Organises

International Conference

on

Digital Economy and its impact on Business and Industry

(ICDEBI-2018)

Wednesday, 3rd October 2018

V P I M S R SANGLI
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National Assessment & Accreditation Council

Organised By:

V. P. Institute of Management Studies & Research, Sangli, Maharashtra, India

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International Journal of Trend in Scientific Research and Development

Availalble on
www.ijtsrd.com

e-ISSN
2456-6470

Email us on
editor@ijtsrd.com

International Journal of Trend in Scientific Research and Development
IJTSRD
International Journal of Trend in Scientific Research and Development
ISSN: 2456-6470

International Conference on Digital Economy and its Impact on Business and Industry

"ICDEBI-2018"

Event Date: 03rd October, 2018

Organised By: V. P. Institute of Management Studies & Research, Sangli, Maharashtra, India

International Conference on Digital Economy and its Impact on Business and Industry

About Conference

Internet and the rapidly changing technology coined the word Digitalization. Digital economy is a term that merely refers to a country's economy that is based on digital payment technologies. Digital economy completely changed the way people have been doing business since so many years. With the evolution of the internet in the past 2-3 decades, digital economy has been growing abundantly across various countries. The digital economy, apart from making transactions and payments easier, is expected to create new market growth opportunities and jobs. Many experts expect that the digital economy will become the most momentous business opportunity in future.

MNCs have greatly upgraded to the changing scenario of digital economy. Small businesses everywhere are finding it difficult to accept and get used to the digital economy. In this age of digital world every business from an online clothing store to a software provider or physical store needs to be techno-savvy. Even educational institutes should consider the growing demand for such skilled employees by enhancing digital skills.

Digital India programme is focused on three key ideas, i.e. creation of Digital Infrastructure and electronic manufacturing in India, delivery of all government services electronically and digital empowerment of Indian people. Digitalization has benefited in many ways such as removal of black economy to some extent, increase in revenue, empowering the people, paving the way to E-governance as well generating new jobs in India.

This conference aims to call for the research papers to know the present status of digital economy in India and to consider recommendations from experts which will have far-reaching implications for the corporate, household, public sectors and society in general.

International Conference on Digital Economy and its Impact on Business and Industry

ABOUT VPIMSR

VPIMSR, Sangli was established in the year 1984 by our patron Late Prof. Dr. A. D.Shinde, a renowned chartered Accountant, Founder of CSIBER Trust to cater the needs of professional education in Sangli district of Maharashtra. He realized the need of a business school in Sangli. His dream of training youth to face the challenges of the new millennium of the twenty first century became a reality when he registered a Charitable Trust "Chhatrapati Shahu Institute of Business Education and Research Trust" (CSIBER) under the able guidance of Late Padmabhooshan Vasantraodada Patil, Ex. Chief Minister, Maharashtra State with active support from Late Shri. Sripatrao Bondre, Ex. Minister, Maharashtra State. Then, establishment of VPIMSR in Sangli proved a blessing in disguise for the rural youth of this area as this is the only Institute which caters to the specific needs of the students coming from country side and from the less privileged classes who cannot afford to join the ostentatious B-Schools in the cities for perusing their academic goals.

VPIMSR has enabled such students to venture into the ever expanding dynamic world of business and come out with flying colors in life. The Institute has its own spacious premises situated in the prime location on Sangli-Miraj road at Wanlesswadi. The Institute has excellent infrastructural facilities viz. several imposing buildings, well equipped computer labs connected by networks and Wi-fi, Audio-Visual Hall, Language lab, library and good learning resource center that includes E-learning facility. It is accredited by NAAC Bengaluru with 'A' grade.

International Conference on Digital Economy and its Impact on Business and Industry

SUB THEMES OF THE CONFERENCE

- Digital India: challenges & opportunities
- Prospects of Digital Economy in India
- Impact of digitalization on Travel and tourism
- Impact of digitalization on media and entertainment industry
- Digitalization in Marketing
- Digital Business strategy
- Digitalization in banking sector
- Digitalization in Education sector
- Disinvestment in Digital Era
- National Initiatives for digitalization
- Financial services: Challenges & opportunities on account of Digitalization
- Future of logistic Industry
- Digitalization in journalism & mass communication
- Digitalization in service sector
- Impact of digitalization on employment
- Use of digitalization in agricultural sector
- Impact of digitalization on society
- Digitalization and ICT innovations
- Digitalization in communication network
- Is Digitalization strengthening the Indian Democracy?
- E-Governance and its impact on digital economy
- E-Marketing of Agricultural products
- Digitalization of SME's economy
- Digitalization in health care
- Role of Internet of things in Automation
- Cloud computing & its impact on industry
- Data protection & security prospects in digital Age
- Artificial Intelligence & its role in Industry
- HRM and Digitalization
- Use of ICT in Management Libraries
- Resource sharing & networking of libraries
- Role of E-HRM for recruitment to retirement
- Robotics & its role in organization
- Business analytics

Any other relevant topic

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International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Organised By: V. P. Institute of Management Studies & Research, Sangli

Skill Development for MSMES Advancement

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ABSTRACT

The present paper is an attempt to understand the significance of skill advancement for MSMEs. The purpose of the paper to visualize and conceptualize the learning profile of lab our strength, segment wise presentation of skill advancement and list of key skills in require in various MSME. The data is composed from secondary sources and the paper will give a chance for new measurement in the area of MSME investigation. Adequate skilled human resources are one of the key factors for the advancement of any segment. In case of Indian MSME segment, the skilled resources are not up to the mark and this has clearly affected the development of the segment in a adequate manner. The skill deficiency's are clearly an issue and it desires particular attention. The segment which has so much of possible in terms of employment creation but it has not able to execute in this regard as deficiency of skill manpower is a main issue. It is often said that India has the demographic dividend and dissimilar other developed nation where dependence ratio is considerably Towering, in case of India it is low. This major benefit must be altered into a skilled manpower so that the industry requires can be made. Today the difficulty is not related to deficiency of employment opportunities, it is essentially related to the problem of employability.

KEYWORD: *MSME, Skill advancement, labour and manpower.*

INTRODUCTION

Formation of business environment is not a simple task as the entire nation's socio economic circumstances has a direct link with this. A nation is investment welcoming provided the political, social, technological, legal surroundings are favorable from the perspective of any kind of potential business actions. This is not only correct for foreign and Indian big industries; it is similarly true for small players as well. As it has been noticed that most of the manufacturing policy of India, has been paying attention on advancement of heavy industries as it was based on the concept of trickledown theory; the profits of the said industrial growth will enrich the lowest strata of the nation. But it not at all happens in case of India. The end result is irregular sharing of national income and unequal financial advancement. Today, the segment has come under center area and lots of initiatives are being implemented so that the true settlement can be utilized correctly. Here, one thing that the policy makers must appreciate that the purpose must be long term and the same need to be allied with development forecast of the nation as well as the people living in that part of the nation where MSME actions are taking place. As the segment started rising interest among the various stakeholders it also brings various issues which needs instant attention so that the true profits can be achieved in a phased approach. It clear that even after marvelous government initiatives the section is missing in some aspects and these issues must be addressed for the even functioning of the segments. The broad issues as tinted by the special Prime Minister's Task Force on MSME segments are listed underneath

Limited access to equity capital

- Troubles in supply to government departments and agencies
- Procurement of raw resources at a competitive cost
- Deficiency of availability of adequate and timely credit

- Towering cost of credit
- Collateral supplies
- Troubles of storage, designing, wrapping and display of products
- Deficiency of admittance to global markets
- inadequate infrastructure facilities
- Deficiency of access to modern technology
- Deficiency of skilled manpower for manufacturing, services, promotion etc.

Skill progression:

Adequate skilled human resources are one of the key factors for the advancement of any section. In case of Indian MSME segment, the skilled capital is not up to the mark and this has clearly exaggerated the development of the segment in an enough manner. The skill deficiencies are clearly an issue and it needs special attention. The section which has so much of possible in terms of employment cohort but it has not able to perform in this regard as absence of skill manpower is a major issue. It is often said that India has the demographic bonus and unlike other developed nation where dependency ratio is substantially Towering, in case of India it is low. This main advantage must be transformed into a skilled manpower so that the industries require can be made. Nowadays the problem is not related to deficiency of employment opportunities, it is essentially related to the problem of employability. This a major problem in most of the developing countries where young generation are educated but they deficit skills which will help them to become industry prepared. The government of India has taken various short term as well as long term occupational courses at a variety of stages of education standard so that the students can get technical information along with universal education. This system may not be likely to implement single handedly by the government alone, so government has recognized National Skill Advancement Council (NSDC) an association instrumental to implement the skill progress initiatives along with various private players who have the expertise in the necessary field. Various other segment skill councils are also developed as the specific needs of the industry may vary. The idea of providing guiding the student surely helpful to reduce the loafer rate at the same time which is a main issue in case of Indian education scheme, Reaping the profits of demographic outline looks more of a fantasy than reality due to amount and excellence gap in terms of skillful workforce in India. It is estimated that India will face a necessitate of 500 million skillful workers by 2022.But India is still struggling with the supply of skilled workforce as currently only 2% of the total personnel in India have undergone skills training. According to the management of India estimate, 93% of personnel employment is in the unorganized or informal segment, which is not supported by a prearranged skill advancement scheme No training on employable kills is being given to young people who can provide them with service opportunities as per present education system. Workers in the unorganized segment are often skilled in officially or on-the-job. The information channels and skill advancement procedure are not understood or not clear. India's labor force constitutes Towering number of labor force with outmoded skills. The pace at which economy is rising and the rate of development that is expected, the challenge will only augment additional as more than 3/4th of new job opportunities are expected to be skill based. The loss of employment and wages throughout the skill training program also acts as a disincentive to skill gaining. The skill advancement environment in India is quiet complex. The vocational training landscape in India has been dominated by the public segment. However, the private segment's participation and fame in the skill development space has started to grow, chiefly in services segment training.

Skill Advancement for MSME:

Young in habitants is the main driving force of any nations and they are the segments who are vigorously taking part in nation building procedure. India is a nation which has a huge population base which automatically distorted into workable forces. It has been estimated that in case of India about 800 million workforces will turn out to be ready to join the personnel by 2022 and at their this development is projected to be 12 million yearly year on year growth of workforce.1 Although India is having the benefit of demographic dividend but the real problem lies elsewhere. The office, in their reports suggest that till date approximately 38% of the workforce is uneducated, 25% of the workforce is educated up to primary level, 36% of the youth is cultured up to center or Towering height and most importantly only 2% of the workforce has formal vocational training.2 This implies a huge gap in conditions of require and supply of skill ful manpower. So, the concept of demographic dividend can only be utilize provided the main personnel become manufacturing ready. If we look at the educational profile of youth workforce in India in the age group of 15 to 59 years a obvious

picture of mismatch can be visible. It can be observed that as the level of education increase the proportion of dropout is also increasing simultaneously. In one of its report of KPMG on Skill Advancement, 2014, it has calculated that in India, approximately 94 lakh students are taking admission at the primary level but only 12 lakh students are ultimately appearing in the class 12 board examinations. This drop out is across gender and it is fairly obvious that proportion of dropout is more among women members as compared to their male counterpart. The graph also suggests that very few proportions of employable workforces have technological knowledge. If only 3% of the educated workforce in the age bracket of 15 to 59 have technical information then surely the gap is quite noticeable and disturbing also. The agenda for skill advancement is comprehensible and the management has also rightly documented the need for the same. As the segment has the potential in terms of employment generation and overall financial advancement of the nation, the government of India, has started implementing various skill advancement initiatives to meet the shortfalls as emerged under the present situation.

As the government is more worried about entrepreneurship actions, the first focus has been given to develop a training programme to train the educated without a job youth with necessary financial support so that they become self adequate. The reason is to create a sustainable income opportunities for the required section along with so as to in near future this unit may able to generate local service opportunities. Two separate programmes are implemented by the central government, viz. Entrepreneurship Advancement Programmes (EDPs) and Entrepreneurship Skill Advancement Programme (ESDPs). The programme are prearranged in the trades like electronics, food processing, sericulture, pisciculture, poultry agricultural, horticulture etc. existing skills of the prospective players may not be adequate to sustain in the volatile business environment. These are the segment where Towering potential for growth is there but the respective players not in a position to nurture the profits as they are not have been exposed to various technologically upgraded production facilities. This small preparation can change the entire business environment as it will help to advance the skills of the labour as well as entrepreneurs who are willing to expand their business actions with the assist of small know-how. To develop a better exposure for entrepreneurship progression programmers the administration of India has recognized The National Institute for Entrepreneurship & Small Business Advancement (NIESBUD) in the year 1983 follow by Indian organization of Entrepreneurship in 1993. These independent bodies are accountable for advancement of various training modules as per the prerequisite of the MSME segments. In order to promote the entrepreneurial actions the government has introduced the idea of 'Assistance to Training Institutions (ATI) to spread the market and business opportunities for MSME segments. The major thrust area is clearly linked to rural advancement by creating adequate self service opportunities in the deprived areas. Till date the office is able to conduct 4, 611 programmes and provided training to approximately 1, 31, 308 trainees.3As the main purpose of ATI is to create job opportunities in rural areas as well as urban areas, some of the segments recognized from the beginning where the areas have the potential. The ministry has identified many crucial areas anywhere low skill involvement is a problem and initiatives have been taken to promote the growth initiatives. The table below can throw a number of light about the section wise presentation and the initiatives taken by the ministry to generate sufficient employment opportunities for the rural youth. These segments wise development needs a clear understanding of the present market need as well as possible that the area is possessing. Without these two, a proper position may not be likely. The electronic system and IT are the two major areas where most of the preparation takes place. The government has organized these training to ful fill the job prerequisite in urban MSME segments where requires for technically upgraded manpower resources are of Towering need. As the locations of the units are urban specific, it is quite understandable that skill up gradation will also be Towering in these area. Along with this it can be experiential that the segment wise spread of trained manpower is not even and some of the segment it is not even 1%. Though the segments like equipment and finishing, leather and leather goods etc. has are quire in most of the marketplace and physical places. The information of people trained in those segments is not acceptable. It can also be observed that even if the purposes of the government to endorse self service or entrepreneurial skill progression only 4% of the total trained resources have got contact in this segment. Some of the segments like automobile, tourism, welcome etc. have the potential to create self employment

opportunities. So more training be compulsory to be provided to tap these region.

Social Skill Developments:

Social category wise participation is heartening although compared to general category the percentage of trained manpower in SC and ST section is low still the overall achievement for the economically background segment is favorable. Skill map is another important initiative that the management is taking place and an in depth study has already been conducted in all the 652 districts of India in this regard. The idea is to recognize the skill gaps and preparation requirements so as to meet the need of local industries located in respective districts. The gap analysis become essential as it leads to create a talent pool which strengthen the supply of manpower for MSME section. The aim of the plan is to identify the training institutes, availability of raw resources and types of existing industries in the district so that the right skill gap can be recognized and hence training programme can be designed for benefit of local personnel. This requires gap psychoanalysis will certainly help the various stakeholders to recognize the section specific training requirement targeted towards likely beneficiaries. The MSME segment itself has the potential provided these gaps can be minimized for an improved development. Measures taken by administration of India the Government and manufacturing are well aware of this reality and trying to figure out solution for the challenges. National Skills Policy was formulated in 2009 by Government of India and special budget was also allocated in the FY 2011-12, 2012-13 with an determined target of imparting skills training to 500 million by 2022. A National Skill Advancement Corporation Board (NSDCB) and Prime Minister's National Skill Advancement committee was established. NSDCB is based on Public Private Partnership (PPP) under the chairmanship of the Deputy Chairman of the Planning Commission. It for mulate strategies based on the decision of Prime Minister's Council on National Skill Advancement. The location up of autonomous body National Skill Advancement Agency (NSDA) was approved on 9thMay 2013. The NSDA is mandated to work towards coordination and harmonization of skill advancement lab ors of the central and state governments as well as the public and private-segment industries. It look after policy changes, scheme reviews, new scheme strategies and engagement with PSUs and NGOs. The administration is constantly working to bring the required machinery and infrastructure for training. Initiatives needs a considerable amount of innovative delivery approaches such as decentralized delivery, mobile training, distance learning/e-learning and web-based knowledge and capacity growth. Special courses offering multiple skills have been initiated at ITIs beneath the Modular Employability Scheme. People who had informally-acquired skills can get certification by taking examinations at ITIs. Public Private Partnership is also used quiet extensively where training programs are sponsor by personal financial support. Apprenticeship Act has also been implement by the Government under which every company has to compulsorily hire a fix number of apprentices from ITI's every year to work and trained the corporation. The apprentice learns hypothesis at the college and gets hand on knowledge at the company. This approach helps in alignment of industry's obligation for skilled aptitude as company's hire the candidate and then train him as per industry's requirement. Public preparation institutes are trying to promote growth of public training institute in difficult areas anywhere private segment is not accessible. NSDC has set a target of at least 70% placement among students on completion of training program so that the relevance of training imparted by its associates can be understood by the students. To improve the dignity of lab or, media campaign have also been start by NSDC at the national level. Government taking one step ahead has made some international collaboration with developed and industrialized countries like U.K, Germany, and Australia etc to swap the ideas for delivery of skills preparation. UK collaboration are:

The UK Skills meeting (UKISF) India, an initiative by the UK India Joint financial and Trade Committee (JETCO), The UK India Business committee acts as Secretariat for the UKISF. It is also the first point contact for UK skill providers, for India, it is FICCI. Because in 1958, Germany has already been provide technical and monetary assistance to develop institutes like Foreman Training Institute (FTI), National Instructional Media Institute, Chennai, or Central Staff Training and examination Institute (CSTARI).

Sum-up:

It can be seen that an all out attempt is visible from various players so that the segment can grow but the problem remains at the implementation level if a sound monitor amenities unsuccessful to be

implement. The rising skill gap is a difficulty and by 2022 India may be out of skill labour forces even if it has adequate provide of manpower. A human resource without having adequate skills becomes unemployable. The concern is not related to education which they are acquiring at various stages. It is basically related to excellence of education and friendship of technical aspects which sometimes missing from the system. As a fast rising developing economy, in addition white and blue collar, India also needs Grey collar- information workers which include ICT skills, difficulty solving, analytical ad effective communication skills and rust collar-skilled worker s at the grass root level in currently unorganized section and un-benchmarked segments like construction, agriculture and related trade. Government, industry leaders are continually from time to time launching new skill improvement initiatives but some way it is not reaching the casual workers who dominate the Indian work-force. Stakeholders (Industry leaders, Government etc) have realize that none of them can work in isolation. They will need to collaborate as the stake concerned is huge. Obligatory Monitoring and Quality Certifications must be in place which will ensure Towering standards training programs with prime focus on ornamental the employability. Segment specific Lab or Market Information System (LMIS) at national and state level is to be established for reducing the skill mismatch which can help in the dependable and realistic evaluation of monetary trends and lab or market. Labour market analysis to be undertaken by Area specific LMIS at local levels with the help of Segment Skill council (under National Skill Advancement Corporation), Supply and require of skilled manpower can be map with the help of Human Resource Planning (HRP) which is also one of the significant constituent. These exercises can help to anticipate skill gap over a period of time at diverse levels, segments and geographical areas. A designated agency must work on generating information from the LMIS and HRP movements. Administration employers, national, state and local level training providers, trainee and prospective trainees must be dispersed with information so collated so that they can use it in their skill progression plans. The information at National level can be disseminated by NCVT by in receipt of input on or after state and local levels. Therapy, residency and guidance can be provided by intensification and upgrading the Employment dealings. In a male under opponent control civilization, there has always been a limited scope to develop their skills for women and girls in country areas due to social, economic and cultural constraint. The payment of wages is also on lower side. Socio-economic empowerment of rural women can be attain by investing in their skill advancement. They can be provided with basic teaching, technical training and other women extension services. Hold up by self help group and NGOs can help in improving their circumstances by creation them understand the significance of basic education and also by making the change in attitude of society towards women. A designated agency must design the courses and introduce them at various levels on the basis of emerging opportunities for skill growth and employment generation. The change must be brought from education system which needs to be renovate and restructured. Young population even after having degree is not able to fit in the manufacturing due to deficiency of expertise to compete. The vocational training must start from Towering School. Students must be complete industry ready by creation the curriculum for professional courses such as manufacturing and MBA in a way that provides complete on the job training. The standard and quality of training needs to be upgrade, Soft skills training down with technological skills will bring preferred consequences.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Digital Storage for Research: Issues and Challenges

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ABSTRACT
Cloud computing i.e. digital storage is set of resources and services presented through the Internet. Cloud services are delivered from data centers situated all over the world. Cloud computing facilitates its clients by providing essential resources via internet. General model of cloud services is Google apps, provided by Google and Microsoft SharePoint. The speedy growth in field of "cloud computing" also increases strict security concerns. Security has remained a stable issue for Open Systems and internet, when we are talking about safety cloud really suffers. Lack of safety is the only obstacle in broad acceptance of cloud computing. Cloud computing is bounded by many security issues like securing data, and investigative the utilization of cloud by the cloud computing vendor. This paper introduces a comprehensive examination of the cloud computing safety issues and challenges focusing on the cloud computing types and the service release types. This paper mainly proposes the core idea of secured cloud computing. It suggests the cloud computing based on disconnect encryption and decryption services from the storage space service. Due to this increasing require for more clouds there is a still growing risk of security becoming a main issue. This paper shall look at ways in which security intimidation can be a hazard to cloud computing and how they can be avoided.

KEYWORD: *Computer, cloud computing, security etc.*

INTRODUCTION

The cloud computing becomes the crowd issue in business and academia with the speedy expansion of computer hardware and software. The cloud computing is the outcome of many factors such as conventional computer technology and announcement technology and business form. It is based on the network and has the arrangement of service for the customer. The cloud computing system provides the service for the consumer and has the nature of high scalability and dependability. Cloud computing just means, Internet computing, generally the internet is seen as compilation of clouds; thus the word cloud computing can be definite as utilizing the internet to offer technology enabled services to the people and organizations. Cloud computing enables patrons to access resources online through the internet, from wherever at any time without disturbing about technical/physical running and safeguarding issues of the original resources. Besides, Resources of cloud computing are lively and scalable. Cloud computing is independent computing it is completely dissimilar from network and usefulness computing. Google Apps is the supreme example of Cloud computing, it enables to access services via the browser and deployed on millions of machines. Nowadays, we have three types of cloud environments: community, personal, and Hybrid clouds. A community cloud is normal model which providers make several resources, such as applications and storage space, available to the public. Community cloud services may be free or not. In community clouds which they are running applications outwardly by large service providers and offers various profit over private clouds. Private Cloud refers to internal services of a industry that is not available for normal people. Essentially Private clouds are a promotion term for an architecture that provides hosted services to exacting group of people behind a firewall. Hybrid cloud is an surroundings that a company provides and controls some resources inside and has some others for public

utilize. Also there is mixture of private and public clouds that called Hybrid cloud. In this type, cloud supplier has a service that has confidential cloud part which only accessible by expert staff and protected by firewalls from outside accessing and public cloud surroundings which outside users can access to it.

TYPES OF CLOUD COMPUTING

There are three main types of service in the cloud environment: SaaS, PaaS, and laaS [1]. In cloud, similar to every future technology, there are some issues which concerned it and one of them is RAS issue. For having good and high presentation, cloud provider must meet several management features to ensure improving RAS parameters of its service such as:

- Accessibility management
- Access manage management
- Susceptibility and trouble management
- Patch and pattern management
- Countermeasure
- Cloud system using and admission monitoring

Cloud computing, so as to transport a controllable cloud computing services to the governments, enterprises and persons without the safety danger. unluckily, there are only imperfect labors towards focusing on cloud computing safety on behalf of operator. It is so necessary to behavior a series of technical researches on cloud security from the viewpoint of operators, while pouring the development and introduce it to the business. This paper presents safety problems encounter in cloud computing, and has a investigate on many technical solutions for cloud security evils.

CLOUD SECURITY ISSUE

Cloud computing and web services run on a system structure so they are open to system type attacks. One of these attack is the dispersed refutation of service attacks. If a user could take control a server then the hacker might stop the web services from performance and order a ransom to put the services back online. To stop these attacks the use of cookies and limiting users linked to a server all help stop a DDOS attack. Another such assault is the man in the center attack. If the secure sockets coating (SSL) is wrongly configured then customer and server verification may not act as expected so leading to man in the center attack. It is obvious that the security issue has play the most significant role in hindering Cloud computing. Without hesitation, putting your data, organization your software at someone else's solid disk using someone else's CPU appears intimidating to many. Well-known safety issues such as data loss, phishing, and botnet pose serious threats to organization data and software. Moreover, the multi-tenancy reproduction and the pooled computing resources in cloud computing has introduced new security challenged that require novel technique to tackle with.

CLOUD SERVICE PROVIDER ISSUE

Service Provider Security Issues The public cloud computing surroundings offered by the cloud supplier and make sure that a cloud computing resolution satisfies organizational security and privacy needs. The cloud supplier to provision the safety controls necessary to safeguard the organization's information and applications, and additionally the proof provided regarding the effectiveness of these controls migrating organizational information and function into the cloud.

PRIVACY:

Privacy is the one of the safety issue in cloud computing. individual information system vary across the world and number of limitations located by number of countries whether it stored outside of the nation. For a cloud service supplier, in every jurisdiction a solitary level of service that is satisfactory. Based on contractual commitment data can store within exact countries for privacy regulations, but this is hard to confirm. In case of Private and secret customer's data rising for the consequences and potential costs of mistake for companies that handle. But professionals develop the security services and the cloud service privacy practices. An effective assessment strategy must cover data protection, acquiescence, privacy, identity management, secure operations, and other related security and legal issues. 2.3Securing Data in broadcast Encryption technique are used for data in transmission. To provide the protection for data only goes where the client wants it to go by using verification and integrity and is not modified in broadcast.

SSLLTLS PROTOCOLS:

SSLlTLS protocols are worn here. In Cloud environment nearly all of the data is not encrypted in the processing time, but to process data, for any function that data must be unencrypted. In a fully homomorphism encryption scheme advance in cryptography, which allows data to be processed

without being decrypted. To give the privacy and integrity of data-in-transmission to and from cloud provider by using admission controls like authorization, authentication, auditing for using resources, and ensure the accessibility of the Internet-facing possessions at cloud supplier.

The cloud system is successively in the internet and the security troubles in the internet also can be originate in the cloud system. The cloud system is not different the traditional system in the PC and it can meet other special and new security problems. The main concerns about cloud compute are safety and privacy. The traditional security evils such as security vulnerabilities, virus and hack attack can also make intimidation to the cloud system and can lead more serious results since of property of cloud computing. Hackers and malicious burglar may hack into cloud accounts and steal sensitive data store in cloud systems. The data and business application are stored in the cloud center and the cloud scheme must protect the resource carefully. Cloud computing is a knowledge evolution of the widespread adoption of virtualization, service oriented architecture and utility computing. over the Internet and it includes the applications, platform and services. If the system meets the breakdown, fast recovery of the resource also is a problem. The cloud systems hide the details of service completion knowledge and the organization. The user can't control the progress of deal with the data and the user can't make sure the data refuge by themselves. The data resource storage space and operation and network transform also deals with the cloud system. The key data resource and privacy data are very introduce for the user. The cloud must provide data control system for the user. The data security review also can be deploying in the cloud system. Data difficult to any authorized place you need it, in a form that any authorized application can use it, by any authorized user, on any approved device. Data uprightness requires that only approved users can change the data and Confidentiality means that only official users can read data. Cloud computing should provide strong user access control to strengthen the licensing, certification, quarantine and other aspects of data management. In the cloud computing, the cloud provider system has many user in a dynamic reply to altering service needs. The users do not know what position the data and do not know which servers are processing the data. The user do not know what network are transmit the data because the flexibility and scalability of cloud arrangement. The user can't make sure data solitude operated by the cloud in a private way. The cloud system can deploy the cloud center in different area and the data can be stored in different cloud node. The different area has different law so the security running can meet the law risk. Cloud computing service ought to be better in legal guard

CLOUD ARCHITECTURE

All Cloud computing is a set of IT services that are provide to a customer over a arrangement on a leased basis and with the aptitude to scale up or down their overhaul supplies. Usually cloud computing services are delivering by a third party supplier who owns the infrastructure. It advantages to mention but a few include scalability, pliability, litheness, efficiency and out sourcing non-core activities. Cloud computing offer and pioneering commerce model for organizations to adopt IT services without frank investment. There are two basic cloud models are discussed, first the Cloud service model and the subsequent Cloud Deployment model. A. Cloud Service Model Cloud computing is a freedom of computing where extremely scalable IT-related capability are provided ―as a service crosswise the internet to numerous external clients. This term efficiently reflects the different facets of the Cloud Computing example which can be establish at different communications levels. Cloud Computing is broadly secret into three services: ―IaaS", "PaaS" and "SaaS". Cloud Computing have some different helpfulness services.

CLOUD SERVICE MODEL:

Cloud Service Model Cloud computing is a release of computing where especially scalable IT-related capability are provided ―as a service transversely the internet to numerous external clients. This term effectively reflects the different facets of the Cloud Computing example which can be found at different infrastructure levels. Cloud compute is broadly classified into three services: ―IaaS", "PaaS" and "SaaS". Cloud Computing have some dissimilar usefulness services.

IAAS (INFRASTRUCTURE AS A SERVICE) MODEL:

The main idea behind this model is virtualization where user have practical desktop and consume the resources like network, storage space, virtualized servers, routers and so on, complete by cloud service provider. Usage cost are intended per CPU hour, data

GB store per hour, network bandwidth inspired, network communications used per hour, value additional services used, e.g., monitor, auto-scaling etc. Examples: Storage services provided by AmazonS3, Amazon EBS. Computation services: AmazonEC2, Layered tech and so on.

PAAS (PLATFORM AS A SERVICE) MODEL:

It refers to the environment that provides the runtime environment, software consumption framework and constituent on pay to enable the direct deployment of application level property or web application. PaaS is a platform where software can be developed, tested and deployed. It means the entire life cycle of software can be operating on a PaaS. This service model is dedicated to application developers, testers, deplorers and administrators. Examples: Google App Engine (GAE), Microsoft Azure, IBM Smart Cloud, Amazon EC2, salesforce.com and jelastic.com.

SAAS (SOFTWARE AS A SERVICE):

Through this service release model end users consume the software request services directly over system according to on-demand basis. For example, Gmail is a SaaS where Google is the provider and we are consumers. Other well known examples of PaaS include billing services provided by Arial system, op basis. Financial services: Concur, workday, Backup and recovery services and so on

CONCLUSION

In this study dissimilar security and privacy related explore papers were calculated briefly. Cloud services are used by both better and smaller scale organization. Compensation of Cloud computing are huge. But it‘s a global happening that all in this world has advantages as well as disadvantages. Cloud computing is pain from severe protection threats from user point of view, one can say that lack of security is the only worth mention disadvantage of cloud computing. Both the Service providers and the clients must work together to guarantee safety and security of cloud and data on clouds. Mutual indulgent between service providers and users is enormously essential for as long as better cloud security. In this paper we have identified that security is main hurdle in wide receipt of cloud compute. Users of cloud services are in fear of data loss and privacy. Researchers and IT security professional must come onward and do more to ensure security and privacy to users. Our study identify top security concern of cloud computing, these concern are Data loss, escape of Data, Client‘s trust, User‘s Authentication, Malicious users handling, Wrong usage of Cloud computing and its services .Hijacking of sessions while accessing data. We propose to use The Cloud Security Alliance (CSA) discharge of a new governance, risk management, and compliance stack for cloud computing. The suite of cloud security tools, available for free download, is meant to help organization create municipal and private clouds that comply with manufacturing standards for conventional governance, risk, and compliance (GRC) best practices. The GRC stack has three components: a technical foundation, a controls framework, and a questionnaire for assess what the CSA calls "industry-accepted ways to file what safety.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Digital Transformation in Financial Services and Challenges and Opportunities

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ABSTRACT
The economic development of any country depends on the well structured and innovative financial system of the country. Innovation is the need of the hour in any segment. The word is continuously experiencing unbelievable innovations in all the areas. Finance which is said to be integral part of all the sectors has witnessed rapid technological innovations. India which stands in the list of top developing countries is presently under the deeper shadow of digitalization.

The digitalization in the financial services is not a new development but the application is widened with the new developments in the Fin-tech services. The Adhar linkage and e KYC have simplified the life of the Indians. The digitalization has brought satisfaction in the minds of the people about the real time transactions because of tools like Immediate Payment Services (IMPS). Digitalization or digital transformation in financial services refers to the process of adopting cloud, social media social Medias, mobiles, big data for ease and efficient based results in the financial services.

The different financial services providers in India have stared adopting new technology in order to meet the fast growing needs of the customers The digital transformation in the financial services in the country by the different players has provided opportunities and created challenges .This paper makes an attempt to address those opportunities and challenges in the financial services caused by digitalization.

KEYWORD: *Acceptability, Customers, Digitalization, Innovations and Services,*

INTRODUCTION

The financial services are at the transmission phase. The financial service sector has undergone drastic changes due to the transmission phase. Digitalization has brought new concepts, business models new areas of focus in the financial service sector. The implementation of new develops arising out of digitalization demands the acceptability by all who are involved in the financial services sector. Therefore everyone who is a part of the process needs to adjust their own operations to fit the needs of digitalization. The key to survival in this sector is depends on the ability to adapt and adjust with the digitalized developments.

Digitalization:

Digitalization is a recent trend which began during 1980s when home computers were introduced to in the consumer markets which opened new channels for consumers to become more communal and aware of civil democratic issues than ever before. Digitalization is an opportunity for companies and organizations to improve their business activities.

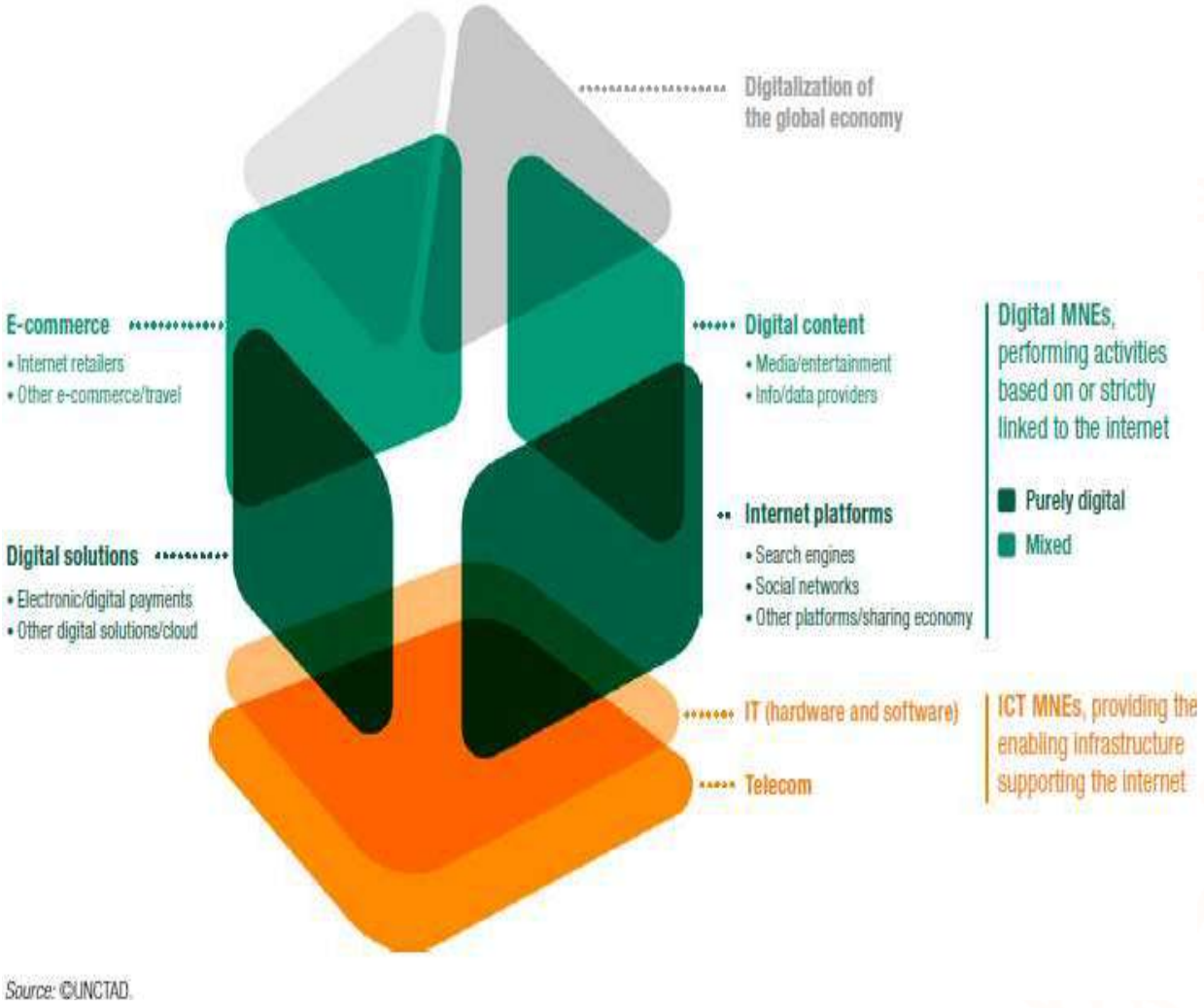
Digitalization can be defined as the use of digital technologies in order to create new business models and to provide new revenue and value-producing opportunities. It is the process of moving into a digital business and the integration of digital technologies into everyday life. (Gartner 2016, cited 28.11.2016.)

