family, customs, etc. These studies also reveal the issues and have identified the probable solutions for overcoming such issues. It has been seen that higher degree of buying involvement, lesser is his level of dissonance. When he takes buying decisions by himself, he is satisfied with the decision in comparison to the purchase decision that's taken. It's also been proposed that more time consumers devote to the buying decision, more content and satisfied he will be with the decisions and lesser is dissonance is attached with consumers buying decision.

Keywords: Cognitive Dissonance, Online Purchasing, Consumer Behavior

I. Introduction

People often seek consistency in perceptions and their beliefs. Thus, the question is what happens one of the belief conflicts with the already held belief. Cognitive dissonance maybe used for describing feeling of inconvenience which results mainly from holding 2 or more conflicting beliefs. If there's any kind of discrepancy between the behavior and beliefs, something needs to change for eliminating or reducing dissonance.

In a business environment which is dynamic, the marketers have been trying to just acquire new base of customers but even refrain current one by offering value, satiating the exchange expectations of the customers. It's been seen that consumer retention is associated with the satisfaction of customer and consumer satisfaction not just retains customer with companies but even affects the revenue, earnings for each share and the price of the stock. Since the behavior of the consumers and its study is the backbone of marketing strategies for each firm, a comprehensive and detailed study of different aspects become quite imperative for success of the organization (Bolia, 2016).

And since, the entire concept of the cognitive dissonance as well as its impact on behavior of the consumers is a part of different researches.

It has been suggested that dissonance mainly includes both the cognitive aspects as term cognitive dissonance may imply and the emotional dimensions to since a lot of definitions imply.

The resultant dissonance boosts an individual to also bring harmony to the inconsistent attributes and thus reduce the psychological tensions. Dissonance may arise in three ways. The first one is any kind of logical inconsistency may cause dissonance. Secondly, dissonance may be caused when an individual experiences inconsistency either in his attitude as well as behaviors or between 2 of the behaviors of the individual. Thirdly, dissonance may happen when strong expectations are disconfirmed. Also, dissonance happens once the decisions are made prior to taking the decision the individual used to have the option to adjust to the behavior and attitude that may be deemed according to the choice. However, once the decision has been done, the commitment is established between the consumers and the buyers, where it is not possible to adjust himself and it's also liable to stand by his decision. Cognitive dissonance has an important role to play in a lot of valuable judgements, evaluations and decisions. Knowing and understanding the impact of the process of making decisions is a good way of improving the ability of making accurate and fast choices.

Cognitive dissonance may happen in a lot of areas, but it's specifically evident in different situations where the behavior of the individuals conflicts with his beliefs which are integral to their self-identity. For instance, a situation may be considered wherein an individual who places importance on being responsible about the environment just bought a new automobile which he may later discover doesn't get huge gas mileage (**Saini, Gupta and Khurana, 2015**).

II. Literature Review

Buyer conduct is the choice cycles and demonstrations of individuals engaged with purchasing and utilizing items. It includes buying and other utilization related exercises of individuals participating in the trade cycle. Conduct of customer is spurred or purposive. The conduct is coordinated towards the objective of getting items or different assets. It is the exercises of individuals occupied with real and likely utilization of market things whether items, administrations, retail conditions or thoughts (**Zhou and Gu, 2015**).

The better the firm comprehends its buyers, the more probable it becomes fruitful in the commercial center. Information on shopper conduct would deliver gigantic assistance for arranging and executing promoting systems. Shopper reaction is a definitive taste of whether a showcasing system will succeed. Consequently, information on buyer ought to be consolidated into each aspect of an effective showcasing plan. Furthermore, this information additionally assists with guaranteeing that item keeps on speaking to its center market.

Mentalities are one of the most vigorously concentrated on ideas in purchaser conduct. Mentalities are learned inclinations to react an item (**Hawapi et al., 2017**). Clients hold demeanor toward an assortment of objects that are essential to advertiser. Additionally, it hypothetically sums up a customer's assessment of an item and addresses good and bad sentiments and conduct inclinations. The mentality conduct interface doesn't generally hold; numerous different capacities can influence conduct. Demeanor can be characterized as a perspective or an inclination (**Wilkins, Beckenuyte and Butt, 2016**).

Or then again, we can say a mentality is an inward assessment, communicated obviously about an individual, article or issue. It has been a vital idea in brain science for over a century and there are bunches of definitions and heaps of proportions of disposition have been proposed (**Pandey and Jamwal, 2016**).

As indicated by the most famous mental conceptualization, the anticipation esteem model, a singular's disposition toward an item addresses a rundown origination or assessment in view of their perceptions, or convictions. Every conviction connects the article with a certain characteristic, and an individual's general mentality is dictated by the emotional upsides of all the credits, cooperated with the strength of her convictions connecting the property with the item (**Hande, Peyami and Cenk, 2019**).

Brain research lets us know that mentalities change, and that such changes have suggestions for conduct. The authoritative tri-part model of mentalities sets that adjustments of convictions about an item will more often than not cause an individual to join new sentiments to it, and these thusly drive changes in inclinations and decisions. For instance, if an individual acquires data about an item that makes her have more certain convictions about it, for example, that a vehicle improves gas mileage than she had recently suspected, she will feel all the more decidedly arranged toward it and will be bound to get it. It ought to be clear, then, at that point, that when we consider specialists' inclinations with regard to monetary activities; we remain on moving ground (**Shulman, Cunha and Saint Clair, 2015**).

Client disposition toward an item or administration is impacted by a match of the item or administration client picture with the client self-idea. Since, by and large demeanor creates after some time through a learning cycle which is impacted by reference bunch impacts, past experience, and character, or it is an overall assessment about something, loving or loathing, and the strength of the sentiments. Disposition is a significant marker in showcasing. It is expected that it has causal connection between mentalities, expectations and conduct. Explores that due to their significance, mentalities are the point of convergence for a generous measure of showcasing system. It implies disposition ought to be considered in any advertising procedure (**Seo, Yoon and Vangelova, 2016**).

At the point when the purchase has been made, a human mind starts studying the benefits and impediments of the purchase trade made. This development prompts spread of bundle of conflicting thoughts in the mind of the buyer. The positive pieces of a choice stayed away from and the negative pieces of the decision made cause

rising strain in the human cerebrum and choose the buyer to rethink about the decision made. Friction anyway is a psychological thought at this point has an inconceivable bearing on the way purchasers plan their purchase and effect of the purchase made on their future association with the affiliation. In a period of exhibiting, where a customer is spoilt with a lot of choices as concerning the thing to get, it is difficult to avoid a situation of chaos which prompts disharmony among the clients. Regardless, purchasers set forth their endeavors in different ways to diminish the conflicting viewpoints which arise to them (**Park, Cho and Rao, 2015**).

Exactly when a purchase trade gets completed, most of the clients feel that their decision has hugely impacted by the business interventions being made by the seller and therefore their scholarly consistency has been compromised to the distinctive publicizing mediations made by the shipper. A client resulting to making an ideal decision may feel that by picking a particular brand, he has managed without the great attributes of an elective brand which he may have had if he had picked the elective brand. The obligation might get supplemented at whatever point bought brand doesn't continue as per the best suppositions for the clients. In such a circumstance, the client might disregard the positive ascribes related with a thing and consider them dreary (**Minnema et al., 2016**).

However, cacophony can be felt by the purchaser at any stage during the buyer's dynamic interaction, it is during the post buy stage that discord could cause even passionate distress in the consumer's mind. Nonetheless, a shopper can attempt differed ways of decreasing the cacophony - (1) through defense (2) he might look for extra data which is in steady with the conduct that he has shown and (3) by failing to remember a portion of the noisy components and by changing his disposition and moving it for the choice made by exceptionally stressing on the positive parts of the choice being made. Intellectual discord can completely be found in the post buy stage as well as is effectively noticeable in the pre-choice stage too. Cacophony has the ability to make the total purchasing experience as harsh and disagreeable. To hold long haul clients, organizations normally will generally stay away from such plans and such promoting procedures which can make disharmony among the buyers after the buy exchange is being finished (**Lee, 2015**).

At the point when a customer dismisses the good credits of a sworn off item, he picks the negative attributes of an item which he picks over the option accessible and this is the primary explanation for the irregularity that a buyer feels in his contemplations and thoughts, subsequently specialists estimated this irregularity as far as the buy choice trouble that the purchasers feels while settling on a choice which prompts cacophony excitement (**Chen and Zhang, 2015**).

The hypothesis of intellectual cacophony is exquisitely straightforward: it expresses that irregularity between two discernments makes an aversive state much the same as appetite or thirst that leads to an inspiration to decrease the irregularity. As per an exploration, insights are components of information that individuals have about their conduct, their mentalities, and their current circumstance. In that capacity, a bunch of perceptions can be random, consonant, or discordant with one another.

Two insights are supposed to be discordant when one follows from the front-side of the other. The resultant inspiration to diminish discord is straightforwardly corresponding to the size and significance of the discrepant comprehensions, and contrarily relative to the extent and significance of the predictable discernments. This pressure is normally decreased by transforming one of the perceptions, or adding new comprehensions until mental 'consonance' is accomplished. Festinger's unique detailing ended up being one of the most hearty, persuasive, and questionable hypotheses throughout the entire existence of social brain science. Albeit various difficulties and amendments have been recommended, the fundamental social perception stays uncontested and keeps on invigorating new examination (Yildiz, 2020).

Utilization of this hypothesis has yielded many astounding and nonintuitive forecasts. For instance, tried and true way of thinking proposes that conduct follows from perspectives; disharmony hypothesis, notwithstanding, distinguishes conditions under which the polar opposite happens. An early and frequently recreated test represents the power and irrationality of the hypothesis. In what is presently known as the initiated consistence impact, requested people to perform a little way from a brain numbingly monotonous action, and afterward to convince a holding up member that the action was truth be told very intriguing. The present circumstance made intellectual cacophony in many people – they accepted that the undertaking was exhausting, yet mysteriously found themselves contending a remarkable inverse (Lazim et al., 2020).

III. Objectives of the Study

1. To find the measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products
2. To ascertain the measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products

IV. Research Methodology

The present study is descriptive in nature wherein measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products were analyzed. The sample taken for the study is 150. The information was gathered with the assistance of an organized poll on a five-point scale and investigated with the assistance of the mean qualities and t test.

Table1 Demographic profile of the respondents

| Variables | Number of respondents | % age |
|-------------------|------------------------------|--------------|
| Gender | | |
| Males | 72 | 48% |
| Females | 78 | 52% |
| Total | 150 | 100% |
| Profession | | |

| | | |
|--------------|------------|-------------|
| Businessman | 36 | 24% |
| Service | 55 | 37% |
| Teacher | 31 | 20% |
| Housewife | 28 | 19% |
| Total | 150 | 100% |
| Age | | |
| 20-35 | 58 | 38% |
| 35-50 | 67 | 45% |
| 50-65 | 25 | 17% |
| Total | 150 | 100% |

Table 1 presents demographic profile of the respondents on measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products. There are 48% males and 52% females in the study. Among the respondents 24% are into business, 37% are into service, 20% are teachers and 19% are housewives. The 38% of the respondents are 20-35 years of age, 45% are 35-50 years of age, and 17% are 50-65 years of age.

Table 2 Mean Value of the factors affecting the measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products

| Sr. No. | Measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products | Mean Score |
|----------------|---|-------------------|
| 1. | There are more chances of fraud in online purchase | 4.01 |
| 2. | You can't be sure of the quality of the product when you buy things online | 3.98 |
| 3. | You get good deals on electronic products online | 4.05 |
| 4. | Elderly people refrain from buying things online | 4.02 |
| 5. | It is not possible to compare prices of products online | 3.85 |
| 6. | People find it convenient to buy electronic products online | 4.06 |
| 7. | There are chances of electronic products being damaged when ordered online | 3.99 |
| 8. | You can't be sure about after sales service when buying electronic products online | 4.12 |
| 9. | Online advertisements influence consumers' buying intentions for electronic products | 4.15 |
| 10. | Insufficient electronic product details make people hesitate in buying them online | 4.11 |

Table 2 shows the opinions of the respondents. It is observed that online advertisements influence consumers' buying intentions for electronic products with the mean value of 4.15. It is followed by You can't be sure about after sales service when buying electronic products online (4.12), Insufficient electronic product details make people hesitate in buying them online (4.11), and People find it convenient to buy electronic products online (4.06). You get good deals on electronic products online (4.05), Elderly people refrain from buying things online (4.02), There are more chances of fraud in online purchase (4.01), There are chances of electronic products

being damaged when ordered online (3.99) and You can't be sure of the quality of the product when you buy things online (3.98) were also considered important. Reasons It is not possible to compare prices of products online (3.85) were also viewed as important.

Table 3

| Sr. No. | Measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products | Mean Score | t-Value | Sig |
|---------|--|------------|---------|-------|
| 1. | There are more chances of fraud in online purchase | 4.01 | 6.314 | 0.000 |
| 2. | You can't be sure of the quality of the product when you buy things online | 3.98 | 5.589 | 0.000 |
| 3. | You get good deals on electronic products online | 4.05 | 6.245 | 0.000 |
| 4. | Elderly people refrain from buying things online | 4.02 | 5.043 | 0.000 |
| 5. | It is not possible to compare prices of products online | 3.85 | 3.562 | 0.000 |
| 6. | People find it convenient to buy electronic products online | 4.06 | 6.428 | 0.000 |
| 7. | There are chances of electronic products being damaged when ordered online | 3.99 | 5.843 | 0.000 |
| 8. | You can't be sure about after sales service when buying electronic products online | 4.12 | 8.178 | 0.000 |
| 9. | Online advertisements influence consumers' buying intentions for electronic products | 4.15 | 7.792 | 0.000 |
| 10. | Insufficient electronic product details make people hesitate in buying them online | 4.11 | 7.359 | 0.000 |

Table 3 shows the results of t-test. It is found from the table that the significance value for all the statements is below 0.05, hence all the statements regarding measuring reasons of cognitive dissonance in the online purchase with special reference to electronic products are significant.

V. Conclusion

A lot of studies have been conducted for finding out factors which affect cognitive dissonance amongst the buyers of consumer goods. Results of these studies illustrate certain factors like religious values, norms, customers, etc. which are mainly responsible to create cognitive dissonance amongst the consumers. Findings of these studies help the academicians and marketers in understanding the significance of cognitive dissonance in order to make the customer either happy or unhappy. These studies even suggest a few strategies that the service organization may reduce the cognitive dissonance. With a rapid growth of the marketers of the service industry of different organizations are witnessing a huge challenge for fulfilling the expectations of the customers. Thus, its important that the service organizations for reducing cognitive dissonance regarding buying and therefore survey in competition in local and global markets.

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Role of RFID in Retail Supply Chain Management Industry: A Systematic Review

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Abstract

RFID technology is a standardized data storage and retrieval system that can promote collaboration and data interchange across non-competing organizations. Because of the emergence of RFID, businesses now have the chance to rethink how they will function and integrate into the supply chain. Adopting such an innovative technology (i.e., RFID) might be intimidating, especially for Small to Medium-Sized Enterprises (SMEs) with limited resources. The management of resources, information, and capital as they travel from provider to customer is called supply chain management (SCM). Logistics is becoming increasingly crucial in the global supply chain as a result of new trends. Many supply chain service providers have recognized the need for technological adoption to assist manufacturers, distributors, and warehouses connect more efficiently. Radiofrequency identification (RFID), one of the most capable technical developments, can improve supply chain transparency and process efficiency.

Keywords: RFID, Supply chain, Organisational management

I. Introduction

Radio-frequency identification (RFID) is an automatic identification that uses RFID tags or transponders to store and retrieve data remotely. Innovations in information technology (IT) continue to increase organizations' abilities to acquire, interpret, retain, and distribute data. Radio Frequency Identification (RFID) has garnered much interest in the supply chain as a technology for automatic identification and data collecting (Kumar., 2019). Organizations can make better judgments in real-time thanks to real-time information-gathering technologies and decision support systems. RFID is one of these technologies that can considerably increase an organization's ability to obtain data about entities' assets and locations.

