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CONTENTS

Research Papers

A REVIEW ON CYBER SECURITY

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ABSTRACT
Cyber-attacks have become common in this internet era. The cybercrimes is growing every year and also increases the intensity of damage. Providing security against cyber-attacks becomes the most important task in this digital world. However, ensuring cyber security is an extremely complex task as requires domain knowledge about the attacks and ability of analyzing the chances of threats. The most important challenge of cyber security is the progressing nature of attacks. This paper presents the Cyber security Threats to be aware of in 2020 along with the why the numbers of cyber security jobs are growing in 2020 , five emerging Cyber-Threats to watch out for in 2021 ,Which country is number 1 in Cyber security , Popular cyber-crimes, Top 10 cyber security trends for 2021, Importance of cyber security along with the numerous risks that are in the present digital span. The investigation made for cyber-attacks and their statistics shows the strength of the attacks.

Keywords: Cyber-attacks, Cyber Threats, Cyber- crime, Cyber-Security jobs.

1. INTRODUCTION
Cyber security refers to the body of technologies, practices, and processes designed to preserve networks, programs, devices, and data from damage, attack, or unofficial access. Cyber security is also known as information technology security.

1.1 The Importance Of Cyber Security: Cyber security is important because military, government, corporate, medical, and financial organizations collect, process, and store unparalleled amounts of data on computers and further devices. A full-size part of that information may be sensitive data, whether or not that be intellectual property, economic facts, private data, or different kinds of facts for which unauthorized access or publicity should have poor consequences. Organizations transmit sensitive facts throughout networks and to different devices with inside the course of doing businesses, and cyber safety describe the field dedicated to protecting that data and the structures used to process or save it. As the quantity and sophistication of cyber-attacks grow, companies and organizations, mainly the ones which might be tasked with safeguarding data regarding national safety, health, or economic records, needs to take steps to defend their sensitive business and personnel data. As early as March 2013, the nation's top intelligence officers cautioned that cyber-attacks and virtual spying are the top risk to national safety, eclipsing even terrorism.

1.2 Challenges Of Cyber Security: For an powerful cyber safety, an corporation needs to coordinate its efforts throughout its whole records system. Elements of cyber embody all the following:

1.2.1)Network security: The method of protective the network from undesirable users, attacks and intrusions.

1.2.2)Application security: Apps require consistent updates and checking out to ensure those applications are secure from attacks.

1.2.3)Endpoint security: Remote access is a essential a part of business, however also can be a weak factor for data. Endpoint security is the technique of protective remote access to a organization's network.

1.2.4)Data security: Inside of networks and programs is data. Protecting organization and client information is a separate layer of safety.

1.2.5)Identity management: Essentially, that is a method of understanding the get entry to each person has in a company.

1.2.6)Database and infrastructure security: Everything in a network includes databases and bodily equipment. Protecting those devices is similarly important.

1.2.7)Cloud security: Many files are in virtual environments or "the cloud". Protecting records in a 100% on line environment offers a huge amount of challenges.

1.2.8)Mobile security: Cell telephones and tablets contain virtually each kind of safety challenge in and of themselves.

The maximum tough challenge in cyber security is the ever-evolving nature of safety risks themselves. Traditionally, companies and the authorities have centered maximum in their cyber security sources on perimeter safety to protect only their maximum crucial system components and protect towards known treats.

2. MANAGING CYBER SECURITY

The National Cyber Security Alliance, via SafeOnline.org, recommends a top-down method to cyber safety in which company control leads the charge in prioritizing cyber safety control throughout all business practices. NCSA advises that organizations should be prepared to "reply to the inevitable cyber incident, restore ordinary operations, and make sure that organization assets and the company's reputation are protected." NCSA's tips for conducting cyber danger assessments awareness on 3 key areas: identifying your company's "crown jewels," or your maximum valuable records requiring protection; figuring out the threats and risks facing that information; and outlining the harm your company could incur should that data be misplaced or wrongfully exposed. Cyber risk assessments should also consider any regulations that effect the manner your organization collects, stores, and secures information, including PCI-DSS, HIPAA, SOX, FISMA, and others. Following a cyber-risk assessment, increase and implement a plan to mitigate cyber risk, defend the "crown jewels" mentioned on your assessment, and efficiently discover and respond to safety incidents. This plan should embody both the methods and technology required to construct a mature cyber safety program. An ever-evolving field, cyber safety excellent practices must evolve to accommodate the an increasing number of state-of-the-art assaults finished via way of means of attackers. Combining sound cyber safety features with an knowledgeable and safety-minded worker base provides the excellent defense in opposition to cyber criminals trying to benefit get entry to in your organization's sensitive information. While it may look like a frightening task, begin small and focus in your maximum sensitive data, scaling your efforts as your cyber program matures.

3. WHICH COUNTRY IS #1 IN CYBER PROTECTION?

The security of a country was idea of in terms of soldiers, weapons and different physical structures. With the arrival of computers, safety evolved to intend information security.

Today, if a nation can't manage its cyber belongings, it isn't secure. Examples of nation-on-nation cyber-attacks abound. Criminal-on-country attacks occur each day. If a nation does not have secure systems, it's citizens are at risk of privacy invasion. The economic institutions that support the economic system are vulnerable to theft with insecure cyber systems. The crucial infrastructure of a nation is likewise at risk if a nation isn't mature.

Which nations are the maximum secure? There are reviews and articles that attempt to answer this question.

The technique of the unique rankings isn't the same, so their findings do not match. CyberDB and Analytics Insight are greater subjective, while Comparitech and ITU have a set method.

ITU	Analytics Insights	CyberDB	Comparitech
United Kingdom	USA	USA	Japan
USA	Russia	Israel	France
France	Israel	Russia	Canada
Lithuania	China	Canada	Denmark
Estonia	Spain	United Kingdom	USA

Table 1: Country ranking in Cyber Protection

The common nations on all 4 lists stand out because the USA , so they're the winner based in this pattern of rankings. Stay Independent as an organization, business or authority's entity via way of means of focusing on cyber-security.

4. Top five Popular Cybercrimes: How You Can Easily Prevent Them

Over the course of the beyond few years, hackers and cyber-crooks armed with sophisticated malware have stolen actually loads of hundreds of thousands of dollars from on line banking accounts and people all around the world. We have stated it many times before in recent articles, the days of robbing banks in individual are gone and now it all takes region behind a display screen of a computer linked to the Internet.

The Internet may be the maximum beneficial device in business, school or each-day life. At the same time, the Internet can make someone's existence a living hell in the occasion that one will become the following sufferer of a cybercrime.

To protect yourself towards cybercrimes you should first understand what kind of cybercrimes there are. The net is a complicated infrastructure in which cybercriminals create approximately 57,000 scam web sites each week. In 2008, there had been approximately 10 million victims of identification theft in America alone,

according to an Agency-France Press record. The effortlessly preventable cybercrimes attack pc users through numerous unique techniques along with using cyber stalking, harassment, invasion of privacy, phishing and even via being on-line impostors. If you're thinking what every of those cybercrimes involve, view our listing of the five popular cybercrimes to effortlessly protect your -self from. All are defined below:

i) Phishing scams: Phishing is an exercise of a cybercriminal or hacker attempting to attain sensitive or private information from a laptop person. This method is typically performed through phishing web sites which can be designed to imitate a legitimate internet site in hopes that the unsuspecting laptop consumer will enter numerous bits of private information such as their banking passwords, domestic address or maybe social safety number. To avoid phishing scams, we suggest the usage of a phishing filter function to your internet browser in order that it may actively experiment web sites which you visit to test if they were diagnosed as a phishing internet site.

ii) Identity Theft scams: Cyber crooks who can also additionally have gained access to your credit card or banking account data may also use that information to make purchases on your name. Identity theft has been a main problem even before the theory of the Internet however as you may already recognize, the digital world has made it lots easier for criminals to make use of and steal your identification. One of the perfect and least costly activities to protect your identification is to closely monitor your accounts. If you observe suspicious activity, you should report it to the right government without delay. Be proactive and do not waste time in those situations. Identity theft scams are very normal on line and can come with inside the form of a junk mail email, internet site or maybe an internet pop-up survey. Phishing is a primary contributor to identification theft additionally.

iii) Online Harassment: Harassment on line is normally associated with your social life-style and in case you pick to use a popular social network such as Facebook or Twitter. Online harassment can include threats sent via email, instant message or via a social community message/post. Usually, it is simple to report those threats to the social network you are being harassed on. Harassment also can be discovered to result in cyber bullying children that can have dire consequences as you can have witnessed recently with inside the media wherein a 13-year-old youngster from Dardenne Prairie, Missouri, named Megan Meier devoted suicide from being bullied on line. Our suggestion for dealing with harassment on line is to at once report any activity out of the regular before it receives out of hand even if you may recognize the individual on the opposite end. Often on line impostors who harass you on line does it to discover your 'breaking point' however you should never let it get that far.

iv) Cyber stalking: Cyber stalkers will visit excellent lengths to try to display a victims on line activity. This can also additionally encompass infecting a individual's laptop with malware this is capable of log laptop activity. Cyber stalkers also are recognized to continually harass their ability victims. Cyber stalking cases must additionally be reported to government, just like on line harassment instances. Cyber stalkers may also contact a victim's colleagues, friends and other on line contacts in order to slander them or extract private information from them.

v) Invasion of privacy: The invasion of privacy is essentially the act of a person attempting to interfere on a individual's private life. This consists of hacking right into a person's laptop, reading their emails or tracking on line activities. Many of those specific crimes are punishable under the law. If you ever suspect a person invading your privacy, you may really contact the police and file a report. Local government can deal with those conditions most times without seeking a selected on line regulation enforcement organization.

In any of the above instances, you should always have the proper laptop safety applications installed and up to date to your laptop which may also include a trustworthy anti-spyware or anti-virus program.

5.   TOP 10 CYBER SECURITY TRENDS FOR 2021
With the virtual revolution around all businesses, small or huge corporates, companies, or even governments are counting on automated systems to manage their everyday activities and therefore making cyber safety a primary aim to protect information from numerous on-line attacks or any unauthorized access. Continuous change in technology additionally implies a parallel shift in cyber safety developments as information of data breach, ransom ware, and hacks become the norm. Here are the top cyber safety developments for 2021 that we are able to cover in detail, including:

i) Rise of Automotive Hacking: The first cyber safety trend in 2021 goes to be the rise of automotive hacking. Modern motors these days come full of automatic software program developing seamless connectivity for drivers in cruise manage, engine timing, door lock, airbags, and superior systems for driver assistance. These

automobiles use Bluetooth and Wi-Fi technology to communicate, which additionally opens them to numerous vulnerabilities or threats from hackers. Gaining manage of the vehicle or the usage of microphones for eavesdropping is expected to rise in 2021 with more use of automated cars. Self-driving or independent automobiles use a good in addition complicated mechanism that calls for strict cyber security measures.

ii) Integrating AI with Cyber Security: With AI being introduced in all marketplace segments, this generation with a mixture of machine learning has introduced amazing changes in cyber security. AI has been paramount in constructing automatic safety systems, natural language processing, face detection, and automated risk detection. Although it's also being used to expand smart malware and attacks to skip the modern safety protocols in controlling information. AI-enabled threat detection systems can predict new attacks and notify admins for any information breach instantly, making it the next cyber security trend in 2021.

iii) Mobile is the New Target: Cyber security trends offer a considerable increase (50 percentages) for mobile banking malware or attacks in 2019, making our hand held devices a ability prospect for hackers. All our photos, economic transactions, emails, and messages possess more threats to people. Smartphone's virus or malware may capture the attention of cyber security trends in 2021.

iv) Cloud is Also Potentially Vulnerable: With more and more corporations now installed on clouds, security features want to be continuously monitored and up to date to protect the information from leaks. Although cloud applications such as Google or Microsoft are nicely equipped with safety from their end still, it is the person end that acts as a significant source for inaccurate errors, malicious software program, and phishing attacks.

v) Data Breaches: Prime target: Data will remain a main concern for corporations across the world. Whether it is for an person or organization, safeguarding digital information is the number one aim now. Any minor flaw or bug on your device browser or software program is a ability vulnerability for hackers to access private information. New strict measures General Data Protection Regulation (GDPR) was enforced from May 25th, 2018 onwards, providing information safety and privacy for individuals with inside the European Union(EU). Similarly, the California Consumer Privacy Act (CCPA) turned into applied after January 1st, 2020, for protecting client rights with inside the California area.

vi) IoT with 5G Network: The New Era of Technology and Risks , Next raging cyber protection trend for 2021 is the IoT with 5G networks. With 5G networks predicted to roll out in 2020 globally, a brand new generation of inter-connectivity becomes a reality with the Internet of Things (IoT). This communication among more than one devices additionally opens them to vulnerabilities from outdoor influence, attacks, or an unknown software program computer virus. Even the world's maximum used browser supported through Google Chrome became observed to have serious flaws. 5G architecture remains successfully new with inside the enterprise and calls for loads of research to discover loopholes to make the device secure from outside attack. Every step of the 5G network would possibly carry a plethora of community attacks that we may not be aware of. Here manufacturers want to be very strict in constructing sophisticated 5G hardware and software program to manipulate information breaches.

vii) Automation and Integration : Here's the following cyber safety trend - with the scale of information multiplying each day, it is eminent that automation is included to give extra sophisticated manage over the information. Modern hectic work demand additionally pressurizes specialists and engineers to supply quick and proficient solutions, making automation more precious than ever. Security measurements are integrated during the agile technique to construct greater secure software program in each aspect. Large and complicated internet applications are further difficult to protect, making automation, as well as cyber safety, to be a important idea of the software program improvement method.

viii) Targeted Ransom ware: Another significant trend in cyber safety is that we cannot appear to disregard for 2020 is focused ransom ware. Especially with inside the developed nation's industries depend heavily on specific software program to run their everyday activities. These ransom ware goals are extra focused, such as the Want to cry attack on the National Health Service hospitals in England Scotland corrupted greater than 70,000 clinical devices. Though generally, ransom ware asks to threaten to publish victim's information unless a ransom is paid still, it may have an effect on the big organization or in case of countries too.

ix) State-Sponsored Cyber Warfare: There won't be any stoppage among the western and eastern powers in tries to locate superiority. The tension among the United States and Iran or Chinese hackers regularly creates worldwide information though the attacks are few; they've a full-size impact on an occasion such as elections. And with greater than 70 elections sure to be held this year, criminal activities during this time will surge.

Expect high-profile information breaches, political and industrial secrets and techniques to top cyber safety trends for 2021.

x) Insider Threats: Human mistakes remain one of the number one reasons for the information breach. Any terrible day or intentional loophole can carry down a whole company with millions of stolen information. Report via way of means of Verizon in information breach offers strategic insights on cyber security trends that the employees directly or indirectly made 34 percentage of overall attacks. So make sure you create greater consciousness inside premises to protect information in each manner possible.

6. WHY THE NUMBER OF CYBER SECURITY JOBS IS GROWING IN 2020

Businesses and companies throughout the globe are falling victim to cybercrimes, while we write this. Cyber safety issues like cyber threats and attacks have turn out to be a curse the world over.

Former US President, Barack Obama had as soon as stated: "Cyber threats pose one of the gravest national security dangers that America faces… It's clear that rather more work needs to be achieved to enhance our cyber security." Clearly, this spells the need for cyber safety specialists.

Not just this, generation large Accenture shared that during 2017, there has been a 27.4% internet growth with inside the common annual number of safety breaches and that from 2016 to 2017, cyber security costs went up by 22.7%. This in addition spells the gravity of the difficulty regarding the world.

As the events of information breaches are increasing unexpectedly, cyber safety problems are becoming a nightmare for enterprises. The number of excessive profile data breaches with inside the last few years' simplest shows that dealing with cyber security issues is a mammoth-like challenge, even for huge players.

The unexpectedly escalating pile of sensitive consumer data – thanks to the proliferation of smart devices, the Internet of Things (IoT), social media, and different virtual channels – has made it even greater important for nations to reinforce their cyber safety front.

7. COMPANIES ARE SEARCHING OUT CYBER SAFETY TALENTS

In light of the exceptional rise with inside the number of cybercrimes globally, the call for for cyber-safety experts is growing throughout all industries. Big organizations like SAP, Oracle, Google, Cisco, IBM, Microsoft, Intel, Amazon, Symantec, Kaspersky, Bae Systems, FireEye, Lockheed Martin, and Check Point Software, are a number of the most important recruiters of cyber-safety professionals.

Women who're with inside the IT quarter can discover many possibilities with inside the area of cyber security. Be it an information protection analyst or a technical architect position, ladies can attain new heights through including precious talents to their resume. Some of the famed credentials consist of the CEH certification, CompTIA certifications, and superior ones just like the CISSP or CISM certification.

While the call for cyber security experts is pretty high in most nations, there may be a considerable difference with inside the degree of call for, as per Indeed's 2017 Cyber security Skills Gap report:

Image 1: Indeed report Israel Leads Employer Demand for Cyber Security Talent

This bar graph suggests that Israel takes the primary place in terms of the need for cyber safety talent, and that too through a huge margin. The demand for cyber safety experts in Israel became 89.2% better than in Ireland (2nd rank), 118.8% better than with inside the United Kingdom (1/3 rank), and 187.4% better than with inside the United States (fourth rank).

Cyber security is one of the many sectors which are going through a excessive shortage of professional and certified talent.

According to the Harvard Business Review, the cyber security enterprise can have over 1.5 million vacant positions through 2020. And through 2021, Cyber security Ventures predicts this number to head as much as 3.5 million. ISACA continues that it takes as a minimum 3-6 months (on average) to fill a cyber-security role.

As for India, NASSCOM estimates that through 2020, the country will want around 1 million cyber security experts to fulfill the ever-growing cyber security needs of the developing economy. According to Cyber security Ventures, through 2021, nearly 100% of large international agencies can have a devoted role for leader information security officer (CISO).

Altogether, the profession outlook for cyber safety professionals appears very promising with inside the future. For instance, the United States Bureau of Labor Statistics predicts that the role of an information safety analyst will develop by 32% from 2018-28. Adding to that, the cyber security enterprise boasts of a 0% unemployment rate.

8. CONCLUSION

In this paper I tried to explain why cyber securities are very important concern for everyone and how we can manage cyber security and what are the challenges of cyber security. Apart from that I tried to explain why cyber security jobs are growing day by day , what are the popular cyber- crimes and how we easily prevent them as well as what are the trends of cyber security.

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THE IMPORTANCE OF VOCATIONAL EDUCATION IN THE INDIAN EDUCATION SYSTEM

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ABSTRACT

Indian education system is largest in Common wealth countries and 2nd largest in the world next to USA. There is a tremendous growth in the enrolment in education system since independence. But at the same time there is also an alarming ratio of dropouts at primary and secondary level. This then gives rise to low enrolment rate at higher education level. Though many students are deprived of the education at higher level, yet it is observed that, in India employability of graduates is a major issue. The reason for this high unemployment ratio at graduate level can be attributed to the skills gap that exists between the graduates and needs of the industry. It has been reported that in India, only 25% of the graduates have employable skills. This clearly indicates the need for high quality vocational education to train the youth in such a way that they are employed. Many countries like Japan have given emphasis on the vocational training as the route to provide critical skills to industry. This article aims to give a brief history of technical and vocational education and the success stories across the globe who have given importance to vocational education right from primary level.

In India, The Kothari Commission (1966) report, was one of the earliest report which emphasized the inclusion of vocational education at secondary level. Recently declared New Education Policy (NEP) (2020), has actually stated that it's the need of the hour that, vocational education be brought in the mainstream education. Hence this article will also discuss how as per the NEP, Vocational Education Programs will be integrated into mainstream education in a phased manner.

Keywords: Vocational, skill, NEP,

INTRODUCTION:

In today's world, of austerity and high unemployment rate, getting a job is not that easy. Employers are interested not only in the outcomes of university examinations, but they also look for the competencies. One of the most important objectives of economic diversification is to create new jobs in the private sector to combat youth unemployment. But if youth in our country don't have the skills the employers need, then definitely the employers will go for people from other countries who have the skills. Very few employers believe that educational programs currently respond to the needs of the private sector. Governments are trying, but they are not able to create the competencies and attitudes which are required. This results in increasing the gap between the skills that today's youth have and what the private sector needs. As economies shift from agricultural-based economies to manufacturing and service industries, labor demand also increases, creating needs [1]. Therefore, the vocational training is the need of the hour to bridge this gap.

Vocational education is an education that will train the students to acquire specific skills to perform a specific job and enter a specific vocation. Vocational education is a system designed for students to acquire and improve their knowledge, skills and attitude which is very important in providing opportunities for employment and effective execution of duties [2]. According to Kilji *et al*, every developing country must aim to create a system of vocational training for the youth with the intention of matching the requirement for trained manpower [3]. Investing in skills development through vocational training is extremely important to transform economies from being labor intensive to skills intensive, which is a critical component for the economic growth and social inclusion [3]. In a study carried out by Kazmi, it was found that skills development through investment in technical and vocational education is a key factor in improving the productivity of any country [1]. Initially it was considered that vocational education is useful for lower social classes and professions that include plumbers, electricians and mechanics [4]. However, with increased globalization, there has been a demand for specialized labor markets that require a higher level of skills and diversified technical and vocational training.

Vocational Education across the globe:

In Germany, vocational education is compulsory for all youngsters up to the age of 18. Vocational training is split between two instructing parties - the employer and the school. The larger part of the training takes place at the workplace. The youngsters are trained for various trades like motor mechanics, electrician, construction industry, hairdressing, office work, etc. The costs of the training programs are borne mainly by industry. The result of this vocational training has created a high quality labor force which produces the high quality products for which Germany is famous [5].

In Japan, after compulsory schooling up to age of 15, over 90 per cent of the age group until 18, vocational education is given to the students. It is observed that Japanese people are obsessed with education. The parents are ready to pay fees for their children to attend these vocational training after compulsory schooling ends. The central government sets the national economic goals and also establishes framework for industrial training and development. The most important thing is that, two-thirds of all vocational education and training in Japan is provided by industry itself, and less than one-third by institutions within the education service. The vocational training given by educational institutions is especially for students of somewhat lower academic ability [6].

In China education and training are integrated. This helps in improving both general foundational skills as well as specific technical and vocational education. For technical and practical skills, there is a system of occupational standards, assessment and certification. Training programs and curricula are developed based on the occupational standards that consider specific requirements of a labor market need. Companies are actively involved both in setting standards and in designing curricula. This ensures that vocational colleges produce competent trainees with the necessary skills, knowledge and attitudes relevant to the market [7].

Germany, Indonesia, Japan, Korea, Israel and China have supported vocational education at the school level on a large scale since the decade of 1970s. This has helped them to boost their economy.

Need of vocational training in India:
India has the largest working population in the world. Still, finding a skilled person for a job is difficult for the employers. This is mainly due to the shortage of skilled workforce in India. The reason for this shortage may be due to the disparity between the knowledge which is gained in the classroom and actually applying in the outer world. The rote learning education system do not train the student to analyze the problem and find a solution for it. In India, education is not meeting global standards.

According to the former FICCI President, Mr. Habil Khorakiwala, "Even as the Indian economy continues to clock close to double-digit growth aided by a robust growth in manufacturing and services sectors, it is up against shortage of skilled, semi-skilled and unskilled workers" [8]. There are various sectors in which there is a shortfall of skilled persons, few are listed below.

i. Media

ii. Engineering industry

iii. Food processing sector

iv. IT and BPO

v. Retail Sector

vi. Leather

vii. Construction sector

viii. Civil aviation

ix. Logistics

x. Banking and Finance sector

xi. Automobiles

xii. Pharma sector

xiii. Data science

xiv. Artificial Intelligence

Individuals learning new age skills, will definitely have an advantage over others who lack this. Hence vocational training is necessary.

Status of vocational education in India:
Indian education system largest in Common wealth countries. According to the literature, drop out after Class VIII is alarming. Among persons of age 15 years and above, only 2 % have any type of technical degrees/ diplomas/ certificates. It is observed that 95% of the world youth learn some type of skill. He/she has a choice of 3000 vocational streams. But in India, the number of trades identified are just 175 with less than 3% of youth getting this formal v The Vocational Training in India is imparted by mainly two types of bodies: Public Industrial Training Institutes (ITIs) Private owned Industrial Training Centres (ITCs) vocational education.

According to the Planning commission report for the 11th Five-year plan there are about 5,114 Industrial Training Institutes (ITIs) imparting training in 57 engineering and 50 non-engineering trades. In India, the emphasis has been on general education, with vocational education at the receiving end. This has resulted in large number of educated people remaining unemployed. Hence now the planners are putting thrust on the vocational education.

According to the 12th five-year plan, 5 % of the Indian workforce in the age group of 19–24 has received formal Vocational Education. As per the New Education policy 2020, at least 50% of learners through the school and higher education system shall have exposure to vocational education by 2025. It has been planned to integrate vocational education programs into mainstream education in a phased manner. Vocational education will be integrated into all educational institutions in a phased manner in the next decade. Vocational education courses will be chosen based on skills gap analysis and mapping of local opportunities, and technical and vocational education will become part of the larger vision of holistic education. National Committee for the Integration of Vocational Education (NCIVE), along with the industry will monitor this integration.

CONCLUSION:

In order to achieve the goals there has to be substantial expansion of quality vocational education and training for raising employability and productivity. It is necessary to redesign the educational pattern at the school level to facilitate skill development. Curricula has to be revised periodically. There should be a flexible approach in developing courses and curriculum. Curriculum should be based of the learning outcome rather than on prescribed rigid format. Specialized vocational courses should be offered at University and Higher Institution level. Government has to redefine its role in reforming and strengthening vocational education and training.

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A STUDY ON CYBER SECURITY PROCESS OF AUTHENTICATION AND MOST SECURE USER AUTHENTICATION METHODS

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ABSTRACT

Security was significant from the very beginning. Cyber security is the field of science. Cyber security is the used with the computers, networks, servers, mobile devices, electronic systems, and different attack from malicious attacks. It is also called as information technology security or electronic information security. In organization ,government, military we use data and transmit sensitive data across networks and to other devices in the course of doing businesses, and. Cyber security means the instruction provided to protect that information and the systems used to process or store it. Every organization needs to follow cyber security to avoid cyber crimes.

Where the process of authentication is the process of recognizing a user's identity.

Keywords: Security, Attacks, System, Information Technology, Process

1.1 INTRODUCTION

Cyber security means a body of technologies, processes, and practices designed to protect networks, devices, systems, and data from attack, damage, or unauthorized access. Cyber security can also be called security information technology. Cyber security is important because government, military, corporate, financial, and medical organizations collect, process, and store data never before seen on computers and other devices. An important part of that data may be sensitive information, whether that be psychological, financial data, personal information, or other types of data where unauthorized access or disclosure could have serious consequences. The organization transmits sensitive information to networks and other devices while conducting business, too. Cyber security means the instructions given to protect that information and the systems used to process or store it.
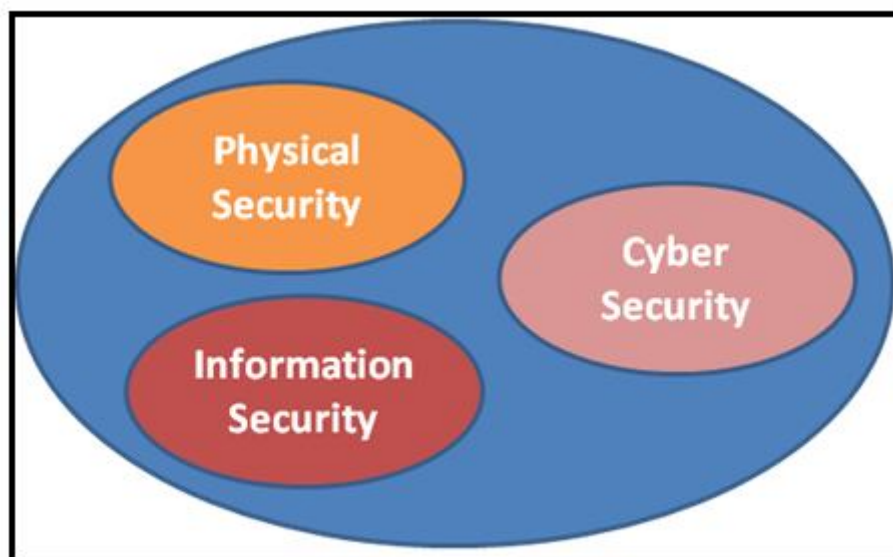
Figure 1.1 Types of Security

Security means we have to protect our data or anything's we wants that terms security.When we talk about things that time its physical security.When related to data that time information security and when that information with interface between internet that is cyber security.(Shown Figure 2.1 Types isf Security) Where there are several method where Authentication is a process of verifying user identity or details. User authentication is the process of verifying the identity of a user when that user logs into a computer system.

The main purpose of authentication is to allow authorized users to access a computer and deny access to unauthorized users.

1.2 Why is there a need for cyber security?

Cyber security is important because it covers everything pertaining to the protection of our sensitive information, personal information, intellectual property, data, and information systems of government and industry in an attempt to steal and harm by criminals and opponents. The risk of cyber security increases, driven by global communications and the use of cloud services. Cyber threats can happen at any level of your organization. Cyber security is a condition or process that protects and restores computer programs, networks, devices, and programs from any type of cyber attack. Cyber attacks are a growing and evolving threat to your sensitive information, as attackers are using new methods offered by social engineering and artificial intelligence to bypass traditional security controls.

The importance of cyber security is increasing. Basically, our society is more dependent on technology than ever before and there is no sign that this trend will decline. Data leaks that could lead to identity theft are now being displayed on social media accounts. Sensitive information such as social security numbers, credit card details and bank account details are now stored on cloud storage services such as Drop box or Google Drive.

1.3 Types of cyber security
a)Network Security

Like app security, network security also uses a number of methods to prevent unauthorized network access. Network management and all IT teams continue to use a variety of security measures to monitor and control traffic.

Network developers regularly use Firewalls, encryption, dual authentication, new passwords, and other security policies to prevent unnecessary network intrusion.

b) IOT security

IOT or Internet of Things targeted at smart devices. Such devices are at high risk and if they become victims of data breaches, data loss will be significant. Powerful Wi-Fi encryption is required for IOT protection.

A VPN router is also important to protect the network of devices connected to the Internet. In addition to Wi-Fi protection and a VPN-enabled router, checking the device's default settings is also important.

c)Cloud Security

Cloud security is also a form of cyber security. It includes many software tools for data protection and monitoring within cloud applications. New security tools are constantly changing to better protect cloud data.

There are the latest cloud protection apps, among them the most common cloud protection apps are Cipher Cloud.

2.1 What is authenticity?

To put it simply, authentication is a process that ensures user identity and provides access to sensitive information.

Traditionally, this is done with a username and password. The user enters their username, which allows the system to verify their identity. This program is subject to (hopefully) only the user and the server do not know the password.

The website verification process works by comparing user information with that on file. If a match is found, the authentication process is complete, and that person may be subjected to an authorization process.

2.2 Types of authenticity

While password verification is the most common way to verify user identity, it is no closer to the most effective or secure method.

Think about it: anyone with your credentials can access your account without your permission, and the system will not block them. Many passwords are weak, and hacking techniques can be hacked in a short time.

1. Password-based authentication

Passwords are a standard way to authenticate. Passwords can be set with letters, numbers, or special characters. To protect yourself you need to create strong passwords that include a combination of all the options.

However, passwords are prone to cyber crime and malicious hacking. The average person has 25 different online accounts, but only 54% of users use different passwords for their accounts.

The fact is, there are more passwords to remember. As a result, many people prefer simplicity to safety. Most people use simple passwords instead of trusted passwords because they are easy to remember.

The fact is that passwords are very weak and not enough to protect online information. Hackers can easily guess user credentials by using every possible combination until they find a match.

2. Verification of multiple items

Multi-Factor Authentication (MFA) is a authentication method that requires two or more independent user identification methods. Examples include codes generated from a user's smart phone, Captcha testing, fingerprints, or face recognition.

MFA verification methods and technologies increase user confidence by adding multiple layers of security. MFA can be a good protection for many accounts. The certificate contains a digital user ID including a public key, and a digital signature of the certificate authority. Digital certificates guarantee public key ownership and are issued only by the certificate authority.

Users provide their digital certificates when they log in to the server. The server verifies the authenticity of the digital signature and certification authority. The server then uses cryptography to verify that the user has the appropriate private key associated with the certificate.

3. Proof of certification

Certificate authentication technology identifies users, devices or devices using digital certificates. A digital certificate is an electronic document based on the idea of a driver's license or passport.

The certificate contains the digital identity of the user including the public key, and the digital signature of the certificate authority. Digital certificates certify public key ownership and are issued only by the certificate authority.

Users provide their digital certificates when they log in to the server. The server verifies the digital signature authentication and certification authority. The server then uses cryptography to verify that the user has the appropriate private key associated with the certificate.

4. Biometric validation

Biometrics authentication is a security process that relies on a variety of individual biological features. Here are some of the key benefits of using biometric authentication technology. Biometric authentication can control physical access when installed on gates and doors. It can be easily compared to authorized features stored in a database. we can add biometric to your multi-factor authentication process.

These are used by consumers, governments and the private sector including airports, military bases, and national borders. Common methods of proving blood authenticity include.

4.1) Fingerprints - Match different fingerprints to each person. Today every day organizations use fingerprints to ensure the presence of employees. Some new types of fingers can also find vascular patterns on human fingers. Fingerprints are currently the most popular biometric technology for everyday consumers, although there are often their flaws.

4.2) Voice recognition - Looks at speaker speakers patterns for specific shapes and sounds A voice protection device usually relies on word-for-word identification, such as a password.

4.3) Face recognition - Similar to the various facial features of a person trying to gain access to an approved face stored in a database. Face recognition is inconsistent when comparing faces with different angles or comparing people who look alike, such as close relatives. Facial life technology prevents damage.

5. Verification based on tokens

Token-based authentication technology allows users to enter their credentials once and receive a separate encrypted string of random characters in exchange. You can then use the token to access protected systems instead of entering your personal information again. The digital token proves that you already have access to it. Use authentication cases based on tokens including the Restful API used by many agencies and customers. Example of Creating a digital banking account provides authentication token.

2.3Conclusions

Now a day's everyone connected with internet so its increases the chances of fraud. So Cyber security is in focus.

Cyber security or information technology security are the techniques of protecting computers, networks, programs and data from unauthorized access or attacks that are aimed for exploitation.

Authentication confirms that users are who they say they are. Authorization gives those users permission to access a resource. There are many methods we can use. Every organization is used Biometrics Method of security but its depends on usability of usage. Means from different methods of cyber security everyone or every organization use any methods depends on their requirement and usability. Face recognition is one of the cyber securities which can be implemented using python programming by using import the packages in python.

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ROLE OF SOCIAL MEDIA DURING THE COVID-19 ERA IN INDIA WITH SPECIAL REFERENCE TO AGRA

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ABSTRACT
Social media work as an information getting tool. At the Pandemic period it works well as a medium of exchange information at one place. In the first few months information are published about the pandemic (COVID-19) were rapidly uploaded and shared by people on social media and on the networking sites also. The main objective f the study is to elaborate the awareness and performance level of people about social media in Agra city. To carry out this study, an online questionnaire was prepared and conducted or filled in Agra, and a total of 60 social media users (respondents) were sampled.

Respondents are reported that social media has a significant impact for spreading information related to the COVID-19 panic in Agra, with a potential output as health issue, social issue, economic issue and others on social media such as YouTube, Facebook, Instagram and so on. YouTube and Facebook was the mostly powerful tool of social media for elaborate panic about the COVID-19 in Agra. This paper results shows that the majority of youths aged 18-25 years are awaring about social media. The impact of social media pandemic among people varies depending on gender, age, and level of education. Social media has played a key role in spreading information about the COVID-19 in Agra.

Keywords: Social media; COVID-19; Fake news, Mmisinformation; Pandemic, Awareness

INTRODUCTION
Severe acute respiratory syndrome coronavirus-2 (SARS-COV-2) is an international health disease. It is a massive issue related to health. During the pandemic at the time of lockdown social media is becoming the best stage or framework for getting knowledgeregarding any opinion, perceptions, and attitude towards different moment or health policy related to Covid-19. As of 22 Feb. 2021, an estimated 11 million people in India had been infected with the covid-19 virus, with about 157 thousand deaths. Social media had become a crucial role for spread communication for government, organizations, universities for getting information to the people at the time of the pandemic.Most of the studies are already used social media to identify the problem related to infectious and public perception, behavior, and attitudes. As information that isuploaded on social media by users themselves. Social Media become an effective tool for communicating people with each other at the time of Covid-19. Social Media was helpful for increase usage, access, and availability of data or knowledge during the pandemic. It plays an important role in the perception of the people, their decision-making, their attitude, and their behavior. Social media is a useful tool to share information and make the connection on three levels – at the individual level, at the professional level, at the business level.

Social media working as a professional public source of communicated. The study conclude that social media play a significant role for aware the public at the time of crisis. Moreover, study also express that it has a psychological effect, from the age of 18-25 are the adult generation, where 80% (n=48/60) were affected. People are gathering governmental information from social media.