Digital transformation in financial services

The financial services in India were computerized decades back but real digitalization process has gained the momentum only after the revolutionary steeps like demonetization and cashless economy taken by the Government of India during the year 2016. The radical transformation of the industry was delayed due to market advantages of traditional financial services providers. These included the established trust of customers, regulatory barriers to entry in banking and insurance and supervisory approaches that created a bias to internalizing all or most of the value chain.

The financial crisis of 2008 has shaken the trust of the investors in the financial institutions which made the process of capital rising difficult. This rated a opportunity for small and less regulated non banking financial institutions to utilize the market and grow. These institutions offered the financial services at a cheaper rates and convenient terms because of their technology based services. This development has resulted in increasing trust of the customers towards the non banking financial institutions. This in turn necessitated the economy to digitalize the following chart shows the Architecture of Digital Economy.

Figure No: 1 the Architecture of Digital Economy



Opportunities of digitalization in the financial sector:

The trend of digitalization has created many opportunities in the financial sector.

1. Demand for wide range of services :
   The invocative market is expecting more number of services from the service providers with at a least cost. Of course most of services we find in the market but still there is scope for addition of features with cost reduction in order to increase the number of customers.

2. Merger of Financial Services of Banking and Non Banking Financial Companies:

Presently we will find different services are provided by the banks and non banking financial Institutions. The combination of these services will definitely benefit the service providers and customers. This will also help to avoid the unhealthy competition in the market**.**

3. Replacement of Physical or Branch Banking and improving efficiency:
   The cost of operating the banking branches is very high in the present day of increasing prices. The digitalization will be a better alternative to the banks and financial institutions to lower the cost the increase the efficiency.

4. The future prospects of Aadhaar eKYC will make people's life easier with overall processing becoming easy. Further, the digitisation brings peace in people's life with real time transaction with Immediate Payment.

Challenges of Digitalization in the Financial Sector

1. Dominance of Cash:
   In many areas in the economy we found the need and existence of cash. All the transaction cannot be brought under the shelter of digitalization. Therefore efforts are essential to reduce the cash transactions.

   Lower income and financial literacy levels (low value transactions, smaller fees, need for user education)

2. Weaker Technology and inability to replace:
   Majority of the institutions in the financial market are operating on the traditional technology. The replacement and up gradation is expensive.

3. Threat :
   The customers and the service providers in the financial markets are under the threat external of hacking not only that they are exposed to the frauds by the employees.

4. Lack of Awareness and Mindset:
   Once need to accept the fact that in spite of efforts by the Government there are still people without having bank account. In such an environment there is a lack of awareness digitalized benefits of financial sector. Further certain category customers are reluctant to adopt and adjust with the changes.

5. Lack of Training g to Staff:
   The technical innovations in terms of digitalization of financial services require trained and updated staff as the digitalization at its inception stage due to delay. The institutions are not in position to offer for this due to cost or lack of resources.

Suggestions:

1. Creating Awareness of digitalized benefits to the customers.
2. More motivation by the Government for increasing digitalized Transactions.
3. Effective Regulatory system for monitoring digitalized transactions.
4. Provision of technological services by RBI for the needy and poor financial institutions.
5. Strong imitative towards the cashless economy.

Conclusion

The digitalization in the financial services is not a new development but the application is widened with the new developments in the Fin-tech services. The key to survival in this sector will be the ability to adapt to the technological changes and adjust. The best example of transmission we can quote is the mobile loan or internet based loan which has became popular in recent years. The bankers who use to make the borrowers to stand in a big queue in the past are now behind the search of the borrowers. This became possible due to digitalization.

The different financial services providers in India have stared adopting new technology in order to meet the fast growing needs of the customers. The key to survival in this sector will be the ability to adapt to the technological changes and adjust. There are challenges which the service providers need to accept for the survival and progress in the financial market.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
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ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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The Trend of Digitalization in Marketing and its Impact on the Customers

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ABSTRACT
The firms and the Marketers are faced with new opportunities and challenges within this digitalized age. The vital objective of digital marketing is to attract customers and allowing them to interact with the company's brand through electronic/digital media. This article focuses on the importance of digital marketing for both the consumers and marketers. We have examined the effects of digital marketing on the consumer's buying decision making and Its impact on firms' sales. Adding up to this, distinguish between traditional marketing and digital marketing are presented in this paper. This study has described various forms of digital marketing, its effectiveness and the impact it has on the firm's sales. The examined sample consists of reports and analysis based on the online survey conducted by us to prove the effectiveness and efficiency of digital marketing. Collected data has been analyzed with the help of different statistical techniques and tools. The results have also stated that the consumers have a positive view towards digital communication while checking out a product, they get affected from other customer's comments and reviews and they do express their post-purchase experiences over the digital/ electronic platforms. 'Website' is the most used digital medium of communication while purchasing a product or service followed by 'smart phones' and 'social networking sites'. Each stage of consumer's buying decision making procedure starting from 'need identification' to 'post-purchase' experience sharing is significantly affected by digital marketing communication media with the 'evaluation' being the most important stage. However, this study has also established that although the customers encourage the usage of digital mediums throughout their buying decision-making journey, still they do not order many products online very often.

KEYWORD: *Digital Marketing, objectives, research results, Promotion, Effectiveness, mass Customer Reach, Impact, comparative quantifiable data, statistical data, problems and solutions.*

1.1 INTRODUCTION

Digital marketing is a type of marketing which is being largely used to promote the products and services to reach mass consumers by using digital channels of communication. The utilization of the electronic means of media by the marketers for promoting their products or services in the market is the main basis of Digital marketing. Digital marketing stretches beyond the internet/ online marketing including sources that do not require use of Internet. It involves mobiles/ cells (for both SMS and MMS), search engine marketing, visual advertising, social media marketing, and various other forms of digital/ electronic media.

Through electronic/digital media, consumers are able access to any information at any time and any place whenever they want. With the emergence of digital media, consumers do not just depend on the company's brand says but also, they follow the friends, media, association, peers, etc., as well. Digital marketing is a broader term that refers to the various kinds of promotional tools and techniques involved to reach the customers via digital methods of technologies.

This is the current emerging trend in "Modern Marketing". Generally, crucial advantage of digital marketing is that it can enable companies to increase the reach and reduce the costs (Watson et al. 2002; Sheth & Sharma 2005). According to Chaffey (2011), social media marketing includes "encouraging the customer's communications and reviews on company's own websites or through its social media presence". Giese and Gote (2000) finds out that customer information satisfaction (CIS) for the electronic or digital marketing can be framed as a total of effective responses of different volume that follows the consumption and is geared by focal aspects of the sales activities, websites (information systems), digital products/services, after-sales service, customer support and company culture. Waghmare (2012) had pointed out that large number of countries in Asia is taking the benefits of the e-commerce platforms through opening up, which is very essential for promoting competition and the diffusion of the Internet technologies. Zia and Manish (2012) found out that at present, buyers in metropolitan cities in India are being driven by the e-commerce: these consumers are buying consumer electronics, booking travels and books online. Although spending of time of per online shopper remains low, approximately 59% online consumers in the metropolitan India already make purchases through online websites in at least once in a month.

1.2 Objectives of the study :

i. To know the different elements of digital marketing.
ii. To know the global use of social media sites and devices
iii. To know the impact of digitalization on the customers.
iv. To know the impact of digitalization on marketing.

3. Research Design:

Source of Data: Primary and Secondary Data
Primary Data: Questionnaire.
Secondary Data: Journals, Websites
Sample Size: 100 Customers
Tools Used for Analysis: Tables and Graphs

4. Data Analysis and Interpretation:

4.1 Elements of digital marketing:

There are various elements of digital marketing but the recent one are search engine optimization(SEO) and search engine marketing (SEM). The rest of the elements were done before. I would like to explain the various elements and how they are important to the digitalization of marketing.

I. Search Engine Optimization(SEO) :
used naturally or organically for the search results in Google or, sometimes seen used with Yahoo Bing and any other search engine

II. Search Engine Marketing(SEM):
used to drive traffic to any business, or basically from the paid efforts. According any business sturucture, a firm would choose pay-per-click that is PPC and cost-per-click known as CPC and the last one cost-per-thousand impressions CPM model.

III. Content creation:
The content creation it is presented in various methods in different formats. These formats are blogs, white papers, banners, inforgraphics, how-to-guids, videos, webinars, news and updates, images podcasts, case studies, e- books, question answer articles mainly used by various students for different study purposes and the last is through the social media sites.

IV. Social Media Marketing(SMM):
The various digital marketing elements here the social media marketing is another element that is used for driving the traffic to your official sites or the business through the social media sites. The various sites like facebook, instagram, twitter, pinterest, google+, linkedin are used to share the information on the recent trends of marketing. So we can say that the above mentioned sites are maily used to share the important content through these sites to let the readers know about the recent marketing. Therefor the content you share will be seen and if it is proper it will be liked.

V. Digital Display Advertising:
The digital display advertising is seen as a subset of the Search engine Marketing. When it comes to marketing a business will be seen using various methods which should be effective and necessary for dislplaying different advertinging formats in order to target the right and potential audientce. The kinds of advertisments which are displayed and shown to the customers should be attractive and should instinctly catch the eyes of the audience so that they will be intrested in a perticular product that is being marketed.

VI. Remarketing or Retargeting:

We need to understand that in business marketing the stratagies like remarketing and retargeting are very essential for targeting the right audience or the customers.

VII. Mobile Marketing:

The mobile marketing is another source and ways of advertising your porducts. Therefor a business may choose to advertise their new innovations through mobile.

VIII. Interactive marketing:

It is important to note that any new stategy you come up with for introducing to the potential customes, first you must make sure that your advertising stategy is properly made in order to keep the customers engaged in the conversation.

IX. Viral marketing:

Accoding to researchers it is known that viral marketing is good strategy and essential for spreading unique content through online. This is due to the proper content shared and it is liked by various readers immensely.

X. Email marketing:

The email marketing is when you decide and find a way to send your message through email to various listed customers who are potential, therefor the strategy is called as the Email marketing. In order to maintain a proper listed customers it is best to use the effective email marketing software.

XI. Affiliate marketing:

Affiliate marketing is one of them where it is the arrangement made on online retailers. Theses retailers are to pay commission website either for traffic or the sales which are generated from its referrals.

XII. Digital media planning and buying:

This is where the media agency researched for a proper strategy framework and is therefor called as the digital media planning. This is the process through which the sales or the conversions are launched with a new brand or the ability to promote an established brand that already exists.

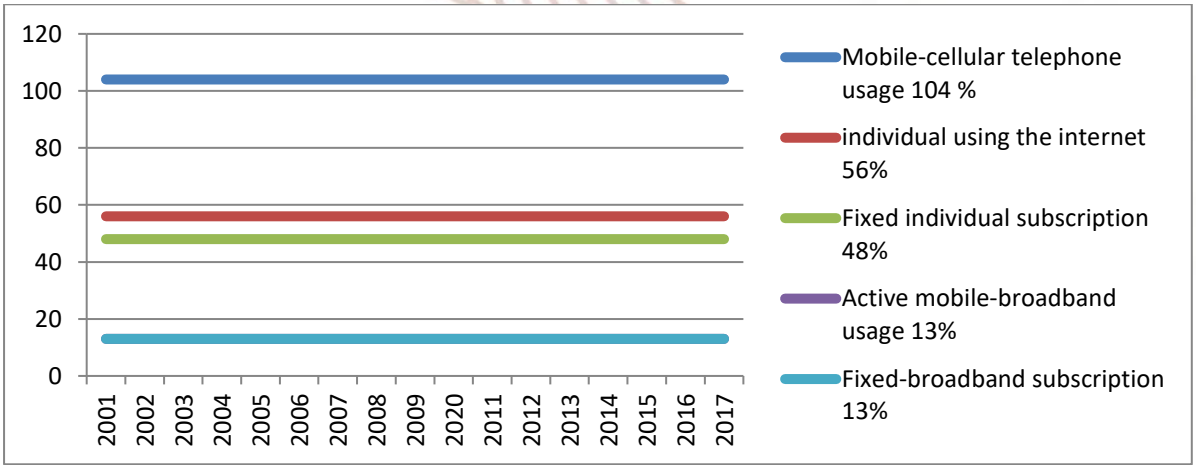
XIII. Web analytics:

Along with all the above elements to digitalization in marketing sector, web analystics is another essential and is important for any digital marketing. It is known that web analystics plays a very important role in the marketing and helps you in collecting, measuring, understanding, planning, analysing, reporting and predicting the necessary web activities for yur business.

4.2 Comparative quantifiable percentage in digitalization marketing:

Here is the comparison of percentages in digitalization marketing starting from the years of 2001 to 2017. As researches have been made on how the information and communication technology known as ICT in knowing the impact on digitalization marketing across the globe. Here I will be showing how much of digital marketing is used by people with various social media channels and platforms. In the graph below, will help to understand the usage of digital marketing at various stages and through what type of technological platforms varying from different years.

Global use of social media sites and devices 2001-2017:



Source: - Global Web Index:

The different types of social media sites and various devices used as a technological platform. The usage of various social media platforms for digital marketing to different channels is growing faster each year. This is with the help of the usage of internet, Face book, twitter, Instagram and others. This various channel has been making it easier for the online purchasing of good. This has said as a global Web Index to be paid as a service giving insights on consumer usage of social network sites globally and different countries. But it is known that many businesses for digital marketing regularly feature very specific social media stats on although they stopped releasing reports on slide share to encourage purchase of their subscription product.

International telecommunication union known as (ITU) is considered to be global and that by every country's source with the biggest sample size for the big picture of digital device usage and along with the possible trends by continent. This also includes the usage of fixed and mobile broadband access by country per percentage of the people. This is latest release of comparative percentage on digital marketing across the globe starting from the end of 2016 that shows the growth opportunity for Internet access along with higher-speed Smartphone use across the world.

4.3 Impact of Digital Marketing on Businesses:

Positive Impact

- **Wide Variety of Easily Accessible Marketing Outlets*:***

The digital marketing provides a way as an opening to many new opportunities in business world. There are various types and ways of marketing that may be though social media, email campaigns, content marketing, Search Engine Optimization, banner ads, and many others. It is understood that all of these functions are to make it easier and to take care of online buying or shopping including making the process go smoother.

- **More affordable Methods of Reaching a Wider Audience*:***

When it comes to online buying many businesses make a basic understanding that advertising online is less expensive than print advertising and therefore more people see it that way. It is considered to be simple where hundreds or even thousands of people are able to reach respective sponsored posts on different social media sites. It may take say for example a hundred dollars to run a single print ad in a newspaper. After this a consideration is to be given to whether the target demographic of the people are even seeing the ad or are they able to see the ads.

- **Larger access to online advertisement:** Most of the people are these days are always online and therefore this makes it easier for the marketing advertisements through various channels. People are always interested in knowing what types of products are available and are they affordable. The audience needs to have a basic understanding and knowledge of new products that are being launched. Nowadays days, people are able to get everything from news, weather, the gossip so on along with Bessie's latest affair, and even with groceries they purchase, with a simple method of few clicks of a mouse or swipes of a finger.

Negative Impact:

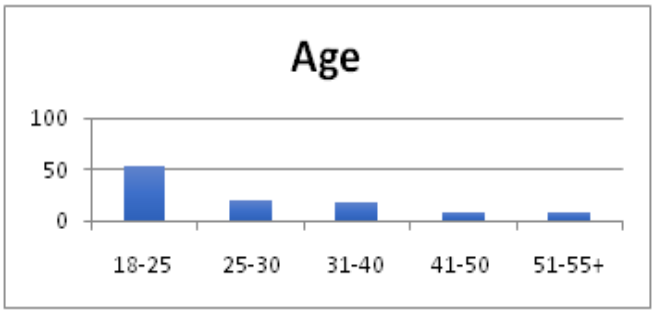
As much as we can see impacts on the digitalization marketing, there are also negative impacts whereas the benefits are easy to see but another important consideration we have to keep in mind is when you go digital with your marketing plan, it is known to be the negative impact of digital marketing. A question may arise in the minds of any business such as what could go wrong and through which type of digital marketing. As many things are being advertised where more people are viewing marketing content, there's always the fear were the receiving audiences may take the message in a wrong way or perceived in the wrong direction.

In the business world there are always negatives with any marketing strategy, but the impact of digital marketing on businesses is considered to be a positive one. This is with the possibility of access to a broader audience, digital marketing illuminates' businesses in ways that were once impossible. This helps by saving businesses time, money, and bringing in new customers like never before.

4.4. The data collected from the 100 respondents is analyzed and interpreted with the help of tables and graphs

4.1. Age:

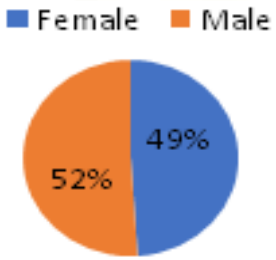
Age	No. Of People (responses)
18-25	53
25-30	20
31-40	18
41-50	9
51-55+	8



Interpretation:
The age groups that mostly prefer the digitalization in marketing were from 18-25 ages. As we can see from the above graph that the age group is mostly young audience and the responses we got for that is 53 members. So, we can say that when it comes to digital in marketing the main audience is the younger generation.

4.2. Gender:

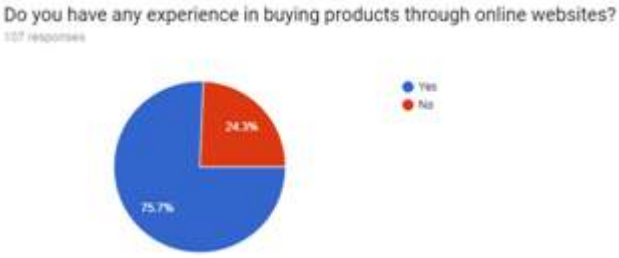
Particulars	No. of respondents	Percentage
Female	49	49
Male	52	52



Interpretation:
According to this graph, it is proven that customers of both the gender either male or female both are equally involved in digital marketing procedure for buying Products through internet or online websites.

4.3. Digital Marketing Experience:

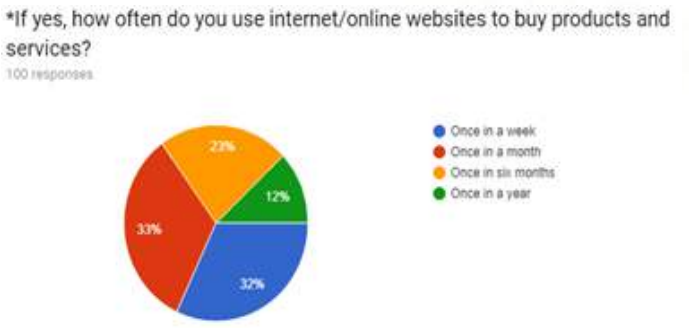
Particulars	No. of respondents	Percentage
Yes	81	75.7
No	26	24.3



Interpretation:
According to this question, most of the respondents have agreed that they have prior buying experiences through online websites. This proves and digital marketing is taking place rapidly and is following the current trends of the markets and customers.

4.4. Usage of Online Websites

Particulars	No. of respondents	Percentage
Once in a week	32	32
Once in a month	33	33
Once in six months	23	23
Once in a year	13	12

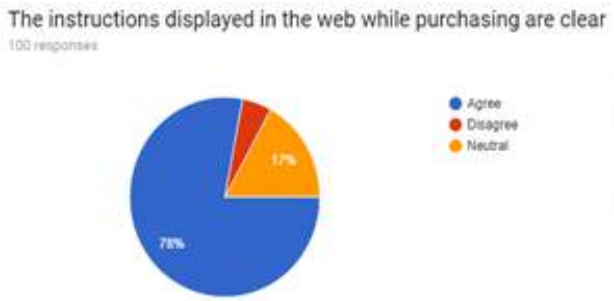


Interpretation:
This data shows that how frequent a respondent purchase product through online channels. According to this statistical data, around 32% of the total respondents buy products through digital medium almost on a weekly basis.

This proves that more or less the customers are well connected with digital marketing methods.

4.5. Clear Display of Instructions:

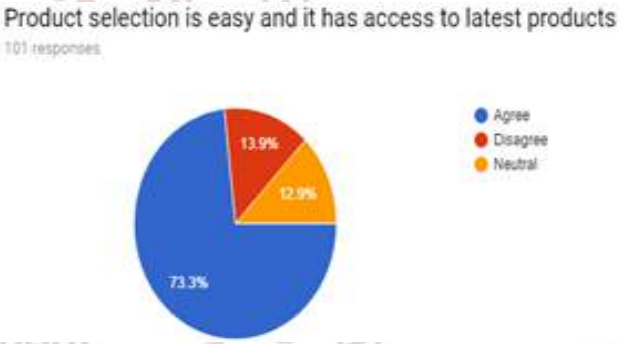
Particulars	No. of respondents	Percentage
Agree	78	78
Disagree	17	17
Neutral	5	5



Interpretation: Among the respondents 78% said the instructions were clearly displayed.

4.6. Easy Navigation:

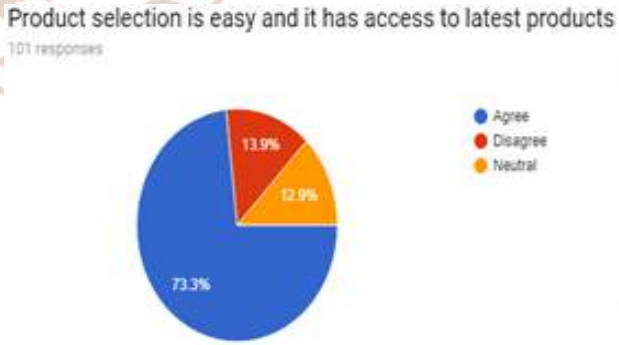
Particulars	No. of respondents	Percentage
Agree	75	74.3
Disagree	12	11.9
Neutral	14	13.9



Interpretation:
According to this statistical data, it has been found that 74.3% of the total respondents are agreed that they find it easy to navigate via online website to buy products. It proves that digital marketing has simplified the process of searching of products through a common digital platform

4.7. Easy Product Selection:

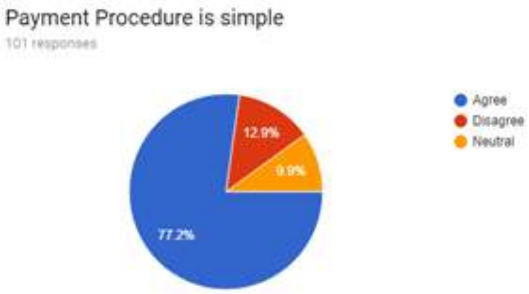
Particulars	No. of respondents	Percentage
Agree	74	73.3
Disagree	14	13.9
Neutral	13	12.9



Interpretation:
According to this data, it is established that most of the respondents have agreed that the selection of products via online websites are relatively easier than that of other sources. This enhances the efficiency of digital marketing.

4.8. Simple Payment Process:

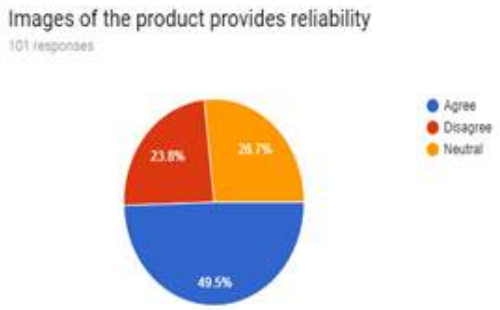
Particulars	No. of respondents	Percentage
Agree	78	77.2
Disagree	13	12.9
Neutral	10	9.9



Interpretation:
This data gives the statistics of whether the online digital markets performs smoothly in terms of transactions or not. Here, most of the respondents have agreed that the online transactions are hassle free and safe. Whereas, very few are also disagreed with this fact.

4.9. Reliability through Images:

Particulars	No. of respondents	Percentage
Agree	50	49.5
Disagree	24	23.8
Neutral	27	26.7



Interpretation:
This data shows the reliability on images during online purchases. According to 49.5% respondents, the images shown are reliable and easy to indicate the actual product.

4.10. Easy Complaint Registering:

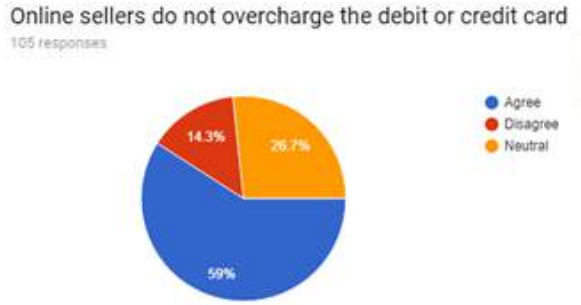
Particulars	No. of respondents	Percentage
Agree	72	72
Disagree	12	12
Neutral	16	16

Interpretation:
This data produces information about the customer care services available while purchasing through online websites. This data shows that 72% of the respondents have agreed to this fact that availability of customer services, especially for registering complaints and approachable.

These are safe and secure and highly confidential.

4.11. No Overcharging Via Card Payments:

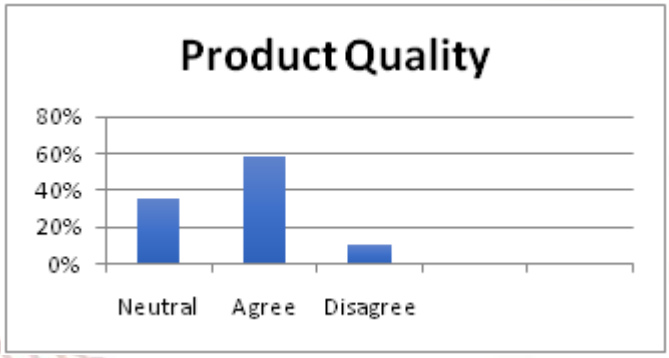
Particulars	No. of respondents	Percentage
Agree	62	59
Disagree	15	14.3
Neutral	28	26.7



Interpretation:
This data gives a detailed view of whether the costs charged are affordable or not. In here, 59% of the respondents have positively reacted towards the card payments and have agreed that the online sellers do not overcharge the debit or credit cards.

4.12. Product Quality:

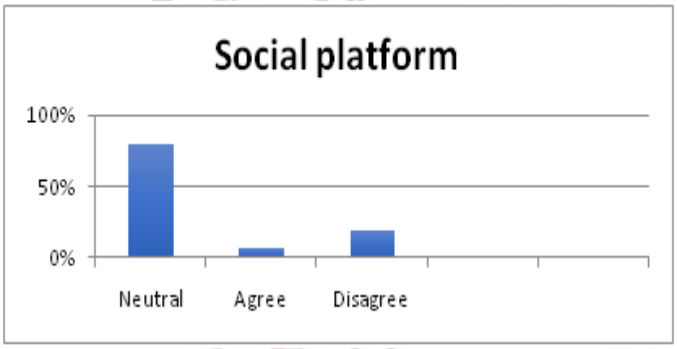
Responses	Percentage	Responses
Neutral	36%	Neutral
Agree	58%	Agree
Disagree	10%	Disagree



Interpretation:
The product quality here in the above graph is seen were most of the customers agree that the product condition is very good. The Graph shows that the number of people that choose agree is 58 members. Therefore it means the product quality is good when purchasing goods.

4.13. Importance of social platform:

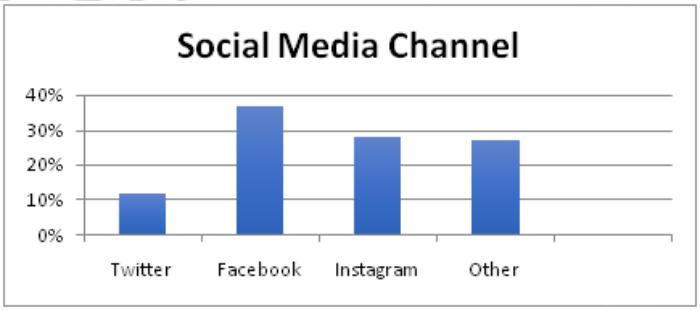
Responses	Percentage	Responses
Agree	79%	Agree
Disagree	6%	Disagree
Neutral	19%	Neutral



Interpretation:
The above graph shows that the importance of social platform that the customers prefer is neutral. Here the most of the audience which are our customers agreed that social media have influence and good impact on the purchase of products when it comes to digital marketing.

4.14. Social Media Channel Used:

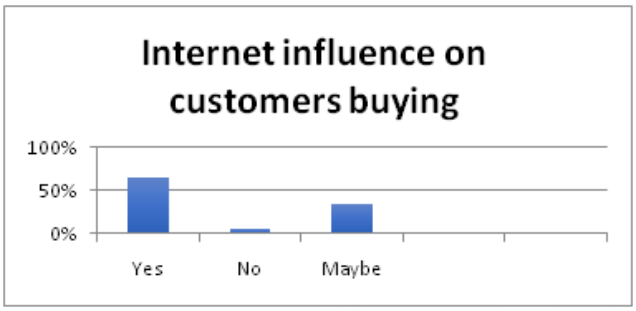
Sources	No. Of People (responses)	Sources
Twitter	12	Twitter
Facebook	37	Facebook
Instagram	28	Instagram



Interpretation:
As we did the survey to know the kind of social media channel that is used when it comes to purchasing or buying. The above graph shows that the customers mostly use Face book. This is also the platform were the new products are advertised as to attract the audience attention.

4.15. Influence on Internet on customer satisfaction:

Responses	No. Of People (Percentage)	Responses
Yes	64%	Yes
No	6%	No
Maybe	19%	Maybe



Interpretation:
When it comes to digital marketing internet plays a major role in allowing the customers to know about the products which are being launched newly. Therefor we can see that in the above diagram that audience has replied that internet influences the buying and purchasing products online.

4.16. Customer Satisfaction:

Responses	No. Of People (Percentage)	Responses
Agree	61	Agree
Disagree	9	Disagree
Neutral	33	Neutral

Interpretation:
When it comes to digital marketing it is important to know that whatever products are bought either online or directly will make the customers satisfied. Here we can see that the goods should have an impact on digitalization market for customer satisfaction. The above graph shows that most of the audiences have agreed and their satisfaction level is high.

5. Problems and Solutions:

5.1. Making the most of a smaller budget:

Here we can understand that one of the biggest digital marketing concerns for businesses is where one business is able to stand out from others against bigger competitors without equal digital marketing budget. When it comes to marketing in the business world, we do know that larger competitors can feel like they have an unfair advantage. Therefor he solutions given below are some of the best ways to level the playing field.

- Solutions to this problem:
- SEGMENT YOUR AUDIENCE
- INVEST IN LOCAL
- GET SOCIAL-SPECIFIC
- USE PAID ADVERTISING ON SOCIAL MEDIA
- CONNECT WITH INFLUENCERS

5.2. Clicks but No Conversions:

Clicks but no conversions is another major problem when it comes to Healthy numbers of clicks attached to high conversion rate and therefore it considered to be one of the most common digital marketing problems that any businesses would face in the marketing world. In many cases it is seen that it can be extremely frustrating to spend the money for many clicks, but there is no improvement on the rate of sales Here are some of the best solutions mentioned in order problems to be solved for this classic and unfortunately timeless digital marketing problem.

- Solutions to this problem:
- AUDIENCE ISSUES
- INEFFECTIVE LANDING PAGES
- MIXED MESSAGING

5.3. Social Media aren't always flourishing:

When it comes to digital marketing, in many cases it is seen that the social media has a reputation and is

famously known for being quick, easy, and free engagement with your audience. In larger sense the practice that is put into can be a difficult for getting the right medium. Many businesses don't approach social media with the sophistication needed to see success. There for there are various solutions to these such problems and how it can help in the fluctuations of the social media.

➢ Solutions to these problems:

- WATCH YOUR FREQUENCY
- OFFER SOMETHING
- ACTUALLY, BE SOCIAL
- CONNECT WITH HAPPY CUSTOMERS

5.4. Tough Ranking Competition:

As we known that the completion in any business is tough and its ranking can be seen either high or low as compared to other competitions. Here the search engine optimization also known as SEO and its competition can be challenging. When setting up your business deciding on your location and industry, one has to keep in mind that there could be thousands of competitors waiting to get on the same few spots on Google's front page. Therefore it is understood and seen making it worse and also there are dozens of finding the moving parts to SEO. This will help in figuring out how to stand out against the other tough competitions. Hence, we need to understand that this can be overwhelming. Here some of the solutions are given proven ways to compete with others when it comes to page ranking.

➢ Solutions to this problem:

- Don' use SEO in the Same Way
- Don't Rank in the Same Place
- Focus on Customer Experience

6. Findings

1. Mobile Cellular usage is more than the individual internet usage and others.
2. Increasing scope for improving market share by digitalization
3. Fear of the receiving the message by the audiences in a different way.
4. There is a higher positive impact of digitalization on the customers.

7. Suggestions and Conclusion:

There is a need for optimum utilization of different means of digitalization. The negative impact of digitalization is to be converted in to fruitful business opportunity by convincing the customers and creating awareness. Digital and electronic channels in marketing have become an essential part of strategy of many companies. Nowadays, even for the small business owners there are very efficient and cheap ways to market her/his services and products. There are no boundaries in Digital marketing. Companies and organizations can make use of any electronic devices such as tablets, smart phones, televisions, laptops, digital billboards, game consoles, and media such as social media, videos, SEO (search engine optimization), content, Google+, e-mail and many more to accelerate promotion of the company itself as well as its products and services. Digital/electronic marketing may get more success if it takes into consideration the customer's needs as a top priority. Digital marketing results won't come without attempting, just like the way "Rome was not built in a day," without trial (and misinterpretation). The watchwords "test, evolve and learn" is a must to be kept at the heart and mind of all digital marketing companies and initiatives. Companies and organizations should put more efforts to create innovative and novel customer experiences and unique strategies for media to identify and catch up the best path for driving up and establishing digital marketing performance.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Impact of Digitalization on the Indian Financial System

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ABSTRACT

Digitalization or digital transformation is more than just adopting cloud, social, mobile or big data technologies. It is about using technology to create new values or change the business model. Digitally transformed businesses typically create an ecosystem where all market participants and consumers participate. 1st July, 2015 is a day when an initiative was being taken by our honorable Prime Minister Narendra Modi towards "making India Digital". The campaign aimed to connect rural areas with high speed internet network and to improve the digital literacy. Indian economy is growing at a fast pace that requires the people to be financial literate to take judicious decisions. After this digitalization, the financial transactions have to be done through internet. So, Digital financial literacy is gaining importance. This paper analyses the importance of financial literacy in today's world. The finding of the study will identify the obstacles in the execution of various programmes to make India financial literate and strategies to execute these policies effectively and efficiently. There are some financial services providers that have taken on a back seat approach and observe the developments in this digitalization space. This is probably a safer approach given the risks and costs involved. On the other extreme end, there are also financial service providers who have yet to embark on any digitalization strategy. However, this does not mean they will not be able to leapfrog ahead once they have strategized their digital strategy.

