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3.1 Research Paper for the Academic Year 2021

Sr. No	Name of Author/s	Title of the Paper	Link of the Journal
1	Dr. Shubhangee Ramaswamy	"A Study on Employer Branding Initiative with reference to Selected Indian IT Companies"	http://www.viirj.org/vol12issue2/61.pdf
2	Dr. Shubhangee Ramaswamy	"Employee Engagement: Probable Solutions to Challenges Posed during Covid-19 outbreak with reference to Indian IT Sector"	http://www.viirj.org/vol12issue2/50.pdf
3	Dr. Shubhangee Ramaswamy	"Adapting Digital Banking Services During Covid-19 Pandemic: A Study on Customer Experiences In Selected District of Maharashtra State, India".	https://iaeme.com/Home/article_id/IJEET_12_05_002
4	Dr. Shubhangee Ramaswamy	"An Effective Mechanism for Securing and Managing Password Using AES-256 Encryption and PBKDF2	https://iaeme.com/Home/article_id/IJEET_12_05_001
5	Dr. Shubhangee Ramaswamy	"Corporate Communication : Legitimacy for Employee Wellbeing during Crisis"	https://turcomat.org/index.php/turkbilmat/article/view/8750/6819
6	Dr. Shubhangee Ramaswamy	"Corporate Communication: Best Practices Adopted by IT Companies to Enhance Employee Engagement"	http://www.viirj.org/vol13issue1/43.pdf
7	Dr. Vinod Mohite	Digital Payment Saga: Pandemic Impact on ATM Usage in India	https://www.tojqi.net/index.php/journal/article/view/1544
8	Prof Praful Sarangdhar	Digital Payment Saga: Pandemic Impact on ATM Usage in India	https://www.tojqi.net/index.php/journal/article/view/1544
9	Dr. Vinod Mohite	Study of Artificial intelligence and its application in marketing	N.A

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		process towards consumer : A Conceptual Analysis	
10	Dr.Jitendra Bhandari,	A study of Factors affecting online buying behavior	https://www.viirj.org/vol12issue1/114.pdf
11	Dr.Jitendra Bhandari,	E-Barter and its entrepreneurial application for best digitalised cashless transactions available	https://www.viirj.org/vol12issue2/131.pdf
12	Dr. Jitendra Bhandari	A Study on Relationship Between Factors Affecting Work Pressure and their Influence on the Employee Efficiency	https://www.viirj.org/specialissues/2021/SP2108/Part%205.pdf
13	Prof Pranjal Jadhav	A Study on Relationship Between Factors Affecting Work Pressure and their Influence on the Employee Efficiency	https://www.viirj.org/specialissues/2021/SP2108/Part%205.pdf
14	Dr. Jitendra Bhandari	Virtual Communication - A Trend in the New Normal: Comprehensive Bibliometric Survey	Part 5.pdf (viirj.org)
15	Prof. Pranjal Jadhav	Virtual Communication - A Trend in the New Normal: Comprehensive Bibliometric Survey	Part 5.pdf (viirj.org)
16	Prof Aparna Shastri	A Study on Relationship Between Factors Affecting Work Pressure and their Influence on the Employee Efficiency	https://www.viirj.org/specialissues/2021/SP2108/Part%206.pdf
17	Prof Aparna Shastri	Virtual Communication - A Trend in the New Normal: Comprehensive Bibliometric Survey	Part 5.pdf (viirj.org)

A STUDY ON EMPLOYER BRANDING INITIATIVE WITH REFERENCE TO SELECTED INDIAN IT COMPANIES

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ABSTRACT

Employer branding is an emerging discipline with its roots in HR principles. Its aim is to develop an image of the organization as an "employer of choice" in the minds of existing and potential employees, as well as other stakeholders including customers and recruiters. Employer branding communicates the identity of an organisation to the public. It is the process of placing an image of being a great place to work in the minds of prospecting and existing employees. The objective is not only to offer these tangible benefits, but to also develop an emotional link with them. A strong employer brand should connect an organization's values, people strategy and HR policies and be linked to the company brand. In recent years employer branding has gained popularity among the HR practicing managers as an important strategy to build organisation sustainability. This paper discusses the various initiatives by the IT giants which resulted in employer branding.

Keyword: Employer branding, IT Companies, HR Policies, organizational sustainability.

Introduction

Branding was originally used to differentiate tangible products, but over the year it has been applied to differentiating people, places and firms (Peter, 1999). According to Aaker (1991), established brand is regarded as a critical means for differentiating between products and creating competitive advantage for organizations. Similarly, employer branding has become a new approach for gaining an edge in the competitive world. The term employer brand‖ denotes what people currently associate with an organization. According to Barrow and Mosley (2005), employer branding is not only to transfer the message of the personality of a company as an employer of choice, but it has been used to adopt the tools and techniques usually used to motivate and engage employees. Like a consumer brand, it is an emotional relationship between an employer and employee. Ambler and Barrow (1960) have defined employer branding as the development and communication of an organization's culture as an employer in the market place. It is the package of functional, economic and psychological benefits provided by employment, and identified with the employing company. It convey the value proposition – the totality of the organization's culture, systems, attitudes, and employee relationship along with encouraging the people to embrace and share goals for success, productivity, and satisfaction both on personal and professional levels. Increasingly, firms are using employer branding to attract recruits and assure that current employees are engaged in the culture and the strategy of the firm. Employer branding communicates the identity of an organisation to the public. It is the process of placing an image of being a ―great place to work in the minds of prospecting and existing employees.

Objectives

1. To study an evolving concept of Employer Branding
2. To study various employer branding activities undertaken by selected Indian IT companies viz. Infosys, Wipro, TCS, HCL, and Tech Mahindra
3. To identify major factors affecting Employer Branding

Research Methodology

The research design used was Case Based. Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does answer questions about

EMPLOYEE ENGAGEMENT: PROBABLE SOLUTIONS TO CHALLENGES POSED DURING COVID-19 OUTBREAK WITH REFERENCE TO INDIAN IT SECTOR

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ABSTRACT

The last year have been really tough on the global socio and economic changes because on contemporary covid-19 outbreak. The lot has changed in terms of how employee and employer engage themselves at workplace. This change was triggered due to penetration of technology across the all industrial sector and around globe. The past few months of COVID-19 pandemic have resulted in companies' laying-off employees, remote working, work-life imbalance and in general increased employability uncertainty especially among IT employees. This has brought organizational focus back to their employee engagement tactics and motivation as employee morale has touched an all-time low. Though the concept of employee engagement first appeared in an academic journal in 1990's, it remained to be a matter of constant revival. The present study is based on secondary data sources such as review of various research papers from substantial online sources, articles, books, blogs and reports. Such study will act as a supportive hand for any organization in building effective employee engagement strategies in this trying situation. Organizations can reengineer their current employee engagement strategies and policies.

Introduction

The year 2020 will be recalled for ages to come and the credit is not because of any revolution that took place but due to the COVID-19 pandemic which led to the global crisis. India too couldn't escape the outbreak and had witnessed a spike increased number of cases starting from March 2020 and subsequently slide unto the pandemic. Soon after, our country India declared its lockdown, it was being witnessed for the first time ever in the history Indian economy was facing difficulty. Government of India was constantly involved in developing remedial and proactive measures. Organizations were facing tough time as they were forced to remain closed during lockdown yet need to manage their operations and feed their employees. The working pattern changed almost for all sectors.

Statement of Problem

The past few months of COVID-19 have resulted in companies' laying-off employees, remote working, work-life imbalance and in general increased uncertainty especially among IT employees. This has brought organizational focus back to their employee engagement tactics and motivation as employee morale has touched an all-time low.

In the given scenario, the employees were forced to work from home and at the same time the organizations were fighting against their sinking operations, salary payments, absurd overheads and employee turnovers etc. This resulted in shutting down of many startups and companies and commercial activities. From big to small, everything came to a standstill. All this added up to low employee morale and disengaged employees. All organizations including the IT sector were thrusting towards virtual working environments to drive substantial outcomes. Hence, it can be said that the Pandemic scenario was compelling all the organizations to call for more employee engagement with an aim to recover output with efficiencies.HR managers were constantly involved in devising new policies and processes to engage and enhance employees' performances. Employee engagement became the topmost priority issue for the IT-HR managers due to Covid-19 pandemic. Employee engagement is a behavioral attitude at workplace where the employees are committed to their organization and align their individual goals to the organizational goals (Chanana & Sangeeta, 2020). Organizations always keep track of the employees who are engaged in their work and earn profitability for

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ADAPTING DIGITAL BANKING SERVICES DURING COVID-19 PANDEMIC: A STUDY ON CUSTOMER EXPERIENCES IN SELECTED DISTRICT OF MAHARASHTRA STATE, INDIA

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ABSTRACT

Introduction: Banks play a vital role for economic growth since their evolution. A bank is a financial institution which deals with monetary deposits, lending, and credits to the customers. In present landscape, banks and businesses are interconnected with each other. The increase in innovation in technologies and development of new solutions encourages banks to transform from traditional bank to e-bank. Rising number of banking institutes are moving toward digital platforms to deliver their services online because of increasing usage of smart phones and internet penetration across the world. Hence, rise in adoption of online and mobile banking platforms are positively impacting the adoption of Digital Banking Services (DBS) across the globe. During covid-19 outbreak the usage of digital banking services increased drastically in urban and rural area of selected region of Maharashtra State.

Methodology: In the present study efforts were made to understand the growth of digital banking services and related customer experience by means of collecting first-hand information from customers. The customer experience is studied on the basis of selected parameters like: trust on digital banking services (DBS), Preference towards nationalized, cooperative and private banks, widely used transaction type, Popular

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AN EFFECTIVE MECHANISM FOR SECURING AND MANAGING PASSWORD USING AES-256 ENCRYPTION & PBKDF2

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ABSTRACT

Users nowadays have several web accounts for email, banking, blogging, social media, online shopping, and other services. The choice of passwords for these different web accounts poses a problem, resulting in a dilemma. Since users tend to have the same password for all of these accounts, if an attacker gains access to one of them, he will have access to all of the other user's accounts, including his banking passwords, email, and online shopping passwords. Users can have a propensity to use easy-to-remember or weak passwords if they use different passwords for different systems, and there is also a high risk of users losing their passwords, raising the associated user support required for password resets. A secure password manager capable of storing multiple user accounts and passwords can be used to solve this issue, relieving users of the stress and challenge of remembering multiple accounts and passwords. To address this problem, an effective tool for managing password is designed and implemented.

Keywords: Encryption, Hashing, AES-256 Algorithm, password-protection, hash-key, Password Manager, Spoofing, Threats, master password, master-key.

Corporate Communication: Legitimacy for Employee Wellbeing during Crisis

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Abstract: Introduction: Effective communication has always played a vital role for any organization. It acts as a pillar on which the foundation of an organization is build upon. The importance of communication mounts during the tough times like hit of the Covid-19 outbreak. The year 2020 has seen as an exceptional global crisis due to COVID-19 outbreak. The word 'Legitimacy' means something which is good and right. Why the thing is right may be because it follows the law, a religion says it is right, or maybe it is naturally accepted..

Purpose: The crisis like pandemic outbreak pooled in high complexities at workplace due to which the employee well-being led to a questionable state. This study aims at explore role of corporate communication in employee wellbeing.

Methodology: This study is well structured approach to review the secondary data from quality data source like: Mckinsey & Company, The survey report by Business Group on Health & Fidelity Investment (2020), A Quantum Workplace Benchmark Report and Analysis (2020), various research articles from sage publication and other sources constructed base for literature review and bringing meaningful discussion related to study.

Result and findings: Corporate communication plays vital role in employee welling and their mindful engagement contributing significantly to organizational performance. During crisis, the unprecedented public health affects all stakeholders. Employee's wellbeing is most important factor for emotional and physical health and to ensure business continuity. Strains and pressures are very high during crisis, the role of internal as well as external corporate communication is crucial to deal with. Being sensible and maintaining a human component in corporate communications will help organizations in the long run.

Implications: This study will serve as input for many corporates in designing their future corporate communication strategies in regards to employee wellbeing. This will help to maintain business continuity and sustain in the crisis situation..

Keywords: Corporate Communication, Employee Wellbeing, Covid-19 Pandemic, Crisis, Internal Corporate Communication, External Corporate Communication

1. Introduction

Outbreak of COVID-19 has spread to all over the world. Huge number of territories and countries are suffering from this issue and trying to deal with this global crisis. Today's organizations have to stay careful and adaptive to unexpected measures. For example external crises, which generate ambiguity and insecurity among their employees and stance instant extortions to the company's enactment and sustainability? This pandemic continues to challenge the world. The onslaught of the COVID - 19 pandemic has changed the social lives of people across regions and economic sections. Every industry is affected by pandemic; this initiated an exceptional failure and collapse in economic happenings. Today's place of work is changing. Although working for the duration of the pandemic has been challenging and from time to time tough to sail across. It has also emphasized the need of improvements to make workplaces run more efficiently.

This crisis has a great impact on employee communication processes, style, and characteristics. Corporate communication becomes gradually more essential for effective internal and external communication as it keeps employees well-versed and tied up so they can concentrate on accomplishing corporate goals. Organization need to ensure timely and correct information flows in every direction to supports and build a unified team and a positive work environment. However, the alterations in the workplaces function during COVID-19 have put a focus on corporate communication practices. In the present study efforts were made to bring out significance of corporate communication for employee wellbeing especially during crisis.

2. Statement of Problem

The Pandemic outbreak pooled in high complexities at workplace. With the rise of these complexities, the employee well-being led to a questionable state. Corporate communication played a legitimate role for employee wellbeing and business continuity at large.

3. Objectives:

1.   To explore the significance of employee wellbeing, especially during crisis.

2.   To design guidelines for corporate communication for employee wellbeing during crisis.

CORPORATE COMMUNICATION: BEST PRACTICES ADOPTED BY IT COMPANIES TO ENHANCE EMPLOYEE ENGAGEMENT

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ABSTRACT

Employee Engagement has become a term that has caught the attention of Human Resource (HR) practitioners all over the world in recent years. Effective communication may increase employee engagement, workplace productivity, and business growth. The purpose of this study is to evaluate and understand the strategies used by IT businesses to improve employee management, with a focus on corporate communication. This research is a well-structured strategy to reviewing secondary data from high-quality data sources such as research papers from Science Direct, Sage publications, and other sources to provide a foundation for literature review. Corporate communication plays an important role in employee engagement in the IT industry. The results reveal that highly engaged employees have better health, are more satisfied, have a higher retention rate, are more loyal, and are more productive. This research will be used by many IT and other industries to build future communication-based employee engagement initiatives.

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Keywords: Corporate communication, Employee engagement, Information Technology (IT), Human Resource (HR)

Introduction

'Employee Engagement,' which developed mostly from consultancy practice, is a concept that is currently being investigated and contested in academics. Most people think of engagement as a state of mind or behaviour that include being preoccupied with, involved in, fascinated by, dedicated to, retained, and persistent in organisation. Employee engagement allows organization to track and manage employee's opinions on important aspects of workplace culture. Organization can determine whether staffs are fully engaged in their task or merely putting in their time. Improving employee engagement practices is significant to a company's success. Employees that are disengaged are less productive at work and have poor customer service abilities. (Osborne and Hammoud, 2017) Organizations can also find out whether team-building activities and HR procedures have a good impact on company outcomes or if there is chance for improvement. The importance of corporate communication in fostering a transparent connection between management and workers, which leads to employee engagement. Employees' perceptions of fairness in the communication process decrease their uncertainty, enhance their involvement, and increase their readiness to put up discretionary effort. Employees will be engaged in work if an organization treats employees as partners, values teamwork, places trust in employees, shows respect for them, and treats them as creative and enterprising people while cultivating their willingness to act, make decisions, and take responsibility while acting ethically. (Baran and Sypniewska, 2020) "As per the result of the study by Tiwari and Lenka, (2020) resonant leadership has a non-significant relationship with employee engagement. However, greater influence of internal corporate communication, knowledge sharing, continuous learning, intrapreneurship, and perceived communication satisfaction has increased the employees' levels of engagement. High employee engagement helps in developing the organisation's image as an employer brand."

Statement of Problem

Indian market's IT sector is one of the most expanding industries. It's important to investigate employee engagement methods and the significance of corporate communication in this.