REVIEW OF LITERATURE
Mian and Khan mentioned that there has been more and morein fake news and available information over a whole world about COVID-19, because of lack of information or faked things in the form of videa. As accordingly **Petric et.al** also express that "media is a platform that coverage most of the information related to the highlightes of COVID-19. It work as a unique medium of getting information , Correspondingly, due to the condition of stressful or panic during covid-19, Depoux and others determines that social media plays a role in three ways in the COVID-19 outbreak in several countries.

i. Factual information about Covid-19 were published on social media.

ii. Inaccurate news, Misinformation, and Fake information about Covid-19 pandemic were published on social media.

iii. Social media created or generated fear and panic related to Covid-19 over worldwide.

Modeling Framework

Social Media Platform (Conceptual Framework)
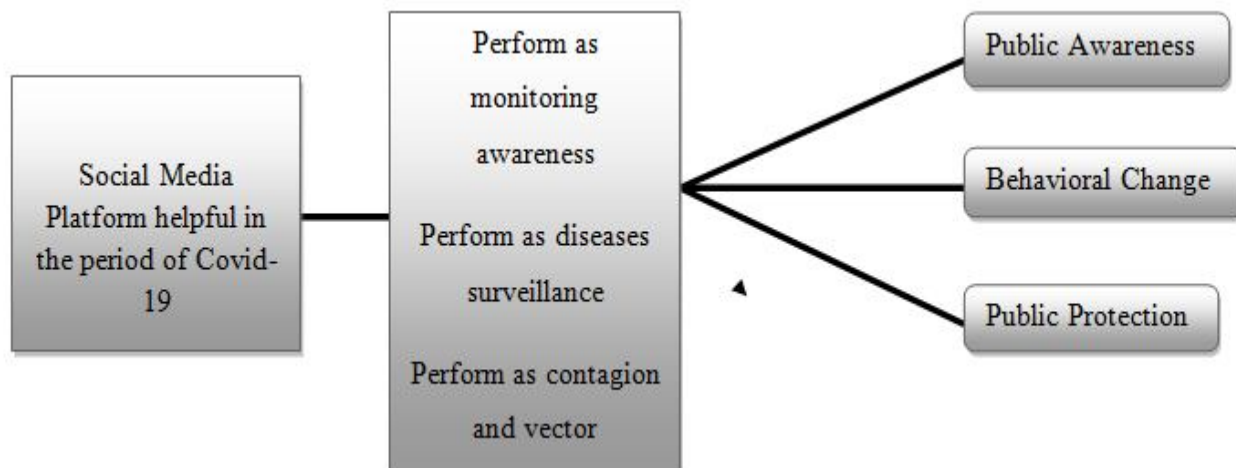
In the COVID 19 Pandemic Social Media played a vital role and acts as a medium of help. Social media monitored the awareness among people related to COVID 19 Pandemic, perform as disease surveillance, and performed as contagion and vector. like making people aware of symptoms, help near them, reach of financial help to needy people, protecting people by letting them know which area is much infected and where it is safe to go or not. Helping poor people by providing essential help to them like food, medicine. Social Media brought people together in virtual mode families and friends who were far away from each other and were unable to reach their home or meet to each other due to lockdown and infectious spread, people did a video call, share their work from home experience with each other, did financial help of each other, learn to cook new recipes and share their recipes too. People recreated their lost hobbies and talent through social media liking singing, dancing, cooking, painting, and many more, and become popular on social media platforms.Many people helped strangers through social media who needed help and were away from the reach of their families.

OBJECTIVES OF THE STUDY
- To study the performance level of social media during the covid-19 period.
- To analyze the status of social media during the pandemic in India

RESEARCH METHODOLOGY
The entire study on the impact of the role of social media during the covid-19 era is based on primary as well as secondary data. The study will focus on the impact of the pandemic on social media.

SOURCE OF DATA
Primary: The primary data will be collected to analyze the role of social media during the covid-19 period through a structured questionnaire.

Secondary: The secondary data will be collected to study the performance of social media in the covid-19 pandemic from the various record of the government, WHO, article, internet, magazines, research paper, books, and from the variously reported journal.

Study area: Agra

A total of 60 respondents has been considered as a sample population in the present stud

Findings of the study

A. GENDER 60 responses

Female	48.3%
Male	51.7%
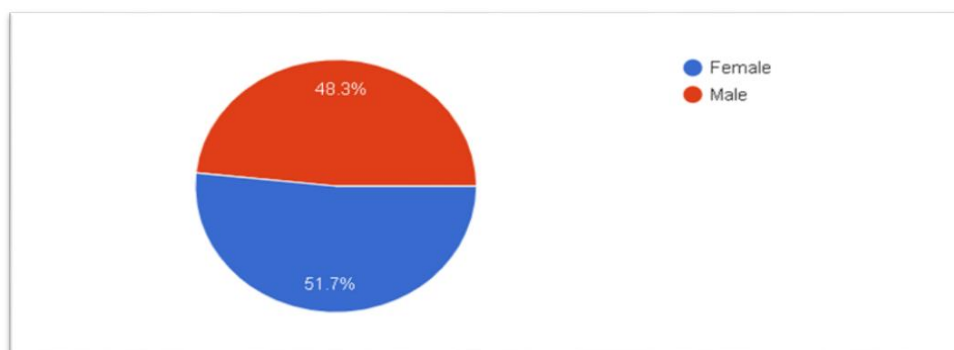
B. AGE (years) 60 responses

18-25	48
26-40	6
41-55	6
above 55	0
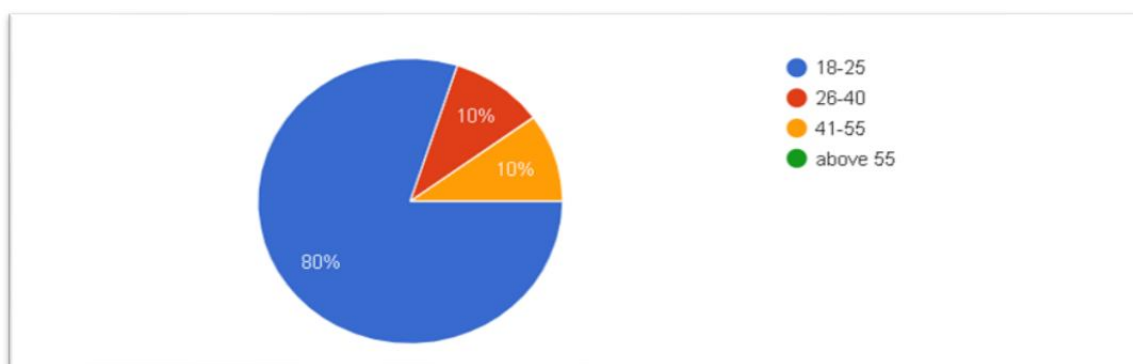
C. EDUCAT IONAL QUALIFICATION 60 responses
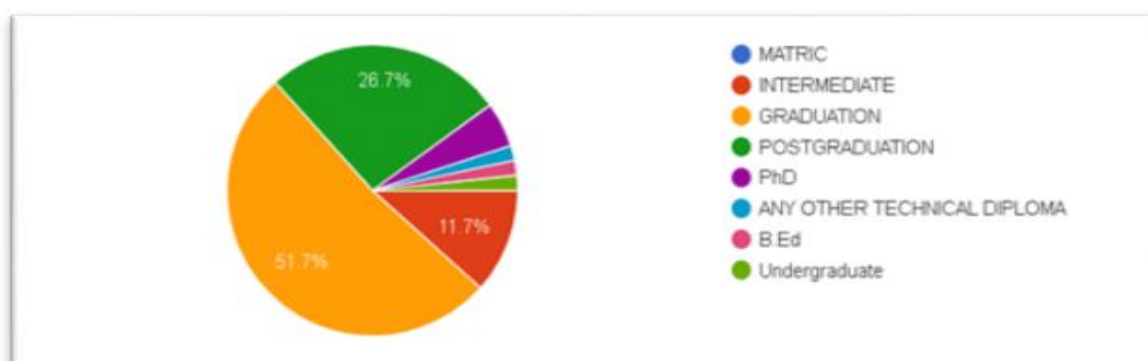
MATRIC	0
INTERMEDIATE	7
GRADUATION	31
POSTGRADUATION	16
PhD	3
ANY OTHER TECHNICAL DIPLOMA	1
B.ED	1
Undergraduate	1

Graph 1 indicates 60 participants, of which (48.3%) were male and (51.7%) were female. Also, most of the participants (48%) were aged 18-25.years. (6%) only 26-55. None of the respondents comes under the age of above 55. The participants are divided into eight categories based on their qualifications. The most common qualification was a Bachelor degree (31%). While the least common was a diploma and B.ED was (1%).

1. **Which social media platform do you prefer to get news and information about the COVID 19 pandemic?**

60 responses

Value	Count
Facebook	29
Instagram	24
Twitter	17
Snapchat	1
Youtube	33
Linkedin	2
Whatsapp	25
Telegram	7
Skype	0
Pinterest	3

The first question in this study asked participants "Which social media platform do you use to get news and information about COVID-19?" The majority of participants (55%) used YouTube to acquire information about COVID-19. The platforms Skype, Pinterest, Snapchat, and Linkedin were among the lowest used for news and information. Facebook is in the second place because it is the popular social media platform used in Agra.
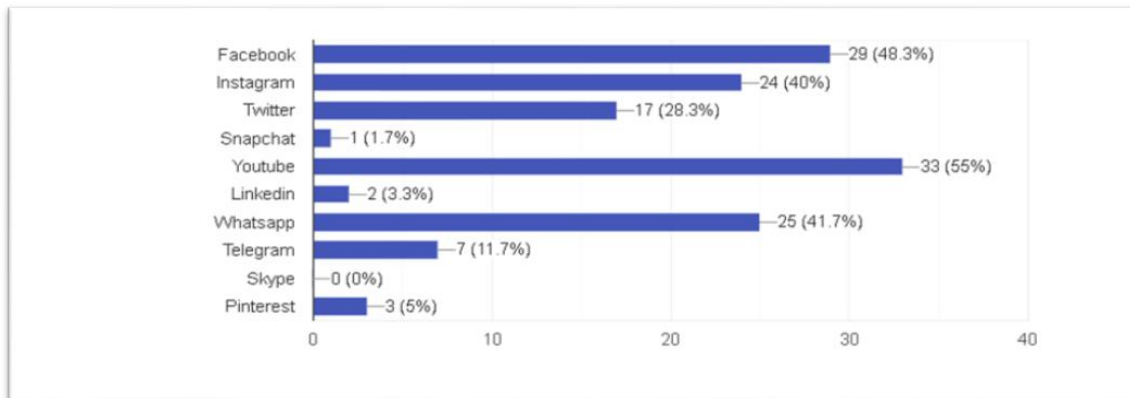
2. **Which platform of social media did help you to know about the initiative taken by the government regarding COVID 19? 60 responses**

Value	Count
Facebook	24
Instagram	21
Twitter	13
Snapchat	1
Youtube	30
Linkedin	3
Whatsapp	21
Telegram	6
Skype	0
Pinterest	1

The second question is "Which platform of social media did help you to know about the initiative taken by the government regarding COVID 19?" The highest proportion of participants getting information related to government initiatives (30, 50%)., had heard, seen, or read health news (COVID-19), while the lowest proportion of participants (1.7%) had heard, seen, or read technology news.
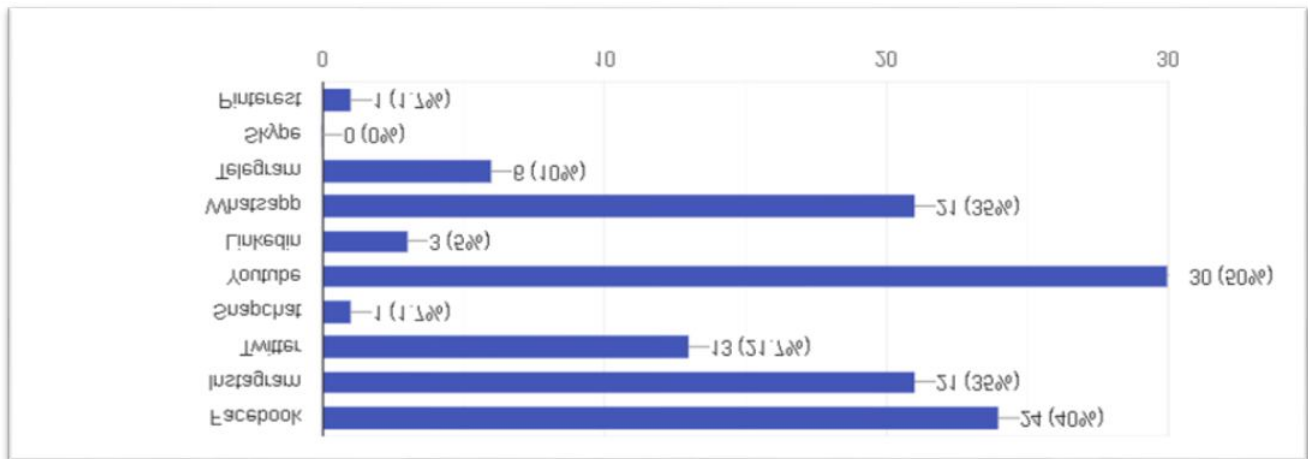
3.   Which news topic have you primarily heard /read on social media during lockdown due to COVID 19?

60 responses

Value	Count
Social News	32
Health News	48
Technology News	7
Economic News	21
Sports News	3
Miscellaneous News	13
Political News	16
Cultural News	5

The third question is "Which news topic has you primarily heard /read on social media during lockdown due to COVID 19?"The highest proportion of participants (n-48,80%) had heard, seen, or read health news (COVID-19), while the lowest proportion of participants had heard, seen, or read technology news (n=3, 0.5%). The survey result shows of the 60 participants show that the COVID-19 health crisis is affecting the type of news topics mostly published on social media.
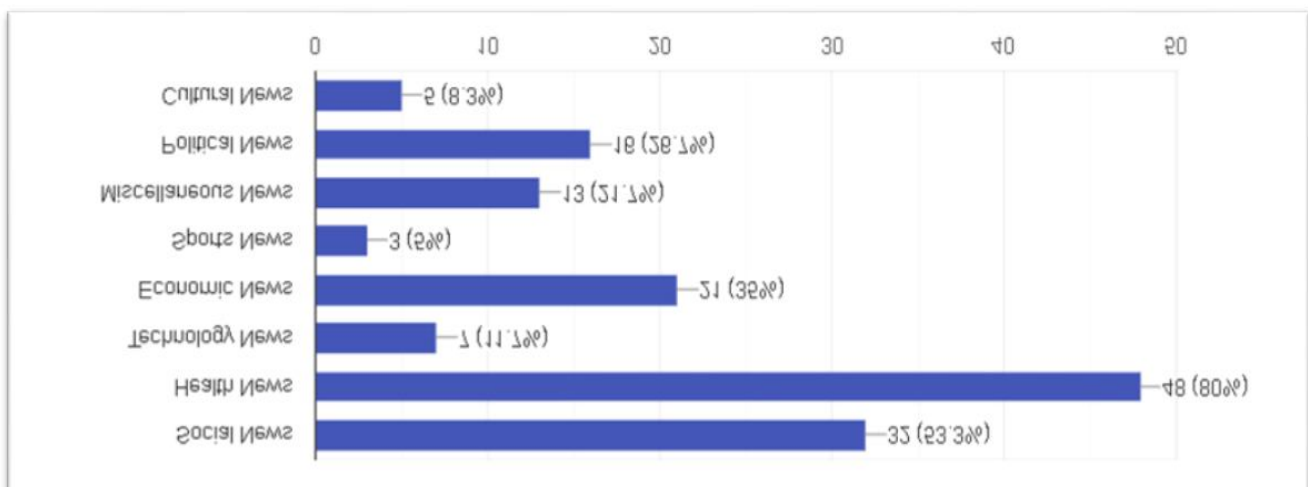
4. Do you think that publishing more news related to COVID 19 on social media has spread panic among people?60 responses

Strongly Agree	15
Agree	23
Neutral	14
Disagree	6
Strongly Disagree	2
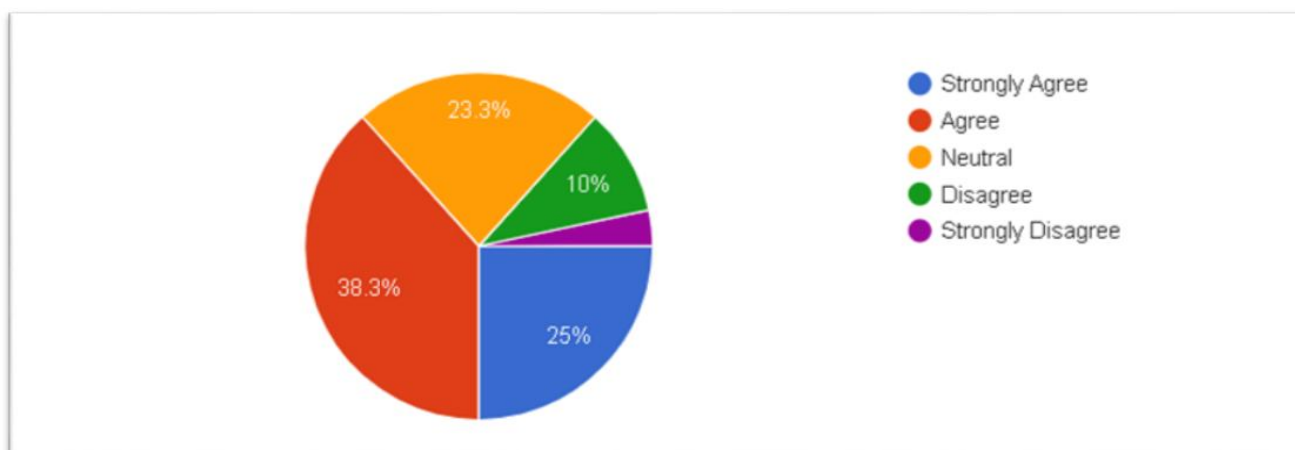
5. Do you think the level of Indian pages, groups, and accounts on social media covering COVID 19 news is sufficient? 60 responses

Strongly Agree	2
Agree	30
Neutral	12
Disagree	14
StronglyDisagree	2
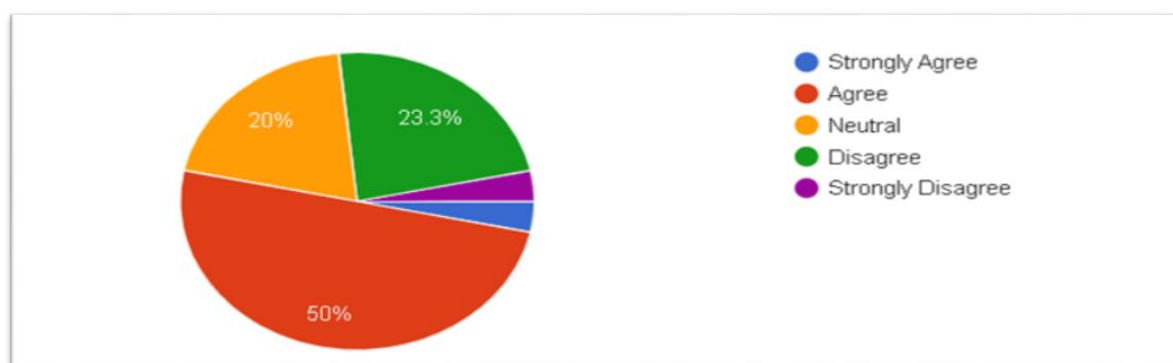
Questions 4 and 5 results people agree (23%) with the publishing more news related to COVID 19 on social media has spread panic among people. Most people are aware of social media at the time of the pandemic. Respondents are agreeing (30%) with the level of pages, accounts, and groups on social media covering social media news is sufficient.

6. Have you posted any News or Information related to COVID 19 on Social Media? 60 responses

Yes	25
No	35
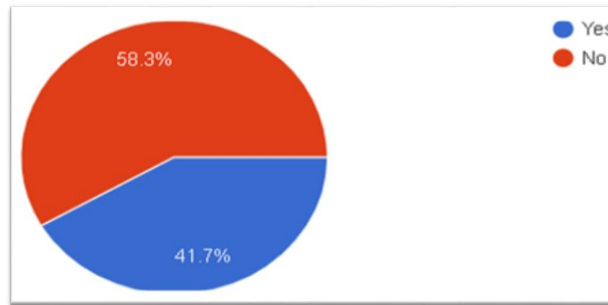
Question 6 is "Have you posted any News or Information related to COVID 19 on Social Media?" so 58.3%(35)respondents did not post any news or information related to COVID 19 on social media whereas 41.7%(25) respondents have been posted.

7. Do you think Social Media was helpful during COVID 19 Pandemic? 60 responses

Yes	48
No	12
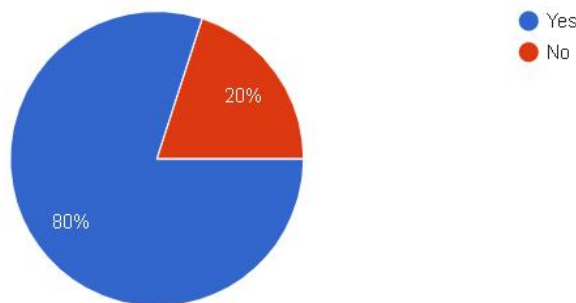
Questions 7 results show that, "Respondents say yes social media is helpful to know the awareness level related to world incidents, in which some issues are faked but most of the issues are related to actual news, people are also mentally aware by social media. The results show that people from different generations are following social media. So social media provided full information regarding the covid-19 effect and precautions of our country as well as other countries.As some social media help for spreading knowledge related to covid-19 precautions and symptoms. This is also a platform for getting information about cases and event updates during the pandemic. Social media play a vital role in the period of lockdown when most people are suffering from different kinds of problems such as- food, shelter, transport, and medical. It was the only source that helps to connect with family and friends. This will also teach us how to prepare ourselves for the fight against covid-19. Social media is a source for getting different sector information or awareness in a single place.

9. **Do you heard about any case related to the COVID 19 pandemic in which social media played a vital role?60 responses**

Yes	23
No	37
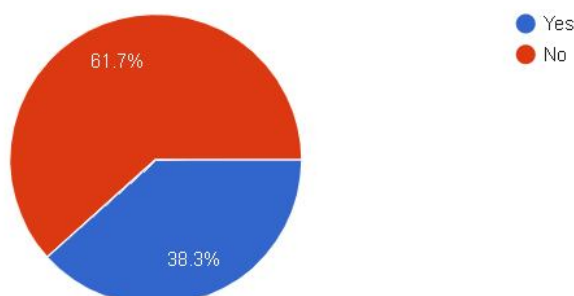
Questions 8 results show that people have seen many more cases related to migrant laborer and daily wage earners through social media and also aware about most of the cases related to military or arms forces and also aware with the scenario of other countries those faced corona diseases. YouTube, Facebook, and Whatsapp are helpful tools of social media for the upliftment of information related to covid-10.

9. Did social media make you aware of the symptoms of COVID 19? 60 responses

Yes	55
No	5
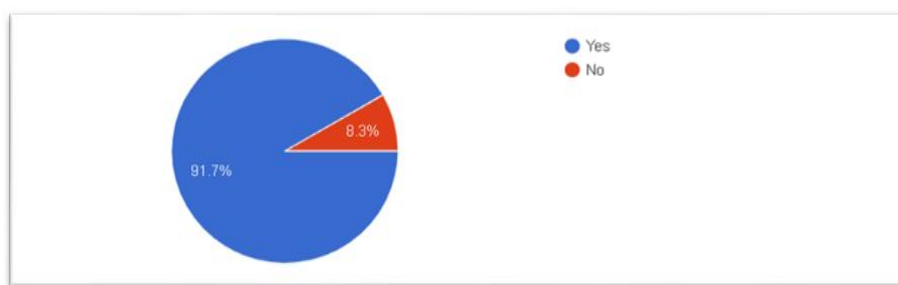
10. Did social media bring people together during lockdown due to COVID 19? 60 responses

Strongly disagree	5
Disagree	4
Neutral	15
Agree	25
Strongly agree	11
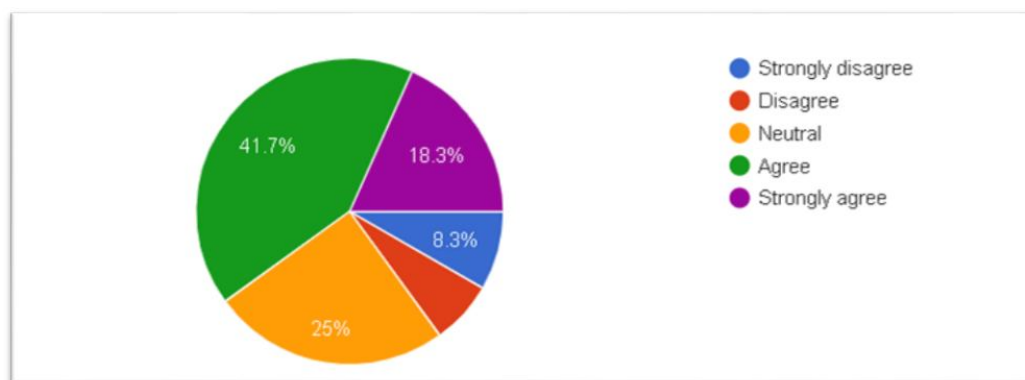
Question 10 results At the time of lockdown people are agree with the view that plople connect strongly witheach other specially their friends and relatives as well as their well known person. During lockdown social media is very helpful for communicating with one to another.

CONCLUSIONS

As social media play an important role for spreading the awareness level regarding knowledge related to covid-19. Since younger generation are consuming more information from social media and then share with their family and friends. Universities are ideal one to design or organize courses, symposiums and conferences that can help students and teacher discus how to search, find, and evaluate information related to health in the case of a pandemic covid-19. In a concluding manner or based on survey YouTube and Facebook has a major media platform of spreading information about pandemic.

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A STUDY ON PROMOTING SMALL SCALE BUSINESS WITH ONLINE TOOLS

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ABSTRACT

Small business is a kind of initiative that develops goods and services on a small order. These enterprises are work for the economic development of a country. To start these kinds of businesses will take very little investment by the owner but promoting these businesses is a difficult task to the owners in the olden days. Now all small business owners are thinking smart to promote their business more cheaply. This only happens with the support of online tools. Online tools mean nothing but Social Media, Apps, Business Software, etc. Present we are living in the social media-driven climate, small enterprise proprietors must realize the need of YouTube, Facebook, Twitter, Whatsapp, Instagram, functions to make policies for promoting their business by using social media for accumulating their enterprise. But, several small business proprietors do not possess a strategy when they introduced their business by using social media. The motive of this study is to recognize how the proprietors of a small business are promoting their enterprise by employing social media tools to grow the business, and how they handle consumers.

Keywords – Small Business, Promotion, Online Tools, Social Media, Business Softwares.

I. INTRODUCTION

Small and Medium enterprises are contributing 37.54% GDP and this chart is predicted to reach 50%. According to the FICCI statement, SMEs have been generating approximately 11.10 crore jobs across the nation (National Sample Survey 2015-16). The SMEs are rightly recognized as India's "Backbone of Socio-Economic Development". SME loans are availing SME funding has become easier to start this Scale of business over the years. The country has witnessed remarkable development in this sector. People are ready to start their own businesses; for that, the government is providing various small business schemes and giving a further boost to this segment. Small and medium businesses originate 40% of the total export from India and also it was generating 45% of the total industrial output. Small scale business units are working as deciding factors in reducing unemployment, eliminating poverty. Small Scale businesses can be started with minimum investment and financing is easily available to these enterprises. But the main problems of these industries are to promoting the business; generally, most of the small businesses are windup by lack of awareness to promote their business in new routes. Present day's the Social media tools were playing a significant role in promoting business and building good relations with customers and consumers. Today's technology acts as a real-time vehicle of information to the customer for immediate, reliable, and secures access to company information whenever and wherever the customer needs. The main problem is many small scale business owners are struggling to use social media tools; as a result, they are missing various countless opportunities without having a basic understanding of the advantages of social media. But some small business owners have overcome this situation by strategically using online tools and which gives an extraordinary result to them for getting profits and make customers to their businesses.

II. BENEFITS TO PROMOTING SMALL BUSINESS WITH ONLINE TOOLS:

Online business tools are employed to promoting the goods and services of Small Scale businesses with the help of the Internet. Some social media tools are Successful on online advertising, online sales and engage customers to increases return on investment to the owners.

Here are some of the motives to promote small scale businesses online:

A. Low investment

Promoting online as against to setting up an offline business requires little to no investment. There are no shops to be charged or extra labor required. It is very cheaper to promote small-scale businesses by taking the platform of social media and used to earn quick returns.

B. Builds lasting relationships

As long as the business has an online presence, the customers will always find that. With the help of online tools, business owners can easily get customer contact details to build lasting relationships. The owners of the business may send product-related information to customers such as special discounts, offers, free gifts, services, etc. It was employed to retain the customers to our products.

C. More visibility to the customers

If more advertisement in online; the customers can filter and search for products more than the offline stores. So promoting goods and services in online will help small business products are more observable and convenient to customers which increase the opportunities of earning more revenue. It is a beneficial way to be discoverable online tools to navigate more value for small businesses.

D. Promoting Worldwide

Online aids are facilitating businesses with a deep source of customers for their goods and services. The advances of internet used to, all types of businesses, from small and medium enterprises to multinationals, have access to millions of forthcoming customers. Online advertisements are seen by many customers through various channels recommended by the owners. When the greater number of the users visiting their page, with that they can make higher sales.

E. 24 hours business every day

With the help of online commerce tools, one will be promoting their business 24 hours every day. Similarly, proprietors will not worry about staff wages or store rents. Moreover, the time differences in the various parts of the world will not influence their campaigns. Target customers can approach with website and they can pay for goods and services irrespective of the schedule or fear of closing hours.

F. Available at Low cost

In any business, the cost is a crucial component that must be evaluated as it affects the firm's budget. Businesses can forgo the high cost of marketing that is related to traditional aspects of advertisement by adopting online marketing. Online ads are way economical than television and radio ads and developing a good approach. It is one of the best ways to sell effectively by owners in online.

G. Get direct customer feedback

If owners manufacture unique products and need feedback to improve, online promoting is a great way to collect feedback. For an offline store customers rarely come back and share their feedback. If they don't like the product, they may never come back again. However, it is slightly different when sell is in online. An online customer will share detailed feedback on the product quality and other product specifications. This feedback can help owners to better understand their products and meet the bar of customer expectations.

III. HOW TO PROMOTE SMALL BUSINESS WITH ONLINE TOOLS:

The following methods in both the short and long term business for promoting business pages on online.

A. Use business listing sites like Google Local and Yahoo Local.

Small Scale Business mostly concentrates on local sales and they are always looking to attract nearby customers on offering some professional services. Small businesses may not reach all local customers at right time and also the customers are struggling to find the business if we are unknown to them. Some of the online tools may act to reduce customer confusion by listing local business sites broadly Google Local and Yahoo Local. These professional platforms are working to provide business information and public details such as business name, address and location of the business, and also working hours of the stores, etc. These sites are providing for Accurate, updated information. Local business owners may try to update their information on these sites they will get a better result in local markets.

B. Post photos and videos with relevant hashtags on Whats App, Pinterest, and Instagram.

Present situation the people are highly utilizing social media apps and sites such as Whatsapp, Instagram, Pinterest, Telegram, Facebook, etc. These sites are mostly concentrating on posting photos and videos and also documents on online by users. So employing related hash-tags and captions appropriately and created designed pictures of the business and detailed broachers of business will pay an effortless result to the firm when it is uploaded on these sites. Once we upload our business photos and videos on these sites which will use as a cheaper promoting tool.

C. Upload useful video tutorials and adds on YouTube.

Present days You Tube is the biggest video platform to the society. This medium may also using as a marketing tool to the business on online. If small business owners are making video tutorials and promoting ads in this platform will reach to a wide area of people. The business video tutorials are giving a suggestion to the customer prospects to easily understand about product features and uses. So Youtube Tutorials are one of the main sources to the present upgraded minds.

D. Improve a relationship with customers through email marketing.

Email marketing is one of the modern online tools which help to get good prospects to small-scale businesses. It takes high patience to attain targets with email marketing. When customers are loyal to the product or not the business owners need to send greetings, information, and brochure to the customers. This will help to get good business prospects. Then, improve a connection with that buyer through campaigns using a network like Addweber, Get Response, Constant Contact, etc.

E. Collaborating with leading online store services.

This is the new innovative thought created by amazon services. If you are a small business seller you can collaborate with amazon service they will promote your products to the amazon watchers so there may be a chance to get more sales with comparing with another web tools.

V. CONCLUSION

Online promoting is a kind of tool to achieve better position to the small businesses in the market. It is the easiest way to promote the products and services to the needy consumers with the help of internet. This is the time to change the small scale business in modern way by using of online advances. So use the online aides to get better result in promotion, sale, and customer relationship.

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CYBER SECURITY: AN OVERVIEW ON ASPECTS, THE MODES OF ALGORITHM AND THE NUMBER THEORY USED IN CRYPTOGRAPHY

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ABSTRACT

With advance of technology there is increase in demands of sophisticated and soft transactions in terms of monitory and other any kind of data. Various software, which can be deployed in the difficult environment where physical human presence is not possible for every time and in the pandemic epidemic situation. These adversities give us an opportunity to implement the robust systems for generating successful all types of transactions like monitory, other data with proper consist of sensory equipment, computation and communication units. These modules are called as nodes. Number of nodes can be connected in a network to have infrastructure which communicates with each other and data from all the nodes can be collected at some central station and then monitored for various applications. The current trend is a wireless connection, is more suitable option as wired communication is bit tedious and messy. These networks are called as wireless sensor networks and can be used for observation purpose and to generate reaction in particular environment. These are very low cost systems for various applications like biomedical, automobile, building management, surveillance etc.

These sensor networks are possible due to communicate between multiple similar or dissimilar network devices and here the major constraint is a security!

In this paper we have given brief description of security and cryptography used in wired and wireless networks and their various applications. We will discuss the concept of security, need of security with aspects of security and cryptography, different attacks, algorithms, modes of algorithms, and an idea about number theory related to cryptography systems used for data transaction of wired and wireless networks. We will conclude the paper with advantages and limitations of these algorithms.

Keywords: Wired and Wireless networks, Transposition and substitution, Stream and block cipher, Algorithm modes, protocols, number theory.

1 INTRODUCTION

Any computer network can be considered as wired or wireless network if there is a wire for data connection between two nodes or if wireless, air and EM-waves are used for the same. When we use the wired or wireless communication for communicating between different machines, connected in a network, security should be provided. At the time of transaction data should be safe and free from all types of threat. An attacker is an opponent and an attackers may stop your services or change the data, or enter to your system surreptitiously by successfully calculating the vulnerabilities of the system. The data of the users are really very important and only authenticate users can get the services of internet in network as well as in the transaction of data between two authenticate users, the interference of an opponents should be stopped. To get the data, sent by the sender, authorised receiver, should give check the identity in terms of ID and password with now days, OPTs. The used protocols should protect the system as well as the channel for secure data transaction.

Online purchasing of the various items and paying the money online, is a routine and the lifestyle nowadays in other words we can say it is a current trend of online purchasing. Here, the most crucial factor is security! Because, in transaction there may be ID, bank accounts or other bank details, password or OTPs or other crucial information. By considering the activities of an attackers, some security measures should be taken to prevent those activities. An attackers check the system's vulnerabilities to enter into the system and sniff the data or for any other malicious activities.

Some major aspects for security is 'integrity', 'confidentiality', 'authenticity', 'non-repudiation', 'availability', and 'accessibility'. Integrity gives the assurance that no third party has seen the data. Confidentiality gives the assurance that no third party has changed the data. Authenticity allows the authenticate user to access the data and it is the process to check the credentials of the user in the database for the identity. Non-repudiation is the assurance that sender cannot deny that sender has sent the message to receiver. Availability aspect gives the services to authenticate user about internet. Accessibility is the aspect gives the access of the data to authenticate user.

An attacker is an opponent or who violates the security policies by checking the vulnerabilities of the system, entered to the system and may trespass or modify the data. If we classify the types of attack, that can be as follows

TYPES OF ATTACKS

A. A general View

a. **Criminal Attack**: Main aim of attacker is financial gain by attacking on computer system. E.g. fraud, scams, destruction, identity theft, intellectual property theft, brand theft.

b. **Publicity Attack**: Attackers want to see their names on media. And one form of Publicity Attack is to damage the Web Pages of a site by an attack.

c. **Legal Attack**: These attacks are quite unique. Here the attacker tries to make the judge or jury doubtful of the security of a computer system.

B. A technical View

a. **Interception** (*Concerned with Confidentiality*): An unauthorized party has gained access to a resource. The party may be a person, a piece of program code, or any computer system.

b. **Fabrication** (*Concerned with Authentication*): This involves creation of illegal objects on a computer system. E.g. an attacker may add **fake records** in database.

c. **Modification** (*Concerned with Integrity*): The attacker may modify the values in a database.

d. **Interruption** (*Concerned with Availability*): The resource becomes unavailable, lost, or unusable. E.g. problems to a hardware device, or operating system components.