KEYWORD: *Indian economy, Digital India, Financial literacy, Financial System*

I. INTRODUCTION

India is the fastest growing economy in the world. The Indian economy is the seventh largest economy in the world measured by GDP and third largest by Purchasing Power Parity (PPP) after US and China. The Indian economy has seen a lot of changes from being self-reliant to opening its door for global trading by allowing LPG(Liberalization, Privatization and Globalization) in 1991 under the then Finance Minister Dr. Manmohan Singh. And since then there is no seeing back. According to the latest Economic Survey 2017-18, the Indian economy will continue to grow more than 7 per cent in 2018-19. According to Fitch Ratings Agency, India's Gross Domestic Product (GDP) will likely slowly accelerate to 8 per cent by FY 2018-19, driven by the gradual implementation of structural reforms, higher disposable income and improvement in economic activity. The recent steps of the Indian government have shown positive results in the growth of the GDP. According to a Goldman Sachs report released in September 2015, India could grow at a potential 8 per cent on average during from fiscal 2016 to 2020 powered by greater access to banking, technology adoption, urbanization and other structural reforms.

The 1990s also saw the entrance of technology in India and people were introduced with the use of personal computers and gradually the automation took every sector by storm and now we can see the virtual world that exists and anything can happen in it from uniting the world to initiate a war if not handled properly. But in a developing country like India the process of digital soundness has been slow and got a huge push to go digital when the demonetization

shook everyone. Although there have been various initiatives taken by our Honorable Prime Minister Mr Narendar Modi such as Make In India, Swatch Bharat Abhiyan, Digital India etc. But it was during this money crunch when people started recognizing the benefits of being digitally sound and how useful it is. Our government has emphasized ongoing cashless as it will make transactions smoother and transparent and eliminates the existence of parallel economy which poses threat to the peace in our country and also helped in their financial inclusion plan and has seen that demonetization has made the accounts opened under Pradhan Mantri Jan Dhan Yojana operational. As rightly said by Rajat Gandhi on financial inclusion "No matter how many banks may open and how many boots you have on the ground, if the person does not know about the financial options that are open to him, policies, schemes and financial instruments will mean little. It is important for a person to know what to look for and only then think of the benefits that he can obtain from it. " Thus this makes the financial literacy all the more important. Financial inclusion is a quantitative term and financial literacy is more about the quality. Financial literacy focuses on the understanding one should have to how to use and manage the money efficiently and reduce the risk and save their money from environmental changes such as changes in the economy, inflation etc. With the demonetization people have also realised how important it has become for them to know about their money and what affects it the most and how they can protect. During this phase digital awareness has also gained importance and people are also willing to learn the new modes available for them to manage their money in the cashless way. During this time the online payment options have helped people to survive the cash crunch they faced and have also become the driving force for digital literacy and financial literacy.

II. OBJECTIVE OF THE STUDY

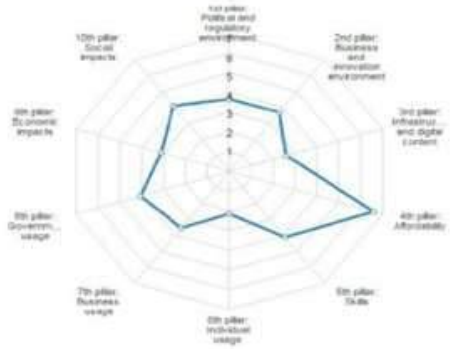
1. To understand the obstacles in the path of digitalization and the economic growth.
2. To understand how every step taken towards financial literacy is affected by various factors and how they are interrelated and interdependent.
3. To understand the requirement of financial literacy.

III. RESEARCH METHODOLOGY

The study is exploratory and quantitative in nature. The secondary information is used for the analysis of the problem. Sources for the secondary data are originated from the various sources like special investigation team report, newspaper and Reserve bank of India (RBI) websites.

Digital World and Digital India:

In the Global Information Technology report 2017 published by World Economic Forum India Ranked at 91stposition in Network Readiness Index among 139 countries slip down by 2 positions in the overall ranking. The change is marginal but this drop is an indicator of our slower pace than other countries. In the overview given the World Economic Forum, the lack of infrastructure (based on which it is ranked 114th) and low levels of skills among the population (101st) remain the key bottlenecks to widespread ICT adoption, especially in terms of individual usage (120th). A third of the Indian population is still illiterate (95th) and a similar share of youth is not enrolled in secondary education (103rd). India's performance in terms of providing online services and allowing e-participation has so far been in line with that of peer countries, but not the global best. Only 15 out of 100 households have access to the Internet and mobile broadband remains a privilege of the few, with only 5.5 subscriptions for every 100 people. This is in spite of the fact that affordability has long been one of the strengths of the Indian ICT ecosystem, with the country ranking 8th this year in this area. There is a deep divide that persists between well-connected metropolitan hubs and remote rural areas, where even the most basic infrastructure is insufficient. The Digital India initiative started by our honorable Prime Minister Mr. Narendra Modi is one of the necessary steps needed for our economy to compete with the digitalization transition going on around the world and aims to close the gap by fostering investment in digital infrastructure, improving digital literacy, and increasingly providing online services to citizens.



Digitalization and GDP Growth:

Impact of digitalization on a country can be assessed

on the basis of its impact on the government, on the economy and the society. We have seen a major change in every sector with the emergence of digitalization. The digitalization has created new job opportunities, have led to innovation in very sector and also led to the growth of the economy i.e. have helped in the GDP growth of the country. The government has emphasized on the digitalization as it brings transparency, better control, better job opportunities, it also provides an ease of access to the people and an upward movement in their quality of life. The study conducted by Strategy& (formerly known as Booz and Company) Shows that the increase and effective utilization of digitalization can increase their GDP. They analyzed that constrained economies realize a 0.5% increase in GDP per capita for every 10% increase in digitalization, while advanced digital economies show a 0.62% increase in GDP per capita for every 10% digitalization increase. India is known as the powerhouse of the software industry and is in a leading position in global sourcing market but there is still a great deal of work to done for its Digital India campaign. Digitalization will be helpful if it can reach the maximum people and for that each and every citizen of the country should be able to easily access the facilities for which they not only need to be connected to internet but also have digital literacy to be able to use facilities provided to them.

The divide between well-connected metropolitan hubs and remote rural areas is one of the main aims of Digital India Program. For this the Central government is hopeful of achieving the complete roll-out of broadband network across 2.5 lakh village panchayats in the country by 2018 as per Bharat Net programme, which aims to provide broadband connectivity to all panchayats in the country, the panchayats will have an ecosystem that will further boost the connectivity and bridge the digital divide in the country. India has also started collaborating with various countries and business organizations (like Google, Cisco etc.) for speeding up its digitalization process by infrastructural development, increasing access to internet and also started the transformation of cities to smart city. This Campaign also got some propellant in the form of free/cheapest 4G mobile data and cheapest Wi-Fi broadband for the customers. Company Reliance Jio Infocomm Limited (RJIL) a subsidiary of Reliance Industries gave push to internet usage by introducing ground smashing data pack rates, at initiation of the project by Reliance the SIM was issued free of cost with 4GB 4G data just by submitting the photocopy of Aadhaar card and IMEI no of your 4G or LTE or VOLTE enabled handsets and after the end of March 2017 at a price lowest of all other service providers.

Digitalization and Demonetization:

Digitalization transition through Digital India Programme aims to provide the much needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Every pillar has its own importance, complexities in implementation and is a propellant for the overall growth of the country.

1. **Broadband Highways:**
   It covers three components broadband for all rural, broadband for all urban and National information infrastructures.
2. **Universal Access to Mobile Connectivity:**
   It focuses on network penetration and filling the gaps in connectivity in the country.
3. **Public Internet Access Programme:**
   To provide Common Services Centres (CSCs) and Post Offices as multi-service centres,
4. **e-Governance:**
   Reforming Government through Technology: Government Process Re-engineering using IT to simplify and make the government processes more efficient is critical for transformation to make the delivery of government services more effective across various government domains and therefore needs to be implemented by all Ministries/ Departments.
5. **e-Kranti :**
   Electronic Delivery of Services: The Government approved the National e-Governance Plan (NeGP), comprising of 31 Mission Mode Projects (MMPs) and 8 components. e-Kranti is an essential pillar of the Digital India initiative and there are 44 Mission Mode Projects under e-Kranti, which are at various stages of implementation.(includes Banking, Post office, Income tax, Land records, Agriculture, Gram Panchayats etc.)
6. **Information for All:**
   Online hosting of information & documents to

facilitate open and easy access to information for citizens,

7. **Electronics Manufacturing:**
   It focuses on promoting electronics manufacturing in the country with the target of NET ZERO Imports by 2020 as a striking demonstration of intent.
8. **IT for Jobs:**
   It focuses on providing training to the youth in the skills required for availing employment opportunities in the IT/ITES sector.
9. **Early Harvest Programmes:**
   It consists of those projects which are to be implemented within short timeline.

Digitalization is a boon and needs to be utilized properly with the recent case of demonetization we can assess that it has helped people during the demonetization from Nov. 8 2016 to Dec. 31 2016 when the country faced cash crunch, when Rs. 500 and Rs. 1000 notes were scraped and new currency was circulated in replacement of old notes. This step not only shook the tax evaders but also pushed India to become more digitally sound country and has also highlighted the benefits and need to go cashless (or have a less cash based economy).Demonetization has also increased the transactions from mobile wallet and digital payment channels. Pay tm said it hit a record of 5-million transactions a day, processing Rs. 24, 000crore worth of payments, less than a week into the Indian government's decision to demonetise Rs.500 and Rs.1, 000 notes making it the largest digital payments company in the country It may be seen as a temporary phase but the ease of access and availability has made more of a good alternative than the paper or plastic money. With the adaptation of technology in the banking sector more and more transparency came in the flow of money in the economy.

Pradhan Mantri Jan Dhan Yojana gave push to financial inclusion that everyone whether from urban area or from rural area should have a account so that everyone is connected in the economy and demonetization led to the operation alization of Jan Dhan accounts which were opened under the scheme. It also had multiple benefits like people who did not had the identity proofs registered themselves for Aadhar card and other identity proofs and will also help in direct transfer of benefits to the concerned person. Digitalization in this situation helped to have a virtual access to the money and with the concept of e-kranti in the banking sector it will become easier for the people to avail the financial services provided by them. Having a bank account is not the only matter of concern but also having the knowledge that how their money gets affected by economic situation of the country and various other factors for having a control over their finances is also important. When people are financially literate, they are more likely to explore the products and services offered by banks and use them for their benefits. This accelerates the pace of financial inclusion, where everyone can access the basic banking facilities rather than relying on the orthodox systems of money market such as borrowing money from money lenders on illogical interest rates. Financial inclusion and financial literacy are two essential ingredients of an efficient economy. Thus financial literacy is what also needs the attention of the masses and with all the latest advances happening around, it is becoming a matter of prime concern. Financial education is “the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.”

The financial literacy level majorly depends upon the education and income of the individuals; the social factors such like family size, family background, age, regions nature of employment have a little impact on this. With the digitalization there is an ease of access to the money as the banking system has evolved with the time and provides the customer with different facilities like online payment of their monthly expenses such as electricity bills, payment of premiums etc. With all this growth and development people need to aware about the problems associated with digitalization of finances.

Financial literacy:

According to a survey conducted by Standard & Poor’s, over 76% Indian adults lack basic financial literacy and they don’t understand the most basic and key financial concepts.

Another survey of “Financial Literacy among Students, Young Employees and the Retired in India” conducted by IIM-A supported by CITI Foundation

reveals that high financial literacy is not widespread among Indians where only less than a quarter population have adequate knowledge on financial matters. There is lack of understanding among Indians about the basic principles of money and household finance, such as compound interest, impact of inflation on rates of return and prices, and the role of diversification in investments."In some studies it is revealed that financial literacy affects the financial behaviour of the people and thus through proper education they will be motivated to take the right financial decisions, get to know about the financial products and services available to them and also inculcates a habit of saving and protecting their money.

Digitalization has revolutionized the way we used the banking services and with the technological advancement and interconnectivity of the various services with the services provided by the banking sector there is need to speed up our country's literacy rate, digital literacy rate and financial literacy rates as they all together have an impact on the proper utilization of the Digitalization.
Financial literacy along with computer literacy is a must to mobilize the savings in the economy and put forth the growth of the economy and puts the society's development on fast track. Many initiatives have started but their reach is narrowed or hampered by various factors. But to keep our pace of Digital transition with the world we also need to speed the pace of digitalization along with these basic requirements or basic knowledge or skills which can obstruct the overall transformation or held us back to achieve this goal.

Obstacles in the process of Digitalization:

1. The resistance to change people show during emergence of new technology.
2. Building trust among the people for change is difficult.
3. Lack of knowledge about its use and benefits.
4. Infrastructure requirements and their unavailability also hamper the reaching of these basic facilities to the people.
5. The basic hindrance is the lack of literacy and literacy is not just to be able to write ones name and do the signature but to have an understanding of the changes going in the technology, society and the country for their own betterment.

RECOMMENDATIONS

1. The initiatives took by the government can only be successful if people get involved in the transformation. The Schools and Colleges can create awareness among the people of their locality about the initiatives and imparting knowledge to the people.
2. For doing so they also need to have the knowledge about the program and how to use the facilities provided by the government.
3. Community centres can be formed were people who are more literate about the issues can help the other people and experts can visit them to give the guidance from time to time.
4. Organizations can guide their employees and make them literate regarding the financial aspects.
5. RBI and SEBI have already taken many steps to create awareness among the people about the importance of financial literacy and also provided the online modules for financial literacy on their websites.
6. People should be imparted with the knowledge of factors which affect their savings and how they can maximise their saving or the facilities available for them to help them to do so.
7. People should also be made aware about the security of their personal information regarding their accounts and online frauds.
8. The banking system must also be made robust as people need to trust the system before they go with the technological advancement.

CONCLUSION:

The digitalization brings innovation, ease of working, new job opportunities and growth in the economy. It helps to bring transparency in the system and more transparent are the flow of funds in the economy less is the problem of tax evasion, parallel economy etc. But with all these benefits available it also makes it necessary for the people to have basic financial knowledge and a push towards the importance of the financial literacy. With the help of which they can protect their money in situations like inflation, depression, and know about different financial products and services to save it for their better future. Digitalisation can also play an important role in achievement this goal as it can have a greater reach to the people. By this we can reach on a conclusion that the new technology needs to harnessed well and for

this it is not only the availability but also the knowledge to use it and get benefits from it. Questions arose on the readiness of the workforce to embrace digitalization. The financial services industry has many legacy systems which have to be compatible to the new digital technologies. Some of these systems are so complex that any integration to the legacy is almost not feasible. Hence, the workaround to ensure the integration is made possible. In worst cases, it is almost not possible to do anything other than to change the legacy systems. New technology means new skill sets' to be acquired. At times, it is rather difficult to change certain mindsets to adopt new skill sets. With so many changes happening on the technology side, it is not surprising to see resistance from all levels in the organization. There are new responsibilities resulting from the digital transformation affecting the whole organizations.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
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Use of Digitization in Agriculture Sector

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ABSTRACT
The Indian Agriculture sector provides employment to about 65% of labour force, accounts for 27% for GDP, contributes 21% for total exports and raw materials to servile industries. Researcher show that 68% of the entire population of Indian is covered by the rural area 58% people depends on agriculture as the main source of livelihood. the fast growing population demands 50% of the increase the production of the food to feed all . at the same time, the traditional in efficient practice, water scarcity for the irrigation, less productive lands, double cropping, lack ok crop rotation, and lack of time for soil recreation are putting a pressure on fertility and yields followed by the exploitation of the middle man preventing the farmers from getting the best price of their product. Under such circumstance the concept of the digitalization of agriculture sector becomes more vital. There is necessity of empowering the rural community by creating digital infrastructure, providing the various digital services, and promoting the digital literacy. Digitalization in agriculture can be defined as ICT and data eco system to support the development and delivery of timely, targeted information and services make forming profitable and sustainable. The district vision of our Prime Minister assures regarding several infinitives take to provide "Protective shield" the formar to increase the production, improve the storage and connectivity with the consumer for better supply and profit.

KEYWORD: *Digital infrastructure, rural empowerment, agriculture, ICT, Smart analysis, data ecosystem, protective shield.*

Objective:

- To identify the problems existing in the agriculture economy in India.
- To analyze the impact on digitalization on agriculture.
- To study the digital initiatives by the government to address former problems
- To study the future impact on digitalization of agriculture.

Methodology:
The methodology used for the research paper is based on secondary information collected form journal books research paper and websites.

INTRODUCTION
"No Race can prosper till to learns there is as much dignity in tilling a filed as in a writing a poem"- Broker T. Washington. Agriculture service as the backbone or one of the important pillars of Indian economy. It not only feed the entire population but also provides the employment opportunities to million people of India. It is also one major ways to earn foreign currency. According to S Mahendra Devi (2011) India introduce many structural reforms and stabilization policies in 1991 which mostly focused on industry, tax reforms, foreign trade and investment, banking and capital market. This economic reform does not include any specific package for the agriculture of the country. It seems as on the major lacunae in the reforms and policies. This part need to analyzed in the order to meet the upcoming challenges as well as expectations and requirement of the nations. India exported $39 billion agriculture product in 2013.making it the 7th largest agriculture exporter worldwide and the 6th largest net exporter. Indian

agriculture proceeds foods are exported to the more than 100 countries. Primarily in the Middle East Southeast Asia SAARC country and EU as the United States.

Digitalization Agriculture contributes to the Indian economy in several ways:

- **Largest employment providing sector** -1.21 billion populations of the entire nations depends on agricultural output for the fulfilment of their food requirements. India produces a lot of food grains such as millets, cereals, pulses, etc.
- **Feeds the expanding populations**- a major portion of the foodstuffs produces is consumed within the country. Agriculture continue to play a dominate part of the overall economic scenario of the India.
- **Major role in GDP**- Indian agriculture contributes to the country's GDP. To Jan 2014 4210.9 Jul-2014 3584.82, Jan 2015 36230.99, Jul2015 5223.29, Jan 2016 5110.02, Jul 2016 3788.47, Jan 2017 5418.51 GDP Increase to it.
- **Contributes in national economy**- India exports the agricultural products, such as a tea, Tobacco, Coffee, Spices and Sugar. It helps in increasing the foreign exchange. India is a ranked 7th in terms of agriculture export. The contribution of agriculture to the nation's foreign exchange reserve is also quite significant.
- **Provide the raw material to industries**- A number of industries agro based industries such as a cotton, sugar, tobacco etc. raw material for such industries are supplied from agriculture produce. Industries are regularly fed by agriculture producers.
- **Important in national trade** – There are three agriculture based on exports of Indian- Cotton textiles, Jute and Tea Account for more than 50% export earning of the country.

Identify the problem in the agriculture sector.

Agriculture, in spite of having a great significance to the Indian economy, the share of agriculture and its allied activity in India GDP is continuously declining over the year. 2009-10 it was 14.06% which declining to 13.09% in 2013-14.Indian agriculture is high risk activity. The risk is again can be seen several ways. Agricultural risk emphasizes the entire problem associated with forming which demands to identify to find the proper solution.

Some of the identify problems are follows:

Agriculture risk can be broadly divided in to 4 major areas.

1. **Production Risk- It mainly emphasizes on the various problems associated with the area of producing the food materials.**

- Whether or Climatic Condition. – The complete depends on rain creates the problem. Moreover, unavailability of the proper information regarding a natural disasters makes the situations worst.
- Lack of infrastructure in agriculture in traditional techniques used in agriculture fail to maximize production. Lack of storage system, newly developed machinery knowledge regarding their usage.
- Lack of farm labor- Industrial sectors that provides more employment or mostly prepared by the people lose interest utilizing their time and labor in tilling the land which does not have a promising wage.
- Irrigation problem- The problem here is proper management of water or lack of it.
- Lack of financial stability- Lack of required investment in farming fail to give the farmer expected results.
- Illiteracy – Lack of awareness in the current technological advances, the proper quality to use the fertilizers and pesticides sometimes results negatively in destroying entire cultivation.
- Seed problem – Farmers depends upon the seeds available in the market which claim high yields which sometimes prove to be falsity.

2. **Post Harvest Risk- It emphasizes upon the problem that the farmers faced after harvesting food grain**.

- Lack of cold Storage system – Improper storage channel leads to poor agriculture export and wastage of the product comes around the thousand and crore of rupee where millions spend their life empty stomach with hunger strived life.

3. **Market risk- This is area focus the difficulties that the farmer encounter wild selling their product in the market**.

- Lack of proper marketing channel – The farmer fail to rich there consumers directly as the major profit is eaten by the middle men due to lack of infrastructure which makes farmer suffer in the hands of the middle men. And anable to get the reserve price for the hard toil. Small and marginal farmers suffer due to small tradable quantities and

socio economic condition, which force them to deal with the multiple layers of middle men.

- Lack of transportation- Indian has very poor rural role affecting the timely supply of inputs and timely transfer of out puts form the Indian farms.

4. **Ecological Risk- It is associated with the lack of availability of the resources which is needed and utilize in forming.**

- Lac k of fertile Land – Soil erosion and small land holding are the problem areas which restrict the farmer using the modern techniques.
- Limited land access – Farmers have fewer acres of land cultivation and reputation of multi cropping along with use of fertilizer and pesticides make soil less fertile.

Government initiatives for digitalization of Agriculture sector.

Government initiatives are the rescue point for the farmers for there upliftment and strengthen is the back bone of Indian Economy through development of agriculture sector. The vision of Prime Minister Narendra Modi Clearly define that the changes and development of India somehow lies in the development of agriculture sector. With the underline vision of doubling the income of farmers by 2022 the 75 independence of the country Modi said "Form this land of Uttar Pradesh, I urge all the states give priority to agriculture and then see the things". He intents to focus on the overall development of the rural economy by setting brodal goals. According to Ran Maidan, Drip Irrigation has help farmers minimize the time they spend on fields which turn they invest in their personal developments, learning new skills participation in village activity and those forums, and take care of their family in better way. The government has expended it is digital Indian program, launching a new initiatives and boarding the scope to touch the agriculture sector too. Dr. P. K Joshi (2014) emphasized that both the central and state government need to take appropriate initiatives to increase the investment in agriculture research and to create favorable business environment through enabling policies towards high-value agriculture.

1. **Virtual agricultural market**- The government wants to make a common electronic platform which will allow farmer to sell their produce buyers, anywhere in the country.
2. **Rashtriya Krishi Vikas Yojana** it is intended to encourage the states to allocate more funds and agriculture and allied sector to incentivize the states to generate additional growth agriculture and allied sector by planning under taking appropriate growth oriented project.
3. **Crop insurance scheme** – The government has approved the Pradhan mantra Fasal Bima Yojana. In this scheme, a premium of 2% of the sum insured will be charged form farmer for all kharif crops 1.5% for all Rabi crops.
4. **Prime Minister Krishi Sinchai Yojana**- The government also had plans to expend irrigation in order to reduce dependency on the monsoon, The governments had approved a sum of rupees 50,000 cores the spend on the setting of irrigations projecting rural area .The major objective of Pradhan Mantra Krishi Sincahai Yojana achieve the convergence of investment in irrigation at the field level.
5. **Use of modern technology and equipment** – The use of modern eccupment and improvised machines would show the better results in production and storage.
6. **Increase the soil fertility**- The regular information through mobile phone regarding the type of techniques' needed to maintain the fertility of the soil and increase the production proved the beneficial.
7. **Mobile apps and internet facility to farmers**- The mobile phone is the preferred delivery medium under digital India with focus on m Governments and m Services. The greatest needs to deliver the targeted and timely information farmer based on their needs. The empowerment that comes to providing to farmers with informs options is transformational. Mobile devices and the internet facility keep the farmers updated with all the relevant information related to farming.
8. **Other initiatives** –
   A. The government has put in operation 3 portals farmer portal, kisan cell center, and mkisan portal to help the farmers take informed decision for efficiency faming under varying agro-climatic condition.
   B. National Bank agriculture and rural development has also designed agriculture portal for farmers.

Involvement of the entrepreneurs in the revaluation of digitalizing Agriculture.

In the current drown of digitalization, the Indian government has vision to keep the sun shining under the digital Indian Imitative, the government indene to

provide digital infrastructure to empower the citizens by using it has a tool. Remarkable contribution can also visualized within the entrepreneurs who have come forward and started to implore opportunity in the agriculture sector.

The future of Indian agriculture

Reihem Roy, VP-Omniviore a partner seems to be extremely hopeful regarding the future of Agri-Tech in India has he said "The world is an Oyster in terms of opportunity. Either you can moan and groan or choose to take it up and built solution.

Conclusion-

Therefore, It can be concluded that in the upcoming years Indian farmers would be feel the compulsion of improving the food and nutritional security along with the keeping in the mind all other aspects discussed earlier. "The digital India" Is all set to trasper the interface of the country socio economic dynamics. The synario opens the skop for new innovations and opportunities as the country is no doubt going to witness a change leading to transformation in the next 10/ 20 years. And they have seen in the last 60 year.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Digitalisation in The Banking Sector

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ABSTRACT
It was only in the late 1980s that Indian banks took to computer is at ion seriously. They had to improve customer service and tone up book-keeping and MIS reporting. Their large customer base (in terms of numbers) was mostly comprised of "low balance" accounts. An effective but low-cost tool that could handle the transactions was needed. It led them to embrace digital is at ion. They started with standalone PCs and migrated to Local Area Network (LAN) connectivity. Core Banking Solution (CBS) platforms followed that transformed branch banking into bank banking. CBS helped banks to provide "anywhere and anytime banking" service to customers. The researcher set out to ascertain the implications of such digital is at ion for bank customers. He interviewed bank officers and bank customers for the purpose. He concluded that digital banking was customer-centric in design and purpose. As a result, banks were in a position to offer an "experience" to their customers as against the "convenience" they offered presently. One such "experience" banks lately offer is worth citing here. To access information about account balance or to receive a mini statement through SMS, all that the customer has to do is to give a missed call to the bank concerned by dial ling a bank-designated mobile phone number. Another digital product innovation, namely, UPI/Aadhaar-based payments make banking seamless for customers, particularly rural customers, who are not familiar with the English language. Thus, digital is at ion has proved to be positive sum game for all stakeholders. The penetration of banking services into rural India is still on the low side but mobile penetration is on the higher side. By leveraging this advantage banks can afford to raise their rural penetration since they can ensure the financial viability of their rural operations.

KEYWORDS: *Book-keeping; CBS; digitalization; leverage; LAN; MIS reporting; SMS; tool*

1.1 INTRODUCTION

In the late 1980s Indian banks embraced computerisation. They had to improve customer service and tone up book-keeping. Their large customer base was mostly comprised of "low balance" accounts. An effective but low-cost tool that could handle the transactions was needed. It led them to embrace digitalisation. They started with standalone PCs and graduated to Local Area Network (LAN) connectivity and Core Banking Solution (CBS) platforms, in that order, transforming branch banking into bank banking. The penetration of banking services into rural India is still on the low side but mobile penetration is on the higher side. By leveraging this advantage, banks can afford to raise their rural penetration without affecting the financial viability of their rural operations.

1.2 Statement of the problem

Banks have embraced computerisation and subsequently digitalisation, in slightly various degrees though. They have invested in physical infrastructure and human resources for the purpose. But such investment in itself is not the end. Periodically, the transformation engendered by the investment should be gauged to ascertain if the outlay has translated into outcome.

1.3 Review of literature

1. G Shainesh and Avijit Choudhary in their article study the role of technological changes and advancements in the form of automated teller machines, internet banking, tele-banking, mobile banking, internet banking, etc **Invalid source specified.**. They conclude that reaching the customers through various channels contribute a lot to meet the competitive challenges.
2. China and India boast of the highest percentages (55-60 per cent) of Gen Y and tech-savvy customers that use financial services from non-traditional firms (The Hindu Business Line, 2017). The governments of the two countries continue to prioritise digital initiatives. Hence, the tech-savvy individuals will become more relevant.
3. Affordable, small but powerful computers and other hand-held gadgets and higher Internet bandwidth gradually facilitated easy access to banking products and effortless banking transactions (The Banking & Finance Post, 2017). The rise of call centres and phone banking services added to customer comfort. A major change in banking practices was facilitated by directing banking transactions through different electronic channels and by helping customers access their bank accounts directly.

1.4 Research gap

The reviewed literature has not dealt with the review exercise undertaken by the banks, upon digitalisation. It is this gap the present study proposes to bridge.

1.5 Scope of the present study

The study confines itself to 60 bank officers (30 from Pr SBs and 30 from PSBs), based in Bangalore (Rural and Urban) districts

1.6 Objectives of the study

The objective of the study is to analyse the implications of the digitalisation exercise for banks and their customers

1.7 Hypothesis proposed to be tested

The study proposes to test the following hypotheses:
"Banks have been more receptive to complaint sand closure of transactions, post digitalisation"

1.8 Research design

1.8.1 Research methodology

The study is descriptive in nature and has used the 'fact-finding' survey method

1.8.2 Sources of data

Primary data has been collected from 60 bank officers (30 from Pr SBs and 30 from PSBs, based in Bangalore (Rural and Urban) districts

Secondary data has been collected from reputed banking journals, finance journals, magazines and newspapers, in hard and soft versions.

1.8.3 Sampling plan

Pr SB officers: Given the limited number of Pr SBs operating in the vicinity where the researcher lives and the time constraint, purposive or judgement sampling under the non-probability method has been employed. Applying a minimum business experience of five years as the criterion, the researcher selected 30 such officers.

PSB officers: Given the limited number of PSBs operating in the vicinity where the researcher lives and the time constraint, purposive or judgement sampling under the non-probability method has been employed. Applying a minimum business experience of five years as the criterion, the researcher selected 30 such officers.

The criteria applied is the most appropriate one for the present study. What is important is the typicality and the relevance of the sampling units to the study and not their overall representativeness to the population. Thus, it guarantees inclusion of the relevant elements in the sample. Probability sampling plans cannot give such a guarantee.

1.8.4 Data collection instruments

Interview schedules, specially designed for the purpose, were administered to the respondents for collection of primary data.

1.8.5 Data processing and analysis plan

Non-parametric statistical units were used to test the association between qualitative characters and conclusions were drawn on the basis of formation of H_o and H_1.

1.8.6 Limitations of the study

Primary data has sometimes been deduced through constant topic-oriented discussions with the

respondents. Possibly, a certain degree of subjectivity, even if negligible, has influenced their views.

1.9 Pr SB officers

In the following paragraphs, the primary data collected from the Pr SB officers is analysed.

1.9.1 Banks can easily seek out new retail customers, post digitalisation

Bank scan easily seek out new retail customers, post digitalisation, according to received opinion. Hence the researcher sought to know from the respondents if they agree with the statement that banks can easily seek out new retail customers, post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

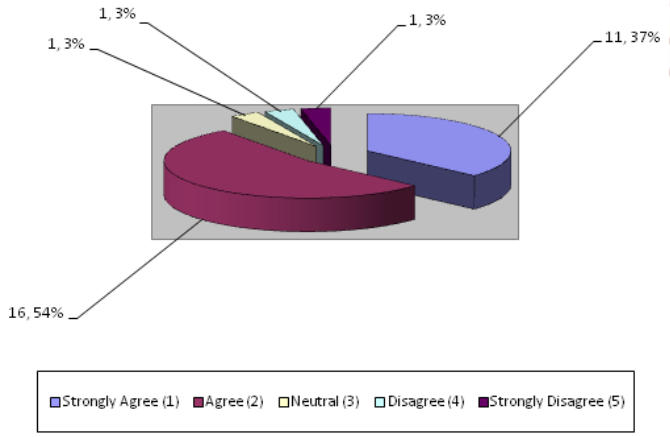
Table-1

Banks can easily seek out new retail customers, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	11	37
Agree (2)	16	54
Neutral (3)	1	3
Disagree (4)	1	3
Strongly Disagree (5)	1	3
Total	30	100

Figure-1

Banks can easily seek out new retail customers, post digitalisation



37 percent strongly agree with the statement that banks can easily seek out new retail customers, post digitalisation. 54 percent agree with the statement that banks can easily seek out new retail customers, post digitalisation. Three percent disagree with the statement that banks can easily seek out new retail customers, post digitalisation. Three percent strongly disagree with the statement that banks can easily seek out new retail customers, post digitalisation. Three percent remain neutral.

91 percent agree with the statement that banks can easily seek out new retail customers, post digitalisation.

1.9.2 Banks can cross-sell financial services easily to existing retail customers, post digitalisation

According to some, banks can cross-sell financial services easily to existing retail customers, post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

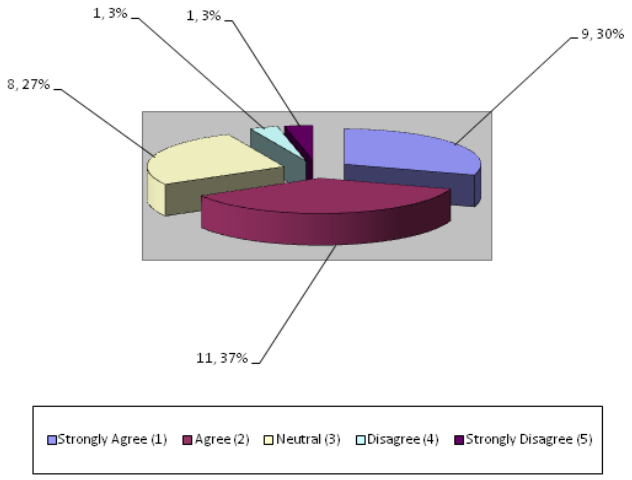
Table-2

Banks can cross-sell financial services easily to existing retail customers, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	9	30
Agree (2)	11	37
Neutral (3)	8	27
Disagree (4)	1	3
Strongly Disagree (5)	1	3
Total	30	100

Figure-4.2

Banks can cross-sell financial services easily to existing retail customers, post digitalisation



30 percent strongly agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation.37 percent agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. Three percent disagree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. Three percent strongly disagree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation.27 percent remain neutral.

67 percent agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation.

1.9.3 Banks caneasily cross-sell insurance and banking products, post digitalisation

Additionally, it is said that banks can easily cross-sell insurance and banking products, post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

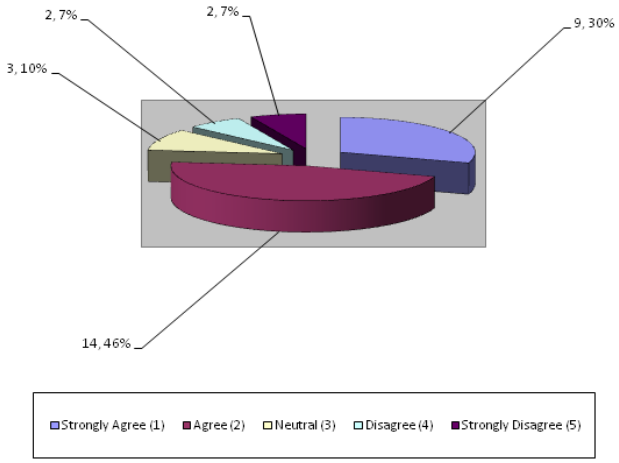
Table-3

Banks can easily cross-sell insurance and banking products, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	9	30
Agree (2)	14	46
Neutral (3)	3	10
Disagree (4)	2	7
Strongly Disagree (5)	2	7
Total	30	100

Figure-4.3

Banks can easily cross-sell insurance and banking products, post digitalisation



30 percent strongly agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation.46 percent agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. Seven percent disagree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. Seven percent strongly disagree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation.10 percent remain neutral.

76 percent agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation.

1.9.4 Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on *post digitalisation*

According to another view, banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products *later on*

post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

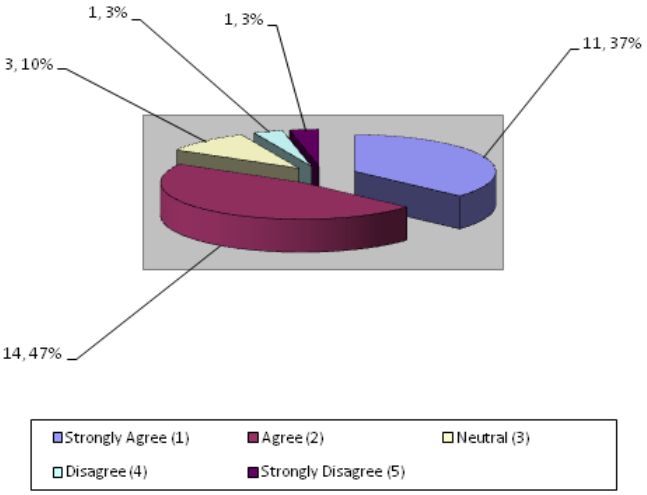
Table-4

Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	11	37
Agree (2)	14	47
Neutral (3)	3	10
Disagree (4)	1	3
Strongly Disagree (5)	1	3
Total	30	100

Figure-4

Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation



37 percent strongly agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.47 percent agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation. Three percent disagree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation. Three percent strongly disagree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.10 percent remain neutral.