Objectives

1. To comprehend the significance of employee engagement in the IT industry.

STUDY OF ARTIFICIAL INTELLIGENCE AND ITS APPLICATION IN MARKETING PROCESS TOWARDS CONSUMER: A CONCEPTUAL ANALYSIS

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Abstract:
The changing consumer buying behaviour and preference, attitude and engagement has brought tremendous challenges to the marketing managers. Due to the pandemic the customer preference and buying patterns towards products has changed the way markets operate in earlier. The advancements in digital automation and its related technologies, the application of intelligent automation in marketing is expected to increase in the future. The problem is that the advances are very recent and thus there is not enough research in depth on the role of AI applications in the marketing process, making it difficult for marketers to use the technologies. This paper offers a research agenda on the latest implementation of artificial intelligence and the challenges faced by marketing managers in the current situation and their impact on the marketing process through the adoption of the AL application in the marketing process, AI platforms and future trends. Technologies help marketers to better understand clients and allow them to better target them and customise marketing behaviour and messages. This research paper also tries to find out about the literature assessment of a variety of researchers who have already posted modern-day utility of artificial intelligence in marketing, and its affect on the future of marketing process. Based on the challenges faced by the marketers in the present situation we have framed a framework on how AL applications can support marketers in marketing process.

Key Words: Artificial Intelligence, AI application in Marketing, AI platforms, AI Trends in Marketing

1. **Introduction**:

The Innovation hold extensively modified purchaser's norm and also shaping the eventual fortune of commerce and promoting in careful. The alter of innovation has managed the price of advertiser's admittance to prospects and gigantic measures of knowledge on examples of their practices that any person wants to vary earlier than they might be useful for dynamic. This fast development in innovation and its influence on the event of the unpredictability of enterprise circumstances are providing climb escalate to the probabilities and problems from a selling level of view, meriting analysis consideration. Marketing process and strategies depend upon simple and, finest case scenario, muddled frameworks wherein the connection amongst circumstances and end outcomes requires investigation. When in indisputable actuality marketing works in complicated frameworks, for example, markets, the place circumstances and logical outcomes should be seen by and large, advertisers want to understand this intricacy

A STUDY OF FACTORS AFFECTING ONLINE SHOPPING BEHAVIOR

Dr. Bhandari Jitendra[1], Amruta Kshirsagr[2], Sachin Kshirsagar[3],
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ABSTARCT

Online business tends to sell a product through online channels. IT innovation has made an immense impact on online based business. In the recent past the advancements, computerized innovation, versatile and online sites turned out to be increasingly more prominent among the buyers. In this way, the large piece of the market is concentrating on online business. It changed the way shoppers are getting their products. It decreased the time, and physical exertion that individuals needed to put into shopping. Online business turned into a test for conventional trade in a method for decreasing the physical exertion and time individual spends looking for a product, additionally, purchaser can without much of a stretch look at the costs online so as to get the best buy they need. It has a few risk as well, which comes normally, as an outcome of online based shopping, such as financial, product and information risk, which are confronting online based business & what's more, still have a great deal of enhancements to be done.

Keywords : online shopping, consumer behavior, consumer risk.

Literature review
Perceived Risk

The idea of perceived risk was first presented by Bauer (1960) and has been frequently used to address different issues in customer behavior. Buying has long been viewed as a risk accepting action as buyers might not be sure of a buying decision and the results of bad choices. Mitchell (1999) characterized perceived risk as an abstractly decided desire of loss. In the online shopping, the degree of perceived risk might be amplified because of on the online buyers' restricted physical access to products and deals with sales force (Park and Stoel, 2005). An abnormal state of perceived risk obstructs buyers from receiving the Internet as a shopping channel (Alreck and Settle, 2002; Forsythe and Shi, 2003; Garbarino and Strahilevitz, 2004). Six segments of perceived risk related with shopping have been recognized as physical, social, product, convenience, monetary, and psychological risk (Peter and Tarpey, 1975). Among the six kinds of risk related with shopping, product and financial risks have been appeared to have a critical negative effect on buyers' online shopping desire (Bhatnagar and Ghose, 2004; Lu, Hsu, and Hsu, 2005). Product risk is characterized as the likelihood of the thing neglecting to meet the performance prerequisites initially planned. An abnormal state of product risk in online shopping might be relied upon because of on the online shoppers' failure to physically look at and test item quality and choices (Alreck and Settle, 2002; Garbarino and Strahilevitz, 2004). In this way, buyers' vulnerability increases with respect to a specific purchase decision with regards to online shopping. Financial risk is characterized as the probability of experiencing a fiscal loss (Horton, 1984; Sweeney, Soutar, and Johnson, 1999). Credit card misuse is an essential money related worry among numerous online consumers. Privacy/Information risk is characterized as the likelihood of having individual data disclosed as an aftereffect of online exchanges (Garbarino and Strahilevitz; 2004; Maignan and Lukas,1997). Research has discovered that protection risk is of developing worry among online consumers' (Drennan et al, 2006).Time risk is the discernment that time, accommodation, or exertion might be waste when a product bought is fixed or replaced Hanjun et al., (2004). Time risk incorporates the stress acquired during on the online exchanges, often resulting from trouble of accessibility as well as submitting requests, or deferrals accepting items, Forsythe et al., (2006). Delivery risk is characterized as the Potential loss of conveyance related with products lost, merchandise problem what's more, sent to an inappropriate spot subsequent to shopping (Dan et al., 2007). Customers fears

A STUDY OF FACTORS AFFECTING ONLINE SHOPPING BEHAVIOR

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E-BARTER AND ITS ENTREPRENEURIAL APPLICATION FOR THE BEST DIGITISED CASHLESS TRANSACTIONS AVAILABLE

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ABSTRACT

A system of exchanging commodities or services for the exchange of other things or services, bartering is a very old concept. A system known as barter was established as early as 6000 BC. It was possible to implement this system without the need for a medium of trade, like money. Following the introduction of the concept of money into the economy, people felt at ease using it to make necessities-based purchases of commodities and services. Subsequently, this technique was only employed during times of financial crisis, when people had very little or no money to spend. One of the numerous ways it differs from gift economies is that there is no temporal delay in the reciprocal trade. One of the research's goals was to raise awareness of the barter system. The practicality of this approach in current practice and the development of a creative bartering concept. A simple-to-read questionnaire was created and given to thirty responders. According to the respondents' collective opinions, the general public now uses a variety of e-commerce payment methods. The data procured was analyzed and Interpreted with suitable conclusions and recommendations. The overall research was up to the satisfaction level and the idea of business was being passed over to the experts to implement.

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Introduction to the topic

A system of exchanging commodities or services for the exchange of other things or services, bartering is a very old concept. A system known as barter was established as early as 6000 BC. During the time when there was no money, it was in use. The idea behind the barter system was to allow people to exchange excess, surplus, or unneeded goods for necessities. It was possible to implement this system without the need for a medium of trade, like money. Barter was thus utilised to replace the purchase system. Although it can be multilateral (i.e., handled through barter organisations), it is typically bilateral. In the majority of emerging nations, barter served as a productive means of exchanging goods.

Following the introduction of the concept of money into the economy, people felt at ease using it to make necessities-based purchases of commodities and services. Subsequently, this technique was only employed during times of financial crisis, when people had very little or no money to spend. One of the numerous ways it differs from gift economies is that there is no temporal delay in the reciprocal trade. It used to take some time for the barter system to determine which source was best for exchanging products and services. This would take longer than anticipated. Barter consequently evolved into the backup option for those with far more patience and time on their hands.

Subsequently, the era of industrialization and globalisation demonstrated strong effects on the Indian economy, as well as the strength and ardour of money. The situation appeared to change when the honourable prime minister of India announced "Demonetization" in 2016. According to theory, demonetization is essentially the process of removing a currency unit's legal tender status. Every time there is a change in the national currency, demonetization is required. A new monetary unit must be introduced in substitution of the outdated one. The general public was concerned about the cost of groceries, produce, and other everyday essentials as well as services like barbering and shoe repair on a daily basis when this act was passed. People with an eye for technology began using e-payment gateways to pay for needs like gpay, Pay-tm, etc. As a result, the general public felt at ease participating in e-commerce. Vendors of vegetables, laundry services, and canteens also began to take cashless payments in exchange for the goods and services rendered. The remaining items included a 4% fee for the

transfer of e-cash into their own bank account. However, there is still a good choice available. Speaking with a friend who offered a rikshaw wala a dozen oranges in exchange for a journey that cost Rs. 80, I became aware of barter as a useful means of exchange because neither party was carrying cash. In a similar vein, during conversations with other friends, it was mentioned that certain people trade newspaper scraps for reading books or clothing for kitchenware (which is common in urban areas). This made their financial troubles less stressful for them.

Literature Review

The literature for bartering and coinage is typically found in textbooks for elementary and secondary education. Reviews of this literature are extremely distinctive. The following is a summary of the international literature on the subject:

Shera Dalin, Karen S Hoffman (2010) The Art of Barter: How to Trade for Almost.
You can still need and want goods even if you don't have any money. It's time to exercise some imagination. The majority of people possess a useful skill; all that needs to be done is identify it and learn how to apply it to obtain another goal. "The Art of Barter" provides detailed advice on anything from piano lessons in exchange for haircuts to an engine tune-up in exchange for painting a house: Finding your "tradable" abilities Starting a transaction Determining what a fair trade is How to complete a transaction Using barter in daily interactions The book is also full of creative suggestions for using barter in the current difficult economic climate.

Nancy Loewen, (2012) Let's Trade: A Book About Bartering
Introduces the idea of selling products and services for other goods through bartering. contains a little historical data.

Michael Wigge, (2014) How to Barter for Paradise
The majority of individuals like to travel in luxury, staying in opulent hotels, never venturing outside of popular destinations, and avoiding locals. However, Michael Wigge is not like most individuals. His next task was to transform an apple into a mansion in Hawaii after spending 150 days traversing the world without money while authoring How to Travel the World for Free.

Wigge travels to fourteen nations and six continents trading items for more valuable ones, and he makes friends with a variety of gregarious individuals who accept his offers. Adopting the identity of the Barterman, he exchanges the apple for sixteen cigarettes in Germany; a few exchanges later, he repairs a motorised rickshaw in India and exchanges it for silk; in Australia, a millionaire amuses himself by offering Wigge an artwork in exchange for the silk if he feeds a wild crocodile. When he finally makes it to Hawaii, he's equipped with a surfboard, two bicycles, Portuguese porcelain, three solid gold coins, a Porsche wristwatch, a record by musician Coati Mundi and a contract that entails a 25 percent share of the earnings from his next single, a voucher for a two-night stay in an L.A. mansion, and an original painting by painter Alex Stenzel. All he needs to do now is find someone to trade him a house. Wigge conducts 42 transactions during his 200-day voyage across the globe, meeting odd, generous, humorous, amiable, quirky, and kind people who aid him in his endeavours. You won't want to miss this journey!

Martin Jenkins, Satoshi Kitamura, 2014 by Candlewick Press, The History of Money: From Bartering to Banking
Martin Jenkins and Satoshi Kitamura lead readers on an enlightening journey through the history of money with wit and clarity. What can resemble a plastic card, a string of shells, a stone with a hole in the middle, or a piece of paper? Naturally, money is the solution. However, when did we begin to use it? And why? What connection does writing have to money? How do taxes work inside? What can resemble a plastic card, a string of shells, a stone with a hole in the middle, or a piece of paper.

Linda Brennan, 2012 Child's World, Incorporated, Bartering
This book is especially meant to provide kids an introduction to trading products and services. The notion of tentative value is also mentioned, which involves calculating the cost of one product in relation to the valuation of

another. Even if this value might not be entirely accurate, if both parties can understand one another, the transaction might still go through.

Objectives of the Research

1. To ascertain the general public's awareness of bartering.
2. To determine whether bartering is feasible and useful.
3. To understand mindset regarding needs and desires
4. To develop a cashless transaction method.

Research Methodology

The methodical examination and evaluation of materials and sources to establish facts and draw new conclusions is known as research. In order to provide verified answers to the questions, the research topic selected needs to be worthwhile and engaging for both the researcher and the respondents. Therefore The purpose of research is to gather data and conclusions that could lead to the best possible solution.

Type of Research : Descriptive.
Sampling Technique- Probability
Sampling Type : Simple Random Sampling.
Population Frame- Identified common people using E-commerce for trading Transactions.
Sample size : 30 respondents.
Primary Data Collection through a Questionnaire and Secondary Data collection through a review of related books and articles.
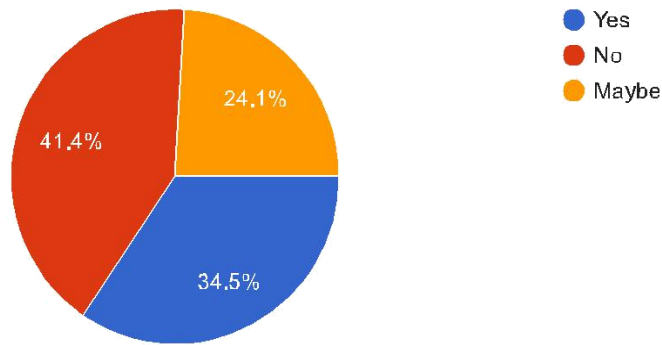
Data Analysis and Interpretation
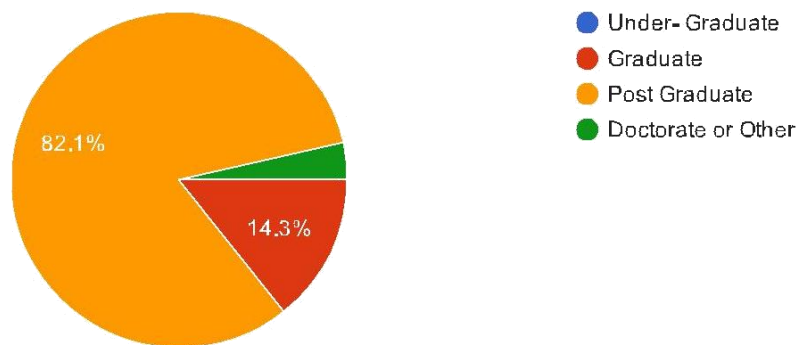
1) **Qualification :**
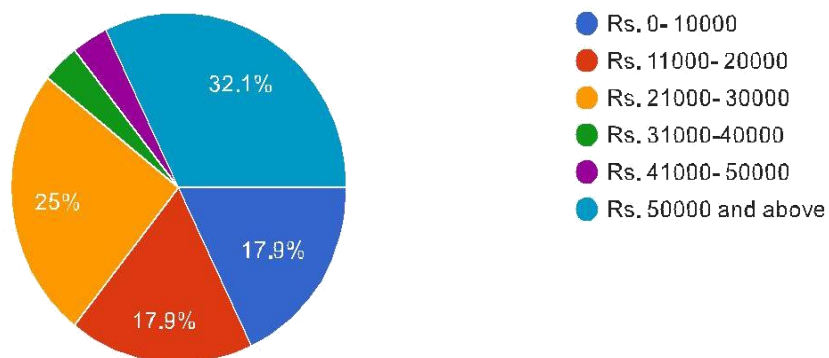
2) **Income (Monthly)**

3) Have you experience Barter Transaction before?

Clothes,electronics goods,books,time

Mobile Phones and Accessories
Books and Stationery
Electronic Gadgets
Bikes

...