C. Main Attack:

a. **Passive Attack**: Passive Attack do not involve any modification to the contents of an original message.

i. **Release of Message Contents**: The Contents of the message are released against to our wish to someone else.

ii. **Traffic Analysis**: By passing many message to the channel, attackers try to figure out the similarities to find the pattern, which is the clue regarding the communication.

b. **Active Attack**: The contents of the original message are modified in some way.

i. **Masquerade**: When an unauthorized entity pretends to be other entity.

ii. **Modifications**:

1. **Replay Attack**: A user captures a sequence of events, or some data units, and resends them.

2. **Alteration**: It involves some changes to the original message.

iii. **Denial of Services (DoS)**: This attack prevents legitimate users from accessing some services, which they are eligible for.

D. Practical Side of Attacks:

a. **Application Level Attack**: These attacks happen at an application level in the sense that the attacker attempts to access modify or prevent access to information of a particular application, or the application itself.

b. **Network Level Attack**: this attack generally, aims at reducing the capabilities of a network by a no. of possible means. These attacks generally make an attempt to either slow down, or completely halt.

E. Attacks on Wireless Network:

a. **Passive Attack**: In passive attacks, attackers listening to the traffic instead of attempting to launch an offensive attack on victim. Passive attacks are very difficult to detect, and very easy to launch.

b. **Active Attack**: Once and attacker become successful in passive attack then the attackers try to convert the attack into an active attack. The nature of wireless active attack is similar to wired active attack. And to prevent unauthorized attack, MAC filtering technique is used.

c. **Person in the middle Attack**: Here, the attacker plays a different role than who that person really is. All wireless networks use some of Access Point (AP), which is usually a wireless router that provides network connectivity. In a person in the middle wireless attack, the attacker sets up her own AP. Means the attacker poses as if she owns the underlying wireless network. This is called as a rouge AP. For launching such an attack, **the attacker usually makes use of a laptop that has two wireless network interface cards. One of these is used to create a rouge AP. The other card is used connect wirelessly to the original network.** When a genuine user sends a request over the wireless network, it does not go to the AP of the original network. Instead, it comes to the rouge AP set up by the attacker.

d. **Jamming Attack**: Jamming attack is a special type of DoS attack in the context of wireless networks. **The idea is to disrupt the working of the wireless network by introducing wireless data frames.** These rouge data frames sent by the attacker have no purpose beyond just wastefully **occupying the bandwidth** of the wireless network or colliding with the genuine data frames to cause disruption.

F. Specific Attack:

a. **Sniffing and Spoofing**: **Packet sniffing is a passive attack** on an ongoing conversation. An attacker need to hijack a conversation But instead can **simply observe packets** as they passed by. And in **Packet Spoofing, an attacker sends packets with an incorrect source address**. When this happens the receiver would inadvertently send replies back to this forged address i.e. spoofed address.

b. **Phishing**: Here, An attacker setup fake websites, which look like real web sites. It is very easy to do, since creating Web Pages involves relatively simple technologies such as HTML, JavaScript, Cascading Style Sheets, etc.

c. **Pharming (DNS Spoofing)**: it is known as DNS poisoning. DNS identifies the Websites with human readable names like www.google.com, and computers treat it with IP Address.

2 BRIEF OVERVIEW OF TECHNOLOGY

The technology about data encoding is used in cryptography for the security purpose, means the aspects of security should analyse and maintain throughout the transactions. Various technologies and algorithms based on these technologies are working in the cryptography. Cryptography is a scientific art that either hide the code or change the code of a plain text into the non-readable form, through the sender and only receiver can decode the message into the plain text or in readable form.

Transposition and Substitution these two techniques are used in cryptography, the meaning of the same is changing the place of plain text is a transposition and instead of a plain text character replace with different character is known as substitution. Simple columnar and rail-fence are the applications of substitution technique and Playfair cipher using 5x5 matrix of alphabets, Caesar cipher, Mono alphabet, Poly alphabet, Vernam cipher are the applications of transposition technique.
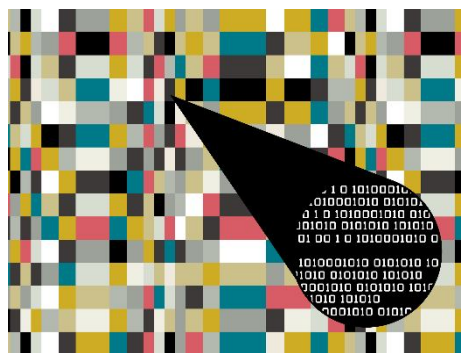
Figure-1 Steganography

Steganography is also a technique and here the data can be hidden using the non-secret image or message in order to avoid detection as show in figue-1. Key range and key size is also a technique and here, Key Range is total number of keys from smallest to largest available key. Key size is measured in bits and is represented using binary number system.

To change the code of the form of plain text, single or multiple keys are used, the key is also having two types one is symmetric key and asymmetric key. By applying single key to encode or to encrypt the plain text and to decrypt or to decode the cipher text to plain text, can be done. With applying different keys as private key and public key for encryption and decryption, then it is called as an asymmetric key. The best example of symmetric

key is IDEA, AES, and DES etc. and for the asymmetric key, examples are RSA, Diffie Hellman's algorithm. Here, public key is known to all and private keys are known to only users. Even sender's private key does not known to receiver and vice versa. In encryption process, the keys are been exchanged. In Deffie Hellman's algorithm, the private key and the public key are use, i.e. asymmetric key but after exchanging the keys, the final key is the same i.e. symmetric key.

Stream cipher and Block cipher are used for the processing to encrypt the text. As shown in figure-2, in stream cipher, one byte is to be taken for the encryption process at a time, in other word, it is an encryption, processed byte by byte of the plain text.

In text format	In binary format	
Blue Sky	010111001	Plain Text
+	100101011	XOR Operation with key
ZTU91^%D	110010010	Cipher Text
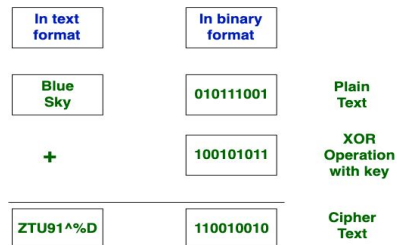
Figure-2 Stream cipher   Figure-3 Block cipher
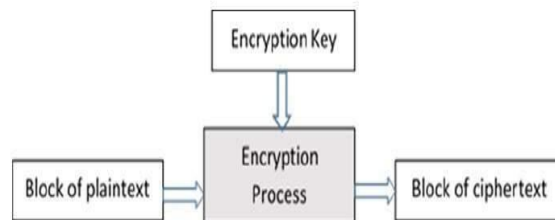
Whereas shown in figure-2, a Block cipher uses either 64 bits or more than 64 bits. While stream cipher uses 8 bits. If the difference between block cipher and stream cipher is analyse then, the complexity of block cipher is simple. While stream cipher is more complex. Block cipher Uses confusion[1] as well as diffusion[2]. While stream cipher uses only confusion. In block cipher, reverse encrypted text is hard. While in stream cipher, reverse encrypted text is easy. The algorithm modes which are used in block cipher are: ECB (Electronic Code Book) and CBC (Cipher Block Chaining). The algorithm modes which are used in stream cipher are: CFB (Cipher Feedback) and OFB (Output Feedback). Block cipher works on transposition techniques like Caesar cipher, PolyGram substitution cipher, etc. While stream cipher works on substitution techniques like rail-fence technique, columnar transposition technique, etc. Block cipher is slow as compared to stream cipher. While stream cipher is fast in comparison to block cipher. The algorithms are based on either stream cipher or block cipher.

3   DIFFERENT TYPES OF ALGORITHM MODES

As earlier we have discussed about block cipher and stream cipher to encrypt the plain text, and the algorithm used for an encryption is dividing into two categories based on block cipher and stream cipher. In Block cipher, every block size is fixed for the input. Various modes are used in algorithm i.e. ECB (Electronic Code Book), CBC (Cipher Block Chaining), CFB (Cipher Feedback), OFB (Output Feedback). ECB and CBC are the modes, working on block cipher whereas CFB and OFB are working on block cipher but acting as stream cipher.

In ECB, fixed length of a plain text blocks are encrypting with the key and in the output cipher text blocks of the same size will be generated, so it is a simple mode of algorithm. In CBC, IV is initialization Vector has no special meaning and kept to be secret. This is only one time used for the first block and it is using XOR operation with the first block of plain text, after this the key will be encrypted to that block and cipher block will be generated. This ciphered block is become IV i.e. initialization vector for next block and so on the operations will be performed. In CFB, IV i.e. initialization vector will be generated and using the key it will be encrypted first later this operation, algorithm take leftmost 8 bits and apply XOR operation on plain text j bits. This ciphered block will be getting shifted through shift register and the same operations will be executing for further blocks. As we have already discussed about CFB mode and in CFB ciphered text j bits we are shifting and using as an IV, by making small change instead of taking ciphered text j bits to next block as an IV, the encrypted block of first time IV and the key, taking just leftmost 8 bits as an IV for the next block, in OFB mode and other operations are similar to CFB.

1. **Confusion** refers to making the relationship between the cipher text and the symmetric key as complex and involved as possible.

2. **Diffusion** refers to dissipating the statistical structure of plaintext over the bulk of cipher text.

4   PROTOCOLS

Protocols are used in networking for data transmission, security, connectivity etc., as protocols are the set of rules used for particular operations, operation may be the data transmission over the channel, to make the channel secured etc. various protocols are available based on OSI model i.e. Open System Interconnection

model. As it is a communication protocol, it takes the responsibilities in synchronization of the data over the channel and the connectivity even in collision control.

Various layers of OSI model is Physical Layer, Data Link Layer, Network Layer, Transport Layer, Session Layer, Presentation Layer, Application Layer. Here the study of these layers suggest different protocol suits. TCP is Transmission Control Protocol and UDP is User Datagram Protocol, both protocols reside in the transport layer. The application of TCP is for transmission the data securely and maintain the integrity. UDP (User Datagram Protocol) is a communications protocol that is primarily used for establishing low-latency and loss-tolerating connections between applications on the internet.

SSL is Secure Socket Layer and the main role of SSL is to secure the session with the user's browser and secure the transaction from secret to browser. For establishing this protocol it requires SSL certificate. Four sub-protocols are the components of SSL protocol, those are alert protocol, handshake protocol, change cipher spec protocol, SSL record protocol, and every sub-protocol is having their different significant role by concerning the security. SSL record protocol provides two services those are confidentiality and message integrity, this SSL record application data is divided into fragments which then compressed and encrypted MAC generated by SHA[3] and MD5[4]. The SSL Handshake Protocol uses the SSL Record Protocol to exchange a series of messages between an SSL-enabled server and an SSL-enabled client when they first establish an SSL connection. Handshake Protocol is used to establish sessions. This protocol allow client and server to authenticate each other by sending a series of messages to each other. Change-cipher spec protocol uses SSL record protocol. Unless Handshake Protocol is completed, the SSL record Output will be in pending state. After handshake protocol the Pending state is converted into Current state.

Change-cipher protocol consists of single message which is 1 byte in length and can have only one value. This protocol purpose is to cause the pending state to be copied into current state. In alert protocol, the mechanism, used in SSL to inform the other end, of any irregularity or failure (Errors) in authentication, is called as Alert Protocol in SSL. The primary job of the Alert Protocol in SSL is to inform the other end about the issues (if any), in the current session. This protocol is used to convey SSL-related alerts to the peer entity. Each message in this protocol contain 2 bytes.

IP-Sec is an IP-Security, a group of protocols that are used together to set up encrypted connections between devices. It helps keep data sent over public networks secure. IPsec is often used to set up VPNs, and it works by encrypting IP packets, along with authenticating the source where the packets come from., IP-Sec is having three sub-components, ESP (Encapsulating Security Payload), AH (Authentication Header) and IKE (Internet Key Exchange). IP-Sec operates on tunnel mode or transport mode. It provides data integrity, encryption, authentication and anti-replay. It also provides authentication for payload.

3 SHA is Secure Hash Algorithm use for message digest,

4 MD5 is Message Digest5 is use in cryptography and message digest is one technique in security for data the integrity

5   NUMBER THEORY USED IN CRYPTOGRAPHY

Why Number Theory? What is the use of Number Theory in cryptography? Number Theory is a branch of mathematics and it is devoted for the study of set of positive integers and its valued functions. The study of finding the GCD i.e. Greatest Common Divisor, is useful to generate the key for encryption and decryption purpose.

Euclidean's algorithm helps to find the GCD and time estimates for doing arithmetic divisibility. Eular's phi functions, Fermat's Little Theorem, Chinese Reminder Theorem, Applications to factoring, finite fields, quadratic residues and reciprocity: Quadratic residues, Legendre symbol, Jacobi Symbol. These are the mathematical magic used for encryption and decryption purpose. RSA is an algorithm where very large prime numbers are used for finding the key. Deffie Hellman's algorithm is also using two prime numbers which are publically known as well as two prime numbers for the user's private key. Here the keys are being exchanged among two users who are sender and receiver.

For finding decryption, the mathematical solution has to find the number of ways to decrypt the plain text message. So the solution should be one and only the one to get correct congruence and finds the factorization of that prime numbers.

Primarily Testing, Legendre and Jacobi Symbols, The Solovay-Strassen Algorithm, The Miller-Rabin Algorithm, The pollard p-1 Algorithm, Dixon's Random Squares Algorithm are the solution for finding the factors of prime numbers, to get the solution.

6   CONCLUSION

As we have discussed in this paper, basics of wireless sensor networks and wired networks are very useful for data transmission. At the end of reception, data must be securely reached, and so link analysis data encryption and decryption mechanism should use properly and very carefully link should be established.

So various techniques like transposition and substitution, block cipher and stream cipher as well as various modes of algorithm are very helpful to protect the data. For the security, major aspects like confidentiality, integrity, non-repudiation, availability, authenticity are properly scrutinized, before and after transmission.

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FARM BILL 2020: THE REALITY PROS AND CONS OF NEW AGRICULTURAL BILL

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ABSTRACT

Recently Indian government passed three farm bills in Lok Sabha on 17 September 2020 and in Rajya Sabha on 20 September 2020. The president of India gave his official agreement on 27 September 2020. Immediately after this, Indian farmers mainly from Haryana and Punjab region started protest against the farm laws. Many agricultural experts from different part of country and abroad including US government have expressed their views in favor of farm laws and supported the Indian government but few farmer unions, traders unions and political parties are strongly opposing the laws. The farm bills passed are known as The Farmers Produce Trade and Commerce (Promotion and facilitation) bill 2020, The farmers (Empowerment and protection) Agreement on Price Assurance and Farm Services bill 2020 and The essential commodities bill 2020 (Amendment).

Keywords: Farm Bill 2020, New Agriculture Bills, Farmers protest, Farm Reform bills, Farm Laws

INTRODUCTION

Indian agricultural system and mechanism of working has been as it is from past many years and current government is trying to improve the system with these new farm laws. The farmers Produce trade and Commerce (Promotion and facilitation) bill 2020 removes all restrictions and allow free trade anywhere (intra or interstate) of farm produce. Previously, farm produce was sold at notified wholesale markets, run by the approx. 7000 APMCs (Agricultural Produce Marketing Committees). All APMC's had licensed middlemen and these middlemen would buy from farmers at prices which were set by auction before selling it to institutional buyers like retailers and big traders.

In new laws, farmers can eliminate this middleman and sell institutional buyers at prices to be agreed between them directly. Hence farmers groups are worried this exposes them to corporate who have more bargaining power and resources than small or marginal farmers. Also small farmers may face difficulties in getting better prices at markets which are further away because of travel and storage constraints. State governments will lose out on taxes that are charged at APMCs if private buyers start purchasing directly from farmers.

Figure-1: APMC

The farmers (Empowerment and protection) Agreement on Price Assurance and Farm Services bill 2020 (Contract Farming Bill), this law allow farmers to enter into agreements with firms, exporters or large buyers to

produce a crop as per pre-set price of agreement. Farmers are worried that this means MSP (Minimum Support Price) will be removed and government will have no control over prices. Farmers are demanding to link MSP to contract prices.

The essential commodities (Amendment) bill 2020 proposes to allow economic agents to stock food articles freely without the fear of being prosecuted for hoarding. They may go for unlimited stocking which can lead to artificial price fluctuations and low prices for farmers.

The farmers are having many concerns and disagreements on farm laws and thus conducting protests at Delhi borders. Few farmer leaders are also misleading the supporters by giving incorrect information on farm laws and creating fear among farmers. The government and investing agencies are keeping a close eye on these protests as there is sufficient evidence available that many anti-national elements have infiltrated the protest and trying to destabilize the country. The 26th January 2021 incident of Red Fort was one of the major evidence of anti-national elements involvement in the protest. Government is still trying to convince the farmers and ready for talks and amendments in laws but farmer leaders are not ready for talks. Supreme court also suggested the farmers to be a part of committee which will study and submit the report on farm laws but farmers leaders are not ready for this. Now slowly farmer protest is losing support of common peoples and their supporters due to the adamant behavior of few farmer leaders.

OBJECTIVE
- To create awareness among peoples about advantages and disadvantages of farm laws 2020.
- To support government and to make peoples aware about the reality of farmer leaders protesting against the laws
- To gather the scattered information about farm laws 2020 on one platform

METHODOLOGY
This paper is based on secondary method. The data and information is collected from government websites, you tube videos and blogs about farm laws 2020.

SCOPE
Indian economy is majorly depended on agriculture and allied sectors as still more that 70% population is into farming. Hence it is necessary to boost the agriculture industry to boost the Indian economy. In order to improve decade old agriculture system and to increase the income of farmers, Indian government has taken initiative and has take positive steps like farm bills 2020. These farm bills are prepared by taking into consideration all small, medium and large scale farmers benefits. There are few concerns of farmers and Indian government is working with agriculture experts to make improvement and amendments in farm bills.

LIMITATION
Misinformation spread by some of politically motivated farmers and opposition leaders is the major limitation. Indian governments is lacking in sources to spread actual information on farm laws to majority of farmers and common peoples hence people are falling prey to misinformation spread across.

SUGGESTIONS
Indian government should also have one to one dialogue with farmer leaders and experts to clarify their concerns. Government should also make use of social websites and platforms to spread more information on advantages of farm laws 2020. Strict action should be taken against farm leaders for spreading misinformation to supporters and farmers.

CONCLUSION
As we all know that almost more that 70% population is depended on agriculture sector, it is necessary to take positive steps to improve Indian agriculture sector. Famers and common peoples should support the government on this and government should also try to understand concerns of real farmers and make necessary amendment in farm laws 2020 if required.

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BIG DATA MANAGEMENT: AN OVERVIEW OF VARIOUS TECHNIQUES AND METHODOLOGIES USED IN BIG DATA WITH DIFFERENT TOOLS & CHALLENGES

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ABSTRACT

Current trend, the big data is used in business intelligence which is a combination of mathematics & statistics, machine learning, artificial intelligence, fuzzy logic and neural networks. With various 'big data' tools, like MongoDB, Hadoop etc. are used to manage the data, but the collection of the data, scrutinizing and filtering the big data as well as to find the similarities in document or shingling of the document, clustering of the data or to find the principal component analysis, are very tedious and complicated but gives simplified, accurate output. For the optimization in output of big data, the analysis, storing the data into the database as well as search for quick access of the data, these operations can be executed through various filters like bloom filter, collaborative filter, and algorithms like DGIM algorithm, Alon-Matias-Szegedy Algorithm for second moments, etc. For the management of big data, various techniques like matrix vector multiplication, finding the distances, shingling of the documents, creating clusters, Mapreduse, Pagerank, topic sensitive, are used.

Keywords: Big data, different tools used in big data like Hadoop, Cassandra, MongoDB, CouchDB, different algorithms, bloom filters, distance

INTRODUCTION

Today's digital world generates enormous data every day. Data gets generated from different sources and indifferent forms. The digital world is making very fast transition which has led to growth of volume of data hence storing & managing such data becomes one task. New developments in technology along with the profound infiltration of portable gadgets including smart phones, tablets etc. have prompted fast growth in data dispersal. Social media, sensors, smart cities are broadly used by young people. All these are sources of huge information generation in real time. If data is crossing the predefined threshold value then only it can be termed as "Big data". The problem of storing and managing such a large & complex data is known as "Big data problem".

According to Gartner, "Big data is high volume, velocity & variety information assets that demands cost effective, innovative forms of information processing for enhanced insight & decision making." In general big data is a collection of information that is colossal in volume, yet developing dramatically with time. It is a data with so enormous size and intricacy that none of traditional data management tools can store it or process it effectively. Big data is likewise an information or data but with tremendous size.

Data can be structured, unstructured or semi-structured. Structured data refers to exceptionally organized data that can be readily & consistently stored and accessed from a database by basic web crawler algorithms. Like the data stored about employee in company database is structured data. Unstructured data is any data with obscure structure or with any structure. As unstructured data can be of any form, this leads to difficult and time consuming process. Email is one of the examples of unstructured data. Semi structured data means the data which contains both unstructured & structured data. To be more precise semi structured data is a type of data that has not been classified under a particular type.

In 2001, Gartner analyst Doug Laney listed 3 V's of big data –Variety, Velocity & Volume. Variety of data refers to different forms of data. Data collected from heterogeneous sources & the nature of data described the variety of data. Velocity refers to the speed at which data is being created in real time. How fast the data is generated and processed in order to complete the demands, determines real potential in the data. And third characteristic is volume. Volume means the size of data. Organizations collect data from different sources including bank transactions, videos, audios, social media, industry etc. the size of big data is usually larger than terabyte or petabyte.

Google is the great source of big data generation. According to research Google processes around 24 petabyte of data on daily basis. Nowadays everyone is using different options such as Gmail, drive, you tube, Google docs etc. accessing, using and storing data on any of these platform leads to new data generation. However, it is to be noticed that all information accessible in the form of big data is not useful for analysis and decision making.

OBJECTIVE
1) To study challenges in big data management.

2) To study different tools available for big data analysis, storage & processing.

3) To study technological approach in big data management.

METHODOLOGY
A systematic review approach was adopted and the technology permits us to integrate existing work and recognize the most applicable investigations in a through way. Many techniques intend to fulfillment of designed output in the area of big data by looking to its challenges and tools.

The objectives of this paper were used as research questions. For collecting the information, various peer-reviewed articles were read. The articles and research papers which gives information about big data. But the literatures reviewed for study are addressing the issues like big data challenges and comparative study between various tools available for managing big data. This paper is further more discusses about the technological approach in the area of big management, different filters, algorithm used in managing data.

In order to conduct the comparative analysis among various tools & also to understand different filters, algorithm used in this area information was searched and utilized from various websites to create basis for this paper.

GAP ANALYSIS & TECHNOLOGICAL ASPECT
The reason for a systematic literature review is to give a perfect and complete list as conceivable of all the published and unpublished studies relating to a specific branch of knowledge. While in the process of reviewing various informative articles it was observed that the topic like bloom filters, clusters, distance etc. needed little more illustration which has been undertaken and focused in this paper.

Distance between the data set points is very important to create the clusters in big data. To find the distance between the data points, we use Euclidean distance, cosine distance, Hamming distance or Manhattan Distance, Jaccard distance, Minkowski distance. The basic thing is that, Clustering is similar to classification in that data are grouped. However, unlike classification, the groups are not predefined.
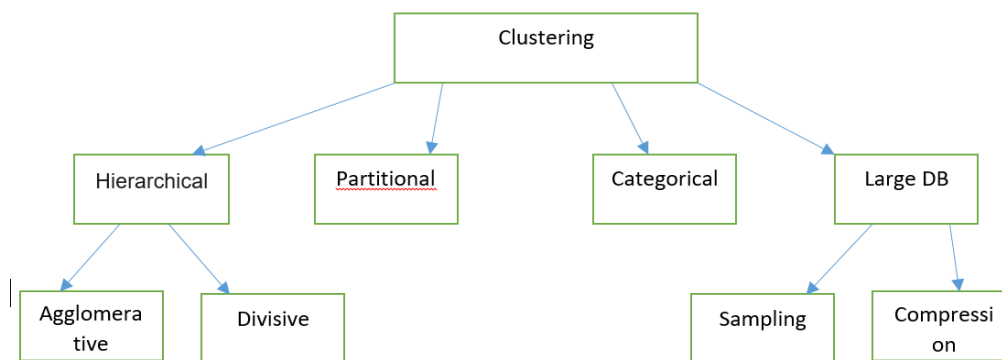
Figure-1 classification of clustering.

Instead, the grouping is accomplished by finding similarities between data according to characteristics found in the actual data. The groups are called clusters. As shown in figure-1, the classification of clustering uses in big data and agglomeration can be done through various other algorithms with same the divisive algorithm can separate the data from cluster.

A smaller part of data can be analyzed by various filters used in big data analysis. Through a filter data can be divided in smaller part of the data set and that subset will analyze. A bloom filter is a probabilistic data structure. The purpose of the Bloom filter is to allow through all stream elements whose keys are in S, while rejecting most of the stream elements whose keys are not in S. A property of Bloom filter, is that a fixed size can represent a set with an arbitrarily large number of elements and in analysis of Bloom filter that never generates false negative result, The probability that a given dart will not hit a given target is $(x - 1)/x$, The probability that none of the y darts will hit a given target is $(1-1/x)^y$. We can write this expression as $(1-1/x)^{x(y/x)}$.

The main purpose of DGIM algorithm used to analyse data is for the window length L on a binary stream, and for all the time to get answer of the queries by counting 1's in last k bit. The complexity of this Algorithm is $O(\log2 N)$.

In streaming algorithm, the use of Alon-Matias-Szegedy Algorithm, is to estimate the Second Moment Stream Approximation, by applying the formula E(n *(2 * X.value − 1)). Univocal element of the stream, x can select randomly.

CHALLENGES IN BIG DATA ANALYSIS

Data is very important asset in the today's digital world. In the universe of enormous information, the more information you have the easier it is to acquire experiences from them. However in big data there are various disruptive innovations in the world today and browsing them may be a tough task. This is the reason big data system needs to support both operational & analytical processing needs of a company.

Expert or skilled data professionals are required to do analysis of big data. The acute shortage of professionals who are able to perform big data analysis is one of the challenges.

The data generated from different sources are in different formats hence it becomes little challenging to get meaningful information through big data analysis. Business organizations are developing at a quick speed. With the huge development of organizations, amount of data production also increases. The storage of this massive data is becoming a real challenge for everyone.

Storing big data is another challenge. Data stored at data warehouse or data lakes gives one more problem of combining unstructured and inconsistent data generated from different sources.

Privacy is again one more challenge in big data. People are sharing their personal information on social media. In this case the major challenge is to determine the trust level on an organizations capturing and storing the data.

TOOLS FOR MANAGING BIG DATA

The present market is overflowed with a variety of Big data tools & technology. They bring cost efficiency, better time management into data analytical tasks. Here is the list of some big data tools & technology with their key highlights. This list incorporates handpicked tools and software for big data.

1) **Hadoop:-** It is an open source, java based framework used for storing & processing data. This framework is overseen by Apache Software Foundation and is authorized under Apache license 2.0. Big data is kind of inadequate without Hadooop and experts would realize that by utilizing distribute file system called as HDFS(Hadoop Distributed File System), the information is part into chunks and saved across clusters of commodity servers. As these commodity servers are worked with straightforward equipment setup, these are prudent and effectively versatile as data grows. Hadoop offers massive storage for all sorts of data. This is very useful tool for research and development purpose.

2) **Apache Cassandra:-** It is an open source, distributed and decentralized storage system used for storing and managing big data. It is versatile, fault-tolerant and consistent. It's dispersion configuration depends on Google's Bigtable. Cassantra is being utilized by probably the greatest organizations like Facebook, Twitter, Cisco, Rackspace, ebay etc. It uses CQL (Cassandra Structure Language) to interact with the database. There is no single place of failure in this tool. With all these features it has some disadvantages like there is no row-level locking feature, poor latency, no join or sub query support.

3) **CouchDB:-** It is an open source NoSQL database developed by Apache Software Foundation. Erlang programming language is used to develop this tool. It offers disseminated scaling with fault tolerant storage. It permits accessing data by characterizing the couch replication protocol. It utilizes the ubiquitous HTTP protocol & JSON data format. As it uses JSON based document format, it can be accessible across different platform.

4) **MongoDB:-** It is a contemporize option in contrast to databases. It is one of the best Big data analytics tool for dealing with informational indexes that vary or change frequently. Some of the best uses of MongoDB incorporates storage capacity of data from versatile applications, CMS, product catalogs etc. But to use it one need to learn it from scratch.

5) **HPCC:-** HPCC stands for High-Performance Computing Cluster. It is an open source, massive parallel-processing computing platform for big data processing & analytics. This system is developed by LexisNexis Risk Solutions. HPCC provide upgrade versatility and execution. It is based on a Thor architecture that enables data parallelism, pipeline parallelism and system parallelism.

6) **Apache Storm:-** It is free open source distributed real time computation system. Programming languages used to develop this are Java, clojure. The backtype and Twitter are the developers of the storm. It has real-time computational capacity. Apache storm has benchmarked of processing one million 100 bytes

messages per second per node. It is scalable, fault tolerant, guarantees your data will be processed. Also it is easy to set up and operate.

SUGGESTION FOR FUTURE WORK

Digitization will definitely lead to generation of tremendous data; hence without analysis processing this data is useless. This requires the improvement of methods which can be utilized to encourage big data analysis. The advancement of powerful computers is a shelter to execute these procedures leading to automated system. Many tools are available for data management, but to deal with increasing data more efficient tools are needs to be developed. The tools which can address problems like missing values, inconsistent, noisy & imbalance data.

CONCLUSION

Nowadays, data is produced at a sensational speed. Analyzing such a huge data & storing in a proper way for future work is one kind of challenge. This paper discusses about challenges in big data management, various tools & technological aspect of big data management. Based on detailed analysis of features of tools, relative information is given about every tool, user has to select appropriate tool as per the requirement. Also few more concepts like bloom filters, distance were highlighted in this paper.

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IMPACT OF COVID-19 ON SPORTS: A STUDY IN BADLAPUR

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ABSTRACT
Year 2020 will always be registered in history for the never before experienced pandemic called COVID-19 due to the attack of Coronavirus. The entire nation is under lockdown following strict rules of social distancing and contactless transactions. All the countries of the world are badly affected due to the enforced close down of all their entire economy.

So the current study is undertaken on the youngsters of Badlapur i.e the suburban city of Thane. But the study reveals that the sports has affected the health of the children physically and mentally. The research article also explores the problems faced by the children during this period and concludes with the suggestion such as sport assistant has to take step ahead and do something for the physical and mental health improvement of the children among the residents of selected area.

Keywords: COVID-19, Physical Health, Mental Health, Sports

INTRODUCTION
In year 2019 the whole world was attacked with a dangerous virus attack called CORONA virus.Due to Covid - 19 it led to series of lockdown and all shutting down daily routine activities from last year till now not the situation is not that very good.No free movement and due to social distancing no one was came out of home,childrens also were also in home only due to this situation.Using hand sanitizer and mask was important or necessary during this period.

Childrens was not able to play any sports or even to come out of home.No physical movement and this affected to move the children's towards online game playing,or online sports or youtube series,watching TV.Everything was digitized in this period.Children's started using their laptops or mobile for online lectures while sitting at home.Sports also got affected because of this situation.Sports also was completely shut down.The unexpected disruption of social has been affected the behavioural and mental health of public and the chidren's also.Mental health of children has affected many ways.Children with pre-existing any disorder,dipression,mood disorders adversely affected during this lockdown period.Cloaing of schools,communication with school mates,play were closed,which are the vital for the health of children.Children only connected to their family members,No connection to other relatives or their friends,this has a impact on the physical and mental health of the children.

Physical Activity:
Physical Activity (PA) is outlined as any bodily movement created by skeletal muscles that need energy expenditure.There are 2 elements to physical activity that require to considered:

Aerobic fitness: this sometimes includes moderate to vigorous activity that creates you are feeling a small amount heat and causes a rise in your respiration rate, respiration depth and your vital sign.

Strength and balance: This can be often the forgotten element of physical activity however it's a necessary half and has several edges.

Mental Health:
Many of the overall and athlete-specific risk factors for mental ill- health ar doubtless modifiable (e.g. brick methods, employment vogue, coaching demands) and need intervention at the individual jock, the sporting or environmental and/or organisational levels. A comprehensive framework for jock psychological state that's conceptualised at intervals the broader 'ecology' of elite sporting environments are going to be best ready to answer the vary of risk indicators during this context.Ecological systems facilitate to clarify the link between the aspects or experiences of a personal (termed 'ontogenetic' factors, like brick or substance use) and also the broader social and cultural contexts during which they exist. Within the case of elite athletes, this includes the 'microsystem' of coach(es), team mates (where appropriate) and family/loved ones.The broader sporting atmosphere (e.g. the athlete's sport, its rules and governing body) forms the exosystem, whereas the role of national and international sporting bodies and also the media and broader society type the macrosystem.

REVIEW OF RELATED LITERATURE:
Kushal Shah,Shivraj Mann, Romil Singh, Rahul Bangar, Ritu Kulkarni discussed in their peer review journal that due to this situation of closing schools,limiting social interaction,travel restriction and moving towards

online classes,it has increased the fear,anxiety,emotional distress among the children.They said that it is essential that guardians,institutions,health authorities protect mental health of children through open communication and facilitate professional counseling to address stressors.

Nicola Theis,Natalie Campbell,Julie De Leeuw,Marie Owen and Kimberley C. Schenke in Jan 2021 said that this is needed to ensure the imposed restrictions do not have lasting consequences on physical activity and mental health for the disabled community.

Profile of the sample of study:

For the purpose of the study,the students from age group of 16-25 from the city Badlpaur are selected.The students who will play indivisual or dual or group sports.There are three colleges and many schools for students.The study has taken to see what is the impact of pandemic situation on students health.The questionnaire(Google form) is distributed among various groups on Whatsapp.The electronic survey was created by adapting validated questionnaires.The survey was split into several sections.

a) Demographics

b) The impact of covid restrictions.

c) Access to physical level activities during lockdown period.

d) Impact of restrictions on mental health of children.

e) Which type of sport children preferred during this period.

OBJECTIVES OF THE STUDY:

The current study is undertaken with the following objectives:

1)To study the impact of Covid-19 on mental health of the children.

2)To study the impact of Covid-19 on physical health of the children.

3)To study the importance of sports in life of children.

METHODOLOGY

For the purpose of the study, the survey was conducted from 100 students(belonging to age group of maximum 16-25 years) selected on a random sampling basis.Along with the primary data, the secondary data sources like various websites were also used.

ANALYSIS AND DISCUSSION:

Demographic profile of the respondents

Demographic Factor	Options	Frequency
Age	16-18 years	20
	19 – 21 years	38
	22 - 23 years	23
	24-25	19
Gender	Male	56
	Female	44

Demographics:

Respondents were asked to provide their age group,to record their biological sex("male","female").Type of sport they played before lockdown period such as "indivisual","dual","group".

Sub Group Analysis:

Respondents were asked to rate whether the lockdown restrictions were negatively impacted (yes or no) or positively impacted (yes or no).

Time spent during lockdown:

Respondents were asked about how did they spend their time during lockdown period multiple choice selection option were provided like Watching TV,Reading story books,Watching Youtube web series,Video games,Social media sites.

Impact of lockdown on mental health of children:

Respondents were asked about during lockdown they have eye sight problem(yes or no)and obesity (yes or no) and whether they have irritability (yes or no) is increased due to excess use of mobile or laptop for online lectures.

Impact of lockdown on physical health of children:

Respondents were asked about weight gain during lockdown period (yes or no),because there is no physical movement,schools,colleges were closed.

Online sport(games):

The respondent were asked about how much time they spend playing online games.Which type of mode they preferred(online or offline or Bending of Online and offline)

Eye Sight Problem:

The result of eye sight problem due to online game playing or watching movies or online lectures.

48% children they have no problem of eyes but 52% of children says that they have eye sight problem.
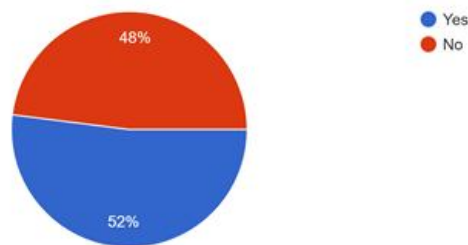
Weight gain:

The result of children having weight gain during lockdown due to no physical movement of the body.72% children has weight gain and only 28% children said that they don't have weight gain.

So the majority of children has weight gain.
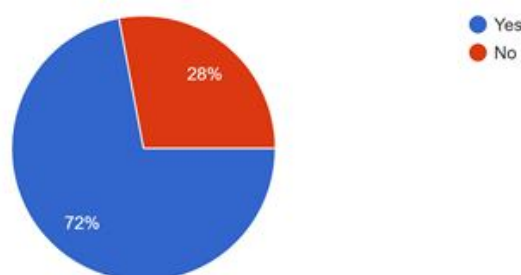
Time spend during lockdown period:
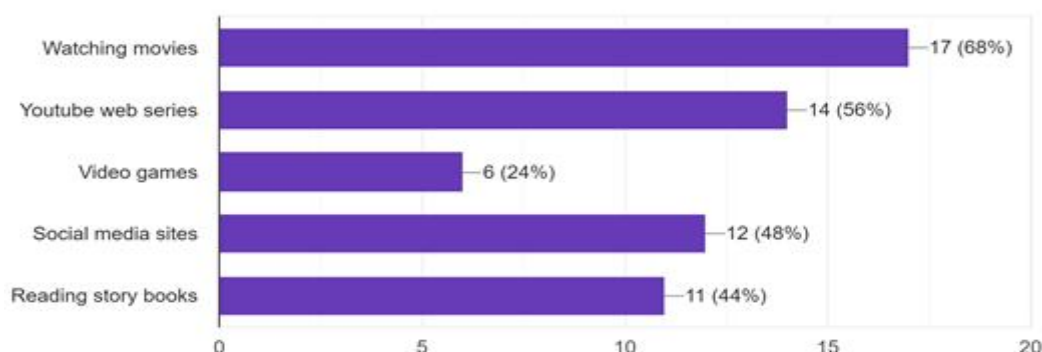
CONCLUSION:
From the findings and survey taken it is analysed that children are affected due to the lockdown period.Their is negative effect of lockdown on physical and mental health of children.The children were more attracted towards the use of mobile and laptop.Playing video games,online lectures makes using mobile the habit of the children.But rather some respondents were agree about the offline sport is important for the health.so the offline sport helps the children growth but due to pandemic it is actually affected the daily routine of the children.