“(Alqahtani&Wamba.2012). RFID, automated wireless identification and data capture (AIDC) technology, is developing as a new wave of information technology (IT) with the ability to alter end-to-end supply chain (SC) business operations, according to the company. RFID technology uses radio waves to capture data and automatically identify items traveling through the SC.” RFID implementation and use inside SC operations might result in significant advantages such as real-time information access, intra-, and inter-business processes, item-level tracking and tracing within the SC, improved inventory management, and decision-making.

Businesses are becoming more aware of radio frequency identification (RFID) and its application in supply chain management due to recent media coverage. RFID for supply chain (RFID/SC) is a growing technological trend in the United States, Europe, and Asia. The potential benefits of RFID to businesses pique merchants' interest in the technology, which also serves as a display of power among supply chain actors. Better supply chain visibility, according to retailers, has decreased stock-outs and labor costs, enhanced inventory management, and increased supply chain efficiency(Lee et al., n.d.).

Organizations mandated to install RFID/SC to continue doing business with retail giants and organizations not impacted by the requirements that are either waiting to see if the technology will be adopted or intended to do so have been recognized at this phase in RFID/SC adoption. The basis for this classification is that there is a considerable difference in attitudes toward technological adoption across the categories. As a result, the primary difference between the two groups is whether RFID deployment is required. Smaller suppliers may be affected by the law, while those who wait and see if RFID/SC take off risk losing market share. Both companies are tasked with developing new technology with few examples to depend on(Soon& Gutierrez., 2018).

II. Literature review

(Jena,Panigrahi,Bhuyan.2020) Found that RFID is recognized as an energy-efficient inventory management practice. When compared to other activities, it uses less energy. It is widely employed as an energy-efficient approach since it can easily record data as long as it is in the proximity of its peripheral or reader. This technique is commonly utilized in the field of supply chain management. Radio Wavelengths Inventory identification methods were thought to be the most successful mechanism for any commercial firm. To keep up with the rapid pace of technological change, we need control over asset tracking and warehouse management systems. Looking at the two control systems mentioned above, RFID is being embraced by retail locations. According to SML RFID (global leader in providing high-performance RFID technology solutions for retail), the RFID market continues to grow at a rate of 30 percent year after year. Inventory accuracy improves by 98 percent or more through the usage of RFID methods when compared to traditional stock management techniques.

“(Mall& Mishra., 2012) Says that The effectiveness of a supply chain and logistics plays a significant influence in boosting a company's return. However, the difficulty is how to achieve the highest level of operational efficiency in the supply chain. Because each link in the chain is a unique entity, the interconnectedness of the various supply chain and logistics links is currently incomplete and erroneous”. As a result, the supply chain has little product visibility and openness. This is especially important when it comes to scalability issues. The solution to this problem is to combine Radio Frequency Identification (RFID) technology with information sharing platforms.

This convergence of technology will be crucial in the future of global trade. With trade boundaries constantly expanding and becoming more dispersed, having a tool that collaborates on this type of complex supply chain is critical. However, the decision to introduce any new technology is fraught with risk due to the high cost involved. Most companies are hesitant to implement such technologies because they are unsure of the return on investment(Nemeth et al., 2006).

(Azevedo, Carvalho.2012) According to the study, businesses must be innovative not only in their operations but also throughout the entire supply chain. In today's economic environment, where customer demand encourages high levels of diversity and products have a short life cycle, businesses must be innovative in their operations and throughout the entire supply chain. RFID (radio frequency identification) is a cutting-edge automated data collection and recognition technology. Without human participation, RFID has been utilized to improve supply chain activities such as material handling efficiency. Product availability is being expanded, and asset management is being improved.

RFID stands for Radio Frequency Identifying. It is a wireless identification technology that enhances the communication capabilities of electronic data connected with physical items. Readers, tags, software, and reader security programs are among the numerous components. Tags are divided into two categories: active and passive. A tiny battery, a microcontroller, and a small antenna are all included in active tags. In addition, the frequency at which radio waves are employed varies. The read/write range of active tags is greater than that of passive tags, which is smaller (Khan et al., 2017).

“(Attaran., 2012) said that RFID, or radio frequency identification, is one of the most exciting and anticipated technologies in recent years. RFID, when used correctly, can save the company money now and make it more competitive in the future”. Despite its many benefits, RFID adoption in the supply chain faces significant challenges. We look at the supply chain processes where RFID technology offers the most outstanding value, the possibilities and limitations of RFID implementation in supply chains, and hypothesize a possible link between RFID system benefits and implementation success factors in this study.

The necessity for comprehensive cost optimization and reliable asset tracking and monitoring has created a substantial market for RFID technology. Many organizations have adopted RFID in their supply chains in recent years. They are now seeing genuine financial benefits as a result of the technology. As organizations from various sectors have learned, RFID technology can do much more than merely monitor boxes in the supply chain. RFID is steadily making a comeback as a valuable technology for increasing internal efficiency (Peppas & Moschuris, 2013).

“(Wamba et al. 2006). Found that RFID is recognized as "one of the most widespread computer technologies in history," according to the company. The RFID principle, on the other hand, is not new; it was first employed in military applications during World War II when the British Air Force used RFID technology to use radar to identify ally aircraft from hostile aircraft." . RFID technology has gotten much press in recent years, with a "boom" in early 2003 as a result of Wal-Mart and the US Department of Defense (US DOD) requiring significant suppliers to adopt and implement the technology by the beginning of 2005.

(Khan et al. 2017) founded that This technology assists businesses in integrating their supply chain systems. Investigated the relationship between the retailer's dilemma and the solutions provided by RFID solution providers to reduce product shrinkage. As a result, the adaptation of RFID technology meets the needs and desires of stakeholders. Several challenges continue to stymie RFID's widespread adoption in the retail industry. It includes the cost of RFID implementation, a lack of customer education, and a lack of technological familiarity; these factors are at the start of the supply chain adoption cycle.

Because of the significant benefits that companies and supply chains can achieve by using RFID instead of bar codes, significant investment in the development and improvement of RFID systems has occurred in recent years. These advantages are primarily the result of advancements in the identification process and the elimination of the need for manual labor to scan items. RFID technology has numerous advantages over bar code technology for consumers, retailers, and suppliers. These benefits are increased security, improved business operations efficiency, customer service, inventory management, visibility, and lower logistical costs (Ngai, 2010).

(Gotmare, Bokade, Bhirud, 2019) RFID (Radio Frequency Identification) is an intelligent object tracking system with numerous applications in various industries. In recent years, RFID technology has piqued the interest of academics and practitioners in the manufacturing and supply chain industries. RFID technology is most commonly used to track products throughout the manufacturing and supply chain, resulting in increased efficiency and economic benefits. This paper's authors performed a systematic review of the literature on RFID applications in manufacturing and supply chain management. The literature on RFID applications in manufacturing and supply chain management was divided into two categories based on potential research areas and methodologies used in the research. The goal of this paper is to bridge the gap

between theoretical research and RFID practitioners. Properly analyzing selected literature and presenting potential future research avenues.

“The management of resources, information, and capital as they move from provider to consumer is referred to as supply chain management (SCM). Logistics is becoming increasingly important in the global supply chain as a result of emerging trends. Many supply chain service providers have recognized the importance of technology adoption to help manufacturers, distributors, and warehouses communicate with one another more efficiently. RFID is one of the most capable technological innovations, with the potential to improve supply chain transparency and process efficiency”. (Desingh.2021).

III. Conclusion

The relevance of RFID in resolving supply chain issues is emphasized. RFID is a critical instrument for ensuring that all sectors run smoothly. RFID technology is gaining popularity as a result of its diverse uses. Manufacturing, commerce, sales and distribution, logistics, and other industries all employ RFID technology. It may aid a company's supply chain process by reducing the time it takes to reach a customer, effectively managing inventories, and tracking information, among other things. Each pallet, container, and product made, delivered, and sold will have an RFID tag attached.

As a consequence, the supply chain operation is incredibly efficient and error-free. It enables the industry to reach end users with the appropriate quality, price, and time. It makes the most money in terms of revenue and customer satisfaction.

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Spirituality: A Blessing in Disguise Against Covid-19

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Abstract

Spirituality is gaining advantage in every sphere of life. It is experiencing the real essence of life. The purpose of the present article is to attract increased interest towards the invaluable and unavoidable benefits of spirituality to fight the ill-effects of corona on mental and physical health of people. To outlines how the stress and anxiety of corona can be won through spirituality. As the expression of spirituality diversify and corona declared as a pandemic, people are going through tough time, the essence of spirituality can be taken into consideration. It calls for a profound awareness among the people across globe to seek spiritual solutions to fight and stand against covid-19 staying healthy.

Keywords: Spirituality, Covid-19, Meditation, Lockdown, Stress, Health, Anxiety

I. Introduction to Spirituality

Spirituality is about consciousness which covers the relationship with the one's inner self to the relationship with others, to the nature, and to the Sacred power. Spirituality unites all spheres of life and gives a sense of well-being. It results in satisfaction and acceptance with life, stay focused and calm even in times of crisis (George, 2006). Spirituality is like a breath within us. It is supported by heart and soul and has the power to cleanse not only one's heart and soul but also the mind and body. Spirituality is deeper sense of connection with the ultimate Divine (McCormick, 1994). Meditation is a tool to implement Spirituality in life as meditation cultivates spiritual qualities of inter-relationship. Through meditation heart turns spiritual, people start absorbing positivity around them and from people around them. Meditation is connecting to inner self and develops one's inner strength. One tries to ignore negative qualities in people and treat everyone equally. The author (Falb & Paragament, 2012) speaks of meditation as a mindfulness technique, a concept of no-self, carried out in silence, integrated with medical and psychological treatments. It is gaining acceptance in the field of psychology and psychiatry giving physical and mental health benefits, putting one to calm giving clarity.

Spirituality is defined in many ways by different authors. It is a belief in God that there exists some power which controls the universe. Spirituality can be defined as the intrinsic-origin view, religious view and existentialist perspective (Krishnakuma & Neck, 2002). Spirituality goes beyond religious or cultural boundaries (Delgado, RN, & MSN, 2005). Spirituality is led by faith and finding true meaning and purpose

of one's life. It is a profound connection with others that brings a sense of satisfaction, attainment of peace and well-being. It has the power to make anyone feel satisfied with the discomforts of life.

Spirituality makes an individual to get through their worst time. It is connecting with the highest feeling with the soul inside or others (Pandey & Jain, 2019). It is a person's belief system and one's inner experience (Kamitsis & Francis, 2013). It is amalgamation of life span of an individual and his experience (Gomez & Fisher, 2003). "Spirituality is the science of soul, a peculiarly Indian science" (Pardasani, Sharma, & Bindlish, 2014). It is envisioning the supreme power (Tombaugh, Mayfield, & Durand, 2011) and connecting with the whole universe (Attri, 2012).

Covid-19 Scenario

The Novel Coronavirus 19 disease (COVID-19), a highly contagious infection, has its origins in the Huanan fish market in Wuhan in the Chinese province of Hubei. This epidemic started in December 2019 due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The intermediate source of origin and transmission to humans is not known, but rapid transmission between humans has been identified. In the first fifty years of this epidemic, more than eighteen hundred people were killed and more than seventy thousand people infected (Shereen, Khan, Kazmi, Bashir, & Siddique, 2020). On December 31, 2019, China reported the outbreak of the World Health Organization (WHO) and the Huanan fish market was closed on January 1, 2020.

The Chinese government initially called this 2019-nCoV a novel coronavirus pneumonia (NCP) that causes a persistent lower respiratory epidemic. The World Health Organization (WHO) then recommended this disease as COVID-19. China has launched Lockdown Wuhan and other neighboring cities since January 23, 2020, including cessation of urban transportation, but the number of cases in Wuhan has continued to increase (Yuen, Ye, Fung, Chan, & Jin, 2020).

Over the past two decades, after these two human coronaviruses, severe acute respiratory syndrome (SARS) and Middle Eastern respiratory syndrome (MERS), COVID-19 has been the third occurrence of CoV in humans as clinical indicators of respiratory, digestive, and systematic Disruptions expressed by the pneumonia (Rodriguez-Morales, et al., 2020). The clinical features of COVID-19 include fever, cough, shortness of breath, muscle pain, confusion, headache, sore throat, rhinorrhea, chest pain, diarrhea and nausea, and vomiting (Chen, et al., 2020). Human to human transmission of the virus increases due to close contact with an infected person or from coughing, sneezing, breath droplets and aerosols. Many scientists, researchers, and various health authorities around the world are working day and night to develop suitable vaccination and therapy strategies to combat this new coronavirus (Shereen, Khan, Kazmi, Bashir, & Siddique, 2020).

More than 200 countries are affected by COVID-19. With the rapid spread of the COVID-19 crisis around the world, the global recession appears to be inevitable. This epidemic has caused dangerous economic impacts such as travel bans, stock market crash, oil price war between Saudi Arabia and Russia, liquidity problems in SMEs and financial difficulties for families, Job loss to name a few. It is also concluded that sectors such as retail, airlines, hospitality and entertainment are most affected by this epidemic. As a result, it is very difficult to assess the extent of the financial damage that will result from this crisis if the current situation continues until the end of summer (Fernandes, 2020).

Countries severely affected by this COVID-19 outbreak need to develop short and long-term strategies to respond to the economic costs of the disease. Tax, monetary and health measures must be taken to deal with a diverse crisis (McKibbin & Fernando, 2020).

Lockdowns

Most of the people are at safe within the comfort of their home during lockdown but still there are people who are away from this not by violating the laws but to safeguard many lives. People involved in civil services, hospitality and healthcare professionals have to step out to save lives. They are the real spiritual being; they care for the humanity not thinking about their own self. In India, there has been an increase in reruns of Mahabharat, Ramayana and many other mythological stories and people have taken a genuine interest in watching these and moving back to spirituality. One must have noticed that in Mahabharat during the Maha-Yudh arjuna took a break and watched with whom will he be fighting, and for what? This has shown the importance of introspection. This lockdown has given time to people to give a thought with a peaceful mind to observe themselves carefully and introspect to become better and give it a deep thought, “why these days have arrived?”, “what was the root cause of such pandemic?”, “How to overcome this?”, “What one should do that these things should not get repeated again?”.

Even with all the negativity and lockdown surrounding corona virus, people can take this as an opportunity to learn something for a better future. This time can be used to create a way of life that is more beneficial for the environment and our personal lives. To understand this better, the 4W's can be remembered as Watch, Way, Worth and Wait. Watch what went wrong and find a way to make it right in the future. People have played with the nature who has now reverted. To satisfy their needs and to find pleasure, people with their lifestyles have violated this beautiful nature. Till the time one was using the resources effectively taking in consideration the nature, it was acceptable but now by deforestation, high edge building, making animals a part of meal, mining, polluting the environment for their own sustainability one has finished the beauty of nature. This can be overcome by spirituality as it enables develop a sense of engagement towards the nature (Kamitsis & Francis, 2013).

Nature has given message to people to stop their deeds now (Robin, 2004). Its time people learn from their mistakes and put a check on their actions as they are bound to have a reaction. Even a cricketer when strike out during the play, he takes a break watch his video again to understand the mistake made by him so as not to repeat that again. Lockdown has given time to rethink about our misdeeds and take responsibility of one's individual action.

It's important that we remember this time because forgetting it will result in a similar situation sometime or the other. It's easy to understand with a small example from daily life. When one visits a doctor and asks what happened what should I do to recover, doctor suggests not to take sugar and salt for few days as the person is suffering from high blood pressure and is diabetic patient. The patient after following the rules and guidelines prescribed, recovered and visited the doctor asking when can I now start with sugar and salt again, doctor says when you wish to visit me again.