Knowledge sharing, technical things, good other than pulses n vegetables, properties not only like vehicles but house also.
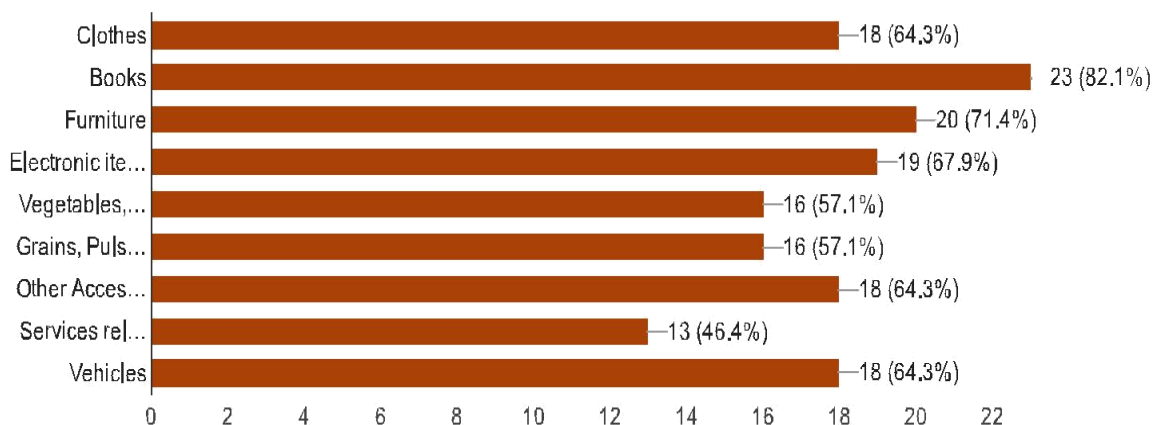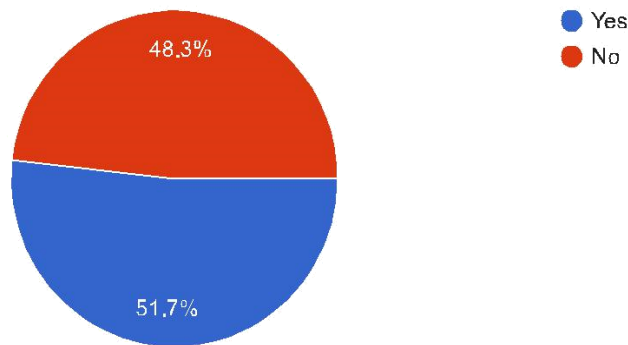
All

Pen

Nothing

Used

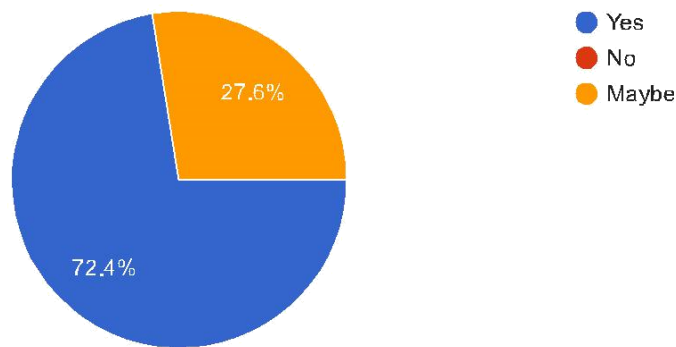### 4) What are various excessive things you would like to Barter?

5) List of things people would like to Barter.

6) Do you think the Barter can be digitized?

7) Do you Bartering is a time consuming process ?

Conclusion

The majority of responders qualified under the post-graduation cadre. Male respondents made up the majority (65.5%) compared to female respondents (34.5%). The majority of responders are in the 20–30 age range. The respondents' highest income falls between Rs 30K and Rs 50K. Of the respondents, 51.7% had prior experience with bartering, whereas 48.3% had not, but were interested in doing so today. When asked to name the different extra things that may be bartered, the majority of respondents said that they would like to trade books (82%), furniture (71.4%), electronics (679.9%), clothes (65%), accessories (64.3%), vehicles (64%), vegetables (51.1%), grains and pulses (52%), and services (46.4%).Therefore, it is discovered that bartering services, vegetables, grains, and pulses pique respondents' least interest.

The overall data interpreted proves that common people also have a big bag of things which are unwanted, unused or excess to their requirement. Hence this bartering concept also focused on , people go for the comfort or luxury products with the necessary goods, and that makes a difference in attitude for needs and wants.

Limitations/ Scope for Future

1. E-bartering is limited to small-scale, daily transactions.
2. It takes more time to get the correct transaction and deal.
3. In these transactions, a sense of compromise is anticipated.

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A STUDY ON RELATIONSHIP BETWEEN FACTORS AFFECTING WORK PRESSURE AND THEIR INFLUENCE ON THE EMPLOYEE EFFICIENCY

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ABSTRACT

The work related pressure has critical mental and physiological impacts on employee performance. However, the work related pressure has some affliction impacts also. The work related pressure makes positive response that makes individual to accomplish and defeat a situation and motivates to perform best of his/her capacity. The large portion of the study conducted observed the impacts of work pressure on staff the scope of the study was restricted to IT industry. The aim of this paper is to illuminate the problem the "Stress" followed with its consequences for staff. A survey of 346 employees was done to analyse the work related, organization related and individual related pressure and its impact on employee efficiency. The relationship analysis was used to establish association of these factors and their impact on work efficiency. Reliability was established using cronbach's alpha. In the conclusion we mentioned that all three types of pressure affects the staff's' exhibition of the efficiency.

Keywords: Job related pressure, work efficiency, organisational pressure, individual pressure.

Introduction

The term work related pressure mean difficulty, strain, misfortune or hardship. The work related pressure has been of extraordinary worry to workers and different stakeholders in organisation. Job related pressure is difficult area for the organisation (Ornelas and Kleiner 2003). Price of work related pressure is exceptionally more for most of the organization. Work related pressure, characterized impression for disparity among expectational personal abilities keep those (Ornels and Kleiner, 2003). Christo and Pienaar (2006) said that the cause of work related stress of employment and difficult work, absence of comfort, intricacy, absence of independence for work. Also, work related pressure is brought about by absence of resourses; work plans, for example, burning the midnight oil or extra time and hierarchical environment are considered as supporters of staff's stress. Work related pressure frequently shows high disappointment among the representatives, work portability, burnout, helpless work execution and less compelling work (Manshor, Rodrigue, and Chong, 2003). Mental stress impact the wellbeing through passionate, intellectual, social and mental

variables (Levi 1998). The job conflicts, job over-burden, job struggle have association and are normal reasons for the work related pressure (Sethi and Chand, 1997). Sort of job alloted for a representative is additionally work related pressure factor and those occupied with business ready to adapt work related pressure compared to the individuals who are appointed disconnected job (Tread G. 1999). Pressure associations is characterized as far as maverick between an individual's abilities and capacities and requests of his/her work and as a loner as far as an individual's requirements are not satisfied with work climate. Cooper et al said that job related pressure is implied variables, Cooper and Marshall (1976)

Review of Literature

Calpan et. al. (1975) viewed an individual, job space and job set with their association involves in assumptions for huge jobs, makes significant work related pressure dependent on the circumstances. Pareek (1983) worked on the work related pressure while distinguishing unique kinds with job stress. Hypotheses related to work related stress influence. (Osipow, 1998). Job load can bring about representative facing violence and disappointment

VIRTUAL COMMUNICATION - A TREND IN THE NEW NORMAL: COMPREHENSIVE BIBLIOMETRIC SURVEY

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ABSTRACT

This paper is an attempt to evaluate the knowledge composition in the field of Virtual Communication which is a must to go for in the new normal with the support of an in-depth bibliometric and network analysis. Findings are drawn from a total of 590 research articles on virtual communication published in research journals and conference proceedings listed in Scopus, spanning over last 38 years from 1983 to 2021. Articles written in English were considered for the current study. This bibliometric assessment provides a diverse perspective by depicting the landscape and developmental path of the research carried out in the field of virtual communication over the time. Analysis is done basis multiple bibliometric parameters with the use of various network analyses and data analysis techniques. Findings of the study reveals the rising number of publications in the virtual communication research domain, where 2021 has witnessed highest amount of publication till date. United States is surfaced as the leading nation followed by United Kingdom and Japan in terms of number of publications in the said field. Further bibliometric findings lay a strong foundation for the in-depth review of literature and empirical study. This marks the scope for future research.

Keywords: Virtual communication, electronic communication, Bibliometric analysis, Network analysis.

1. Introduction& Review of Literature -

1.1 Introduction to Virtual Communication

The Internet has introduced previously unknown modes of communication and new languages into our lives. One of such modes of communication is the virtual communication (Morozova & Rozhnenko, 2021). Man has communicated since the first signs of human life. From simple exchange processes to speaking through the use of symbols and written communication (Colin, 1966). Communication is now a fundamental process for companies and a very important Dimension of virtual team work (Purdy et al., 2000). Considering the business scenario during and post COVID-19, it has laid compulsion on many businesses to operate on virtual platform. This has increased reliance on virtual communication for the smooth functioning of virtual teams (Morrison Smith & Ruiz, 2020).

1.2 Literature Review

As correctly stated by (Mitchell & Zigurs, 2009), virtual communication is a mode of communication that includes the use of technology- audio and video to communicate with people who aren't physically present in front of us. Even though virtual communication started way back with the discovery of telephone, the arrival of webcams, video conferencing and instant messaging, made virtual communication a big success (Shukla, 2012).

With the outbreak of the corona virus curse, face-to- face business communication has been wiped out for the time being. In-person meetings were fast replaced with virtual communication tools (Anderson et al., 2007). Empirical study conducted by Weigand et al.,(2003) highlighted the advantages of virtual communication over traditional mode of communication. Apart from been quickly, virtual communication is also cost effective. Organizations can save on, spending on travelling expenses merely by initiating a video call (Kresimir et al., 2006). In a proficient environment, virtual communication saves a lot of time and funds. By using any instant messaging apps or web conferencing tool, we can exchange any information across the globe in seconds. It's a rescuer in case of a disaster (Shawn et al., 2015). Most of the texts we exchange with the aid of instant messaging application or internet conferencing device are encrypted, hence there is no fear of our messages being misused (Yi et al., 2006).

The largest challenge related to the use of virtual verbal exchange is that people's interpersonal abilities are diminishing (Ya-

ADAPTING DIGITAL BANKING SERVICES DURING COVID-19 PANDEMIC: A STUDY ON CUSTOMER EXPERIENCES IN SELECTED DISTRICT OF MAHARASHTRA STATE, INDIA

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ABSTRACT

Introduction: Banks play a vital role for economic growth since their evolution. A bank is a financial institution which deals with monetary deposits, lending, and credits to the customers. In present landscape, banks and businesses are interconnected with each other. The increase in innovation in technologies and development of new solutions encourages banks to transform from traditional bank to e-bank. Rising number of banking institutes are moving toward digital platforms to deliver their services online because of increasing usage of smart phones and internet penetration across the world. Hence, rise in adoption of online and mobile banking platforms are positively impacting the adoption of Digital Banking Services (DBS) across the globe. During covid-19 outbreak the usage of digital banking services increased drastically in urban and rural area of selected region of Maharashtra State.

Methodology: In the present study efforts were made to understand the growth of digital banking services and related customer experience by means of collecting first-hand information from customers. The customer experience is studied on the basis of selected parameters like: trust on digital banking services (DBS), Preference towards nationalized, cooperative and private banks, widely used transaction type, Popular

Digital wallet platform for online payment, secured banking transaction, convenience of use, perceived benefits and disadvantages of digital banking services. On the other hand systematic approach to review the literature is adopted to study related trends.

Findings: Though there is increased usage of DBS during covid-19 outbreak and people have higher preference to use DBS still awareness, security concern, convenience of use and network connectivity remains major issues needs to be addressed. Superior customer experience means clarity and transparency, support for digital tools with which many customers are still unfamiliar in distress. Communication and quickly adoption of technology and situation plays crucial role. Implications: This study is useful for all the banks as an input to maximize their customer experience and strengthen their customer base at large. Banks would do well when they expand their digital infrastructure encompassing stability, security, availability and reliability of their digital services.

1. INTRODUCTION

In a short period of time, COVID-19 has overwhelmed lives and livelihoods around the globe. For vulnerable individuals and the customer teams that serve them, it has also forced a rethinking of what customer care means. Suddenly, examinations of customer journeys and satisfaction metrics to inform what customers want have given way to an acute urgency to address what they need. Hand in hand with this perspective, four CX practices can frame short-term responses, build resilience, and prepare customer-forward companies for success in the days after coronavirus. They are: focusing on care and connection; meeting customers where they are today; reimagining CX for a post-COVID-19 world; and building capabilities for a fast-changing environment (Rachel Diebner, Elizabeth Silliman, Kelly Ungerman, and Maxence Vancauwenberghe (April 2020).

In the context of COVID-19, banks can better serve customers in distress by enhancing support in the use of digital tools and new products and services. Banks can play an immediate role in slowing the spread of COVID-19 by helping customers make better use of existing digital and remote channels. And banks can help limit the impact of the likely downturn by building new experiences to help their customers manage debt, adjust budgets, and make full use of new government programs. In normal times, customer experience in banking is about making customers happy with the result that they are more loyal, use products more, and cost less to serve. In the context of COVID-19, superior customer experience means clarity and transparency, support for digital tools with which many customers are still unfamiliar, and new products and services for customers in distress. Banks can play a significant role in easing financial distress, so that customers can spend more energy on their families' and their own health and well-being (Eleanor Bensley, Shital Chheda, Robert Schiff, Daniel Stephens, and Nicole Zhou, April 2020). In times of crisis, customers' priorities change.

Four actions can address immediate customer needs and prepare for the future.

Focus on care and concern	Meet your customers where they are	Reimagine the post-COVID-19 world	Build agile capabilities for fluid times
• Reach out, but with support, not marketing	• Innovate digital models to help customers weather the crisis safely from home	• Economic hard times will force cost cuts	• Tap social media, not surveys, for quick customer readings
• Make a priority of employees and community	• Expand home delivery options	• Migrate customers to digital channels to save money and boost satisfaction	• Solicit employees for ear-to-the-ground insights
• Stay true to company purpose and values	• Consider contactless operations	• Brick and mortar stores may look very different post-crisis	• Save time with "test and scale" labs
			• Pay attention to "failure modes" indicating that you've missed customer signals

¹ *Earned brand 2019*, Edelman, edelman.com.

Statement of Research Problem: Though the customer is techno savvy or otherwise covid-19 outbreak acted as catalyst to increase the usage of digital banking services across the globe. An unavoidable consequence of the pandemic was the closure of some banks because customers adopted digital alternatives which they fail to offer. The reality is that this digital shift has laid the foundations to address the need for greater engagement with customers to improve their experience, which was already banks' top strategic priority, according to a recent report by the Economist Intelligence Unit (EIU).

2. OBJECTIVE

- To study the effect of covid-19 pandemic on Digital Banking Services
- To conduct customer experience survey regarding usage of Digital Banking Services during Pandemic in the selected rural and urban region on Maharashtra State, India
- To suggest best practices for Digital Banking Services to strengthen the customer base.

3. LITERATURE REVIEW

The global digital banking market registered revenue of nearly $803.8 billion in 2018 and is anticipated to grow at a 10.0% CAGR, surpassing $1,702.4 billion by 2026. The market has witnessed a significant growth previously, but due to the unexpected COVID-19 outbreak, the market will witness additional growth in 2020, owing to the rising adoption of mobile payment solutions. This growth will be majorly driven by changing customer behavior, increasing focus of the people from visiting bank branches to online access of bank services. With the worldwide spread of COVID-19, the bank operations have been hampered. Borrowers and businesses have faced losses, there has been sluggish growth in sales, and decline in profits. On the other hand, this pandemic has been considered as an opportunity by some to launch `

The covid-19 pandemic has brought digital wave across the globe. Almost all the sectors were forced to adopt technology to their best possible ability. When the coronavirus hit the

world, banks reacted like every other sector, by focusing on adoption of technology and maintaining business continuity. The digital infrastructure played very important role in business continuity. To facilitate the shift to digital, many banks had to expand to new channels chat applications Most of those initiatives can be seen as reactive and short term, but are a step ahead in the right direction. The impact of COVID-19 on business and consumer behavior change is a topic of great importance for companies and financial industry around the world not only to take actions on short-term, but, even more important, to reconsider their strategy on medium and long term(Baicu, C.G., Gârdan, I. P., Gârdan, D.A., Epuran, G., (2020),   The customer experience is increasingly shaped by technology giants, and banks know that their customers expect the same kind of seamless, contextual, compelling service from them. Earlier, the risk of frauds was considerably low, as banks transactions were considered secure due to PIN integrated with online authorization to authenticate the transactions. With increase in innovation in the fintech industry, fraudsters have been coming up with new frauds such as cyber-attacks and skimming, which hamper the market growth. Cyber-attacks are increasing nowadays, and becoming one of the major threats for banks across the globe. In addition, online banking sites and mobile apps are designed to offer security, and banks are continuously updated the sites. However, no system is completely foolproof and can be hacked at any point of time, resulting into risk of identity theft, stolen login credentials, and others.As covid-19 accelerates the take-up of digital banking services, banks have a unique opportunity to address two of the biggest problems facing the sector: customer satisfaction and trust. Banks that have supported their customers during the pandemic have an opportunity to change the relationship with their clients to build deeper trust, which is the most valuable asset for banks, old or new.

The financial institution should focus on providing value to their customer, help them achieve their financial goal such as buying a house, and in this instance view them as a home buyer not just a borrower. This involves a different approach; it means reinventing processes and unifying the bank around the customer. With the right digital tools to analyze risk, it's possible today for a mortgage application to be approved in minutes. Yet too many financial institutions still don't offer even this and open banking can deliver so much more. Banks should be aiming to integrate with third parties to provide a suite of services – not only a mortgage, but also help with finding a property to buy, home insurance, transferring utility accounts to the new address, and so on.