SUGGESTION:
The sport association among the schools and colleges can provide a way through which students can play their sport offline by using the security measures such as mask and sanitizer.

Counselling can be provided to facilitate the children who are suffering from mental disorder or any kind of disorder so that they can be inspired or will get motivation for the future.

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CAPITAL AND FINANCIAL MARKETS

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ABSTRACT

India is an emerging market and is in the phase of becoming a developed nation from a developing one. In this, Financial and Capital markets have played a strong role in boosting India's economy. The history of Indian capital market dates back to the eighteenth century with East India Company and today it is one of the strongest independent financial market recognized globally.

The following research paper will briefly explain the concepts of financial and capital markets. It will touch base upon the recent performances of our stock markets depicting the impact of Covid-19 on our economies and how we are able to recover from it.

The research paper would also highlight some of the important reforms introduced by our government in the financial sector. It will give a glimpse of road ahead to the future of Indian financial market.

Keywords – Financial Market, Capital Market, Sensex, IPO, Government Reforms, Indian Economy

FINANCIAL MARKET

Financial market facilitates trading of securities, borrow and lending of funds, transfer of funds. It creates securities for investment. People who have surplus funds invest in these securities to earn return on their investment.

Financial Securities can be like Stocks, Derivatives, Foreign Exchange, Currency, etc.

It is an organized structure or mechanism for exchanging financial assets. It allows people to easily buy and sell financial securities, commodities and other fungible items of value at a low transaction cost and at prices that reflect the efficient market hypothesis. The participants in financial markets are borrowers, lenders, brokers, financial institutions and intermediaries.
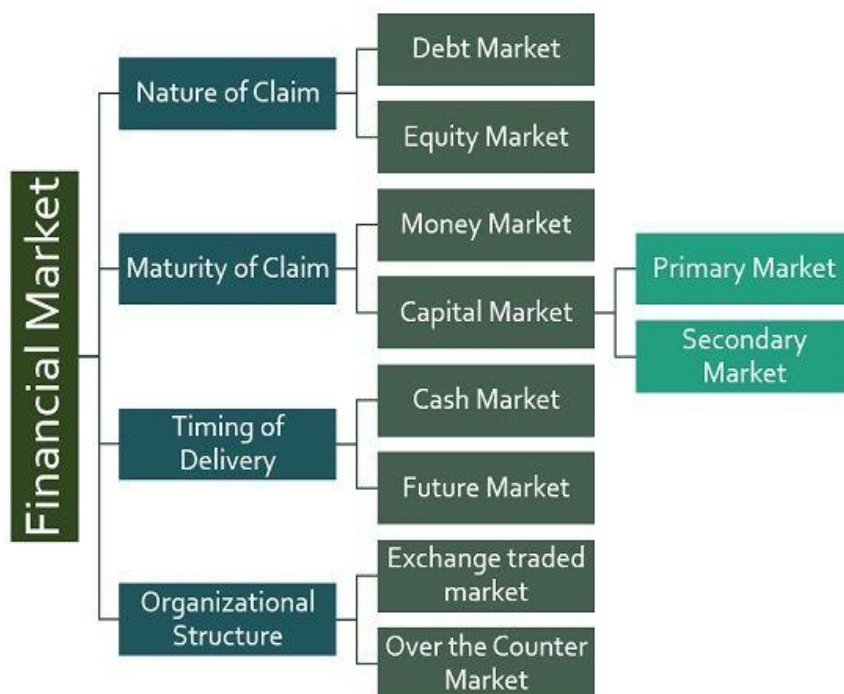
Money Market

Money market facilitates trading in very short-term debt investments. It involves purchase and sale of large volumes of very short-term debt products, such as overnight reserves or commercial paper. Individual investors may invest in money market by purchasing mutual fund, treasury bills, etc.

Derivatives

Derivatives are financial contracts whose value is determined by a value of an underlying asset at a pre-specified price at a pre specified time.

Derivatives can trade over-the-counter (OTC) or on an exchange. OTC derivatives constitute a greater proportion of the derivatives market. OTC-traded derivatives, generally have a greater possibility of counterparty risk. Counterparty risk is the danger that one of the parties involved in the transaction might default. These parties trade between two private parties and are unregulated.

Contrariwise, derivatives that are exchange-traded are standardized and more heavily regulated.

Capital Market

Capital Market is the market where borrowers and lenders exchange medium and long-term funds. Funds can be raised via friends or relatives of promoters, banks, financial institutions, financial or strategic investors or the entity may remain private. The same could be raised either in the form of equity or debt or combination of both. Funds can be raised by issuing shares or debt instruments through recognized stock exchanges.

The Indian capital market includes both the stock or the share market and the bonds market. Share or stock market is the market where equities are traded, whereas, the bond market is the market where debt securities are traded. The Capital Market is regulated by Securities and Exchange Board of India (SEBI) or the U.S. Securities and Exchange Commission (SEC) that overlook the market in their jurisdiction ensuring that the investors are protected against fraud apart from other duties. The regulatory bodies lay down specific rules and regulations that must be adhered to safeguard the investors' interest.

Capital Market is divided into Primary and Secondary Market:
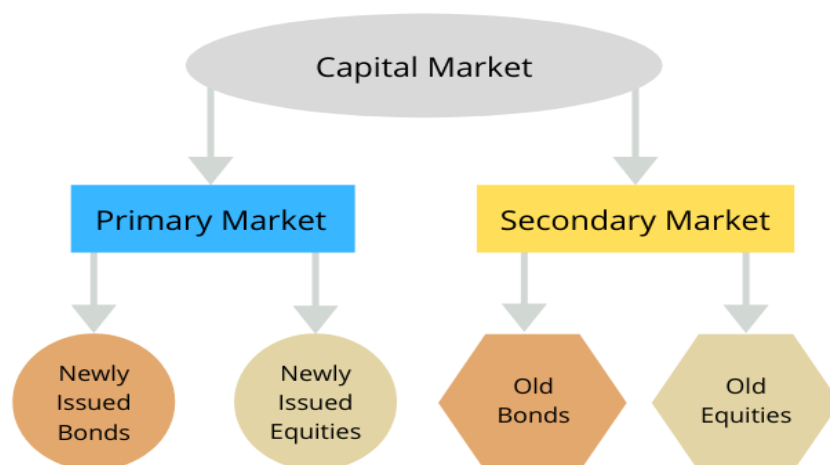
Primary Market:

In Primary market, company's issue new shares to the public which are known as Initial Public Offerings (IPO) to raise capital. These securities can be shares, bonds or non-convertible debentures. Company's raises funds for its operations, business expansion or for long term investments.

Primary market brings together the "Supply and Demand" or "Sources and Uses" for new capital funds. In this market, the principal sources of funds are the domestic savings of individuals and businesses, other suppliers including foreign investors and government.

It facilitates the government and corporates for raising the funds required for capital expenditure and to discharge the other obligation such as Exit opportunity for venture capitalist or private equity firm. The common mechanism is an IPO offered to general public as precursor to the trading in secondary market.

Secondary Market:

Secondary market refers to a market where securities are traded after being initially offered to public in the primary market. Secondary market comprises of Equity market and Debt market. It is divided into Over-the-Counter Market and Exchange traded.

Over the Counter –

OTC market refers to the process where securities are traded in an informal way i.e. that is not listed on a formal exchange. It is a bilateral contract, where two parties are involved i.e. the investor and dealer.

Stocks traded in OTC market are basically of smaller companies that cannot meet exchange requirements for formal exchange.

Exchange Traded –

Exchange-traded market also known as auction market is a place where all the transactions are done through a central source (exchange) that is completely responsible for being the intermediary that connects buyers and sellers.

National stock Exchange (NSE) and Bombay stock exchange (BSE) are the two major stock exchanges in Indian stock market. The benchmark indices of these two exchanges are Nifty of NSE and Sensex of BSE. Analysis is done based on these two benchmarks.

Performance of IPOs in recent times:

Issue Details		Subscription (in crores)		Price		
Date	IPO Name	Issue Size	Total	Issue	Listing Close	Listing Gains(%)
30-3-21	Nazara	582.91	75.04	1,101.00	1,576.80	**43.22**
26-3-21	Kalyan Jeweller	1,175.00	1.28	87.00	75.30	**-13.45**
26-3-21	Suryoday Small	582.34	2.37	305.00	276.20	**-9.44**
25-3-21	Craftsman	823.70	0.69	1,490.00	1,433.00	**-3.83**
25-3-21	Laxmi Organic	600.00	2.68	130.00	164.60	**26.62**
24-3-21	Anupam Rasayan	760.00	23.86	555.00	525.90	**-5.24**
19-3-21	Easy Trip	510.00	3.39	187.00	208.30	**11.39**
15-3-21	MTAR Tech	596.41	133.18	575.00	1,082.25	**88.22**
5-3-21	Heranba	60.00	33.13	627.00	812.25	**29.55**
26-2-21	Railtel	819.24	20.68	94.00	121.40	**29.15**
25-2-21	Nureca	100.00	17.98	400.00	666.65	**66.66**
5-2-21	Stove Kraft	412.63	18.03	385.00	445.95	**15.83**
3-2-21	Home First	1,153.72	26.66	518.00	527.40	**1.81**
2-2-21	Indigo Paints	1,170.56	54.84	1,490.00	3,118.65	**109.31**
29-1-21	IRFC	4,633.00	1.16	26.00	24.85	**-4.42**
1-1-21	Antony Waste	300.53	3.85	315.00	407.25	**29.29**
24-12-20	Bectors Food	540.54	198.02	288.00	595.55	**106.79**
14-12-20	Burger King	796.50	156.65	60.00	138.40	**130.67**
20-11-20	Gland	6,479.55	2.06	1,500.00	1,820.45	**21.36**
2-11-20	Equitas Bank	517.60	1.95	33.00	32.75	**-0.76**
12-10-20	Mazagon Dock	443.69	157.41	145.00	173.00	**19.31**
12-10-20	UTI AMC	2,159.88	2.31	554.00	476.60	**-13.97**
5-10-20	Angel Broking	600.00	3.94	306.00	275.85	**-9.85**
1-10-20	Chemcon Special	318.00	149.33	340.00	584.80	**72.00**
1-10-20	CAMS	2,244.33	46.99	1,230.00	1,401.60	**13.95**
21-9-20	Route	600.00	73.30	350.00	651.10	**86.03**
17-9-20	Happiest Minds	702.02	150.98	166.00	371.00	**123.49**
23-7-20	Rossari	496.25	2.97	425.00	742.35	**74.67**
16-3-20	SBI Card	10,286.20	26.54	755.00	683.20	**-9.51**

Initial Public Offers (IPOs) or public issues by Indian companies that were spurned amid market chaos in March this year which attracted investor attention as the indices gained thrust and reduced all the Covid 19 led losses. Also, some of them made spectacular listing gains despite the pandemic. Here are the top IPOs of 2020 and 2021 which provided over 50% gains on market debut:

1. Chemcon Speciality: 115% Premium

2. Happiest Minds Technologies -111% Premium

3. Route Mobile- 105% Premium

4. Burger King India- 92.25% Premium

5. MTAR – 82.6% Premium

6. Nazara Technologies – 80.7% Premium

7. Indigo Paints – 75% Premium

8. Nureca – 58.74% Premium

9. Rossari Biotech- 58% Premium

Performance of Sensex in recent times:

As Covid-19 spread around the globe, it has impacted financial market at a very significant level. BSE Sensex and NSE Nifty had performed their worst run-in years. On 18th March 2020, Sensex ended at 28,896 points after falling 1,709 points while Nifty ranked below 8,500 points a three-year low. On 23rd March 2020 Sensex closed at 25,981 and 29915.96 on the previous day. That was a big fall of 3934.72 points. On the same day NSE nifty down at 7610.25 which was lower by 1135.2 points from the last day. After 23rd March 2020, both Sensex and Nifty started to increase and on 2nd June 2020, they reached to 33,825.53 and 9,979.10 respectively. India's volatility index or VIX reached the highest point i.e., 83.61 on 24th March 2020 and after that, it starts to decreased and reached to 29.66 on 11th June 2020. Most of the global stock markets have been hit daily low record. However, in recent times, we have seen recovery in the stock markets as all the indices start rising and showing upward movements. One of the important reasons for this decline in these indices could be a move towards safer assets (such as gold) because of the uncertainty regarding the near future.

Markets began to rise again after gradual upliftment of lockdown, Sensex breached its previous all-time high in November as global vaccine developers announced successful updates on their results and applied for emergency approvals in different countries. Boosted by vaccine hopes, liquidity expansion by central banks resulting in more foreign institutional investment and a clear outcome in the US presidential election, the Sensex has risen by 25% till date since November 2020.

India's Reforms:

With such a diversified financial sector undergoing rapid expansion in terms of existing financial services and new players in the market, government of India have initiated several reforms to liberalize, regulate and enhance financial markets. The sector comprises commercial banks, insurance companies, non-banking financial companies, co-operatives, pension funds, mutual funds and other smaller financial entities. It has given various benefits to Micro, Small and Medium Enterprises (MSMEs). These measures include launching Credit Guarantee Fund Scheme for MSMEs, issuing guideline to banks regarding collateral requirements and setting up a Micro Units Development and Refinance Agency (MUDRA).

Government Initiatives:

- In November 2020, the Union Cabinet approved the government's equity infusion plan for Rs. 6,000 crores (US$ 814.54 million) in the NIIF Debt Platform funded by the National Investment and Infrastructure Fund (NIIF) consisting of Aseem Infrastructure Finance Limited (AIFL) and NIIF Infrastructure Finance Limited (NIIF) (NIIF-IFL).

- In November 2020, two MoUs were signed—one between India International Exchange (India INX) and Luxembourg Stock Exchange and another between State Bank of India and Luxembourg Stock Exchange for cooperation in financial services, ESG (environmental, social and governance) and green finance in the local market.

- On November 11, 2020, The Cabinet Committee on Economic Affairs approved continuation and revamping of the scheme for financial support to public-private partnerships (PPPs) in 'Infrastructure Viability Gap Funding (VGF) Scheme' until 2024-25 with a total outlay of Rs. 8,100 crore (US$ 1.08 billion).

- Bond Market - Certain specified categories of government securities to be fully opened for NRIs

- FPI limit in corporate bonds increased from 9% to 15%

- New legislations to be formulated which will establish the mechanism for netting of financial contracts

- New Debt exchange traded funds (ETFs) consisting of government securities will be expanded

- To address the liquidity constraints, a partial credit guarantee scheme will be formulated for NBFCs

Road Ahead

The road ahead for deepening the financial market needs to be paved by the formulation of a strong linkage between the economic development and capacity of financial system. A greater transparency is also needed for regulatory procedures to bring a new view to our financial markets and take it to a higher level.

- By 2030, India is expected to be the fourth largest private wealth market globally.

- With relaxation to foreign investment rules, many companies have announced plans to invest in Indian markets over a period of next 5 years. Strong Indian Banking and Financial sectors will lead to India becoming one of the most growing global economies

- Sensex is expected to cross 1,00,000 points in the next 10 years with opportunities in many sectors like health care, banking and IT

- Over the past few years, the financial markets have become increasingly global. The Indian market has gained from foreign inflows through the investment of Foreign Institutional Investors (FIIs) and will continue to do so

CONCLUSION

Indian Financial market have learned quite a few lessons, be it a Harshad Mehta Scam in 1992 or Global Financial Crisis in 2008, which led to a strong technological development and built a greater risk controls to protect India's economy. Downfall of economy in 2020 have been recovered to a great extent and in recent times, India has hit an all-time high Sensex which will hopefully continue to grow in future. Stability is an hour of need for Financial markets for which safeguarding mechanisms are in process of development to prevent systemic risks. As turbulence in the financial market continues to give experience to the regulators, they would be in a better position to tackle the upcoming risks which can derail the Indian economy. With strong initiatives and greater reforms, India is likely to become the strongest economy globally in upcoming years.

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CRITICAL SURVEY ON NON-ACCEPTANCE OF E-BANKING

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ABSTRACT
Cashless economy is the need of every country to curb black money. The purpose of the study is to find various factors that contribute non-acceptance of e-banking. Exploratory factor analysis was used to list various dimensions that contribute to non-acceptance of e-banking Total six factors were extracted namely trust and privacy, electronic e-literacy, limited scope, technical issues, customer support, infrastructure contributing 68.898 percent of variance. The study definitely helps to find out important factors contributing to non - acceptance of e-banking. Further studies can be made by applying confirmatory factor analysis technique

Keywords: E-banking, digital banking, factor analysis, EFA

INTRODUCTION

Banks play a vital role in economic growth since their evolution. Electronic banking means the use of computer and information technology to enable banking transactions to be done via telephone or a computer rather than through human existence. Nowadays Business relies on more systematic and rapid access to banking direction for their resources, auditing, daily banking, etc. E-banking provides 24X7 banking options**. It is also called "Web Banking"** which is also a part of the core banking system operated by a bank. Some banks operate as a direct bank where they rely on an Internet connection. In India "**ICICI bank"** was the first bank in 1996 to introduced internet banking to its customers.

E-banking is a wider concept it includes e-wallets transaction, Plastic money (use of debit cards and credit cards). E-banking provides more facilities as compared to traditional methods of banking. A bank customer can perform non-transactional tasks through online banking, including Viewing account balances, viewing recent transactions, order cheque books, download periodic account statements. E-banking is your personal banking service on the internet protect with PIN and bank identifiers. It is available anywhere and anytime. E-banking has been popular in metropolitan cities and not in rural areas. Government and RBI should come up with new initiatives to increase the awareness level among village inhabitants especially the panchayat and Zill Parishad. The government needs to continuously monitor the increased strain in these areas to implement digital banking. E-banking can improve the way of living instead of standing in queues the solution is at the door via mobile applications or emails.

With the growth in information technology, the Indian banking system is at a supreme. If a customer has internet banking various operations can be handle through these channels such as investment in IPO, filing of income tax return, etc. Compared to banks abroad, Indian banks still offer offline services as compare to online services still have a long way. To reach a critical mass, there has to be an ample number of users and appropriate IT infrastructure in place such as an online platform, digital helpdesk, regular updates, and supervision, etc. Implementing e-banking requires high initial outlays which in turn result in positive feedback in long run.

Security is the major obstacle to implement e-banking besides these they are other concerns such as the risk of releasing personal information, trust issues, changes of double debiting the amount from the account. The banking system and RBI should undertake various seminars and workshops to educate the existing customers about e-banking and attract new customers. In this way, banks can improve the awareness level among the customers. The rapid awareness among customers carries a lot of risks and concerns. Thus it is the responsibility of banking staff to educate the customer by daily emailing about the benefits of e-banking and reduce the last-minute rush.

Nonacceptance among the customers includes lack of security, additional cost incurred on every transaction if any, limited merchant acceptance, lack of personal touch, trust issues, preference for traditional methods, complex design, inappropriate infrastructure. This led to an amendment in the banking act, the payment settlement act which has legally accepted the preference of electronic banking. The design, rules, regulation is not easy to understand by many internet users in the lower class and backward region which become a limitation for execution of e-banking. The initial cost of investment is high in terms of imparting educations to educate the customers and attract new customers. From 1990 to 2020 the banking system in India has been majorly transformed from offline to online due to the advent of technology. The technology and banking system

has a direct relationship with an increase in technology phase there is an uptrend in the banking system and the same with the medical sector.

Internet banking has changed the banking industry and has major effects on e-banking relationships. Online banking is certainly here to stay which has become a necessity for the bank. The non-acceptance among the customers is a major obstacle for digital banking in India. The government and RBI are taking various measures to promote e-banking for future digitalization. Nowadays mobile banking has become the go-to method for users which all security and privacy issues. The truth is that many conventional facilities have been merged with digital banking. The banking sector is one of the major pillars for any given economy whether national or international boundaries. The current phase has led to the open doors of digital platforms in every sector.

The customers are fully aware of digital banking in major urban areas as compare to rural areas which are the main obstacles of problems. RBI should continuously monitor these obstacles by releasing e-banking users viz rural-urban quarterly same as the release of various industrial data.

REVIEW OF LITERATURE

The researcher has undertaken various reviews.

Arpita Khare et al. (2012) have made research to understand the attitude of Indian consumers towards belief and user friendly about the importance of e-banking. There is a need to diffuse new technology with convenient service models to improve banking services. The data were collected from the Structured Questionnaire. ANOVA test and Multiple Regression Analysis were used to understand different parameters. Customers usually prefer bank staff which does not assure physical contact while using the internet. Thus various methods can be used to understand the customer perception about electronic banking.

Deepak Kaushik (2019) has made a study on Internet banking in Financial development in India. The study helps to understand the Knowledge about the consumer perspective of internet banking. The government of India has provided legal recognition to an electronic transaction. The challenges and opportunities have hit e-banking. Most of the banks in India have to take the necessary steps to educate the existing customers and attract new customers. The study has been made to aware of how Indian banks use their internet skills to entertain their customers and attract new customers to increase their customer base.

K.T. Geetha et al. (2019) have made an investigation on the affirmation of e-banking among customers in India. Factors such as security, privacy, and awareness level among the customers were low. Data collected through a structured questionnaire. Recommendations were also listed to improve awareness among the users in India. There is a need to provide better and customized services to customers who prefer online banking. The research was restricted to Coimbatore city only. Data collection can be extended to that person who prefers e-banking in earlier days to know the acceptance and service quality.

Monisha et al. (2017) has made a study on e-banking in India its challenges, innovations, and challenges. The traditional method has been transformed from ATM to Internet banking. The study was made to understand the current innovation and challenges faced by the banking sector. Innovations such as ATM cards, NEFT, RTGS, etc. The opportunities that started in rural markets were high. Advance studies need to be conducted to examine forces that direct customers intend to take up internet banking services. The facts noted are creating awareness as customers are very inquisitive about learning new things.

Neha Dixit et al. have made an investigation on the acceptance of e-banking among adult consumers in India. The investigation was made to identify which factors affect e-banking. The data were collected from respondents who were above the age of thirty-five through a questionnaire. The privacy issue, sharing of personal information were given a high status for non-acceptance. The study normally focuses on adult customers. The population factors were a major concern that almost 60% of the population lives in rural areas. The perception of acceptance of e-banking is high among adults as they better understand internet options.

Sriram Devulapalli et al.(2017) have made a study on the opportunities, challenges of e-banking in India. Data were collected from both primary and secondary modes to study the challenges, identify opportunities, and enlighten safety measures adopted. Data were collected using a structured questionnaire which was shared among 150 invitees. Safety and Security were major challenges faced during digital banking. Safeguards include confidentiality of data, passwords, etc... The increase in trends in internet sources has recommended the increasing trends towards acceptance of digital banking.

Shubhara Jindal (2016) has made a study on the e-banking scenario in India. The ICICI bank kicked off online banking from 1996 to 1998 which is also called as adoption phase of e-banking in India. The challenges were

initially high setup cost, lack of awareness among bank customers, etc. Suggestions include proper infrastructure, specialized training, and so on. Younger generations are beginning to see the convenience and platform for e-banking. E-banking will not be only an acceptance mode but also a preferred mode in the coming years. E-banking in India has been in a growth phase since 1998.

OBJECTIVES OF THE STUDY

1. To find out various dimensions that contributes to the challenges for non-acceptance of E-banking

2. To find out key dimensions that contributes to the challenges for non-acceptance of E-banking

RESEARCH METHODOLOGY:

Research Design: it gives further direction for the implementations of the research.it helps in data collection & organization. It also gives direction for data analysis and data interpretations. The present study focuses on descriptive research design.

- Nature Of Study: both qualitative and quantitative aspects is covered in the present study.

- Research Plan for Data Collection: data is collected from both primary as well as secondary source.

- Primary Source: The primary data is collected as follows

- Research Technique: data has been collected through online google forms.

Secondary Source:

- Magazines, books & journals.

- Sampling Plan:

Sampling Element: Individuals.

- Sample Size: - 250

- Sampling Method: The Researcher uses Non Random Snowball Sampling and Convenience Sampling.

- Place of Study: Mumbai region.

- Statistical Technique: This Research Study Uses Excel & SPSS (Statistical Package For Social Science)

DATA COLLECTION AND RESPONDENT PROFILE

Data were collected from 250 respondent of Mumbai region. Out of which 120 were female respondent and 130 were male respondent.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.769
Bartlett's Test of Sphericity	Approx. Chi-Square	2049.974
	df	190
	Sig.	.000

Communalities	Initial	Extraction
lack of customer service	1.000	.770
non-availability of offline customer support	1.000	.683
lack of responsiveness by the staff	1.000	.812
lack of awareness	1.000	.649
lack of knowledge	1.000	.634
complex instructions	1.000	.645
difficult process of linkage of documents & bank details with wallets	1.000	.693
amount debited by bank but not received by beneficiery	1.000	.726
failure of transaction	1.000	.746
problems in scanning barcodes	1.000	.748
lack of securities	1.000	.611
risk of hacking	1.000	.422
increase in E-frauds	1.000	.702
trust issues	1.000	.696

fear of disclosure of personal data	1.000	.619
limited merchant acceptance	1.000	.763
limited to indian transaction	1.000	.765
non-acceptance in backward areas	1.000	.740
dependent on devices	1.000	.657
internet connectivity	1.000	.699
Extraction Method: Principal Component Analysis.		

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.966	24.828	24.828	4.966	24.828	24.828	2.632	13.158	13.158
2	2.536	12.681	37.508	2.536	12.681	37.508	2.617	13.086	26.244
3	2.156	10.781	48.290	2.156	10.781	48.290	2.381	11.903	38.146
4	1.819	9.097	57.387	1.819	9.097	57.387	2.375	11.874	50.020
5	1.265	6.327	63.714	1.265	6.327	63.714	2.134	10.669	60.689
6	1.037	5.184	68.898	1.037	5.184	68.898	1.642	8.209	**68.898**
7	.944	4.718	73.616						
8	.698	3.490	77.106						
9	.596	2.978	80.084						
10	.556	2.779	82.863						
11	.503	2.516	85.378						
12	.484	2.420	87.798						
13	.411	2.056	89.854						
14	.381	1.904	91.759						
15	.346	1.730	93.489						
16	.324	1.619	95.108						
17	.292	1.462	96.570						
18	.266	1.331	97.901						
19	.226	1.131	99.032						
20	.194	.968	100.000						
Extraction Method: Principal Component Analysis.									

Scree Plot
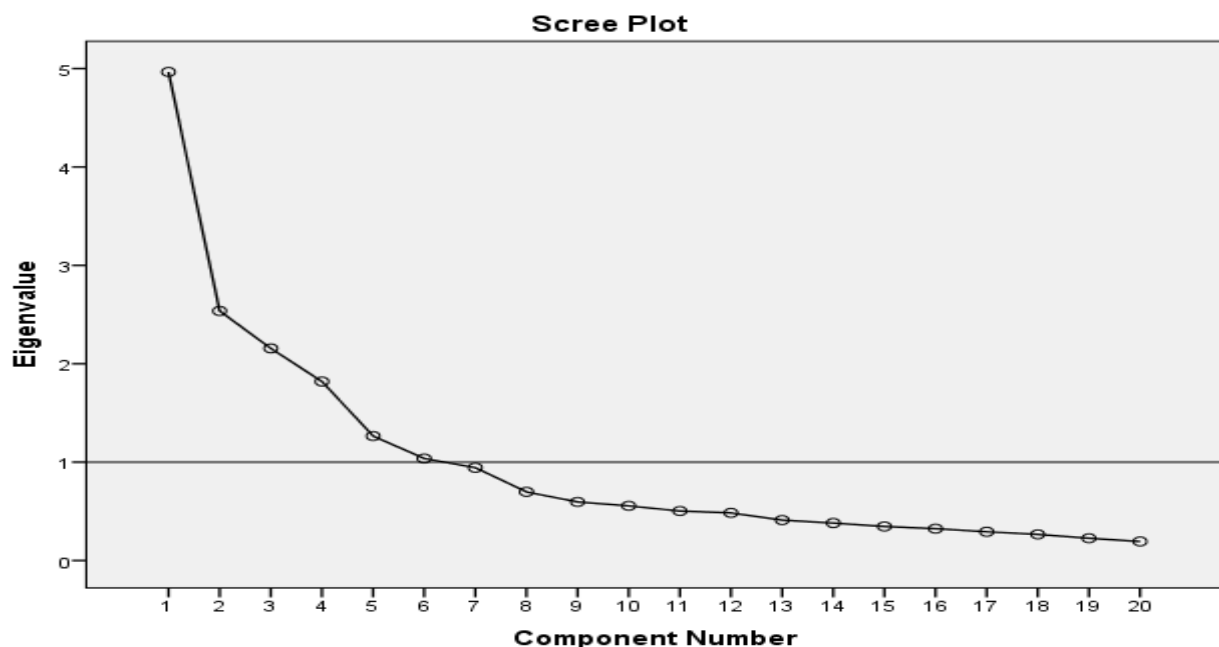
Rotated Component Matrix

	Component					
	Trust and privacy	Electronic E-literacy	Limited scope	Customer support	Technical issues	Infrastructure
lack of customer service				.838		
non-availability of offline customer support				.698		
lack of responsiveness by the staff				.845		
lack of awareness		.796				
lack of knowledge		.776				
complex instructions		.790				
difficult process of linkage of documents & bank details with wallets		.784				
amount debited by bank but not received by beneficiery					.808	
failure of transaction					.815	
problems in scanning barcodes					.782	
lack of securities	.637					
risk of hacking	.601					
increase in E-frauds	.776					
trust issues	.765					
fear of disclosure of personal data	.668					
limited merchant acceptance			.834			
limited to indian transaction			.844			
non-acceptance in backward areas			.829			
dependent on devices						.784
internet connectivity						.830

Kaiser-Meyer-Olkin test is 0.769 which means sample size is sufficient for factor analysis. Also Bartley test of sphericity is 0.000 which means the correlation matrix is distinct as compare to identity matrix. It is seen that first six factors viz. trust and privacy, electronic e-literacy, Limited scope, customer support, technical issues, infrastructure contributes to 68.898 percent of variation. So it can be concluded that 68.898 % contribute to developing scale for non-acceptance of e-banking through these six dimensions.

The most important and allied factors that contribute to challenges in online teaching is trust and privacy which contribute to **24.82 %.**

CONCLUSIONS
E-wallets and E-banking should improve their security system by various ways such as anti-virus and anti-malware protection, firewalls, SSL, automatic Log down, OTP , multifunction authentication measures , cookies ,credential confidentiality to develop trust among the users and non-users. Banks must also promote online transaction by various campaign such as no charges for online transaction, rewards for online transaction, Support in usage of e-banking etc.

Also various measures must be taken to improve the customer services and various measures must be taken to increase the scope by attracting non –users and also allowing international transaction.

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SERVICE QUALITY OF STATE BANK OF INDIA IN VASAI REGION

Adil Altaf Pirani, Insiya Adil Pirani and Sohil Altaf Pirani

ABSTRACT

The banking sector is one of the most regulated of Indian economy. Customer is the king who drives the entire business in the service sector. The purpose of the study is to find out difference of expected and perceived service received in SBI bank Vasai Branch. Gap analysis of expected and perceived were calculate to analyze customer satisfaction in various dimensions of SERVQUAL model. Customers were satisfied in all the dimensions of SERVQUAL however there was need of improvement in two indicators prompt services & knowledgeable staff. . The study definitely accomplished the objective of the study. Further confirmatory factor analysis can be applied to find out model fit.

Keywords: Service quality, Banking sector, Customer satisfaction,SERVQUAL.

INTRODUCTION

In the past few decades and coming decades, the banking sector is pioneered for economic growth and development of the Indian economy. To see whether a particular country is developed or not economists need to ensure whether the banking sector has a strong pillar. The "first commercial bank " was developed in 1911 named "Central bank of India". The role of the banking sector gets popular after 1990. State bank of India is among the top hot public sector banks in India. Indian banks are divided into two branches namely scheduled and non-scheduled banks. Certain banks got nationalized except SBI in 1969.

SBI is also considered as vintage in the Indian banking sector.SBI was established in the 18th century as Bank of Calcutta and has centralized headquarters in Mumbai. It is also considered as one of the largest networks in terms of the customer in India and in the earlier 90's it was nationalized and renamed as "State bank of India". SBI is the only bank that has its associates in various parts of India viz. State bank of Mysore, State bank of Hyderabad, and many more. SBI has one major competitor i.e. HDFC bank in terms of customers, ATM centers, net worth. SBI also entered the mutual fund market in 1987 which has now become the most prefer mutual fund as compared to other mutual funds.

There are around three branches in the Vasai region. Service quality also has various dimensions such as reliability, empathy, responsiveness, and many more. Customer is the king in the service sector. The banking sector has been transformed from offline mode to online mode thanks to the technology which is changing day by day. Customers can open an account instantly without going to the bank and fill a physical form. With the growth of competition, banks should provide all facilities to customers to process their transactions. In last decade SBI has developed new product and services such as car loan, loan against shares and security, opening of bank account instantly, contract farming, etc.SBI also performs some functions of government such as acceptance of TDS and GST payment and other indirect taxes.SBI also introduced "Zero Balance Savings A/C" which become popular among customers and was adopted by other banks in India.

Customer satisfaction can be achieved by reducing the gap between perceived services and expected services received by customers from banks. The customer has faith in SBI officials thus it become one of the largest customer banks in India become motto **" The bankers to every Indian"** is popular among Indian customers. SBI also become successful in opening its branches in rural areas by assisting the government under the " SBI Youth for India Fellowship" which gain momentum in the last few years.

REVIEW OF LITERATURE

The researcher has undertaken various reviews.

Dr. Mrs.G.Santhiyavalli (2011) has studied the customer excellence of the State bank of India. Customer excellence can be explained by differentiating the expected and perceived services received by customers. Customer satisfaction can be measured through its various dimensions of service quality. Servqual technique was adapted to measures various dimensions of service quality. Demographics and inferential statics were used to collect data to measure customer satisfaction. The study was restricted to the Coimbatore district. Responses

were collected ad formed under seven-point Lickert scales. The circumference of the study was restricted to five branches of SBI and undertake only qualitative aspects.

Dr.Mamilla Rajasekar et al. (2015) have studied the quality of services among customers who prefer internet banking. The study was restricted to rural areas only. Servqual model was used to understand the customer's taste and preferences. Data were collected from one hundred and fifty customers. Regression and ANOVA were used to assess the relationship between customer gratification and quality of service. The study was made to analyze how it will impact SBI customers who refer to internet banking options that were trending in the last few years. The study reveals that there exists a genuine correlation among various variables that were used to interpret the data.

P Roselin (2020) has made a study on the quality of services of the State bank of India. The service sector mainly depends on customer preference and choices. The study was made to analyze and understand the relationship between the customers and the services they offered. Data were collected from one twenty respondents who were internet users. The study revealed that around forty percent of customers find that SBI is friendly. The service dimensions were extremely satisfied by customers which help State bank in the future to retain their existing customers. Banks need to maintain their strategy by maintaining four and seven marketing mix.

Sangita Manji et al. have studied customer gratification through the quality dimension in SBI. The study was undertaken to understand the customer preferences, likes, and dislikes and evaluate customer satisfaction and efforts made by SBI to retain their existing customers and attract new customers to increase their customer base. Data were collected through a questionnaire with a hundred and ten customers who have SBI A/C. The study was restricted to the Burdwan district which reveals that service quality is unsatisfactory among customers who have SBI A/C. Chi-square tests were used to explain the data. The relationship between quality of service and customer gratification should be strong so that customers can never be left.

OBJECTIVE OF STUDY
To Study the service quality of State bank of India in Vasai region

HYPOTHESIS OF STUDY
Ho: There is no change in expected services and perceived services of various dimensions of SQ of State bank of India in Vasai region.

H1: There is the change in expected services and perceived services of various dimensions of SQ of State bank of India in Vasai region.

RESEARCH METHODOLOGY:
Research Design: it gives further direction for the implementations of the research.it helps in data collection & organization. It also gives direction for data analysis and data interpretations. The present study focuses on descriptive research design.

- Nature Of Study: both qualitative and quantitative aspects is covered in the present study.

- Research Plan for Data Collection: data is collected from both primary as well as secondary source.

- Primary Source: The primary data is collected as follows

➢ Research Technique: data has been collected through online google forms.