People should not wait for the government to enforce the lockdown, even if it is opened, take responsibility to safeguard themselves and others, move out only when required. This situation has taught a big lesson to all, watch your faults, find ways and delete the worthless things, misdeeds and negative emotions. Delete and don't thing about useless things in life. By discussing, worrying and waiting for this panic to end, it will not happen. Enjoy the time given with family and use it to build healthy relations and new memories.

Once this end, people will miss the time spent with their family, time spent in isolation analysing and evaluating ones' own self and in learning new things. There is a possibility that attitude toward life gets changed for the people and they start giving importance to spiritual values.

One should convert this phase into opportunity by following ways

- **Time:** Time is priceless and available free of cost, so value the time you have, one cannot buy the time but can use it, one can't hold the time but can spend it creating memories for the future to cherish forever. Time can't be visualised but its significance can be felt, once it flies it never comes back. Utilise the time available during lockdown properly.
- **Awareness:** Analyse yourself, your past deeds, situations that went wrong, try to give a deep thought on the mistakes made, learn a lesson from them. Analyses the strengths that you possess, work to enhance them and overcome your weakness to make it your strength.
- **Developing relations:** Bridge the communication gap with your parents and the family members. Today people have a family whom they live with but living together and being united are different things. Utilise this lockdown to build the relationship among each other, enjoy their company, let go of the past grudges. You will realise what you were missing, the strengths that you had but never felt. Be a bridge not a wall in your family.

- **Health:** Focus more on your health. Take effective steps to cure from the disease you are suffering from. Government has issued some directives to follow herbal remedies. Take a healthy diet to boost up your immunity to protect yourself from Corona and any other health related problems. Be mentally and physically healthy.
- **Yoga, meditation, pranayama kriya:** Develop a habit for workout on daily basis. This will enhance your body system. Engage into activities such as meditation, prayer, this gives inner strength and develops inner peace to deal with any kind of crisis. Pranayama kriya energises body, strengthens breathing capacity when done early morning and gives a sense of peace. Meditation, yoga, prayers have a positive impact on health (Young & Chen, 2013).
- **Plan the future course of action:** Plan your future as per your desires, think about what you want to do and what you want to be or where you want to see yourself 10 years down the line. Believe the plan you want to achieve, trust your strength and work to implement the same.
- **Enjoy vacations:** Consider this lockdown as vacations, to stay at home. Love yourself and enjoy your own company. Take this vacation as an opportunity not to see more places but to make more memories with your loved ones and be self-aware.
- **Serve the country:** Consider this an opportunity to serve the country doing nothing, sitting at home preventing transmit of corona virus.

Overcoming fear, stress and anxiety caused by Corona through Spirituality

Corona is a pandemic (Declared by WHO on 11 March 2020); an unfortunate tragedy world is going through. This tragedy is made worse by the constant negativity and information overdose caused by the social media and news. It is important to disconnect with this disease to maintain sanity and well-being of one's mind. A never-ending reminder of the worst situation ignites stress and fear of the uncertain future and leads to many mental problems and restlessness. Everyone is already aware of the norms to be followed to keep this disease away. Still people are constantly engaged into sharing information on how to protect yourself – wash your hands, sanitise properly, maintain distance and to self-isolate. In these tiring times, it is important to share positivity, instead of negativity surrounded by this disease. People are using the time not to be productive, but they are drowned in the endless conversations about Corona. People are cleaning their homes to keep the virus away but they are not cleaning their mind and the virus has already made its way in their life through that. Such a home cannot be called as clean. The transfer of negativity will become a never-ending loop travelling from one person to another and leading to a world crisis.

It's time to focus on cleaning the thoughts, mind and soul just as people focus on cleaning their surroundings to stay healthy. As the negative thoughts in one person's mind can spread in the society as a whole and cause fear amongst all deteriorating mental health of anyone involved. This radiation of negative thoughts for

a prolonged time will affect the body, giving birth to many problems such as high blood pressure, depression to name a few. Social distancing in terms of vibration is impossible due to the constant information exchange. It is a collective failure that can transform into a disaster. One's thoughts also affect other people, health and the environment. Soul and mind should be powerful and one should be spiritually sound.

Covid19 attacks lungs, heart, kidney, liver and may damage them or several other body parts affecting the blood pressure and causing shortness of breath. It affects the mental health and causes stress, tension, anxiety due to the impact it has on personal health and the surroundings. People with weak immune system are more prone to this disease.

A spiritual person radiates positive attitude towards life to others (Young & Chen, 2013). Spirituality is a way of life that can help in reducing stress and burnout. There has been a widespread of Corona information and misinformation like unnecessary forwarding messages, videos that may or may not show the truth, number of people impacted and death toll rising every hour. This information, even if relevant, creates panic and fear in mind of people this fear can take everybody. Necessary Information and Daily updates can be consumed once in a day. People are already aware about the precautions to be taken to safeguard themselves from this disease and rather than re-iterating what they already know it is advisable to only engage in this kind of information exchange when there is something new coming up. This fear can lead to mental instability with the community.

Be introspective rather than being responsive. Even well-educated people are believing the rumours and misguiding information that is constantly circulating through media or social media, instead of validating its genuineness, people are reactive as the mind is so packed with information that they just accept it. Instead of getting into the minute details of everything they just believe things kept in front of them. So being introspective can help people lead their way out of this tangled web of information about Corona. There are writers, columnist or political speakers who manipulate facts as per their requirements and give false information to the readers and listeners. It is a crime against the minds of all the parties involved (Newman, 2009). They will pass this information further which will again be a criminal offence.

In this time of pandemic, It's the time to prove that the world stands united. People can contribute in this global objective by staying positive, staying calm, staying hopeful, practicing spirituality and being aware. They can do their bit by distinguishing between isolation and discrimination, refraining from stepping out and curbing the spread of misinformation. Time to tame the thoughts that are cultivating in one's mind. When it is exploded or flooded with ideas, stress, fear and anxiety and questions arise like "Am I going to be affected by virus?", "What about my family?" then learn to let go all the stress and fear by taking control and getting rid of such thoughts. It may seem difficult but can be achieved through meditation and applying spiritual dimension to your life resulting in mental and physical wellbeing.

Spirituality helps developing a let go attitude, which is important to accept the situation on focus on work or the target, which enable you to just float with the flow, flow with the life (Rubin, 2004) Spirituality makes mind stress free and undistracted. Reaching your targets becomes easier when you forget about winning or losing.

A healthy community needs good leaders and a good leader should be rational, realistic, creative and understand the nuances to tackle the problems of that community. Spirituality helps develop all such skills in an individual (George, 2006); (Fairholm, 1996).

Spiritual values can help overcome the hardships in life (Newman, 2009; Baker, 2003). There have been numerous examples from the history where people implemented, developed courage and determination to fight with their circumstances and their struggle can inspire others in difficult situations.

“Shakespeare’s Hamlet in spite of being in bad conditions, having no money, leading a struggling life, he fought for people and inspired others giving a lesson in humanity.

Sidney Kingsley’s play, The Patriots, make sone remind of Washington and Jefferson fight for democracy even when it was a new concept. Jefferson returned France and is told by the first president that the country is in a state of danger between no ruler or one rulership. To enable democracy, he fought with all unforeseen circumstances and finally established it.”

Spirituality develops a person’s faith, gives them courage and strength to deal with every type of problem or pain they are going through (Baker, 2003) This faith helps find purpose in life which leads to life satisfaction of people which further improves the quality of life. Those who are satisfied from within, have the courage to face all challenges and keep hold of their personal and professional life. Spirituality gives meaning to everything in one’s life and learn to live with what they have. It integrates everything, every aspect of life, gives direction, meaning, resulting in pure bliss that one can get even without earning.

II. Conclusion

Spirituality is experiencing the real essence of life. It is risen above the materialistic aspects of life developing strength, enables people to understand this is a time of pandemic which will pass. It is impossible to separate out the construct of spirituality flourishing from mental and physical welfare (Kartupelis, 2015). It develops a mindset that one is not afraid of anything, but is ready to face the challenges life have set for them. It is gaining acceptance in the field of psychology and psychiatry giving benefits of improving psychological resilience and buffer the ill-effects on overall physical and mental health. Meditation helps achieve such attitude towards life. It gives a direction to lead a life, creating an awareness that people should stand united with all races, castes, and struggle to preserve the family, society and the world; becoming role model for others and set a glorified path with

their values, morals and inspire others to implement spirituality into their lives the same way and serve the country.

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Pandemic Scare on Commodity market- Covid 19

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Abstract

Coronavirus (COVID-19) makes dread and vulnerability, hitting the worldwide economy and enhancing the budgetary markets instability. commodity Markets like some other market are giving an awesome come back to investors in the nation like India, because of the way that there has been increment in the volume of exchanges of different commodities versus increment in the quantity of financial specialists Study found that the COVID-19 day by day announced instances of new contaminations have a peripheral negative effect on the commodity market over the long haul.

Keywords: - Covid-19, commodity market, Uncertainty, global economy

I. Introduction

The episode of the new coronavirus (COVID-19) emergency corners nowadays the overall open plans. Starting in China (Hubei locale), the COVID-19 influenced throughout the most recent 2 months more than one lakhs individuals and in excess of 100 nations. Despite the fact that COVID-19 doesn't present comparative examples as far as casualty rate when contrasted with the 2002-2003 Severe Acute Respiratory Syndrome (SARS), or as far as worldwide spread when contrasted with the Spanish Flu pandemic of 1919, the new coronavirus is infectious and triggers a great deal of vulnerability in the genuine economy and money related markets. The World Health Organization (WHO), which day by day screens the COVID-19 figures from January 21, 2020, proclaimed the coronavirus a pandemic. In spite of the fact that the spread of the infection began to decrease, after the center of February in China, the disease cases developed exponentially outside China. The European nations, yet in addition the United States, are presently seriously contacted. On the available, the COVID-19 triggers dread as well as tension in the general public, supported both day by day announced new contamination cases and by the expanding casualty proportion. Then again, the infection begins to influence the genuine economy, producing an accident on money related and product markets. COVID-19 adversely influences the general interest, making short-run unpredictability in the nourishment costs, and approaching the portability of laborers and voyagers. What's more, COVID-19 makes dread and extra weight on money related markets, where the cost unpredictability is ceaselessly expanding.

The WHO information show that China despite everything is, for the occasion, the most influenced nation on the planet. Be that as it may, the infection quickly spreads in different nations like Italy, Spain, Iran or South Korea.

The worldwide monetary emergency, preparing for some time, truly began to show its belongings in 2007 and into 2008. Around the world market have fallen, enormous cash related establishments have fell or been bought out, and governments in even the wealthiest nations have expected to consider rescue packs to safeguard their financial structures. Because of bigger ascents in 2007 the developing markets drop more in 2008 than created showcases yet in enormous part end up at a similar level as different markets. The worldwide idea of the emergency is likewise obvious from the high connections among business sectors and venture styles that further expanded during the emergency. Therefore, enhancement gave little assistance to financial specialists when required most as business sectors dropped pair.

Gold costs kept on declining in household markets, expanding their ongoing fall. On mcx gold future fell 2% or about rs 800 to rs 38755 for each 10 gram. Gold had shed about rs 5000 for each gram in past five meetings, tumbling from rs 44500 levels. Gold is regularly seen as a sheltered harbor in the midst of strife in worldwide money related markets. Be that as it may, the ongoing sharp fall in gold costs has been credited to trip for money in the midst of uplifted unpredictability across business sectors over the covid-19 alarm.

The oil value response to COVID-19 was step by step suited until March 09, 2020, when, 49 days after the arrival of the first coronavirus checking report by the World Health Organization (WHO), Saudi Arabia floods the market with oil. Subsequently, universal costs drop with over 20% in one single day. Against this foundation, the motivation behind this paper is to examine the effect of COVID-19. Unrefined petroleum costs in March fell close to levels unheard of since 2003. Right now, present research entices to examine how the COVID-19 new contamination cases influence the commodity market.

II. Literature review

Expanding vacillation of item costs since the turn of the century has set off a blast in writing contemplating the conduct of product costs. Arezki et al., (2014) ; Fernandez et al., (2018). Ait-Youcef (2018) unequivocally researches the idea of financialization in item advertises by testing whether record venture can have results to product costs. Utilizing a Threshold Autoregressive Quintile Regression model, it was found that financial exchanges do Influence agrarian value developments, and the relationship is critical during periods with outrageous developments, for example, the 2008 worldwide money related emergency period. The outcome is predictable with Zhang (2017), who additionally finds that worldwide securities exchanges influence oil value developments fundamentally during the period after the worldwide money related emergency. Since 2007, world nourishment costs have flooded quickly, prompting an intense worldwide nourishment emergency in 2008. This heightening of nourishment costs has featured the expanding unpredictability of the circumstances

and end results of nourishment value stuns in a globalized world and raised genuine worries among policymakers about the antagonistic effects of nourishment costs on the poor in creating nations. Most investigators concur that a blend of rising oil costs, US dollar (\$) devaluation, bio fuel arrangements, advertise hypothesis, and incidentally forced exchange limitations all added to the fast flood in nourishment costs Headey and Fan (2008)

Pre emergencies and post emergency impact of monetary emergency on global item advertise was stued by utilizing VAR model (Zhang and Broadstock, 2018).

(QiangJi and Fan, 2012) considered the impact of unrefined petroleum advertise on non-vitality product showcase when 2008 money related emergency and discovered raw petroleum impacts the vitality ware showcase.

The examination of unpredictability designs in rural commodity market was considered during the Asian and Global money related emergencies. Instability for farming items advertise just as oil showcase for the duration of the time related with cataclysm was tried by utilizing T-GARCH model. Results demonstrated that insecurity in ware advertise was upgraded during 2008 worldwide money related emergencies and that had a more grounded and perseverance sway during Asian Financial Crises. It was additionally recommended that item advertise vulnerability is because of theoretical practice and this will majorly affect coming years. There was an emotional change in worldwide product costs following the 2008 money related emergencies (Saucedo et al., 2015; Morales, 2017; Algieri et al. 2019). There is high confirmation that oil costs influence farming wares costs. The constructive outcome of a frail dollar on horticulture costs is also insisted. Household markets are constantly influenced by worldwide markets. It is because of stuns (Nazlioglu and soytas, 2011; Mittal et al. 2018). The instability overflow when worldwide money related emergency in Malaysians elastic market was analyzed by utilizing ARCH model and discovered presence of unpredictability for both the period. Worldwide money related emergency of 2008 leads interruption and vulnerabilities in future interest and supply for normal elastic and principal to more noteworthy characteristic elastic cost vulnerability (Gohl et al. 2016).

Time fluctuating linkage was found among world oil market and Chinese wares by utilizing DCC-GJR-GARCH It implies worldwide oil advertise influences each item of china yet it isn't there at times it influence the worldwide market yet not to china showcase (Bhol et al, 2016; Jiang et al, 2019). Instability overflow among spot and future market related with metal was dissected with the assistance of EGARCH and discovered unpredictability exist between these two likewise long haul relations between these two (Kumar and Shollapur, 2015; Barreto and Ramesh, 2018).

Nissanke (2012) expressed that the connection between budgetary markets and item showcases filled in as a quick transmission channel which amplified the emergency sway in the creating countries that were at first protected from the money related disturbance. There is a wide hole in the comprehension of the mind boggling channelization between the money related emergency and the product markets.