In the aftermath of the covid-19 pandemic, many industries want to 'build back better', rather than return to business as it was before. Banks should do the same. Their customers have been forced by circumstances to embrace digital banking. It's up to the banks to compete on experience making it as personal, engaging and rewarding as it can be. Get that right and banks can truly turn customers into partners.

In these unsettling times, CIOs who are quick to adapt to a mobile-first approach for their services will be the first to see improvement in their ROIs and earn some trust from their consumers. With the foray of new technologies and financial tech institutions slicing into the banking pie and more importantly, with the uncertainty of global events, the banking industry needs to quickly adapt and look towards elevating the customer experience and also finding a way to reassure their customers to retain and engage them remotely. By putting the customer at the core of their business strategy, banks can still find a way to add some stability to their businesses. According to a Study by Kantar, "Financial institutions that lead in customer experience (CX) have a higher recommendation rate, a higher share of deposits, and a greater likelihood that customers will increase their portfolio of new products and services from their bank. While financial institutions that let their customer experience decline, risk losing up to 12.5% of their share of deposits."

The 'Leaders' that are quick to adapt to a mobile first approach for their services will be the first to see improvement in their ROIs and earn some trust from their consumers. Automating processes and improving customer communication by implementing new age digital solutions should be the way forward for banks moving on. This will also help the industry better use existing resources, reduce paperwork and improve time to market for several of their services while offering consumers the convenience of banking on the go from their mobile phones or tablet. Besides net banking and mobile apps, banks need to use preferred channels of communication such as Social media, Instant Apps or Progressive Web Apps and OTT messaging apps to reach out to their customers considering the amount of time consumers spend on such channels.

Given the far-reaching impact that COVID-19 will have on the payments space, TCS believe that banks would do well to expand access to digital touch points underpinned by stability, security, availability, and reliability in the immediate term. Accordingly payment firms with strong fundamentals and focus on digital payments are most likely to emerge as leaders in the post-COVID era. As the industry navigates through the pandemic, payment players will need to define their response across four phases that may overlap: *Immediate-term*: ensure availability and stability of the IT systems as continuous access to immediate funds is key. *Short-term:* identify the most frequently used services, analyze consumer spend behavior, and design an action plan to extend services over the right digital channels. *Medium-term:* focus on expansion of digital services and interactions to enhance customer affinity; leverage the power of open banking to expand the charter for digital services and innovations. *Long-term:* focus on strategic business continuity improvements and supporting a digital-only organization strategy (Tata Consultancy Services Limited, 2020). A study by Qureshi, Zafar, & Khan (2017) found that one in every two Pakistanis used internet banking, suggesting that there are some risk averse people in society, and this extends beyond Pakistan (Mostafa and Eneizan, 2018; Siyal, Donghong, Umrani, Siyal, & Bhand, 2019).

4. DATA ANALYSIS AND INTERPRETATION

Table 1 Demographics profile of respondents

Profile of Respondents	No. of Respondent	Percentage (%)
Gender		
Female	34	33.3
Male	68	66.7
Age		
21-30 year	49	48
31-40 years	26	25.5
41-50 years	14	13.7
51 years & above	13	12.7
Education Qualification		
Under Graduate	24	23.5
Graduate	30	29.4
Post Graduate	41	40.2
Ph.D	7	4.9
Area		
Urban	71	69.6
Rural	31	30.4

Occupation		
Government Employee	10	9.81
Private Employee	45	44.11
Self Employed /Business	8	7.84
Farmer	2	1.96
Student	36	35.29
Housewife	2	1.96

In the present study demographic composition of respondents consist of male and females from Maharashtra State from both rural and urban area having the age group 21 years and above. Majority were working professional either in private or government sector.

Usage of digital banking services during COVID-19 outbreak

Table 2

Use of DBS	No. of Respondent	Percentage (%)
Yes	98	96.07
No	4	3.92

Usage of digital banking services during COVID-19 outbreak
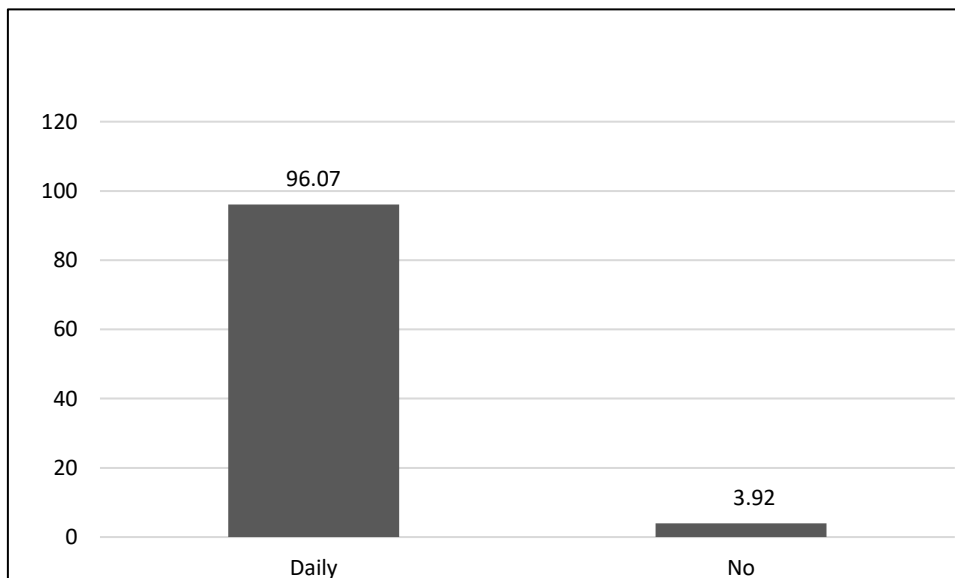
Figure 1

Frequency of usage of digital banking services

Table 3

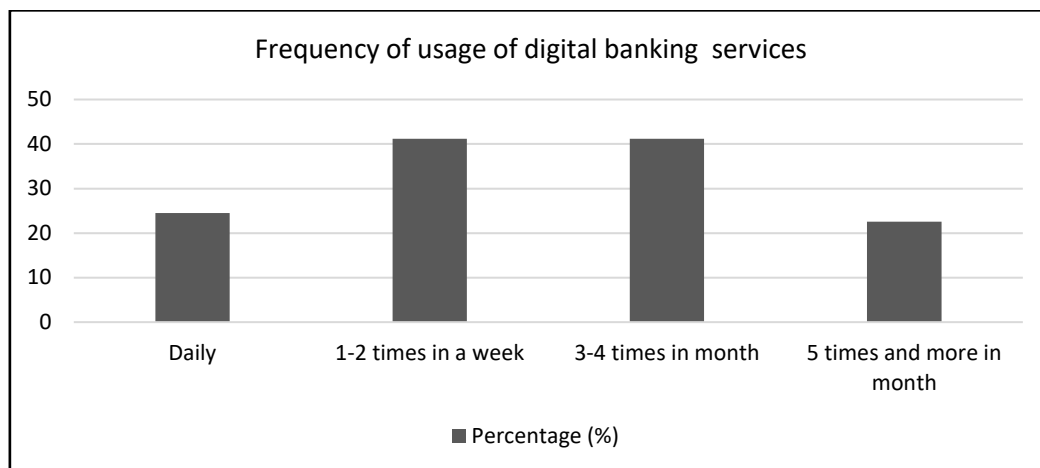| Frequency of usage of digital banking services	No. of Respondent	Percentage (%)
Daily	25	24.51
1-2 times in a week	42	41.18
3-4 times in month	42	41.18
5 times and more in month	23	22.55

Figure 2

- Frequency of different types of digital banking services availed by customer
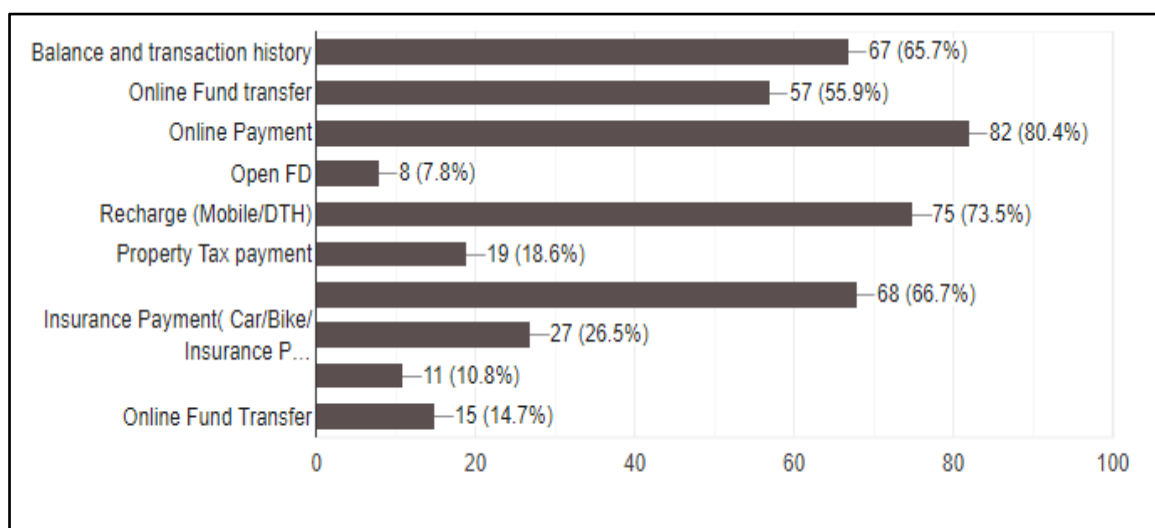

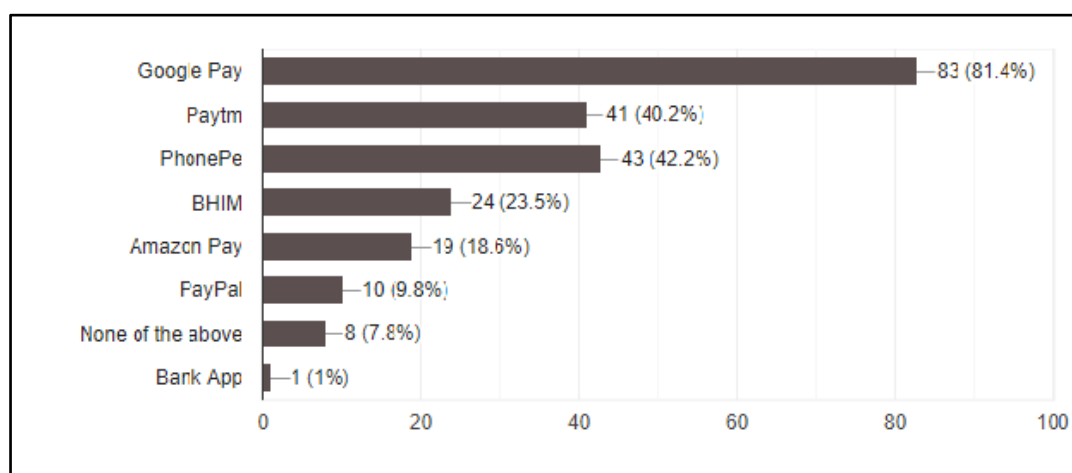**Figure 3**

- Most used UPI Payment Apps

Figure 4

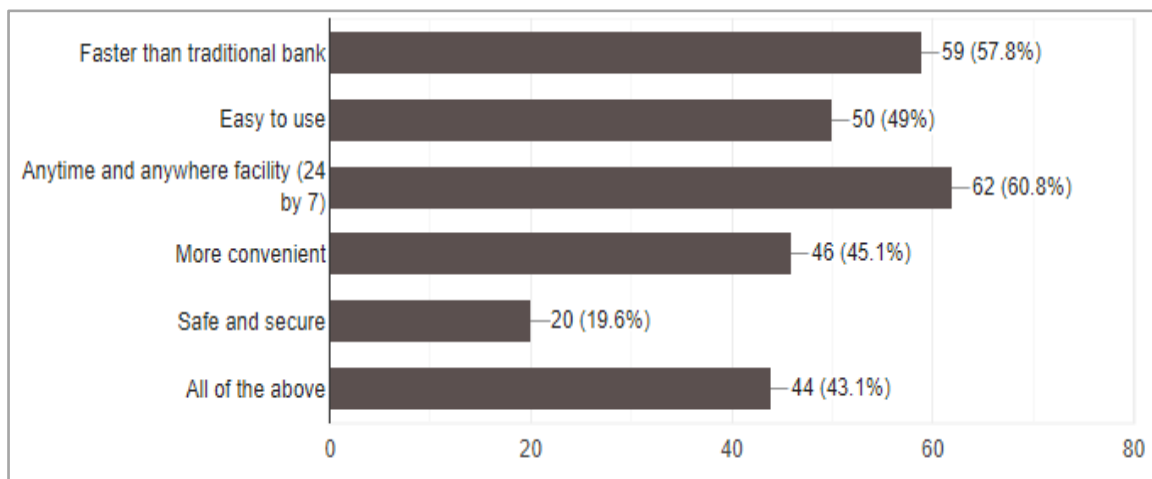- Benefits of using digital banking services

Figure 5

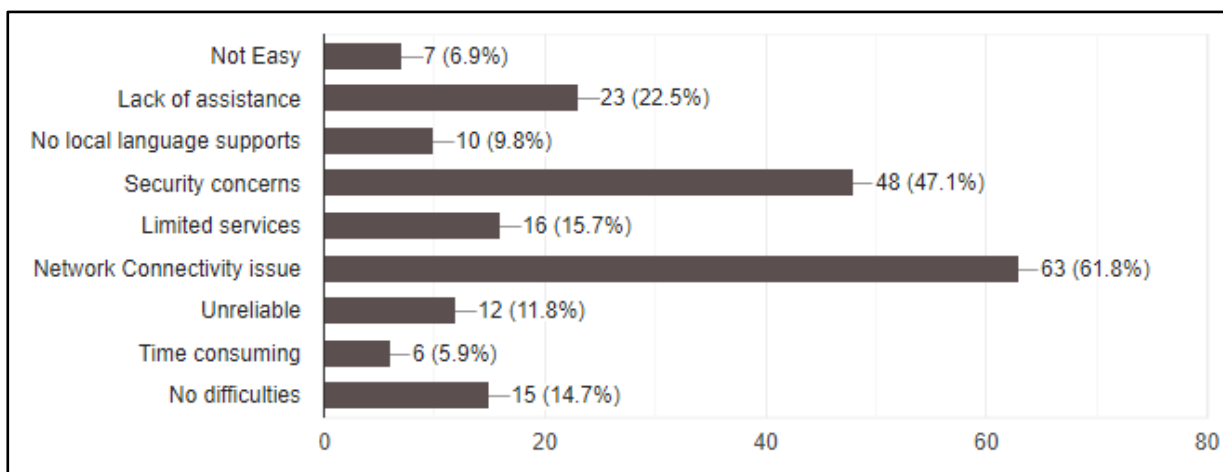- Problems faced while using digital banking services during COVID-19 pandamic

Figure 6

- Overall customer perception on availing digital banking services during pandemic COVID-19 outbreak

Table 4

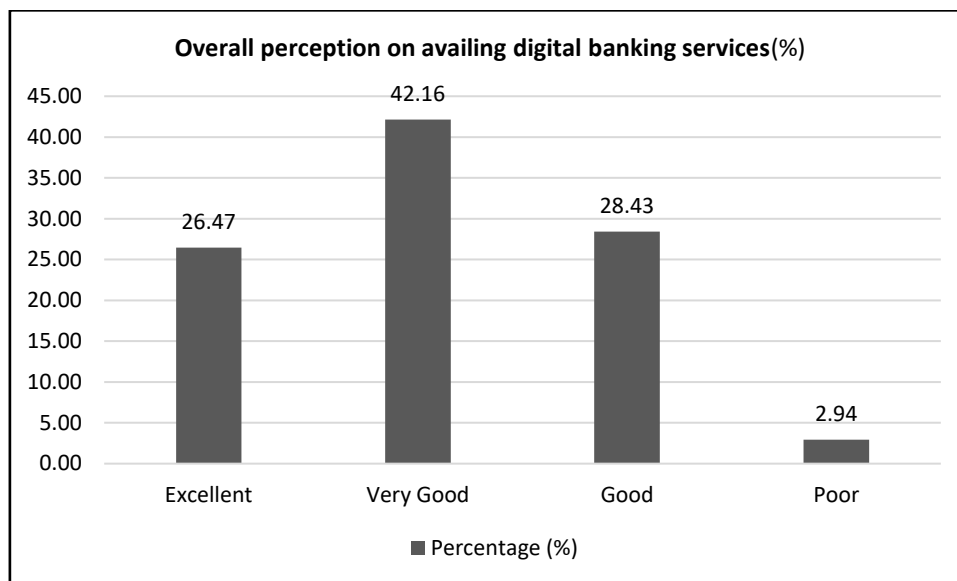| Overall perception on availing digital banking services	No. of Respondent	Percentage (%)
Excellent	27	26.47
Very Good	43	42.16
Good	29	28.43
Poor	3	2.94

Figure 7

5. FINDINGS AND DISCUSSION

- As Covid-19 impacts the global economy, it will still be crucial for most organizations to ensure business continuity. Communication and quickly adapting to the situation will play a key role in ensuring this goal is met. Adopting of technology will play a crucial role in ensuring business continuity especially in banking sector.