84 percent agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.

1.9.5 Banks *have been more receptive* to complaint sand *closure of* transactions post digitalisation

According to received opinion, banks have been more receptive to complaint sand closure of transactions post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

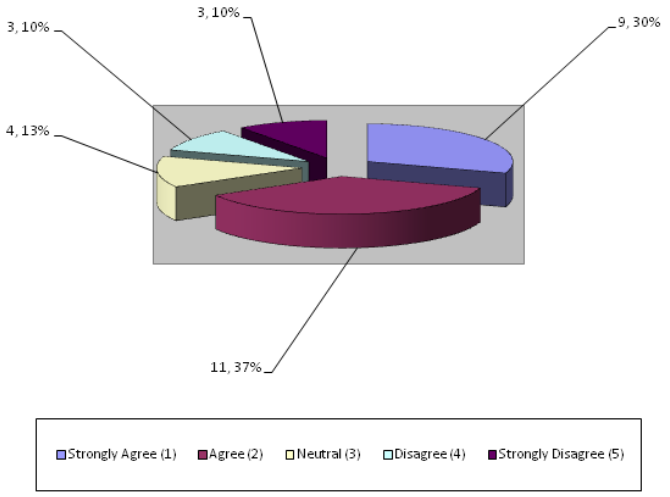
Table-5

Banks have been more receptive to complaint sand closure of transactions post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	9	30
Agree (2)	11	37
Neutral (3)	4	13
Disagree (4)	3	10
Strongly Disagree (5)	3	10
Total	30	100

Figure-5

Banks have been more receptive to complaint sand closure of transactions post digitalisation



30 percent strongly agree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation.37 percent agree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation.10 percent disagree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation.10 percent strongly disagree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation.13 percent remain neutral.

67 percent agree with the statement that banks that banks have been more receptive to complaint sand closure of transactions post digitalisation.

1.10 PSB officers

In the following paragraphs, the primary data collected from the PSB officers is analysed.

1.10.1 Banks can easily seek out new retail customers, post digitalisation

Banks can easily seek out new retail customers, post digitalisation, according to received opinion. Hence the researcher sought to know from the respondents if they agree with the statement that banks can easily seek out new retail customers, post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

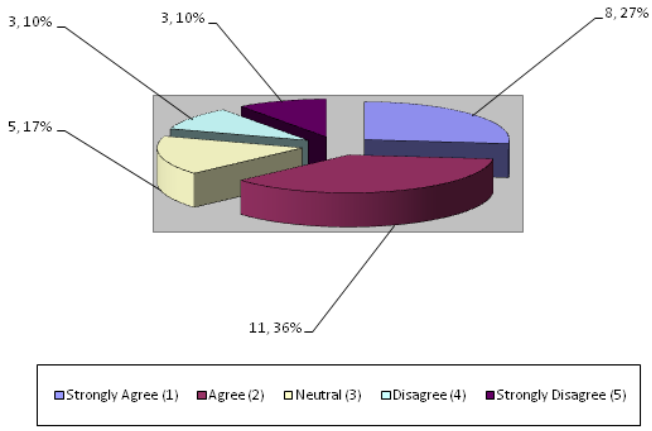
Table-6

Banks can easily seek out new retail customers, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	8	27
Agree (2)	11	36
Neutral (3)	5	17
Disagree (4)	3	10
Strongly Disagree (5)	3	10
Total	30	100

Figure-6

Banks can easily seek out new retail customers, post digitalisation



27 percent strongly agree with the statement that banks can easily seek out new retail customers, post digitalisation. 36 percent agree with the statement that banks can easily seek out new retail customers, post digitalisation. 10 percent disagree with the statement that banks can easily seek out new retail customers, post digitalisation. 10 percent strongly disagree with the statement that banks can easily seek out new retail customers, post digitalisation. 17 percent remain neutral.

63 percent agree with the statement that banks can easily seek out new retail customers, post digitalisation.

1.10.2 Banks can cross-sell financial services easily to existing retail customers, post digitalisation

Banks can cross-sell financial services easily to existing retail customers, post digitalisation, according to some. Hence the researcher sought to know from the respondents if they agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation.

The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

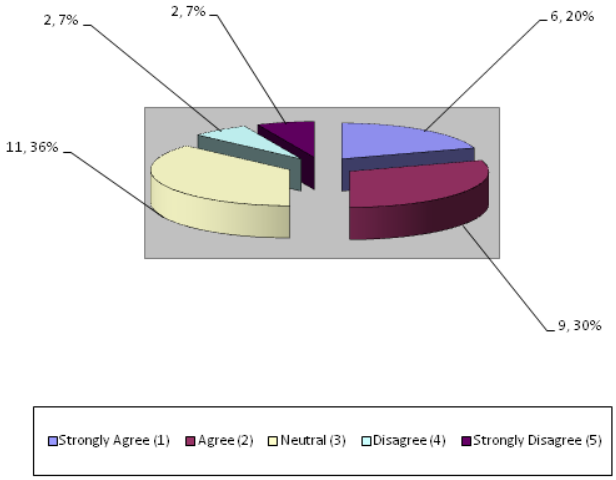
Table-7

Banks can cross-sell financial services easily to existing retail customers, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	6	20
Agree (2)	9	30
Neutral (3)	11	36
Disagree (4)	2	7
Strongly Disagree (5)	2	7
Total	30	100

Figure-7

Banks can cross-sell financial services easily to existing retail customers, post digitalisation



20 percent strongly agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. 30 percent agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. Seven percent disagree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. Seven percent strongly disagree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation. 36 percent remain neutral.

50 percent agree with the statement that banks can cross-sell financial services easily to existing retail customers, post digitalisation.

1.10.3 Banks can easily cross-sell insurance and banking products, post digitalisation

It is also believed that banks can easily cross-sell insurance and banking products, post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

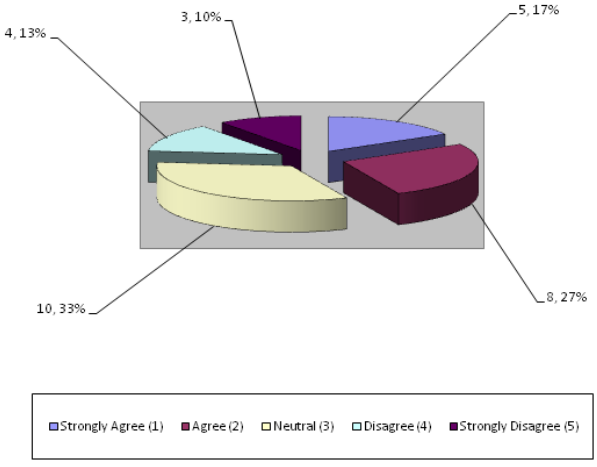
Table-8

Banks can easily cross-sell insurance and banking products, post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	5	17
Agree (2)	8	27
Neutral (3)	10	33
Disagree (4)	4	13
Strongly Disagree (5)	3	10
Total	30	100

Figure-8

Banks can easily cross-sell insurance and banking products, post digitalisation



17 percent strongly agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. 27 percent agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. 13 percent disagree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation. 10 percent strongly disagree with the

statement that banks can easily cross-sell insurance and banking products, post digitalisation. 33 percent remain neutral.

44 percent agree with the statement that banks can easily cross-sell insurance and banking products, post digitalisation

1.10.4 Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation

Some maintain that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

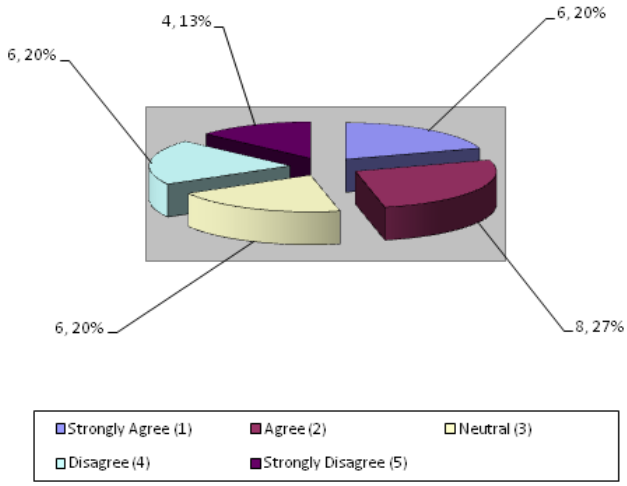
Table-9

Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	6	20
Agree (2)	8	27
Neutral (3)	6	20
Disagree (4)	6	20
Strongly Disagree (5)	4	13
Total	30	100

Figure-9

Banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation



20 percent strongly agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.27 percent agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.20 percent disagree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.13 percent strongly disagree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation.20 percent remain neutral.

47 percent agree with the statement that banks find it easier to cultivate younger retail customers, capturing them when they are young, to cross-sell products later on post digitalisation

1.10.5 Banks have been more receptive to complaint sand closure of transactions post digitalisation

Received opinion also has it that banks have been more receptive to complaint sand closure of transactions post digitalisation. Hence the researcher sought to know from the respondents if they agree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. These variates are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

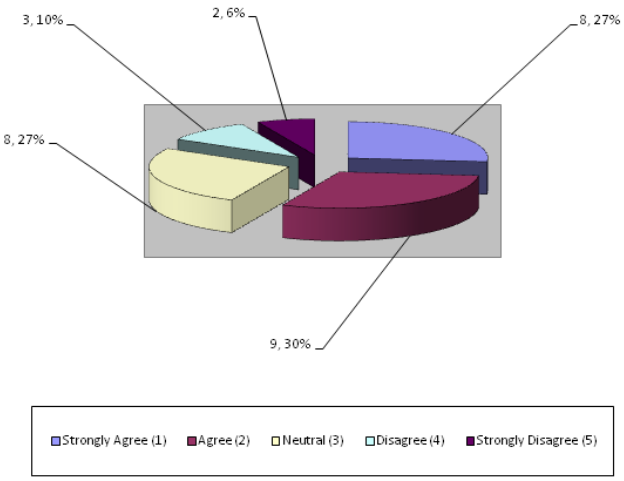
Table-10

Banks have been more receptive to complaint sand closure of transactions post digitalisation

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	8	27
Agree (2)	9	30
Neutral (3)	8	10
Disagree (4)	3	6
Strongly Disagree (5)	2	27
Total	30	100

Figure-10

Banks have been more receptive to complaint sand closure of transactions post digitalisation



27 percent strongly agree with the statement that banks have been more receptive to complaint sand *closure of* transactions post digitalisation.30 percent agree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation. 10 percent disagree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation. Six percent strongly disagree with the statement that banks have been more receptive to complaint sand closure of transactions post digitalisation. 27 percent remain neutral.

57 percent agree with the statement that banks that banks have been more receptive to complaint sand closure of transactions post digitalisation.

1.11 Conclusions

Conclusions relate to the hypotheses. They are answers to the research questions.

1.12.1 Hypothesis testing

Hypothesis

The following is the hypothesis proposed to be tested: "Banks have been more receptive to complaint sand closure of transactions post digitalisation"

Hence H_0 and H_1 are as follows:

H_0:

Banks have not been more receptive to complaint sand closure of transactions post digitalisation

H_1:

Banks have been more receptive to complaint sand closure of transactions post digitalisation On the basis of the primary data collected from the respondents, vide

Tables: 5

And 10, a chi-square test was applied to ascertain the association, if any, between the two variables. The following Table reveals the computation made using MS-Excel:

	Observed Values		
Category	Yes	No	Total
Pr SB officers	20	10	30
PSB officers	17	13	30
Total	37	23	60
	Expected Values		
Category	Yes	No	Total
Pr SB officers	18.5	11.5	30
PSB officers	18.5	11.5	30
Total	37	23	60
	Yes	No	
o-e	1.5000	-1.5000	
	-1.5000	1.5000	
(o-e)^2	2.2500	2.2500	
	2.2500	2.2500	
((o-e)^2)/e	0.1216	0.1957	
	0.1216	0.1957	
CV	0.2432	0.3913	0.6345
TV			3.8415
p			0.9591

The calculated value of χ^2 is *0.6345*, lower than the table value of *3.8415* for an alpha of 0.05 at one degree of freedom. Hence the alternate hypothesis is rejected, and the null hypothesis is not rejected.

1.12 Researcher's recommendations

1. Banks should exploit the "digitalisation advantage" to augment their customer base; not to tone up only housekeeping.
2. While exploiting the digitalisation-driven cross-selling and up selling, banks should neither hard sell nor mis sell their products and services and turn bank sters.
3. Banks have been able to be more receptive to customer grievances in the post digitalisation phase. But there is scope for the banks to be even more receptive to customer grievances and transaction closures.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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A Study on Digitalization in Education Sector

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ABSTRACT
Digitalization could be termed as one of the innovation in the sector of education as it highlights the various activities that lead to the modernization of business model or regarding education sector. The term digitalization refers to the conversion of paper mode or typewritten information (text) into the digital form, means encoding it into Zeroes & Ones so that Computer can store, process, and transmit such information. In the process of digitalization computer is a device which convert encoded information into readable form so that one can make conclusion from the same. The application of digitalization in the education sector leads to learning environment in the 21st century. It shows all about the replacement of 'old school system' with 'new school system' that boosted digital education. Digitization does not mean just bringing a "Smart School" but to have the development of an efficient learning oriented lectures to be given in the technical manner so as to match with the present scenario.

KEYWORD: *Education, Digital Education, Digitalized Education & Economy, e-learning.*

INTRODUCTION

In the present scenario, India has been reached to the topmost destination in the field of education. Indian education system has adopted innovative skills so as to reach the final destination and making progressive approach towards problem oriented phenomenon. In the world of Information Technology there is need to have an innovative idea that represents the scope & significance of the knowledge and it is all possible when a nation turn into the globalized form of education. Due to application of digital education it has widened the scope and enhanced the application of the same in the world of Information Technology. It shows all when little children watch their favourite cartoons on the device, e-learning with the application of digital technology. It represents explicit knowledge when apply the digital mode of education in the relevant area. All terms associated with the educational field is represented in a digital manner when it is being digitized with appropriate tools & techniques. The impact of digitalization in educational sector has totally changed the scenario and a teaching process to a very great extent. Technology based education came into existence providing education with technical aspects to both students and educators. Innovation and technology have been predominant in each sector with undergoing vast changes in the past few years. Technology has made everything much easier and faster, leaving no option for various sectors of the economy but to adapt to change or fear to become obsolete. In the scenario of digitalization, the education sector need to have update and innovated with the adequate proportion of techniques. The Weatern education system came into being in India with the British Raj. However, the British have moved and evolved ways of learning, the Indian education system still lags behind. Teaching is still conducted in archaic classrooms with rigid syllabi dominating the curriculum.

Digitalization provides, fluidity to the Indian Education sector by being a supplementary from of the system as it is available to students as per their need. While the traditional educational system has a

uniform approach, educational technology can be customized as per student's requirements. It can be molded as per the student's capability to understand and imbibe any particular subject. As the world is moving towards digitalization India has no option but to keep pace with it. We know that the traditional educational system in India is here to stay for the long haul and that no one can take away that learning experience. But our education system needs to be dynamic and needs to adapt technology. There is no need to fear a subject like math's as there are fun ways to learn it with the use of Edtech. Today, there are apps to learn languages or any other subject. Hence the significant role of digitalization appeared.

Research Methodology:-

Looking into the requirements of the study the research design is being applied to adopt descriptive nature. The research study is of descriptive nature. The collection of data was significantly used from Secondary source and published articles extensively used. Various web articles distinctively used.

Objectives of the Study:-

1. To know the impact of digitalization in education sector.
2. To highlight the emerging trends in education and relevant sectors due to digitalization**.**

Data Collection:-

The research paper is based on the secondary source of information. The required data is extensively used or applied in order to prepare a research paper, as it is in the descriptive nature.

Impact of Digitalization on Education sector:-

The prevalence of technology affected many areas of society in a positive manner, including education. Modern day students not only to have computers to help them with their schoolwork or academic activities, they also use the internet for research while teachers use technology to enhance their lessons.

1. Due to the digitalization, students are helped to access with the Internet easily & quickly as it helps them to work better with the academic activities. It shows an indication of having pace of Indian Education System with the globalized scenario.
2. Digitalization help to set up e-library by providing computer lab in the school and colleges, as traditional libraries are outdated. It helps to eradicate hurdles arising in the way of research activities.
3. Due to evolution of digitization it enables to video conferencing when schools in different part of the state, country or world connect, students can meet their counterpart without leaving the classroom.
4. In the era of pre-digitization students tend to enroll through distant courses, called as correspondence courses at colleges and universities. To the contrary, in the digitization era student would receive course details through the mail and would be required to mail assignments to his teacher at the educational institution. Technology is being thankful for the easily accessibility towards the enrolment for various courses offered at distinct level.
5. The limitations regarding resources and budget has been eliminated due to the evolution of technology as the technical devices such as internet, web tools assist students in distinct mode. When school is unable to send its students to the field, technology could enable to attend the web seminar and it is all possible due to the technology and innovative tools.
6. By providing computers in each & every classroom teachers enable students to learn digitally in the form of correction in spelling, grammatical mistakes, removal of repeating words etc. it creates accuracy in the field of educational environment.

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Digitalization in Banking Sector

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ABSTRACT
Digital transformation is far beyond just moving from traditional banking to a digital world. It is and other financial institutions learn about, interact with and satisfy customers. An efficacious digital transformation begins with an understanding of digital customer behavior, preferences, choices, and likes, dislikes, stated as well as unstated needs aspirations etc... And this transformation leads to the major changes in the organization, from product centric to customer centric view.

The most effective way to understand and bring the organization from traditional banking to digital banking is omni channel approach. As customers continue to change their channel usage patterns, bank and credit firms need to focus on delivering a seamless customer experience across touch points. More than just an axiom, omni channels banking is a prospect to take bottom line on higher note by gaining insights from customer channels, behavior and preferences. Today's customers are more sophisticated and tech savvy, and to cater to their specific needs, each customer need unique customers from banking. They want the companies to understand their unstated needs as well as their likes. So, it should come as no surprise that these customers are expecting similar kind of response and service from banking institution too. From researching new service, opening an account, checking balance, conducting transactions, loans, credits, wealth management, customer support, and experience has become a key to success in this competitive market place.

INTRODUCTION
Banking industry is going through of commoditization .In today's scenario, differentiated and delightful customer experience has become more important than just providing financial service. To grab a bigger price of the cake, banking industry has to understand the unstated needs of the customer the way airlines understands the preference of the frequent players or the retailers understand the likes/dislikes of their customers ,without even taking direct feedback of the customers.

Each and every day, new device /technologies are providing various customers touch points. Every time customers touch a computer or a screen, they are providing an information trail and its banks responsibility to understand how they use this trail to move their bottom line upwards. Traditionally bank spent most of their efforts, time and money on transaction execution, which is nothing but has become a very basic feature of their overall service. While providing expedient, consistent and precise transaction processing abilities still critical, we believe that banks can learn from how retailers see the customers' journey through an Omni channel lens. Banks now need to rethink the way customers are being valued, may be from the angle of the industries that greatly value customer experience.

CURRENT PROCESS
Initially ,customer logins to its bank website and looks at the current assets and liabilities , based on various analytics algorithms bank suggest money investment options as well as borrowing options as per the eligibility .Customers portal also gives a brief picture of current financial markets and its impact to the customers current financial position ,in case customers wants go ahead with any of the investment suggested or borrowing options ,and he/ she can have

at the brochure and get in touch with the customer representative for taking the process ahead. This process involves a lot of manual intervention in terms of converting suggestions /decisions into real investment which also takes a lot of time.

The users does a basic search on the internet for buying any financial products and the post that, raises a query of request with the bank for further information. User raises the query , either through website or calling of the customer care .Based on the query and field of the query ,customer representatives forwards the call to the specific department and arranges a meeting with the use .The user ,then ,selects either video conference with expert or the physical meeting .Before the meeting multiple fields query ,the users decides whether to have all physical meetings or video conferencing .Post reviewing all the suggestions user accept or reject the suggestions if any of the suggestion is accepted then the representative goes ahead with the paper work or other formalities.

Limitations of current process

- Personal assistance from the banks perspective is must.
- Separate meetings for the various products.
- Users need track all products separately.
- Bank suggestion based on only users financial strengths.
- Service based on user's stated needs.

Role of digitalization in banking

Banks are not just a part of our lives, but have a significant role in our daily lives. For many, day will not be end without at least a single financial transaction .Thus banks always try to adopt latest technologies to enhance customer experience.

Digitalization is not an option for banking industry, rather it is inevitable because every industry is being digitalized and banking sector is no exception.

Mobile banking is increasing at a fast pace more than online banking.

Advantages of digitalization in banking

- Improved customer experience.
- Reduction of cost for banks and customers as well by using ATMs, cashless transaction etc.
- With more digital data available with banks, they can take data driven dynamic decisions by using digital analytics. This benefits both customers and banks.
- Technology is non -discriminatory. Everyone will be treated same at banks.
- Number of customers will be increased for banks because of the increased convenience of banking.
- Digitalization reduces human error.
- Need of handling large amounts of cash will be reduced?
- Opening and maintaining bank accounts are never been easier.
- Repetitive task will be eliminated by automation.
- Rural and urban gap will be eliminated.
- With the increasing cashless transaction, fake currency threat will be reduced.
- Productivity will be increased.

Disadvantages of digitalization in banking

- Digitalization reduce the effort of employees and hence results in loss of jobs.
- Some bank branches may cease to exist with the increasing use of online banking.
- Banks will be more vulnerable to cyber attacks.
- Privacy may have to be compromised.

Major technology trends that will reshape banking are as follow

1. Open banking is the new norm.
   Open banking a connected ecosystem for financial and non financial services with multiple underlying services providers is the future of banking .The launch of UPI by the National Payments Corporation of India (NPCI)has thrown open the gates for innovation in the open banking space.
2. Banking on the could first strategy
   Progressive banks are already making strides in cloud adoption .Disruptive technologies that are changing the face of business .Business models for emerging banks also be largely driven by the cloud first strategy. Demonetization is pushing India towards a cashless society, and as banks prepare to deal with the increased influx of electronic transactions, cloud will provide with the required elasticity to meet these demands.
3. Usage of Blockchalns
   As banks try to become more efficient to meet the increasing demands of customers, blockchalns will be one of the enable for reimaging process. In 2017, banks will increasingly move some projects from pilot to production and leverage blockchaln to automate inter organizational processes.

4. More things to bank on
   The year 2016 was the year of mobile first strategy. Indian banks leveraged the increasing adoption of mobile to provide customized offerings on their apps. However, digital technologies are evolving at an unprecedented rate, and so is customer adoption.
5. All of these overlying technologies will be built on the bedrock of banking architectural simplification. The new year will see banks move to componentization instead of the traditional monolithic architecture.
6. Cyber security
   Increasing cyber attacks and online frauds gives sleepless night to several CEOs. The end result is going to be much more increasing in information security appending.

The world has changed and continues to change rapidly. The convergence of telecom, media and computing has charged the way we work, play and live. Everything is moving faster –trends, news, products, markets, etc.

Conclusion

With the increasing usage of smart phones, digitalization of banking sector is inevitable to catch up the increasing expectations of the world. It indeed reduces human errors and increased convenience. But the fact that cyber threats are on the rise, banks must be very careful and should be prepared to handle cyber attacks.

The major ongoing development that i have described in my remarks today represents a speed and scale of change that goes above and beyond what I would call normal. We should be aware of the risk that such high pace of change generates and seek to seek to stay on top of those risks.

It also a good time for consumers as a technology pushes us towards the possibility of having smoother service provision. Straight through digitalized process potentially allow us to quickly access and purchase the service we want without the need for manual inputs that can slow things down

Let us therefore embrace technological change where it helps us to achieve those stable long term objective. I believe we are already making on all sides significant progress in this work. If we continue with the right attitude, we have an exacting time ahead and together we can help generate the a better banking system for customers and citizens in to the future.

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Digitalization in Marketing

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ABSTRACT
In this seminar I would like to show about the digitalization in marketing and its performing in our day to day life such as its needs, types and its advantages and also its disadvantages. Digitalization in marketing is playing a very important role in the economy.

NEEDS OF DIGITALIZATION IN MARKETING:
Every business will have different specific goal in mind, but almost all are trying to reach more customers and convince them to purchase .to do thus effectively, you have to take benefit of all the most precious marketing resources and technologies. Which include:

1. **Affordability**
   Digital marketing is noticeably low expensive than other marketing techniques. Specific prices vary based on what you're doing but ad spend tends to be lower than other forms of marketing.
2. **Mobile admittance**
   You may not know thus but 77 percent of American youths are on a smart phone and are likely o use that smart phone or another mobile device for news, social networking, and countless other actions .Digital marketing lets you reach them while they're doing this.
3. **Flexibility**
   There are many forms and benefits of digital marketing. Including banner ads, email marketing, content marketing, and social media posts. Thus by learning how to market yourself digitally, you open up a wide range of possibilities for future publicity strategy.
4. **extension**
   Many customers do almost all of their shopping online. Digital marketing lets you to request to these people and thus develop the reach of your business.
5. **Multimedia:** Consumers tend in the direction of more with marketing materials that mingle numerous types of content, including photos, video clips, and audio. It is far easier to incorporate all these content types into digital marketing than any other type of publicity –and it is very important.
6. **Interactivity:**
   Digital marketing lets you be in touch directly with the consumers who perceive you content, notably through website comments, messages, reviews, and social media posts. This shows those consumers that you care about what they say and think, leading them to think respected and Part of the society you're building.
7. **Tracking:**
   Besides communicating with consumers digital marketing lets you track their activities. You can keep an eye on which ads and types of content they have seen shortly before they make a buy.

Types of digital marketing

1. **Social Media Marketing**
   The social Ms has a muscular focus on social media marketing. So that is where we are going to start our list of types of digital marketing. Social Media positively has fairly earned position in the record. Social media marketing is, the use of social media platforms and websites to support a goods or service.

2. **Content Marketing**
   Content marketing is the ability of using storytelling and important information to raise brand knowledge with the objective of getting your target viewers to take a gainful action. Content marketing aims at building interaction with probable consumers and becoming a colleague rather than an advertiser. Content marketing strongly relies on content delivery. Content marketing can hardly ever be seen completely divided from other types of digital marketing that can fill the content distribution part.
3. **Search Engine Optimization (SEO)**
   SEO is the course of action of optimizing content or websites so that they explain up in explore outcome in search engines such as Google. Search engines settle on which websites to prove for a search term based on keywords mentioned on the website and links that pass on to this website. That means SEO has a lot to do with using the right keywords or key phrases in the copy of a website or within the content.
4. **Search Engine Marketing (SEM):**
   While SEO describes the course of action of perceiving not paid traffic from search engines – SEM refers to the paid traffic from search engines. The most general form of search engine marketing is probably Google Ad words for the uncomplicated cause that Google is by far the most used search engine.
5. **Pay-Per-Click Advertising (PPC):** Similar to SEM other forms of PPC advertising also illustrate marketing techniques where the marketer pays for each click on a link.

Advantages or benefits of Digital Marketing:

1. **Level playing field:**
   Any company can challenge with any enemy apart from of element with a well-built digital internet marketing approach. Furthermore, typically a minor store would find it difficult to bring together the grace of the accessories of its larger opponents. Online, a sharp well thought out site with a sleek consumer trip and incredible service is master – not dimension.
2. **Low cost:**
   It allows to companies to save money, an component that is really taken into account by the companies since the Digital marketing strategies don't necessitate a great amount of financial commitment.
3. **Easy to measure:**
   Online everything can be calculated, thus it's simpler for the companies to know right away if their strategy is operating or not, what business concern or customer is enthusiastic about their items, from what places or nations are they, etc.
4. **Brand growth:**
   Continuation on the Internet can help the development of the business organization from any local market to country wide and worldwide market locations at the same time, providing almost boundless development opportunities.
5. **Available 24/7:**
   The World Wide Web not at all rests and so does Online promotion, enabling company with small sources to maintain physical 24-hour functions to contend in the electronic industry using Online promotion resources that can run almost 24 hours a day and 7 days a week.

Dis-advantages of Digital Marketing:

1. **Promotion policy can be copied:**
   One of the hazards in Internet marketing is that a particular method can easily be copied by a rival. And, many have done so with conclude ignore for the lawful repercussions their actions may bring. Pictures or images can be used to mislead consumers and bring away an important company. From you. Not only that, these can also be used for perpetrating adverse and incorrect information about your goods, products or services that will dangerous your online reputation – and minimize useful focused consumers.
2. **Digital Marketing Includes Too Much Competition:**
   Just like the development of online ads, Internet promotion is knowledgeable with a great process of too many competitors. Digital promoters are not competent of receiving into a more powerful place for the best possible disclosure for their promotion and promotion tasks, and with the use of too many competitors, will make it even more difficult and costly to get the interest of targeted observers.
3. **Security problem:**
   Internet marketing has its own demerits which are not noticeable on its knowledge value. so, For a person or client who queries online for goods or services, there is a caution not to disclose all the private information as it might be used against them by nameless people.

4. **lack of belief:**
   One of the important disadvantages may be a absence of believing in of the customers. Because of could be exclusive extraordinary offers that come out to be scammers. So, this is a part that reduces the image and reliability of quality and sincere business organization.
5. **Requires More primary Investment:**
   Playing **Digital marketing** contains various boundaries like developing delicate and professional looking for your website and planning an effective system. Therefore, Paid marketing like Search engines Ad Words, Search engines Ads, and Social Media Marketing is quite expensive, especially for small enterprise owners.

Conclusion:

So, digitalization in marketing is about utilising digital technology to reach marketing goals. There is no essential necessitate for digital marketing to always be separate from the mark technology department as a whole, as the goals of both are the same. However, for now, it remains a useful term because digital marketing needs a certain skill set to utilise the digitalogy effectively.

International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Digitalization in Education Sector

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ABSTRACT
In today's world, digitalization has been a game changer in one of the most important sectors– Education. It has been effectively used as a prominent technique in the whole gamut of education sector. It has blurred the boundaries of physical distance, as well as, has embedded more scientific ways to impart knowledge from tutors to the students. Digitalization would also mean huge savings in the resources (infrastructure of seating capacities, printing of books, notes, papers etc.)

Primary objective of the study is to highlight evolving of digitalization& its economic impact on the education sector. Digitalization of education assumes to include two inseparable components – a) classroom learning concepts and b) online learning methods. The paper also describes various terms and types of digitalization. It discusses advantages and disadvantages of online methods of learning.

This paper also tries to differentiate between 'Old-school' techniques and 'Digitalized' techniques in education. While there are obviously seen advantages of Digitalized education sector, there are still merits in certain aspects of 'Old-school' education.

The nature of the study is semi empirical. Various theory concepts, experiential learning and data points from external sources have been used while arriving at recommendations and views expressed in this paper.

INTRODUCTION
Digitization is the process of converting information in to a digital format. It has many advantages and a few disadvantages as well**.** It combines concepts of classroom learning and online learning methods. Digitization is very useful not only in education but also in sectors like banking, finance, insurance, marketing, shopping, heavy industries, travel and tourism, hotel industry and in the field of medicine. Within education sector, it has different applications like online courses, online examinations, digital textbooks, animations, and administrative activities.

A differently coined term **'Digitalization'** is the application of electronic / digital techniques to existing manual and paper-based process for better revenue generation and improved business models enabled by the digitization of information.

The difference between digitization and digitalization is very important. While digitization is process of converting information/data in to digital format; digitalization is the use of digital technologies to change a business model and provide new revenue producing opportunities.

We are in the 21st century where technology is changing at a rapid pace. Smartphone, laptops, and tablets are not foreign terms to common people anymore. And with fast speed data connectivity made available across the country, adoption of digitalization has catapulted to a new high.

When we consider education sector, it's dynamics are changing by every passing day. Along with the methods, mentality of students is also changing. They are extremely curious today and are not restricted with textbooks that were traditionally available in the book stores or libraries. Their methods of learning are changing every day. Learning through YouTube, online portals, apps is a common thing now. Their

curiosity is vast and cannot be fulfilled with conventional educational systems.
Traditional educational system lacks these advancements and hence we are compelled to use digitalization in our educational system.

Online courses, online examinations, digital textbooks, animations, and administrative activities are known and popular ways digitalization in education system. There are various adaptations in the education sector such as learning through phonics that are fun, interesting and easy to understand. This technique is primarily used for kids' learning wherein sound, pictures, and stories are woven together and presented to kids in an electronic form.

Education system – then and now
In the previous era, knowledge transfer was strictly was through the lessons given by teachers to his pupils. This method ensured that not only theoretical knowledge was getting imparted, but also the real-life experiences were amalgamated into it so that pupils could learn the nuances of the lessons.
Although Digitalization has changed the education sector dramatically, the traditional way of Guru-Shishya method of imparting knowledge is irreplaceable. It cannot diminish the importance of old education system. Digitalization in education has led to misconception that the relevance of the teacher would gradually fade away in an era of e-learning.

The institution of teacher remains a strong pillar of the education system.

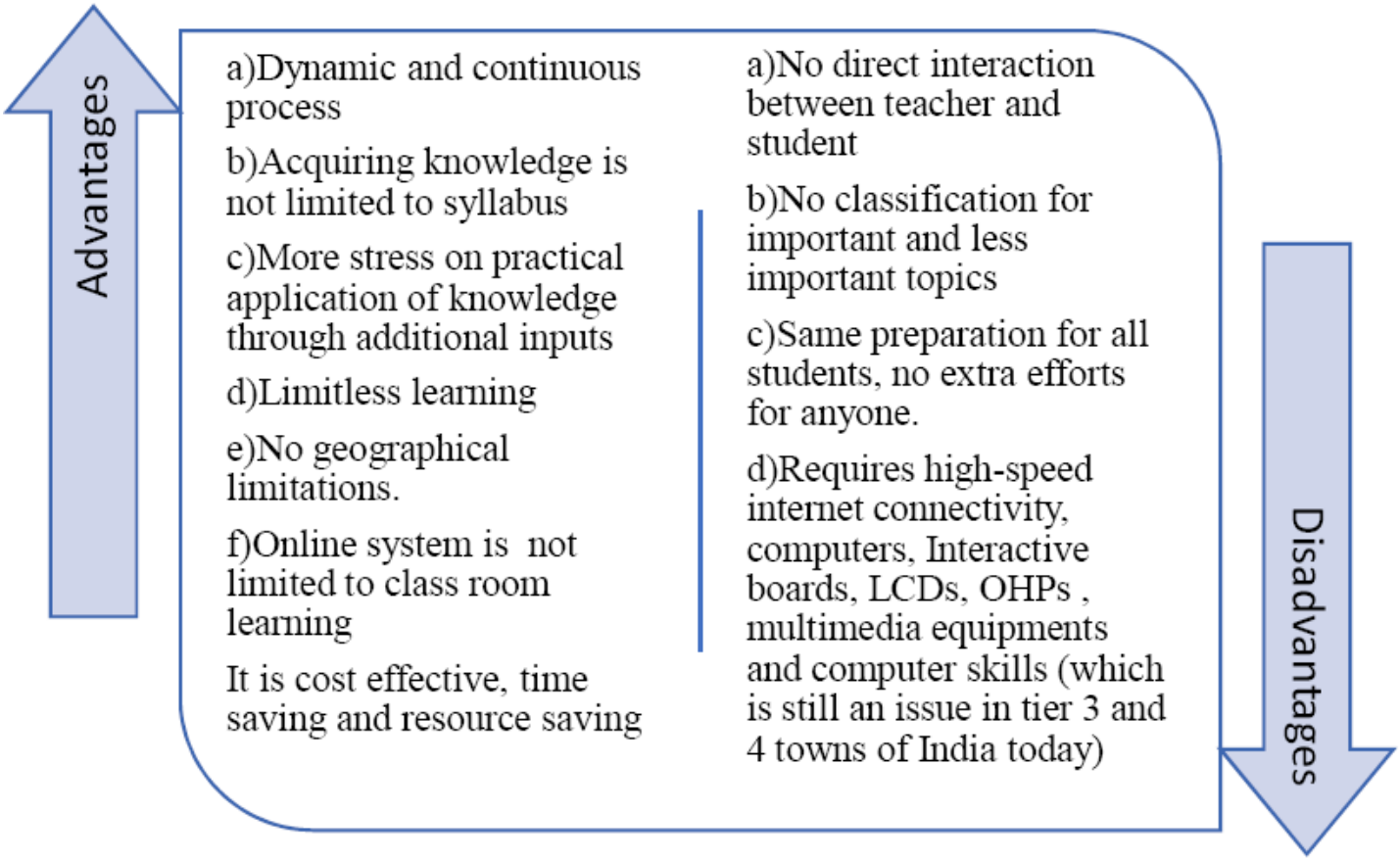
Teacher plays an important role in today's education system too and guides his pupils to identify places where his students can apply the knowledge and also the likely pitfalls. There is no doubt that students will be felt deprived if they are not learning in a digitalized world today, just that pivotal role of teacher needs to be understood by all elements of this sector.