We can see since January 2020 it is continuously falling down. Not only crude oil each and every commodity worldwide affected by covid-19. In graph form oil price is shown below



Source: <https://www.tradingview.com/x/00uv1yXN/>

III. Conclusion

This examination gives proof that the value arrangement moved to high unpredictable system in a large portion of the products over all areas and a large portion of items during the emergency time frame. This infers monetary vulnerability brought about by the 2008 worldwide budgetary emergency influenced the Indian commodity market in this way. The fast proliferation of COVID-19 pandemic creates stun waves on the money related and commodity markets, just as in the genuine economy. The profundity of the new monetary downturn will rely upon the arrangement reaction to the corona virus emergency. The emergency prompted increment in danger of putting resources into these business sectors

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A Study on Academic Anxiety of High Achiever and Low Achiever school children.

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Abstract

Today anxiety is a common phenomenon of everyday life. It plays a crucial role in human life. Academic Anxiety is a state anxiety which relates to the impending danger from the environment of the academic institutions. The objective in this present study is to determine the effect of academic anxiety of high achiever and low achiever of school children. The academic anxiety scale was used to measure the academic anxiety between high and low achiever. The sample was comprised of (N=60) high and low achiever. high achiever(n=30) and low achiever (n=30) selected purposefully from city Cuttack Odisha Test was used for Statistically analysis. The study reveals that there is difference in academic anxiety of high achiever and low achiever. The low achiever has more academic anxiety than the high achiever. We can also help them to get rid of their anxiety by the appropriate guidance from the teachers, and school counselor. Lastly from this study we found that High achievers are less prone than anxiety low achievers.

I. Introduction

Today, anxiety is a common phenomenon of everyday life. It plays a crucial role in human life because all of us are the victim of anxiety in different ways. Generally, anxiety can be either a trait anxiety or a state anxiety. A trait anxiety is a stable characteristic on trait of the person. A state anxiety one which is aroused by some temporary condition of the environment such as examination, accident, punishment etc. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environment of the academic institutions including teacher, certain subjects like Mathematics, English. Academic anxiety arises out of the apprehension of rebuke from teachers, parents and peers regarding the failures of performing the responsibilities of an academic properly. Developing a state of academic anxiety. Causes a decrease in attention span, concentration and memory which can result in having a negative effect on the performance of the individual. Causes a decrease in attention span, concentration and memory which can result in having a negative effect on the performance of the individual. Academic anxiety afflicts students during school related situation! If academic anxiety isn't properly addressing. It can have many serious and lasting consequences, such as causing a student to procrastinate, perform poorly on school work, fail in classes and withdraw from socializing with peers or pursuing activities that interest him. Academic anxiety is to a certain extent, unavoidable, necessary and even productive, since it motivates to spend time for academic tasks. Academic anxiety is a common issue that students

cannot ignore. If they want to succeed in school. It often leads to problems concentrating while studying and remembering information while completing test, which makes the student feel helpless and like a failure. If academic anxiety isn't properly addressed. It can have many serious and lasting consequences, such as causing a student to procrastinate perform poorly on school work, and withdraw from socializing with peers or pursuing activities that interest him. Academic anxiety in children and adolescence can be challenging to recognize since it can have much in common with other disorder.

High Achiever

High achievers are those who achieve a goal. In school, a high achiever would be a student who get high marks, good grades. They do the work that is required and do it well. They tend to be well organized with good time management skills, which is why they turn in neat and tidy work on time. They also tend to be well behaved, adjusting well to classroom, environment and participating enthusiastically in classroom discussion.

Low Achiever

The term "Low achiever sometimes refers to those children with IQ levels lower than average but not low enough to categorize them as learning disabled or mentally disabled. Low achiever is those who are not conscientious about his/her study. They are not physically or mentally or socially good. In school they are sit on last bench. They are always avoiding their study and engaged other activities. In school, a low achiever, would be a student who gets low marks. They aren't well good and well organize.

Effect of Academic Anxiety on Performance

Anxiety is not a bad thing. It is true that a high level of anxiety interferes with concentration and memory. which are critical for academic success without any anxiety, however most of us world lack the motivation to study for exams, write papers, or do daily home work. A moderate amount of anxiety actually helps academic performance by creating motivation.

Factors Influencing Academic Anxiety

Both genetic and environmental factors influence normal anxiety traits as well as anxiety disorders. In addition, it is becoming increasingly clear that these factors interact to produce specific anxiety-related behavior. For example, in humans and in monkeys' mutations in the gene encoding for the serotonin transporter result in increased anxiety in adult life when combined, with a stressful environment during development. Another recent example comes from twin studies suggesting that a small hippocampus can be a predisposing condition that renders individuals susceptible to post-traumatic stress disorder. Such example illustrates how specific mutations leading to abnormal brain development may increase vulnerability to environmental insults which may in turn lead to specific anxiety disorders.

According to Cornell University, "Academic anxiety is the result of biochemical processes in the body and the brain that make your attention level increase when they occur. The changes happen in response to exposure to a stressful academic situation, such as completing school assignments, presenting a project in class or taking a test. When the anxiety becomes too great, the body recoils as if threatened, which is a normal fight - or-flight reaction.

With reference to Lummeburg (1964) found a negative correlation between test anxiety and achievement scores in a sample of 213 boys and girls studying in grade IV to V.

A manageable level of academic anxiety is actually a good thing, according to Greenfield community college. Moderate academic anxiety provides the motivation students require to exert effort completing assigned school work and preparing to take examinations. Academic anxiety only becomes a problem that needs a solution when the amount experienced grows so excessive that a student is no longer able to function productively.

A study conducted by Ojha (2005) revealed that the boys have more academic anxiety than girls, several investigators found that girls have also suffered significantly more academic anxiety than boys, Ghaderi, et.al, (2009) studied the depression, anxiety and stress among the Indian and Iranian students. Result revealed that the depression, anxiety and stress level of Indian students are significantly higher than those of Iranian student Furthermore gender difference is not found significant.

Singh and Asha (1984) conducted a study on "Neuroticism anxiety and academic achievement. The result showed that a greater number of high achievers had high anxiety than the low achievers. When the correlation between high achiever and anxiety was calculated, it was found that high achievers had high anxiety.

Daulta (2008) studied the impact of home environment on the scholastic achievement of children. The study was conducted on a sample of 220 students drawn from Senior Secondary School of Panipat, Results showed that good quality of home environment had significant positive correlation with high level of scholastic achievement. This finding demonstrates that home adjustment affects scholastic achievement significantly.

II. Objective

To assess the academic anxiety of High achievers and low achievers of high school children.

III. Method of Study

Sample

In the present study 60 subject were taken, out of which 30 were high achiever, and other 30 were low achiever of class 8 student. Categorization of high achiever and low achiever has been done by taking the previous year Annual Examination result of the students.

Description about Tool

The academic anxiety scale for children was used for the of the assessment academic anxiety of high achiever and low-class achiever school students of 8". The questionnaire consists of 20 items. There are two possible alternatives YES or NO of each statement.

Scoring of the Tool

The maximum possible score of this test is 20. In academic Anxiety scale for children, each item of the test is scored as either +1 or 0. There are two types of items- positive and negative. All positive items which are endorsed by the subjects as 'Yes' and all negative items No.4,9,16 and 18 which are endorsed by the subjects as 'NO' are given a score of +1. A score of zero is awarded to all other answers. Thus, high score on the test indicates high academic anxiety and low score on the test indicates low academic anxiety.

Procedure

In the present study the total number of 60 subject was taken which consisted of 30 high achiever and 30 low achiever class 8" student. I met them individually and gave them the academic anxiety scale for children questionnaire with certain instructions.

Results

| Test | | High Achiever | Low Achiever | T |
|------------------------|------|---------------|--------------|------|
| Academic Anxiety scale | Mean | 11.46 | 14.066 | 7.02 |

**P<0.01

Discussion

After the administration it was found that High achievers are goal oriented, well organized. But low achiever is not well organized they are also aggressive sky in nature. In this study high achiever's anxiety was less than low achievers. The study was conducted to determine difference between academic anxiety or High achiever and low achiever of class 8th school children. Total number of 60 subject was taken out of which 30 were high achieve and 30 were low achievers (according to their

previous year Annual examination. Result also evident that high achievers have less level of anxiety than low achiever. High achievers are free, relax, they are close with their teachers and knowledgeable person. They are concerned about their study and they clear their doubt every situation. High achievers have moderate amount of anxiety, which might be helpful for their academic performance on the reverse it was found that the low achievers are not interested in clarifying their doubts. They are also aggressive in nature, Majority of the time they remain absent in class room. If we all are conscious about low achievers. We can also help them to get rid of their anxiety by the appropriate guidance from the teachers, and school counselor. Lastly from this study we found that High achievers are less prone than anxiety low achievers.

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Use Pattern and Information seeking behavior of Digital environment of P.G and Research Scholars of Bangalore University Library : A Case study

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Abstract

The present research paper examine that Use Pattern and Information seeking behavior of Digital environment of P.G and Research Scholars of Bangalore University Library. The survey method used for the study. The structured questionnaire prepared and data collected from the students and collected data was analyzed and presented in graphs and tables. there were 250 questionnaires distributed to the students and 235(94%) filled questionnaires were received back from the students followed by 71(30.22%) were spent “Less Than 1 hour” of their time in library, 64(27.23%) were spent 1to2 hours their time in library, 54(22.98%) were spent 2 to 3 hours in library and 46(19.57%) were spent 4 hours and above hours in their library, 71(30.21%) were use “Text books” , 59(25.10%) were use “News papers”, 21(08.94%) were use “Research Papers”.

Keywords: Use pattern, information, seeking behavior, Research scholar, Bangalore university, questionnaires, Text books, News papers, Abstracting journal.

I. Introduction

The present Research paper aims Use Pattern and Information seeking behavior of Digital environment of P.G and Research Scholars of Bangalore University Library. Universities play a vital role in development in Research and education for the betterment of the society. In today’s knowledge society the libraries are having with computers, printers, scanners, videos, compacts discs, floppy discs, magnetic tapes, cassettes, barcode readers, RFID (Radio Frequency Identification Device), and OPAC it has changed the Printed card catalogue in to Online catalogue. Bangalore University is located in Bangalore was established in July 1964.

II. Literature Review

Khan (2016) His research paper examines that the survey method adopted for the study. There are 180 questionnaires distributed to the students Out of which 150 filled questionnaires were received back from the students followed by 4(6.66%) U.G users “Dissatisfied” with E-information services where 44(73.33%) U.G users, 48(80%) P.G users and 28(93.33%) research scholars “Satisfied” with E-information services. 12(20%) U.G users, 12(20%) P.G users and 2(6.66%) Research scholars are “Somewhat Satisfied” with E-information services. **Chanchinmawia and Verma** (2018) Their Research paper raveled that A structured questionnaire was designed and randomly distributed to 232 research scholar for data collection, out of which

175(75.43%) filled questionnaire was received followed by (56%) belongs to the age group of 26-35 years, followed by the age group below 25 year (26.8%) and 36-45 year (13.71%). while only 3.42% of respondent are above 46 years. It is observed that majority of the research scholar are between 26 to 35 years age. (42.8%) visited library monthly and 37.14% respondents visited library occasionally. Only 3.53% respondents reported that they visited library daily and 14.28% respondents visited weekly.

III. Objectives of the Study

- To know the Number of questionnaires distributed and received back
- To find out course wise response received
- To know Gender wise response received
- To verify Age wise response received
- To know the How often visit to the library
- To know the purpose of visit to the library
- To know Time spent in the library
- To know the use of internet
- To find out availability of Digital environment
- To know the Sources of information seeking in Digital environment
- To Know the Electronic information products in library
- To find out Most used search engines
- To know Satisfaction of facilities of the library.

IV. Scope and Limitations and Method of the Study

The present study limited only PG and PhD students of Bangalore university Library, Bangalore. The Survey method adopted for study there are 250 questionnaires distributed to the students and 235(94%) filled questionnaires were received back from the students.

V. Data Analysis

The Present collected data was analyzed and presented with tables and graphs

Table 1 Number of questionnaires distributed and received back

| No .of Questionnaires distributed | N. of questionnaires received back | % |
|--|---|----------|
| 250 | 235 | 94 |

T 1 shows that Number of questionnaires distributed and received back from PG students and Research scholar of Bangalore University Library. There are 235 Questionnaire were distributed and 235(94%) are received back.

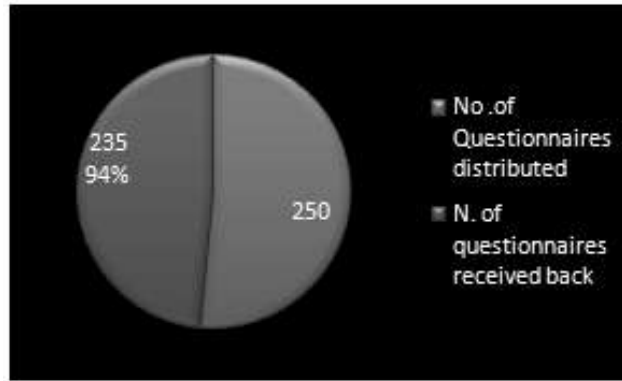


Fig.1 Number of questionnaires distributed and received back

Table: 2 course wise response received

| Sl. No | Course | No. of respondents | % |
|--------------|--------|--------------------|-------|
| 1 | P G | 123 | 52.34 |
| 2 | PhD | 112 | 47.66 |
| Total | | 235 | 100 |

T2shows that course wise response received from the students there are 123(52.34%) were “PG” students followed by 112(47.66%) were PhD.

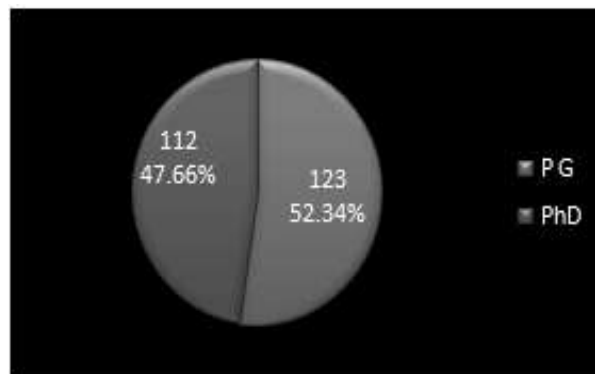


Fig.2 course wise response received.

Table: 3 Gender wise response received

| Sl. No | Gender | No. of respondents | % |
|--------------|--------|--------------------|-------|
| 1 | Male | 97 | 41.27 |
| 2 | Female | 138 | 58.73 |
| Total | | 235 | 100 |

T3 Shows that To know Gender wise response received from the students there are 97(41.27%) were “Male” followed by 138(58.73%) were “Female”.

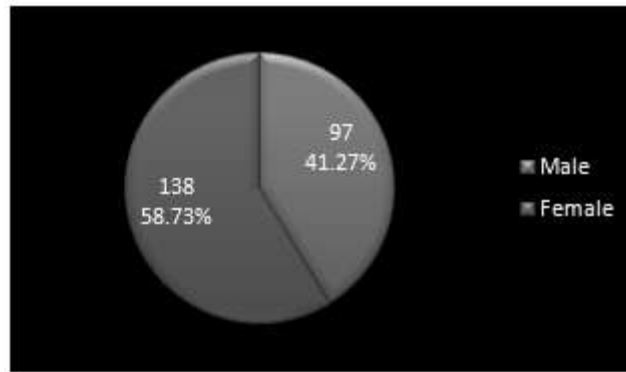


Fig.3 Gender wise response received.

Table : 4 Age wise response received

| Sl. No | Age | No. of respondents | % |
|--------------|--------------|--------------------|-------|
| 1 | 21-25 | 63 | 26.80 |
| 2 | 26-30 | 61 | 25.96 |
| 3 | 31-35 | 53 | 22.56 |
| 4 | 36-40 | 41 | 17.45 |
| 5 | 40 and above | 17 | 07.23 |
| Total | | 235 | 100 |

T4 shows that To verify Age wise response received from the students there are 63(26.80%) were between the age group of “21-25” years followed by 61(25.96%) were between the age group of “26-30” years, 53(22.56%) were between the age group of “31-35” years, 41(17.45%) were between the age group of “36-40” years and 17(07.23%) were between the age group of “40 and above” years.