- Digital banking market witnessed significant growth in the year 2020 will continue its growth even after the control of the pandemic situation.

- The customer experience is studied on the basis of selected parameters like: Trust on DBS, Preference towards nationalized, cooperative and private banks, Major usage of DBS for type of transaction, Popular Digital wallet platform for online payment, Secured Banking Transaction, Convenience of Use, Perceived benefits and Disadvantages of DBS.

- Though there is increased usage of DBS during covid-19 outbreak and people have higher preference to use DBS still awareness, security concern, convenience of use and network connectivity remains major issues needs to be addressed.

- In normal times, customer experience in banking is about making customers happy, in the context of COVID-19, superior customer experience means clarity and transparency, support for digital tools with which many customers are still unfamiliar in distress.

- Banks to overcome these obstacles during corona virus pandemic must empathize with their customers and support to meet their individual needs like retailer and telecoms companies do when a customer is unhappy with the standard offering. Banks can use AI technology and advanced analytics to approach their customers with personalized offers.

- Following are some of the suggestions for quickly adapting to remote world 1) Virtual assistants on WhatsApp or SMS 2) Live Chat for additional customer support 3) Marketing automation platform that can also be remotely operated from anywhere to track Big Data in real-time and help to send notifications and special offers for upselling and cross-selling services.

6. SCOPE FOR FURTHER RESEARCH

Specific study among the nationalized, cooperative and private bank can be conducted to set the benchmark. Even comparative study among top three players in every segment can be conducted to understand their best practices.

7. CONCLUSION

Banks are significantly making continuous improvements in banking technologies to develop enhanced security in transactions. Banks need to implement an event-driven technology architecture to make every interaction smart and contextual. Focusing on the customer experience is the winning strategy during and post crisis.

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EMPLOYEE ENGAGEMENT: PROBABLE SOLUTIONS TO CHALLENGES POSED DURING COVID-19 OUTBREAK WITH REFERENCE TO INDIAN IT SECTOR

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ABSTRACT

The last year have been really tough on the global socio and economic changes because on contemporary covid-19 outbreak. The lot has changed in terms of how employee and employer engage themselves at workplace. This change was triggered due to penetration of technology across the all industrial sector and around globe. The past few months of COVID-19 pandemic have resulted in companies' laying-off employees, remote working, work-life imbalance and in general increased employability uncertainty especially among IT employees. This has brought organizational focus back to their employee engagement tactics and motivation as employee morale has touched an all-time low. Though the concept of employee engagement first appeared in an academic journal in 1990's, it remained to be a matter of constant revival. The present study is based on secondary data sources such as review of various research papers from substantial online sources, articles, books, blogs and reports. Such study will act as a supportive hand for any organization in building effective employee engagement strategies in this trying situation. Organizations can reengineer their current employee engagement strategies and policies.

Introduction

The year 2020 will be recalled for ages to come and the credit is not because of any revolution that took place but due to the COVID-19 pandemic which led to the global crisis. India too couldn't escape the outbreak and had witnessed a spike increased number of cases starting from March 2020 and subsequently slide unto the pandemic. Soon after, our country India declared its lockdown, it was being witnessed for the first time ever in the history Indian economy was facing difficulty. Government of India was constantly involved in developing remedial and proactive measures. Organizations were facing tough time as they were forced to remain closed during lockdown yet need to manage their operations and feed their employees. The working pattern changed almost for all sectors.

Statement of Problem

The past few months of COVID-19 have resulted in companies' laying-off employees, remote working, work-life imbalance and in general increased uncertainty especially among IT employees. This has brought organizational focus back to their employee engagement tactics and motivation as employee morale has touched an all-time low.

In the given scenario, the employees were forced to work from home and at the same time the organizations were fighting against their sinking operations, salary payments, absurd overheads and employee turnovers etc. This resulted in shutting down of many startups and companies and commercial activities. From big to small, everything came to a standstill. All this added up to low employee morale and disengaged employees. All organizations including the IT sector were thrusting towards virtual working environments to drive substantial outcomes. Hence, it can be said that the Pandemic scenario was compelling all the organizations to call for more employee engagement with an aim to recover output with efficiencies.HR managers were constantly involved in devising new policies and processes to engage and enhance employees' performances. Employee engagement became the topmost priority issue for the IT-HR managers due to Covid-19 pandemic. Employee engagement is a behavioral attitude at workplace where the employees are committed to their organization and align their individual goals to the organizational goals (Chanana & Sangeeta, 2020). Organizations always keep track of the employees who are engaged in their work and earn profitability for

the organization through their performance especially in IT sector.

Objectives

1) To study impact of Covid-19 outbreak on employee engagement initiatives in Indian IT Sector. 2) To identify the challenges posed and probable solution for the same.

Need & Scope

The current study is limited to study of employee engagement trends during ongoing Covid-19 pandemic and study the impact of said pandemic on employee engagement. Functional scope is limited to identify the contemporary challenges while restarting workplaces and proposing potential solution to handle them. The study reveals the details on widely used top two trends viz. Leadership Briefing and Virtual Team Meetings for employee engagement. It also helped to identify concern challenges and related solution for employee engagement during crisis.

Research Methodology

This paper is a review paper based on secondary data. An extensive literature review was carried out to study employee engagement in general and trends during Pandemic. Also dig in the research papers, blogs, articles, companies report and online newspaper provided insights on the concept of employee engagement and the several initiatives adopted by the IT organizations during pandemic's lockdown. Though the content on Employee engagement is readily available but specific and relevant data pertaining to Indian IT sector is yet to be incited. This gave a direction to the researchers to conduct this study.

Literature Review

According to Adhitama and Riyanto (2020), employee engagement is defined as one of the essential issues that each association endeavors to keep up among their workers and to ensure that workers put their hundred percent of effort in their duties.

COVID-19 Pandemic: A Global Issue: The COVID-19 pandemic can be defined as a global health crisis of time and one of the greatest challenges that we ever faced since World War Two. World Health Organization (WHO) declared novel Corona virus as a pandemic on 11th March 2020. WHO has given a call to all nations to take immediate actions and scaling up responses to treat, reduce and detect transmission to their citizens. Although, China was the first country to face the crisis since Dec 2019, rest of the world has been facing a fast and wide spread of novel virus as of now. More than 90.3 million cases in 185 countries are confirmed as on 11th January, 2021 with approx. 1.93 million deaths. *But the pandemic was much more than a health crisis; it's also an unprecedented socio-economic crisis.*
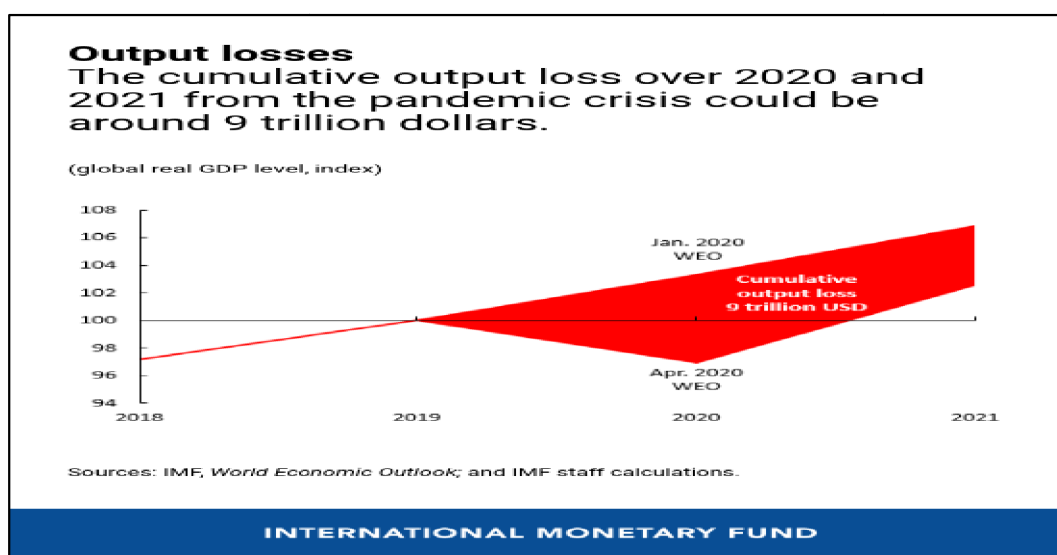

Figure 1: IMF projections of losses due to Covid-19
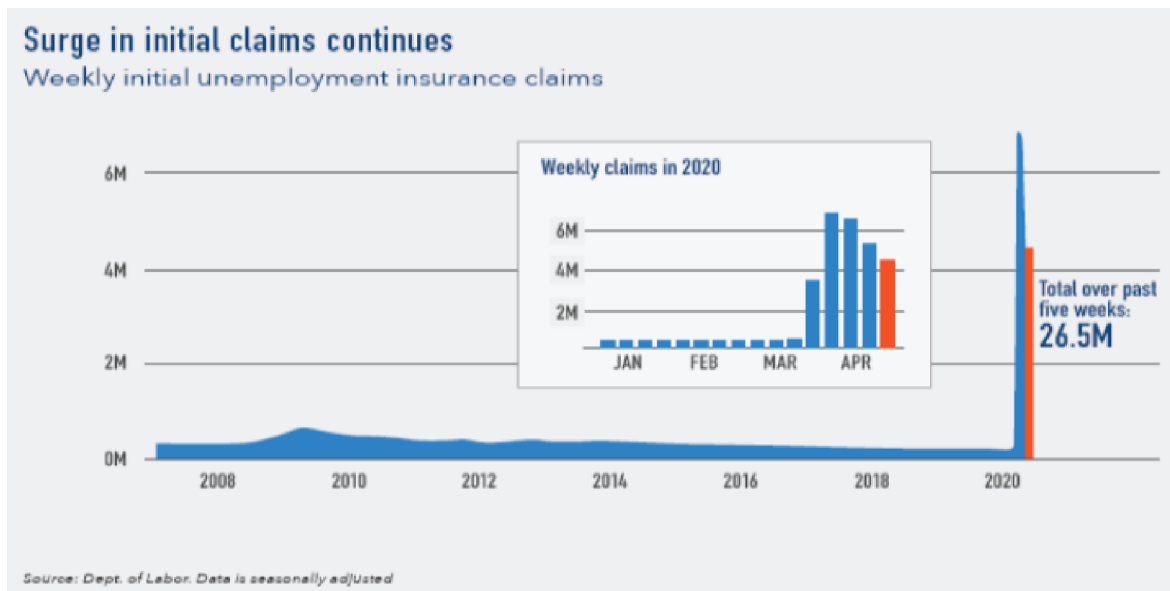(Source: IMF Blog- International Monetary Fund 2020)

Figure 2: Surge in initial unemployment claims
(Source: quantumworkplace.com 2020)

Unemployment Levels, Historic Rise- During the COVID-19 crisis and subsequent lockdown guidelines, the unemployment rate rose to over 16% – levels not seen since the Great Depression. More than 26 million workers filed for unemployment.

COVID-19 Pandemic impact in Indian Context: According to JHU CSSE COVID-19 Data update as on 8th January, 2021, there were total 10.5 million cases of Coronavirus Covid-19 in its 32 states and union territories. This includes 151k deaths and around 10.1 million people recovered. Indian prime minister had announced country wide lockdown from 25th March 2020 and extended till August 2020.Though the partial lockdown phase was imposed on certain states, the India Government machineries were constantly on toes for the preparedness and safety measures including tracing the suspected cases, setting up diagnosis facilities, prevention of social engagement, hospital logistics, control and containment plans. In a nut shell, India has responded with determination and shown urgency to overcome this unprecedented challenge.

Employee Engagement: Products and Process cannot help organization to sustain loyal customers. They also need highly motivated, dedicated and involved employees who are very passionate about their work and organizations. *To conclude there is a need of 'engaged employees'*. Nurturing engaged employees requires a lot of effort and skill by HR Professionals and calls for different HR Philosophy in the organization. Employee Engagement is the new buzzword. A business success is directly linked to the commitment of the employees. Organizations that constantly keep themselves aware of their employees needs with the help of employee satisfaction surveys will have competitive advantage over those who don't. *To conclude, successful companies are those that recognize opportunities to foster employee engagement.* Employee engagement has always been a key metric to measure success of any organization but the tough situation like the Covid-19 pandemic has rendered more weightage to the given concept. When employees are engaged at their workplace they bring their full selves to work (William Kahn 1990).
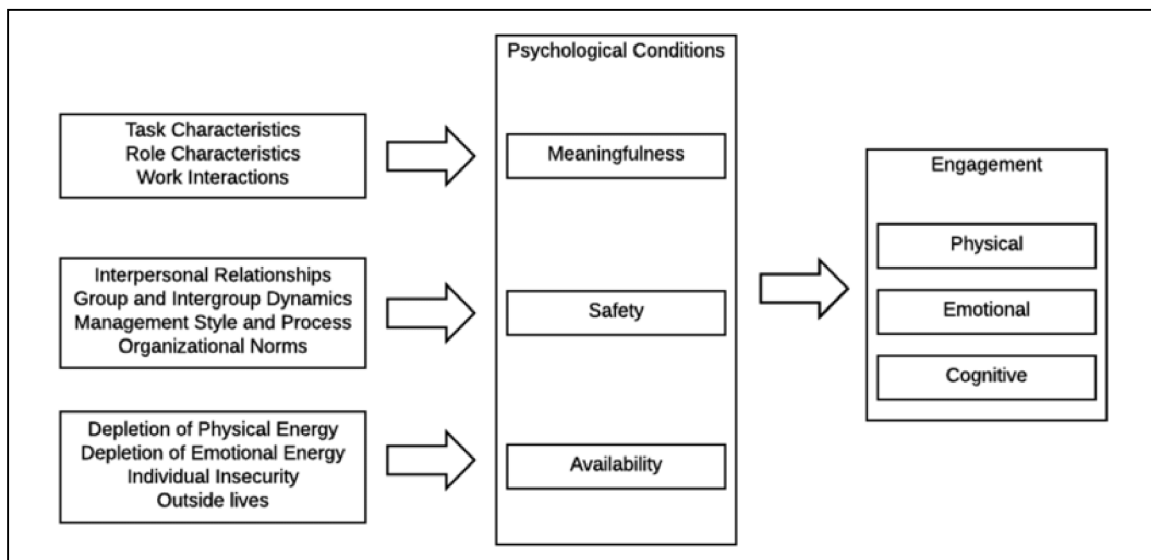
Figure 3: Kahn's model of employee engagement
(Source: Researchgate.net- Kahn (1990) model of employee engagement)

Kahn first time coined the term 'Employee Engagement' presented his research on psychological conditions of personal engagement and disengagement and it outlined three dimensions of engagement. Firstly, physical engagement refers to the extent employees expend themselves at work both mentally and physically. The second level of engagement is cognitive. To be engaged at this level the employees must be aware of their employer's vision and strategy and the level of performance needed to align with their individual goals to the organization's goal. The third is at emotional level and relates to the cordial relationship between the employer and the employee. Kahn cited that a positive interpersonal relationship and team management strategies will pool in a sense of trust and security among employees. Thus the significance of employee engagement can be described as:

1. Engaged employees lead to high performance and boosts productivity.
2. Engaged employees leads to higher level of customer satisfaction.
3. It aids in creating a pool of talented people in the organization.
4. It augments the organization's culture.
5. High Engagement is an indicator of an organization's success

Thus, it is stated that employee engagement is an essential parameter of an organization's success and the managers are constantly working on deriving modern strategies to keep their workforce happy and remained in the organization. To conclude in nutshell as rightly said by Doug Conant "To win the marketplace you first win the workplace"

What areas of Employee Engagement changed dramatically during the crisis?