Secondary Source:
➢ Magazines , books & journals.
➢ Sampling Plan:

Sampling Element: Individual.
➢ Sample Size: - 100
➢ Sampling Method: The Researcher uses Non Random Snowball Sampling and Convenience Sampling.
➢ Place of Study: vasai
➢ Statistical Technique: This Research Study Uses Excel & SPSS (Statistical Package For Social Science)

DATA ANALYSIS

Data was collected from100 respondents of vasai region who have SBI account. Out of which 60 respondents were female and 40 were males.

Reliability Analysis

SERVQUAL DIMENSIONS	EXPECTED	PERCEIVED
Reliability		
Services are delivered as Promised		
Transaction are completed on time		
Banks have a Fixed Schedule	0.815	0.760
Assurance		
Bank's staff are polite.		
Staff are knowledgeable in clearing doubt to the customers		
Display proper token on screen	0.775	0.699
Tangibility		
Website is updated with all information		
Seats are comfortable		
The inside environment is pleasant		
Air Conditioners works properly		
ATM machines is well maintained		
Passbook machines is well maintained		
Cash deposit machines is well maintained	0.713	0.701
Empathy		
Live CCTV facility is available for the safety of the customers		
Fire Extinguishers are available for the safety of the customers		
Wheelchair facility are provided wherever necessary		
Separate seats are available for senior citizens		
Separate seats are available for differently-abled citizens	0.708	0.767
Responsiveness		
Suggestions/feedback are entertained		
The customer help desk is helpful		
Prompt services are offered – waiting time	0.728	0.711

The reliablilty of the instrument was determined by Cronbach's Alpha. All the values are above 0.70 which indicates high level of reliablilty.

GAP ANALYSIS

	PERCEIVED		EXPECTED		GAP
DIMENSIONS	MEAN	SD	MEAN	SD	(PERCEIVED MEAN – EXPECTED MEAN)
RELIABILITY					
Services are delivered as Promised	2.550	1.05	3.551	0.78	1.001
Transaction are completed on time	2.650	1.15	3.881	0.82	1.231
Bank's have a Fixed Schedule	2.455	1.04	3.551	0.76	1.096
Assurance					
Bank's staff are polite	2.151	0.99	2.997	0.78	0.8460
Staff are knowledgeable in explaining offers to the customers	2.820	1.19	2.327	0.92	(0.493)
Display proper token on screen	2.750	1.09	3.000	0.79	0.250

Tangibility					
Website is updated with all information	2.1150	1.01	3.172	0.53	1.057
Seats are comfortable The inside environment is pleasant	2.820	1.09	3.115	0.72	0.2905
Air Conditioners works properly	2.550	1.14	2.995	1.04	0.445
ATM machines is well maintained	2.350	1.12	2.854	1.03	0.504
Passbook machines is well maintained	2.425	1.32	2.758	1.12	0.333
Cash deposit machines is well maintained	2.258	1.10	2.584	1.16	0.326
Empathy					
Live CCTV facility is available for the safety of the customers	2.780	1.14	2.980	0.87	0.200
Fire Extinguishers are available for the safety of the customers	2.630	1.1	3.880	0.85	1.25
Wheelchair facility are provided wherever necessary	2.650	1.14	2.800	0.97	0.150
Separate seats are available for senior citizens	2.650	1.19	2.752	0.87	0.102
Separate seats are available for differently-abled citizens	2.210	1.07	2.525	0.79	0.315
Responsiveness					
Suggestions/feedback are entertained	2.800	1.01	3.970	0.80	1.17
The customer help desk is helpful	2.630	1.16	3.880	0.85	1.25
Prompt services are offered	2.820	1.19	2.100	0.82	(0.720)

RELIABILITY

As shown in the above table, the gap between the perceived and the expected are positive. It means there is a high level of customer satisfaction towards State bank of India concerning reliability.

ASSURANCE

As shown in the above table, the gap between the perceived and the expected are positive, **except staff lacks knowledge while discussing doubt**. However, the overall gap score are positive.

TANGIBILITY

As shown in the above table, the gap between the perceived and the expected are positive. It means there is a high level of customer satisfaction towards State bank of India concerning tangibility.

EMPATHY

As shown in the above table, the gap between the perceived and the expected are positive. It means there is a high level of customer satisfaction towards State bank of India concerning empathy.

RESPONSIVENESS

As shown in the above table, the gap between the perceived and the expected are positive **except for prompt services rendered by the providers.** However, the overall gap scores are positive.

CONCLUSION

Customers are satisfied in all the dimensions of service quality of State bank of India in Vasai region. However, there are some indicators in which the expected score is less as compare to perceived score. To retain the existing customers and to attract the new customers State bank of India need to increase the number of staff to maintain provide prompt services and trained their employee well to deal with customer and to solve their doubt which help to improve customer relationship between customer and bank staff. Nowadays customers have started accepting digital banking over traditional banking, so employees shall be trained in all the aspect of banking so as to help the customers in all the areas of banking.

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IMPACT OF COVID19 ON COLLEGE STUDENTS WITH SPECIAL REFERENCE TO MUMBAI

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ABSTRACT
COVID-19, a virus that has affected the lives of people across the globe. The Conduct of this virus is not just gigantic in size but has an explorative impact upon all categories of people, be it any age group. The Infants and seniors are though most vulnerable, the people among the students and middle age group are equally effected. This research is an attempt to find the effect of Covid19 upon the student's fraternity in respect to physical health, education growth and mental health.

INTRODUCTION
Covid19 is an infectious disease caused by Corona virus, this disease symptoms from a minor respiratory issue to majorly, in some cases even death. The virus was first evolved in Wuhan, China in December 2019, being spread in Humans after eating Bats. After being reported to WHO it was officially named as Covid19.

THE SYMPTOMS OF COVID19 ARE:
- Fever

- Dry Cough, Sneeze or speak

- Tiredness

- Headache

- Nasal Congestion

- Sore throat

- Loss of taste and smell

Effected areas round the globe:

Advantages as per student's perspective for of COVID-19:
- **School and college holidays**: most of the teenagers enjoy being at home and having quality time playing games and chatting with friends. COVID-19 has made them get this quality time with freedom to explore their fields of interest.

- **Time to spend with family**: Another advantage of this lockdown was a better interaction specially between the working parents with their children. Watching movies together, having meals together and likewise**.**

- **Saving time:** most of the time that was earlier spend on travelling, is now available for relaxation, chatting, prayers, more self-study and exploring new avenues like baking, cooking etc.

Disadvantages as per student's perspective for of COVID-1919:

- **Online lectures**: Adaptation to the content and knowledge in physical teaching is 80-90% where as in case of online teaching it is even more less and is as low as 40-50%. The doubts are rarely been asked and taken care of in online teaching methodology. Also, the lectures need continue staring on the blue screen that my effect the eye site and physical health in form of wrong body posture.

- **Affordability:** Another disadvantage is for the once who are already hand to mouth, with limited resources. As for online study not just, there is a need for a system but an internet connectivity.

- **No Exams:** though it seems to be good initially but in reality, having no exams means no assessment hence no rating of what is learned this may have long term effects on the rating of the students.

- **Apply for higher studies:** students in the final year of graduation are most affected by COVID-19, many of them who were planning to go abroad, had no choice be to drop an year for the things to get normal. Circumstances have made them stay at home for a complete long year of their productive career growing year.

Measures to maintain physical well-being during covid19:

- **Stay at home:** precaution is always better than cure, hence one should avoid going out unless things are indispensable to handle.

- **Have healthy diet:** the next important thing keep in mind is to have a healthy diet, eat more of vegetables and fruits, keep yourself hydrated and avoid junk food. staying at home may decrease your physical activities to eating fatty food may add extra kilos will be difficult to shed later.

- **Home workout:** workout is a must. And it has been seen that teenagers believe in keeping their body toned and fit, however during lockdown going to gym can make you vulnerable to catching the virus, hence efforts should be taken to find ways to do workout at home.

Literature review:

1. Prasad (2020) in the research paper titled," A Comparative Study of Academic Performance Anxiety Study Habits and Attitudes Among High School and Intermediate Students In Pre COVID 19 Condition "the researcher has enlightened that most of the students from the high school believe the going to school and attaining bookish knowledge is a waste of time and energy, the study was conducted on a sample of 100 students.

2. Aucejo (2020) in the research article titled, "The impact of COVID-19 on student experiences and expectations: Evidence from a survey". The survey was conducted in US on 1500 students and there was large scale negative effect across many dimensions upon the students, there were delay in their graduation, loss of job, internships, job offers of many of them. Worst impact was upon the students of lower income group

3. Jaravel (2019) in the research article titled, " Real-time price indices: Inflation spike and falling product variety during the Great Lockdown', in the article the researcher concluded that there was as much as 2.4% of inflation in the first month of lockdown, furthermore the purchasing power declined in the product supply due to fall in production. The entire process got developed due to fall in the jobs, indirectly affecting the student community.

4. Gonzalez (2020) in the research paper titled, " Influence of COVID-19 confinement on students' performance in higher education', in the study the researcher conducted a research on 458 students in Spain, the study showed that the learning of the students changed due to covid19, there was an improvement in their efficiency and learning practices and performance.

OBJECTIVES OF THE RESEARCH

1. To study the impact of COVID-19 on the educational growth of the students.

2. To study the effect of COVID 19 on the mental health and well-being of the students.

3. To study the impact of COVID-19 on the students' academic pursuit and future plans.

RESEARCH METHODOLOGY

Primary data was collected through Google questionnaire from 148 students. The research was conducted on the students of KES Shroff College from self-finance section pursuing various professional courses like BMS, BAF, BBI, etc.

TECHNIQUE OF DATA COLLECTION
1. Questionnaire
2. Personal Interview

DATA RELIABILITY:
Using ANOVA method, we found that Cronbach's alpha = $1 - \frac{MSR}{MSE}$ = 0.7847.

As, Cronbach's alpha is within the range of $0.7 \leq \alpha \leq 0.8$.

Hence , we can infer that data internal consistency is acceptable

TOOLS AND TECHNIQUES:
- Percentage Analysis
- Chi Square test

Composition:

The sample constituted about 44% of male and 56% are female.

Pie Chart 1 — Composition of Under Graduate Students

Pie Chart 2 — Composition of Distance from Students Residence to College
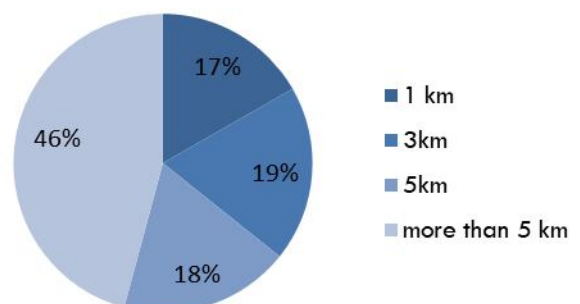
Pie Chart 3 — Online Teaching is Cost and Time Effective
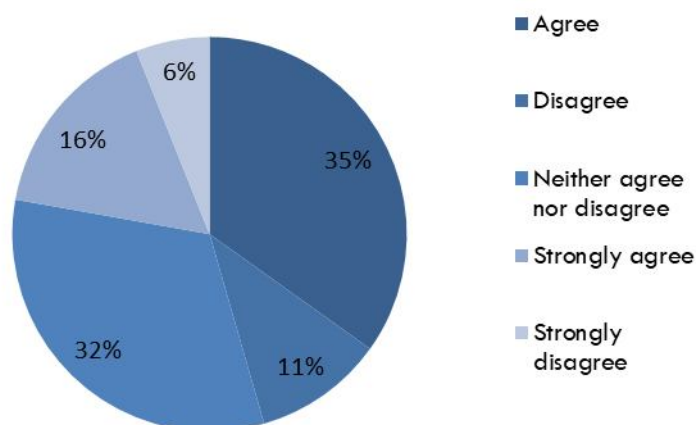
- Pie chart 1 reveals 60% of the respondents belong to Second year Under Graduate program
- Pie Chart 2 reveals 46% of the respondents travel more than 5 km for their academic studies
- Pie Chart 3 reveals that 35% of the students consider online teaching is cost and time Effective

DATA ANALYSIS AND INTERPRETATION:

Table 1

Percentage of students	Prefer Online Teaching	Pay attention during online lecture	Class Participation
No	21	31	26
Maybe	64	47	39
Yes	16	22	35

From table 1, it be inferred that

- 16% of students prefer online teaching

- 22% of students able to pay attention

- 35% of students are able to participate during online lecture

The following hypotheses were tested using Chi- Square analysis:

1. H_0: There is no significance relation between teaching method (online / traditional) and students attention

	Calculated value	df	Tabulated value	At level of sign. 0.05
Pearson Chi - square	99.1909	4	9.4877	P value = 1.4623E-20

Conclusion: If $X^2 cal. > X^2 tab$, we reject Null hypothesis

From above table, we can infer that null hypothesis is rejected.

Hence, we can conclude that there is a relation between teaching method (online / traditional) and students attention.

2. H_0: There is no significance relation between students class participation and environment during online lecture

	Calculated value	Df	Tabulated value	At level of sign. 0.05
Pearson Chi - square	27.8075	6	12.5916	P value = 0.000102137

Conclusion: If $X^2 cal. > X^2 tab$, we reject Null hypothesis

From above table, we can infer that null hypothesis is rejected.

Hence, we can conclude that there is a relation between student's class participation and environment around the student during online lecture

3. H_0: There is no significance relation between online teaching are cost & time effective and distance travelled by students during normal lecture

	Calculated value	Df	Tabulated value	At level of sign. 0.05
Pearson Chi - square	7.9952	12	21.0261	P value = 0.785505

Conclusion: If $X^2 cal. > X^2 tab$, we reject Null hypothesis

From above table, we can infer that null hypothesis is accepted.

Hence, we can conclude that there is no relation between time travelled by the students and cost – time effectiveness of online teaching

4. H_0: There is no significance relation between online teaching   and ways for practical subjects

	Calculated value	df	Tabulated value	At level of sign. 0.05
Pearson Chi - square	33.07658	12	21.0261	P value = 0.000942

Conclusion: If $X^2 cal. > X^2 tab$, we reject Null hypothesis

From above table, we can infer that null hypothesis is rejected.

Hence, we can conclude that there is relation between online teaching and ways for practical subjects

5. H_0: There is no significance relation between students practicing during online lecture found online examinations are apt full

	Calculated value	df	Tabulated value	At level of sign. 0.05
Pearson Chi - square	71.5792	4	9.4877	P value = 1.0531E-14

Conclusion: If $X^2 cal. > X^2 tab$, we reject Null hypothesis

From above table, we can infer that null hypothesis is rejected.

Hence, we can conclude that there is significance between students practicing during online lecture found online examinations are apt full

CONCLUSION
From the above research it can be concluded that there was a great impact of covid19 upon the overall development of the students, over-all the participation of the students in the teaching learning process has drastically reduced, the understanding and grasping is equally affected in the online method of education. Also, the understanding the practical subject too becomes a big challenge for the learners. Furthermore, students planning to travel abroad are been affected due to the pandemic. Conclusively Covid19 has a distressing impact on the student's mental wellbeing.

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CRITICAL SURVEY OF IMPACT OF COVID-19 ON ONLINE TEACHING PLATFORM

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ABSTRACT

Covid-19 has changed the normal work life of the educators. The purpose of this study is to find out change in awareness of various digital teaching applications post COVID among the educators. Central tendency was calculated to analyze change in awareness in pre & post covid .There was increase in awareness of various digital platform in post covid as compared to pre covid. The study definitely helps to find out change in awareness of various digital teaching applications post COVID. Further inferential statistics can be applied for the predictive analysis.

Keywords: Digital Learning, E-Learning, Covid-19

INTRODUCTION

An online teaching platform means a place of combined online services that provide all learners, trainers who are involved in education with techniques, tools, and instruments to provide support and enhance education. Many E-learning companies provide learning platforms. The concept of e-learning and online platforms do exist for a decade the schooling system has not given enough attention to the study of student inspiration under the effect of digital learning. The various study has been undertaken to find how online education predicts future learning which helps of online technology for educational purposes.

According to the economic survey of the Organisation of Economic Co-operation and Development (OECD), 30 % of Indians between the age group of 15to 29 neither enrolled for any online education and skill development courses. An increase in technology trends and smartphones in India is another major factor that is driving growth in the online education market. E-learning companies in India as of 2020 are BYJU'S, Dexler Education, Educomp Solutions, NIIT, Edukart, Unacademy, etc which helps to provide support and enhance quality educations. Online platforms are also referred to as " E-Learning". They are typically membership and subscription-based but there are other options where users can jump in and learn immediately without registration termed as Free resources. Online learning provides various benefits such as immediacy, cost-effectiveness, reduce travel time, self-paced, comfortable apart from these it allows for more exploration. Teaching can be based in or out of the classroom with the help of the internet and delivery of education can be made to a large number of the recipient at the same or different times and locations. The schools and institutions which uses E-learning platform are a step forward of those which have a conventional method towards digital learning.

"Digital platform" has changed the face of education trends. Teachers love to teach on the digital platform who can blend their traditional learning techniques and able to personalize their classes as and when they deem fit. Communication over digital platforms between teachers and students is much more intuitive than traditional methods. From a student's point of view, online learning means one-to-one attention. It means attending class in your pajamas as per our own schedule also for tutors as another source of income globally. Digital platforms are very affordable with a condition of internet connection. The online platform enables students to access quality teachers anywhere on a planet with a reliable internet connection with a facility such as video conferencing, text chat, online materials, online whiteboard, teachers tools, and control.

As per the Education Forum "The Covid-19 pandemic" has interchanged education forever. Research recommends that online learning has been shown to expand the preservation of information and take less time meaning the changes coronavirus has caused might to here to stay. Due to the increase in demand for education various online platforms and distant learning education platforms are offering free access to their services. It enables them to reach students more effectively and efficiently through chat groups, video meetings, voting, online access to resources. There are also challenges for online learning such as reliable internet access, also the gap between privileged backgrounds who do not have internet access or a computer.

Studies show that children on large scale use their senses to grab, making learning fun. The Pandemic has changed how millions are educated around the globe. New education solutions could bring much-needed innovations, the digital access has shifted new education approaches which could widen quality gaps. **To help slow the spread of the virus e-learning has shaped its status.** Educational innovation is receiving attention

beyond the typically funded government projects. Most initiatives and measures were limited in scope the pandemic could pave the way for a much large scale.

The pandemic provides an opportunity to remind ourselves of skills students, government measures, and directions to make such an informed decision. To ensure those skill sets remain prior for all students a shift is required in our education system. Since the pandemic has disturbed the normal way of life across the globe the digital world has come to some relief. Among many establishments, schools have also shifted their bases. Government measures such as the PM e-VIDYA platform have been launched with new channels one for each class to teach the students in all states these efforts prove to be beneficial for a sizeable block of the school-going inhabitants.

The Alternate medium has also brought some relaxation in Indian and Global society. The digital divide is affecting both roles of government and non-government organizations across the states. As per the survey digital learning seems to be more effective as compared to conventional methods of learning. The college study has been improved during this pandemic and a belief that it is better than face to face physical mode. The pandemic phase has brought the world economic down and more demand for digital platform these shows there is an inverse relationship between these two factors.

REVIEW OF LITERATURE

The researcher has undertaken various reviews.

Anna Sun, & Xiufang Chen (2016) has made a study on online education and its effective practice. The intention behind the study is to provide recommendation who want to apply in the online learning environment. The review suggests that based on findings that well developed course, motivation for online learning, Well support instructors. Distances in educations originated in the United States around the 1800s and got emerged in other countries. Online education has been evolved regarding the aspects form conversion from offline to online. Various reasons were identified such as cost-effectiveness, improve the quality structure, etc. Some popular online education such as Coursera, eduMOOC, MITx, Saylor. Social presence and interactive communication have been proven effective in online learning.

Cathy Li, & Farah Lalani (2020) The pandemic has changed education forever, with this education has changed dramatically. In response to such a pandemic, online platforms have emerged. The online mode has become the future of online learning. Online learning seems to be most effective as compared to offline due to cost-effective, time management. The government-funded organization has also made a shift towards online mode to promote and enhance education. Over the period we have seen the integration of various industry this phase seems to the future of education.

Dr. Pravat Kumar Jena (2020) has studied the measures on online learning taken by the government during the lockdown period. Digital learning is the best solution during this pandemic phase. Therefore some instruments and appliances for online learning can ensure the continuity of learning. An instructor can indemnify the lack of physical presence in the virtual classroom by creating an interactive environment. The value of e-learning is being accepted on a very large scale by more organizations since it is environment friendly to deliver large numbers of people. The method used was a secondary method to collect data from websites, learners support centers, also the initiative taken by the government in consultation with the ministry.

Loknath Mishra et al. (2020) The review has been made for online mode as an alter mode of learning adopted by Mizoram University with NAAC. While implementing online mode the action plan to revise, evaluate, review the traditional model the skills and capacities, resource, time, vision. The researcher has adopted both quantitative and qualitative methods to study the perception of various stakeholders. This being liberalization, Privatization, Globalization among the countries during the lockdown. Content needs to be developed to enable them to think critically.

R.Radha et al. (2020) has researched to understand the e-learning during covid phase on a global level along with interest of students towards e-learning resources. The method used for collecting data was primary, data collected from college students who pursue graduation in a different field and were scrutinized based on stratified sampling. The satisfaction level among students was also assessed by understanding student learning capacity. Various factors were used to make a comparison between e-learning and traditional learning. E-learning seems to be the forthcoming trend, the online method suits everyone at a convenient time. Thus findings of the study reflect the impact of e-learning.

Shivangi Dhawan (2020) has analyzed that digital learning is the only remedy in the time of the COVID-19 pandemic. The education system is based only on the traditional method but the pandemic has shifted the base

from traditional to a digital platform. The research has analyzed the importance of e-learning during this phase and the challenges associated with online learning. Here online learning was not an option but a necessity to go from offline to online. A lot of issues are attached to online education with SWOC analysis – Strength, Weakness, Opportunity & Challenges. The challenge to an educational institution is not only finding new technology but also to enhance the quality of online education in minds of those students to find difficult to adopt these change.

Vishal Dineshkumar Soni (2020) The study stresses the worldwide impact of the digital learning process during COVID-19. To prevent the spread of viruses the education system has shifted from offline to online mode. The study is a compilation of instruments and appliances along with a future perspective on education. The suspension of schools, colleges, the institution has led to the growth of e-learning, this being a global transition period. Various benefits and challenges are associates with digital learning such as audio, video, and reliable internet connection. The worldwide pandemic has specifically immense the prime of learning.

OBJECTIVES OF STUDY
To find out the change in awareness of various online teaching platform in Pre and Post Covid.

HYPOTHESIS OF STUDY
H0: There is no change in awareness of various online teaching platform in Pre and Post Covid.

H1: There is a change in awareness of various online teaching platforms in Pre and Post Covid.

RESEARCH METHODOLOGY:
Research Design: it gives further direction for the implementations of the research.it helps in data collection & organization. It also gives direction for data analysis and data interpretations. The present study focuses on descriptive research design.

- Nature Of Study: both qualitative and quantitative aspects is covered in the present study.

- Research Plan for Data Collection: data is collected from both primary as well as secondary source.

- Primary Source: The primary data is collected as follows

- Research Technique: data has been collected through online google forms.

Secondary Source:
- Magazines , books & journals.
- Sampling Plan:

Sampling Element: Individual.
- Sample Size: - 52
- Sampling Method: The Researcher uses Non Random Snowball Sampling and Convenience Sampling.
- Place of Study: vasai-virar region
- Statistical Technique: This Research Study Uses Excel & SPSS (Statistical Package For Social Science)

DESCRIPTIVE STATISTICS

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	31	59.6	59.6	59.6
	female	21	40.4	40.4	100.0
	Total	52	100.0	100.0	

Data was collected from 52 respondents out of which 31 were male and 21 were female

Out of 100 percent 59.6 percent comprises of male and 40.4 percent comprises of female.

ONLINE PLATFORM	PRE COVID AWARENESS (MEAN SCORE)	POST COVID AWARENESS (MEAN SCORE)
ZOOM	2.154	4.438
SKYPE	2.269	4.060
GOOGLE MEET	2.462	3.878
UDEMY	2.385	4.100
UNACADEMY	2.340	4.353
EDUKART	2.308	4.442
BYJUS	2.308	4.212
PM E-VIDYA	2.327	4.216
MS TEAM	2.481	4.327
GOOGLE CLASSROOM	2.423	4.385
VEDANTU	2.481	4.280
KHAN ACADEMY	2.462	4.365

The mean score for zoom application awareness pre covid was 2.154 and mean score post covid awareness for zoom application was 4.438.

The mean score for Skype application awareness pre covid was 2.269 and mean score post covid awareness for Skype application was 4.060

The mean score for Google meet application awareness pre covid was 2.462 and mean score post covid awareness for zoom application was 3.878.

The mean score for Unacademy application awareness pre covid was 2.340 and mean score post covid awareness for Unacademy application was 4.353

The mean score for Udkart application awareness pre covid was 2.308 and mean score post covid awareness for Udkart application was 4.442

The mean score for Byjus application awareness pre covid was 2.308 and mean score post covid awareness for Byjus application was 4.212

The mean score for PM e-vidya application awareness pre covid was 2.387 and mean score post covid awareness for PM e-vidya application was 4.216.

The mean score for MS Team application awareness pre covid was 2.481 and mean score post covid awareness for MS Team application was 4.327.

The mean score for Google classroom application awareness pre covid was 2.423 and mean score post covid awareness for Google classroom application was 4.385.

The mean score for Vedantu application awareness pre covid was 2.481 and mean score post covid awareness for Vedantu application was 4.365

The mean score for Khan Academy application awareness pre covid was 2.462 and mean score post covid awareness for Khan Academy application was 4.365

From the above, there was a clear indication about increase in awareness during post covid.

CONCLUSION
Digital learning has become major substitute after pandemic phase. There is a change in awareness level among various digital applications. E-learning is growing post covid.it can be also seen that educators are getting acquaint with various digital applications post pandemic. covid has created trouble all over the world but due to covid educators are able to reach students all over the globe with the help of digital platforms.

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A STUDY ON EFFECTS OF ONLINE TEACHING FROM TEACHERS PERSPECTIVE

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ABSTRACT-

The Covid-19 pandemic has negatively influenced the educational systems worldwide, causing the closure of both higher education institutions and schools in most countries in the world. The World Health Organization (WHO) advises all countries to follow health and safety protocols to prevent the spread of Covid-19. As a result, traditional classroom learning and teaching were reviewed and replaced with virtual classrooms. This change aimed to follow the government restrictions to maintain social distance between students and teachers, and students among themselves. Along with medical staff I feel Teachers will also be honored as Corona Warriors as the work of the teacher never stopped, in fact teachers kept on moving the education system as per their knowledge and with self-learning or with due training they entered into the new era of Online Teaching learning process. This research focuses on the efforts taken by the teachers and the continuous involvement of teachers to keep the education system on track. It mainly focuses on the higher education teachers conducting online classes using Internet networks with accessibility, connectivity, flexibility and the ability to generate various types of learning interactions for the degree college students. This situation and online work affect teachers positively and negatively both. The survey shows that teachers are neutral about using online methods in future but they are positive towards blended teaching and learning process.

Keywords- WHO (World Health Organization) , Covid-19 , Zoom App, G-Meet , Distance Education, blended teaching learning process (online + offline)

INTRODUCTION –

Teachers are the pillars of the society. They create the value in the generations. During corona pandemic teachers had been working for the engagement of this young generations in studies and education. It was a great task specifically for the higher education teachers who are dealing with the youngest generations of the nation. Corona pandemic brought NO work, no outing for young generations for months together. This young population kept free at home with smart phones and social media. Those are the teachers who tried to keep them on the right track and pushing them ahead with the lectures, activities, competitions and workshops. Teachers played a vital role in that period to take care of the young students by motivating them and supporting them mentally to deal with this unavoidable circumstance. The colleges had started the lectures right from June-2020 and so higher education has no vital effects of studies in pandemic situation. The whole credit goes to the efforts and the approach of the teachers to deal with the situation. Teachers with self-learning, training, workshops, you tube, tried to learn this E teaching and kept the education system moving on. More than 55% teachers learned the techniques of conducting online lectures through webinars and workshops. Whereas27% teachers got a proper training from their institutes for conducting online research. The research tries to find out the effects of this online efforts of teachers on them and educations system. It also will try to reveal the future of the education system. The whole 2020 had gone in online classes, so now it will be little difficult to reach to the students for traditional classroom methods. The research shows that in future the combination of online and offline teaching will be preferred by the students and the education system. When taken the suggestions from the teachers, everyone has different words, but all are in opinion that online lectures are good for pandemic situation. But it can not be the overall solution and cent percent replacement of traditional teaching. Traditional teaching has the great impact on teacher student's relationship and involvement in the process which found missing in online teaching. There are many other practical issues in online teaching at students end. Unavailability of resources like smart phones, tablets, basic infrastructure like electricity, un availability of technical knowledge and illiteracy are the challenges for online education for its smooth working. Students' involvement, concentration and sincerity are the problems from students' side which teachers has to solve. We could not find solutions for practical subjects in online teaching methods.

STATEMENT OF THE PROBLEM:

The closure of higher education institutions and schools during corona pandemic does not only affect students and their families, but also has a comprehensive impact on teachers and their teaching habits. This sudden change was not less than a disaster for teachers. Many teachers seem to be teaching without getting remunerations. The families of the teachers affected but the work of the teacher was going on. Teachers were left with the work without proper information and instructions. Most of the experienced teachers were not trained in online teaching methods and online teaching tools. During crises teachers also try to prepare students

cognitively, emotionally and practically to respond wisely, morally and skillfully. The major problem was infrastructure availability, either with the teachers or at the students end. There were many problems faced by the teachers with respect to their family. They are asked to take the lectures from their home. With joint families and managing the family members in small residential areas it was very difficult for the teachers to carry over the work. Technical knowledge and computer and connectivity issues were the major challenges in online lectures. Attendance of the students, interactions during lecture, learning habits, involvement in teaching learning process, self-assessment these are the important problem faced by the education sector in pandemic period. The ultimate effect of all these problems was on teachers. But 90% of the teachers came over the weaknesses and tried to change the threats into the opportunities. Thus, throughout the Covid-19 crisis, teachers have been on work with distance learning using various tools. More than 55% teachers responded that they are teaching from 1 hour to 3 hours and more than 41 % teachers are teaching more than 3 hours per day. So, the total work per day of the teachers does not get reduced.

Some major problems faced by the teachers during online teaching are-
- 83% teachers responded that the major problem in online teaching was not connectivity but the interaction with the students.
- 67% teachers faced connectivity issues, like problems in uploading and downloading, connecting to the videos and connecting different online tools that were used by the teachers.
- 27% teachers got problems in solving the technical issues faced by them during the lectures. Data connectivity, power failure, internet availability at the student's end were also the major problems faced by the teachers.

OBJECTIVE OF THE STUDY-
- To study the teaching methodologies adopted by the teachers for conducting online lectures.
- To study the availability of the infrastructure required for online lectures with teachers and technical knowhow of the teachers.
- To study teachers views regarding online teaching and its overall effects on teachers.
- To give suggestions for blended teaching learning process in future.

JUSTIFICATION OF THE OBJECTIVE-
The research survey will try to assess the online teaching and its effects on teachers. It will try to study different methodologies adopted by the different teachers according the requirement of subjects and curriculum. It has been seen that teachers have adopted online process either will self-training or through different webinars or with the help of social media. Survey shows that 84% of the teachers take the help of PPT presentation for the effective online teaching. It is observed that online lecture with PPT has created positive impact on student's involvement in the process. Survey also shows the result that 62% teachers approximately used lecture and whiteboard method. This method found to be convenient in practical subjects. 15% teachers took the help of online books pdf for the subjects. According to the research teachers tried all possible ways to create a learning atmosphere for the students and for the effective delivery of the lecture. The next important part of online teaching is technical infrastructure available with teachers, its knowledge and handling the issues related to the problem. Teachers learnt all these things with the own experiments or with the help of internet. Pandemic has made the teachers techno savvy in a very small period. 68% teachers faced connectivity issues where as only 9% teachers are lack of technical know-how. So it is proved that teacher have learned to solve the technical problems during online teaching. 78% teachers have used zoom app for lectures and 31% have used google meet for the same. So, majority of the teachers preferred zoom as its very easy, convenient and user friendly. The survey has clearly indicated that online teaching is less impressive than the classroom teaching. It also states that the preparatory time needed for online teaching is major as everything from teacher's brain need to be reflected in soft copy. Many teachers agreed that the load on the teachers has increased due to online teaching methods. The research will try to find out some suggestions on online teaching and offline teaching and the combination of both. Blended teaching is the new way of education life that may take the place of traditional teaching methods in future. Students, teachers and the whole education system has changed the way of teaching learning process during pandemic. It is observed that it will be very difficult to come back to traditional teaching in fact future education will welcome the blended teaching learning process. 56% teachers agreed that blended teaching will be the most preferred way in the near future.

STATEMENT OF HYPOTHESIS-

Hypothesis-
H0- Online teaching is not effective.

H1- Online teaching is effective.

Analysis of Primary data-
A questionnaire based surveys of about total 36 individuals were conducted through Google Form from degree college teachers who are conducting online lectures . Total 18 questions through google form were asked to 36 numbers of respondents.

FINDINGS & SUGGESTION-

<div align="center">

Finding no 1

</div>

How many hours you teach online per day ?

36 responses

- less than 1 hr
- 1Hr to 3 Hrs
- 3 hrs to 5 hrs
- more than 5 hrs

41.7%
55.6%
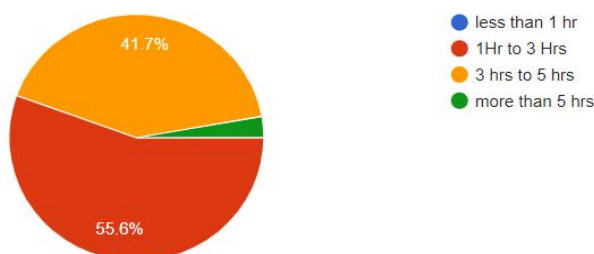
Suggestions
In total 36 responses, 56% approximately teachers are taking lecture for 3 hours. And 41% teachers were conducting the lectures more than 3 hours to 5 hours. The surveys clarifies that the load of the teachers has not decreased. Even for higher education no syllabus was changed or minimized by the university. Teachers used all their time and efforts to exert the maximum efforts for the lectures and the syllabus. It is also seen from the survey that teachers have worked all the day around as per the convenience of the students and even on the holidays. So, teachers worked full time along with the due efforts and did their job very efficiently.

<div align="center">

Finding no 2-

</div>

Which online mode do you use for teaching?

36 responses

| Platform	Responses
Zoom	29 (80.6%)
Microsoft Teams	3 (8.3%)
G-Meet	11 (30.6%)
WebEx	1 (2.8%)
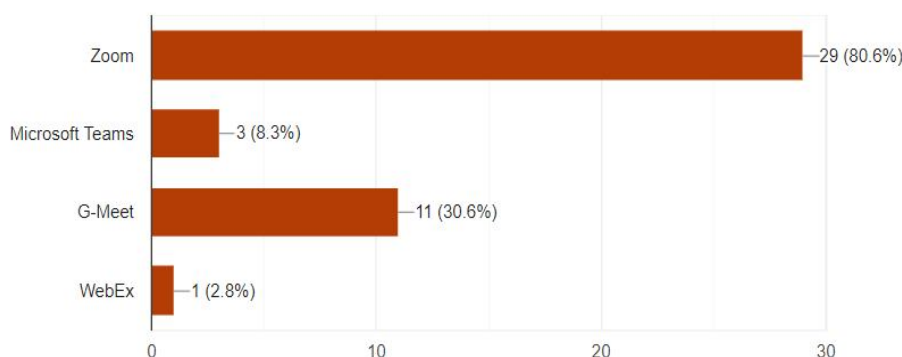
Suggestion-
The results clearly mentioned that 81% of the teachers have used zoom as a platform for online lectures. 30% of them used G-Meet and Microsoft teams and other were used very rarely by the teachers. We as teachers will also agree that zoom proved to be very easy and convenient platform for the lectures. It was very user friendly and not taking much space and data in the device. The major advantage of it is , that its free for first 40 minutes and it gives a facility of recording of the lectures.

Finding no 3-

Which methodology you have adopted in online teaching?
36 responses
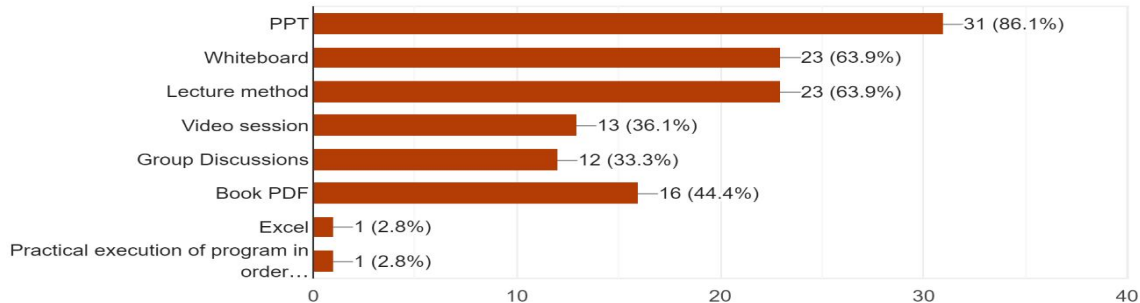
Suggestions –

This pandemic made traditional teachers as E-Teachers. We could see from the survey that 86% teachers took the lectures with PPT. It is also examined that teachers needed more preparatory time for preparing PPTs. They also need to learn many things for making the PPT effective, and informative. 63% teachers used white board and simple lecture methods. Video sessions also seem to be the major impact on online lectures with 36% contribution. Over all teachers used all possible methods to keep the students engage and interactive and keep this teaching learning process continued.