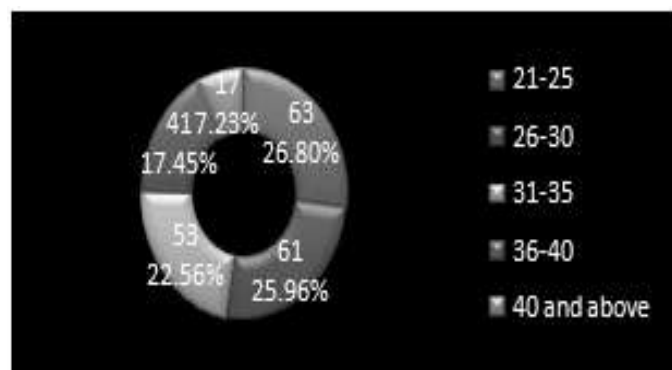


Fig.4 Age wise response received

Table : 5 How often visit to the library

| Sl. No | Often | No. of respondents | % |
|--------|---------------------|--------------------|-------|
| 1 | Daily | 51 | 21.71 |
| 2 | Once in a week | 47 | 20 |
| 3 | Two times in a week | 41 | 17.45 |

| | | | |
|-------|-----------------------|-----|-------|
| 4 | Three times in a week | 36 | 15.32 |
| 5 | Fortnightly | 33 | 14.04 |
| 6 | Occasionally | 27 | 11.48 |
| Total | | 235 | 100 |

T5 Shows that To know the Frequency of visit to the library there were 51(21.71%) visit library “Daily” followed by 47(20%) were visit library “Once in a week”, 41(17.45%) were visit library “Two times in a week”, 36(15.32%) were visit library “Three times in a week”, 33(14.04%) were visit library “Fortnightly” and 27(11.48%) were visit library “Occasionally”.

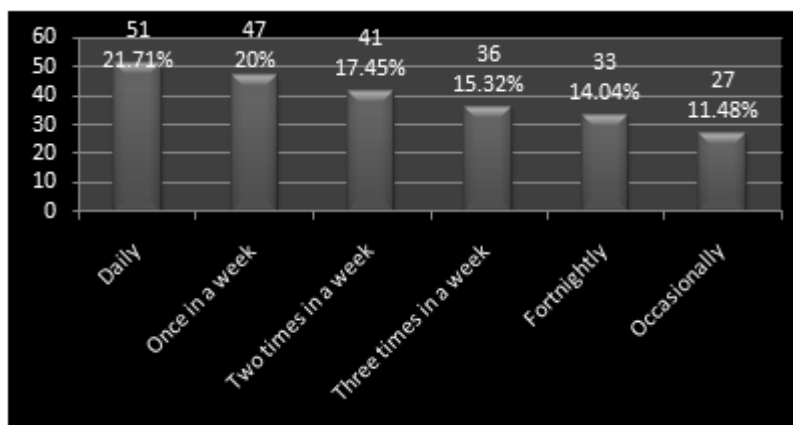


Fig.5 How often visit to the library

Table: 6 Purpose of visit to the library (more than one response received)

| Sl. No | Purpose | No. of respondents | % |
|--------|----------------------|--------------------|-------|
| 1 | For general Studies | 210 | 89.36 |
| 2 | Preparing for Exam | 211 | 89.78 |
| 3 | Current awareness | 198 | 84.25 |
| 4 | To browse internet | 187 | 79.57 |
| 5 | To read E-Resources | 169 | 71.91 |
| 6 | To read E-News paper | 177 | 75.31 |

T6 shows that purpose of visit to the library there were 210(89.36%) visit library “For general Studies” followed by 211(89.78%) were visit library for “Preparing for Exam”, 198(84.25%) were visit library for “Current awareness”, 187(79.57%) were visit library for “To browse internet”, 169(71.91%) were visit library for “To read E-Resources” and 177(75.31%) were visit library for “To read E-News paper”.

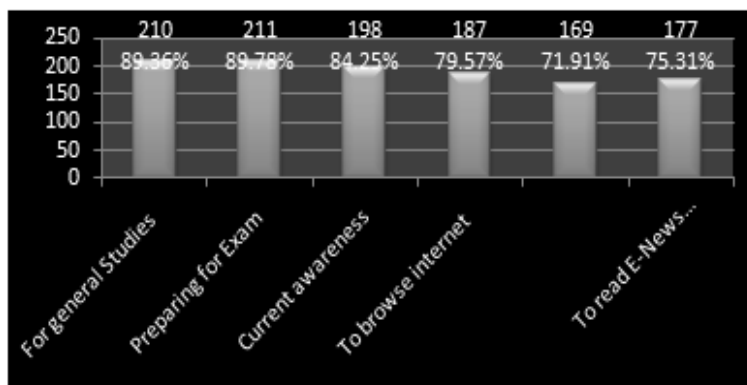


Fig.6 purpose of visit to the library.

Table: 7 Time spent in library

| Sl. No | Time | No. of respondents | % |
|--------------|-------------------|--------------------|-------|
| 1 | Less Than 1 Hour | 71 | 30.22 |
| 2 | 1 to 2 Hours | 64 | 27.23 |
| 3 | 2 to 3 Hours | 54 | 22.98 |
| 4 | 4 hours and above | 46 | 19.57 |
| Total | | 235 | 100 |

T 7 Shows that Time spent in library there are 71(30.22%) were spent “Less Than 1 hour” of their time in library followed by 64(27.23%) were spent 1to2 hours their time in library, 54(22.98%) were spent 2 to 3 hours in library and 46(19.57%) were spent 4 hours and above hours in their library.

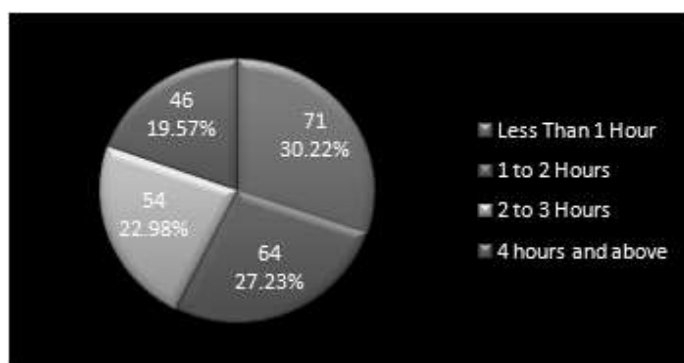


Fig.7 Time spent in college library

Table: 8 The use of internet

| Sl.No | Use of internet | No. of respondents | % |
|--------------|-----------------|--------------------|-----|
| 1 | Yes | 235 | 100 |
| 2 | No | Nil | 000 |
| Total | | 235 | 100 |

T8 shows that The use of internet there are 235(100%) were using internet in their library

Table : 9 Availability of Digital environment

| Sl. No | availability of Digital environment | No. of respondents | % |
|--------------|-------------------------------------|--------------------|-----|
| 1 | Yes | 235 | 100 |
| 2 | No | Nil | 000 |
| Total | | 235 | 100 |

T 9 Shows that availability of Digital environment there were 235(100%) were responded that there were having Digital environment in their library.

Table: 10 Sources of information seeking in Digital environment

| Sl.No | Sources | No. of respondents | % |
|--------------|----------------------|--------------------|-------|
| 1 | Text Books | 71 | 30.21 |
| 2 | News papers | 59 | 25.10 |
| 3 | Research papers | 21 | 08.94 |
| 4 | Review articles | 20 | 08.51 |
| 5 | Abstracting Journals | 11 | 04.69 |
| 6 | Reference Books | 53 | 22.55 |
| Total | | 235 | 100 |

T10 shows that Sources of information seeking in Digital environment there are 71(30.21%) were use “Text books “ followed by 59(25.10%) were use “News papers”, 21(08.94%)were use “Research Papers”, 20(08.51%) were use “Review articles”, 11(04.69%) were use “Abstracting Journals” and 53(22.55%) were use “Reference Books” in their library.

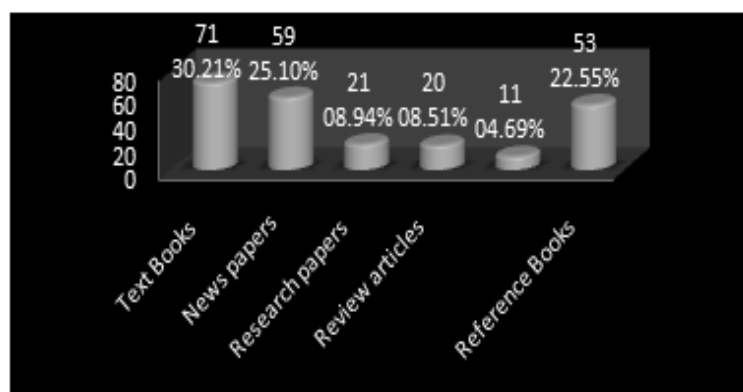


Fig.8 Sources of information seeking in Digital environment

Table: 11 Electronic information products in library

| Sl.No | E-Information Products | No. of respondents | % |
|-------|----------------------------|--------------------|-------|
| 1 | E-Books | 50 | 21.28 |
| 2 | E-Journals | 43 | 18.30 |
| 3 | E-Databases | 24 | 10.21 |
| 4 | E- thesis and Dissertation | 37 | 15.75 |

| | | | |
|--------------|----------------|-----|-------|
| 5 | E- News papers | 72 | 30.63 |
| 6 | E- Magazines | 09 | 03.83 |
| Total | | 235 | 100 |

T11 shows that Electronic information products in library there were 50(21.28%) use “E-Books” followed by 43(18.30%) were use “E-Journals”, 24(10.21%) were use “E-Databases”, 37(15.75%) were “E- thesis and Dissertation”, 72(30.63%) were use “E- News papers” and 09(03.83%) were use “E- Magazines”.

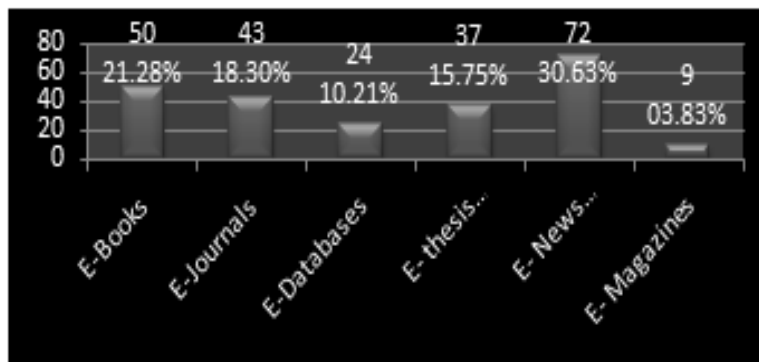


Fig.9 Electronic information products in library

Table: 12 Most used search engines

| Sl.No | Search engines | No. of respondents | % |
|--------------|----------------|--------------------|-------|
| 1 | Google | 67 | 28.51 |
| 2 | Ask.com | 37 | 15.75 |
| 3 | Yahoo | 51 | 21.70 |
| 4 | Bring | 32 | 13.62 |
| 5 | AltaVista | 48 | 20.42 |
| Total | | 235 | 100 |

T12 shows that Most used search engines there are 67(28.51%) were most using “Google” followed by 37(15.75%) were using “Ask.com”, 51(21.70%) were using “Yahoo”, 32(13.62%) were using “Bring” 48(20.42%) were using “Alta vista”.

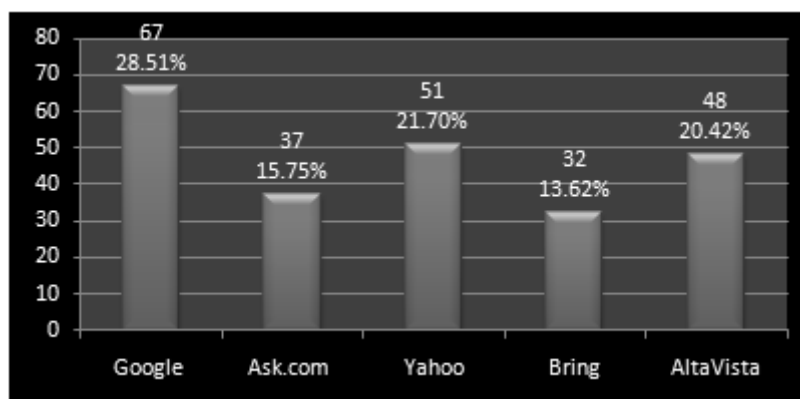


Fig.10 Most used search engines

Table: 13 Satisfaction of facilities of the library (more than one response received)

| Sl.No | Facilities | No. of respondents | % |
|-------|--------------------------|--------------------|-------|
| 1 | Location of the library | 230 | 97.87 |
| 2 | Books Arrangement | 228 | 97.02 |
| 3 | Furniture and equipment | 212 | 90.21 |
| 4 | Lighting and ventilation | 210 | 89.36 |
| 5 | Cleanliness | 219 | 93.19 |

T13 shows that Satisfaction of facilities of the library there were 230(97.87%) satisfied with “Location of the library” followed by 228(97.02%) were satisfied with “Books Arrangement”, 212(90.21%) satisfied with” Furniture and equipment “, 210(89.36%) satisfied with “Lighting and ventilation” and 219(93.19%) were satisfied with “Cleanliness”.

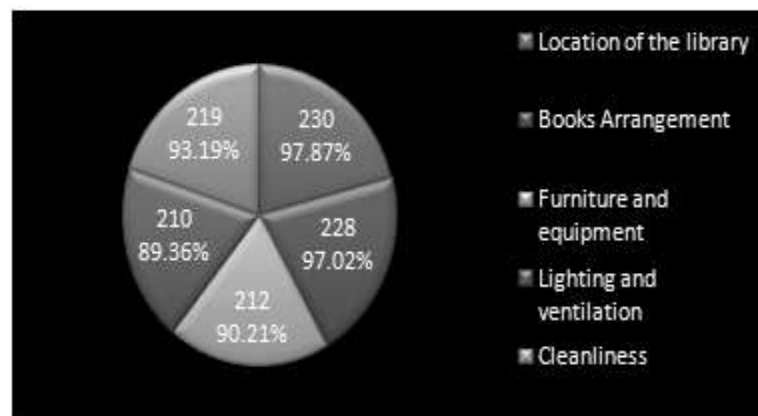


Fig.11 Satisfaction of facilities of the library

VI. Findings and Conclusion of Present Study

The major findings of the study revealed survey method adopted for the study. There were 235 Questionnaire were distributed and 235(94%) are received back from the students followed by 123(52.34%) were “PG” students 112(47.66%) were PhD, 97(41.27%) were “Male” , 138(58.73%) were “Female”, 63(26.80%) were between the age group of “21-25” years , 61(25.96%) were between the age group of “26-30” years, 53(22.56%) were between the age group of “31-35” years, 41(17.45%) were between the age group of “36-40” years and 17(07.23%) were between the age group of “40 and above” years, 51(21.71%) visit library “Daily”, 47(20%) were visit library “Once in a week”, 41(17.45%) were visit library “Two times in a week”, 36(15.32%) were visit library “Three times in a week”, 33(14.04%) were visit library “Fortnightly” and 27(11.48%) were visit library “Occasionally”, 210(89.36%) visit library “For general Studies”, 211(89.78%) were visit library for “Preparing for Exam”, 198(84.25%) were visit library for “Current awareness”, 187(79.57%) were visit library for “To browse internet”, 169(71.91%) were visit library for “To read E-Resources” and 177(75.31%) were visit library for “To read E-News paper”.