Below are the key observations for **traditional or old** education system:

- Direct interaction between teacher and student
- Stress on important part of the syllabus
- Reading on related areas which are not part of the syllabus
- Extra preparations for the student with low understanding level
- Guru- Shishya parampara system allowed shishya to observe, experience and learn from his /her guru 24 x 7

- Lack of dynamism
- Learning is limited to syllabus, teacher and subject
- It makes student exam oriented
- It does not equip student for practical application of knowledge
- It is not cost effective. Traditional education has become very costly.
- Resources like books/teachers have limitations. If books/teachers are inadequate learning will stop

While for **online education**, below are the observations w.r.t. advantages and disadvantages:



Expanse of the online education

Today in India, traditional and online education systems are existing in parallel. Online system is in transitional phase actually. We are not yet completely detached from old learning system and at the same time, we are slowly and gradually accepting online systems.

Entrance examsare online / digitalized but latter, the education imparted in classroom, is through traditional way. While online methods can accurately evaluate answers of multiple choice questions, they cannot really evaluate the subjective answers easily. Hence, it is partly accepted for higher education but primary and high school education still uses old system. Teaching and examinations still happen with old system. Results are declared with online systems. We are in a phase of preparing our teachers and students for online education system. Even application of online system for administrative purposes is in mixed state.

The staff and student lack the required skills for complete application. All types of fess are still paid in schools and colleges. Online payment system is not fully accepted. Present education system is combination of an old system and new system.

Application of online techniques in various parts of education

The new phase of learning has begun and involves various advanced techniques and methods like:

1. Online self-paced or timed courses
2. Online examinations
3. Digital textbooks
4. Animation
5. Videos and films and PowerPoint presentations
6. Use of multimedia equipment like interactive boards, LCDs, Laptop and advanced projectors.

Brief description is given below for important technologies in use.

1. Online courses – They are used to learn a new language or get trained in some specific course, or even to learn through distance learning. Online courses are developed by experts who have unmatched proficiency in their specific field and can give you the experience of real-time learning by designing their own online course.
2. Online examinations – Examination process is convenient for both teachers and students.

3. Digital textbooks – Digital textbooks provide an interactive interface in which the students have access to multimedia content such as videos, interactive presentations, and hyperlinks.

4. Learning through animations – This is typically used for educating children between two five years old. Learning through pictures, diagrams, through colors is more effective.
5. Videos and films and power point presentations are used for student of any age group. Management films, motivational films, are examples of this method.

SWOT – online education in India

SWOT analysis for online education in India is tabled below:

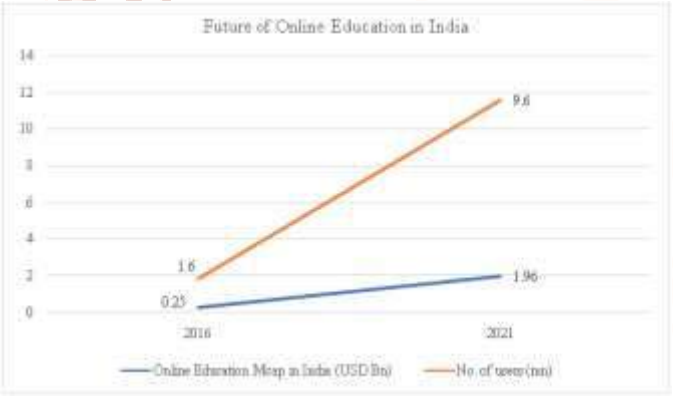
Scope and Limitations

If we were to define scope of Digitalization in India today, it is expected to pervade almost each and every area of education. It will be wide spread; right from primary education to higher studies and onto research field as well. It will also be pervasive in all other fields like health, transport, travel tourism, insurance, banking, finance etc. It will be consumer centric and will be made extremely convenient. Though personal or human interaction would not be available, but accuracy and repeatability will be enhanced through automation capabilities embedded within.

Conclusion & future of online education

Based on the figures made available in KPMG's report and Quora, it is evident that future of digital market and online education system in India is extremely bright. There is huge scope for implementation. Digitalization in education, banking, insurance, financial services, agriculture, and other sectors of economy are going to open many opportunities for service providers.

These figures, give us an overview of the growth potential which India has for online education.



Increase in number of users of online education systems, increasing cost of traditional education, increase in number of internet users, estimated

increase in number of open learnings and distant learning courses by 2021 and percentage of ambitious young population with low income. Population between age group 15 to 25 is target market for online education.

Following key conclusions can be drawn:

- Online education market in India is set to increase at an astonishing rate i.e. CAGR of 52%, from 2016 to 2021
- Number of users in online education to grow 6x from 2016 to 2021. This is in-line with internet penetration rate in India which is 31% today with almost 409 Mn internet users, and nearly 735 Million new users are predicted by 2021.

Also, the cost of traditional education from 2008 to 2014 has risen by 175%, hence online education is a low-cost alternative to traditional education.

And, open learnings and distant learning courses are expected to grow to 10 Mn by 2021.

Nearly 46% population is between 15–40 age group. The young population with high aspirations but lower income is good target market for online education. The acceptability of online channel is high in younger demographic.

Report also indicates that people trying to provide generic online education via non-personalized games and animations and standard courses would struggle to exist in near future looking at the trend and platforms that provide personalized learning experience will grow. (Source: -www.quora.com)

Digitalization means advance technology and more usage of electronic media, which will improve country's GDP and bring more revenue. If we follow trend of USA/UK, where digitalization is implemented twenty years earlier than India, we are sure that digitalization will make Indian economy stronger with strong GDP and good growth rate.

Presently it is e-learning and test preparation which are leading the market, but in future years to come, gamification (using game rules to non-game situation and making learning experience more enjoyable and fun giving, which can retain the students interest in learning.) and application of technologies like Virtual Reality and Artificial Intelligence is going to make an impact in the pedagogy.

Digital technologies given below will impact economy of the country and improve the performance of online education. It will also increase market depth and will bring more revenue to the country.

1. Big Data: Users create digital footprints via interaction of the platform, which are captured by system to map their profiles and suggest them proper course and material.
2. Data Analytics: Mapping academic/professional background and drive purchase behaviour.
3. Wearable devices: New mode of content consumption.
4. Virtual Reality: Virtual labs can be setup to perform experiments.
5. Machine Learning: A detailed feedback given to each student with level of accuracy, grasping power, time spent on different concepts, historical performance.
6. Artificial Intelligence: Providing profile based customized course suggestions to prospective students. Help students to make informed choice on course content, type of course, type of evaluation and course duration.

And from the Business Model point of view, online players may adopt hybrid channels to reach their customers. Like, online learning platforms may start engaging with the students through offline touch points- labs, group discussions, panel discussions, to bridge the gap with traditional modes of learning.

Digitalization has changed our education system undoubtedly, but we cannot say that it has diminished the value of our traditional classroom learning. It also cannot replace Guru-Shishya parampara (conventional student – teacher learning method) which was used in older days. During those days, students used go and stay with their Guru for ten to twelve years. This system was more profound in use for performing arts like singing, dancing, painting, drawing, etc.

In a nutshell, India has exciting opportunities in Ed-tech sector with rising young population, increasing internet penetration and acceptance of online learning as a cost-effective channel.

Following conclusions can be drawn at the end of this study on digitalization of education sector in India:

- Digitalization in education system will be a big success in future (at least 50 years)
- It will be beneficial to all stakeholders in education. Important among them are givers of

educations (schools, colleges, universities,) and receivers of education i.e. Students.

- It will improve efficiency of present education system.
- It will be more precise and accurate.
- It will reduce waiting time of student.
- It will save on national resources.
- Campuses of universities and colleges and schools may not exist and traditional classroom learning will be replaced by distance learning.
- Present examination system will be replaced by online examination system.
- Results will be declared immediately. No waiting.
- Repeat examinations will happen quickly.
- Payment of fees, admissions and registration for the course, examination form filling, giving examination, improvement in student performance, etc will be conducted online only
- Physical movements of students from home to college/universities may not really be required. It will save on transportation cost.
- Only disadvantage would be online or digitalized education will not give a personal touch.

Recommendations

1. Looking at the growth opportunities for online education, distance learning, and e-learning, sizable amount of provisions should be made in budget for education. At present less than 4% of GDP is provided for traditional education in central budget. Budget provision are Rs. 85,000 crores
2. Government must provide strong internet high speed connectivity to rural citizens. Budget indicates only 5 crores are provided for broad band access. This is turning factor for development for online education. Budget provisions for digital India in 2018-19 is Rs. 3073Crores.Global economy is changing to digital economy.Rs.864is provided for promotion of digital econoy.Rs.4000will be spent on digital literacy programme. Rs.30crores will be spent on development of manpower development. Set up of 5lacs. Wi-Fi hotspots will provide broadband access to 5crores rural citizens (source: - www.thehindu.com)
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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Digitalization in Marketing

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ABSTRACT
The world has transitioned into a digital environment. For today's businesses, it is imperative to have a website and use the web as a means to interact with their customers. There are some successful traditional marketing strategies, particularly if you are reaching a largely local audience, but it is important to take advantage of digital marketing so as to keep up in today's world. Online Marketing uses internet to deliver promotional marketing messages.

Digital marketing is also known as Internet marketing, but their actual processes differ, as digital marketing is considered more targeted, measurable and interactive. It includes Internet marketing techniques, such as Display advertising , Web Banner advertising, pop ups, text ads, display ads, Social Media Marketing (SMM), Mobile Advertising, E-mail Advertising, Search Engine Optimization (SEO), Search Engine Marketing (SEM) and link building. It also extends to non-Internet channels that provide digital media, such as short messaging service (SMS), Multimedia Messaging Service (MMS), callback and on-hold mobile ring tones, e–books, optical disks and games.

KEYWORDS: *Digitalization of Marketing, Social Media Marketing, You Tube Marketing, Online Marketing, Online Shopping, Internet Marketing Platforms.*

INTRODUCTION

We live in an era where everything is inter-connected. With the availability of anything and almost everything on a single click at your door step, advertising and marketing are not the same anymore. These days, it is important to have a strong online presence, along with a great brand that is presented uniformly across all mediums. Digital Marketing is essential for companies who want to utilize the power of the internet in order to boost their business. Digital Marketing is also known as 'Online Marketing' 'Internet Marketing' or 'Web Marketing'.

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business. Digital marketing is the marketing of products and services using digital technologies, mainly on the internet, which also includes mobile phones, display advertising and any other digital medium.

In 1971, Ray Tomlinson sent the very first e-mail, and his technology set the platform to allow people to send and receive files through different machines. In 1990s, the term Digital Marketing was first coined, with the debut of server/client architecture and the popularity of personal computers, the Customer Relationship Management (CRM) applications became a significant part of marketing technology. In the 2000s, with more and more internet users and the birth of iPhone, before consulting a sales person, customers started searching products and making decisions about their needs online first which created a problem for the marketing companies as most of the retailers did not provide their domain address. In 2007, the concept of marketing automation was raised to solve the above mentioned problem. By 2010, digital marketing became sophisticated and was still growing till 2012-13. In 2000s, the development of social media sites such as Facebook, Youtube and Twitter made the customers highly dependent on digital electronics in their daily lives. The change of

Customer behavior improved the diversification of marketing technology.

Crossing the national and geographical boundaries, Digitalization in marketing has brought about tremendous changes in the methods of marketing, providing a wide access of potential customers. Due to digitalization in marketing it has become easy for the small and medium size business to advertise their business to a wide range of people as it is cheaper in cost as compared to the traditional marketing and advertising methods. It has also facilitated instant feedback from the customers. Lots of time and efforts are saved by making the website of the business where in the business can be made available 24/7 to the customers resulting in increased sales and profits. Staying connected with the customers by use of e-mails or multiple messages in a short span of time helps save the tedious task of sending newsletter to every client.

It allows two-way communication between a company and consumer in a way that wasn't previously seen and it has changed the business approach as the consumer holds more power now. It includes Internet marketing techniques, such as Display advertising , Web Banner advertising, pop ups, text ads, display ads, Social media marketing (SMM), Mobile advertising, e-mail advertising, search engine optimization (SEO), search engine marketing (SEM) and link building. It also extends to non-Internet channels that provide digital media, such as short messaging service (SMS), multimedia messaging service (MMS), callback and on-hold mobile ring tones, e–books, optical disks and games.

This research paper is based on the secondary data collected from various websites and describes the different types of digital marketing techniques like SEO, SEM, SMM, PPC, etc. Significance is given to the importance of digital marketing and its benefits. It aims to identify the effectiveness of Digital marketing. The objective is to identify the contribution of Online marketing in the changing marketing scenario and the reason for its growing popularity.

TOOLS OF DIGITAL MARKETING

A. Online Marketing

For any business to succeed, it is very important to reach out to consumers and establish the brand. Without a marketing solution a business cannot be successful. Online marketing is a strategy that helps build a company's reputation and exposure online by using a variety of internet tools and solution. Before it is possible to understand the different strategies and marketing tools, it is important to understand what is online marketing and how it promotes business.

Online marketing which is also called internet marketing or online advertising is a tool strategy or a method of getting the company name out to the public. The advertisements can take many different forms and some strategic focus on some subtle messages rather than clear cut advertisements. But the way it promotes the business is simple. It builds up the company reputation by increasing its ability to be found online. A large number of potential customers browse the internet, look for information or simply enjoy their favorite past times with the internet connections. By taking advantage of the tools and resources, it is possible to get the company name out to the public and encourage potential customers to look further for information. Thus, online marketing or internet advertising or web advertising is a form of marketing and advertising which uses the internet platform to deliver promotional marketing messages to the consumers. So, Online Marketing is the practice of leveraging web- based channels to spread a message about a company's brand, products or services to its potential customers. The methods and techniques used for online marketing include e-mail, Social Media, Display Advertising, Search Engine Optimization and many more.

B. Search Engine Optimization (SEO)

After a website is built for the company, it needs promotion. Search Engine Marketing (SEM) is one of the best ways to promote your company, its services and its website. It is the process and strategy of getting website exposure online with keywords related to your business. This is called Search Engine Optimization (SEO). Search Engine Optimization (SEO) is the process of optimizing website content online to increase exposure in the organic search results for desired key words. This is a long term strategy that has many factors contributing to its success. These include, site architecture, on site content, off site content or on page and off page content. It also includes internal and external links, key word research and competition analysis to name a few. While being found online is probably the most important part of online marketing strategy, there are other types of marketing strategies that supplement

these efforts.SEO is the process of affecting the online visibility of a website or a webpage in a web search engines unpaid results – often referred to as natural, organic or earned results. It is the process of getting traffic from the free organic or natural search results on all search engines. All major search engines such as Google, Bing, and Yahoo have primary search results where web pages and other content such as videos or local listings are shown and ranked based on what the search engine considers the most relevant to users. Thus, it is the practice of increasing quantity and quality of traffic to your website through organic search results. It is done by improving rankings in the algorithmic search engine results.

C. Social Media Marketing

Social media is a collection of websites or applications that let people interact with each other by creating and sharing images, text, videos and even GIFs. There are a variety of social media platforms such as Facebook, Twitter, Whatsapp, Linkedin, Youtube, Instagram, Snapchat, etc. Social Media has completely changed the way a business can reach its customers. From small start ups to large corporates, companies are using social media to reach and inspire people all over the world. It offers a huge amount of opportunity to really get to know your customers and build relationships with them. It is an exciting way to do marketing and promotions and reach a wider audience for spreading information about you. Social Media isn't great just for personal use but it can also be a highly effective tool for any business. Companies of all sizes, as well as NGO's, or any person can use social media to connect with customers and grow their online community. Using Social Media to reach out to people and promote your business is known as social Media Marketing.

With Social Media, many successful businesses are changing the way people learn, explore and discover new things. It also allows businesses to advertise in a targeted, consumer-focused way, offering the potential for great value for money from advertising budgets. Social media marketing is a two way conversation where direct interaction helps create a stronger and a long lasting customer relationship. It's reactive nature means, communicating in a timely way which has never been simpler. It is an effective way to create business awareness and a positive, memorable impression. For e.g. Social Media Posts that encourage customers in engaging with the business. It allows businesses to engage, entertain and respond to the audiences. Instead of talking with customers as with some traditional media, it lets you listen and respond to them in a personally tailored and immediate manner. This way of communicating with the new and existing customers can transform how a business promotes itself. A simple, open conversation can help people feel more at ease when interacting with you. It also helps improve marketing and customer retention and how it gives new audience insights that help sharpen your offerings.

So what's so great about Social Media Marketing is that, it has a lot of potential benefits for businesses.

- It helps you reach your new customers quickly.
- It offers a business the potential to reach millions of people all over the world in a targeted and personalized way.
- It gives you real time access
- It builds trust and relevance
- It allows you to build community

Therefore, we can say that social media marketing encourages a two way conversation. It gives you the opportunity to grow business by listening to and understanding your customer needs and preferences. Connecting via social media means people around the world can have conversations about you and your business and also share their experiences and recommend you to friends and family.

D. Display Advertising

Display advertising is an advertising on websites or apps or social media through banners or other advertising formats made of text, images, flash and audio- video. It is an online form of advertising that the company's promotional messages appear on third party sites or search engine results page such as publishers or social networks. It is a form of advertising that conveys a commercial message visually using text, logos, animations, videos, photographs or other graphics. Display advertising frequently target users with particular traits to increase the ads effect. It is a type of paid advertising also known as Pay-Per-Click Advertising or also called as PPC. It is a type of paid advertising that gets your business found on search engines. It is a great way to compete in the online space and directly target customers or consumers in your area for using a search engine to look for products or services. The beauty of this is that you have a chance to compete with the bigger competitors in local market without spending much money. It also gives small business

owners a way to directly target searchers based on their geography. So your search engine ads only show to people who are around your store or service area. It is like having a bill board online, but your targeting is much more effective because it is only being shown to people in the local area who are actually looking for your products and services. Pay-Per-Click is also known as Cost- Per- Click. It is an internet advertising model used to direct traffic to websites in which the advertiser pays the publisher when the ad is clicked. It is commonly associated with the first tier search engines. Essentially, it is a way of buying visits to your sites rather than attempting to earn those visits organically. Search Engine Advertising is one of the most forms of PPC. It is an online advertising model in which advertisers can display ads for their goods or services when users or people searching for things online enter relevant queries into the search engines. Advertisers are only charged when a user actually clicks on their ad and hence the name Pay-Per-Click or PPC.

It is a type of sponsored online advertising that is used for a wide range of websites including search engines where the advertiser only pays if a web user clicks on their ad. It works like a silent auction. Advertisers place bids on keywords or phrases that they think their target audience would type in a search field when they are looking for specific goods or services. When a web user types a search query into the field of search engine that matches the advertiser's key word list or visits a web page with content that co-relates to the key words or phrases chosen by the advertiser, the PPC ad may be displayed on the page. In a search engine, a PPC ad is generally just above or to the right side of the search results where they can be easily seen. On the other kind of web sites the ads will be placed in the location that the site designer has determined will be the most advantageous to his site and the advertiser. Overall PPC ads are beneficial to advertisers and web users alike. Advertisers get noticed by their target audience and are charged only for the times that their ads are clicked on and web users get to select from sites that may be relevant to the page that they are viewing without having to deal with obnoxious banner or pop-up ads that flash and distract.

E. You Tube Marketing

You Tube is a great source for funny, entertaining content, but it's also increasingly become an essential tool for marketers. In fact, nearly half of all marketers plan to add You Tube marketing to their strategy every year. One third of all online activity is spent watching videos and You Tube has more than a billion active users today. The platform is so expansive that it can be accessed in 76 different languages, accounting for 95% of the world's population. It is considered to be internet's 2nd largest search engine and can help improve SEO and overall brand presence. You Tube allows marketers to present content in a unique way that is easy for viewers to consume and share. Unlike other social networking platforms you tube exclusively hosts video content. You Tube is owned by Google, as a result, when you sign up for a Gmail account you will automatically have access to a You Tube account, a Google + account and much more. You Tube makes it incredibly simple for you and others to promote your video across other social networks. You Tube can do a lot for the businesses who utilize it correctly and consistently. Video is a huge platform today. It is dominating the world of marketing and if you aren't using video you will almost lose out certainly to your competition. With video ranking higher on all social platforms and performing well in ads, customers are more likely to notice and respond to businesses using video. When you are using you tube, you will have a whole library of videos. You can then, upload the video files natively to each platform. You can also embed You Tube videos in your blog posts with just a few clicks, making your blog posts more dynamic and engaging. You Tube also has an enormous and very diverse audience which happily uses both you tube and Google on search engine to find content that they are looking for. If you are able to optimize for the rght key words, you will be able to connect with that audience instantly. Since you tube videos can show up early on in Google's search results, it is the second most commonly used search engine after Google. You Tube has really a very large and diverse audience. It has over a billion active users and the site gets over 30 million visitors every single day and you tubes audience watches more than 3.5 billion hours of video every month and more than 1 billion video views every day. Thus, you tube has become one of the most sought after online marketing platforms today. For any business to reach out to its audience you tube cannot be ignored.

F. Email Marketing

Email Marketing is basically the use of email to promote products and/or services. But a better email marketing definition is the use of email to develop

relationships with potential customers and/or clients. Email marketing is one segment of internet marketing, which encompasses online marketing via websites, social media, blogs, etc. It is essentially the same as direct mail except that instead of sending mail through the postal service, messages are sent electronically via email. Someone somewhere buys an email list (or several!) and sends an email along the lines of "Get _____ (the product name) for only Rs__! (amount) to everyone on the list–sometimes repeatedly. All this does is annoy everyone and give email marketing a bad name.

At its best, email marketing allows businesses to keep their customers informed and tailor their marketing messages to their customers.

Email Marketing Can Be Personalized

Particular groups of customers can be targeted or even individuals. Offering individual customers' special deals on merchandise and/or services on the customer's birthday, for instance, is one example of email marketing personalization. (A restaurant might send an email to customers on their birthday offering 50% off on entree,) Email marketing helps a business develop and maintain a relationship with a customer over time that hopefully results in increased sales and increased customer loyalty.

Email marketing best practices include developing your own email list rather than buying an email list(s) and making participation in your email list opt-in rather than opt-out (using permission-based email marketing). Email should also be optimized for mobile usage as according to statistics over half of emails are opened on mobile devices.

The Advantages of Email Marketing

The two big advantages of email marketing are price and ease. Emailing is an inexpensive way to advertise your company and its products and/or services compared to many other types of marketing. It's also extremely easy to set up and track an email marketing campaign, making it a very accessible type of marketing for small businesses.

Newsletters can be sent to the email list you've built from the people who provided the necessary information on your website, for instance, providing these potential customers with news updates about your company, upcoming events and/or special offers – and, of course, reminding them that your business exists and that maybe it's time for another visit.

The huge advantage of email over social media is that prospects and customers are more likely to see an email than social media. Just posting something doesn't mean that everyone you want to see your message will see it. Your post might not even show up in your targets' social media streams. However, an email will sit in the inbox until its read (or deleted).

Ideally, email marketing should go hand-in-hand with social media. Adding social media "Like" or "Share" buttons to your marketing emails gives an additional way for customers to connect with your brand. Snippets of positive reviews from social media fans can be included in emails, and conversely, social media postings can be used to encourage fans to subscribe to your email newsletters.

Email marketing can substantially increase your income if you do it correctly. (See the tips below.) It's a great way to get people to visit and/or revisit your website or blog, and more traffic usually equates to more income.

Email Marketing Tips

1. Build your own list. This has already been mentioned but buying email lists is a waste of time. All you're going to do by sending unsolicited email is turn off most of the people you're hoping to turn into customers and run the risk of being labeled a spammer.
2. Adhere to the rules of the CAM-SPAM Act. These rules include having a non-deceptive subject line, a method of unsubscribing, and your name and address at the end of the emails.
3. Don't just send out ads to buy all the time. Use your emails to build rapport with customers by sharing your expertise and/or that of others, giving them tips and insights they can value. Share information that lets them know more about you and/or your company if it's interesting.
4. Treat your list well. Remember that the people you're using email to communicate with have trusted you with their email and name; they deserve your respect. Just as you deserve as a chance to convert them from customers to fans and even evangelists for your brand, people who want to talk about and share your message and get involved in any way they can.

5. Stick to a schedule if you're doing a newsletter. Sending email on a regular day or days can help your subscribers know what to expect from you and when. Also Known As: E-mail marketing, direct email marketing.

G. Mobile Marketing

Mobile marketing is a multi-channel, digital marketing strategy aimed at reaching a target audience on their smart phones, tablets, and/or other mobile devices, via websites, email, SMS and MMS, social media, and apps. .Mobile is disrupting the way people engage with brands. Everything that can be done on a desktop computer is now available on a mobile device. From opening an email to visiting your website to reading your content, it's all accessible through a small mobile screen. 80% of Internet users own a Smartphone. Effective mobile advertising means understanding your mobile audience, designing content with mobile platforms in mind, and making strategic use of SMS/MMS marketing and mobile apps.

Mobile marketing is the art of marketing your business to appeal to mobile device users. When done right, mobile marketing provides customers or potential customers using Smartphone with personalized, time- and location-sensitive information so that they can get what they need exactly when they need it, even if they're on the go.

Mobile marketing consists of ads that appear on mobile smart phones, tablets, or other mobile devices. Mobile marketing ad formats, customization, and styles can vary, as many social media platforms, websites, and mobile apps offer their own unique and tailored mobile ad options.

Every business needs a mobile marketing strategy for the same reason that you need a computer and Wi-Fi access – this is the age in which we live! Walk around any major city and you'll find a lot of people with faces glued to their smart phone screens. According to recent reports, 40% of users' internet time is spent on mobile devices, which means simply ignoring the rise of mobile just isn't an option.

Types of Mobile Marketing Strategies

There's a healthy variety of mobile marketing strategies to try. The kind that works best for your business will depend on your industry, target audience, and budget.

App-based marketing: This is mobile advertising involving mobile apps. While 80% of mobile time is spent engaged with apps, you don't have to create an app yourself to get in on the action. Services like Google Ad Mob help advertisers create mobile ads that appear within third-party mobile apps. Face book also allows advertisers to create ads that are integrated into Face book's mobile app. Face book's mobile Promoted Post ads integrate so seamlessly with Face book's news feed that users often don't realize they're looking at ads.

In game mobile marketing: In-game mobile marketing refers to mobile ads that appear within mobile games, like in the example below. In-game ads can appear as banner pop-ups, full-page image ads or even video ads that appear between loading screens.

QR codes: QR codes are scanned by users, who are then taken to a specific webpage that the QR code is attached to. QR codes are often aligned with mobile gamification and have an element of mystery to them, since users who scan them don't always know exactly which rabbit hole they're jumping down.

Location-based marketing: Location-based mobile ads are ads that appear on mobile devices based upon a user's location relative to a specific area or business. For example, some advertisers may only want their mobile ads to appear when users are within a 1-mile radius of their business.

Mobile search ads: These are basic Google search ads built for mobile, often featuring extra add-on extensions like click-to-call or maps.

Mobile image ads: Image-based ads designed to appear on mobile devices.

SMS: SMS marketing involves capturing a user's phone number and sending them text offers.

Conclusion

In comparison to the other mediums, digital marketing has proved to be more effective, given the need of the people in today's world as it is considered to be the most measurable. The different tools of digital marketing have made it easier and cheaper to advertise their businesses, products and services, though initially, the companies might have to bear higher costs. It has also made it easier to find potential customers and management of marketing campaigns. Being available to customers 24/7 so as to increase

the sales and profits is easily possible due to the digitalization in marketing.

There are various elements by which digital marketing is formed. All forms operate through electronic devices. Some of the elements have been explained through this research paper as trailing below:

Online Marketing is a very important part of digital marketing. It is also called as internet advertising through which a company can deliver the messages about products and services. Search Engine Optimization (SEO) is an organic way of maximizing the number of visitors to a particular website by ensuring that the website appears high in the search results returned by the search engine. Social Media Marketing is the use of social media sites as a platform to promote their businesses, products and services. Display advertising is advertising on websites or apps or social media through banners or other ad formats made of text, images, flash, video or audio. The main purpose of digital advertising is to deliver general advertisements and brand messages to site visitors. You Tube marketing is an essential strategy to take advantage of the web's massive shift towards video. E-mail marketing means sending a commercial message typically to a group of people who could be potential customers or current or previous customers, using e-mail to build loyalty, trust or brand awareness. Mobile marketing is a multi-channel, digital marketing strategy aimed at reaching a target audience on their smart phones, tablets, and/or other mobile devices, via websites, emails, SMS and MMS, Social Media and apps.

Thus, we can conclude that digital marketing has no boundaries. It has become an essential part of marketing strategy of many companies. Digital marketing uses the power of internet and satisfies the demand of Business owners and customers in innovative ways.

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INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Digital Transformation of Travel & Tourism In India

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ABSTRACT
Digital innovation is transforming the way we live, work and run businesses it has global impact on economies, sectors and industries. The commencement of the Digital India programme in 2014 led the country into the League of Nations that is revamping their economies and governance with the power of technology. Since then, Digital India has affected almost all aspects of our lives, ranging from work, travel, communication to shopping, education and healthcare. India is going to be digital and travel and tourism are no exceptions to it. India has been ranked 51st out of 63 countries in the 2017 IMD World Digital Competitiveness ranking. Technology today plays a vital role in shaping the travel industry. With the increase in internet penetration and availability of smart phones India's Travel sector has expanded in the recent years. Among the service sectors in India, the tourism and hospitality industry has emerged as one of the major drivers of growth. The rich cultural and historical inheritance variety in flora and fauna and places of natural beauty spread across the country has enriched Tourism in India. Key advancements in the travel space move around five themes, namely Artificial Intelligence (AI), Big Data, mobile applications, social media and Virtual/Augmented Reality (VR/AR). These advancements could enrich travel experiences through direct and flexible interactions with customers. This paper attempts to explore a broad view on the economic contribution of travel in India, trends, challenges and consequences of digital travel, the role of new technologies and automation in streamlining the business processes across the value chain thereby canvassing picture of digital travel revolution unfolding.

KEYWORDS: *Artificial Intelligence (AI), Big Data, Digital innovation, Social media and Virtual/Augmented Reality (VR/AR).*

1. INTRODUCTION

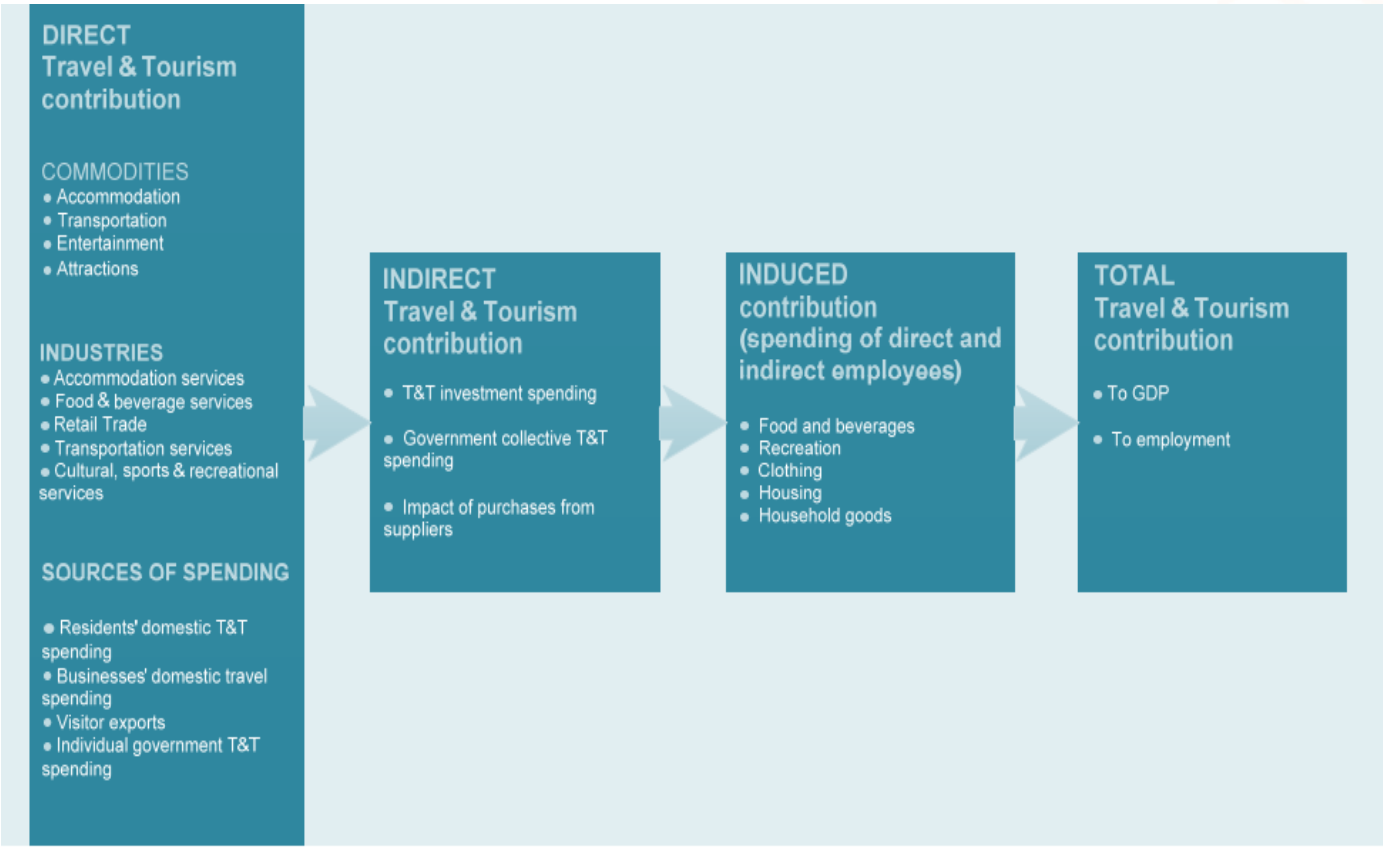
Travel and tourism is among the largest service provider industry in India. The rich cultural and historical inheritance variety in flora and fauna and places of natural beauty spread across the country has enriched Tourism in India. This sector aims to develop and promote tourism, retain the image of India as a tourist centric destination and expanding the present tourism products. Tourism in India is a great employment generator in different areas like accommodations, transportation, attractions sites, information offices photography etc. It is a significant source of foreign exchange in India. The minister of tourism SHRI. K. J. ALPHONS said that the Earnings from foreign exchange in tourism have grown by more than 17 per cent in April 2018 over April 2017. Tourism has provided employment to 41.6 million people in 2017 contributing 8% of the total employment opportunities generated in India in 2017. It is among the top 10 sectors to attract the highest Foreign Direct Investment (FDI). From April 2000-December 2017, the hotel and tourism sector attracted around US$ 10.90 billion of FDI.

2. OBJECTIVE OF THE STUDY

1. To understand the economic contribution of Indian tourism industry.
2. To study digital transformation in travel.
3. To study tools and technology for digital travel.
4. To study challenges and way forward for digital travel in India.

3.1. DEFINING THE ECONOMIC CONTRIBUTION OF TRAVEL & TOURISM

One of the important economic activities in most countries around the world is Travel & Tourism., The industry has significant direct economic as well as indirect and induced impact. The following diagram shows the economic contribution of travel & tourism.



Source: https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2018

Direct contribution to GDP

GDP generated by industries that deal directly with tourists, including hotels, travel agents, airlines and other passenger transport services, as well as accommodation services, food and beverages services, retail trade and cultural sports and recreational services that deal directly with tourists. It is equal to total internal Travel & Tourism spending, within a country deducted by the purchases made by those industries (including imports).

Direct spending impacts

VISITOR EXPORTS It includes expenditure within the country by foreign tourists for both business and leisure trips, spending on transport, but does not include international spending on education.