Finding no -4

Select your options-
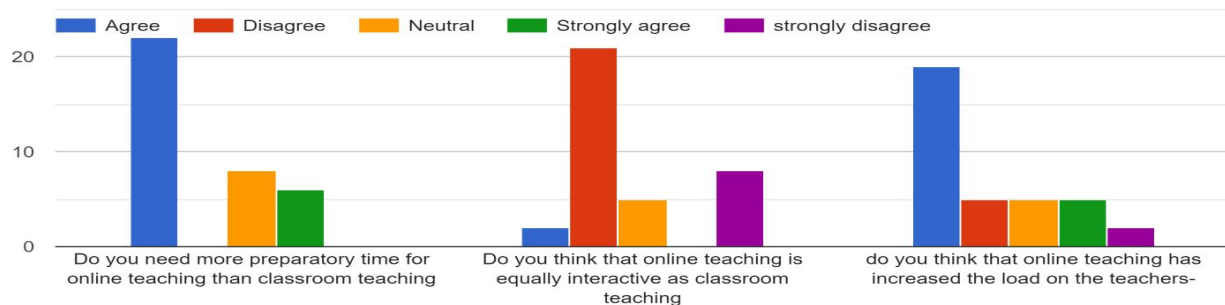
Suggestions

Major online teaching was conducted through PPT, but it took a lot of time of the teachers and it increases the overall load on the teachers. Most of the teachers agreed that Preparatory time was taken by the lectures was more than the traditional teaching, but the effect was also considerable with Presentations because of audio video visuals. Most of them agreed that the loads on teaching have increased at the considerable rate. With all these effects most of the teacher disagree that online teaching is interactive. It got effective with the tools like videos and audios but when it comes to interaction with the students then most of the teachers disagreed to the fact.

Findings no 5-

Select your option
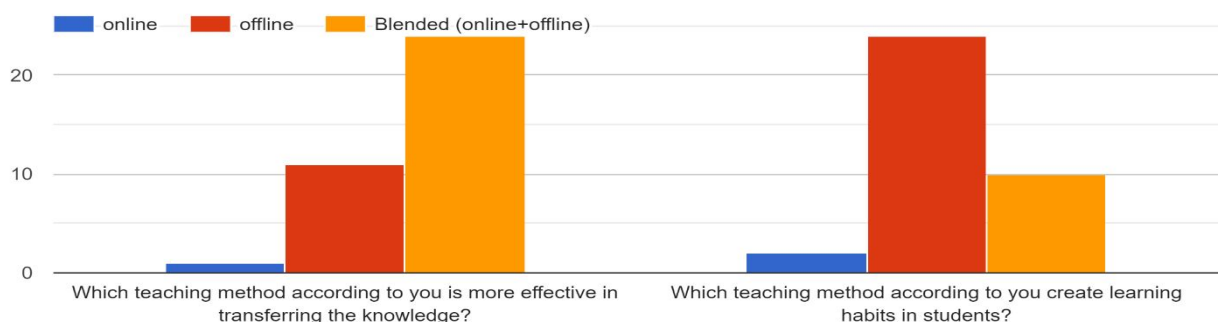
Suggestions

Blended teaching is the process of combination of all that is Online + offline teaching methods. When it comes to Transfer of knowledge point Most of the teachers have preferred blended teaching methods, but very few are supporting to online teaching. It is clearly seen from the graphs that teachers are more convenient with offline or blended teaching learning process. Maximum teachers responded to offline teaching for creating learning habits in students.

Finding no 6

Which things about online teaching do you feel works great for you–
36 responses
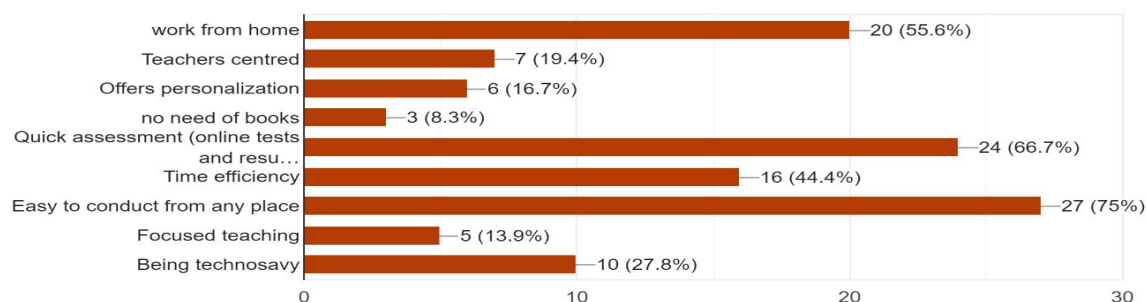
Suggestions

75% teachers felt online teaching convenient as it can be taken from any place. It gives a large place utility to the teachers. The positive out come of it is that teachers could take all 100% lectures at their end as there was no time bound also. Teachers are also happy for the quick and convenient assessment process in the online system. 55% teachers felt it great to have work from home concept even for the teaching field. This era also have opened new career doors for the upcoming talent.

Finding no 7

Will you prefer online teaching forever in future–
36 responses
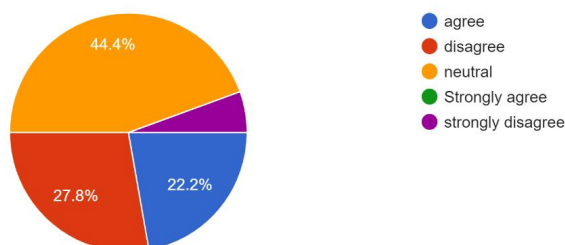
Suggestions

Survey mentioned that teachers are confused about the future education system. When they are asked that whether they will continue online teaching in future, 44% teachers are neutral on the question. Either they won't be deciding or they are confused about online offline teaching. 27% disagree where as 22% only agreed that they would like to teach online in future.

CONCLUSION-

Research indicates that teacher's perspective is positive for online teaching methods over traditional methodologies including better use of limited time and better access to courses and effectiveness of the teaching learning process. It will be welcome by the teachers for its unique feature of work from home and controllable from any place. Online teaching is also acceptable as its's a requirement of the new generation and the new education environment. But many teachers are in opinion that whole system transformation from offline to online will not be effective. Involvement of the students and creating learning habits in students would be difficult in online teaching methods. It is recommended to consider this situation as an opportunity for changing teachers' classroom practices and developing their knowledge and skills to be ready to engage effectively in online learning. More efforts should be given in teacher professional development by the higher education system. In survey, teacher gave different suggestions on online teaching methods, the suggestion are-

➤ Platform like Moodle can help teaching fraternity and students to become more interactive and participative over online platform if implemented and used at university/institute level.

➢ Offline teaching is always best compare to online through students and teachers perspective.

➢ Students should be good listeners and teachers should be good presenters for online teaching otherwise it is just the teacher who is speaking and there will be hiatus in learning and teaching.

➢ No any technology can replace the traditional teaching. But to move with digital era one should adapt blended teaching method

➢ Online teaching is future need. We have to prepare ourselves for the blended teaching learning methods .

SOURCES OF DATA COLLECTION-
• **Primary data**- Survey through questionnaires collected 50 samples from degree college teachers.

• **Secondary data**- Newspapers, Journals, Reports, educational magazines, Periodicals

REVIEW OF LITERATURE-
Different articles in Reader's Digest.

Research papers from Google Scholars.

Articles from Marathi magazine " shikshan sankarman"

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AN EMPIRICAL STUDY ON NATIONAL EDUCATION POLICY 2020 & HIGHER EDUCATION IN INDIA

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ABSTRACT

After 34 years, Union Cabinet of India announced its National Education Policy 2020 on the recommendations by an expert committee headed by Dr. Kasturirangan, Former chairman of the Indian Space Research Organization (ISRO), which was approved on 29 July 2020, outlines the vision of India's new education system by 2021. The policy is an extensive framework for school education to higher education as well as vocational training in both rural and urban India. The policy does not only change student education, but also the board and facilitators, thereby restructuring the whole system to focus more attention on learners based on access and equity, quality, affordability and accountability as pillars. Present study highlights the major changes in education system its implications, benefits after implementation of this policy.

Keywords: Higher education, NEP-2020, Distinguish NEP 1986 & NEP 2020 Future implications & Suggestions to NEP

INTRODUCTION

India's higher education system is the third largest in the world, next to the United States and China. The Parliament has established governing body at the tertiary level known as University Grants Commission, who advise govt., enforces its standards and act as link between the Central and the state. Ministry of HRD is now Ministry of Education India has change education policy after 34 years from 1986 to now 2020 whereas other countries changes its education policy dynamically.

As per record 2020, In India Total number of universities are 1000 , which includes central universities 54, 417 state universities, 124 deemed universities, 361 private universities, & Other Institute under State Legislature Act, and 159 Institutes at National Level which include IIMs, AIIMS, IITs, IIITs, IISERs and NITs.

- A New Education Policy aims to facilitate an inclusive, participatory and holistic approach, which takes into consideration field experiences, empirical research, stakeholder feedback, as well as lessons learned from best practices.

- It is a progressive shift towards a more scientific approach to education. The prescribed structure will help to cater the ability of the child – stages of cognitive development as well as social and physical awareness. This new structure can bring India towards leading countries of the world.

OBJECTIVES OF THE STUDY

- To show up and outline the policies of the higher education system that has just been accepted (NEP July 2020)

- Compare the current policy in India with the national Education Policy 1986

- Innovations identified in the new national policy for higher education 2020.

- To examine the benefits of advanced education Strategies of NEP 2020.

- To foresee the ramifications of NEP 2020 on the Indian advanced education framework.

METHODOLOGY

The data and information provided in the current study was compiled from various studies& analysis on the NEP 2020 prepared by education Analysist & national agencies. Information is obtained from different websites that are genuine. It has referred from journals and e-contents relating to the NEP 2020 & changing educational system.

Highlights of Education Policy 2020

- All higher education institutes excluding the medical and law colleges will be governed by a single regulator.

- MPhil courses will now be terminated.

- Board exams will now be more application and knowledge-based.

- Both the public and private higher education institutes will be governed under the same norms.

- To promote and give more emphasis on the regional language/mother-tongue, instruction medium up to class 5 will be in local/home languages.

- All entrance exams for higher education institutes and universities will be held commonly.

- School curriculum to focus more on core concepts.

- Vocational education will also be imparted from 6th grade onwards.

- 10+2 study culture discontinue and new structure of 5+3+3+4 will be followed, subjecting to the respective age group of 3-8, 8-11, 11-14 and 14-18 years

Difference of National Education policy 1986 & National Education policy 2020

- In NEP 1986 the role of education is the all-round development of students. Whereas NEP 2020 Objective is to provide Multidisciplinary &interdisciplinary liberal education.

- Earlier Common education structure of 10(5+3+2) +2+3+2 is followed. NEP 2020 is proposing Common education structure of 5+3+3+4+4+1 is suggested.

- Foundation stage begins at age of 6. In New policy 1st preliminary training begins at age of 3.

- Postgraduate education was two years with electives. One to two years' postgraduate education has more focus on specialization and research.

- In NEP 1986 Students have the freedom to select subjects throughout their field of study. In NEP 2020 Students have the free choice of subjects outside their field of study.

Implications of NEP 2020 on Education System:

- Cleaning of Education system :

Merit-based & eligible leaders will be appointed at of Institutional having in Research & Innovations unlike the current system. Minimum eligibility to be appointed is minimum of 5 author scholarly publications or patents during the last five years to become institutional leaders like Chancellors, Chairman, and Director etc.

- Changing Single discipline colleges into a multi-disciplinary autonomous degree Colleges :

This will once more facilitate to decrease corruption and lobbies in faculties. Several Colleges are not able to make their own courses, controlled as they're by rigid government official's norms of the affiliating University. All this deeply undermines the principle of native governance and also the native pursuit of innovation and excellence. This should be self-addressed with urgency. This helps to develops accountable Heads to works in HE administration & research in order that they will build higher innovations in impartation higher academic services.

- Research at Bachelor & Master levels :

This allows students and college members to suppose creatively confidently to propose and do new things leading to novelty.

- Highly educated Board of Governors (Bog) to avoid misuse of power by people :

Every autonomous establishment is predicted to for a lavatory having extremely qualified, competent, and dedicated people UN agency have tested capabilities and a powerful sense of commitment to the establishment.

- Single Regulator for entire HEIs :

National Higher Education Regulatory Authority (NHERA) one HEIs regulator setup results in effective regulation of monetary integrity of HEIs, governance, open revelation of financials,

- Free ship will caused to more Private Universities than Public Universities

Bright and intelligent students no matter their economic standing, religion, gender, can get the chance to learn in private HEIs with free ship & scholar ship   freed resulting in mobilization of intelligent and self-motivated students resulting in overcrowding of merit able students in private Universities.

- Alteration of Public/Government Colleges:

Major Modification in processes: (a) the affiliated public/government colleges will be multi-disciplinary and progress their intake capacity of annual admission 3,000 or a lot of students ,can become autonomous college. (b) Small colleges with less resources can transform into constituent faculty of affiliating university and receive mentorship can receive support to provide quality education.

- Transformation of personal faculties:

Three doable of Transformation: (a) The non-public sector faculties will eventually expand in terms of their resources and quality of education and reaches a predefined enfranchisement standing to become Autonomous Degree giving faculty,(b) Some colleges with one or 2 disciplines and haven't any scope of enlargement to admit 3,000 or a lot of students can be a part of with similar (same management or same religion) faculties in this region and should become a gaggle of schools or a cluster and remodel themselves into a degree giving Autonomous faculty, (c) The non-public faculties that cannot type cluster or a part of a gaggle and fail to succeed in the pre-defined enfranchisement standing can eventually close their operation as delineated in figure one.

Features of National Education Policy 2020

- Student Centric Model :

The Present Model was institution set which is teacher centric who choses subjects, curriculum, evaluation, etc. now it replaced with student centric model where student has right to choose the subject he has to study from the institution, SWYAM MOOC, and from ODL and he can appear for competency based evaluation in his own pace. Thus, the higher education section of NEP-2020 replaces teacher centric education system to student centric system

- Integrated Controlling & Monitoring System :

As per NEP-2020, the first 10 years from 2021 to 2030 is the implementation period and the next 10 years from 2030 to 2040 is the operational period. The implementation process is divided into seven stages

(1) Implementation of spirit and intent of the policy

(2) Implementation of policy initiatives in a phased manner

(3) Prioritization and sequencing of policy points

- Competency based Continuous Evaluation system:

As against current credit system on choice based, proposed competency-based credit system has benefit of evaluating skill sets of a student with knowledge and experience. Competency develops confidence and aim of higher education system is building confidence to identify threats, challenges and transform them into opportunities to cure problems in the society.

- Research & Innovation Focused:

The objective of higher education is to create new knowledge or a new interpretation of existing knowledge through systematic analysis. It will cure all problems of the society optimally. To focus on new innovative solutions, higher education must create new intellectual property by involving research and innovations as a most important part of its system. The higher education policies of NEP-2020 transforms the HE system from information centric to creative knowledge Centric.

- Selection on Meritious students & Professors :

NEP 2020 stresses on merit based admission by giving importance to social justice. It also comments that the quality of higher education and research can be improved only if all faculty selections and promotions are merit based. All kinds of reservations and lobbies should be curbed at individual institution level by means of appointing highly qualified and proven leaders as members of the Board of Governors. It stressed on merit-based appointments at all central & state policy formulating and regulating levels of HE Councils .

- Increase of online training:

The use in the effective implementation of education in 21st century of the information communication and computer technology (ICCT), including education, Internet technology, artificial intelligence, virtual reality etc. Modern technology helps to plan and design efficient online education in order to realise the characteristics of the ideal training system and improve GER. In the 21st century, technology-led education is expected to replace

classroom education and the NEP-2020 policies that lay the foundation but also promote classroom-based education, credit goes to improved tech generations.

SUGGESTIONS

1. Universities should have their own Publication Unit:

At HEIs level, publication or patent is the objective of academic research, but faculties are losing interest in research because the process of scholarly publication or to own a patent is t much time and expenses or loss of copyright to international publishers without any financial gain. Solution for such problem, all Universities must start their own digital publication units in a systematic way to help researchers in publishing high quality research and sharing with global indexing agencies which in turn will reduce few university publication model journals which follow unethical process of publication.

Three modes of teaching–learning method is needed in HEIs:

The use of technology by HEIs should be maximized, and the brick and mortar paradigm of the campus-based teaching-learning process should be minimized. To attract tech-generation students to online education, HEIs can use technology-based training methods such as (a) weekly three-day classroom-based classes, (b) weekly two-day online classes, (c) weekly one-day industry/vocational/skill-based online/classroom-based classes, and (d) two subjects per semester through MOOCs such as SWAYAM/NPTEL, ODL, and others.

3. Vocational Training based Earn while Learn Encouragement-

Once students reach age 18 years, they should be motivate to learn skill in their interested field & get involved with kinds of economic & productive activities & become independent. It will happen through vocational training & Personality development & building self-confidence learn & earn programmers.

4. Compulsory Employability & Entrepreneurship connected papers in each term to promote Employability & Entrepreneur ability in student's minds

The subjects at UG level must be redesigned as according to the employability skills and entrepreneur ability skills apart from offering specializations i.e. marketing, finance, IT etc. Assessment of such subjects should not be traditional way conducting semester end exam instead there must be continuous internal assessment. This new model boost confidence to students to choose an entrepreneur career.

5. Role Models in Research Innovations at Higher Education Board:

The selection of heads & members of all Committees at HE Departments by controlling agencies must be based on their active research contribution during the last 5 years. Obsolete deadwood professors/bureaucrats should be kept outside from decision making positions strictly. Political interference must be avoided to these committees & performance is given on criteria. Accordingly, various committees like NHERC, NAAC, HEGC, GEC, HECI, National Research Foundation, ICAR, VCI, NCTE, CoA, NCVET, etc. would have qualified and proven research scholars who are role models for young researchers and active research.

CONCLUSION

Higher education is a crucial to decide the economy, position, technology adoption, and healthy human behavior in each country. Gross Enrolment Ratio incorporate each subject of the country in educational activity offerings is that the responsibility of the Education Department of the country government. National Education Policy of Republic of India 2020 is walking towards achieving such objective by creating innovative policies to enhance the standard, attractiveness, affordability, and increasing the provision by gap up the upper education for the non-public sector and at a similar time with strict controls to keep up quality in each educational activity establishment. By encouraging merit-based admissions with free-ships& scholarships, benefit & analysis primarily based continuous performers as school members, and benefit primarily based verified leaders in control bodies, and strict watching of quality through biennial certification supported self-declaration of progress through technology-based watching, NEP-2020 is anticipated to meet its objectives by 2030. All educational activity establishments with current terminology of related to schools can expand as multi-disciplinary autonomous schools with degree giving power in their name or becomes constituent schools of their related to universities. National analysis Foundation provides fund for new research areas of basic sciences, applied sciences, and social sciences & humanities. HE system can rework itself as student centrically with the liberty to select on core and allied subjects inside a discipline and across disciplines. School members additionally get autonomy to settle on programmer, methodology, pedagogy and analysis models inside the given policy framework. These transformations can begin from the educational year 2021-22 and can continue till the year 2030 wherever the primary level of transformation is anticipated to visible. Hence, the Indian

educational activity system is moving from teacher centrically to student centrically, info centrically to information centric, marks centric to skills centric, examination centric to experimental centric, learning centric to Research centric, and selection centric to competency centric.

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AN OVERVIEW OF CRYPTOCURRENCY IN INDIA WITH SPECIAL REFERENCE TO BITCOIN

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ABSTRACT

Cryptocurrency is a digital or virtual or internet currency Which use cryptography for security. Cryptocurrency has created unmatched changes in the financial market having both positive and negative contributions. The concept of cryptocurrency is a little tough to accept, but it is easy to use. It has turned out to be a new avenue of investment instrument in India similar to gold. Even though the government hasn't formulated any regulatory body or legislation with regards to cryptocurrency trading and transaction in India, the government restricts the buy and sell of cryptocurrencies like Bitcoin, Litcoin, Ethereum, Ripple, etc. Bitcoin is a decentralized virtual cryptocurrency which solve double spending problem without including any trusted third-party intermediary. Bitcoin is in form of digital code which is hidden in "data blocks" and could be mined by cracking those data blocks. It permits the transactions to be performed without any centralized banking system. It was started by Satoshi Nakomoto in 2009. Lots of research has been done in this field but that is just a drop in an ocean and there is still a lot to achieve. Limited number of published literatures creates a demand for further research in this area. This study focuses on understanding what cryptocurrency is all about and the legal status of cryptocurrency in India with special reference to Bitcoin.

Keyword: Cryptocurrency, Bitcoin, Mining blockchain, Status of bitcoin in India.

I. INTRODUCTION

Cryptocurrency is a form digital coin money of a country which is recognized electronically in which methods are accepted for encoding and are recycled to manage the whole of created money and it is also helpful to check the transaction of cash which are performing its function freely and without any restrictions of a central bank. As world is full of technological advancements, cryptocurrency is becoming easier for investors who values privacy and creation of money. In recent days cryptocurrencies like Bitcoin, Ethereum, Ripple, Litcoin etc. are trending within financial market as many investors are showing interest in buying cryptocurrencies. On the other side, there are a greater population at a confused state of mind with regards to the overall performance of cryptocurrency. The main problem to use these cryptocurrencies is its safety contention. These digital coins are not that much secure as the people think they are. Another difficulty faced by many people is the variation problem of the currency as it is uncertain. Bitcoin was the first decentralized cryptocurrency introduced in the year 2009. Cryptocurrency doesn't form any physical form as it is totally in a digital value on the web. These digital values can be used as cash equivalent for transactions and other business. Cryptocurrency doesn't rely on the financial institutional regulations but are encrypted and protected which makes it difficult to increase the supply of money over a predefined algorithm rate. Cryptocurrency charges fee at a minimum rate as compare to the fee charged by a financial institution for the processing of a credit card. contention

II. OBJECTIVES OF THE STUDY

- To understand the concept of cryptocurrency and different types of cryptocurrency.

- To understand the concept of Bitcoin and its working mechanism.

- To study the present status of cryptocurrency in India with special reference to Bitcoin.

III. RESEARCH METHODOLOGY

This paper is purely based on secondary data referring to various sources such as journals, newspaper Articles and websites.

IV. CRYPTOCURRENCY IN INDIA

Cryptocurrency is the completely decentralized payment system using a well-defined network. It is technical concepts that form the basis of digital payment ecosystem. This technology mainly includes cryptography, public key, private key, the blockchain, mathematical function. The various form cryptocurrencies are used to transfer value among its users primarily via the internet, however other transference networks can also be used. The whole ecosystem of cryptocurrency is developed in the open-source environment. These open-source programs can be run and maintained on a wide variety of computer and mobile devices.

The impact is of cryptocurrencies on the Indian economy is clearly depicted as the prices of cryptocurrency market are now falling down. Indian government had made it clear with their stand that not providing a legal status to cryptocurrency in India. The reason for behind this decision from government that, the challenge of

monitoring the decentralized transactions in cryptocurrencies are difficult to trace which could be advantageous for the hackers, criminals and also for terrorist activities. Cryptocurrency like Bitcoin has become popular in India like other nations as the volume of Indian rupee being traded in cryptocurrency have been at the highest post demonetization. Researches shows that the volume generated by the rupee dominated cryptocurrency is the third largest volume traded after American dollar and yen. The demonetization policy of 2016 may have encouraged the implementation of cryptocurrencies amongst a substantial share of the population but realities rapidly began to come out that have subdued the growth of the market in the country. In spite of its enormous population, India only contributes two percent of the whole global cryptocurrency market capitalization.

V. TYPES OF CRYPTOCURRENCY

Cryptocurrency is designed to work as a medium of exchange in digital form. Lots of cryptocurrencies are available over the internet. A new cryptocurrency can be created at any time as cryptocurrency growing faster.

1) Bitcoin (BTC)

Bitcoin is one of the most commonly known digital currencies and is considered an original cryptocurrency. It was introduced in 2009 as an open-source software. Bitcoin allows users to make transparent peer-to-peer transactions by using blockchain technology. All users of bitcoin can view these transactions as they are secured through the algorithm within the blockchain but only the owner of that Bitcoin can decode it by using "private key" which is given to each owner.

2) Litecoin (LTC)

Litecoin was introduced in October 2011 as an alternative to Bitcoin. Like other cryptocurrencies, Litecoin is a peer-to-peer cryptocurrency and open source-source software project released under the MIT/X11 license. Its creation and transfer is based on an open source cryptographic protocol and it is completely decentralized. There is difference between Litecoin and Bitcoin in many ways. Experts says that Litecoin are more complicated to create and more expensive to produce because it uses different algorithm called scrypt and FPGA (Field Programable Gate Array) and ASIC (Application Specific Integrated Circuit) devices made for mining

3) Ethereum (ETH)

Ethereum is a type of cryptocurrency which was proposed in late 2013 by Vitalik Buterin, a crypto currency researcher and programmer. It was initially released on July 2015. It is an open-source platform based on blockchain technology. While tracking ownership of digital currency transactions, Ethereum blockchain also focuses on running the programming code of any decentralized application, allowing it to be used by application developers to pay for transaction fees and services on the Ethereum network.

4) Ripple (XRP)

Ripple is a real-time gross settlement system, currency exchange and remittance network created by Ripple Labs Incorporation, a US based company. Ripple was introduced in 2012 that acts as both a cryptocurrency and a digital payment network for financial transactions. It's a worldwide settlement network that is designed to create a fast, secure and low-cost method of transferring money. Ripple allows for any type of currency to be exchanged, from USD and Bitcoin to gold and EUR and connects to banks, unlike other currencies. Ripple is different from other types of digital currencies because its primary focus is not for person-to-person transactions, rather for moving sums of money on a larger scale.

5) Bitcoin Cash

Bitcoin Cash is a type of digital currency that was created to improve certain features of Bitcoin. In Bitcoin Cash the size of blocks increased as compare to Bitcoin, it also allowing more transactions to be processed faster.

6) Ethereum Classic

Ethereum Classic is a new version of the Ethereum blockchain which runs smart contracts on a similar decentralized platform. Smart contracts are applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interface. Like Ethereum, it provides a value token called "classic ether" which is used to pay users for products or services

VI. INTRODUCTION OF BITCOIN

One of the most popular cryptocurrency wallet using is Bitcoin which was invented by an unknown person or group of people using the name Satoshi Nakamoto in 2008. Bitcoin is a cryptocurrency, in a form of decentralized digital currency that can be transfer from user to user on the peer-to-peer. Bitcoin network without the need for intermediaries, where transactions happen through a public ledger called blockchain, handling

users' data anonymously. Ten years since its introduction, Bitcoin is today the most widely used and accepted digital currency. Even though Bitcoin is commonly referred to as a cryptocurrency, Nakatamo himself referred to it as "a system for electronic transactions without relying on trust". Other electronic payments require a trusted intermediary, such as bank or electronic unit, in order to verify a transaction. Instead of relying on a single trusted intermediary, like a bank or a credit card network to transmit and verify transaction, the Bitcoin system relies upon a large number of competing "miners" to verify transactions. Bitcoin regulate and generate units of currency through the rules of cryptography. The transaction fees of Bitcoin transaction are comparatively less than transaction fees of traditional online payment mechanisms. Bitcoins are totally in virtual coins form designed to be self-contained for their value. Bitcoins are not physically present it is in digital form, so that only balances are kept on a public wallet in the cloud. It can be move or store without need of bank. All Bitcoin transaction is verified by a massive amount of computing power. A personal database that you can store on your computer drive, on your smart phone, on your tablet or somewhere in the cloud is referred as wallet. Bitcoins are sent from one personal wallet to another.

Features of Bitcoin

The Bitcoin is not only protocol which allow to send money from one person to another but also it has many features that make it different from other cryptocurrencies.

- **Control against fraud:** It provides users with top level of protection against most common frauds like charge backs or unwanted charges. There is no chance of any type of Fraud because only users can encrypt their wallet and have complete control over their money.

- **Globally accessible:** Bitcoin allows any bank, business or individual to securely send and receive payments anywhere at any time in few minutes. All types of Payments in the world are acceptable.

- **Cost efficient:** With Bitcoin transactions can be possible directly without any mid person. The transaction fees as well as time is much less as compare to other payment system.

- **Transparency:** All Bitcoin transactions are public and transparent to all users. The Block chain stores all transaction details. Where user can any time verify.

VII. WORKING MECHANISM OF BITCOIN

Individuals can use Bitcoins to make payments to other individuals or merchants without involving a third party, like a bank or financial institution, for the purpose of validation. Transactions are cleared and validated within the system through the blockchain. Most cryptocurrencies are based on blockchain technology. In simple words, it is a system to transfer and store data or information which is generated while transacting in a cryptocurrency. The blockchain is a public ledger that records and publicly displays all Bitcoin transactions which have been executed within the Bitcoin system. A block is a permanent record of recent transactions in Bitcoin. The blocks of recorded data build upon each other to form the blockchain which dates all the way back to the first Bitcoin transaction. The transparency established by the blockchain is essential in securing the validation process as it allows the community to monitor and self-police transaction activity. It also allows for verification of both the spender and the recipient and ensures that double-spending a Bitcoin is not possible.

When one creates a Bitcoin wallet to store Bitcoin, the person will receive a public key and a private key. Public keys and private keys are a set of long numbers and letters; they are like his/her username and password. People require their public key of if they want to send money to them. Because it is just a set of numbers and digits code, nobody needs to know their identity i.e name or email address etc. This makes Bitcoin's users anonymous. But the private key is not disclosed. On the blockchain, private key is one's identity. Private key is used to access the Bitcoin. If it is disclosed to someone then they can steal all the Bitcoins in the account or wallet.

There are two ways to get/earn bitcoins:

Mining	Exchange
1. Bitcoins are hidden in various data blocks, which can be extracted by applying various complex algorithms known as mining. Various software are available in market to mine bitcoins.	1. If a person does not know mining of bitcoins, he can directly exchange the bitcoins from someone who already has bitcoins.
2. Rewards are given if those hidden blocks are discovered, it is 25BTC for one block and it can be max up to 21 million in a system.	2. Now exchange can be done by Either, giving them money or, offering them service.

When a sender enters a key (which can either be in the form of PIN or password) which is private, it validates the user and connects it to the network, in which a public ledger named block chain records are the transactions happened (refer Figure1). Thus, by entering addresses you can pay to anyone in the server.

VIII. LEGAL STATUS OF BITCOIN IN INDIA

The legal status of Bitcoin and related crypto instruments varies substantially from country to country and is still undefined or changing in many of them. Bitcoin are totally banned and transactions based on Bitcoin are illegal in countries like Nepal, China, Pakistan, Taiwan, Cambodia, Indonesia, Bangladesh, Iran, Saidi Arabia, Colombia, Ecuador, Bolivia, Egypt, Morocco and Algeria.

But in India, Canada, Jordan, Vietnam and Thailand Bitcoin is legal but there is a banking ban imposed. Bitcoins has been available in India since 2012. On 1 February 2018, Finance minister Arun Jaitley, in his budget speech stated that the government will do everything to discontinue the use of Bitcoin and other virtual currencies in India for criminal uses. He reiterated that India does not recognize them as legal tender and will instead encourage blockchain technology in payment systems. According to the Indian government instruction that is people who are using these types of digital currencies should take certain precaution because there is no lawful protection for these currencies and no help can be provided from the government side if some fraud is faced by the user of such currencies.

In early 2018 the Reserve Bank of India (RBI) imposed a ban on the transaction of cryptocurrency for entities regulated by RBI. In 2019, a petition has been filed with the Supreme Court of India challenging the legality aspects of cryptocurrencies and seeking a direction or order restraining their transaction. The Indian government is drafting the regulatory framework for cryptocurrencies. On February 25, the Supreme Court gave the government four weeks to come up with crypto regulation.

In March 2020, India's Supreme Court struck down a 2018 order by the central bank restricting banks from dealing in cryptocurrencies, prompting investors to pile into the market. The court ordered the government to take a position and draft a law on the matter.

In 2021, the government introduced the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 during the Budget session of Parliament. RBI also suggested that it plans to bring a digital version of the Indian Rupee and "was exploring the possibility as to whether there was a need for a digital version of fiat currency, and in case there was then how to operationalize it." The Finance Minister further clarified government's stance against crypto-currency with her reply in the Rajya Sabha. "A high-level Inter-Ministerial Committee (IMC) constituted under the Chairmanship of Secretary (Economic Affairs) to study the issues related to virtual currencies and propose specific actions to be taken in the matter recommended in its report that all private cryptocurrencies, except any virtual currencies issued by state, will be prohibited in India,"

IX. CONCLUSION

Crypto-currency is such an invention which has become popular worldwide. Earlier RBI imposed ban on using cryptocurrency in India as that to be associated with money laundering and terrorist financing activities. However, cryptocurrency is a modern technology and a tool which needs to look forward for. Cryptocurrency especially Bitcoin offers a brand new, effective, fastest and attractive model of payment methods that can boost companies and operators' revenues. It also provides substitute method of payment, apart from real money, which can be used to make financial activities such as buying, selling, transferring and exchanging easily. Cryptocurrency brough positive changes to e-Business and e-Payment sector. However, cryptocurrency doesn't get that much of trust yet as many concerns, challenges and issues are existing in many cryptocurrency platforms. Until cryptocurrency is being well regulated and controlled, users need to take extra precautions of

using such digital currency. So, the lack of legislations is considered as the main concern in cryptocurrency systems.

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CHANGE IN SCHOOL WORKING DAYS FOR THE STUDENTS WHO WORK

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ABSTRACT

Best time of a person from his entire life is his school life were he enjoy all his moment with happiness and joy. Fact of the current time is that around 15 crore children have not got this facility even though we have so many programme by our Indian Government. One of the reason for such situation is the financial crises. India being the fastest growing economy in the world has two third of the people living in poverty. As larger amount of Indian population is under poverty, people don't have facility to eat, to sleep nor even shelters to live, so the condition for children going to school is still a big question. Public school are working on it with all efforts and scheme where education is compulsory for children under the age group of 14 years. There should be some reform in school working timing to overcome a part of it. School should be started on Saturday and Sunday so that atleast such students who want to attain school but because of home financial problem are unable to go to school can attain the school atleast for 2 days in a week. Change in school timing is also important as students can prefer their time for going to school. Development of India purely depends of youth which is directly depended on their education.

Keywords: school working days, school timing

INTRODUCTION

Economic condition of India is growing on a faster rate, but still around 69% of Indian population don't have 150 rupees to spend for food for 2 days. India rank 102 out of 117 countries in hunger index. Even the first two goal of **Sustainable Development Goals** of India is for **No Poverty** and **No Hunger** respectively. According to NSO (National Statistical Office) report female students pursing education in tenth standard is just around 8%.

Statistics depicts that India's population under the age group of 0-14 year category is 26.62% according to 2019. India has highest number of young population with 67% lying in the age group of 15-64 age group. India being on top list leaving behind China in youth population then to literacy rate is very low in India by 69.1%. Problem for this situation is, students don't go to school either they don't like going to school or they are encircled by financial condition. Some other reasons might occur but the critical situation is the financial crises the students faces. Government has taken many initiatives regarding for such situation such as Right of Children to Free and Compulsory Education (RTE) Act, 2009, Sarva Shiksha Abhiyan programme for improving school infrastructure, Rashtriya Avishkar Abhiyan for improving secondary education, and many more.

Government is taking many steps, initiative to attract students to go to school, but still there is a lack of its full implementation as students are either taking back step or not going to school. So some more reforms are needed to attract students to school. We can't say that government is not taking proper step but yes there is some interstice in current system. Count of public schools are more compared to private schools, where teacher ratio is 16.2 and 11.9 at public school and private school respectively. Primary education in India for children between six and fourteen years have made mandatory by Indian Law. Midday meal scheme called as National Programme of Nutritional Support to Primary Education (NP-NSPE) was initiated by GOI on 1995 to attract students and also to decrease the ratio of hunger and malnutrition.

NEED OF SCHOOL REFORMS:

Children going to school are very less as compared with total population, reasons is just not the difference between studies of public school and private school, one of the major reason is financial crises. Government has provided all the needed measurement in public school but they still lack in attracting students because people fell working is better than going to school. Most of the people migrate to new places in search of job, but they leave behind the dreams of their child. They take off their child from school but don't send them in new school. There should be a proper tracking mechanism for such children.

Peoples do work for 7 days of week, they are want their child to work as it may help them for having a meal for a day. So if the schools are working on Saturdays and Sundays i.e. on weekends it will attract lots of children toward the school. It is totally illegal if a child under the age of 12 years is working, but there arise a exception from their families to go against it, due to may reasons.