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Implementation of Remote Sensing in Geography Teaching: Potentials and Challenges

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Abstract

Information and communication technology (ICT) is being used to make education more child-centred, which supports rejecting the old technique of recall and memorization to focus on practical elements of the topic while developing creativity. In the modern era, Remote sensing (RS), Geographical Information Systems (GIS), and Global Positioning Systems (GPS) have helped shift education from instructivism to constructivism and supported us in updating, storing, and availing large amounts of information. As a result, learners can evaluate and select relevant data for formal learning from time to time. In geography, remote sensing is a new, innovative teaching method that provides authentic, real-world learning materials. Satellite images, which include a plethora of geographical data, are a by-product of this technology.

Furthermore, they come in various formats, each with geographical features, phenomena, and wavelengths. The processing of satellite data into various valuable information helps develop new geography lessons for students. They are also helpful for problem-solving and action-based learning. Furthermore, it can update the curriculum from time to time, which is also helpful in decision-making for delivering the solution to several geographical questions. Remote sensing is a system that contributes information to its users with the help of software which is only beneficial when this data is evaluated, interpreted, and produces meaningful and valuable information. Using these procedures in the teaching-learning process gives rise to the subject interdisciplinary by dealing with the actual investigation and transfers this

information to daily life situations and makes learning close to reality. Hence, there is an urgent need to consider the role of remote sensing in geography teaching. This paper examines the potential and challenges of using remote sensing in geography teaching, how teachers incorporate remote sensing modules into the classroom for the teaching-learning process, and offer some practical suggestions for mitigating challenges in implementing technology in geography teaching. The present study's finding based on several studies reveals that the remote sensing method of teaching geography is better than the traditional method in concept development.

Keywords -Information communication technology, Remote Sensing, Image, Geography Education

I. Introduction

"Geography is defined as the study of Earth as the home of mankind." Geography is concerned with the man-environment relationship studying space, place, and changes with time in a natural process, environment, and interaction between humans. It helps develop proper perspectives on social and natural environmental issues, like pollution, resource depletion, and global warming, on human life quality and developing culture.

Geography is taught to the students to understand a critical appreciation for conservation and environmental concerns properly. Studying geography as science helps investigate the cause and effect of natural phenomena on the landscape and human activities concerning space and time. Dobson (as cited in Jensen, 2009) deserves a place among the fundamental sciences, but more importantly, it deserves a more significant role in education. Geographic knowledge may be acquired informally as incidental or naive knowledge (Egenhofer & David, 2000) or formally or intentionally learned knowledge (Golledge, 2002).

In everyday life, decision-making and thought processes are informally developed in which knowledge is very helpful. For example, geographers from old times used maps as a tool for data collection to present a three-dimensional Earth on a two-dimensional surface. There are several maps based on a theme known as thematic maps, which geographers use for research. It provides a conceptual framework for understanding the processes and human activities that shape the world. It consists of a knowledge base, critical thinking, analytical skills, spatial thinking skills, and practical skills that help solve various problems (Bednarz, 2017).

After the 1960s, geographers used multiple methods, models, techniques that helped geographers to quantify geography. The earth geographer, for example, employs inventions, discoveries, exploration, mathematical calculations, and a variety of methods for quantitative data collection, storage, processing, and representation in the form of maps and satellite images (Manage, n.d.). In addition, geographers use experimental modalities that help them in deductive reasoning to produce explanatory laws. The main techniques of data collection are remote sensing, geographic

information systems, and global positioning systems. The current data collection methods emphasize the process rather than the outcome (Kanickaraj, 2018).

The Application of Remote Sensing in Geography Teaching

Remote sensing is an art and science of taking earth observation from space to collect spatial data without contact with the object or process. Rapid technological, scientific development and computer capabilities provide abundant data sources based on electromagnetic radiation captured by the different sensors. This data is processed with the assistance of various available software and hardware, resulting in a significant new source of information that can be used for various purposes, ranging from environmental to educational (Roy, 2017).

In education, various teaching strategies such as problem-solving, dramatization, and audiovisual aids have been used for a long time. In the present world, there is a need for meaningful and quality-based education close to reality and multidisciplinary in the modern revolutionary world. These days, technology is changing the face of education and transforming it digitally. In geography, geospatial technology such as Geographic Information Systems (GIS), global positioning systems (GPS), remote sensing, online mapping, and visualization enable geography students and educators to explore a greater variety of spatial concerns than was previously conceivable (URISA, 2010). Geosciences may be taught in novel ways using telecommunications, computer graphics, geography computer programmes, and simulations to describe and estimate research findings (Nellis, 1994; James et al., 1999). These innovative communication technologies have induced tremendous change in the present teaching-learning system. It helps break the subject boundaries and develop situated learning, metacognition, and higher-order thinking (Potchelve, 2010). It emphasizes more practical than theoretical aspects and fosters creativity, inspiration, and interest within the individual (Hennessy et al., 2005). It involves the analysis of physical systems and processes to solve geographical problems. It helps develop observation, collection, recording, analysis, interpretation, and representation of data. With the introduction of Google Earth, Google Maps, and Microsoft Bing Maps, high-resolution satellite imagery has been more accessible than ever before (Zhang et al. 2020; WorldWideScience,2021).

In the field of geography, remote sensing is used as a new innovative communication technology that helps in the collection of data and in planning innovative geography lessons. It shifts education from instructive to constructivism. It provides students with a large amount of information to select relevant information for learning (Kiv & Soloviev, 2018). It is a modern tool for geography teaching that offers authentic world learning materials to allow problem and action-oriented learning (Mehmet, 2017). It made the subject interdisciplinary by dealing with the actual investigation and transferring this information to daily life.

This system gives information to its users through a variety of applications. Data must be assessed, processed, and created for this purpose to produce relevant and valuable information. (Potchelve, 2010). Personal, business, organizational, and

governmental decision-making use geospatial and geographic data produced from satellite images of all sizes (Geography: Its Nature and Perspectives, 2019).

The geography teacher prepares and uses interactive lessons appropriate for pupils, multimedia presentation options like movie animations, and web content. All the practical approaches to learning about remote sensing are based on satellite images that motivate, engage, and promote students' and teachers' interaction with Earth. These images can extract, interpret, and evaluate information with the help of various images processing software such as ERDAS Imagine and ESRI's ArcGIS, which provides new knowledge beneficial for multiple applications. During the teaching-learning process, with the help of satellite images (LANDSAT, MODIS, ASTER, SSMIS, and AIRS) and open source and paid software, data is transformed digitally into information and applied for the practical solution of various Earth problems (National Research Council, 2001). In this type of learning, the teacher acts as an advisor who helps students develop suitable learning strategies. It enables students to move away from the traditional method of teaching geography, plays a significant role in decision-making, and provides solutions to various geographical questions (Dziob et al., 2020).

II. Recent Review

Review the related literature on remote sensing and the methods of teaching. Geospatial technology is concerned with environmental, land use, and natural resource planning. The Earth's surface data collection, used for visualization, mapping, and spatial analysis, is referred to as remote sensing (Aidash, 2020). This information paves the way for the modernization of geography education. It is used as a vehicle for teaching and learning in the science and geography curriculum (Voss et al., 2008). It provides a powerful medium for teaching spatial awareness that can motivate young people and encourage teachers to teach the whole class through interactive methods (Oberle et al., 2010). Naumann et al., 2009 believe that implementing remote sensing in class should become regular and widespread. A concept attainment model develops students' deductive and inductive thinking skills meaningfully—this model emphasizes relating classroom knowledge to real-life experience (Novak, 2002). The main aim of integrating a web-based learning portal on remote sensing into school lessons is to provide students with the help of a comprehensive and structured learning portal (Goetzke et al., 2013; Vob et al., 2011). This learning portal helps in the understanding of the subject and promotes a constructivist way of teaching. The Constructivist approach focuses on learning as an active process that results from perception, thinking, and behavioral patterns. It provides a holistic view of the world for the student and develops critical thinking skills (Pritchard, 1994).

Students positively perceive web-based instruction using these (digital and interactive) learning portals (Beutelspacher & Stock, 2011). A student-centred blended learning approach is appropriate in everyday situations. Blended learning engages students in active learning and supports self-directed learning through this thinking, doing, and a new way of teaching will foster reflection (Moore & Gilmartin

2010). In Earth and environmental science education, flipped learning and remote sensing is the new teaching method. (Nunez et al. 2020).

Sato, 2001 used spreadsheet VBA and CSV data structures for remote sensing image analysis and found that it is effective in raster image analysis by the students in the short class. In his study, A View From Above (Nielbock, 2017) describes how, using satellite images, students can identify different features over the Earth, create maps and images of spectral indices, and interpret and use them. In learning through satellite image, the teacher acts as an advisor that helps the students develop learning strategies and make learning close to reality based on previous knowledge (Dziob et al., 2020).

Furthermore, satellite images or aerial photography have far more potential than a mere map of a location. The advantage of utilizing satellite imagery to teach geography is that it encourages and motivates pupils to tackle geographical and environmental challenges on their own (Goetzke, 2013). Therefore, teachers use satellite images to teach geography and science in the classroom. In addition, Landsat imagery can be a powerful and vital tool for assessing conditions and solving practical problems at local, regional, and global levels. Therefore, Landsat imagery is increased for teaching and learning. For this multispectral image analysis, images from different seasons and years are required (Jeannie, 2009).

Various software (GEE, BLIF, Glokal, and LEO Works) is developed for schools and used as educational materials to teach geography using interactive geography lessons based on satellite images (Goetzke et al., 2013; Nielbock, 2017; Jhan et al., 2017; Neumann, 2009). In learning through satellite image, the teacher acts as an advisor that helps the students develop learning strategies and make learning close to reality based on previous knowledge. Furthermore, teachers use interdisciplinary and subject connecting teaching to solve geographical questions and make the subject problems more action-oriented. This portal consists of interactive learning modules based on the constructivist approach that encourages students to discover materials independently (Voss et al., 2008). Technological advancements necessitate geospatial tech training for the many programmes that are currently in operation. Therefore, remote sensing methods in school lessons are very much required, and teachers' training is needed in the future for innovative geography.

III. Objective

1. To identify the role of remote sensing in geography teaching.
2. To analyze the potential and challenges of using remote sensing in geography teaching.
3. To suggest some practical suggestions for mitigation of challenges in implementing remote sensing technology in geography teaching.

IV. Methodology

The current research is descriptive and exploratory, and it is based on secondary data. Educational journals, books, monographs, yearbooks, e-books and bulletins, government and other publications, search engines, scholarly articles, and research papers extensively reviewed the literature available on the internet.

Remote Sensing's Role in Geography Teaching

Remote sensing is a new technology that is making its way into classrooms. Understanding how and why instructors utilize remote sensing makes future use, lesson planning, implementation, and training more accessible. Constructivist learning theory supports it as a teaching tool. Because of its vast potential for developing an inquiry-based learning environment, remote sensing plays a vital role in geography education (Ditter et al., 2011). It is a valuable tool in geography because it helps process spatial data into images and maps. Using remote sensing in geography lessons can improve the quality of teaching and learning, increase students' interpersonal skills, life skills, and knowledge (Jing et al., 2020). Teachers can easily access up-to-date authentic data and gain in-depth qualitative expertise on local issues and the environment. It is a relatively new technology that is filtering into the classroom. Examining teacher use of Remote Sensing is necessary to determine what prevents teachers from using remote sensing. This teaching tool is supported by Constructivist learning theory and spatial thinking skills (Saputro, 2020; Dziob, 2020). The following section discusses the role of remote sensing in geography education (Dovgyi, 2020).

As a Means of Communication

Remote sensing is intertwined with map-making, allowing for multiple data representations about the Earth's physical and social features (Blaschke et al., 2011). As a result, it aids in more up-to-date communication with the natural world. During classroom teaching and learning, geospatial data and three-dimensional data models are used for this purpose.

Data Management Software

Remote sensing and geographic information systems (GIS) have developed into a critical tool for gathering, managing, and storing data that helps in the Earth's observation of nearly every element of the planet during the last few decades. Satellite data with extremely high spatial and spectral resolution has become available in recent years, and the applications have expanded in terms of different beneficial advantages (Kumar et al., 2013). These datasets provide a platform for their practical application with available software for remote sensing and GIS. Users can choose satellite data from various formats to solve pollution, disaster management, conservation, land use, and land development without affecting other system parts.

Potentials for Using Remote Sensing in Geography Teaching

Geography is a science that investigates the causes and effects of natural phenomena on the landscape and human activities in space and time and how these phenomena shape society. Informally acquired "incidental" or "naive knowledge"

(Egenhofer & David, 2000) and "formal" or "intentional" ("taught", "learned", or "expert") knowledge are two types of geographic knowledge (Golledge, 2002). The modern period of education is focused on providing current data, facts, truth, discoveries, and research to instructors and students.

Today, for quality geography education, different types of modern ICT in general and geospatial technology, in particular, are used with traditional methods. Through this, learning has become more flexible, self-directed, and location and time-independent thanks to internet-based tools. In addition, ICT and geospatial technology are helpful in geographical studies through data observation, gathering, analysis, interpretation, and representation. These technologies use hardware and software and focus on practical rather than theoretical knowledge. With the help of this, students will be able to create thematic maps and visualize geographical and regional data. Furthermore, remote sensing is essential for school and higher geography classes, considering the new education policy 2020.

The 2002 World Summit on Sustainable Development encourages the advancement and widespread application of earth observation technologies. Environmental impacts, land usage, land-use changes, and habitat loss of endangered/exotic species are collected via satellite-based remote sensing, global mapping, and geographic information systems. From a teacher-centred approach to a student-centred one, the paradigm of teaching and learning has transformed (Sato, 2001). It helps collect and analyze sensed data about the environmental processes occurring on the Earth (Crocetto & Tarantino, 2009). The remote sensing technology collects data, converts it into information, and applies it to solve various real-life environmental problems. The remote sensing method of teaching geography allows students to learn based on prior learning through problems and action-oriented learning. This teaching method aids in the correlation of theoretical and practical knowledge of the subject, allowing students to develop better concepts. Students can use this theoretical and practical knowledge to solve various geographical problems by applying what they have learned in different situations (Naumann et al., 2009). This method also allows the teacher to pick up new information while teaching. The instructor should have prior teaching experience.

To use the remote sensing method in their lessons, the teacher should have prior knowledge. The teacher should answer all of the students' theoretical and practical questions about the subject. The classroom will be lively, with plenty of opportunities for teacher-pupil interaction. The advantages of remote sensing data and apps might be crucial in bridging communication barriers (The National Academies Press, 2021). We can also use these satellite images for e-learning for a large audience (Bauer et al., 2021). It provides an opportunity for equal access at a reasonable cost and without discrimination.

The use of this method in the teaching and learning process does not discriminate in terms of data supply based on social, economic, or technological status. In this method, we have access to raw and processed data and data that has been analyzed.

Challenges in the Implementation of Remote Sensing in Geography Teaching

From my search of the literature, it is clear that several challenges restrict the implantation of remote sensing in Indian geography education (Sato, 2001; Tsai, 2014; Chaudhary, 2012).

Technology

One of the most significant obstacles to using and implementing remote sensing in practice at the school level is technology. Hardware, software, and data are all included. Several schools across the country do not have these. Up-to-date software and data are not readily available. Remote sensing equipment is expensive, and it must be appropriately maintained. Software is the foundation for teachers to use remote sensing to create inquiry-based, "hands-on, minds-on" lessons and projects aligned with specific content objectives (Whitaker, 2011). This learning is aided by technology, which allows them to interact with phenomena through dynamic, three-dimensional representations of the familiar map form. Students are also learning critical modelling and analysis skills for the twenty-first century. Remote sensing technology is beginning to seep into the infrastructure that remote sensing seeks to understand and describe. Technology finds use in far more mundane applications like in-vehicle navigation and the delivery of goods and services.