Domestic travel & tourism spending

It is spending within a country by that country's residents for both business and leisure trips. It excludes multi-use consumer durables as they are not purchased only for tourism purposes.

Government individual spending

It is expenditure by the government on Travel & Tourism services directly provided to visitors, such as cultural services (eg museums) or recreational services (eg national parks).

Internal tourism consumption

It is the total revenue generated within a country from visitor exports, domestic spending and government individual spending by industries that deal directly with tourists. It excludes spending abroad by residents.

Business travel & tourism spending

It is expenditure on business travel within a country by residents and foreign visitors.

Leisure travel & tourism spending

It is expenditure on leisure travel within a country by residents and non resident visitors

Direct contribution to employment
It is the number of direct jobs within Travel & Tourism industry.

Total contribution to employment
It comprises of the number of jobs generated directly in the Travel & Tourism sector plus the indirect and induced contributions

Indirect and induced impacts
Indirect contribution
The following three factors are contributors to GDP and jobs:

- **Capital investment**: It comprises of capital investment by all industries directly involved in Travel & Tourism. This also constitutes investment expenditure by other industries on particular tourism resources such as new visitor accommodation and passenger transport equipment, as well as restaurants and leisure facilities for explicit tourism use.
- **Government collective spending**: It is Government expenditure for general tourism activity. This comprises of national as well as regional and local government spending. For example, it includes visitor information services, administrative services, tourism promotion and other public services.
- **Supply-chain effects**: It is the purchases of domestic goods and services directly by different industries within Travel & Tourism as inputs to their final tourism output.

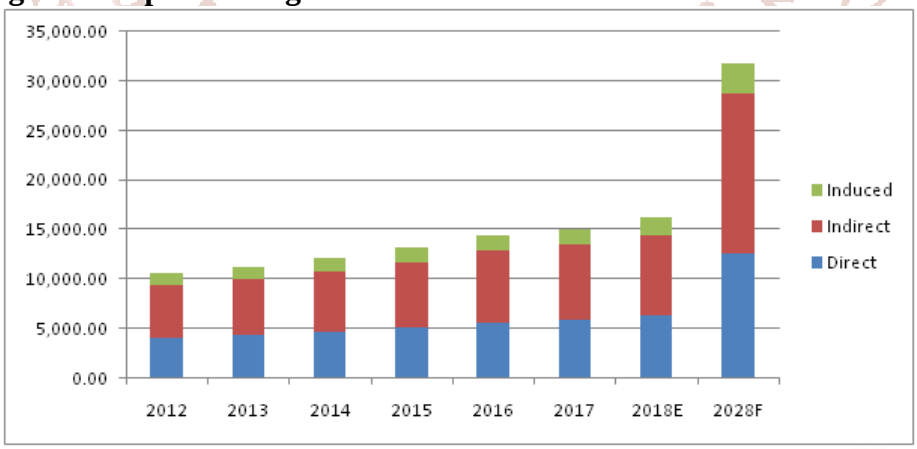
Induced contribution The expenditure by those who are directly or indirectly employed by Travel & Tourism.

The following table and graph presents the total contribution of travel & tourism to GDP

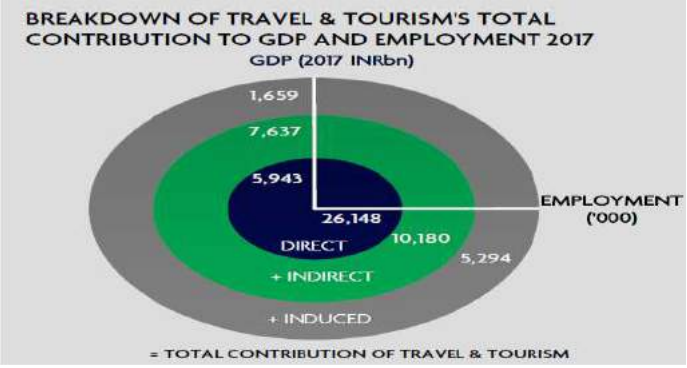
INDIA (INRbn, real 2017 prices)	2012	2013	2014	2015	2016	2017	2018E	2018F
Direct	4,149.8	4,413.1	4,736.9	5,181.2	5,676.6	5,943.3	6,392.7	12,678
Indirect	5,255.7	5,589.1	5,999.2	6,561.9	7,189.3	7,527.2	8,096.3	16,057
Induced	1,207.6	1,276.3	1,381.1	1,465.7	1,573.3	1,659.3	1,771.8	3,092.1

Source: TRAVEL & TOURISM ECONOMIC IMPACT 2018

Figure: Graph showing total contribution of travel & tourism to GDP



The above table and graph shows the direct, indirect and induced contribution of travel & tourism to GDP from 2012 to 2017, 2018E and 2028F. The graph shows a continuous rising trend indicating a bright prospect for the industry. Further the following diagram gives the breakdown of travel & tourism's contribution to GDP and Employment 2017.



The above figure shows continued and steady growth with rise in Foreign Tourist Arrivals (FTAs) and growth in Foreign Exchange Earnings during 2017. The key drivers for this rapid growth are growing disposable incomes and the rise of millennials as the 'chief wage earners', who account for 47 per cent of the working age population. Along with it, the increasing number of smart phones, Internet and technology-driven tools are acting as a catalyst for speedy digitisation of the travel and tourism sector.

3.2. DIGITAL TRANSFORMATION IN TRAVEL

The travel and hospitality sector is speedily developing with the increasing acceptance of various tools, technologies and digital platforms first and foremost to improve customer experience, build strong loyalties and run businesses efficiently. These include mobile applications, social media, Big Data analytics, artificial intelligence (AI) and machine learning, virtual reality (VR) and augmented reality (AR).

Travel port which is the leading Travel Commerce Platform, published the results of a Global Traveller Survey of 11,000 people worldwide that highlights the use of digital tools when planning, booking and experiencing a journey.

The main results from the global report are:

- When planning a trip:
  - 81% use peer to peer reviews when researching a trip
  - 47% use voice search, using devices such as Amazon Echo and Google Home, when researching a trip
  - Nearly 25% of over 55 year olds use a smart phone to research a trip
- When booking a trip:
  - Over 33% of travellers book their trip on a mobile device
  - 61% avoid hotels that charge for Wi-Fi
- When on the trip:
  - 70% of travellers believe that digital boarding passes make travelling so much easier
  - 60% of travellers feel that a good digital experience is important when choosing an airline
  - 44% of travellers rely on their smart phone at their destination
- When at the destination:
  - Travelers use an average of 16 different categories of apps when traveling
  - 75% of travelers leave reviews on review sites

Source: https://www.travelport.com/company/media-center/press-releases/2017-11-08/travelport-global-survey-highlights-different-digital

In the same way Indian travellers are becoming tech friendly having following characteristics as displayed in different research and statistics published in 2017

- Most travellers go online, and 67 per cent even use voice search while researching for a trip
- 71 per cent use smart phones for research and booking, and 82 per cent would appreciate digital boarding passes and e-tickets for convenience
- 87 per cent use videos and photos posted by friends as part of their travel research, and 83 per cent believe that being able to stay in touch is most important while travelling
- 85 per cent use price comparison sites to look for deals, and 58 per cent agree spending considerable time to find best price
- 91 per cent use review sites, though 52 per cent are wary of their trustworthiness
- 75 per cent choose hotels that do not charge for Wi-Fi

3.3. TOOLS AND TECHNOLOGIES FOR DIGITAL TRAVEL

The arrival of technology is promoting a change in the travel and tourism industry regarding how companies interact with customers. As a result, travel companies are adopting various technologies to improve operational efficiencies and meet customers' expectations, according to leading data and Analytics Company,

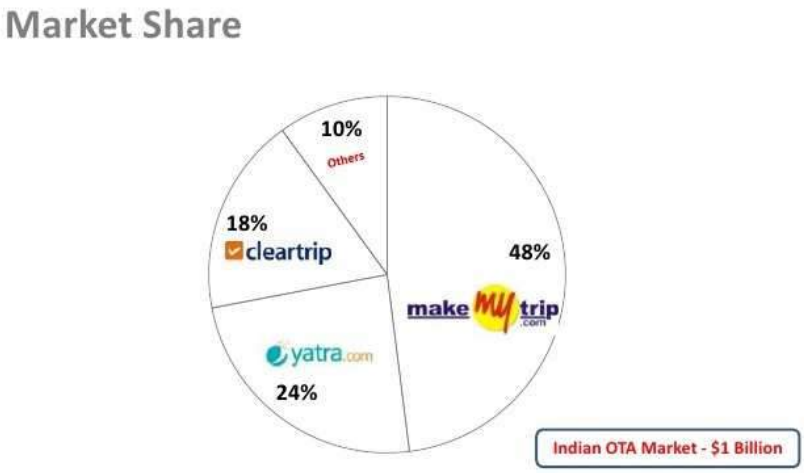
The tools and technologies that are finding major applications in the travel sector include mobile

applications, social media, Big Data analytics, AI, machine learning, VR, and AR.

Mobile applications

Most of the interactions with the customers are through the mobile. The statistics shows the number of mobile phone users in India from 2013 to 2019. In 2017 the number of mobile phone users in India is expected to rise to 730.7 million. In the same year the number of smart phone users in India is assumed to reach 340 million and could reach almost 468 million by 2021.

An OTA is a travel website that specializes in the sale of travel products to consumers. Some agencies sell a variety of travel products including flights, hotels, car rentals, cruises, activities, and packages.The following figure presents market share of OTA in India.



Big Data analytics

Big data analytics helps in structured decision making. It personalises customer experience, make use of dynamic pricing and channelize marketing efforts. It helps the business in the **travel** and **tourism** industry to take instantaneous decisions as per the varying customer demands.

Artificial Intelligence

AI in the form of chat bots, virtual assistants and even robots is increasingly being employed across the travel sector. In addition, machine learning makes these tools smarter over time and helps improve customer experience. For effective use of recommendation mechanism to deliver a good user experience over avenues like holiday packages, car rentals, hotels, and cruise lines, among others online travel agencies have made use of AI and ML.

Virtual Reality (VR) and Augmented reality (AR)

A panorama view of vacation could be obtained by VR. Augmented reality, or AR, is a digital technology, which changes a person's perception of their physical surroundings, when viewed through a particular device. The augmented reality is similar to virtual reality, but AR does not replace the real-world environment, but supplements it by laminating it with the digital components. Augmented reality has become increasingly popular within the travel industry as it enables hotels and other businesses operating in this field to develop the physical environments they are actually trying to persuade customers to visit by including local sights and hotel rooms.

3.4. CHALLENGES FOR DIGITAL TRAVEL IN INDIA

- **Lack of enabling infrastructure** Digitisation of travel is highly dependent on factors such as high-speed Internet connectivity, seamless digital payment solutions and a robust regulatory and policy framework. While positive strides are being made in each of these aspects, India stil considerably lags in comparison to most nations globally.
- **Disintegrated payments** The issues concerning payments include lack of integration between the payment systems of banks, mobile wallets and merchants, high cost of digital transactions and lack of facilitation of foreign currency payments.
- **Threats to data security and privacy** With increasing digitisation in travel especially the growth of mobile wallets, Unified Payments Interface (UPI), internet banking and other such digital initiatives taken by the government — the risks of data security are bound to rise.

3.5. WHAT IS THE WAY FORWARD

With the advent of technology, the Indian travel and hospitality sector is expected to see more of innovative solutions and services such as AR city tours, smart tourism, robots for security and housekeeping, smart luggage, radio frequency identification (RFID)/facial recognition technology to open hotel doors, driverless/self-parking cars and air taxis over the foreseeable future. With such developments at the front the government and players in the sector are expected to take certain actions going forward, which include

For government

- Easier identification through Aadhaar, improved access to banking infrastructure and point-of-sale (POS) machines, and availability of internet connectivity and telecommunication networks are some steps for enabling a flawless experience for travellers.
- IT literacy is a must condition for the digital services to catch up amongst the masses. Steps must be taken to introduce skills required in the direction of digital economy at early levels, particularly at schools.
- In commercial and financial transactions there is a greater risk of phishing attacks. To counter this, the Government of India can look at implementing its own General Data Protection Regulation (GDPR).

For businesses

- Branded hotel chains in India are expected to continue investing in digital technologies and platforms. Enhancing pre-booking as well as post-booking experiences would be of supreme importance.
- Loyalty would take preference for hotels, airlines as well as OTAs. India would continue to remain a price sensitive market.
- Things to do at a destination would be a noteworthy area of focus for online travel companies, especially metasearch engines, as they are venturing into it as merchants — allowing them to earn higher margins
- Direct bookings would be emphasised more by hotels and airlines.

4. CONCLUSION

The government's e-tourist visa programme continues to gain attraction, with a sharp rise in applications in October 2016. Digital Solutions enhancements are the need of the hour as it really does help the flow of travel. Globally, consumers are looking for extra value from their travel spends and in India, travelling is part of people's ambition. The industry needs to address the evolving travel perceptions and behaviors by offering specialized services for each need. The way that tourists discover, book and organise trips is changing. In todays digital world developing at a increasing pace travel agencies have to adapt to offer a seamless online experience. Some of the urgent priorities for travel start-ups include efficiency, skill and software expertise.

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International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

E-Marketing of Agricultural Products

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ABSTRACT
The internet has changed the world. In line with other sectors, retail business have taken up e-marketing or internet marketing, expanding outreach to customers beyond their conventional shopping places. Farmers can use internet on many possible ways to sell their products. Using internet as a way of selling agricultural products is changing marketing channels in the agribusiness industry.

Now farmers will be able to sell their produce through e-market platform i.e. the National Agriculture Market (NAM) which was launched by our Prime Minister Narendra Modi.

Agricultural markets are characterized by poor competitiveness, fragmentation, inefficiency, presence of executive middlemen and frequent price manipulations. E-Marketing of Agricultural Products is an electronic trading portal for agricultural products through which many of the farmer's problems will be solved. This paper analysis the nature and importance of e-marketing of agricultural Products.

KEYWORDS: *E-marketing, Agriculture, Agricultural products, Farmers, Internet and Technology.*

INTRODUCTION

Agriculture is the backbone of India. More than 60% of Indian workers are involved in Agriculture. Agriculture refer to the cultivation of land and breeding of animals and plants to provide food, fiber, medicinal plants and other products to sustain and enhance life. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enabled people to live in cities.

Agricultural products refer to crops, livestock and livestock products including field crops, fruits, vegetables. Horticulture specialties, Cattle, sheep, pigs, goats, horses, Donkeys, poultry, fur-bearing animals, milk, Eggs, aquaculture and furs. More than one third of the world's workers are employed in agriculture. After agriculture second only to the service sector but over the past several years the number of agricultural workers in developed countries have decreased significantly.

E-marketing is referred to those strategies and techniques which use online ways to reach target customers. E-Marketing is also known as Internet Marketing, Web Marketing, Digital Marketing, or Online Marketing. E-marketing is the process of marketing a product or service using the Internet. E-marketing not only includes marketing on the Internet, but also includes marketing through e-mail and wireless media. E-marketing of agricultural products means marketing of agricultural products through online ways from agricultural producers to any business houses or ultimate consumers.

Agricultural producers are also trying to develop this marketing channel even though there are many barriers of selling agricultural products via the Internet. Farmers may use the Internet to sell agricultural products for consumers and also for organizations. E-marketing is most useful to the farmers since the benefits are high and electronic systems are ready to serve customers all over the world and open for 24 hours in a day. The cost incurring is also low.

Agriculture is the basement for any country for their continuous development and survival. So, agricultural development is the utmost priority now as role of digital marketing is concerned, it tries to expand the reach of the people associated with agriculture, it helps in promoting right agri products to its rightful buyers by reaching out to new people across diverse locations.

Benefits of E-Marketing to Farmers

- **Wide market**:- Farmers can sell their products worldwide. It covers large number of customers of different states and different countries also.
- **Open for 24 hours/continuous market**:- online market is opened for 24 houre in a day so, farmers can sell their products at any time as and when they wish to sell.
- **Right person and Right price**: farmers have to place their products through online. If they get proper price for their products then only they have to sell their products to the right person.
- **Less cost**: There is no middelemen so there is a less cost or sometimes free of cost.
- **No waste of agricultural products**; Sometimes most of the agriculture products will be destroyed because of non availability of customers on time. Since online market is a continuous market there is no problem of wastage of any products.

5 Ways to Sell Agricultural Products Online

1. Online Market Place:

As there is a physical market place for agricultural products, there is also online market place for it. With the proliferation of online market places, selling agricultural products online just got a lot easier. There are many online market places in India for farmers. Some examples are Kisan market, Farmers online market etc. Listing your farm products on these platforms is another way to get more exposure, and subsequently sales.

The first thing to do if you want to sell your agricultural products on an online market place is to read their terms & conditions. These would usually contain their charges and general rules and regulations. You wouldn't want to get kicked off the online market place because you violated their terms whether knowingly or unknowingly

2. Online Grocery Store:

Online groceries stores are a good place to sell off some of your agricultural products. According to wikipedia, *"A grocery store is a retail store that primarily sells food"*. While the food items online grocery stores sell may differ per store, if you're a farmer that probably grows agricultural products like potatoes, poultry product (e.g chickens & turkeys), aquatic animals (e.g fishery products), and a couple of other farm products. Big basket founded in 2011 (online super market in india is one of the examples for Online grocers. many online grocery stores would be a good fit for you.

3. Social Media:

Recenlty Social Media is playing vital role in marketing. The success of Facebook**,** Twitter, Instagram, and many other social networks has helped many small business owners to reach large number of customers without leaving their computer screens. Social media marketing is growing stronger day by day, and is capable to either explode your sales, or destroy it.

4. Personal Web Store:

owning your own web store is the best online way to sell your agricultural products as compared to selling your agricultural products on social media, an online grocery store, and an online market place, because having personal web store enables you to closely control your farm products sales on your platform, incase you get kicked off the rest.

5. Online Food Delivery:

By processing agricultural products to edible form, they can be sold online via a food delivery service. There are many restaurants that deliver food to customers when customers order food online. The food delivery is usually done via online food shopping sites like Hello Food, Food Panda, etc.

Platforms for E-marketing of Agricultural products in India

KisanMandi.com

It is the online Agricultual Market where you can Buy or Sell or Advertise fruits & vegetables, agri produce or any agri machinery or Tools or Tractors etc. it will really fulfils our dream **"Sabko Sahi Mol "**.

Kisanmandi Online Agri Market Private Limited is *incorporated/ registered as a Private Limited Company on 26-04-2016, is* **recognized as a startup by the Department of Industrial Policy and Promotion, Govt. of India.**

It has three verticals as under:

Retail – B2C: Online Vegetable store in Main cities of India.

Online wholesale – B2B: it is a Online Portal here farmers can submit their Agricultural Products for Sale.

Vendors (Channel Partners) – It is a Online Portal here Manufacturers or Big Distributors can sell Agri Machinery and products, Packing and food storage Materials to the Farmers.

Also, Kisanmandi.com will be catering to almost all the needs of the agriculture fraternity where they will find all commodities/ items ranging from Tractors. Diesel Engines, Pump Sets, Agro Farm Implements, Cattle feed, seeds, Grain storage bins, Water Tankers, Wheel Barrows, Trolleys, Tree Guards and Gardening tools etc.

National Agriculture Market or **eNAM**

It is one of the good online trading platforms for agricultural commodities in India. This market helps farmers, traders and buyers for online trading in commodities. This market helps to discover better price for the products and smooth marketing of agricultural products. The market transactions stood at □36,200 crores by January 2018, mostly intra-market. More than 90 commodities including staple food grains, vegetables and fruits are currently listed in its list of commodities available for trade. The eNAM markets are proving their graetness as it is witnessed with some aspects like the crops are weighed immediately and the stock is lifted on the same day and the payments are cleared online. In February 2018, some attractive features like MIS dashboard, BHIM and other mobile payments, enhanced features on the mobile app such as gate entry and payment through mobile phones and farmers database is helping adoption even more. The present trading is done mostly for intra-market, but in phases, it will be rolled out to trade in inter-market, inter-state, creating a unified national market for agricultural commodities.

It was launched by Ministry of Agriculture, Government of India. The electronic market pilot across India was launched on 14 April 2016 by Prime Minister of India, Narendra Modi. The Portal is managed by Small Farmers' Agribusiness Consortium (SFAC) with technology provider, NFCL's iKisan division. A similar project was initiated by the Congress government in Karnataka, during UPA period and it had been a great success. NDA government has rolled it out nationally.

eNAM platform facilitates farmers to trade directly on their own through mobile app or through registered commission agents.

The eNAM is linked with 585 markets (APMCs) in 16 states and 2 union territory. 45 lakh farmers got membership in 15 states. This market is facilitating traders and exporters in acquiring quality produce in bulk, at one place and it will ensure transparent financial transactions.

The Government plans to connect over 22,000 GrAMs, local farmers markets, with the platform.

Agricultural Marketing Information Network (AGMARKNET) It was launched by the Union Ministry of Agriculture in March 2000. The Directorate of Marketing and Inspection (DMI), under the Ministry, links around 7,000 agricultural wholesale markets in India with the State Agricultural Marketing Boards and Directorates for effective information exchange. This e-governance portal AGMARKNET, implemented by National Informatics Centre (NIC), facilitates generation and transmission of prices, commodity arrival information from agricultural produce markets, and web-based dissemination to producers, consumers, traders, and policy makers transparently and quickly.

The AGMARKNET website (http://www.agmarknet.nic.in) is a G2C e-governance portal that caters to the needs of various stakeholders such as farmers, industrialists, policy makers and academic institutions by providing agricultural marketing related information from a single window.

Challenges for E-marketing of agricultural products

1. Lack of knowledge of Electronic medias

Majority of the farmers do not have computer knowledge and unable to operate Android mobiles so may difficult them to go with e-marketing of agricultural products.

2. Worldwide competition

There are many number of sellers from different geographical areas of different countries. So it is

difficult to expect sell of our products with right price and right time.

3. No security:

Sometimes farmers may enter fake websites or fake online portals. This will be wastage of time and products.

4. Cannot fully depend on E-marketing.

Because still many number of customers prefer to purchase the products physically. So it is necessary to depends on offline market also.

Conclusion

Traditional marketing for agriculture products suffering from many drawbacks. Introduction of E-Platform for agricultural products is helpful from the point of farmers as well as governments. In this process every citizen of the country should support to the farmers. Development of nation depends upon development of farmers because farmer is the backbone of the country. By giving online marketing education to farmers, farmers will get marketing opportunity to their products that will contribute lot to the development of the nation.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Business Analytics & It's Impact on Business & Industry

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INTRODUCTION

Business Analytics became the most effective thing for business in the last decade. Different multinational corporate companies like Google, IBM, Face book, Yahoo and eBay are the frontrunners in big data and business analytics in their respective business domains [1].Business Analytics uses big data which is higher and richer data that shows more details about behaviors, activities, and events that happened all around. Business Analytics access this different variety of the data from huge resources with less response time.[2].Companies that collect data might be used to produce different income generation possibilities. So they need to find out what sort of data they need and how it will be collected, sorted and analyzed.

The sources of the data may be internal or external. The internal data constitutes different business reports, minutes of meetings, proceedings, etc. The external sources are customer feedback, responses, reaction of competitors etc. One of the rich source of data is social media now a days. Millions of users use social media websites daily. Social media are computer-facilitated tools that enable the faster exchange of information in virtual networks [3].The most widely used social media websites are face book, whatsapp, twitter, instagram and you tube. Millions of videos, data, files are daily uploaded and downloaded.

There is no single definition of business Analytics in literature. In fact each author stresses different aspects. BA or BI is defined as the method of converting data into information and subsequently to knowledge [4]. The types of knowledge obtained are about the customer requirements and decisions, organizational performance in the industry and the global trends. Another definition of BI, particularly the BA systems is, BA systems put together the gathering and storage of data and knowledge management with analytical tools to present a ready-for action and complicated information to the planners and decision makers [5].

This is to assist them to obtain the right information at the right time, location and form. The data is mined, extracted, and put to use by means of framing different models. These models are framed using different algorithms, operational research techniques and behavioral sciences. This information predicts a lot of things and provides guidelines in the formulation of the strategies in different business domains. So it is a combination of tools aiming to enhance the decision making in an organization by transforming data into beneficial information and knowledge which is extracted by utilizing data mining tools and analytical techniques. [6]

KEYWORD: *Business Analytics, Business Intelligence, Big Data, Predictive Analytics*

Scope of Business Analytics

Business analytics can be used as a solution provider in all walks of life and not only in business. It helps in taking strategic decisions for all business domains. Business Analytics in general are used to detect the relationships and patterns in data in order to predict the future by analyzing the past and taking better preventive decisions. Thus, the business analytics aim of use differ from one industry to another, for instance a marketer can use the business analytics to predict the customers' response to an advertising campaign,

or a product seller can use it to predict the movement of product prices, or it can be used to detect trends such as in banks if a manager wish to recognize the most profitable customers, or alert a credit card customer to a probable fraudulent charge. Thus the business analytics help in answering many questions such as what will happen if the demands of products decrease. Or if suppliers' prices increase, what is the risk to lose money in a new business?

Structure of Business Analytics

The organization has to understand the business need thoroughly so that the state of the art solution can be found out. BA is not a common solution to a business problem but varies according to the individual business need. Data mining is part of Business intelligence functionalities as defined by Gartner who described BI as a software platform delivering 14 capabilities divided into three groups of functionalities including integration, information delivery and analysis functionality which contain the data mining and predictive modeling.

While data mining is considered as the automated process to detect the un known patterns in the structured data of the organization (7) (8). The other scientists also describe data mining as the process to collect, filter, prepare, analyze, and store data that will be used to create useful knowledge and supporting the business analytics and predictive modeling.

The generalized structure of data analytics is divided into different elements

1. **Data Source/Data Layer**
   The internal source of data is generated from ERP, CRM, or SCM systems or other soft ware's, spreadsheets, HTML & XML documents, other files and spreadsheets. The external data sources are statistical public reports. The other inputs of data are discussions, videos, graphics and other user generated content.(9)

2. **ETL Process/Integration layer**
   Extract, Transform, Load This layer extracts the data from different original data sources, clear the inconsistent data, keep the data in required form and structure, integrate all the data together and upload it in defined data warehouse or data mart. The data processing or transformation is done by using programming language, scripting or SQL language. Here the transformed data is having different coding, quality than the source data. Non-relevant (repeat & missing) data are excluded. The data warehouses technology is subject-oriented, integrated, time-variant and non-volatile collection of data which supports the management's decision-making process [10].

3. **Data Analysis/Application layer**
   It consists of tools which are used for analysis of integrated data. This analys is identify trends, patterns and exceptions also. OLAP (Online Analytical Processing databases) are used to process the data and provides different point of view from all angles of the same data. Sales data can be collected within one particular territory, within a limited time frame and of a particular product or product line. The most significant component of the application layer is data mining a computational process involving the discovery of patterns in large data sets [11] .It involves using methods that are at the intersection of artificial intelligence, machine learning, statistics, and database systems to present useful information to users [12]. The outcomes of the data mining are used for prediction and description (describes reality).The already known variables are used to predict the future outcome. The data mining uses various techniques and some of these are listed by Hen et al. (2011) in their publication Data Mining: Concepts & Techniques and analyzed in Stodder's research text Customer Analytics in the age of social media(2012)are Cluster Analysis, Anomaly Detection, Association Rule mining, Classification methods, Regression analysis & natural language processing.

4. **The presentation or display layer**
   It presents the data in user-friendly manner. The outcome in different performance ere ports which is used to monitor the performance of business. The reports can be customized as per the need of the final user. Results are in the form of spreadsheet or dashboards. The strategic decisions are derived from these dashboards. The dashboards measures the business performance effectively which is a multi-layered applications built on business intelligence and data integration infrastructure [13]

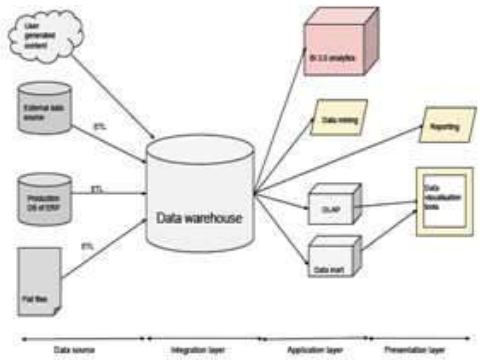

Figure 1. Business intelligence architecture (source: Hen et al. (2011))

Applications of BA in marketing

Marketing department of an organization has the responsibility of identifying, satisfying and retaining the customers using their product or services. The data driven digital marketing belongs to the emerging trends in marketing along with cross channel and content marketing.BA proves to be very effective in these marketing activities.BA can be used effectively in below area of marketing.

1. **Customer Segmentation and Profiling**
   The marketing decisions are depend upon the results derived from the application of customer segmentation and profiling techniques. The model used here is RFM model.(figure). This model divides the customers into groups according to the following three metrics values: recency meaning how recently the customer made a purchase; frequency, standing for how often they purchase; and monetary value, or how much they spend. The other segmental information like demographical segmentation (Age, sex, marital status, education) and behavioral segmentation (How often they purchase a product) can be also determined by BA. It also studies the migration of customers from one segment to the other and can be used for effective decision making regarding a product.

2. **Supportive analysis for cross selling & up selling**
   Here the previous purchases of specific customer are taken into consideration while selling the products. The market basket analysis identifies interdependencies between the products and clustering them as a model can be used in BA. The affinity grouping model identifies which product attract the sale of other products. These factors increase the sale of the product remarkably. Cross selling and up selling are considered to be the most attractive marketing objectives organizations hope to be achieve when implementing Business Intelligence into decision-making processes [14]

3. **Survival time Analysis**
   This technique shows how loyal the customer is to the brand and what is the probability of it that he will switch to another brand. The organization receives this be havioral information to prolong a customer's survival time.

4. **Forecast the development of strategic business process**
   The use of historical, present and anticipated data can predict the future of the company. The potential behavior of the customer can be analyzed which predict future sales, profit and overall strategies of the business.

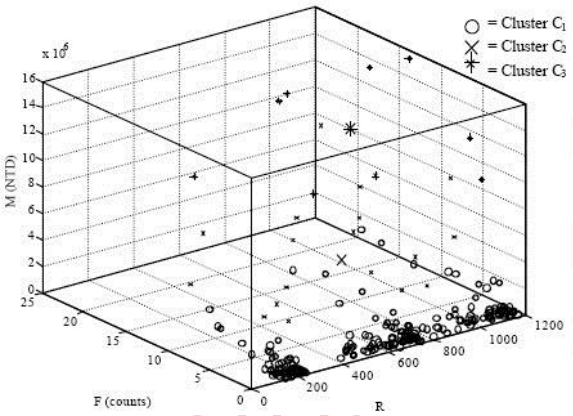

Figure 2.RFM model (Source: Hsu (2012))

Application of BA in social media

Many authors believe that social media analytics presents a unique opportunity for businesses to treat the market as a dialog between businesses and customers; instead of the traditional business-to-customer marketing approaches [15]

Different analytics techniques are used in social media. These are

1. **Natural language programming (NLP)**
   It is the most common technique and may not be used for processing of real time data. [16]

2. **Opinion Mining**
   The Opinion Mining Technique is defined as the effort of finding valuable information contained in user-generated data [17]

3. **Sentiment Analysis**
   Sentiment analysis software discovers the business value in opinions and attitudes expressed on social media, the news, and in enterprise

feedback. [18]. It is again divided into two techniques 1) Lexicon based method – It depend upon the vocabulary or words of the person. 2) Machine Learning method – Machine learning uses linguistic features.[19]. Overall, these techniques offer many more linguistic challenges, especially when analyzing Twitter and other micro blogs, which do not contain much information, assume implicit knowledge, involve lots of language variations, emoticons, letter-casing, domain-specific slang, hash tags and irony that cannot be processed by common BI [19]

Applications of BA in manufacturing

In majority of manufacturing organization BA services are integrated with existing systems in manufacturing like ERP, MRP, SCM etc. The dashboard is also an important tool used by BA. The manufacturing industry is benefitted by BA applications in which they can see the real time progress of a process which is visually represented in effective manner. Manufacturing organizations experienced higher productivity, reducing manufacturing cost and improved customer satisfaction. [20]

Applications of BA in Society in general

1. **Education Sector**
   BA (Predictive Analysis) models can be used by educational institutes to increase the retention of the student and enhancing their results and achievements.BA also predicts the students' performance in a specific course during the semester and mark the ones that will fail and have low performance in exams.[21]

2. **Agriculture Sector**
   BA models are used to develop a multi criterion support system based on predictive analysis to help the stakeholders having better purchases and the ability to take better sales decisions and knowing the requirements of the green coffee supply chain market in India. [22]

3. **Finance Sector**
   The researchers created a BA model to optimize prediction of products and stock market indications. Thus this model allows to set the stock indications future values and trading of financial services which will allow investors to increase significantly their returns on investment and reduce the risk [23]

4. **Defense Sector**
   In Pakistan the focus of the BA model was to minimize the loss of human life from the drone attack by predicting the future attack frequency and the prospective losses and injuries and its adoption by the government. [24]

Challenges in front of BA

1. **Infrastructure**
   Big infrastructure is needed to use different BA models in industry. Presently large multinationals like face book, Google, IBM, eBay, amazon are using it. Large and midlevel companies should consider the use of online platforms for this purpose. Most mid level companies in India are unaware of online platforms of BA.

2. **Agility**
   Change is permanent in every business. The BA model must be agile/ flexible to accommodate the business requirements of the future.

3. **Trained Work force**
   Specialized and technically qualified/trained people are needed to handle all BA activities.

4. **Privacy Violation**
   The risk in utilizing of big data analytics is obviously the privacy aspects, not all the required information can be easily accessed, so that companies must consider the rules of taking information from other websites or from individual's private accounts.

5. **Integration of current ERP systems with BA models**
   Different online BA models like HADOOP, OLAP are not able to integrate with the current ERP systems of the organization. They cannot extract the exact information used for decision making.

Significance of BA in digital economy of India

NASSCOM predicts the Indian Analytics service industry is growing at a CAGR of 25% and poised to touch USD 2.3 billion by 2018.The industry in India is expected to almost double by 2020. The Indian analytics service market stands at 35%-50% of the global market. [25]

Digital economy in India is progressing fast due to the new internet savvy generation and also government is

promoting it by various measures. The advantages are speed, less cost and convenience. BA will become the important facet of this economy. As more and more transactions becomes digital more and more data will generate, This data will be the important aspects to formulate different BA models. So BA becomes more and more significant and important as the digital economy progresses. The BA scientist dig dipper into this data to make decision making easier for the businesses. Indian corporate world become more streamlined and can take informed business decisions.

Conclusion

Business Analytics is an emerging field in India. Use of BA models will get a boost as the digital economy and use of internet become rampant by every citizen in india.BA provides important information which can be well utilized in business for decision making. BA improves the process efficiency, delivery time, reduces cost, increases customer satisfaction levels and add value to the business. Indian corporates are also formulating the strategies based on business analytics in their respective business domains. It will certainly change the way of doing business.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Digitalization in Banking Sector

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ABSTRACT
The role of digitalization in the banking sector has altered customer's preferences and demands.

The main purpose of the study is to know the impact of digitations in context to e-banking services. Traditionally the relationship between the bank and its customers has been on a one-to-one process.

The government of India has been curiously taking various steps to bring to technological advancements in the banking sector in India. Introduction of debit cards, credit cards, NEFT, RTGS, Jan Dhanyojana, White label ATMs, mobile banking, internet banking and many other major initiatives to enhance banking in India have great responses from the consumer's end.

These diversified digital products help the organizations (service providers) to improve their firm performance and to remain competitive in the market. They also assist in increasing market share to grow their profitability and improve financial position and performance.

They all observe that despite rapid technological advancement in DFS during the last ten years, Digital Financial Services the factor affecting firm's performance didn't get the reasonable attention in academic literature and profitability.

Evolving new technologies like app banking, mobile wallets etc. more people are accessing and using financial services provided by the banks. The paper discusses about the impact of digital technology over financial position with respect to the Indian economy and cultural.

KEYWORDS: *Banking Sectors, New innovations, Digitalization and Demonetization, Challenge to Digitalization, Recent Trends in Banking*

INTRODUCTION

'Digital' is the new concept in the banking sector, with banks all around the world is shifting towards digitalization. Banks of all sized and across all regions are making huge investments in digital initiatives in order to maintain a competitive edge and deliver the maximum to its customers. Digitalization leads to data analytics and intelligence, which helps banks comes get closer to customers.