Quantumworkplace.com (2020) has carried a survey and they have reported significant changes in employee engagement areas like communication and leadership, compensation and benefits, and health, well-being and balance. These are shown in figures 4 to 6.

Figure 4: Change in Communication and Leadership
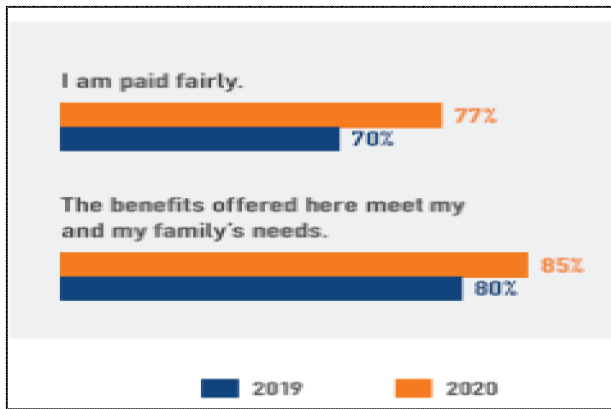(Source: quantumworkplace.com 2020)

Figure 5: Change in Compensation and Benefits
(Source: quantumworkplace.com 2020)

Figure 6: Change in Health, Wellbeing and Balance
(Source: quantumworkplace.com 2020)

The Pandemic Effect on Indian IT Sector: Indian IT firms faced the full impact of

business disruption as the US and Europe due to the Covid 19-induced lockdown in the quarter to June, as analysts expect companies to report 5-10 per cent drop in revenue due to clients cancelling or putting off discretionary spending on technology in the three-month period. IT firms like Infosys, Wipro and Tech Mahindra booked chartered flights to bring home employees and their families, who were stranded overseas due to the pandemic and visa issues. And almost overnight, IT companies big and small embraced work from home. There were initial hiccups but almost 98% of the IT workforce was working from home at the peak of lockdown in India.

KPMG Management Consulting administered survey for 315 organizations across 20 industry sectors. The survey report highlights the survey outcomes and showcase our understanding of the impact of the covid-19 pandemic on wide gamut of HR Practices and processes like employee wellbeing, employee engagement, recruitment, compensation and benefits, performance management and learning and development, etc.(KPMG India's Covid-19 HR Practices Survey 2020)   The following practices were adopted by the organizations to keep employee engaged.
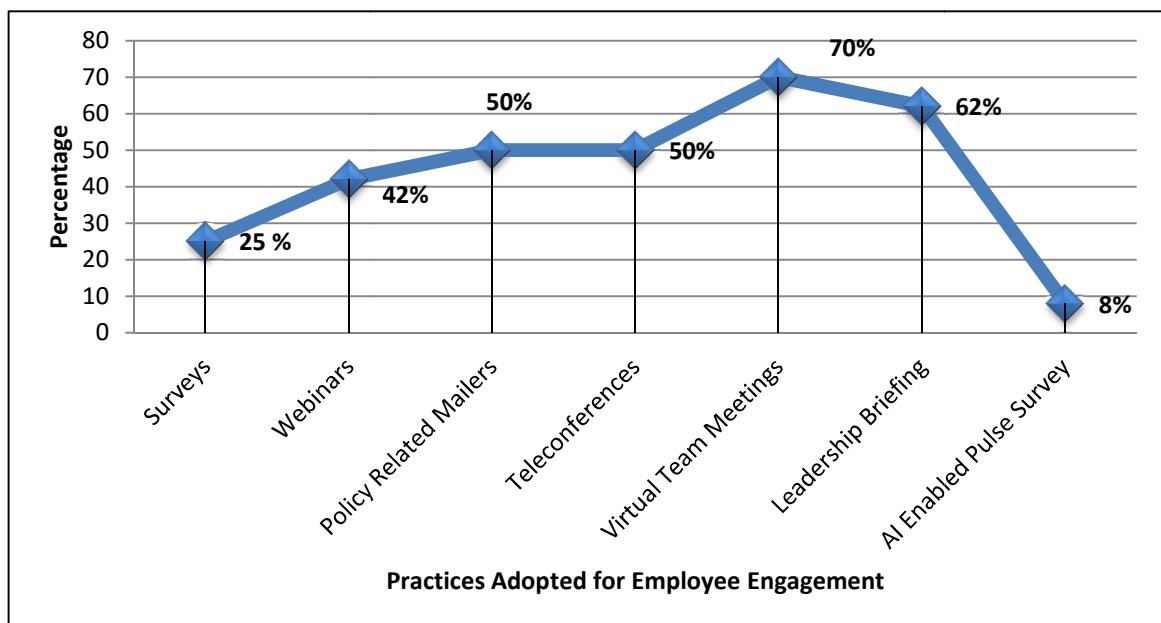

Figure 7: India's Covid-19 HR Practices
(Source: KPMG India's Covid-19 HR Practices Survey 2020)

Challenges Posed to Employee Engagement: According to Charles Darwin - it is not the strongest or the most intelligent who will survive but those who will manage change". Today it is followed as a mantra more than ever.

This Covid-19 pandemic has also impacted the pattern in which the whole world treating employee engagement. Some of the recent challenges are enlisted below:

1. Lack of clarity: There was an urgent need to evaluate employee engagement level to avoid losing top talent of an organization. Enforced lockdowns complete work from home pattern, job insecurity, pay cuts and many more were alarming issues that warned the employees about their sustenance at their workplace.

2. Work life Imbalance: The work from home pattern left the employees with a feeling that there is no start or end time to their work days. Companies were at a point of cost cutting and were finding ways to escape the heat of the pandemic.

3. Revising the strategic framework and the role of HR managers: during pandemic low budgeting, downsizing and revising the strategic framework was needed in a very different context.

4. Amplified use of Artificial Intelligence: Use of AI can be challenging too. An augmented use of artificial intelligence was witnessed during this lockdown period owing to less use of manpower. AI boosted the communication and personalized activities at workplace.

5. Lack of commitment from Top management: There were many issues that the top management was handling simultaneously and it got difficult for them to focus on issues like employee engagement.

6. Trust in the employer trusting the employer was also challenging during the tough time like in the pandemic era. Loose connect and low communications were present during this period of pandemic. Employees were apprehensive in consulting their employers and as a consequence it led to a friction in employee- employer relationship.

7. Decline in Spending: Pain for IT and outsourcing companies stems from a decline in spending on IT projects by companies in the U.S. and elsewhere, especially in such sectors as travel and tourism, hospitality, and aviation, which have lost 80 percent to 90 percent of their revenues.

8. Captive Centers' Struggle: These are one of the segments of IT industry and performs certain functions for the parent company, including data analytics, IT management, and research and development to save costs and benefit from the local talent pool. Walmart Labs and U.S. retailers Target and Lowe's are among those that have such centers based in India, These smaller centers have struggled amid India's lockdown, which prompted industry analysts to say that some of them may eventually be sold off or shut down.

9. Digital Transformations: On a positive note, the pandemic is expected to push more organizations worldwide to undergo digital transformations, which include shifting to digital technologies to manage many business functions, including business processes and customer engagement.

10. Acknowledging technology as a new friend. Though the mainstream work in IT industry is bonded around technology, the HR processes are gradually moving towards technology too. The best way to engage them is through leveraging HR technology.

Discussion and Findings

Formal working was replaced by work from home and online work assignment. This posed as a challenge for the HR leaders to confirm the engagement quotient of their employees and whether they are in line to achieve the organization goals or not.

1. Employees lacked in clarity about the direction in which their company was heading. It created a challenge for the HR managers to motivate and retain the talent in the organization.

2. The HR managers were bounded to have an in-depth knowledge of market conditions, competitions and Company's vision. Situation monitoring and assessment were

added on to an HR's Duties and responsibilities.

3. To be an effective communicator, retaining top talents, maintaining health and hygiene also got included in his duties. Dealing with low morale and disengaged employees was also tough. It became more challenging for the HR professionals to manage all the added responsibilities in an effective way.

4. Embracing AI in day to day routine is expected but it can't overlook the human factor in the organization and is still considered as a challenge to many HR managers.

5. The strategic framework must be compelling enough to draw out results. There is an involvement of technology in almost all facets of HR processes. Considering this, the HR policies must be reframed.

6. During the lockdown the employees were confused, fearsome and curious to know about their job security and survival and ultimately eager to know the company's status.HR managers must work on the deficiency and build strong communication network.

7. Companies need to go an extra mile in support of their employees. This will help in building trust among employees which brings special attention to role of HR managers' compassion and empathy for employees as an important ingredient. Reinventing the human part in HR will become pivotal in the digital era.

8. Inclusion of Team building, wellness and mental health program. This is something almost all companies are adopting.

9. Leadership Briefing, Virtual Team Meetings were top two HR Practices adopted for employee engagement.

Scope for further Studies

As the present study is focused on Indian IT sector only. The study can be extended to other major sectors. An empirical study of employee's opinion about engagement level would be suggested to conduct to get different perspective.

Conclusion

To conclude we can say that balancing business and people is imperative in such pandemic like Covid-19. Leadership, Communication, Employee Support, Compensation and benefits, wellbeing program plays crucial role to protect the organization from talent loss. Employee Value Proposition, Synchronization between Personal and Organizational Goal, Freedom and Autonomy, Employee Orientation, Bridging Performance Gaps, Recognition to be understand and taken care.

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STUDY OF ARTIFICIAL INTELLIGENCE AND ITS APPLICATION IN MARKETING PROCESS TOWARDS CONSUMER: A CONCEPTUAL ANALYSIS

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Abstract:
The changing consumer buying behaviour and preference, attitude and engagement has brought tremendous challenges to the marketing managers. Due to the pandemic the customer preference and buying patterns towards products has changed the way markets operate in earlier. The advancements in digital automation and its related technologies, the application of intelligent automation in marketing is expected to increase in the future. The problem is that the advances are very recent and thus there is not enough research in depth on the role of AI applications in the marketing process, making it difficult for marketers to use the technologies. This paper offers a research agenda on the latest implementation of artificial intelligence and the challenges faced by marketing managers in the current situation and their impact on the marketing process through the adoption of the AL application in the marketing process, AI platforms and future trends. Technologies help marketers to better understand clients and allow them to better target them and customise marketing behaviour and messages. This research paper also tries to find out about the literature assessment of a variety of researchers who have already posted modern-day utility of artificial intelligence in marketing, and its affect on the future of marketing process. Based on the challenges faced by the marketers in the present situation we have framed a framework on how AL applications can support marketers in marketing process.

Key Words: Artificial Intelligence, AI application in Marketing, AI platforms, AI Trends in Marketing

1. **Introduction**:

The Innovation hold extensively modified purchaser's norm and also shaping the eventual fortune of commerce and promoting in careful. The alter of innovation has managed the price of advertiser's admittance to prospects and gigantic measures of knowledge on examples of their practices that any person wants to vary earlier than they might be useful for dynamic. This fast development in innovation and its influence on the event of the unpredictability of enterprise circumstances are providing climb escalate to the probabilities and problems from a selling level of view, meriting analysis consideration. Marketing process and strategies depend upon simple and, finest case scenario, muddled frameworks wherein the connection amongst circumstances and end outcomes requires investigation. When in indisputable actuality marketing works in complicated frameworks, for example, markets, the place circumstances and logical outcomes should be seen by and large, advertisers want to understand this intricacy

and develop methods for managing these difficulties. Marketing process has lots a lacking on a study comprehension of how AI intelligence improvements possess been utilized thus far and the way they ought to be in a while (Paschen et al., 2019)

Today, new applied sciences and new sources of data about Client behaviour are rising and may also help managers to grasp this in large big data, artificial intelligence, interactive communication media, and so forth. Consumers get satisfaction from these applications, within the type of declined costs, extra various service channels, revolutionary breakthroughs, and alternatives for expanded human creativity and ingenuity when tedious, repetitive duties are carried out by AI (Haenlein & Kaplan,2019)

1.1 Need of Artificial Intelligence in present scenario:

Artificial intelligence (AI) in marketing process is presently gaining importance, as a consequence of rising computing power, decrease computing costs, the supply of massive data, and the advance of machine studying algorithms and models. Copeland (2020) considers AI to be the "ability of a digital computers or computer-controlled robotic to carry out duties usually related to intelligent persons." One in all the fields more importantly impacted by AI is education, mainly the marketing focus (Schlegelmilch, 2020). AI's various functions in advertising and marketing embody gross sales forecasting, web site expertise personalization, speech recognition, content material creation, chatbots, and more. The worldwide artificial intelligence market measurement been esteemed at USD 40 billion within the 2019 and can anticipated in the direction of creating at a development of 43% from the 2020 upto 2027.

AI has enabled organisations to raised perceive their prospects and successfully aim them with per- sonalised digital messages (Mogaji et al., 2020). By means of artificial intelligence, firms study what questions are requested and how you can reply them appropriately. This permits an individual participating with a business's web site to hold a dialog as to same as as doable to one with a human. Thus, entrepreneurs use AI to develop more practical methods and to vary the way in which companies attract, nurture, and convert prospects. These potentialities come up and formulate synthetic intelligence more and more vital in the sector of selling primarily for three reasons: the explosion of knowledge and information sources, the rise in the flexibility of software program to course of it, and the formation of ever extra superior algorithms.AI is vital in advertising and marketing as a result of clients anticipate firms to know their needs, and AI may help entrepreneurs determine who precisely their audience is, thereby making a private expertise for patrons (Davenport, Guha, Grewal, & Bressgott, 2020).

AI will exert appreciable effect on the interchange and interconnection inside organizations and supply of new decision-making strategies primarily based on big data and analytics (Siau & Wang, 2018, 2020). Modern services by way of the usage of AI technologies, large productiveness improvements, and intensified world competitors are anticipated (Makridakis, 2017). It depends on a number of key technologies, comparable to machine learning, pure language processing, rule-based professional systems, neural networks, deep learning, bodily robots, and robotic course of automation (Davenport 2018). By using these tools, AI offers a way to "interpret outside knowledge correctly, be taught from such data, and exhibit versatile adaptation" (Kaplan and Haenlein , 2019). The strategy to describe AI relies upon not on its

underlying expertise but slightly its marketing and enterprise applications, equivalent to automating enterprise processes, gaining insights from data, or participating clients and staff (Davenport and Ronanki 2018).The Technological developments in software is leading the Analytics market and is accounting for additional than 40.0% share of the world income in the year 2019. Using AI, entrepreneurs can additionally advantage from advertising and marketing optimization strategies such as media content material placement, and commercial and marketing campaign optimization based totally on utilization sample and purchaser behavioural

The main purpose of this research paper is to identify the problems faced by the marketing managers and how artificial intelligence application can support. The platform allows for new ways of marketing. It provides a number of different resources and it is important for advertisers to understand them and understand when and how to use them to innovate their operations and create a competitive advantage. Since this topic is trending so strongly right now a lot of experts are trying to learn more about it. The study is, sadly, dispersed around all the various dimensions of AI and less commonly defined but more focused on particular cases. This paper will also provide a summary of the existing platforms used by the organisation and describe the criteria for more in-depth analysis. We have framed four research questions to understand the how artificial intelligence is becoming very important for today business environment.

Q 1: What are the current challenges faced by the Marketers?

Q.2: How can artificial intelligence improve and support in designing better marketing process?

Q.3: What AI platforms are currently used in marketing?

Q 4: What are recent trends in AI application and its importance?

The article is divided into five sections. The first part includes the brief introduction artificial intelligence and Artificial intelligence in marketing in global prospectus. The second section discusses about the literature review of various researchers and their opinion on the artificial Intelligence. The third section will explain various challenges faced by marketing managers in the current situation. The Fourth session discusses about the application of Artificial Intelligence implemented in the area of marketing process. The Fifth session highlights the various latest's AI platforms used by the marketers. The six session of the article covers the various latest trends in the application of AI in marketing aspects.