Training of Teachers

In India, a large percentage of teachers do not study remote sensing at the undergraduate level. Because they do not have appropriate knowledge about remote sensing as a teaching method, its adoption into classroom practice remains reluctant, owing primarily to a lack of teacher expertise and educational materials. (Wolf et al., 2016). Thus, there is a need for pre-service and in-service teachers to receive remote sensing training that covers both theoretical and practical aspects.

The curriculum

Teaching requires adequate content, concerned with relevant data that helps teachers plan and teach their lessons. In addition, remote sensing in classroom modules requires content such as earthquakes, global warming, and natural disasters that can be efficiently conducted with the help of available software. As a result, the curriculum is the essential aspect of education since it directs learning. Students benefit from remote sensing technology because it makes learning more accessible and alters the learning environment. (Whitaker, 2011).

Laboratory equipment

The difficulties, in this case, are essentially a result of the teacher's inexperience in locating practical learning tools. Satellite photography and aerial photographs are used to provide information about geography and remote sensing devices. The teacher's misunderstanding of the government website and the use of Google Earth to download satellite imagery.

Time

Teachers do not have enough time in the curriculum to integrate remote sensing into education better. Remote sensing-based lessons take a long time to learn and implement. Teachers find it difficult to learn entirely new knowledge and skills in their limited time.

Technicians

The lack of laboratory assistants and many teachers who have not collaborated with the teacher or laboratory assistant on implementing remote sensing in the practical geography classes affects the school's geography education.

V. Conclusion

The study's conclusion shows that the remote sensing method assisted students in positively improving their concept. Society's needs and aspirations determine any subject's education. Young professionals in today's global society are expected to have practical knowledge of software applications. At the secondary school level, geography is one of the mandatory and essential subjects in the social science curriculum. Incorporating remote sensing into secondary school classrooms might positively impact the Earth observation industry by increasing students' interest in the topic (Dziob et al., 2020). It is beneficial to know the Earth's physical and social aspects. With available software, remote sensing is a computer-aided tool that provides problem-oriented learning. According to various scientific studies, articles, reports, seminars, workshops, projects, and applications, remote sensing is a better student-centred teaching method.

The National Curriculum Framework (NCF) 2005 and the new education policy (2020) provide sufficient guidelines for teaching geography while incorporating remote sensing into the schools' and higher education classrooms. However, physical facilities, time, teacher training, and other issues in Indian schools and higher education limit remote sensing-based lessons in geography classrooms. Curriculum designers and teacher training institutes can take proactive measures to address all of these issues. All of these issues can be resolved by curriculum designers and teacher training institutes taking proactive steps. With the help of available software, teachers can learn about remote sensing-related content, teaching geography pedagogy, and content implementation. Remote sensing can help make the classroom more interactive and practical, enhancing geography teaching and learning relevant to today's world. We hope that the availability of all the facilities regarding remote sensing to teachers will stimulate and encourage them to implement remote sensing-based geography lessons.

VI. Suggestions

In light of the above conclusion, a few suggestions that help improve teaching effectiveness are that teachers should be provided with physical infrastructure and seminars, vocational courses, symposiums, and conferences on remote sensing. In that situation, they can learn about remote sensing-related content, geography teaching

style, and content implementation using existing tools. Furthermore, it is envisaged that the availability of all facilities stimulates and encourages teachers to use remote sensing-based lessons in their geography instruction.

However, remote sensing in geography is only beneficial when students have the maximum opportunity to access the teaching module in the soft and hard copy, software, and data. The opinion should be collected from the student that will be helpful to know the effectiveness of implementing remote sensing in geography lessons. Teachers should be encouraged to use remote sensing methods in teaching geographical classes.

The teacher should be given technical know-how about remote sensing and its practical implication in the classroom. Since remote sensing is better in concept development and uses a constructivist approach, it will be helpful for school education to higher education. Helpful information and regular updates should be provided regarding remote sensing applications for students, teachers, and parents to improve teaching and learning conditions. The curriculum designer should also focus on remote sensing methods and geography through proper planning and policy.

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An Artificial Neural Network Methodology to Detect Fake Profiles: A Study

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Abstract

This Chapter is to evaluate whether or not a request from a Facebook friend is verified, we employ machine learning, especially the concept of artificial neural networks. The students and libraries engaged are also depicted. We'll also go over the sigmoid function and how its weights are calculated and applied. Finally, we'll look at the social network page's settings, which are critical to the solution. Bots and false accounts are further threats to obtaining personal data and using it fraudulently. Bots are computer programmes that collect user information without the user's awareness. Scraping the internet is the term used for this technique. What's worse is that this behavior is perfectly acceptable under the law. To obtain a user's sensitive information, bots can be disguised or seem as a faked friend request on a social networking site.

Keywords: ANN (Artificial Neural Networks), Face Detection, SVM, CNN.

I. Introduction

In 2017, Facebook has 2.46 billion users, making it the most popular social networking platform [1]. Users' data generates the majority of income for social media network businesses. Regular social media users have no idea that when they use a social media network's service, their rights are forfeited. Organizations in the social media sector stand to earn much from the exploitation of its users. Facebook earns money from advertising and data every time a user or customer posts a new

location or area, new photographs, likes, dislikes, or tags other users in content. American users produce \$26.76 in revenue on average every three months [2]. Adding billions of users makes this number soar.

Data breaches and probable identity theft have become more common in today's digital age due to people's growing reliance on computers. These kind of assaults can occur without the victims of a data breach being aware of them, and they usually do not notify them either. There's no need for social networks to beef up their data security at the moment.

Social media networks like Facebook, Instagram, and Twitter are frequently the targets of these hacks. Banks and other financial organisations might be targeted by these assailants as well. These kind of assaults can occur without the victims of a data breach being aware of them, and they usually do not notify them either. Social networks have no reason to enhance the security of their user data at this moment. Social media networks like Facebook, Instagram, and Twitter are frequently the targets of these hacks. Banks and other financial institutions are also on their list of possible targets. Every day, thousands of hackers appear to be hacking into social media networks. There was a data breach at Facebook recently that affected around 50 million people [3]. When it comes to Facebook's usage of user data, the company has a set of clearly stated provisions [4]. Even if the policy works most of the time, frequent exploitation of critical security and privacy aspects is still possible. Facebook's built-in security measures appear to be allowing forged accounts to go through. Personal data can also be collected fraudulently by using bots and false accounts, which increase the chance of this happening. In computer science, a bot is a software that collects information about a user without the user's awareness. Scraping the internet is the term used for this technique. What's worse is that this behaviour is perfectly acceptable under the law. The bots can be concealed or seem as a fictitious friend request on a social media network site in order to get access to sensitive data. This paper's approach is to focus on the dangers of a false social media profile created by a bot. It's likely that the above-mentioned solution will be implemented as an algorithm. Python was the programming language of choice.

If a bot or fraudulent friend request is sent to a user while they are online, the algorithm can tell whether or not it is from a genuine individual.

For an algorithm to function, we would need the assistance of social media companies, since we'd want a training dataset from them in order to build our model and then validate whether or not the accounts were faked afterwards. The algorithm may potentially be implemented as a browser plug-in that runs on top of the user's existing web browser.

II. Literature Survey

Forged Profile Identification in Online Social Networks Sk.Shama, K.Siva Nandini, P.Bhavya Anjali, K. Devi Manaswi

Today's technological advancements are astounding. Mobile phones are becoming increasingly sophisticated. Online social networks, such as Facebook and Twitter, have become an integral part of everyone's life, making it simpler for people to meet new people and stay in touch with old ones. However, the above-mentioned increase in networking or online causes numerous issues, such as people fabricating their profiles and the rise of online impersonation. Almost all users are bombarded with extraneous information when online, all of it coming from bogus users. Most recent study shows that between 20% and 40% of online social media profiles, such as Facebook, are bogus. As a result, the discovery of bogus social media profiles leads to a framework-based solution.

Make use of an Artificial Neural Networks (ANN) to discover Forged Profiles Gergo Hajdu, Yaclaudes Minoso, Rafael Lopez, Miguel Acosta, Abdelrahman Elleithy*

In this study, we employ artificial neural networks and machine learning to determine whether or not a Facebook friend request is genuine. We also want to provide an overview of the courses and libraries that will be utilised. The sigmoid function is also discussed, as is how the weights are generated and utilised exactly. Finally, we look at the social media network page characteristics that are critical to the solution.

Bots and fake accounts are further threats to obtaining personal data for illicit purposes. Users do not have to be aware of the usage of bot programmes, which collect information about them without their knowledge. Scraping the internet is the term used for this technique. What's worse is that this behaviour is perfectly acceptable under the law. Using bots to get access to private information may be done by hiding them or forging friend requests on social networking sites.

It is the goal of this chapter is to find the solution to draw attention to the hazards of a bot, which might take the shape of a forged or fraudulent social media presence. An algorithm would be the most practical way to implement this approach in the real world, though. Python was the language of choice for us. There will be a way for the algorithm to detect bots or false or forged friend requests that are fishing for personal information from users when they get them through the internet. In order for our suggested algorithm to operate, we would want the assistance of social media firms, since we require a training dataset from them in order to train our model and subsequently validate whether or not the profiles are false. Even as a browser plug-in, the algorithm may be best effective as a conventional layer atop the user's web browser.

III. Analysis

Unmanned restaurants lack personnel, making it impossible for the restaurant's management to gauge how customers feel about the idea and the cuisine. This challenge is only partially solved by existing ranking systems like Google and TripAdvisor, which only cover a portion of consumer views or opinions. Only a small percentage of the restaurant's customers utilise these ranking systems voluntarily on third-party rating platforms[6]. This article focuses on consumers who go to social media sites to spread hate or positivity, depending on their perspective.

When determining if a friend request is genuine or not, we employ machine learning and overtly created neural networks.

To keep track of existing and new forged or false data profiles, we utilise Microsoft Excel. This method then uses a data frame to store the results. There will be two sets of data created from this collection: one for training and the other for testing. Our model would have to be trained using data from social media websites or networks.

If you're looking for forged or false profiles in the training data, you'll want to look for the following characteristics in the profile: Age of account; Gender and age of user; Link in description; Number of messages received; Number of friend requests sent; User location; IP location; Fake or Not. A value is assigned to each of these specific parameters once they have been examined and tested. The gender parameter, for example, assigns a value of (1) to the training set if the profile can be identified to be female or male. Other metrics are subjected to a similar procedure. Additionally, the country of origin is taken into consideration.

IV. Implementation

Face Detection

Since just the most significant facial features, such as the nose, eyes, mouth, and cheeks, are required for classification, detecting or localising faces is a critical stage in picture categorization. In terms of face detection algorithms, there are four broad categories to choose from: feature, template, and appearance-based. For face localisation, our expected system will make use of the Viola Jones object detection method, which is classified using a feature-based approach. The Viola Jones object identification technique makes use of feature-based cascade classifiers based on Haar information. Face identification relies heavily on the Haar Cascade classifier. The Haar features determine if these traits are present in any given input picture.

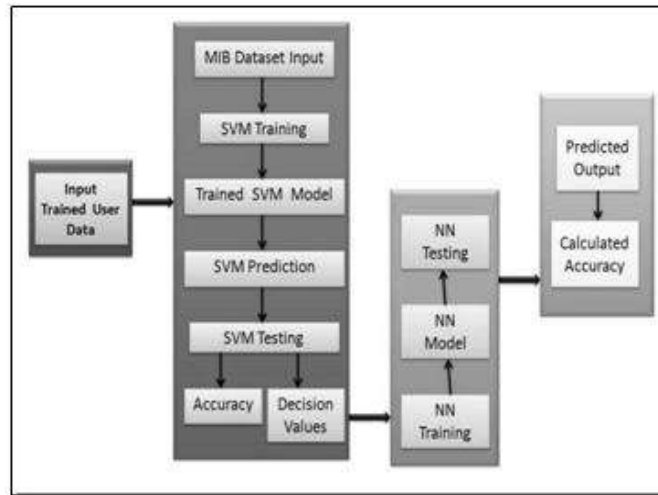


Figure 1. Architecture Diagram.

Now SVM is a classification method which splits into two planes acceptable, not accepted. So initially we are choosing a category from MIB dataset assume status count or followers count and verify for the behaviour if it's being continuously erroneous it will go into accuracy decision otherwise decision value. Thus we choose each category listed in the MIB dataset so select whether this category may be chosen for a fake account or not and a hyperplane is constructed between accuracy and choice. If the gap between accuracy and hyperplane is less, we may utilise that category to look for fraudulent accounts for that individual or social media platform. And we choose just the top 5 categories SVM is doing of this stuff. To identify how many false accounts are there therefore with all these accounts we are going to neural accounts. As an example, a neural network is like the brain in that it will look at each characteristic one by one and produce an image of a cat as the result. In our scenario, I am transmitting all these characteristics picked by SVM as hidden category. This is the user account's input; if there is any odd activity, such as a high status count or a high number of follower requests, it will be flagged as a fake account. However, if it passes all of the concealed categories, it will be regarded a legitimate account.

Calculations for design exploration, the assistance vector machine being the most used component (SVM). For grouping information and images, kernel capabilities have been supplied in the form of vectors. If so, it's ready to use libSVM's AI computation, right? It was decided to use Back propagation for the Neural network.

Facial Expression Recognition classification

The last phase of FER (Facial Expression Recognition) is to classify a given face into one of the fundamental emotion categories after thoroughly reading the relevant characteristics. Deep networks can conduct FER end-to-end, unlike conventional techniques, which regulate the feature extraction and classification steps independently. A loss layer is added to the network's end to control back-propagation error, and the network can then directly output the sample's prediction probability. To

minimise the entropy resulting from the estimated class probabilities and the ground truth distribution, CNN uses the SoftMax loss function.

The softmax function, also known as softargmax[1] or normalized exponential function,[2] is a generalization of the logistic function to multiple dimensions. It is used in multinomial logistic regression and is often used as the last activation function of a neural network to normalize the output of a network to a probability distribution over predicted output classes, based on Luce's choice axiom.

Convolutional Neural Network (CNN)

A wide range of computer vision applications, including FER, have relied on CNN for various reasons. There were numerous studies done in the early twenty-first-century FER literature that showed CNNs are more robust and can deal with location changes as well as changes in scale than multilayer perceptrons. This was especially true when dealing with variations previously unknown to the multilayer perceptron.

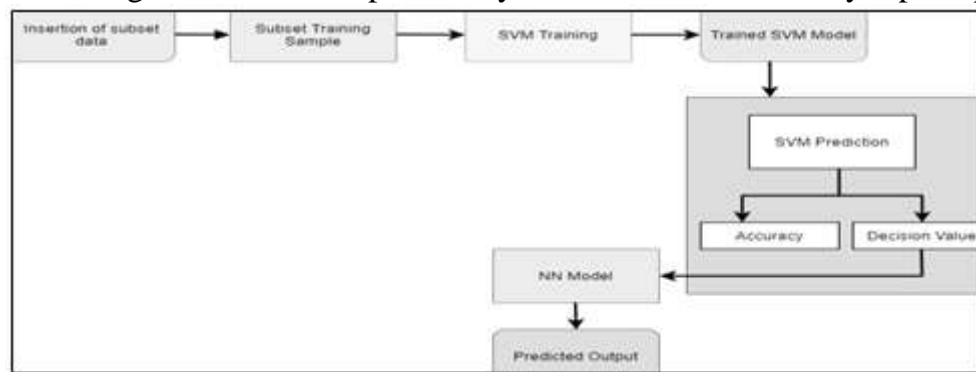


Figure 2. Flowchart of the system

V. Conclusion

To determine if any friend request is genuine or not, we utilize machine learning and overly constructed neural networks. Every neuron (node) has a sigmoid function applied to every equation. Our training data comes from social media networks such as Facebook, Twitter, and others. So the deep learning algorithm may learn patterns of bot activity by back propagation, minimizing the final cost function and changing the weight and bias of each individual neuron.