The financial development in Indian banking industry occurred after the nationalization of 14 major scheduled banks in July, 1969 and 6 in April, 1980. In the 1990s, The future of Indian Bank looks exciting but also transformative. India's banking sector could become the fifth largest banking sector in the world by 2020 and the third largest by 2025. Indian banks used technology based solutions to raise revenue generation, increasing customer experience, optimize cost structure and manage organization risk. However, there is a wide change in the technology applicapability and capability across different banking industry.

Banking digitalization

New Innovations:

There has been new way for innovation in the financial sector in recent years as banks realize the need of digital technologies such as mobile, analytics and telepresence to meet fast-changing demands from customers. Following are the some new innovations in banking sectors:

1. Biometrics Technology :

Biometric technology by which a person can be uniquely identified by evaluating one or more distinguishing biological traits. Biometric authentication includes fingerprints; hand, DNA, retina, ear and face features. Biometrics systems could end the need of PIN code and password. According to the BBC, Hongkong and Shanghai Banking Corporation (HSBC) are launching voice and touch recognition security services in the UK. Barclays also upped security in 2014 – offering finger scanning for authentication of large transactions.

2. Facial recognition Technology :

A facial recognition system is a new computer application capable of identifying or verifying a person from a digital image or a video frame from a video source. There are many types of authentication for banks and payment firms to consider though, and e-commerce firm Alibaba believes that payments could be made with a smile. HSBC is the first bank who adopts the facial recognition technology.

3. In-car apps :

Spanish financial institution Caixa Bank has created the first mobile banking app that can be accessed while driving, using voice control functionality. The technology used by CaixaBank app, called Línea Abierta BASIC. Drivers can make balance enquiries and transfers, as well as locate nearby branches and ATMs, by speaking into their Android device.

4. Smart Watches :

Banking transactions can be done on smart watch-be it an Android Wear or Samsung Gear. It‘s not only global financial institutions and banks like Scotia bank, Deutsche Bank that have developed apps for smart watches that run on all major mobile operating systems. But some Indian private sector banks like ICICI, AXIS, HDFC banks have introduced smart watches apps.

Table 1: Smart watch apps launched by Indian banks

Name of the bank	Name of the smart watch app
HDFC bank	Watch Banking
ICICI bank	iWear

Source: compiled from different websites

5. Google Glass Technology:

Spain, Banco Sabadell in became one of the first banks to create retail Google app that allowed users to locate the nearest ATM, check account balances, and use video conferencing for technical support. Spainish financial firm, Caixa Bank has also already developed a Google Glass app. It works by super imposing directions to the nearest branch onto the Glass screen, providing information such distance and phone number of the nearest branch, all of which is accessed through the voice recognition system.

6. Robotics :

Bank of Tokyo-Mitsubishi UFJ took a first step toward employing nonhuman Staff, with the introduction of a customer service humanoid robot at its flagship Tokyo outlet. The robots can answer basic customer service questions in 19 languages, as well as analysing customers facial expressions and behaviour. Country's leading private sector lender ICICI Bank has implemented robotics software. Over 200 software robots are now performing more than ten lakh transactions per day for the bank which comprises 10% of its total transactions.

7. Augmented Reality(AR) apps :

Augmented Reality (AR) is the method of enhancing and improving your view of the real world using different technologies. It is the integration of digital information with the user's environment in real time. Australian Bank announced the release of an augmented reality app for mobile devices. Commonwealth Bank of Australia and St. George Bank Australia also adopted this technology.

8. Beacon technology :

Bluetooth Beacons installed at banks to integrate physical and mobile channels, to create a new type of interaction and effective communication and to deliver to the customers a positive and personal experience. Barclays is one of the first banks to using all this technologies.

9. Oculus Rift :

Rift is advanced display technology combined with its precise, low-latency constellation tracking system enables the sensation of presence. The US bank has been testing the use of Oculus Rift virtual reality headsets at its Digital Labs in San Francisco, offering customers the ability to “virtually” enter a branch and speak to a teller face to face.

10. Crypto currencies :

A crypto currency is a medium of exchange like normal currencies designed for the purpose of exchanging digital information. A crypto-currency is a digital currency created through encryption techniques. Bit coin is the most famous. South Africa‘s central bank is ―open‖ to crypto-currencies and block chain, according to new statements from its governor. According to a recent media report, the banks that are opening crypto currencies include Deutsche Bank, BNY Mellon, Banco Santander and UBS.

11. Artificial intelligence (AI) :

Artificial intelligence is an area of computer science that emphasizes the creation of intelligent machines that work and act like humans. Computers can perform activities like speech recognition, Problem solving with AI. Learning and Planning and Swiss banking giant UBS entered into a commercial agreement with software vendor Sqreem, which crunches huge volumes of information about a clients behaviour to offer them detailed, personalised in format

Digitalization and Demonetization

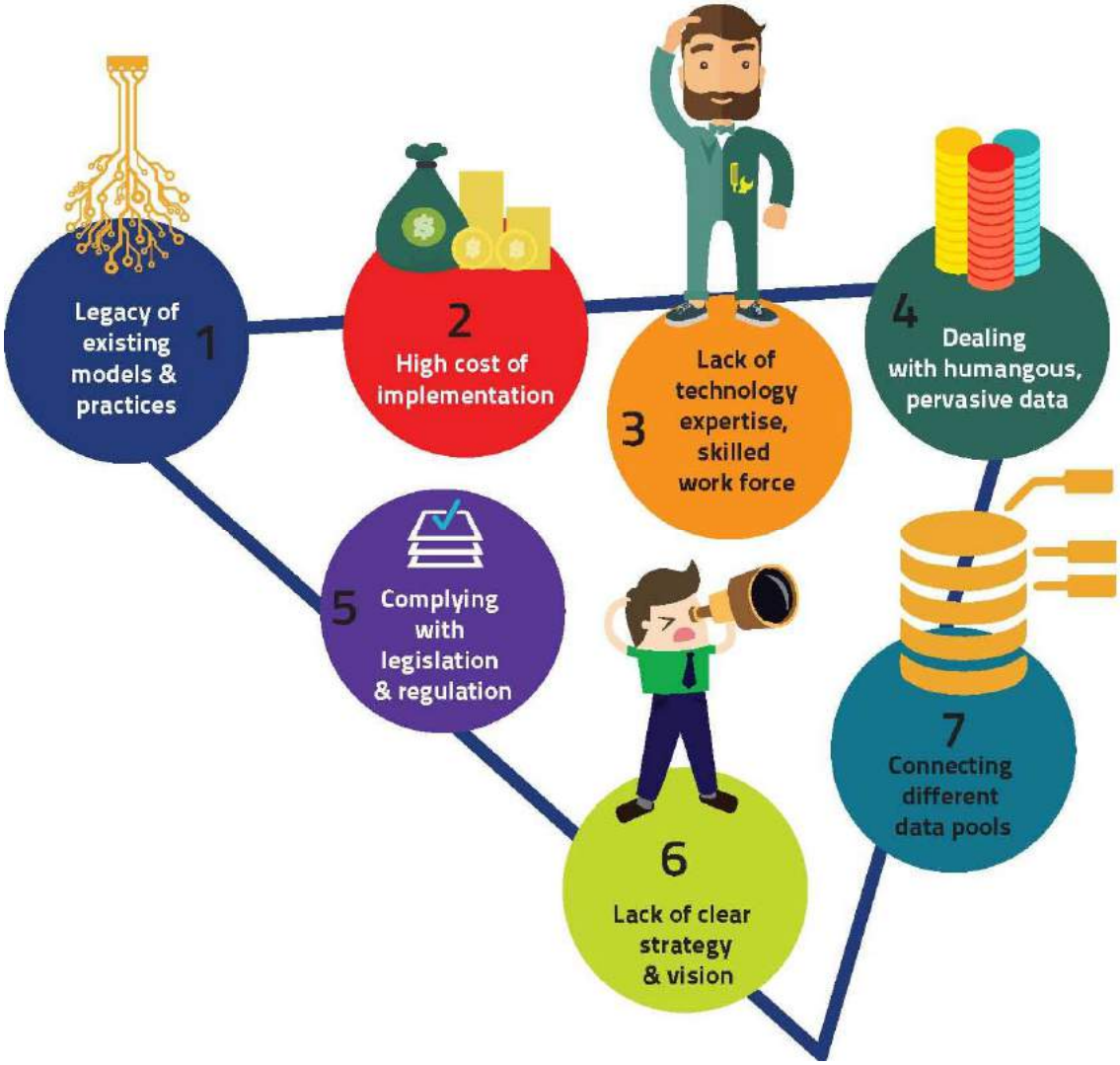
Digitalization transition through Digital India Programme aims to provide the most needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance:

Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Every pillar has its own importance, complexities in implementation and is a propellant for the overall growth of the country.

1. **Broadband Highways:** It covers 3 components broadband for all rural, broadband for all urban and National information infrastructures.

2. **Universal Access to Mobile Connectivity:**
   It focuses on network penetration and filling the gaps in connectivity in the world.
3. **Public Internet Access Programme:**
   To provide Common Services Centres (CSCs) and Post Offices as multi-service centres.
4. **e-Governance:**
   Reforming Government through Technology: Government Process Reengineering using IT to simplify and make the government processes more efficient it is a critical for transformation to make the delivery of government services more effective across various government domains and therefore needs to be implemented by all Ministries.
5. **e-Kranti :**
   Electronic Delivery of Services: The Government approved the National e-Governance Plan (NeGP), comprising of 31 Mission Mode Projects (MMPs) and 8 components. e-Kranti is an essential pillar of the Digital India initiative and there are 44 Mission Mode Projects under e-Kranti, which are at various stages of implementation. (Includes Income Tax, Agriculture, Land records, Banking, Gram Panchayats and Post office etc.)
6. **Information for All:**
   Online hosting of information & documents to facilitate open and easy access to information for citizens to use digitalization in the country.
7. **Electronics Manufacturing:**
   It focuses on promoting electronics manufacturing in the country with the target of NET ZERO Imports by 2020 as a striking demonstration of intent.
8. **IT for Jobs :**
   IT focuses on providing training to the youth in the skills required for availing employment opportunities in the IT/ITES sector in the country.
9. **Early Harvest Programmes:** It consists of those projects which are to be implemented within short timeline.

Challenge to Digitalization:



Recent Trends in Banking:

1. Automatic Teller Machine (ATM):- Automatic Teller Machine is the most popular devise in India, which enables the customers, can withdraw their money 24 hours a day 7 days week. ATM allows customer who has an ATM card to perform routine banking transactions without interacting with a human teller. In addition to cash withdrawal, ATMs can be used for payment of utility bills, funds transfer between accounts, deposit of cheques and cash into accounts, balance enquiry.

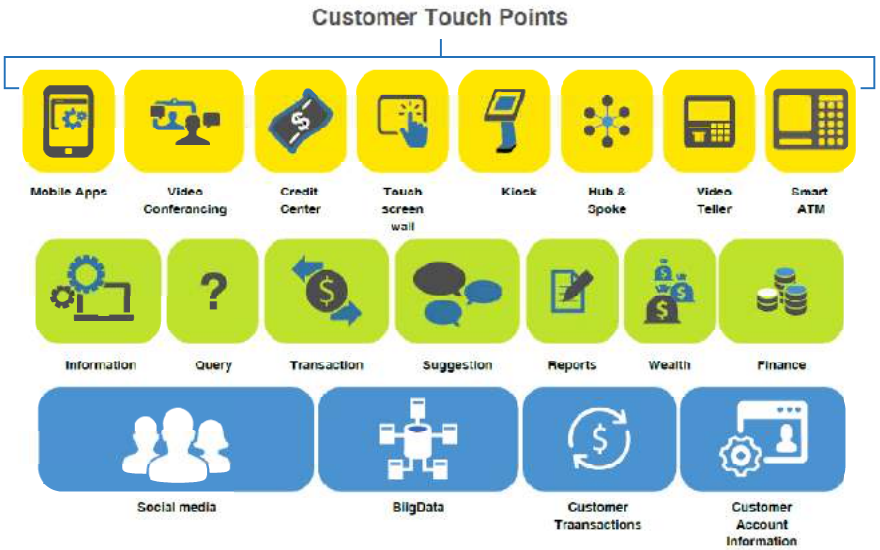
2. Tele Banking: - Tele Banking facilitates the customer to do entire non-cash related banking on telephone. Under this devise Automatic Voice Recorder is used for simpler queries and transactions. For complicated queries and transactions, manned phone terminals are used in Tele Banking.

3. Electronic Clearing Service (ECS):- Electronic Clearing Service is retail payment systems that can be used to make bulk payments/receipts of a similar nature especially where each individual payment is of relatively smaller amount. This facility is meant for companies and government departments to receive large volumes of payments rather than for funds transfers by individuals in ECS.

4. Electronics Funds Transfer (EFT) :- Electronic Funds Transfer (EFT) is a system where by anyone who wants to make payment to another person. can approach his bank and make cash payment or give authorization to transfer funds directly from his own account to the bank account of the beneficiary. Complete details such as the receiver's name, bank account number, account type (savings or current account), bank name, city, branch name etc. should be furnished to the bank at the time of requesting for such transfers so that the amount reaches the beneficiaries' account correctly and faster. RBI is the service provider of EFT.

5. Real Time Gross Settlement (RTGS) :- Real Time Gross Settlement System, introduced in India since March, 2004, is a system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. The RTGS system is operated by the RBI and provides a means of efficient and faster funds transfer among banks facilitating their financial operations. As the name suggests, funds transfer between banks takes place on a 'Real Time' basis. Therefore, money can reach the beneficiary and the beneficiary's bank has the responsibility to credit the beneficiary's account within two hours of the transaction mode.

6. Point of Sale Terminal: - Point of Sale Terminal is a computer terminal that is linked online to the computerized customer information files in a bank and magnetically encoded plastic transaction card that identifies the customer to the computer. During a transaction, the customer's account is debited and the retailer's account is credited by the computer for the amount of purchase.



We have highlighted above some of the new emerging trends. Now I highlight the opportunities' that new trends bring in the growth and development of banking sector in our country.

Conclusion:

1. The digitalization brings innovation, ease of working, new job opportunities and growth in the economy.
2. It helps to bring transparency in the system and more transparent are the flow of funds in the economy less is the problem of tax evasion, parallel economy.
3. With all these benefits available it also makes it necessary for the people to have basic financial knowledge and a push towards the importance of the financial literacy.
4. With the help of which they can protect their money in situations like inflation, depression, and know about different financial products and services to save it for their better future.
5. Digitalization can also play an important role in achievement this goal as it can have a greater reach to the people.

By this we can reach on a conclusion that the new technology needs to harnessed well and for this it is not only the availability but also the knowledge to use it and get benefits from it.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
International Conference on Digital Economy and
Its Impact on Business and Industry
Organised By: V. P. Institute of Management Studies & Research (VPIMSR), Sangli

Appraisal Study of Speech Recognition EDI in Emerging Technologies

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ABSTRACT
Speech could be a natural mode to move with others. With speech, we are able to categorical our words to others. Speech recognition could be a method or technology wherever the statements or commands of human speech to grasp and react accordingly. Speech recognition permits machining system to show the incoming speech signals into commands through the method of distinguishing and understanding. It additionally creates the natural language operate. Main Goal of speech recognition is to attain higher language communication between man and machine. So it is a great technology of human machine interface. The paper describes the speech recognition technology development is all basic principles, strategies and classification of this technology. Accuracy of various strategies of speech technology is provided to prepared strategies with their performance side. By this paper focus on various mobile base speech recognition technologies available with its comparisons'.

KEYWORD: *Speech; Speech recognition; voice; machine control; human machine interaction; communication; device control*

1. INTRODUCTION

Electronic DataInterchange(EDI) may be a transmission technique that gives standards for exchanging information via any electronic means that.

1.1 HISTORY of EDI

Like several alternative early info technologies, EDI was impressed by developments in military supplying. The quality of the 1948 Berlin airlift needed the event of ideas and ways to exchange, generally over a three hundred baud rate teletype electronic equipment, immense quantities of information and data concerning transported product. These initial ideas later formed the primary TDCC (Transportation information coordinating Committee) standards within the USA. Among the primary integrated systems mistreatment EDI were Freight management Systems.[1] One such period of time system was the London flying field shipment EDP theme (LACES) at Heathrow flying field, London, UK, in 1971. Implementing the direct dealer input (DTI) technique, it allowed forwarding agents to enter info directly into the Customs process system reducing the time for clearance. The rise of maritime traffic and issues at Customs just like those tough at Heathrow flying field light-emitting diode to the implementation of DTI systems in individual ports or cluster of ports within the Nineteen Eighties,

1.2 Types of EDI

1) Direct EDI/Point-to-Point

Brought to prominence by Wal-Mart, direct EDI, generally referred to as point-to-point EDI, and establishes one association between 2 business partners. During this approach, you connect with every business partner severally. It offers management for the business partners and is most ordinarily used between larger customers and suppliers with lots of daily transactions.

2) EDI via VAN or EDI Network Services supplier

an alternate to the direct EDI model is associate EDI Network Services supplier, which, before the

web, was brought up as a added Network (VAN). Several businesses like this network model to protect them from the continued complexities of supporting the variable communication protocols needed by totally different business partners.

3) **EDI via AS2**
AS2 is a web protocol that permits information to be transmitted firmly over the web. EDI via AS2 delivers the practicality of EDI with the ubiquitous sness of net access.

4) **EDI via FTP/VPN, SFTP, FTPS**
FTP over VPN, SFTP and FTPS area unit commonly-used communication protocols for the exchange of EDI documents via the web. Any of those are often wont to hook up with business partners directly (Direct EDI) or via associate EDI Network Services supplier.

5) **Net EDI**
Not like EDI via AS2, net EDI conducts EDI employing a normal net browser. Organizations use totally different on-line forms to exchange info with business partners. Net EDI makes EDI simple and reasonable for small- and medium-sized organizations and corporations that have solely occasional ought to utilize such a service.

6) **Mobile EDI**
Users have historically accessed EDI by a non-public network like a VAN or the web so as to send and receive EDI-related business documents. Mobile EDI has had restricted adoption, partially attributable to security issues with mobile devices across associate EDI infrastructure, however in the main attributable to restrictions with the mobile devices on the market. The screen quality and size of devices has been unsuitable, however there's a growing business developing computer code applications (‘apps’) for transferring onto mobile devices therefore it's solely be a matter of your time before you'll be ready to download provide chain and EDI connected apps from personal or company app stores. [2][3][4]

7) **EDI Outsourcing**
EDI Outsourcing (also brought up as B2B Managed Services and B2B Outsourcing) may be a invasive choice that permits firms to use external specialist resources to manage their EDI surroundings on a every day basis. This can be partially driven by firms desperate to integrate to back workplace business systems like Enterprise Resource Planning (ERP) platforms. Several firms don't need to use their internal resources to undertake this current kind of work in order that they source it instead.

2. SPEECH RECOGNIZATION IN EDI

Speech recognition is that the ability of a machine or program to spot words and phrases in voice communication and convert them to a machine-readable format.

How It Works:

To convert speech to on-screen text or a pc command, a pc must undergo many complicated steps. After you speak, you produce vibrations within the air. The Analog – To – Digital Converter (ADC) interprets this analog wave into digital information that the pc will perceive. To do this, it samples, or digitizes, the sound by taking precise measurements of the wave at frequent intervals. The system filters the digitized sound to get rid of unwanted noise, and generally to separate it into totally different bands of frequency. It conjointly normalizes the sound, or adjusts it to a continuing volume level.[5][6]

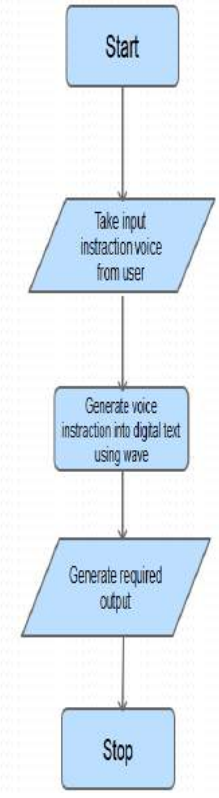

Figure 1.1: Flow Chart How it works

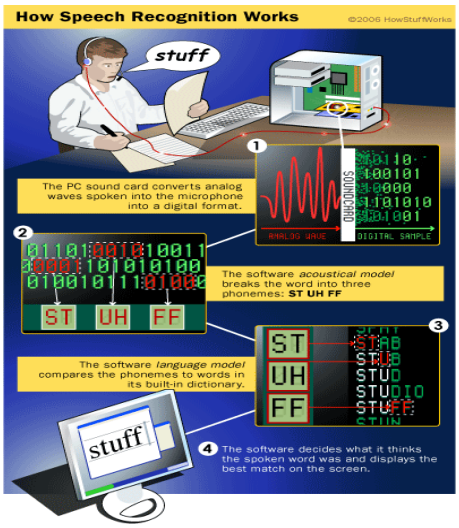

Figure 1.2: Technical exposer of Speech Recognition

3. Speech Recognition Technologies

1) I Phone "Siri"

It's voice recognized practicality that is embedded in Apple phones that takes instruction as a voice from user and convert it into the system intelligible language victimization wave and it'll come back output.

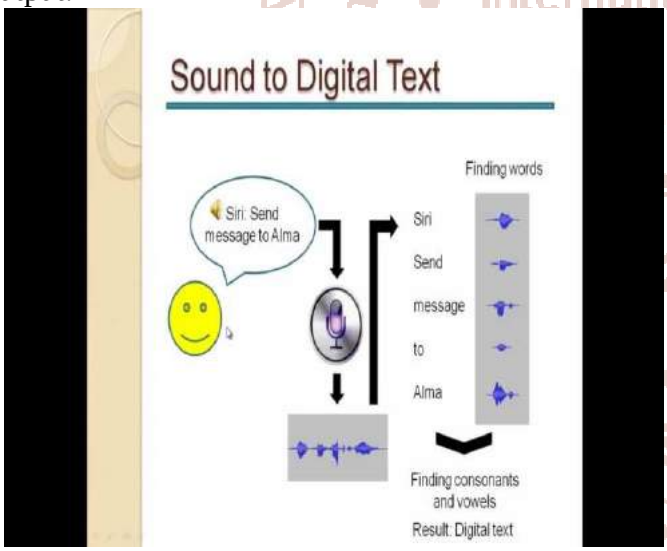

Figure 1.3: Block Diagram of "Siri"

2) Amazon Echo:

It is the device that is developed by Amazon. The devices connect with the voice-controlled intelligent personal assistant service Alexa that responds to the name "Alexa". This "wake word" are often modified by the user to "Amazon", "Echo" or "Computer". The device is capable of voice interaction, music playback, creating flutter lists, setting alarms, streaming podcasts, taking part in audio books, and providing weather, traffic and different real time data. It can also control several smart devices using itself as a home automation hub. [7]

Figure 1.4: Amazon Echo

3) GOOGLE HOME:

Google house is a sensible speaker developed by Google. It had been declared in might 2016 and free within the us in November 2016. Google Home allows users to talk voice commands to act with services through the Home's intelligent personal assistant referred to as Google Assistant. an oversized variety of services, each in-house and third-party, area unit integrated, permitting users to concentrate to music, explore videos or photos, or receive news updates entirely by voice. Google Home additionally has integrated support for home automation options, belongings users speak commands to the device to regulate good home appliances

Figure 1.5: Google Home with "Speech Sensor"

4) SPEECH TEXTER

It is net the net} web application that provides practicality as rather like MS-Office word. it's wholly speech recognized internet application that takes the instruction from user and kind it within the editor window and it'll keep information in continues manner in editor as outlined in following figure:

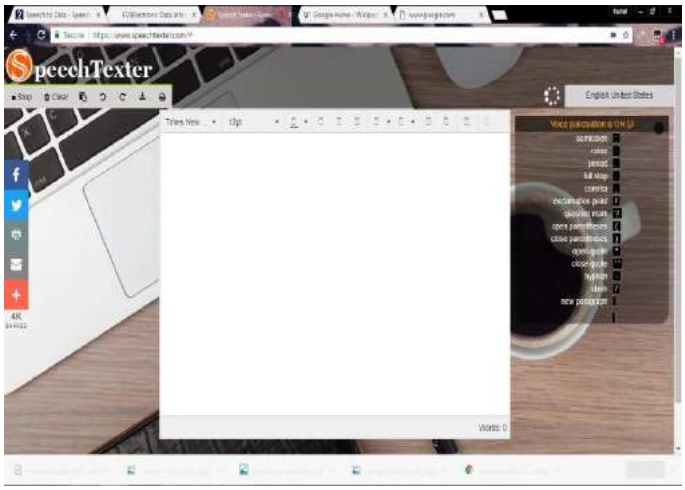

Figure 1.6: Speech Texter: A Web SToT (Speech to Text)

PROBLEM AND BENEFIT:

- In Speech Texter there are a unit therefore me issues that the recognition of this net application isn't so sensible and it doesn't settle for troublesome words simply and it'll sort totally different words.
- But it's useful for a few user United Nations agency don't need to jot down numerous words. So, by this will they can they'll speak the sentences and this net application will sort it so the user can simply put it aside.

5) JIO PHONE:

The Jio Phone may be a 4G-ready feature phone which will embody support for voice input and also the whole host of Jio apps. This phone factory-made by Reliance Info comm. LTD, This phone can become be a awfully known phone at now.

According to the society the Jio Phone is known as a result of its value low-cost in cost and it's several options principally "Speech Recognition" and different options simply same as several mobiles.

We heard that there's additionally a Hotspot facility in Jio Phone however really it's not 100 percent right.

There are a unit some differing kinds of models factory-made by Reliance Team that the feature of Hotspot aren't obtainable in every and each mobile however in some models the Hotspot feature is obtainable. If we have a tendency to see as a IT field Team then the Jio phone isn't standard attributable to it's worth and options, there are a unit some additional awe-inspiring options that was provided by Reliance team and it's necessary that everybody is aware of it.[8][9]

Firstly, the Jio phone does not want any third party application to run or support "Voice Command". This Phone features a nice feature that it simply ought to unlock the phone and provides command. In the other phone there's no facility like this except I Phone sir.

Then, the Jio Phone has done a superb work that they compress and install all the Jio apps during this tiny phone that has no such a lot RAM capability. really the scale of all Jio apps is therefore massive which all Apps area unit simply put in in Jio phone it's superb.

Then, the Jio phone has additionally a pleasant service of languages and it's recognition is incredibly nice. It support Hindi Language additionally. it's terribly spectacular Phone.

Figure 1.7: Jio Phone Speech Recognition

6) Lyra VIRTUAL ASSISTANT:

As a bit like Jio Phone we have a tendency to got one mobile application "LYRA" the virtual assistant. As we all know Jio has several feature however as same as Jio Lyra application has conjointly those all options like Speech Recognition. But we are going to see that Lyra has such a lot a lot of additional options than Jio Phone, Lyra is absolutely terribly user interactive.

There are a unit several options in Lyra like: Jokes, Weather, Math, Play music, notice Video on YouTube, Search on Google.....etc.

Lyra has an additional glorious feature that it s does not want any third party Browser to look something. It has its own Browser that is built-in. It has its own Alarm facility, business facility ,Message causing facility, flutter notes facility, Reminder facility...etc There has E-mail causing facility during this however it's some downside by that it cannot settle for excellent E-mail. So, there'll be downside to send a E-mail to anyone. For user facilitate Lyra provides the list of all options and commands by that user will simply operate it.

If we have a tendency to compare Lyra, Jio Phone, Siri then the Lyra are best compare to any or all

Figure 1.8: A Very New your Personal Assistant "Layra"

4. Comparision of All Voice Recognization Devices And Applications

TITLE	Google Voice Search	I-PHONE SIRI	Google Home	Amazon Echo	Speech Texter	Layra Android App	JIO Phone
Useful for human daily Utility	5	4	3	3	2	4	4
Searching Information	5	0	3	2	0	3	2
Useful for Historic Data Fetching	5	0	3	0	0	3	2
Best for Communication	0	4	3	4	0	4	4
Useful for Data Sharing	0	1	0	0	4	4	5
Useful for human Interaction	4	5	3	4	3	5	5
all types of knowledge data	5	1	3	0	0	4	4
TOTAL	24	15	18	13	9	27	26

5. Conclusion :

In this paper, given a review of Speech recognition, the area of Speech recognition is regularly dynamical and improving. Speech recognition technology is capable to make possible to speak with disabled persons. It makes management of digital system. In future, huge prospects to enhance the world of speech recognition technology, by enhancing of speech recognition will give higher services for disable persons. Speech recognition will give a secure atmosphere to our system by voice authentication. Different strategies and their accuracy conjointly tabulated that shows the employment of HMM and ANN model is far wider used strategies for continuous speech recognition method. In the future, the correctness of speech recognition and also the Quality of speech are going to be additional improve that's makes communication really easy and reliable for everyone including disable persons. Future systems should be additional efficient and capable compare to ancient systems. Future scope: the globe of Speech recognition is speedily changing and evolving. Early applications of technology have achieved variable degrees of success. The promise for the future is considerably higher performance for nearly every speech recognition technology space, with more robustness to speakers, background signal etc. This will ultimately result in reliable, strong voice interfaces to each telecommunications service that's offered, thereby creating them universally offered.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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E-Governance: Contests for State Level Model

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ABSTRACT
By the mean of E-governance this informative research paper focus on general trait and main criteria of challenges in front of services provide by government. When we deliberate about Information and Communication Technology (ICT) E-governance is a part of it and it provide convenient application on citizens and government. We accept India is in list of growing country; E-governance is an important key element for both citizens as well as government to increase transparency between Government–to–Citizens (G2C). Same when we talked about E-governance we must focus of some focal challenges for it as primary level in this research paper contest is categories like – Environment – Social – Economical – Technical part to build E-governance as successful model it leads to the Gross Domestic Product (GDP). Before proposed model for E-Governance we must contemplate some major aspect and challenges for the same.

KEYWORDS: *Information and Communication Technology (ICT), Government – to – Citizens (C2G), Gross Domestic Product (GDP)*

1. INTRODUCTION
E-Government can be defined as the use of information and communications technologies by governments to improve the range and quality of information and services to citizen, businesses, society organization and other government agencies in resourceful, gainful and useful manner to make government process more transparent. The main objectives that follows delivery models named Government-to-Citizen (G2C), Government-to-Business (G2B), Government-to-Government (G2G) and Government-to-Employee (G2E).

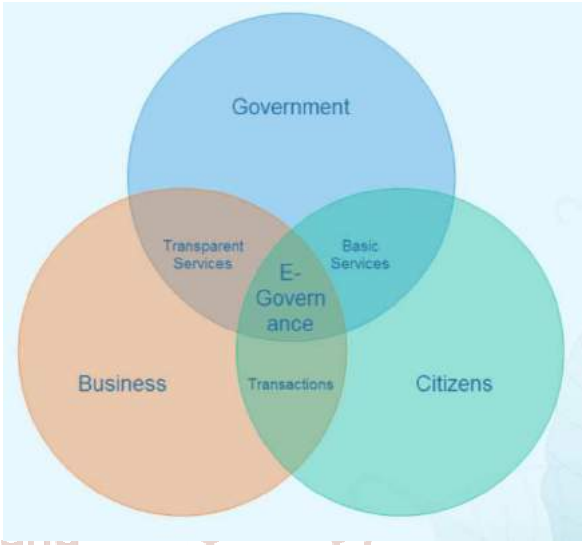

Figure 1.1 Target Agents and Services of E-Governance

1.1 Government-to-Citizens (G2C)
First if we discuss about G2C, it is the most basic and an important role played by the government for the citizen of the States. Likewise Baby birth - Medical Services - eliminatory, Secondary and college level quality education services not only this but motivate the citizens to convert to employees or an entrepreneur.

1.2 Government-to-Business (G2B)
Than we focus on G2B, government will help to business and non-profitable company for transactions such as contract bids, data collection and grants. Government should provide transparent services wherever business owners should pay liabilities and taxes to government. Government should announce various beneficiary schemes for small to MNC level business.

1.3 Government-to-Employee (G2E)

An employment is directly effect to Gross Domestic Product (GDP) of any country, according to this it is decide country is in developing and developed phase this process indicates G2E. An employee responsibility and liabilities are to pay tax to the government with 100% transparency; by the collection of this tax government should provide basic services to the citizens and senior citizens. For this same any government should provide user friendly and portable taxpaying system to all the employers.

1.4 Government-to-Government(G2G)

Finally the growth of government that converts to E-Governance is depend depth study and pilot testing of existing E-Governance model of other states. This G2G process meets and discoveries benefits and challenges face by other E-Governance states, if we take example Gujarat as E-Governance is in developing phase and same as other side government like Bangalore, Tamil Nadu had already established E-Governance system for their state.

To any Government to E-Governance first we face so many challenges. In this research paper we find main domain challenges like Environmental and Social Challenges – Economical Challenges and Technical Challenges.

2. Environmental and Social Challenges

2.1 Languages

Gujarat State has around 6 Core populations. This population scattered into 27 districts, all these districts have various languages as pronunciation in Gujarati. Most of people do not know English language. So Government has big challenges to understand common popular languages which will worldwide accept. For this English language popularity is must.

In against of facing this issue we found literacy ration of Gujarat state, however everyone knows Gujarati as mother tongue in compare to English speaking language. So it is necessary to focus literacy ratio of Gujarat State.

2.2 Literacy and IT- Literacy

As per National Information Centre (NIC) statistics recent data of Gujarat literacy is 79.31 % since 2011, among them rural area literacy is just 73% as compare to urban area it is 87% hence it is desirable to promote rural area education as fast for E-Governance system. Out of this population most of people do not have knowledge of computer and Information Technology. So here is a big challenge for the Government to IT awareness in each district for successful implementation for E-Governance system.

2.3 Struggles for Changes

Literacy and IT Literacy is a key factor for E-Governance setup model among this IT Literacy has different types of criteria like general users of IT, developer level users of IT, expert level of users in IT. Out of this E-Governance model should be develop like that general users of IT can accept – utilize – service benefit – analysis (admin level). Main issue is general users' struggles how to utilize E-Governance service. In some state it is existing as a part of website – web portal but as per general survey it comes out people/citizens are not interested – they are not getting portability – depend on internet services…etc. Factors for struggling and facing a lot problem for accept changes for the better service.

It should be desirable that E-Governance model should provide services by most famous and immerging technology like "mobile app" development. By this suggestion we can come out from such struggle and changes and people will easily accept this service at 24x7 level.

2.4 Population

India is considered as big number of population country, among the different state if we considered as a pilot project on Gujarat State which has nearly 6 Core populations. Out of this if we considered factors like literacy – IT Literacy and then after we suggest most useful E-Governance service on Mobile app. But we still face some problem like – Unique Citizen – Identification – Citizen Authentication – Genuine Data filling by Citizen – Keep Record of each Citizen – Citizen Assets Data. To manage these problem Government require more skilled and technically sound staff for various types of services.

3. Economic challenges

To drive E-governance Economical or financial is an important obstacles for successful setup of an E-governance model. For this we found some important aspects of challenges as below.

3.1 IT Infrastructure

For every services of E-Governance we require authenticate data in proper format. To manage these huge data government need to setup big data Centre at

different places. To manage Centre government need expert IT Engineer, Big Data Analytics and Developers. If we consider to setup Data Centre for top to bottom level services, government need to centralize all the authenticate data and connectivity between all Villages – Taluka – District and then all data collect to the Central level State Administration department. As we know national level we already established National Informatics Centre (NIC), we need to suggest State Information Centre (SIC) to provide maximum services by E-Governance. Internet is a key resource for IT Infrastructure for that Gujarat State had already established GSWAN (Gujarat State Wide Area Network). State Government has already establish services like Core Applications – Common Applications – Departmental Applications – Knowledge Management Applications – File Management Applications – Workflow & Organization Model – Securities & Access Control etc. If we consider all these aspects it is completely administration level, but as a key factor for end user beneficiary it recommend to build IT Infrastructure to setup Wi-Fi and best service of internet service provider (ISP) by government only.

3.2 Portability of Applications

To enhance the work flow and work efficiency government should provide specific device to the central administration as well as to all department and government offices which is connected with E-Governance service. For that government have big challenges for purchasing huge number of such device for their staff. So we suggest to make each services of E-Governance must have dashboard to analyze work of their department so one can check the workflow from device anywhere - anytime. Application Portability can enhance the work efficiency and transparency. Citizen will get the advantage of Application Portability in term of time to time response from government.