II. Conceptual Literature Review:

Artificial intelligence does not have a standard concept. The developer argues in an article in Forbes that several businesses say their applications have AI, but he disagrees. True Artificial Intelligence can build on previous iterations by being smarter and more aware, allowing its abilities and understanding to be improved. The creator goes on to say that the evolution of AI does not end there. As the first to determine whether or not a PC is intelligent, many human beings factor into Alan Turning. Turing advised that we should be confident of their intellect if computer systems confirmed human stage conversational abilities. Turning proposed a human-level talent conversational check that has been called the Turning test. In reality, taking a look at Turing is a sport conducted with the support of three people, an

interrogator, a man and a woman. The interrogator sits in a different room as opposed to the other two. The aim of the recreation is for the interrogator to determine which of the various gamers is the machine. The laptop is trying to fool the interrogator, and the human interviewee is trying to help the interrogator. Take a look at verbal dexterity tests, historical history knowledge, and the underlying capacity for reasoning.

There are several types of AI, according to the Committee on Technology, the Subcommittee on Machine Learning and Artificial Intelligence. These consist of wondering like humans, acting like humans, rationally asking, and rationally performing. AI was broken into 5 groups by venture capitalist Frank Chen: logical thinking, representation comprehension, preparation and navigation, processing of herbal language and understanding. While most are aware of AI's core thought, it is difficult to pin it down. "This range of AI problems and solutions, and the basis of AI in human comparison of algorithms' overall performance and accuracy, makes it difficult to definitely outline a large bright line between what constitutes AI and what does not." AI is a technical know-how that enables computer systems to perform decision-based tasks before they are left to human beings. It shows up in a variety of ways, including machine-based mastering that can end up higher in assessment step by step and decisions the more it is used and speech-based technical know-how that can identify specific voices and languages. AI is now part of the market environment, and it is changing rapidly.

Dennis Herhausen (2020) in his research paper has digitalization has revolutionized no longer solely customer advertising however additionally industrial marketing. This gap, which we have undertaken to resource base points of view in an organize structure work and also evaluate around 129 research articles across two many years of research towards perceive one of a kind digital advertising competencies for engineering firm. In this analysis, we discover 4 themes: channel, social media channel, digital relationship and digital technology. Luigi M. De Luca (2020) in his research paper elaborated conceptualizes and operationalizes three vital massive facts advertising affordances: patron behaviour sample spots, in real time markets responsiveness and also data driven markets ambidexterity. In The experimental evaluation establish assemble of validation and affords a initial homological check the direct, indirect and also conditional outcomes of a large facts advertising affordance on a apparent huge facts performances. Davenport T. (2020), in his lookup paper proposed a shape for comprehending the impact of AI mainly on the have an effect on of AI on advertising techniques as properly as customers' behaviour. He concluded: AI's short- and moderate-term have an impact on may additionally be greater confined and if AI augments (rather than replace) human managers it will be extra effective.

According to Jianming Zhou (2020) , The AI R&D group chief the usage of expertise leaderships a predictive variable that notably improves the capacity and effectiveness of AI know-how switch consisting of each inner and exterior AI know-how transfer, and can assist rapidly obtained the key information and key applied sciences required from the AI R&D team. Yulu He (2020) innovatively adopts a extraordinary goal patron cost weight calculation technique to achieve the client fee calculation weight that fits the unique enterprise. The client price of every crew was once calculated and corresponding patron relationship management.

Jing Xu (2020) the elements that can also have an effect on consumers' willingness to buy regional manufacturers on e-commerce platforms, and applicable countermeasures are put ahead for the improvement of Liujiaxia regional brand. Akash Sampurnanand Pandey(2020) bayesian Automated Hyperparameter Tuning, with Tree-structured Parzen Estimator, has been carried out on all of 9 ML classifiers predicting the clients in all likelihood to be retained with the aid of the bank. After visualizing the nature of dataset and its constraints of category imbalance and restricted coaching examples, Feature Engineering has been carried out to compensate for the constraints.

Torubein Fawei(2020), we analysed patterns current in the advertising benchmark data, which can have an effect on the prediction accuracy. Boosting explored in our experiments has tested an environment friendly discount of the prediction error. Based on our outcomes we conclude that the DT and ANN models grant analysts with comprehensible selection making ideas which can meet the sensible expectations of prediction accuracy. Maricel Monge (2020) ,study is to become aware of and symbolize statistics mining and laptop mastering strategies used for financial institution patron segmentation, their help tools, collectively with comparison metrics and datasets . Decision bushes and linear predictors had been the most used facts mining and desktop getting to know paradigms in financial institution consumer segmentation.

K Letheren, R Russell-Bennett (2020), latest tendencies in artificial intelligence (AI) and robotics, and how these are influencing marketers, customers and society. We argue that the internet impact is squarely in the gray and that entrepreneurs have a special strength to leverage AI and robotics tendencies for good. U Kerzel (2020), Artificial Intelligence (AI) and Machine Learning have giant manageable to seriously change agencies and disrupt complete enterprise sectors. However, organizations wishing to combine algorithmic selections into their organisation face more than one challenge. They have to perceive use-cases in which artificial intelligence can create value, as nicely as choices that can be supported or accomplished automatically. P Esch, Y Cui, SP Jain (2020) ,the authors display that, in contrast to self-service checkouts, AI-enabled checkouts lead to drastically greater consumers' patronage likelihood. Furthermore, sensory stimulation stemming from in-store verbal exchange (environmental cues along with assortment, advertising, and technology) underlies this impact. C Prentice, S Dominique Lopes (2020) the find out about is approached from the customers' point of view and examines how AI and worker provider nice have an impact on client pride and loyalty.

III. **Challenges facing by Marketing Managers in Competitive market:**

Economic reforms, globalization and liberalization have totally modified the face of advertising in all over the world. The huge exchange in enterprise surroundings offered about the reforms in the monetary insurance policies of countries. The centre of interest in advertising has shifted away from quantity and earnings maximization with the aid of promoting to shipping of value, first-rate improvement, advent of customized consumer relationships, including values to products, and fulfilling and conserving present customers.

Marketing has emerged as the most integral characteristic in nowadays mate even the small companies are now the use of modern advertising strategies due to growing international

competition. With the large unfold insurance of tv and net advertising is no longer imitated to geographic boundaries, the vicinity and time constrains are squeezing.

The deepest adjustments come from the acceleration of the monetary globalization, as properly as from the speedy technological innovations, from the local weather and surroundings changes, from the rising of the collaborative or sharing financial system and from the amplified significance of offerings and intangible belongings to companies and consumers. In this ever-changing state of affairs of uncertainty and excessive competition, advertising is going through new challenges and opportunities, which go from the want to rethink historic theories to the urgency of innovation in administration standards and processes.

Marketing challenges are additionally in the front of technological know-how for growing and underdeveloped countries. It is a difficult assignment to compete with developed nations in discipline of technology. Use of internet, laptop primarily based data gadget and selection help machine are the section of advertising and marketing system. A robust database is required to for higher purchaser services. Regular enhancement in nice of merchandise as per the expectation of clients is ought to for the pride of clients and enlargement of business.

The challenges which are confronted by means of advertising and marketing managers in twenty first Century are as follows:

1. Managing market insecurity:

The epidemic have affected each and every corner of commercial enterprise world as markets were forced to close, elevated unemployment's, also disrupt furnish chain and also decreased confidence level. This condition, within enterprise way, is that we do not recognize how the markets will recover in timeline. Many enterprise offerings that have been as soon as enact confronting each other are now being furnish distantly. The Companies have also accelerated our implementation of remote work options as teleconferencing software, online collaborations equipment and also augmented reality.

2. Marketing and new technologies:

The statistics and conversation technological know-how revolution, with the world diffusion of the net and the proliferation of superior interplay applied sciences (e.g. cellular gadgets such as laptops, smart phones, tablets, etc.), has deeply modified each sphere of life. The development of new technology, in particular the Web 2.0, is redefining interactions amongst persons as properly as relationships between producers and consumers. The digital revolution has deeply modified advertising and marketing processes: e.g. by means of integrating standard market lookup with huge statistics analytics and innovating the method of value-creation thru co-creation, i.e. buyers are immediately concerned in the manufacturing and distribution of price the usage of social media websites.

3. Marketing and worldwide competition:

The globalization of markets has modified the guidelines of competition. The loosening of obstacles to alternate may present threats to the firm, considering the fact that home markets are opening up to overseas competition, however may also additionally provide large boom possibilities on global, usual or rising markets. In the new aggressive surroundings even the smallest association is global. Internationalization has end up a situation of survival and

growth. Firms are requested to boost advertising techniques that are globally built-in and regionally responsive.

4. Improving purchaser experience:

The client stays in the centre of as we do as marketers. The greater the expectations. One effective thought of the changing system is omnichannel marketing. The companies can now supply the proper contents, in the proper language required, at the proper timeline, to the proper customer, throughout more than one touch points. The venture for advertising groups will be the achievement of utilizable data's. Getting in advance and grabbing the opportunity and facing the opposition require records and insight into your target market.

5. Identifying the Right Technologies for your Needs & Delivering personalisation:

Finding the correct applied sciences was once the fifth best fear for entrepreneurs this year. The cause is comments has been scattered on the today's technologies. Many humans are unable to become aware of the applied sciences for their needs. Luckily, if you are searching for a software, device or a science piece in order to remedy a specific advertising and marketing issue, then you can seem to be for the device like Growth Verse that presents on line visualization for free in the panorama of advertising technology. The major center of attention of this device is on fixing the enterprise issues.

Modern entrepreneurs recognize that relevance is massively important. Personalisation gives the reply to this advertising challenge. Product data management, shoppers assume to locate each simple and specific product information's, is properly as related product contents, all in their personal language. This will require a key in grasp of the nearby marketplace and national language. This is not a trend and even though anticipation pushed through accelerated on line shopping.

6. Leveraging AI and desktop gaining knowledge:

This venture additionally affords a huge prospect. The Professional determines to have greater moment to focal point of innovative tasks, as an alternative than to have repetitive guide routine. The manufacturers that have harness to the energy in AI nowadays stands towards to be the gainer of tomorrow. The brand is already making the use of its potential.

7. Managing organisational exchange:

The task for advertising department is to preserve up the fast tempo of the technological changes, letting on my own complete organisations. The exponential alternate of technological know-how is commonly accepted. It's pretty handy to overlook that human beings will always take a moment to alter their necessities and behaviours.

8. Advancing changes in Market:

The fast tempo of the innovation has been shorter for product lifestyles cycle, greater marketplace to addressing and also lot of stress to hold. The Process is optimising its crucial in accomplishing time to market goal. The Marketing Mangers want to do the greater work in much lesser time and concurrently rethinking of their market strategies. There is threat of delay in market is always high. It can always end the results in to losses of market share valve and manufacturer reputation.

the information data, apprehend the different people can make use of it, the place they use it and the place it will go when it leave the four partitions in the enterprises.

IV. Artificial Intelligence application framework in supporting Marketers in marketing process:

Artificial Intelligence has to potential to assist Marketing Managers who needs to undertake automation procedure in their organisation. Artificial intelligence and Machine learning to know can analyse massive quantity of information except the assist market analyst. This paper will provide an explanation for how the artificial Intelligence can be a higher software when it is utilized in the manner of marketing. It has the capacity to convert the challenges confronted through the Marketing Managers in to higher possibilities and additionally help in taking higher selection for creating techniques in the modern situation. We have developed an artificial intelligence framework in order make the managers recognize the capability of the synthetic talent from records pushed to actionable advertising process.

The application of the artificial intelligence in the advertising technique can be used from the establishing of the hassle identification (i.e present day situation) to monitoring overall performance of the market.

a. Analysing the modern-day market state of affairs:

Analyzing the modern scenario and perception macro environmental elements that can have an effect on the organization, its marketing activities and also to its stakeholder's. In this process, advertising manager attempt in enhancing a appreciation for the present day and also future surroundings in which the organisation has to operates, manager can consider market, the possibilities inside them and also the threats springing up from a AI adoptions decision. AI affords entrepreneurs the possibility to perceive adjustments in competitor behaviour, estimating the product demands and verify purchaser sentiments. The examining of the markets requires essential to advertising and marketing manager in to focal point in a competing brand, product alternative and also reachable channel inside whole class landscapes. The category can enhance swiftly for the development in a science and on hand choice, main to the market's volatility.

b. Understanding markets as well as client's behaviour:

The managers wants to apprehend market and customer, as properly as a gathering in understanding of micro environmental elements is specially have an effect on the firm, along with market share trend, product demand and also consumer characteristic, along with need, want, behaviour, attitude, manufacturer loyalty and buying pattern. In this stage, entrepreneurs purpose towards boosting an appreciation of unique market in which to function in and the customers the targets, by monitoring the behaviour for the success of preceding degrees a phrases of a important metrics. At the time of this process, the analytics and ordinary markets research are regularly engaged, along with the AI offering a significant array of possibilities past.

c. Market Segmentation model (STP):

Market Segmentation model includes growing a appreciation of client segment and helping advertising and making the marketing manager to focus on targets and positions Decision. The

process will make entrepreneurs searching for crew shoppers in accordance to sure criteria, enabling specific concentrated on of message and introduce to the manufacturers as well as merchandise which can fantastic enchantment for every segments. AI now solely helps in predicting customer's intent however can assist marketer's section clients into greater subtle groups. Given the massive heterogeneity of customer tastes and preferences, the possible of segmentation is immense, from tailoring promotions and advertisements to making higher product and manufacturer recommendations.
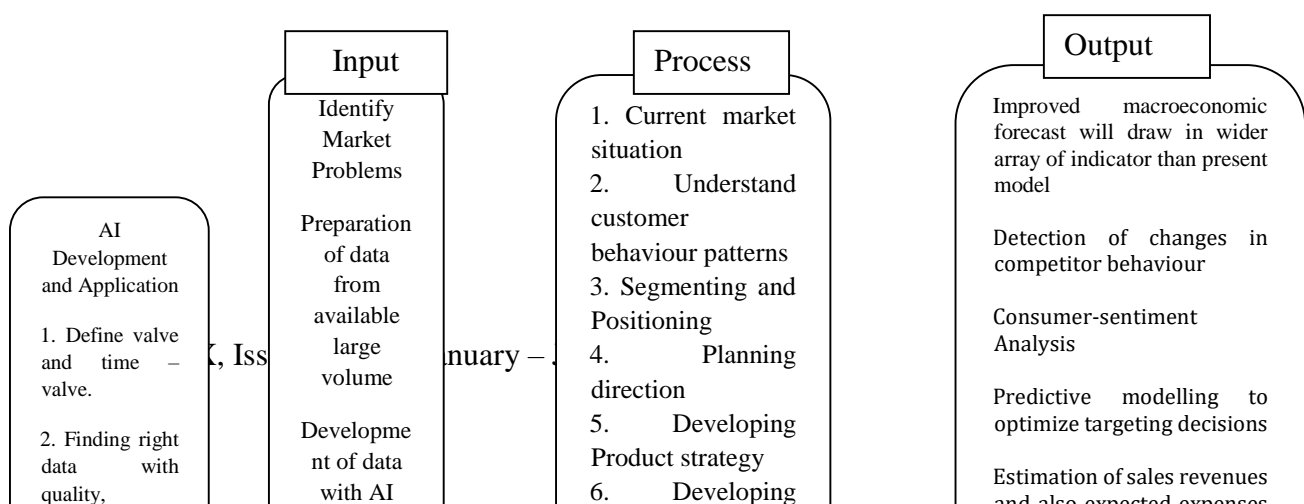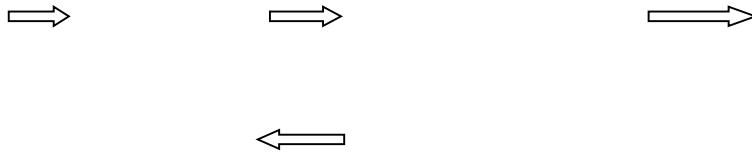
d. Marketing Promotion support:

Artificial Intelligence has the capabilities for improvement of longer-term desires as well as related temporary targets to help large strategies. The increase strategies, on-growth strategies, targets and client carrier are essential issues inside the phase. To aid boom strategy of AI and chatbot this can also be built-in app to inspire purchaser purchase. The frequent purposes of AI at the stage are in consumer services.

e. Developing product strategy & Developing pricing approach:

The improvement of product method (the advent of a suite is to merchandise bought in the way of a organisation).The entrepreneurs utilize their appreciation for goal customers and also meant role in favour to company in assisting boost profitable product. This generally entails choices regarding a product designing, feature, quality and customizations. The opportunities for a AI help within product approach consist of figuring out gap for introducing new product developments, facilitate the manufacturing to merchandise personalized to consumer specifications and helping the product transport and shipping. So, AI can additionally become aware of which merchandise to manufacture

In growing a pricing approach, entrepreneurs figure out how lots to cost for product and services, try to apprehend client charge understanding and also mapping the competitor's price analysis. AI can aid within a range of way, consisting of estimate elasticity of purchaser rate, enable dynamic pricing and detects pricing anomaly. The application of AI permits entrepreneurs to tune shopping for tendencies and decide greater aggressive product fee factors in a try to nudge clients at the factor of decisions.