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Industry 4.0: An Analysis of Opportunities

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Abstract

Traditional industry is being transformed by the advancement of information and communication technologies and their integration into production processes, pushing it to a new level of organizational development. A new paradigm is being explored throughout the world to reap the benefits of these technologies and increase competitiveness in the global market. The adoption of "smart" equipment that can interact autonomously along the value chain is Industry 4.0 or the 4th Industrial Revolution. Machines employ self-optimization, self-configuration, and artificial intelligence to produce higher-quality goods and services in this method. Several new technologies based on cyber-physical systems and the Internet could improve automation and shorten product development and market launch time.

Keywords: Traditional Industry, industry 4.0, Industrial Revolution

I. Introduction

With more product variety in assembly processes, the manufacturing business is getting increasingly complex. This shift away from bulk production and toward more personalized service for individual clients has placed new demands on current manufacturing systems. Embracing the complexity that can increase the performance of assembly systems can provide a competitive edge above simply overcoming the challenges of complexity. The need for personalized items is causing high-volume mass production to transition to one-batch manufacture. This has resulted in a rise in complexity, necessitating technology that can help with the shift. Industry 4.0, a technology-driven manufacturing industry development in modern production systems, generates a new degree of interaction between actors and resources. Competent operators operating on cyber-physical shop floors will realize Industry 4.0's promises. "Human operators, who are socio-technical systems by definition, are essential for managing complexity, interaction and initiatives, coordination and problem-solving, and decision-making on shop floors."

"The advancement of information and communication technologies (ICT) and its integration into manufacturing processes has benefited the whole value chain in recent decades. The advancement of these technologies has boosted industrial productivity, lowered production costs, and provided cost-effective ways to provide clients with quality, speed, and cost-benefit analysis (Li et al., 2019)". Faced with

recent technology advancements and a scenario in which there is an increasing need for personalized products, greater complexity, higher quality, and lower costs, the creation of a new business model is being debated around the world under the banner of Industry 4.0.

As humankind progressed, the environment around us changed regularly. As a result, technical and manufacturing breakthroughs are changing. Industry 4.0 is a model that shows how industrial production varies over time due to changing circumstances. As a result, man, machine, and production as a whole form one intelligent and self-contained network. The phrase "Industry 4.0" refers to an intelligent factory where intelligent digital technologies are networked and connected with environmental assets, semi-finished goods, completed goods, machinery, equipment, robots, and humans. This industry is well-known for its adaptability, effective resource use, and incorporation of consumers and business partners into business operations (Vuksanović et al., 2016).

II. Literature Review

The adoption of the latest technology results in significant changes to the business model. This necessitates what is known as digitalization. Manufacturing must become more adaptable in order to make numerous ideas a reality as soon as feasible. "The two factors that Hardware and software solutions for real-time data evaluation will contribute to this. Digital PLM innovations can be applied to intelligent manufacturing affecting the entire product life cycle from 3D product design and 3D simulation tools, through automation and production control systems, supply chain management and logistics to recycling". "To keep international competitiveness, each of these operations is aimed at increasing productivity (by halving the time between new product development and market introduction), efficiency (automation allows for greater flexibility, better product quality, and more efficient production), and energy savings (for example, delayed material processing, robots can be activated and turned off as needed, saving up to 15% of electricity)" (Wyrwicka & Mrugalska, 2018).

(Foidl & Felderer, 2016) "Infrastructure and technology overlays in Industry 4.0 enable better and faster information utilization, resulting in a shift in the foundations of information transfer in manufacturing processes. The innovation project should be focused on specific objectives, problems, or wants of society, rather than just a discovery in basic research and its search for applications". The product or service should be an integration axis around which an ad hoc system can design, produce, and market, then give service and finally dispose of. A client's order, which includes a list of specifications, should serve as motivation to act - to design, configure, utilize, and dismantle the production system after it has completed the mission.

Industry 4.0 is a revolutionary 21st-century breakthrough that helps firms create "smarter" products and services by reducing costs and boosting efficiency. The human aspect is critical to the implementation and the work being based on current

research in the field. "Smart Factory may help industrial firms improve their processes and significantly enhance their internal efficiency since it features automated operations, a straightforward setup involving quick, need-based installation, and, eventually, an extremely high degree of scalability." The mechanized activities, simple setup and installation, and high degree of scalability of Smart Factory may aid industrial organizations in further improving processes and increasing internal efficiency.

(Petrillo et al., 2018) Founded that Labor markets have complex dynamics that are heavily impacted by labor demand and supply determinants. In this vein, the impact of Industry 4.0 on technology, production, and organizational structure is projected to impact employment and the future of work. Changes in markets and technological progress are continually transforming industries throughout economies, as well as jobs. Automation technologies and robots will eventually fulfill the majority of duties that humans have historically performed.

Furthermore, creative destruction will obliterate old industries while establishing new ones, which are more technologically intensive. Finally, the general economy will reach a "tipping point" due to the transition to a technology-intensive industry. Beyond this stage, companies will prefer to use automation and robots in production rather than human labor. In this regard, the World Economic Forum (WEF) predicts that total task hours completed by automation, which are currently at 29% across 12 industries, would climb to 58 percent by 2022 (Gökalp et al., 2017).

(Li et al., 2019) Founded that "The fourth industrial revolution is marked by the convergence of digitalization and automation, which allows machines to become more intelligent, interactive, and user-friendly. These new technologies will have a significant impact on how people work. New sorts of robots will be able to interact with humans. When paired with other coming technologies, this technology will create wholly new computer models that will complement human activities, particularly cognition". New skills are necessary to close the gap across engineering and computer science, automated learning, and artificial intelligence. Industry 4.0 must also be a tool for manufacturing environmentally-friendly (Lasi et al., 2014).

The adoption of interconnected, innovative, and self-controlled processes and systems is the goal of Industry 4.0. As a result, corporate processes based on Industry 4.0 technologies enable unique value-added processes that are more flexible, reliable, and efficient. In general, technological advancements produce new business prospects and business models. However, Industry 4.0 is being hailed as a game-changing technical breakthrough that will usher in new or significantly improved development in the industrial sector. As it is still in its early stages of development, defining the structure and technique of Industry 4.0 implementation guidelines is crucial to ensuring its success in the industry.

(Gallab et al., 2021) says, "The factories will be able to self-organize after the fourth industrial revolution. It is extremely likely that fractal models, which allow even a description of chaotic processes occurring in dynamic systems, will be used to

achieve it. According to the management concept, production fractals connect directly with the applicable supplier or recipient fractals based on the notion of "fractals" as self-organizing and self-optimizing, small and quick regulatory systems." They choose each time approach, such as planning and control methods, and use machines and robots ideal for carrying out specific tasks, thanks to self-organization. It is becoming increasingly difficult to maintain and create such a framework. The demands placed on individual employees or groups are becoming increasingly sophisticated. The next challenge is creating and managing such information and communication networks on a personal, organizational, and technical level (Foidl & Felderer, 2016).

III. Conclusion

Industry 4.0 is 21st-century manufacturing that allows firms to generate "smarter" goods and services by decreasing costs and boosting efficiency. The human aspect is critical to the application and the work based on current literature in the area. "Thanks to the program's automated procedures, basic setup including simple, need-based installation, and, ultimately, high degree of scalability, Smart Factory may aid manufacturing businesses in further improving their processes and greatly enhancing their internal efficiency." Organizations must operate in a competitive market where the quality of their processes, services, and products determines their financial performance, customer base, and survival. Quality management has, unsurprisingly, become a fundamental and vital aspect of corporate management for every organization.

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Role of ICT in Effective Implementation of Business Operations: An Empirical Study

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Abstract

Internet today have brought a new era with many new are companies setting up and overtaking the traditional one. Technology is at the core of everything and rapidly increasing its impact on our lives. Business is one core sector which boomed due to technological advancement, making management one key tasks for its development. Development of ICT and its implementation in the business operation have led to many productive results. Business today from the tiniest to the largest are equipping themselves with information and communication technology to produce better and efficient results and thus to expand their market size. The paper tried to explain the effectiveness of the implementation of ICT in our lives and how it affects the business world.

Keywords: ICT, Technology, Service, Business Management

I. Introduction

ICT (I.e., Information and Communication Technology) has now become a fundamental part of business management. This is an indispensable part for the smooth operation of businesses of all sizes and complexity both domestic as well as globally. The fast up gradation of ICT and the enormous use of ICT in all areas of our lives have implications for business as well. Businesses now manage their work with ICT support to help them complete tasks speedier and more accurately than ever before. Service sector is one of the fastest growing sectors and the driving factor behind this broadening effect is the ICT sector. With the advent effect of the internet information technology (IT) have magnified and globalized the world by bringing it closer than ever before.

Business management is rising and today has become more challenging than before. There exists a hidden complexity of individual work which makes it difficult to manage business. The effectiveness of business management largely depends on the management of the tools used. Work Projects are very time consuming; administrators are usually unable to use communication skills. Though, if a large pool of capital investment is required, managers rely on the use Information and Communication Technology (ICT), which increases the efficiency of activity management. Information and Communication Technology (ICT) are able to cover all software and software related activities and solutions, such as ICT services, ICT applications, software products and embedded software. Examples of ICT solutions are various such as custom software development, mobile application development, website design and development, and graphic and animation design. For that reason, information and communication technology (ICT) is a necessary part of business management in any country in the world. This is vital to keep businesses running efficiently, regardless of size and complexity.

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In an increasingly urbanized world where advances in industrial technology have made us capable to freely move of commodities, services, capital and labor across the national borders. These system processes have come up as an important part of the new-age social and economic progress. In a constant changing world the only way to sustain is to adapt technology. It can be the highest degree of help management can get which improves the effectiveness and effectiveness of governance. Further, it is also used to collect information's which are superior and complex in nature which are then shared with other organizations and sectors to facilitate synchronized management in the modern-day business world.

ICT consists of all virtual era that assists individuals, agencies and groups in the usage of facts and information. It covers all the digital merchandise that address facts in a virtual and electronic form. Therefore, ICT is involved with online statistics storage, retrieval and transmission of these data.

The Revolution of Industrial has changed the world of business, creating a number of mechanisms that are economical as well as 100-times more productive. However, the businesses somewhat remained stagnant nearly for a century. With the Revolution of industries and the technological usage in the economy, circumstances have changed more devastatingly than during the period o the industrial revolution. It is no exaggeration that things will never go back to be the same. The pace at which this technology evolves and adapts is exponential for that purpose wherever all business units are caught in the wave, whether ready or not.

The accomplishment of a company depends on certain factors. Some of these are precise analysis, choosing the correct expertise, and visualization for the future. Studies over the last two decades have shown that corporate that invest in technology and walks the path to innovation achieve greater market share, huge financial figures, and overall competitiveness compared to the latter. Information technology is the only

innovation that allows companies to analyze specific huge data set and plan business strategies accordingly. It also provides numerous tools to help in solving complex problems and plan one's business scalability. Now a day, digital marketing has demonstrated to be a great tool for sitting in remote offices and homes and promoting products and services in the world. And thanks to futuristic cloud computing and modern communications, companies can create global organizations that are able to manage and monitor virtual offices around the world.

ICT makes a commercial enterprise extra efficient, powerful by providing services to readily be available for the customers as well as a system to right away reply to customers' requirements. ICT can help commercial enterprise sports such as design, manufacturing, R&D, distribution and income and feedback. Contrary to the time-honored are expecting that the ICT will lower the call for head-to-head contact and could bring about extra dispersion in terms of monetary activity. Indications are also been made that ICT have become an integral part which strives to promotes commercial agglomeration. In addition, arguments are also been made that to seek of activity and recruitment through the services of the Internet, provides an ability to produce positive performance in terms of profits to the exertions marketplace.

Analysis suggests that information and Communication Technology have a high level of impact on the different aspects of growth and development. ICT takes parts in facilitation of an array of transactions and services in the field of banking, management, online solutions, and many more. The driving force behind the rising urbanization around the globe is the Information and Communication Technology. It also helps in ensuring urbanization by providing various services.

Important purposes of technology in business are communication over platforms such as voice and video teleconference software, email, chat, private networks for corporate, and the Internet in general. IT makes it easy and convenient for businesses to host virtual gatherings with employees as well as customers around the globe without the wastage of time and money on travel. Meanwhile, employees can operate a wide range of information, share it, and collaborate on the required tasks regardless of their location. Employees can also work remotely, which helps companies save money. Businesses can also operate social networking sites to better solve consumer related problems. SNSs (Social Networking Sites) make brands more accessible to the general population.

One more role performed by the ICT in business is to the improve operational efficiencies so that companies can complete tasks in a faster and less expensive way. This often is carried out through the corporate software and the centralized corporate databases developed with the help of ICT.

Instead of forcing employees to count and control inventory, Companies use stock management software developed with the help of ICT, which can check levels of stockpiles in real time, provide useful reports to the managers, it thus helps initiate orders when supply levels are low and provide an efficient way to manage. It further

helps in making better decisions to manage and run business. Relationship management software for customer helps in automating common purchase and sales including additional marketing projects like generation of guidance, mailing promotions, and metrics locating. Businesses may leverage well-characterized firm resource planning software to simplify accounting, human resource management, supply chain monitoring, invoicing and procurement.

IT delivers great customer experiences through better consumer service, easier modified marketing and electronic-commerce. Instead of contacting the corporation only during trading hours, consumers can suitably communicate with the corporation through the global website, social networking site, email and personalized prompt messaging services. By locating consumers' purchase history using marketing software, businesses can send personalized promotions that better congregate consumer requirements and increase sales potential. Consumers also profit from being able to purchase goods and services from the company's global website, which also increases the prospective for income and company's growth.

The role of IT in management choice making is obvious in the tools such as ERP software and verdict sustain systems that provide support for people who manage to make informed decisions by viewing real-time data on company performance. The software is an online control panel with all the relevant information about the company's economy, consumers, sales and promotion trends, and stock levels. Executives thus can access the information to make sure which goods to encourage or stop selling, where to minimize costs, which consumers need maintenance, and then submit purchase orders and resources.

Network-connected systems, such as high-level secure systems which required calibrated access and wireless cameras, help enhance safety measures in the business and minimize the risk of stealing and failure of the company's private information. ICT also enables businesses to safely store critical corporate data in databases provided through the cloud system, reducing paper waste, improving security and simplifying backups. With ICT, businesses can scale internationally as easily as building a multilingual website that sells products to the customers globally and allows them to shop in multiple currencies. There is now online recruitment that allows companies to locate more skilled contender and conducting the majority of the recruitment procedure in online mode which helps company save both time and money. From facilitating teleworking to minimizing energy utilization with contemporary organizations, IT can help ensure the company's resilience, reducing costs and further improves the company's reputation.

SMEs i.e., Small and Medium Size Enterprises today are the new hotspots and a target of the government policies. The medium size industry is in race to implement ICT to their business operations to grow and expand in a more economical and efficient manner. There is an abundant of opportunities for the SME sector provided the implementation of Information and Communication Technology. SMEs include various areas such as agriculture, information technology, tourism, energy and economy. Over the years, these have been witnessed by the governments to be helpful

in the growth of private sector of the country. However, private sector, enormously made of large firms, occasionally outshines the SMEs. Implementation of information and communication technology will help SMEs come out of the shadow and strengthen their core and performing in an efficient manner.

II. Conclusion

Business administration and management can be an uprising field and introduction of ICT have made it more effective. Today corporate invests highly in the information and communication technology as they have proven to produce better results. Research and analysis by the companies have been major tasks to develop particular and identical solutions to manage business and fulfill the desired company wants. ICT can appreciably enhance poor people's human and social capabilities and cast a positive impact on them. ICT has endless applications and is an integral part of a up-to-the-minute life. ICT not only manages the business in a trade but also creates the information within the trade. It is unfeasible to even make extended tenure business success without utilizing the profits of ICT in digital period. Business sector has been relying upon the ICT due to its efficiency and effectiveness in business operations and communication.

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