Total population of children in India accounts for approximately **48 crore** in the age group of 0-14 years.15 lakh schools are there and only **25 crore** children are going to schools. There is a very large gap between total

population of children and their ratio of going to school. There is definitely some problem because of which children prefer not to go to school even with the facility public school gives.

OBJECTIVE:
- To implement changes in school working days for the students working due to financial crises.

RESEARCH METHODOLOGY:
Google forms is a cloud based data management for analysing and depicting the outcome of collected data. It store the data that are basically question aired, so analysing of data becomes easy. It becomes easy to analyse the data using google forms since output is provided in pie charts, linear scale.

Quantitative methods as well as qualitative methods is adapted for getting the best come. Reason for adapting both the method is, many of time responders just tick even not having the knowledge of it, or just go on ticking randomly due to shortage of time. Survey was taken as it becomes impossible to go to each and every door.

FINDINGS:
Survey was taken for the students under the age group of 16 years, where they were asked about who do they feel for going to schools even on Saturday and Sunday. They were asked, for the financial crises they do have or not. Have students faced any problem in going to school because of financial problem was the major concern of this survey.

Survey specifies that around 65% of students want to work either because of financial issue, or because they want to explore the new things or want to gain practical knowledge of their field. Figure 1.1 shows how many percentage of students want to work.
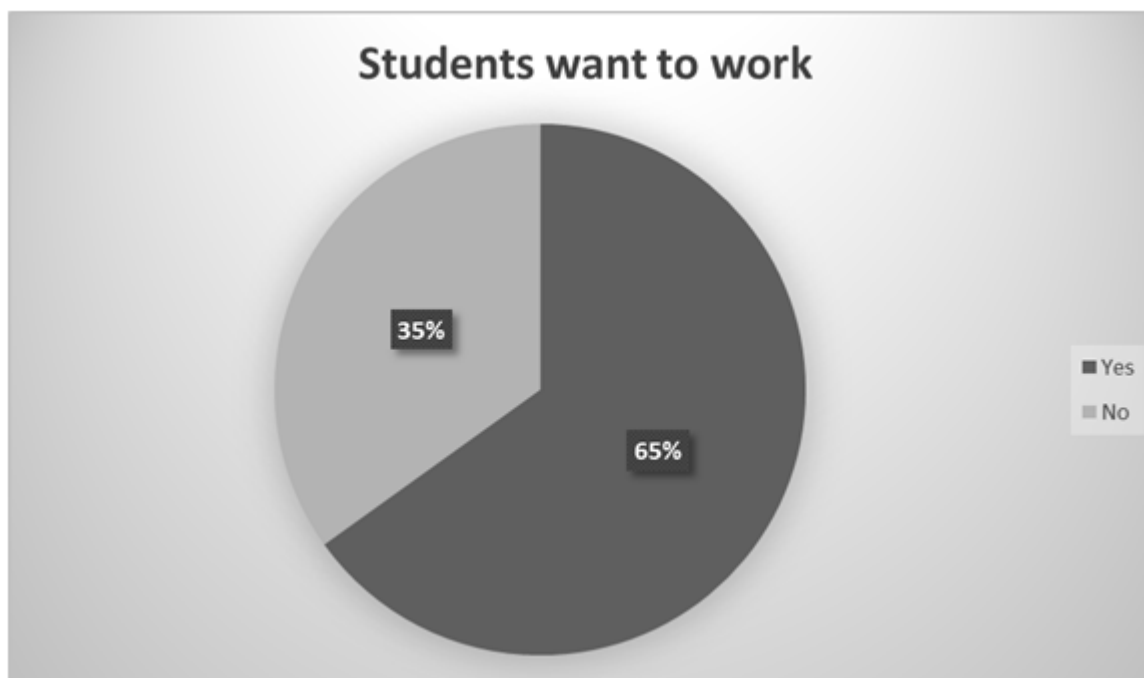
Most of the students want to work to support the family, this clearly specifies that children are aware of the financial problem they have and they really want to help their family even by working and going to school. It's not for only for public or private school, students belonging to any school or from any area they want to support their family ultimately.

Students also want to learn new things of their interest, as this will also attract number of students towards school.

65.1% replied that they want to work because of financial issue.

71.4% replied that they can come to school even on Saturday and Sunday.

LIMITATION:
Large reform will be required as keeping the syllabus same for all standard and teaching them in two days i.e. on Saturday and Sunday will be a tedious work. Collecting the data of such children will be first step towards the reform and the first step towards the major concern.

SUGGESTIONS:

Government should take a proper measure of all child who have born and how many of them are going to school. The day can be collected by the teachers of that locality, as if school will not work it will indirectly effect their job. Government can also take the help of NGO (Non-Governmental Organizations) for keeping the track of child going to school and also of those who are not going to school for what reasons. Small students can also be attracted by giving them new uniform for free to wear as most of the children loves wearing new uniform.

CONCLUSION:

The best life a person has is his childhood. School life the best life we all definitely had it, buy knowing this thing and also working on it, school should have some more reforms. One of the reform should be to start the schools on weekends. Students will definitely come even though they work. NGO's proper functioning will help in keeping the track of such children and also some useful measures will be provided by them.

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IMPACT OF COVID-19 ON DIGITAL MARKETING

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ABSTRACT

Across the globe the COVID-19 pandemic and resultant lockdowns have dramatically modified the everyday behavior of billions of individuals. It's had a specific impact on digital channels, with individual shifts to online provided that several outlets are and consumers are forced to remain at home. This paper presents how the coronavirus has mpact digital marketing and what we think businesses should do to embrace this impact. Also will be able to know how to better handle digital marketing business operations in the face of uncertainty and have a steady grip over your business.

Keywords: digital marketing, covid 19, pandemic, internet, Brand presence, online stores, voice search;

INTRODUCTION

Most people at the side of the industries we tend to feel a powerful sense of disruption in our work and social lives due to the onset of covid 19. This invisible enemy single-handed forced the globe economies to put together try to perceive what's progressing to happen next. The fact is that because of the disruption caused by novel coronavirus, we've undergone a lot of digital transformation within the last one year than we've seen within the last 20 years.

Digital transformation has always made sense but its adoption by the business owners has been slow especially by those people who are still dealing with some of the overwhelming concepts of the conventional industry. However now the advent of novel coronavirus changes the game. The business needs now are compelling and urgent enough that those who fail to transform their business will likely risk a considerable loss of revenue and may even risk becoming uncompetitive and obsolete. This is the right time for all businesses worldwide whether big or small to embrace digital twin automation robotics, additive manufacturing and artificial intelligence as technology building blocks and divine deep into the world of digital marketing.

What is digital marketing?

Digital marketing is the promoting of products over the net or any form of electronic media.

People consume digital content on a routine. Eg: Earlier we would read all the news over the newspaper. However since we've got smartphones, we've got tablets, everything is bound to online activity. So, ancient platforms will disappear by commutating it with a digital market, which will completely take over the business very soon.

Evolution of Digital Marketing:

This was first used in the early 1970's wherever a programmer called Ray Tomlinson sent the first email and through this it has been established that we are able to communicate with machines. Digital marketing created a revolutionary in the field of marketing. As the range of users increased the landscape evolved from emails to search engines like Archie, Yahoo, Google, and E-commerce sites like Amazon, Ebay and many more. History of digital mating started in the year 1990. This was once the term digital marketing was first used in the launch of Archie first search engine. This is how Digital marketing took mainstream one by one year by year.

Needs:

Marketing has a lot of options. It is always associated with the strategies related to it and also you'll get artistic, creative and experiment with every little aspect of the marketing campaign. When we compare with traditional marketing, this is impossible; the task which we can complete online cannot be done with the help of traditional marketing. Traditional marketing forms would be printing ads, phone communication and additionally physical marketing. If we want to begin a business and wish to promote it, we cannot head to everyone's house, knock on their doors and tell them I'm going to begin a project or I am going to work on this. Would you please help me do it? So one platform where we can actually out across our views or ideas, what we are going to do is digital marketing.

OBJECTIVE:

- To know about digital marketing.

- To the effects caused by covid 19 pandemic on digital marketing

- To study the sudden changes in the digital era due to covid 19 crisis.

- To analyze different trends to enhance businesses through digital marketing.

METHODOLOGY

The study is based on content analysis. Research has been done through a variety of resources by collecting different information from newspapers, websites, articles, reports, journals and books. A secondary data has been taken to study the impact of COVID-19 on Digital Marketing.

FINDINGS:

Pandemic has a multiple impact on selling discipline and different strategies have been applied to aim to define and reach higher requirements and preferences of the audiences. Through this paper you can learn new trends which are being followed and will increase more to communicate directly with customers and maintain their businesses.

Major visible paradigm shifts that we are noticing and the way we are able to leverage these trends as an individual or as an organization:

1. The first aspect is that rise in internet consumption levels. Are you finding yourself a lot more online these days, well you are not alone. With the majority of the countries being in lockdown and or quarantined the overall internet consumption of the world has been rising since February 2020. This means more people than ever before are coming online each day which means more businesses than before are opening online each day to cater these people and yes you guessed it right these businesses are now attracting more audience online each day.

2. The second trend talks about the importance of maintaining a brand presence. Have you ever stumbled upon any advertisement lately which did not focus on promoting their products' services but just wished you the best of health? That's what's called maintaining a brand presence. World-renowned motivation; speaker Zig-Ziglar used to say you don't build a business you build people and then they build the business. Not every user comes online to buy stuff. It is time for businesses to establish goodwill and create a positive aura through SEO practices and social media marketing as people are buying less and just surfing the internet more. Consider for e.g. the marketing strategy of "HDFC bank" in the wake of the covid 19 pandemic, the Indian bank brought on board composer A. R. Rahman created an online campaign to pay tribute to the indomitable spirit of India. Campaigns like these go a long way in building goodwill for a brand.

3. The third and most visible trend is seen through the rise in the number of online stores. Most businesses except for those engaged in essential goods and services are at a standstill and on top of that these enterprises are also cutting back on costs. This basically means that the axe falls on the marketing team. How to market anything effectively if there is a budget cut or worse if the shop shutters are down. This situation has given rise to many online stores coming into existence who can deliver products or services as per the latest guidelines released by the government. Except for the red zones these stores can still access their target audience living in the green and orange zones and continue with their business operations. Think about it, just a notification update on your website and social media channels and your whole consumer base is aware of the state of your business operations.

4. The fourth trend comes through insights from the professional digital marketing network which states that there's a spike in the number of inquiries for services. The sudden growth of people being inside has led to an amendment in lifestyle wherever consumers have shifted to spending more time online than before. Brands that are traditionally offline have innovative new online products in an effort to adapt to this new way of living. Lockdown has drastically increased the consumption of data and since online time for users increased. Companies are now paying more attention to digital mediums for marketing. This has led to a rise in the number of inquiries for digital marketing agencies and freelance professionals.

5. The fifth distinct trend is increase in the overall digital marketing budget. An average business usually sets aside about 2-3% of their marketing budget for digital medium. But this is also undergoing major changes. Recent research has shown that 61% of marketers are altering their short-term media strategy. However only 9% are making long-term changes. There is a slight move from offline media to online as marketers in the same study made clear that they would take a more online approach. This budget shift is not surprising considering that digital media is consumed at a higher rate due to the online lifestyle of the post corona consumer. While lockdown has done serious damage to a lot of businesses there are some for whom it has become an opportunity in digital marketing agencies and freelancers are one of them. More users on the internet have more chances of success for pay-per-click advertising.

6.   The sixth interesting trend on our list is pay-per-click advertising. Event marketing has taken a massive downtown but that is neatly translated into huge gains for the digital marketing arena. With far fewer people travelling, advertisements on billboards and other offline ads will be far less visible. Since more people than ever before are searching for products online rather than in the real world. Pay-per click advertising could be the best advertising campaign. PPC stands for *pay-per-click*, a model of internet marketing in which advertisers pay a fee each time one of their ads is clicked. Essentially, it's a way of buying visits to your site, rather than attempting to "earn" those visits organically.

7.   The seventh trend talks about the importance of voice search technologies. Before the spread of the coronavirus pandemic, most people used voice search while driving. Now it has even greater use of voice-based assistants like Siri, Cortana and Google assistant. Especially in public places as people tend to avoid direct contact. The possibilities for the future of voice technology are endless and at the moment one thing is clear, voice search is taking off among consumers who are smitten with the latest home voice assistant devices including Amazon's echo and Google home. At the moment there are already 45 million voice assisted devices in use in the United states. And while screen less browsing is expected to account for 40 % of browsing by 2021. 50% of searches will be conducted through voice technology by the same year.

8.   The eight trend talks about sectors that had traditionally kept away from online marketing are considering an investment in digital marketing. Digital marketing has the ability to take over traditional marketing channels and transform the way people receive business and brands. Since the digital medium is immediate and offers a more personalized experience, the healthcare industry is best placed to take advantage of this medium as they have now discovered. While the traveling and hospitality industry has suffered the biggest blow due to this pandemic. It is also necessary to maintain your brand's presence in people's minds through digital marketing channels this will allow business to capitalize fast on the opportunities that will open up once things get back to normal and people start traveling again.

LIMITATIONS:

The study is limited to secondary data collection. Additionally there are time constraints while collecting the data. And generalization from this study is not preferable depending on all the data. A number of the downsides and challenges of digital marketing you ought to be aware of include:

● **Up-to-date with skills** - You must make sure that your workers have the right information and experience to carry out digital marketing successfully. Tools, platforms and trends change rapidly and it's important that you just keep up-to-date.

● **Time taking** - tasks such as optimizing online advertising campaigns and making marketing content may take up a great deal of your time. It's important to measure your results to confirm a return-on-investment.

● **High competition** - while you'll be able to reach a world audience with digital marketing, you are also up against international competition. It may be a challenge to stand out against competitors and to grab attention among the many messages aimed at consumers online.

● **Feedbacks** - any feedback or criticism of your brand can be visible to your audience through social media and review websites. Carrying out effective customer service online may be difficult. Negative comments or failure to retort effectively can damage your brand reputation.

● **Security Problems** - there are a variety of legal considerations around collecting and using customer data for digital marketing purposes. Lookout to fit with the rules relating to privacy and data protection.

SUGGESTIONS:

Being a digital marketer you can literally turn around the business given that you stay up to date with all the algorithm changes and the fluctuations in your sector specific economy. So, if your business, do not cut down on Digital marketing activities. Accelerate them and keep in mind the ever shifting trends. Fun fact: did you know that Jim Collins and his book from good to great stated that approximately 80% businesses lasting more than 15-20 years, were commenced during the time of recessions? Those 80% businesses are now our fortune 500 companies. Businesses who want to remain visible to consumers in the coming years will have to find a way to incorporate voice technology into their digital marketing strategies. Extraordinary times call for out of the regular solutions. Brands are now putting more efforts into digital marketing than ever before. This trend naturally translates into exciting new opportunities for those who have the right skills. Increase in pay, bigger budget and flexible work conditions are just some of the many perks of being a digital marketer and there are just aren't enough digital professionals to fill the new jobs being constantly created. Learning digital marketing skills is a great way to future improves your career.

CONCLUSION:

Since January 2020 our world has been watching the covid 19 pandemic unfold during which there numerous questions were asked in the boardrooms, on earnings calls, in the media and in the government. People wanted to know how their business would survive when the whole world was shut down. The answer to all those questions came in the way of digital transformation.

Digital Marketing is just a platform or just a medium from which we can get a lot of followers or we can promote our product especially now, when we are working from home during this pandemic. Also it is one of those fancy new buzz words that is used in recent days more than ever in the last 20 years. It includes all marketing efforts that promote your product or brand using electronic devices or the net . It leverages online marketing tactics such as mainly search marketing, email marketing, social media marketing and mobile marketing. in order to connect with the current and prospective customers. It is basically internet marketing and is also referred to as advertising and delivering through digital channels, the channels will be social media platforms, mobile platforms, email or web applications, search engines and websites. It is any form of marketing product or services that involves electronic devices. This is the major reason it's been around for more than decades.

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LOOKING FORWARD FOR THE SUSTAINABLE DEVELOPMENT OF WOMEN ENTREPRENEURS

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ABSTRACT

Enterprise is a key parameter for the development and advancement of all nations and it is most applicable to move nations. Only an approach of wage business won't take care of the grave unemployment issue. A country in what way ever rich in material assets, can't succeed if its assets are not put to beneficial use, for this reason, enthusiastic business people are required who can contribute adequately for national flourishing. The main arrangement is advancement and improvement of Entrepreneurship, as enterprise goes for making an individual an occupation supplier and not work seeker. Business enterprise has for the most part been a male-ruled marvel from the early age however now time has changed the circumstance and brought women as today's most vital and motivational business people. The position and status of women in any general public is a list of its human advancement and advance. In all the created nations on the planet women are putting their means at standard with the men in the field of businesspeople are similarly equipped in running business yet at the same time needs behind notwithstanding women strengthening development in our nation, there are social, social and monetary obstacles in the method for women enterprise and the real issue is absence of entrepreneurial environment. Regardless of having the potential and ability, women are denied of chances, data and training. In these exploration paper real issues of women business visionaries are highlighted, potentialities of ambitious women who are effective are distinguished and in this way give good examples to potential women business visionaries especially for young women entering the work advertise surprisingly.

Keywords: Entrepreneurship, women entrepreneurship, transition countries.

INTRODUCTION

Women claimed organizations are expanding the world over. The concealed entrepreneurial capability of women has been bit by bit going to the fore with the changing socio political calculates society". The discriminatory limitations are smashed and women are new working in each line of business from pappad making to power links". "They are prospering as architects, inside decorators, exporters, distributers, piece of clothing makers and as yet investigating new roads of financial participation". Empowering women business visionaries is fundamental for accomplishing the objectives of economical advancement and the bottlenecks obstructing their development must be destroyed to entitle full cooperation in the business," In a view to energize women in setting up their own particular ventures, the Ministry of MSME has a Scheme named Trade Related Entrepreneurship Assistance and Development (TREAD)'.

In Women Entrepreneur is a person who acknowledges test to meet her own needs and turn out to be monetarily free by working together. The part of women business person in monetary advancement is inescapable. These days, women enter in chose callings as well as in callings like exchange, industry and designing. Women are likewise eager to take up business and add to the country's development. This part is likewise being perceived and steps are being taken to advance women business enterprise. In India, strengthening to women is not legitimately given, for including into entrepreneurial exercises as well as in their regular day to day existences. The idea of Women Entrepreneurs might be characterized as women or gathering of women who start, sort out and maintain a business endeavor. Women claimed organizations are exceptionally expanding in the economies of all nations. Women' strengthening in India is still a deception. India, in spite of the fact that women constitute most of the aggregate populace, the entrepreneurial world is still a male commanded field. Enabling women business people is fundamental for accomplishing the objectives of feasible advancement and the bottlenecks preventing their development must be annihilated to entitle full support in the business.

Over the world, entrepreneurs have been viewed as instrumental in starting and supporting financial improvement both in created and creating nations. Today business is worked around human capital and women are one of the profitable components. Advancement of business sectors urged women to approach to end up a business visionary and begin new industries. A part of current women is not limited to the customary part as a mother and housewife; it has and is experiencing changes. As lady gets taught she starts to consider herself an autonomous individual, she gets to be mindful of her own personality, possibilities and basic leadership capacities.

OBJECTIVES OF THE STUDY
The present study goes for satisfying the accompanying targets.

1. To concentrate on the profile of women business visionaries.

2. To investigate the challenges of women business visionaries with respects to being - A business person Being - A women.

3. To recommend measures for inspiring the status of women business visionaries.

RESEARCH METHODOLOGY
The research design which has been formed for this research article is descriptive research design. The nature of data which is collected and used for this research article is secondary. The relevant and required data are collected from secondary sources such as text books, national as well as international articles and dailies.

LIMITATIONS
The data are secondary in nature. As such the data are taken from the secondary sources the analysis is based on the rendered information from them. The suggestions rendered may not be extended to the similar cases.

NEED FOR THE PROMOTION OF THE WOMEN ENTREPRENEURSHIP
Society that does not have an idealistic, positive enabling picture without bounds is constantly inconvenient for the country. At the point when society is skewed and control, it starts an entropic winding to segregation – social Entrepreneurs can utilize that abilities to rebalance society. Society business people are change specialists that enhance society by creating powerful and fair new models regularly less various leveled yet more helpful and complex than existing ones. Analysts and experts have characterized society enterprise in different ways however a typical demonstrator is a wander that increases the value of a group mission through inventive, hazard taking, professional practices. Society business joins development with significance of group needs and their work covers with social equity and natural presentation developments. Women in Ancient India were accountable for the home issues and were agreed high status practically equivalent to that of man in religious obligations. Progressively because of the changing social-political circumstance, women were consigned to the foundation and were subjected to abuse. Two primary driver for the decrease of women power are: a) Lack of appropriate instruction. 2) Lack of money related autonomy. In Modern India more women are leaving colleges, IIT's and IIM's; there are women specialists, women engineers, women researchers and women social laborers and so forth.

With a specific end goal to a lady to bloom forward as an Entrepreneur in our general public, there are 4 Conditions: 1) There must be a perused enthusiasm for chalking out one's way as an Entrepreneur. 2) There must be appropriate direction from experienced and concerned people. 3) Financial and Moral support from the Institutions and Social Organizations. 4) Various administrative bodies to go about as facilitators. At the foundation of all there is the person who is extraordinarily taught and sufficiently informed women possessed organizations are very expanding in the economies of the considerable number of nations. The concealed entrepreneurial possibilities of women have bit by bit been changing with the developing affectability to the part and monetary status in the general public. Aptitude, information and versatility in business are the principle explanations behind women to rise into business-wanders. "Women Entrepreneur" is a man who acknowledges testing part to meet her own needs and turn out to be financially free. A powerful urge to accomplish something positive is an in constructed nature of entrepreneurial women, who is equipped for contributing qualities in both family and the social life. With the approach of media, women know about their own attributes, rights furthermore the work circumstances. The unreasonable impediments are smashed and women are discovered enjoyed each line of business from pepped to power links. The difficulties and openings gave to the women of advanced period are developing quickly that the occupation seekers are transforming into employment makers.

They are thriving as creators, inside decorators, exporters, distributers, article of clothing makers and as yet investigating new roads of financial interest. In India, in spite of the fact that women constitute most of the aggregate populace, the entrepreneurial world is still a male commanded one. Women in cutting edge countries are perceived and are more conspicuous in the business world. Freedom purchased guarantee of correspondence of chance in all circles to the Indian women and laws ensuring for their equivalent privileges of interest in political process and equivalent open doors and rights in instruction and business were established. Be that as it may, tragically the administration supported advancement exercises have profited just a little area of women. The substantial larger part of them are still unaffected by change and improvement exercises have profited just a little rate of women is the Urban Middle Class Women. Opportunities Galore:

Exceptionally instructed, in fact sound and possibly qualified women ought to be empowered for dealing with their own business instead of dependant on wage work outlets. An attractive situation is important for each lady to instill entrepreneurial values and include significantly in business dealings.

THE VASTLY OPENING UP OF OPPORTUNITIES FOR WOMEN

1. Eco-accommodating Technology.

2. Bio-Technology.

3. IT Enabled Enterprises.

4. Occasion Management.

5. Tourism Industry.

6. Telecom Sector.

7. Plastic Industries.

8. Floriculture.

9. Sericulture.

10. Home grown and Health Care.

11. Sustenance Processing.

12. Instruction Sector.

13. Worldwide Efforts:

CLASSIFICATION OF MICRO ENREPRENEURS

The women are arranged into four gatherings as indicated by their exercises as (1) Cultivators (2) Sellers (3) Manufactures (4) Managers.

Arrangement of women smaller scale business visionaries activities under taken

1.Cultivators Cultivating - (a) Organic vegetables, (b) Fruits (c) Flowers, (d) Leaf

Vegetables (e) Mulberry leaves (f) Oil seeds.

2. Merchants Selling vegetables, organic products, nuts, blooms verdant vegetables, drain Items.

3. Fabricates Associating with readiness and offering of pickles, drain, curds, drain

Cakes, Jams, natural product juices, building up Tiffin focuses, sustenance courts, spread drain fixates on the high courses closer to their towns.

4. Supervisors Managing, Milk Centers, Petty Shops, Bakery, Flour Mills, sericulture exercises and so on.

The women are classified into four groups according to their activities as (1) Cultivators (2) Sellers (3) Manufactures (4) Managers.

PROBLEM OF WOMEN ENTREPRENEURS IN INDIA

Like a male business people a women business person has numerous capacities. They ought to investigate the possibilities of beginning new endeavor; attempt dangers, present new developments, coordination, organization and control business and give compelling initiative in all parts of business. In India, the entrepreneurial world is still a male ruled one. The entrepreneurial procedure is same for men and women. Fruitful men and women business visionaries experience comparative inspirations and subsequently make progress in to a great extent same path under comparative difficulties. They are likewise found to have admittance to support from similar sources. A similar condition both men and women can be fruitful business people. (Cohoon et.al. 2010). In any case, practically speaking the greater part of the up and coming women business people confront issues that are of various measurements and extents than that confronted by their male partners. These issues, for the most part, keep these women business people from understanding their potential as business people. The real obstacles that the women confront amid beginning and running an organization by and large originate from financing and adjusting of life. The adjusting of life is brought about because of absence of family support for the women. The other ruining outer elements incorporate sex segregation, unavailability to data, preparing openings, framework and so forth. Some inner variables like hazard avoidance by women, absence of certainty, absence of vision of vital pioneer and so on can likewise make deterrents for the women business enterprise advancement.

SCHEMES OF THE GOVERNMENT OF INDIA TO PROMOTE ENTREPEURHSIP

Since 1980 the legislature of India has indicated expanding sympathy toward women issues through an assortment of enactments advancing the training and political support of women. There ought to likewise be endeavors from all divisions to support the monetary investment of women. Alongside sufficient preparing, institutional and money related support as a composite bundle should be empowered.

Plan of the Ministry is the Micro and Small Enterprises Cluster Development Program (MSE-CDP) to give help to limit building, normal offices, showcasing and so forth. However another plan is the Credit Guarantee Scheme to guarantee better stream of credit to MSEs by minimizing the hazard view of budgetary foundations and banks in loaning without insurance security. With a view to urge women business people to take an interest in the International Exhibitions under MDA plot it has been chosen to repay 100 rate economy class air admission for one representative. In India, despite the fact that women constitute most of the aggregate populace, the entrepreneurial world is still a male overwhelmed field. Enabling women business people is vital for accomplishing the objectives of practical advancement and the bottlenecks ruining their development must be killed to entitle full cooperation in the business.

Over the world, business people have been viewed as instrumental in starting and maintaining financial advancement both in created and creating nations. Today business is worked around human capital and women are one of the significant components. Progression of business sectors urged women to approach to end up a business visionary and begin new ventures. A part of advanced women is not bound to the conventional part as a mother and housewife; it has and is experiencing changes. As lady gets instructed she starts to consider herself a free individual, she gets to be mindful of her own personality, possibilities and basic leadership abilities

HOW TO DEVELOP WOMEN ENTERPRENEURSHIP

1. Empowering Women's investment in Decision-Making.

2. Professional Training to be reached out to Women Community that empowers them to comprehend the creation procedure and generation administration.

3. Aptitude Development in Women's Polytechnics and ITI's.

4. Making arrangement of Micro-Credit System and venture credit framework to Women Entrepreneurs at Local Level.

5. Sexual orientation Sensitization Programs.

6. A Women Entrepreneurship Cell (WEC) ought to be set up to handle the different issues of Women Entrepreneurship in all states.

NEED FOR THE WOMEN EMPOWERMENT FOR SUSTAINABLE DEVELOPMENT

However another plan for business people is the Credit Guarantee Scheme. The Scheme expects to guarantee better stream of credit to smaller scale and little ventures by minimizing the hazard view of budgetary foundations and banks in loaning without insurance security. Under the plan, ensure cover is given to insurance free credit office reached out by part loaning establishments (MLIs) to the new and in addition existing smaller scale and little undertakings on advances up to Rs.100 lakh. The assurance cover accessible is up to 75% of the credits amplified. However for Micro and Small Enterprises worked as well as claimed by women, the degree of certification cover is 80%.

With a view to urge women business people to partake in the International Exhibitions under MDA plot it has been chosen to between alia give lease free space in the displays and repay 100% economy class air admission for one delegate. I ask every one of you to take full preferred standpoint of these plans.

ADVANTAGES OF WOMEN MICRO ENTRPENEURSHIP

Create individual financial autonomy and improve the individual and social abilities like

• Create mindfulness

• Develop social net working

• Enhance the fearlessness

• Improve the way of life

• Urge to accomplish

• Dare to take an interest in political issues

• Economic strengthening

• Able to take an interest in basic leadership exercises.

• Solve the issues of rustic women and the town. 69• Enhance the initiative qualities.

Manageable Development of women through miniaturized scale business enterprise bring numerous advantages like women' strengthening, financial status, fairness, property rights, improvement of self regard, notoriety, overall market offices, group advancement and so forth.

CONSTRAINTS OF WOMEN ENTREPRENEURS
Because of gender discrimination segregation young women are mingled diversely controlled by social standards, ethics, convictions, rehearses with no rights and basic leadership powers. In light of these reasons women business people are confronting numerous requirements like absence of certainty, double parts, unbending and male commanded economic situations and so on.

1. Absence of Confidence Due to differential socialization social standards, ethics in the family women need certainty, bolster, basic leadership powers required for the development of a business person. Social laborers can build up the women business people inside their range by amplifying the fundamental information sources.

2. Over burdenness because of double parts With the double parts as, spouse and mother women not able to deal with the endeavor successfully due to absence of time, fixation and over troubled individual commitments. The relatives like in-laws, spouse and others can share their obligations to make them allowed to take up with a venture.

3. Inflexible and male ruled economic situations Women, business visionaries need to depend, on their family male individuals because of unbending male overwhelmed economic situations, absence of mindfulness, experience, and heaving limits. The relatives, NGO's by giving data about accessible market openings, conditions and administrations.

4. Need pushing Generally Indian women associated with female qualities, withdrawal attitude, child inclination, and confined development. The most critical pushing is self inspiration, family bolster positive Government Policies, auspicious accounts and a reasonable environment to build up their endeavors.

5. Absence of appropriate preparing Indian families and society give preparing to a young lady to make her as a decent spouse as opposed to inspire her as a business visionary she is not permitted to create net work with different businesspeople, which is considered as a transgression and terrible culture. Approach openings, preparing, aptitude advancement flexibility to net work with other agents.

6. Absence of access to money related bolster as a result of societal personality women are not access to funds like (1) partake in the property (2) Government or private advances, plans motivations, and so forth. Break even with partake in the parental property, access to private, Government advances, bolster and finish data from other relatives is all strolls of their life.

7 Lack of introduction, data about preparing programs because of absence of education, confined development, absence of systems administration, and mindfulness. Proficiency is the primary wellspring of data about all plans and organizations which will give preparing, money related help and about the endeavor and market offices.

8. Absence of access to assets Withdrawal nature, societal zeo heaven, reluctant nature of fabricate the abilities to distinguish their needs and shed down the women keeping Them far from all resources hesitations to figure out how to snatch a wide range of assets.

CONCLUSION
The rise of women business visionaries and their commitment to the national economy is very noticeable in India. The discriminatory limitations are smashed and women are observed to be enjoyed each line of business from papad to power links. The difficulties and openings gave to the women of advanced period are developing quickly that the employment seekers are transforming into occupation makers. They are prospering as architects, inside decorators, exporters, distributers, piece of clothing makers and as yet investigating new roads of monetary cooperation It is high time that the nation ought to adapt to present circumstances and make more emotionally supportive networks for empowering more business enterprise among women the main the feasible improvement can be accomplished in India. Despite the fact that the administration of India has made Appreciative strides for the advancement and improvement of the women yet at the same time the long

approach . A portion of the proposal which can enhance the state of the women business enterprise in India for the economical advancement of the nation are as per the following .

1. Enabling Women Entrepreneurs is vital for accomplishing the objectives of supportable improvement.

2. The bottlenecks obstructing the development must be annihilated.

3. Full cooperation of women as business visionaries in a wide range of appropriate organizations ought to be empowered.

4. Appropriate preparing projects ought to be started.

5. Tutoring, News Letters, Trade Fairs/Exhibitions can be a valuable wellspring of entrepreneurial-advancement.

6. Advancing Women-Entrepreneurship is unquestionably a beyond any doubt way to fast financial development and advancement.

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COMPARATIVE STUDY OF DIFFERENT SMARTPHONE PLATFORM WITH SPECIAL PERSPECTIVE TO SECURITY

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ABSTRACT

The usage of Smartphones in regular life has progressed within the recent years conveyance new ways that to form and transfer personal and business info. Android and iOS

are the 2 principally used platform among varied mobile operating systems. Out of that Android users ar slightly additional than iOS, 1.4 billion Android users and one.0 billion iOS users worldwide nowadays. There are problems within the use of sturdy security controls in Android similarly as iOS versions. This paper concerns regarding all the safety management problems associated with these 2 mobile package. This work presents the comparison between android and iOS supported varied security parameters such as communication, vulnerabilities in software system, hardware,malware, resource management. It additionally states solutions to enhance and improve the present mistreatment parameters within the system.

Keywords Sandboxing, Randomization, Encryption

INTRODUCTION

Mobile software package that may be a hand-held operating system. This is often a software system ambo for mobile devices that facilitates mobile devices to run the application and program. Mobile devices change United States of America to send text messages, browse the net, access emails and even create monetary transactions. This MOS coalesce options of personal computer software package and management all hardware and optimizes the potency. There are numerous MOS within the market. the 2 well-known MOS today is Android and iPhone software package (iOS). Android OS is associate degree open source, its ASCII text file was discharged by Google below the Apache license that makes it accessible for everybody. The operating system may be a UNIX system based mostly and also the application software system running on associate degree application framework combining with Java compatible libraries supported Apache Harmony. Android is meant primarily for bit screen devices and the interface relies on direct manipulation mistreatment the touch screen. the primary Android phone oversubscribed within the year,2008
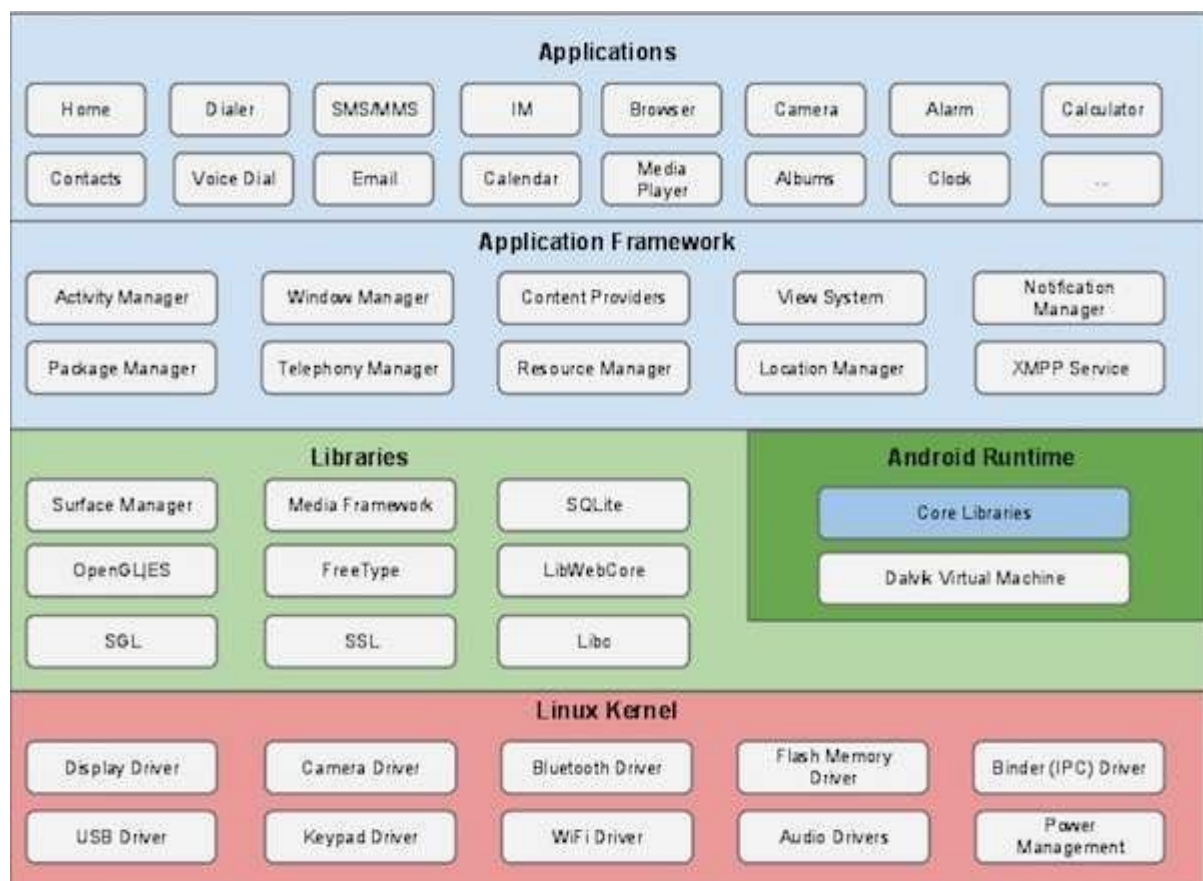
iOS was derived from OS X . This iOS is merely utilized by Apple Inc. for iPhone and iPad [8]. There square measure four abstraction layers that square measure Core OS layer, Core Services Layer, Media Layer and Cocoa bit layer. Core OS layer is that the base layer of the iOS stack and assemble directly on the hardware. This layer serves a good kind of services as well as low-level network access to peripheral accessories and customary operating system services like memory management policy, and thread handling filing system. The iOS Core Services layer serves the institution on that many earlier layers documented made and consists of the following framework. Media layer contains the graphics, audio, video and technology intermeshed towards making the finest transmission familiarity obtainable on a mobile device. Technology during this layer were designed to create it simple for you to make applications that seems and sound monumental. The Cocoa bit layer serves the key structure for constructing iOS applications. It explains the elemental application infrastructure and hindrance for key technologies such as multitasking, touch-based input, push notifications, and many high-level system services. a number of the applying can be freely downloaded. For iOS application cannot directly communicate with alternative apps. the primary iPhone oversubscribed in the year,2007 and therefore the latest version is iOS ten. Why we need security on MOS is to create certain all the user information isn't hacked, to create certain sensitive knowledge isn't exposed to alternative persons and to acknowledge, prevent, correct and eliminate viruses.