Input	Process	Output
Identify Market Problems	1. Current market situation	Improved macroeconomic forecast will draw in wider array of indicator than present model
Preparation of data from available large volume	2. Understand customer behaviour patterns	Detection of changes in competitor behaviour
	3. Segmenting and Positioning	Consumer-sentiment Analysis
Development of data with AI	4. Planning direction	Predictive modelling to optimize targeting decisions
	5. Developing Product strategy	Estimation of sales revenues and also expected expenses
	6. Developing	

AI Development and Application

1. Define valve and time – valve.

2. Finding right data with quality,

⇒   ⇒   ⇒

⇐

Fairness   Transparency   Accountability   Traceability   Privacy   Reliability
Reproducibility

marketing process

G. Developing logistics strategy:

In the improvement of developing logistics strategy, which include deciding most useful channel, distribution network, and also product stockings. The entrepreneurs attempt to figure out linking direct income channel, complete channel, or retailing channel. In several instance, AI will supply admission to new channel methods to the market. AI permits entrepreneurs to predicting and also optimizing distribution network, inventories and shop layouts. These days, retailing are in a position to appoint AI's knowledgeable active planning that endorse in best quantity and also placement of stock inside the stores. Additional advantages to logistics administration consist of cognitive way of procurement and to projecting merchandising, to help with inventory as well as stock management.

H. Developing advertising communications:

The improvement of advertising communications and have an impact on strategy, with a precise focal point on serving clients the proper promoting at proper timing. The entrepreneurs work in creating and enables manufacturer which means in the minds of customer, as nicely to informing them about product offers. So this will entails careful developments, targeting and also placements of communication in direct for deliver a tremendous messages to the right sets of clients whilst minimize the cost. A numerous variety of possibilities exist for a AI inside a huge area for advertising communications, along with organising the AI-driven advert testing's , appropriate advert targeting, optimize advert , key-word biddings and personalizing of contents material creation.

I. Planning implementation control:

The creating planning implementation control particularly determined for pick out and reveals overall performance control of metrics and also taking imperative remedial action. Marketers will utilize metrics in order to determine how their effort is functioning, pick out effort, and in

enlarge competence. The Key components of the mission consist of figuring out and measuring applicable metrics and determining how to reply to abnormalities. The AI will work on a experimental basis. Algorithm is in a position in choosing up specified records with means of the conducting the human intelligence and entrepreneur will be capable in understanding, anticipating, and analyzing.

IV. Types of Artificial Intelligence Marketing Platforms applied in Marketing:

In direct reaction to the way research has influenced the larger management exercise, the advertising and marketing discipline has shifted significantly in recent years. Each aspect of how agencies design, schedule, execute and evaluate their advertising and marketing strategies is now really influenced by technology. While each industry has altered consumer products, economic services, long-lasting commodities, and others the science industry tends to lead the cost in advertising transformation by taking advantage of its fast-paced, innovative existence, and has turned out to be the mannequin for modern-day digital advertising efforts. Changes in the advertisement and marketing of science merchandise are now not only necessary for these entrepreneurs seeking to hone their craft in that company, but also for entrepreneurs in various industries searching for new skills and practises to accumulate.

1. AI Products for Content Strategy

All accurate content material advertising and marketing efforts begin with a well-developed content material strategy. And a right content material approach is created with a combine of human insights and facts on what works. For that latter section of the process, AI systems can play an vital position in assisting entrepreneurs higher parse the facts you have to create extra correct personas, greater beneficial goals, and enhance a more advantageous content material format for your business.

a.HubSpot

As one of the pinnacle CMS alternatives on the market, HubSpot presents a lot of distinctive aspects and performance for clients, a couple of which are fueled by way of AI technology. Specifically, HubSpot makes use of desktop studying to assist clients higher recognize the principal subjects and issues that get you the consequences you prefer with each clients and the search engines. It gives data-backed theme hints you can construct your content material method around. And the usage of the information you have from previous leads and contemporary customers, it offers predictive lead scoring to locate and goal your most treasured leads.

b.Concured

Concured affords an AI-powered content material approach platform. The product makes use of facts and computer gaining knowledge of to endorse content material matters primarily based on what your target market responds to, finds gaps in the content material already accessible in your enterprise and affords suggestions on the high-quality content material to promote to make your content material advertising and marketing go further.

c.MarketMuse

Market Muse makes use of computing device mastering and herbal language processing to analyze a company's content material and examine it to heaps of different web sites masking

the equal subject areas. Based on the comparison, it resources subject thoughts to flesh out your method and pointers for how to enhance your content material as you create it

2 AI Products for Content Creation

Getting a strong content material method into region is the first step for content material marketing, however one of the hardest ongoing duties worried is growing new content. A quantity of AI merchandise help with the content material advent method by using examining the content material you already have to appear for data-proven approaches to enhance it.

a.Atomic Reach

Atomic Reach is an AI-driven content material Genius platform. The product analyzes content material you've already created, or that you're in the manner of creating, and offers a rating primarily based on a range of linguistic measures to assist you gauge best and preserve your tone regular throughout pieces. It additionally analyzes the statistics from your content material consequences to grant conversion recommendations to assist you get higher consequences over time.

b.Acrolinx

Where the merchandise in our first class assist you create a content material strategy, Acrolinx helps you make certain the content material you create traces up with your strategy. You supply the device with any hints you've created, and it presents real-time comments on how properly your content material aligns with your rules. Over time, the product learns from the content material it analyzes and is capable to grant higher metrics for how to enhance the content material you create.

c.Brightedge

The website positioning platform Brightedge gives an AI-powered function known as Insights. The device analyzes thousands and thousands of net pages to furnish consumers with clear motion gadgets they can take to enhance their SEO, which includes tips on methods to replace the content material you create for higher results.

1. AI Products for Email Marketing

   Email advertising is one of the most vital on line advertising methods due to the fact of the astonishing ROI (return on investment) it delivers. But you can expand that ROI via the use of AI martech equipment that flip records into clear insights on how to write greater positive emails.

   ### a.Phrasee

   Nothing else you consist of in your electronic mail things if the problem line doesn't get human beings to click. Phrasee is AI devices in particular centered on supporting groups write higher situation lines. The device develops an algorithm tailor-made to your precise manufacturer voice, and makes use of a herbal language technology gadget to generate difficulty strains your records suggests will function well.

   ### b.Optimail

   Optimail lets you outline your primary e mail advertising goals. Then, with each electronic mail you send, it analyzes the effects to furnish you pointers for optimizing your campaigns to

higher meet these desires over time. The longer you use the product, the higher the science learns what works for your list.

c.Automizy

Automizy affords an e mail advertising and marketing platform that consists of AI tech to assist you write higher concern traces and pick the exceptional ones to strive every time. It compares your situation line to all previous e mail campaigns on Automizy to furnish a rating primarily based on its probably success, and lets you A/B check specific choices each to enhance your personal effects and supply the device extra statistics to work with.

4. AI Products for Promotion:

For your internet site and content material to do its job, human beings have to be in a position to locate it. Promotional channels like pay-per-click marketing and social media are an necessary section of any suitable advertising strategy. AI equipment can now assist you get higher effects for your advertising campaigns.

a.Albert

Albert is a self-learning advertising platform that automates the introduction of advertising campaigns primarily based on previous data. That consists of each paid search and social marketing campaigns. By enhancing concentrated on and cross-channel execution, it can optimize campaigns for higher ROI over time.

b.Sprinklr

The social media administration platform Sprinklr introduced a new AI-powered characteristic that strategies tens of millions of social media messages throughout systems to higher apprehend what humans are pronouncing on social and what they reply to from brands. The device helps manufacturers control their social profiles extra efficaciously with indicators about conversations to track, and insights into how to prioritize purchaser interactions on social.

c.Acquisio

Acquisio is an AI device for managing PPC campaigns. The product makes use of AI to streamline the marketing campaign introduction manner and optimize campaigns for higher ROI. The technological know-how video display units PPC information continuously to examine from it, and applies what it learns to automate bids and finances administration for brands.

d.Cortex

Cortex is an AI-powered social media administration product that analyzes thousands and thousands of information factors from exclusive manufacturers on social to analyze what humans reply to. It makes use of that statistics to assist groups recognize when and what to share on social media to get the first-class results.

5.AI Products for Personalization

People more and more anticipate a customized advertising ride and manufacturers that can pull it off get higher results as a result. Some of the equipment already stated in different classes resource in higher personalization, HubSpot and Concured each do, for example. But there are some AI martech merchandise mainly centered on the use of computer mastering to assist

entrepreneurs supply experiences to customers tailor-made to their pastimes and the place they are in the funnel.

a.Uberflip

Uberflip's content material trip platform makes use of AI to decide which of the content material portions you have that will be the most beneficial to every traveler based totally on statistics about their behavior, interests, and the place they are in the buyer's journey. The device automates the method of growing a applicable ride for every man or woman that comes to your website, growing the probabilities they'll stick round and take a particular action.

b.Drift

Drift offers AI-driven chatbots—a one of a kind way to create a customized journey for site visitors to your website. With computer getting to know and herbal language processing, the chatbot can decide the satisfactory solutions to the questions site visitors have in actual time. And when a visitor's questions advocate it's a treasured lead, it connects them to contributors of your crew to precede the dialog with a human.

VI . AI marketing trends shaping 2022 and beyond:

Artificial Intelligence has already transformed our advertising and marketing management. It's has been estimated that around 60% of businesses will be the use of artificial intelligence for by using digital revenues. The marketers can skilfully exercise AI science in order to power profit, the purposes of AI proceed to established and clarify. Machines getting to know the advertising device has precipitate shift in various ways which are follows.

1. Predictive Analytics and Forecasting

Predictive forecasting would possibly no longer be amongst the most modern AI advertising trend. AI powered tool proceed for advancing and provide supreme computing analyses and the usability for a mid-sized businesses. The potential the today's seller can pass past failure in fashions in actionable insights concerning their patron bases and extra precisely pick out future outcomes. Through identifying models and predictive scoring, entrepreneurs can now extrapolates who is most possibly in turn out to be a direct based totally taking place comparable profile to current customer. AI powered technical program additionally permits entrepreneurs in pinpointing the best price leading from the prospect group. The predictive model cans possibly treasured innovation. The Artificial Intelligence can bring to the advertising sector, since it lets in entrepreneurs towards solely optimizing in their choices currently however for the predictable future.

2. Customer Hyper-Segmentation:

The Marketing Managers would always agree for deep grasping of the goal for targeting audience will be a key to a profitable campaigning. AI applications provide entrepreneurs as well as facet via gathering efficiently in processing large quantities of information. As desktop mastering algorithm come through the data, the research greater and extra about the target audience and are capable to make a growing wide variety of connection connecting every records points. This allows for introduction of hyper focused model, segment corporations primarily base on this comparable connection.

3. Personal Researching and Psychographic build:

Similar, target market hyper segmentation affords a systematic grasp in consumer characteristics. AI powered program will in turn construct extraordinarily strong personal that can go past usual modelled representation for buyer. Through AI personal is not simply assumption on a whiteboard but real time amalgamation of the client bases.

4. Personalized Advertising services:

Companies can have good potential to recognize the target market in real time capability the customer advert journey is able to optimize with the degree of unheard of personalize of scales. The companies should rather than forcing customers with comprehensive contents, they should serve focused commercials towards every user. In order to serve customized ads, the companies should count for a series of statistics factors their computer studying algorithm to collect, in digest, and also extrapolate to a users conduct over time. The companies do on a large scale with extraordinarily excessive, efficient and projects to exceed more than $200 billion in mixed income in the year 2020.

5. Contents Recommendation:

The perception in how the laptop getting to know optimize in the advert serving a greater experience, it can follow that AI systems can additionally provide better enormous gain than to content material recommendation. Various Companies have been the use of AI advertising and selling tactics for several years in order to advise extra contents materials for consumers would possibly like using better chronic engagements and also occasion used up on their personal platform.

6. Micro moment as well as Targeted Timing:

The way laptop mastering be able to parse sizeable quantities in statistics into hyper segmented group, consequently it use records in calculating and predicting instances of top engagements. With mastering to precise corporation have been engaging with contents material over a past, the AI packages can also predict the most probable situation can involved in the content material for future. The present exceptional facet in the normal advertising, which is depends closely on experimental. A machine studying eliminate all the conjecture, permitting entrepreneurs to exactly timing customers' adverting rides and pivoting campaign for the real-time in optimizes for engagements.

7. Lead Qualification and Scoring

The AI powered campaign with centred time is also optimizing leads qualification and for scoring procedure at large scale. Through profitable campaign comes down to handing over proper messages to the proper person in a proper time. A machine can get to know equipment supply entrepreneurs the capability to acquire this ideal in shape of content material and time.

8. Emailing Market Dynamics Optimization:

It is identical to state for the use of AI in optimizing electronic mail campaign. The email advertising can be length engaged in gaining of automating structures and also segments content, this precisely the most modern amongst AI's advertising trend. The desktop gaining knowledge of can step similar with its hyper segmented organization and in optimizing timings.

9. Chatbots

The brands are making use of offering like facebook's messenger and slack to speak to the customers in today's communication system. Though its offerings normally required human assets in order to manage it properly in probably grant a bad consumer ride which means of make human being wait to the subsequent on hand representatives. Today chatbots clear up the hassle with the aid of making use of AI to automate responses by way of presenting attainable consumers with approaches to locate the proper product or service. They additionally force affectivity means of coping with limitless inquiry in the identical times and using being handy all the time. The chatbots additionally continue information and are capable in analyze and enhance effective of prospect conversation primarily base on previous inquiry.

10. Visual Search:

The visual search makes use of real world pictures in order to enter for on-line search, which can absorb via AI platform and laptop mastering towards apprehend contents material and also perspective of these photographs and to return a listing a associated result. The image of these objects as well as looking the usage of that photograph can convey you without delaying for product web pages how to purchase those items.

11. Competitive Pricing

Traditionally be decided the usages of algorithm to consider a range of market factors: competitor pricing, value of productions and demand of the market. The business chooses the merchandise to promote as well as seem to be absolute best yield possible. The machine learning can disrupt the procedure through adjust to fluctuate variable immediately, ensuing in a competitive pricing. Through robotically elevating fees relying on the real time value of the variable as well as constantly adapting with a customer conduct and preferences, AI's application will increase to most income and inventory.

12. Voice Search

The smart audio system has shortly end up a staples numerous household, with roughly 30% of US people proudly owns at most of these devices. While we are nevertheless in methods gone from imperative mass we have actually reach to the factor that place units like Amazon echo's and Google homes are not simply novelty, however provisions. The company have been at the front position are no longer solely with using developing these device, however additionally through developing in the search algorithms for greater effective communication processing.

13. Marketing automation

Marketing automation methods normally contain a collection of rules, which when precipitated initiative interactions with the customer. But who determined these rules? Generally, a marketer who's essentially guessing what will be most effective. Machine gaining knowledge of can run thru billions of factors of patron facts and set up when are the most high-quality instances to make contact, what phrases in difficulty strains are most advantageous and tons more. These insights can then be utilized to improve the effectiveness of your advertising and marketing automation efforts.

14. Propensity modelling

As already mentioned, propensity modelling is the purpose of a computer mastering project. The computing device gaining knowledge of algorithm is fed giant quantities of historic data, and it makes use of these facts to create a propensity model which (in theory) is in a position to make accurate predictions about the actual world.

IIV. CONCLUSION

Artificial Intelligence tools are necessary to make positive that agency stays aggressive and environment friendly in today's dynamic environment. The equipment is tailored to the present advertising practices to increase skills and automate tasks. Overall the digital transformation has led to a shift in center of attention of the practices. Due to the large availability of statistics new dimensions of evaluation are available. Deep learning and labelling equipment allow extra certain profiling of clients and the environment. This statistics can be used to enhance the patron relationship administration on more than one levels. Employees in the bodily and digital commercial enterprise surroundings are in a position to work greater efficaciously and provider can be higher centred and personalized to the clients and their needs. In return extra facts is generated and amassed that than once more will be used to enhance the interplay with the clients for instance thru non-public provider bots that no longer solely aid throughout the buying trip however join the every day lifestyles at domestic to groups and their merchandise and services, customizing the advertising and marketing strategy even more.

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