Application Sandboxing

The process of application sandboxing wants declarative permissions or entitlements .These declarations square measure outlined within the manifest of the mobile app. once a mobile app is made, the permissions or entitlements set square measure appointed. And once they're appointed,

they will not be dynamically modified a runtime by the mobile app, or the mobile OS kernel [3]. This determines the resources which will be shared. and people limits can ne'erextend on the far side the definite declaration set at startup. This is the layer of protection that today's mobile OS offer. For mobile software, application sandboxing are applied to boost the protection of the mobile. Application sandboxing could be a instrumentality wont to manage and certain the application from accessing to the system or different application specially the malicious code and virus. Sandboxing can assign a singular ID for every application and run it because the users

which run in an exceedingly separate method. this is often necessary to cut back damage by the malicious as a result of it's isolated from the opposite application. For automaton, the appliance sandboxing is based on the UNIX kernel platform . it's a posh and robust sandbox model. Application sandboxing in automaton is controlled by every application and needed permission and approval to continue accessing what the appliance required. This will improve and build the protection tighter. Each application has its own sandbox directory and also the permission is per application. For iOS, the appliance sandboxing has-been outlined by Apple as a group of fine-grained management that confines the appliance access to the filing system, network and hardware. iOS additionally encompasses a sturdy sandbox model wherever all applications shared a same sandbox model that is additional secure and fewer hospitable the gang. iOS is far higher and more secured since it's solely allowed users to access the system go into the foundation and also the settings of the phone not in each application. However automaton depends additional on user as a result of it required user to line the protection for every application throughout installation time

Data Storage Format

Data storage may be a place wherever all the data is hold on either in an exceedingly inbuilt storage or auxiliary storage. Normally, a mobile device can have each inbuilt storage and also auxiliary storage to stay all the

information . If storing sensitive knowledge on a tool, you would like to form positive that the storage itself is secured and guarded . For automaton, the storage may be hold on in each data storage that is external and internal inbuilt. Auxiliary storage in automaton such as Mount Rushmore State card doesn't have authorization and by default all the applying has scan access to the storage and might scan all files. Automaton implements commonplace crypto libraries to secure the storage however this methodology solely act as countersign policy. With root access, it's straightforward for any unneeded code to find the secret writing keys within the memory. AN application in Android will access all the files throughout the device while not any restraint so will unfold the malware on to the storage. Whereas within the iOS, the devices itself don't have AN external storage or memory. It solely features a inbuilt storage which requires permission to maneuver or access all the information. The Data Protection arthropod genus designed into iOS, combined with complex passphrase will give a further layer of information protection. Therefore iOS storage are going to be safer than automaton and create the applying troublesome to access the information within the data storage.

Memory Randomization

Other safety features area unit memory randomization or Address area Layout randomization .Memory randomization could be a method wherever the memory application, shared library et al. in a very device is located willy-nilly. this is often vital to evade the malicious code or virus to attack the memory of the running application. Malicious code or virus need to seek out the correct position or memory region of the task it desires to attack and this is often complex for them since it are willy-nilly set. Even with the subsistence of ASLR, developers should pay attention that we be apply defensive programming techniques, such as preventing buffer overflow and alternative memory corruption that may occur. For robot package, memory randomization is totally applied to candy unharness. For iOS, memory randomization has been applied since iOS four.3 earlier than the robot package. It conjointly intercalary additional secured technology wherever iOS has code linguistic communication technology which could be a method requisite to allow banned applications running in a very device. Code linguistic communication technology could be a method where new third party applications necessitate to be valid and signed mistreatment AN Apple issued certificate. It is compulsory process to verify the OS is keep sure to the new apps. It conjointly important to prevents the third party Application from loading unsigned code resources or mistreatment self-modifying code. By right, iOS is a lot of secured compared to the robot package as a result of memory randomization in iOS is increased by the code linguistic communication technology

Encryption

Encryption is transformation of information into a cypher. Encryption is additionally the most effectual technique to archive knowledge security. you need to have access to a secret key or secret that facilitate you rewrite a knowledge that is in AN encrypted file. Unencrypted knowledge is named as plain text and Encrypted knowledge is called as cipher text. secret writing is important for mobile operating system as a result of it give extra protection in case your mobile is purloined. Secret writing may be a new security method introduced in mechanical man. there's no device secret writing on mechanical man version but three. You should have passcode to check the encrypted go into iOS. Apple iOS device protection API is a lot of sturdy than Android. whereas coming up with the developers doesn't take benefit of the secret writing technique though each mechanical man and iOS software system supports the storage of secrets within the cipher text mode on disks. All encrypted knowledge are often keep in the form of plain text however can't be accessed by the developers while not knowing the secret writing codes.

Built-in Antivirus

In general there area unit three styles of widespread malware that affects mobile like Virus, Spyware and Trojan [10]. a pestilence may be a true piece of malicious package. The Virus is sometimes transmitted through email. Spyware is software that gathers data concerning users while not their knowledge. in the meantime Trojan serves a fascinating operate however actually the aim of the Trojan is malicious. each automaton and iOS mobile was introduced with inbuilt antivirus features to avoid malware like viruses, spyware and Trojan from poignant our mobile software. Android mobile doesn't have a lively vetting method. Android users will install thousands of applications from Google Play safely. The antivirus options weren't really found on Android devices however really found in Google Play

METHODOLOGY

This study used the descriptive technique of analysis mistreatment documentary examination to assemble important data and to fulfill up the goals of the study. For this purpose, the proponent used the web, scientific articles, threat reports and recorded shows as sources. to urge some base knowledge regarding risks and threats for applications the proponent looked into security motivation, design, malicious history, malicious approaches,

threats andvulnerabilities.The exponent used a form list as a survey instrument to determine the level of security awareness and practices of automaton and iOS users. Apple includes a smart name for staying on prime of security. The company strictly reviews all of the apps out there through the App Store to avoid permitting malware through. They conjointly work effortlessly to confirm devices have the foremost recent version of the iOS put in (which typically includes security updates) and encourage mass upgrades. Thanks to their reputation and overall quality, breaching Apple's iOS would be a powerful exploit for any hacker. However still last year, security researchers found a vulnerability that had thepotential to permit faux versions of apps to urge into iOS devices.

SECURITY COMPARISON BETWEEN ANDROID AND iOS

Features	Security Comparison in Mobile OS	
	Android	*iOS*
Application Sandboxing	Each app has its own sandbox	All apps shared same sandbox
Data Storage Format	Have an external storage and can be accessible by unwanted code	No external storage and difficult for the unwanted code to access built in storage
Memory Randomization	Fully applied in Nougat and started since Jelly bean. No code signing technology	Fully applied in 9.0 and 10.0 releases. Added with code signing technology
Encryption	Android 5.0 and above supports full disk encryption whereas Android 7.0 and above supports file based encryption	Hardware and Firmware encryption ; Advanced Encryption Standard(AES) 256 bit crypto engine
Built-in Antivirus	Antivirus can be downloaded from the Android market. More easy for virus attack since no protection and checking is done before outside web source application been downloaded	No antivirus is required since there is checking been done in the Apps Store
App Store Distribution	Google play is the most trusted and used marketplace for android apps, but there are many other too which are used very less	App store constitutes 90% of apps distribution by iOS users but there are other too which are used very less.
App Permission	In this if you want an app , then all the permissions is to be accepted , then only you can use that app. No modification in permissions can be made by user.	Improved permission system where you can actually pick and choose which data an app gets access to. So one can modify permissions on its own
Interface	Navigation system is better and give access to its user to change according to their choice	Navigation system is restricted , allows user to put them in a folder and cannot remove the apps from home screen.

Software/Security Updates	It does not provide security update to the version lower than Android 4.4.4 that means leading to security holes for version lower than 4.4.4	It provides timely security updates for all its users
Customization	It offers far more freedom in terms of customizing the interface according to you	By contrast, it doesn't allow you to change any icons in the Control Centre
Security	There is a high chance of malwares, and virus to enter the system because it does not check for the source of download and the software or app being download	There is rare chance of malware, trojans or virus enter the system as there is no option provided to download other than app store and other trusted sources.
Fragmentation	The fragmentation is more because being an open-source as well as so many versions are there.	The fragmentation is lesser than android being a closed source and providing security-patches to all system having iOS
Vulnerabilites	There are 850 vulnerabilities in android at present	There are 1091 vulnerabilities present in iOS at present

CONCLUSION

Although each Android and iOS have their flaws, Apple's iOS has still tested to be a safer bet in terms of security. Apple runs a decent ship which may feel constricting to users, but ultimately, it's to stay their users as secure as potential. Yes, hackers have begun to poke holes within the iOS however theyhave solely managed to focus on jail broken iPhones and minuscule portion of apps inside the App Store. Mobile security is all regarding trade-offs and manage the chance. It's about how developers will scale back and minimize potential risks for consumers. The mobile user ought to create a selection between comfort and privacy of information. In conclusion, we have a tendency to in agreement that iOS area unit a lot of advantage compared to robot software package in term of security based on comparison that have created. However, there area unit few basic security points to stay our knowledge safe on the various mobile device are:

- Update your package: invariably update your Smartphone OS, no matter it being associate degree robot or an iOS, whenever any application patches or Upgrades area unit free.

- Lock your device: If the device is being employed by a stranger, use a Arcanum to lock your device to avoid data theft.

- Don't flight your devices. don't jail-break, root, or modify the OS files.

- Add real associate degreetivirus from approved app store: Install an antivirus and firewall package to detect and stop any infection.

- Add location pursuit app: Install device-trackingapplications to seek out the phone whenever it's lost or stolen

- Backup your data: frequently backup or synchronize your settings and different personal information to avoid the loss data}.

- apprehend what you're downloading: try and learn about the application's name before putting init.

- Manage your data: management the kinds of information that can be accessed via mobile devices to work out your exposure ought to a tool be compromised.

- Use Mobile Device Management software: Use it to create associate degree encrypted password-protected sandbox for sensitive knowledge and enforce device-side technical policies.

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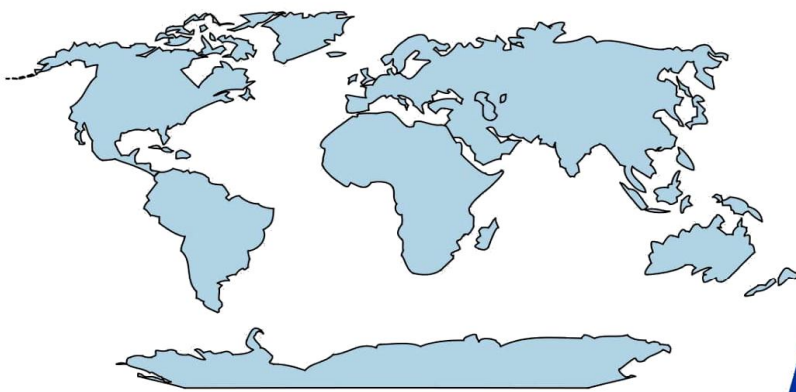
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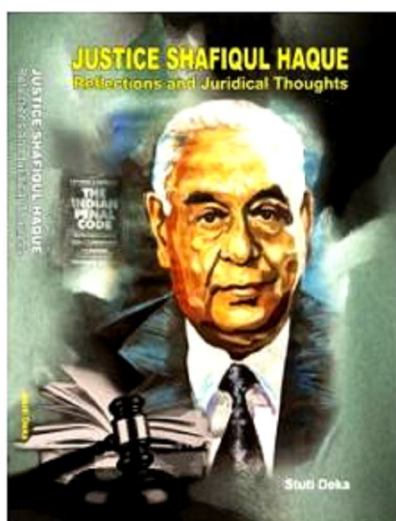
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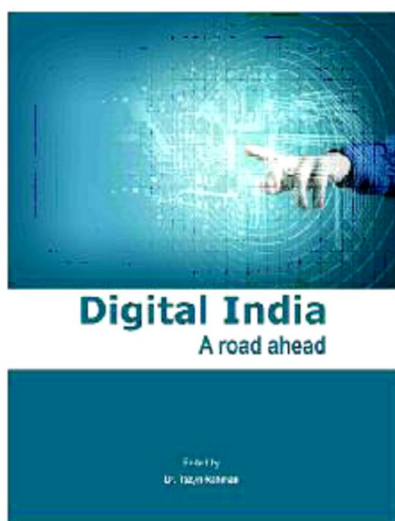
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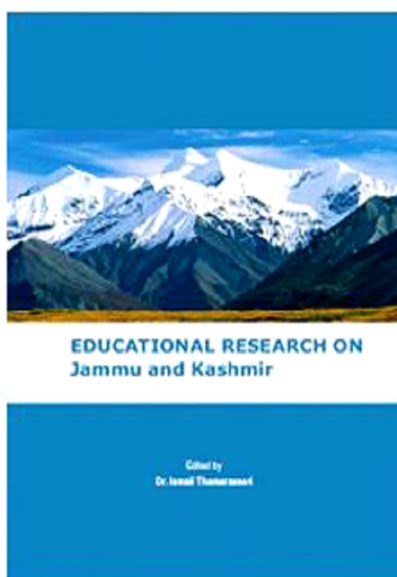
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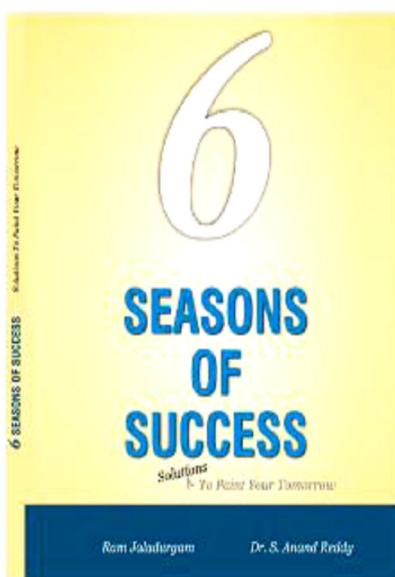
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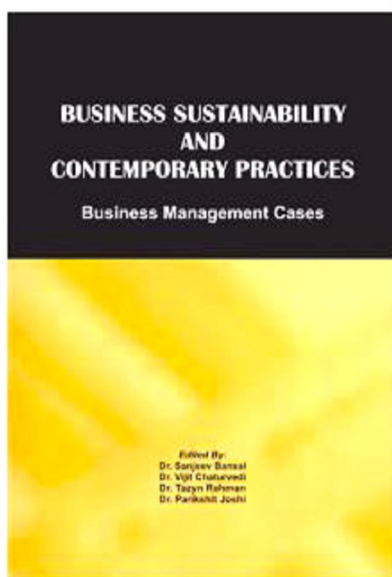
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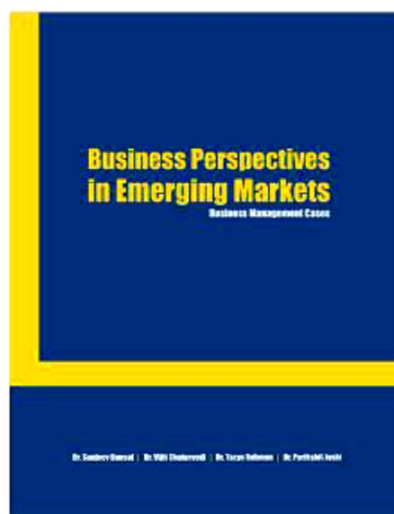
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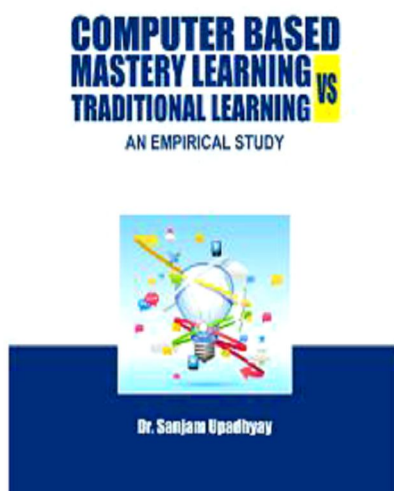
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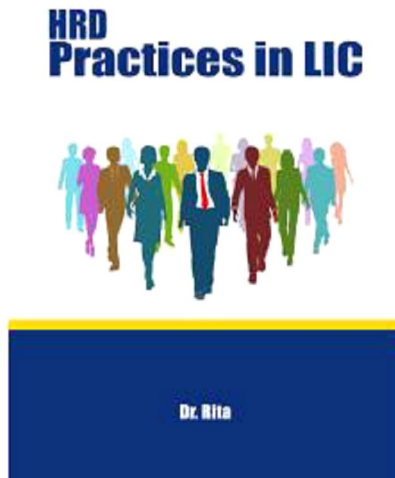
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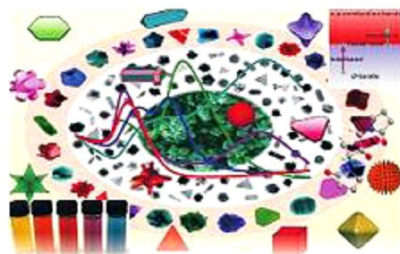
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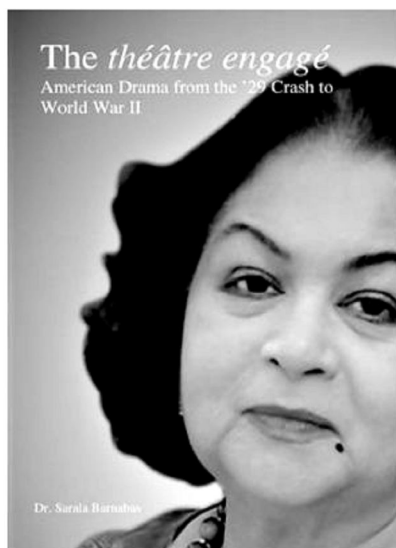
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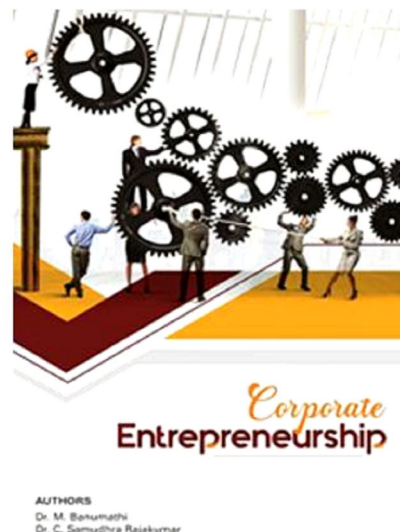
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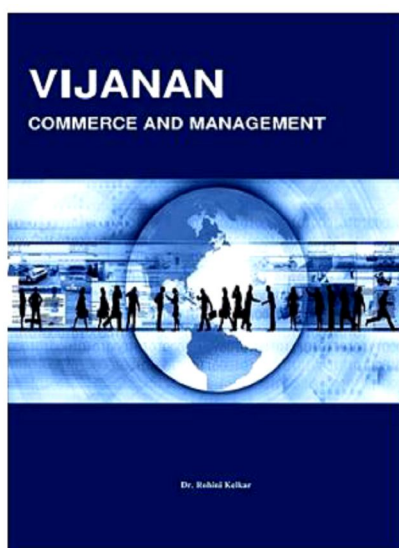
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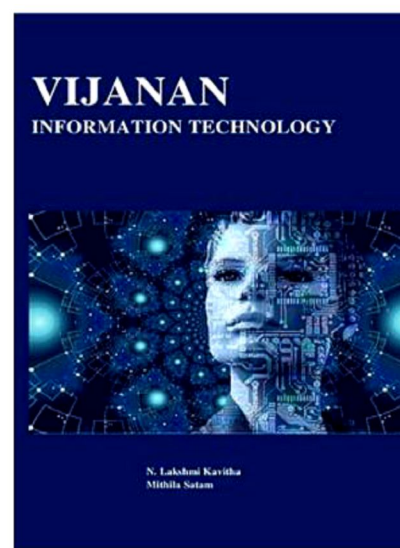
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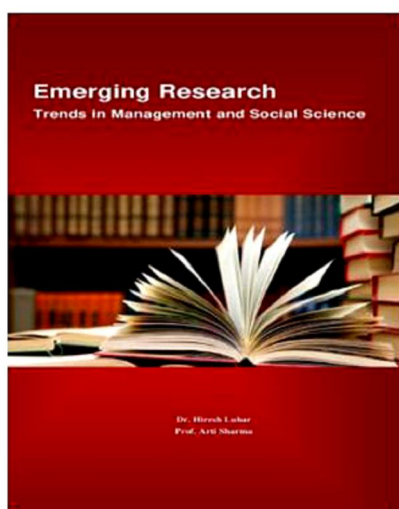
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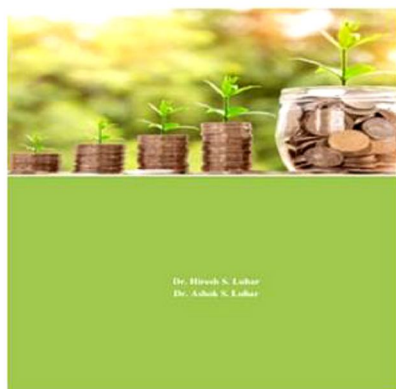
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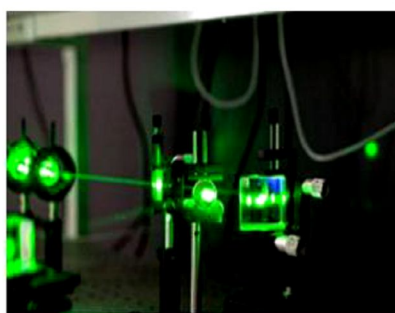
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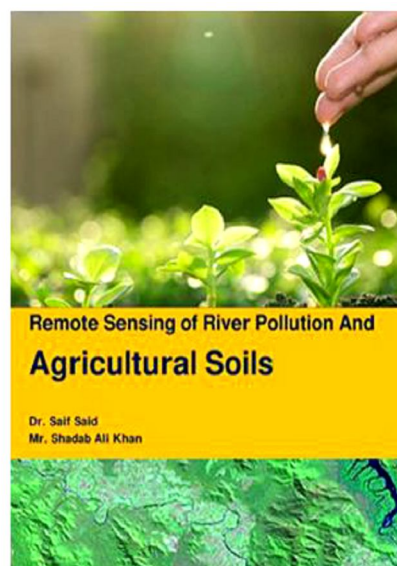
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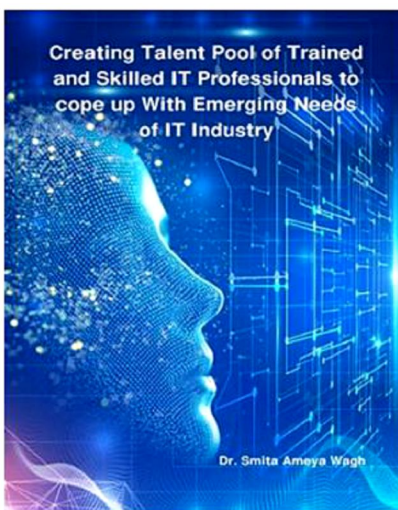
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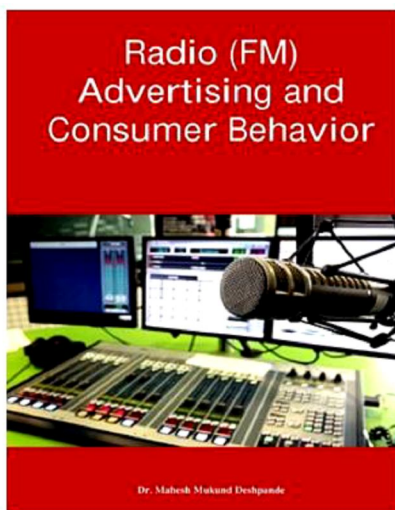
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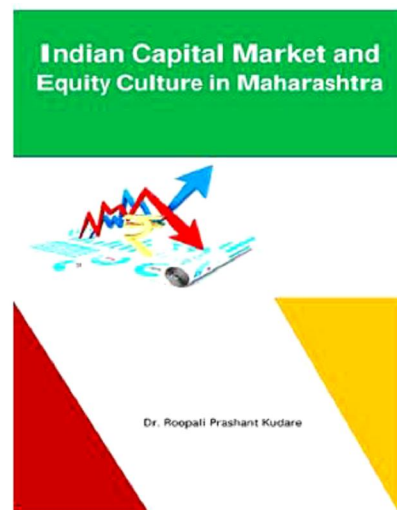
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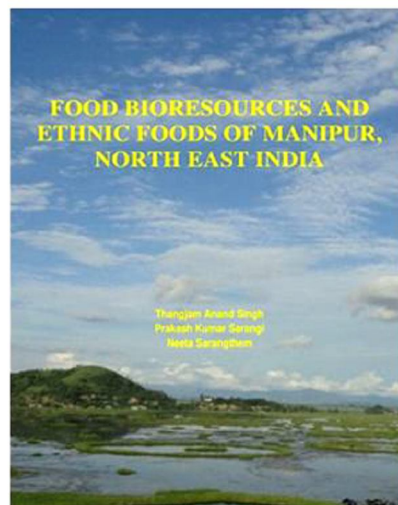
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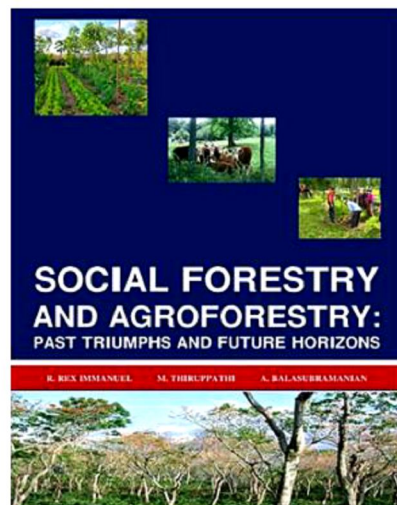
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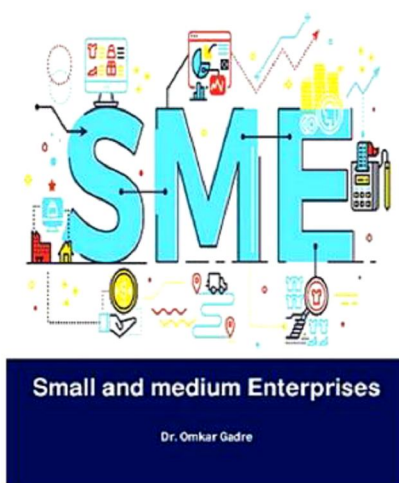
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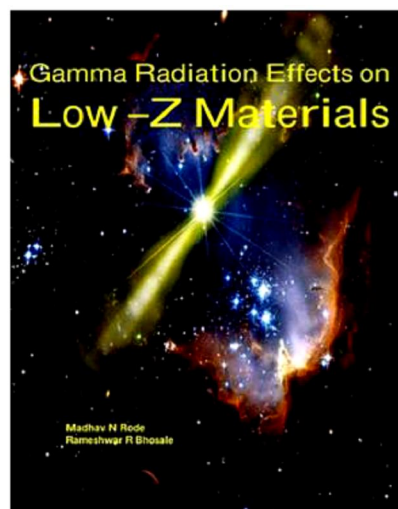
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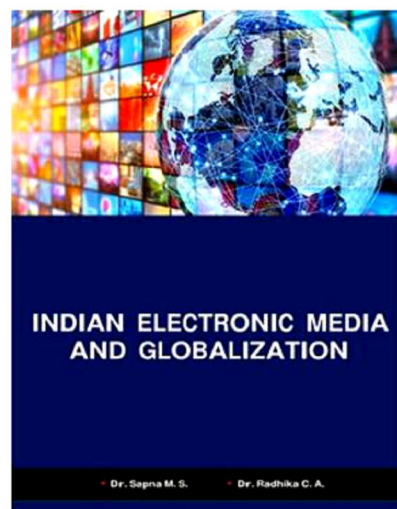
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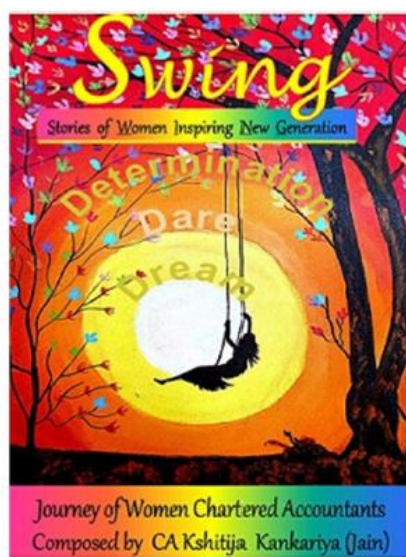
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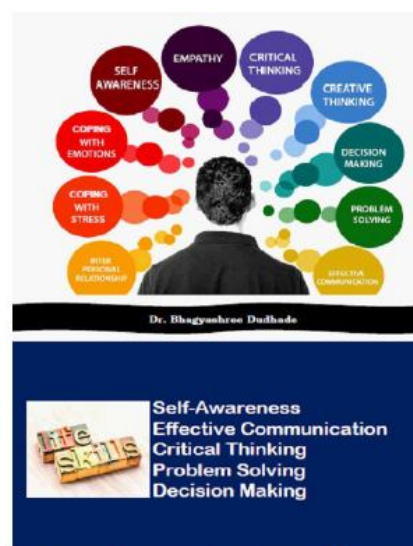
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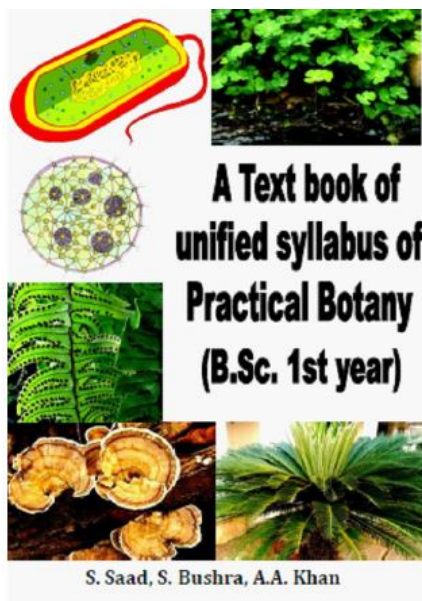
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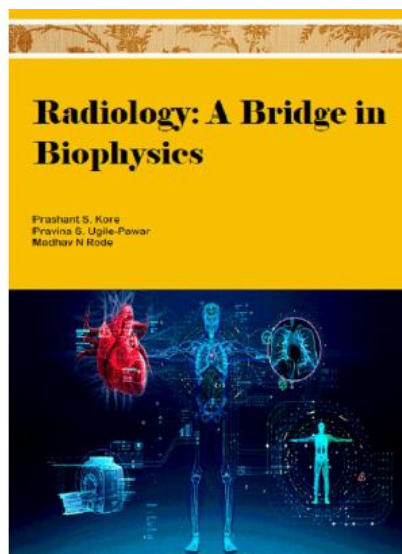
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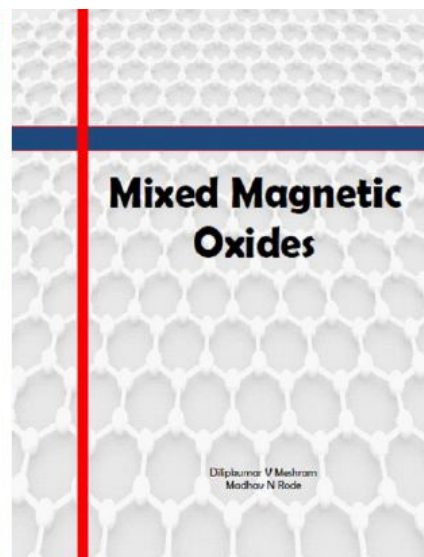
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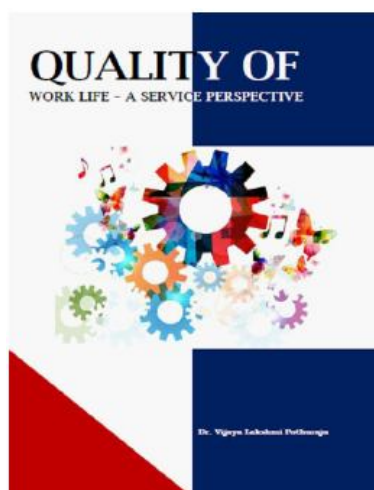
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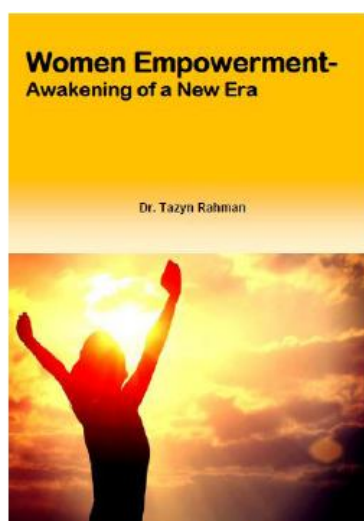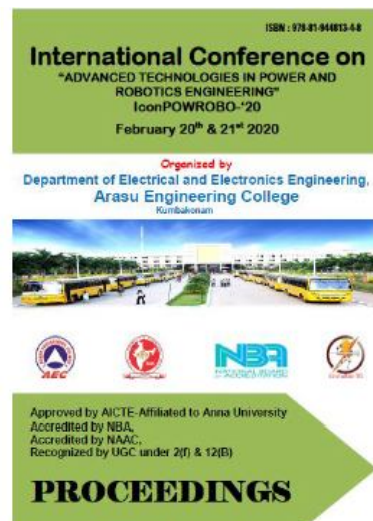
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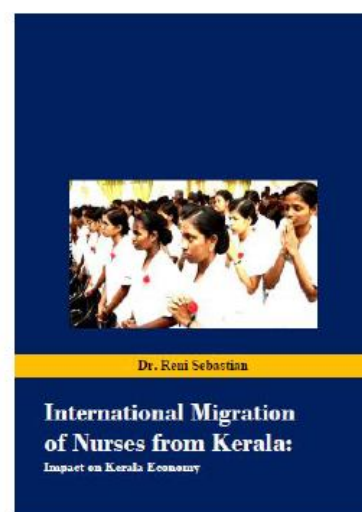
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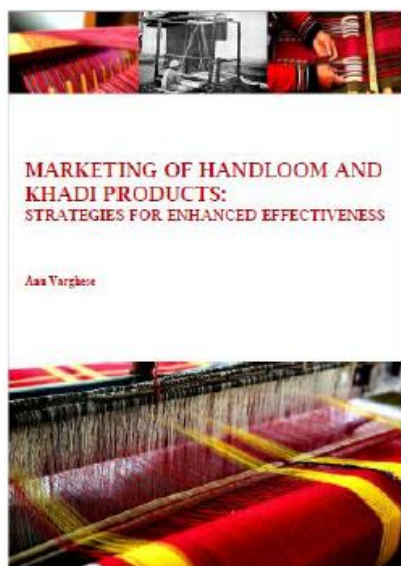ISBN : 978-81-944069-2-1
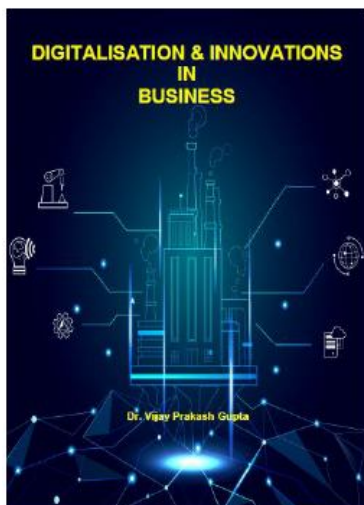
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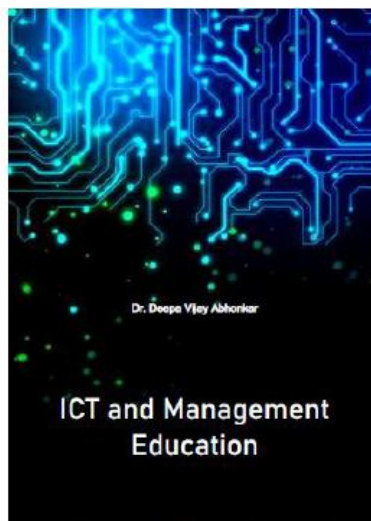
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