3.3 Maintenance

When we talk about huge IT Infrastructure and device portability these all means digital devices – Gadgets – Networks – Data Servers – File Servers and many more. To maintain this assets government should require Technically Skilled Staff. To reduce the economic cost it is require regular maintenance and setup with minimum cost. For the individual users data security government should establish backup server also. Maintenance in sense of hardware and software as well as when emerging technology comes update themselves for this for better performance of E-governance model.

3.4 Limited Financial Resource

When we think about Economic challenges one should focus on Gross Domestic Product (GDP) is one of the measures of national income and a country's economy. GDP is defined as the total market value of all final goods and services produced within the country in a given period of time. GDP of a country is the measure of its financial strength. India has limited financial resources so as to implement and maintain the e-Government projects properly. If we can complete government project and new manufacturing units will increase the ratio or GDP.

4. Technical challenges

For successful working of an E-governance model the most important and key factor is Technical Challenges. By providing proper solution only we can come out from the following challenges of Technical level.

4.1 User Friendly

When we consider huge number of beneficiary, we must focus on system design part so the users of system can easily access the services. Government should give proper guidance to the users for accessing the services as well as to complete their transaction in right way. If the system is User Friendly maximum number of business, people and Citizens will proceed with E-Governance.

4.2 Security

To implement E-Governance the major aspect we consider is security. For the widely availability of users data government should enhance the security for Data Centre data access. We must work out on persons personal data like Income sources – medical data – Financial data privacy, so no one can access and modify others data. For that we have to apply some measures to protect individual data.

4.3 Scope of Applications(Web Service & App base)

For the successful implementation of any application or app, the first step to identify the scope of application in desire manner. The application which provided by the government, it should first describe their scope so that the application implementation will be accurate.

4.4 Multi-Language Functionality

When we try to implement application for general people or citizen for the state we must have to give language option to the end user, so the citizen will not face language barrier to use the application and government service. Using Multi Language Functionality will attract more number of users to use the system as well as government services.

5. CONCLUSION

Usage of Information and Communication Technology (ICT) is making large number of efforts behind E-governance. Many Indian state spending lots of money behind but still it is not complete by any state of India. Before taking any action on E-governance and it's service there is need to focus on some main challenges and its aspects. The challenges like social – economical and technical attention on key issues like literacy – population – infrastructure – user authentication – data storing and security. When any state government properly make survey and find apposite solution for the same.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Effect of Digital India on Indian Society

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ABSTRACT
Digital India is the result of numerous advancements and innovative headways. These change the lives of individuals from numerous points of view and will engage the general public in a superior way. The 'Digital India' program, an activity of respectable Prime Minister Mr. Narendra Modi, will emerge new movements in each part and creates inventive attempts forge next. The thought process behind the idea is to construct participative, straightforward and responsive framework. Digital India is a program to convert India in to a digitally empowered society, and knowledge economy. It is an ambitious program of Government of India projected Rs. 1,13000crores. This project is delivering good governance to people and coordinated with both State and Central Government. Henceforth, an endeavor has been made in this paper to comprehend Digital India as a crusade where advancements and network will meet up to have an effect on all parts of administration and enhance the personal satisfaction of nationals.

KEYWORDS: *Digital India, Innovative, Society, Endeavour, Administration, Economy.*

INTRODUCTION
Prime Minister Narendra Modi launched digitalization system in the country on 1st July, 2015. The plan for making India digital is to connect rural Areas with high speed internet networks. Digital India is a program to prepare India for a Knowledge future. Digital India is an initiative made by the PM Narendra Modi to transform India into digital empowered society and knowledge economy. This program is an ambitious program of Government of India with a project amount of rupees 1,13000crores. This program is for preparing India knowledge based. The words of PM Modi for Digital India are "The more technology we infuse in Governance the better it is for India". "Digital India is more for poor underprivileged. It Aims to bridge the gap between digital haves and have not's by using the technology for the citizens" words of Shri Ravi Shankar Prashad (the Hon'able Minister of Communication and IT Government of India).

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. E-governance initiatives in India took a broader dimension in the mid-1990s for wider sect oral applications with emphasis on citizen-centric services. The major ICT initiatives of the Government included, inter alia, some major projects such as railway computerization, land record computerization, etc. which focused mainly on the development of information systems. Later on, many states started ambitious individual e-governance projects aimed at providing electronic services to citizens.

Though these e-governance projects were citizen-centric, they could make less than the desired impact due to their limited features. The isolated and less interactive systems revealed major gaps that were thwarting the successful adoption of e-governance along the entire spectrum of governance. They clearly pointed towards the need for a more comprehensive planning and implementation for the infrastructure required to be put in place, interoperability issues to be addressed, etc. to establish a more connected government.

There are three Vision Areas and Nine Pillars for the implementation of digital program in India. Digital

India is a complex program that reduces the manual working of multiple departments. Digital India program is a use of computer technology and mobile applications for taking up of Government services quickly. Digital India today Digitalization system in India will not only makes changes in government processes, policies, increases but also brings about huge democracy in the economy of a country. This becomes a major innovative program for the economic development of our country. Vision of digital system is the development of a country through electronic technology and for creating more job opportunities

The components of Digital India are:

- Creating Digital infrastructure.
- Providing of services digitally.
- Digital literacy.

Infrastructure as a utility to every citizen

The initiative is aimed at providing connectivity through fixed-line broadband, mobile connectivity or Wi-Fi hotspots. Every citizen would be provided with a unique identity with lifelong validity that can be tied up with mobile number and bank account to enable digital banking. Access to Common Service Centre (CSC) would be improved and shareable cloud space on public cloud servers would be provided.

Governance and services on demand

The initiative plans to create seamless integration across multiple government departments and jurisdictions, and make services available on online and mobile platforms. Financial transactions would be made cashless and electronic, and entitlements would be available on the cloud. The ease of doing business in India would be improved.

Digital empowerment of citizens

The initiative would provide universal digital literacy to empower citizens to use digital platform/devices. Universal access to digital resources would be provided, wherein all documents would be available in digital form on the cloud. Government services would be provided in local languages and a platform would be made available to citizens for participative governance.

Vision of Digital India:

- High speed digital highways unit the nation.
- 1.2 connected Indians drive innovation.
- Access to information no barriers.
- Technology ensures the citizen- government interface is incorruptible.
- Government services are easily and insufficiently available to every citizen's mobile devices. Government proactively engages with the people through social media.
- Quality education reaches the most inaccessible corners driven by digital learning.
- Quality healthcare percolates right up to the remotest regions powered by e-healthcare.
- Farmers are empowered by real-time information to be connected by the global markets.
- Mobile enable emergency services ensure personal security.
- Mobile and e-banking ensures financial inclusion.
- E-commerce drives entrepreneurship. Here are some of the projects and products that have been launched, or are ready for deployment, as part of the Digital India initiative:
- Digital locker system to minimize usage of physical documents and enable their e sharing via registered repositories.
- MyGov.in as an online platform to engage citizens in governance through a "Discuss, Do and Disseminate "approach.
- Swachh Bharat Mission Mobile app to achieve the goals set by this mission.
- E-Sign framework to allow citizens to digitally sign documents online using Aadhaar.
- E-Hospital system for important healthcare services such as online registration, fee payment, fixing doctors' appointments, online diagnostics and checking blood availability online.
- National Scholarship Portal for beneficiaries from submission of application to verification, sanction and disbursal.
- Digitize India Platform for large-scale digitization of records in the country to facilitate efficient delivery of services to the citizens.
- Bharat Net programme as a high-speed digital highway to connect all 250,000 gram panchayats of country -- the world's largest rural broadband project using optical fibre.
- BSNL's Next Generation Network to replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.
- BSNL's large scale deployment of Wi-Fi hotspots throughout the country. 'Broadband Highways' as one of the pillars of Digital India to address the connectivity issue while enabling and providing

technologies to facilitate delivery of services to citizens.

- Outsourcing Policy to create such centres in different north-eastern states and in smaller towns across the country.
- Electronics Development Fund to promote innovation, research and product development to create a resource pool within the country as also a self-sustaining eco-system of venture funds.
- National Centre for Flexible Electronics to promote research and innovation in the emerging area of flexible electronics.
- Centre of Excellence on Internet on Things (IoT) as a joint initiative of the government agencies and private institutions such as Nasscom.
- To make Post Offices multi-service centres.
- To connect all schools with broadband and free Wi-Fi.

OBJECTIVES:

1. To study the concept of Digital India & Its Services.
2. To know the Vision of Digital India with innovative ideas and practical solution.
3. To Know Citizens perception about Digital Services in Rural Areas.

LITERATURE REVIEW:

'Digital India' initiative has been an area of interest of numerous researches from various disciplines because of its great significance and influence on the economy as a whole and particularly the technological sector.

SundarPichai, SatyaNadella, Elon Musk researched about Digital India and its preparedness to create jobs opportunities in the information sector. He concluded that creating new jobs should be continued with shifting more workers into high productivity jobs in order to provide long term push to the technological sector in India.

Microsoft CEO, Satya Nadella intends to become India's partner in Digital India program. He said that his company will set up low cost broadband technology services to 5lakhs villages across the country.

Prof. Singh began with the basic overview of what Digital India entails and led a discussion of conceptual structure of the program and examined the impact of "Digital India" initiative on the technological sector of India. He concluded that this initiative has to be supplemented with amendments in labor laws of India to make it a successful campaign.

Arvind Gupta intends to say that Digital India movement will play an important role in effective delivery of services, monitoring performance, managing projects and improving governance. An Integrated Office of Innovation & Technology to achieve the same, for problem solving, sharing applications and knowledge management will be the key to rapid results, given that most departments work on their own silos. Tracking and managing the projects assumes significance because India has been busy spending money in buying technology that we have not used effectively or in some cases not even reached implementation stage. Sharing learning's and best practices across departments needs to be driven by this Office of Technology.

Gupta and Arora (2015) studied the impact of digital India project on India's rural sector. The study found that many schemes have been launched in digital India to boost agriculture sector and entrepreneurship development in rural areas. Digital India programme has also set the stage for empowerment of rural Indian women.

Rani (2016) concluded that the digital India project provides a huge opportunity to use the latest technology to redefine India the paradigms of service industry. It also pointed out that many projects may require some transformational process, reengineering, refinements to achieve the desired service level objectives.

Midha (2016) concluded that digital India is a great plan to develop India for knowledge future butits improper implementation due to inaccessibility and inflexibility to requisite can lead to its failure. Though digital India programme is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we Indians should work together to shape the knowledge economy.

RESEARCH METHODOLOGY:

Being a Descriptive research it is based on Primary as well as secondary data.

Primary Data: In this present study, I have collected primary data through Google forms (Questionnaire) from the respondents.

Secondary Data: The major sources of secondary data for present study are – E-Governance Reports, E-Readiness Reports, Govt. reports and circulars, Newspapers, Magazines and Periodicals, Journals, Conference proceedings, Internet, Websites, e-literature and Books.

Therefore, a citizen's survey was undertaken with help of a Goggle forms questionnaire that Researcher send it link to the around 150 respondents mail id to study the impact of Digital India projects on Indian Society at Sangli district. Among this 150 respondent researcher has got the response of 118respondents within a time given frame.

Limitations of the Study:

The present study is confined to a minimal sample size and may not reflect the opinion or response of the whole population. There were only 118respondents taken for the survey. The results of my study are entirely confined to the responses of the Sangli district and may deviate in terms of actual population as a whole recommendation given after the study are entirely dependent on the survey and the secondary & primary analysis done in the report.

NINE PILLARS OF DIGITAL INDIA:

1. Broadband Highways: The Government of India launched Digital India program with the vision of broadband networks all over the country in which government allocated 5 billion to connect high speed broadband highways for connecting all the villages, government departments, institutes and universities. For fulfilling this pillar, the National optical fiber network (NOFN) is launched. Investment in this project is funded by Universal services obligation fund, it has set the process for connecting broadband networks to the country's 2, 50, 000 gram panchayats by year 2016.

2. Universal Access to Phones: In this Pillar, Government of India focuses on network connectivity and filling the gap in connecting the different areas of the country to mobile access or network with the help of internet coverage. In the past years, network technology like 2G was running in the country which was at one time becomes the most useful network connect but then there becomes a need for the further high speed connectivity to reach the maximum of areas within the country as in some of the areas, there was no coverage for 2G networks. Government felt the need for the start up of new and modified network and for this they have started with 3G and 4G which we are using today for better and efficient mobile connectivity. But still, there is a need arise for the further more improved internet connectivity and for this government is focusing on 5G network connectivity in future period.

3. Public Internet Access Program: The two components of this pillar are common service centres (CSC) and Post office as Multi service centres. This Pillar focuses on connecting the National Rural internet mission. It consists of those technologies that support effective cost, security, services, connectivity that delivers remote access to any information or service available across the domain. This change in technology will open new doors of e-services to every citizen i.e. E-governance. E-Governance is an easy services delivery program government started for connecting with the public. Common Service centres are the centres that cover the local area for nearby places. It provides multi end point for service delivery. Its coverage is 2, 50,000 villages.

4. E-Governance -Reforming Government through Technology: E- Governance is a Re-Engineering process of government business using IT to improve its processes and policies. This pillar is formed by government for transforming government to e-government and its governance to e-governance. E-Governance is the situation where the interaction with the government can be done through one counter, 24 hours a day, 7 days a week without waiting in queues at Government offices. Each citizen can make a contact with government through a website where all forms, laws, news and other information will be available. This model of E-Governance could be put to three categories: G2G, G2B andG2C.

5. E-Kranti – electronic **delivery of services:** e-Kranti means electronic delivery of services to public. This e-Kranti focuses on providing information and knowledge to people regarding health, farming, rights, and financial services electronically with easy access. Government of India has allocates 5 billion for e-Kranti projects in the country. It includes the following sub projects:

Projects	Service Offered
e-Education	Literacy programme and Wi-Fi connectivity in schools Online graduate and Master degree courses
e-Health	Online medical consultation Online medicine supply and records
e-Farming	Online availability of real time price information Online ordering of inputs and loan payments

6. Information for All: The next pillar for implementation of Digital India project in India is availability of information for all. Two way communication system between government and citizens. Availability platform for open data makes easier for the citizens to take the benefit of all services under a single system of information. Government of India has launched a web based online site for public access for quicker and easier access and interaction. Government started data.gov.in website for interacting with public.MyGov.in is a website implemented by government of India as a platform for citizens to engage in governance.

7. Electronic Manufacturing- Target Net Zero Imports by 2020: This Pillar focuses on promoting manufacturing of electronics in the country and not to be imported from outside the country. This will promote and develops industrialization in India. This fabulous aim can be achieved only by the coordination between the following actions: By making suitable changes in taxation system by the government for motivating the industrial sector for manufacturing electronics, development of Skills and talent, by enhancing and providing fund to PhD students in universities across the country for research in manufacturing of electronic.

8. IT for Jobs: This pillar focuses on providing training to youth for developing their skills required for jobs opportunities in IT sector. There are three components for completing this aim. First component is to provide training to youngsters to build them eligible for getting jobs in IT sector. The target for achievement of this aim is to train 1 crore students from small towns, villages for IT jobs within a period of 5 years.

The second component is to establish BPO's in every north eastern states to enable ICT growth in these sectors.

The third component of this pillar is to train 3 lakh service delivery agents to run viable business delivering IT services. IT parks are established by government of India in different states for the development of skills and talent of youth in the country like IT Park in Chandigarh, Bharat Electronics limited in Panchkula(Haryana).

9. Early Harvest Programs: This pillar focuses on the generation of short timeline projects which replaces manual services by transformation of manual services to e-services. These includes Wi-Fi in all schools, colleges and Universities, IT platform for messages, Public Wi-Fi hotspot, Biometric attendance, Government greetings to e-greetings, SMS based weather information

Impact:

The estimated impact of digital India by 2019 would be cross cutting, ranging broadband connectivity in all panchayats, Wi-Fi in school and universities and public Wi-Fi hotspots. The programme will generate a huge number of IT, telecom and electronics jobs, both directly and indirectly. Success of this programme will make India digitally empowered and the leader in usage of IT in delivery of services related to various domains such as health, education, agriculture banking, etc.

Effects of Digital India Project by 2019:

- Wi-Fi in 2.5 lakh educational institutions, all universities; Community Wi-Fi locations for people.
- Job creation: Immediate 1.7 Cr. and Oblique at least 8.5 Cr.
- India to be innovator in IT use in solutions - health, knowledge, financial.
- High speed internet in 2.5 lakh villages, universal phone connection.
- 400,000 Community Internet Access Point.
- Digital Inclusion: 1.7 Cr qualified for IT, Telecommunications and Electronic devices Jobs.
- Net Zero Imports by 2020.
- E-Governance & e-Services: Across government.
- Digitally motivated people - public reasoning, internet access.

FINDINGS & CONCLUSION:

1. Most of the people are of 26 – 35 age groups.
2. Most of the respondents are doing job.
3. Most of the people are aware of Digital India Project.
4. Digital India Project will go to uplift the standard of living.
5. People want to live in a city where every work is digitalized.
6. Literacy to every other rural people and providing digital education is very important thing to convert India Digitally.
7. Rural people can able to adopt the digital changes only if they will be given proper guidance of digital literacy & knowledge.
8. After digitalization, educational institutes will become more convenient as compare to their current services.
9. Digital literacy is the idea of Digital India according to most of the people.
10. According to most of the people, Digital India Project has been rated as "Excellent' as well as 'Good'. Most of the people are aware of Digital India. From the survey, we have concluded that Digital India Project will definitely uplift the standard of living. People want to live in a digitalized city as it will provide better lifestyle through digital services. Rural area people will also be able to adopt the digital changes only if government of India will provide the proper training and digital literacy. Without a proper digital training, it will be difficult for the Indians to get comfortable with digital changes in the country. Digital India will be providing lots of job opportunities and will help in reducing unemployment from the country. Especially IT people will get a good opportunity to showcase their technical skills. The job will be mostly white collar job which will raise the standard of living in the country. Service sector will also undergo vast change as people will able to get all the work done digitally. The time taken to complete each task will reduce to minimum. It is possible that after digitalization, there will be Net-Zero imports in the economy by 2020. GDP of country will also be affected by this project. This project will definitely bring prosperity & up gradation to country but certain drawbacks are there as it is fully related to technology. Security may become the matter of concern. Other than this, the error in the system may be lead to a serious problem. People have lots of expectations towards this project. Government of India has to stand upon the expectations.

RECOMMENDATION:

1. Indian government need to start providing digital literacy to every other citizen.
2. To create impact of Digital India to be realized, we have to use technology to solve problems faced by Indians and for that we need a very strong culture of grounds-up frugal innovation in IT.
3. Our recommendation to the government would be to set up PPP forums in each of these segments to invite industry to participate in areas where they have the domain expertise and interest.
4. The government has set the stage with a strong vision and an equally strong show of will to make it happen. What we need now is for them to focus on setting the right policy frameworks and processes that make it easy for industry to do business in India and encourage us to participate in India's journey towards becoming a digital India.
5. What are needed now are an unprecedented focus and the will to make it happen across both government and industry.
6. The one area where this kind of a model is needed with a high level of urgency is in developing the culture of innovation in India.
7. The government must encourage open global standards that will enable India to benefit from the best technology worldwide.
8. The government should also focus on sustainable development and basic facilities of rural area before providing them digital services. These two have to go hand-in-hand.
9. The numbers are mind boggling, but they can be achieved, especially as rapid pace of innovation is increasingly making technology more favorable for mass scale adoption, which is a must for the successful realization of Digital India.
10. It is recommended that every citizen must realize that such an important and enormous vision cannot be the government's job alone. We have to be an equal partner in this journey.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
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ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Digitalization in Banking Sector

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ABSTRACT
In order to improve the customer service, book-keeping and MIS reporting, the need for computerization was felt in the Indian banking sector in late 1980s. Reserve Bank of India set up a Committee headed by Dr. C. Rangarajan on computerization in banks in 1988.

Conversion of data into a digital format with the adoption of technology is called as digitization. By implementation of digitalization, banks can provide enriched customer services. This provides convenience to customers and helps in saving time. Digitalization decreases human error and thus builds customer reliability. A new wave of technology is revolutionizing the way customers engage with their finances. From social to mobile capabilities, banks have to rethink the way they do business to deliver a better customer experience and remain competitive. The recent introduction of open banking and the Payments Services Directive 2 (PSD2) regulation is hastening this transformation by placing power in the hands of customers. Banks must now allow customers to share their financial data, such as spending habits and regular payments, with authorized third-party providers if customers wish to do so.

In addition, until the past few years, banks were not visualizing the tremendous shift in consumer behavior that occurred as a result of the millennial generation now become the largest consumers of financial products. With the increasing usage of smart-phones, digitization of banking sector is predictable to catch up the increasing expectations of the world. It indeed reduced human errors and increased convenience. Now, cyber threats are on the rise hence, banks must be very vigilant and should be prepared to handle cyber-attacks.

KEYWORDS: *Digitalization, Internet Banking, Online Banking*

I. INTRODUCTION

Digitalization is the process of transforming information into a digital format, in which the information is organized into bits. The result is the representation of an object, image, sound, document or signal (usually an analog signal) by generating a series of numbers that describe a discrete set of its points or samples. The result is called digital representation or, more precisely, a digital image, for the object, and digital form, for the signal. The digitized data is in the form of binary numbers, which simplify computer processing and other operations. Digitizing simply means the transformation of analog source material into a numerical format; the decimal or any other number system that can be used instead.

Digitization is of vital significance to data processing, storage and transmission, because it "allows information of all kinds in all formats to be carried with the same efficiency and also intermingled". Unlike analog data, which typically suffers some loss of quality each time it is copied or transmitted, digital data can, be transmitted with absolutely no deprivation.

Diagram 1: 5 Key Banking Technology Trends

Information Technology was implemented by banks initially with the introduction of standalone PCs and voyaged to Local Area Network (LAN) connectivity. Further, Core Banking platform was adopted by banks. Thus branch banking changed to bank banking. Core Banking Solution (CBS) facilitated banks to increase the comfort feature to the customers as a encouraging step towards improving customer accessibility through anywhere and anytime banking.

Different Core banking platforms such as Finacle designed by Infosys, BaNCS by TCS, FLEXCUBE by i-flex, gained popularity.

In 1991-92, with the opening of the economy, the process of Computerization gained a leap. Several commercial banks started moving towards digital customer services to remain economical and significant in the race.

Dan Jones, partner and head of Capco's UK Digital practice, says convenience, speed and flexibility are no longer considered attractive add-ons, but have become a standard expectation of the rapidly changing customer-bank relationship. According to Mr Jones, successful organizations will be those that can keep pace with customer needs and demands, and implant appropriate services into the wider ecosystem of digital products.

II. Research Methodology:-

Research paper is based on secondary data obtained from various sources like

1. Earlier paper published.
2. Websites
3. Articles published in Research magazines.
4. Articles appeared in news paper.

Current status in the Digital Space

Indian Government is aggressively promoting digital transactions. Some of the significant steps for innovation in the Payment Systems domain are the launch of United Payments Interface (UPI) and Bharat Interface for Money (BHIM) by National Payments Corporation of India (NPCI). UPI is a mobile interface where people can make immediate funds transfer between accounts in different banks on the basis of cybernetic address without mentioning the bank account. Today banks aim to provide fast, accurate and quality banking experience to their customers. Today, the topmost agenda for all the banks in India is digitization.

Difference between Online and Digital Banking

For the most part, these two words are alternatives. But, online banking can be defined a bit more narrowly as- online banking primarily emphases on money transfers, bill pay, remote deposits, and basic online management of accounts. Other synonyms for online banking include virtual banking, internet banking, and e-banking. So, online banking focuses on digitizing the "core" features of banking, but digital banking incorporates digitizing every program and activity undertaken by financial institutions and their customers.

Banks play a significant role in our daily lives. For countless people, at least a single financial transaction is been done in a single day. Thus banks always try to implement latest technologies to enhance customer experience. Digitization is not a choice for banking industry, rather it is certain because every industry is being digitized and banking sector is no exemption. .Mobile banking is increasing at a fast pace more than online banking.

ADVANTAGES OF DIGITIZATION IN BANKING:-

- Reduction of costs for banks and customers as well by using cashless transactions, ATMs, etc.
- With more digital data available with banks, they can take data-driven vibrant decisions by using digital analytics. This benefits both customers and banks.
- Number of customers will be amplified for banks because of the increased convenience of banking.
- Digitalization decreases human error.
- Need of handling large amounts of cash will be reduced.
- Rural and urban gap will be eliminated.
- Fake currency threat will be reduced, with the increasing cashless transactions.

DISADVANTAGES OF DIGITIZATION IN BANKING:-

- Digitalization shrinks the effort of employees and hence results in loss of jobs.
- Some bank branches may conclude to exist with the increasing use of online banking.
- Banks will be more vulnerable to cyber-attacks.

- No one can hide crores of rupees in banks and just act middle class. Privacy may have to be compromised.

III. TECHNOLOGICAL DEVELOPMENTS IN INDIAN BANKING

Digital Collaboration

We will be part of our not-so-distant future when we expect driverless cars and robots, it should be equally direct for us to visualize a future banking system with its own form of artificial intelligence (AI).

AI-enabled tools such as chatbots have been already implemented by banks to interact with customers, but that is just the point of what is to come.AI has the potential to modify organizations on an extraordinary scale, from virtual financial assistants to computerized credit scoring and predictive analysis.

Mr. Jones explains: "From a customer point of view, machine-learning is starting to enhance their experience in smart ways, quickly and efficiently resolving their problems.

Machine-learning and AI will allow banks to spot outlines and solve customer problems at a segment of the current speed in a very cost-efficient manner. This second wave of interruption will have a powerful influence, transforming the banking industry and with it the customer journey. Banks should seize the opportunities, when technology presents to shift to the next gear. Because time does not wait for any organization, people including banking sectors.

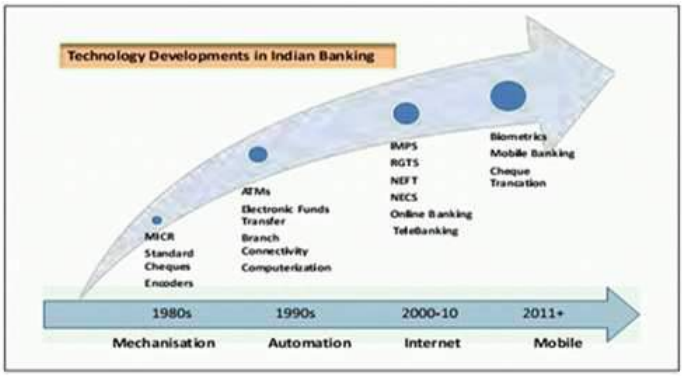

Figure2: Technological Developments in Banking

Few Trends and Opportunities:

1. **Changing consumer behavior in favor of digitalization**

As the market is exposed to unsettling digital services, it is now putting its hands on changing client preference from traditional banking to its digitalization. Also, India's demographic share is well suited to switch to digital behavior, with the median age of an Indian expected to be 29 years by 2020 and 900 million population falling in the age group of 15-60 years by 2025.People have enthusiastically started using technology to do banking transactions and benefit other services because they want more suitability at the cost of giving extra price.

2. **Unpenetrated areas and government initiatives**

Around 50% of the non-banked population is directed and developing towards the goal of financial presence. Due to some government initiatives, banks have incredible opportunities and advantages in implementing digital infrastructure.With Rs. 500 billion being targeted to be transmitted directly under DBT (Direct Benefit Transfer), around 160 million accounts have been opened under PMJDY (Pradhan Mantri Jan DhanYojna).

3. **Leveraging increased smartphone usage and mobile penetration**

Mobile phones are likely to lead the digital growth in India, because the youth of India prefer to use smart phones rather than stand in long queues to avail banking services. Mobile perception of around 90% is likely to drive financial insertion. The existing and predictable widespread reach of smart phones in the country provides a disruptive and low-cost medium, to extend the reach of banking and payments services. Refer the graphs below:

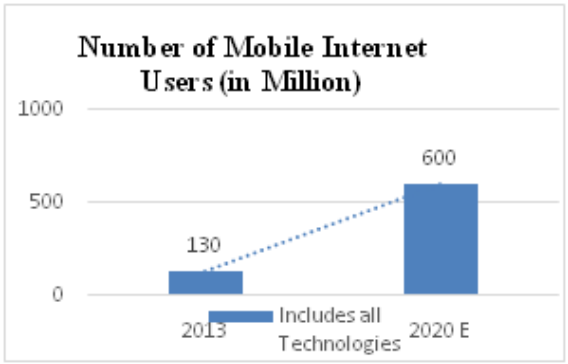

Figure3: Number of Mobile Internet Users

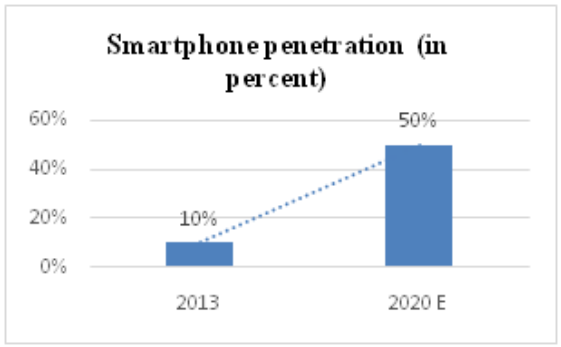

Figure4: Smartphone Penetration (in percent)

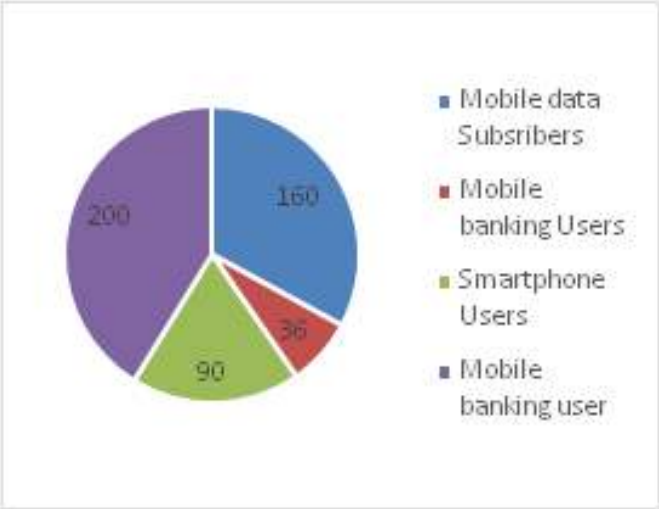

Figure5: India's Mobile Banking Opportunity

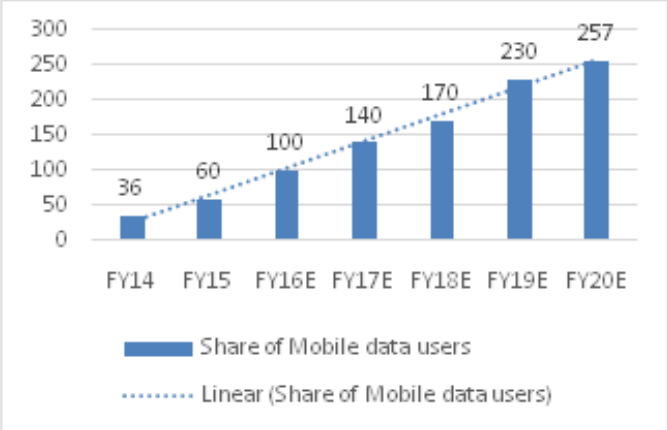

Figure6: Mobile banking user forecasts

Some Challenges:

- As per the report of FICCI, BCG, and IBA; 17% of the users were unaware about bank's digital offerings, 35% were aware but were not using, 7% were unhappy user and 42% were fulfilled users. The challenge here is to convert alertness into practice.
- MSMEs 70% and shopkeeper transaction's 90% were done through cash &cheque, only 8% MSMEs collect orders online, and only 4% agree payments online. This is completely improper in a digital world and thus becomes a challenge.
- 24% do not know how to use Mobile banking apps, 16% don't know about bank's app and 12% of them have fear of hacking.

Despite the huge possible and well-established promise of digital financial services, there is a need for the users to adopt a general approach on -going digital and combining business strategy with all the elements of their operating ecosystem to create a significant customer experience.

Indigenous Banking:

The exact date of presence of indigenous bank is not exactly known. But, it is sure that the old banking system has been functioning for centuries. Some people suggests the presence of indigenous banks to the Vedic times of 2000-1400 BC. It has excellently fulfilled the needs of the country in the past.

However, with the approaching of the British, its failure started. Regardless of the fast growth of modern commercial banks, however, the indigenous banks continue to hold a noticeable position in the Indian money market even in the present times. It includes seths, shroffs, chettis, mahajans, etc. The indigenous bankers give money; act as money changers and finance internal trade of India by means of hundis or internal bills of exchange.

The main defects of indigenous banking are:

1. They are disorganized and do not have any communication with other sections of the banking world.
2. They associate banking with trading and commission business and thus have presented trade risks into their banking business.
3. They do not differentiate between short term and long term finance and between the purposes of finance.
4. They do not give receipts in most cases and they charge out of proportion interest in regard with other banking institutions in the country.

SUGGESTIONS FOR IMPROVEMENTS OF INDIGENOUS BANKING ARE:

1. The banking practices need to be upgraded.
2. These banks should be connected with commercial banks on the basis of certain understanding in the respect of interest charged from the borrowers, the confirmation of the same by the commercial banks and the passing of the discounts to the priority sectors etc.
3. These banks should be stimulated to become corporate bodies rather than continuing as family based enterprises.

IV. STRUCTURE OF INDIAN BANKING SYSTEM

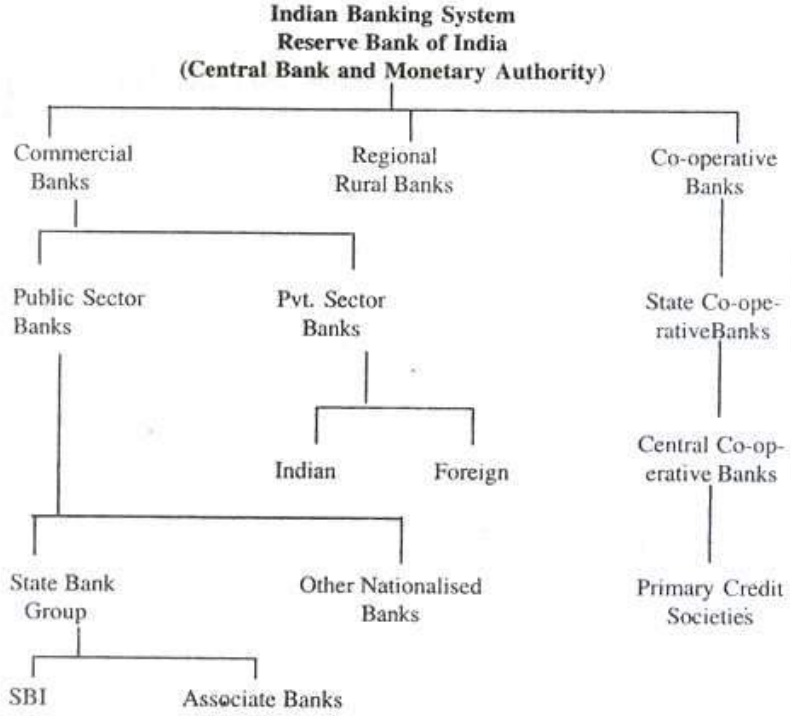

Figure7: Structure of Indian Banking System

RESERVE BANK OF INDIA (RBI):

The country had no central bank earlier to the establishment of the RBI. The RBI is the supreme regulatory and banking authority in the country and controls the banking system in India. It is called the Reserve Bank' as it keeps the reserves of all commercial banks.

COMMERCIAL BANKS:

Commercial banks organize savings of general public and make them accessible to large and small industrial and trading units mainly for working capital requirements. Commercial banks in India are private sector with a few foreign banks and largely Indian-public sector and. The public sector banks account for more than 92 percent of the entire banking business in India—occupying a leading position in the commercial banking. The State Bank of India and its 7 associate banks along with another 19 banks are the public sector banks.

SCHEDULED AND NON-SCHEDULED BANKS:

The scheduled banks are preserved in the second schedule of the RBI Act, 1934. These banks have a paid-up capital and reserves of a combined value of not less than Rs. 5lakhs, they have to please the RBI that their affairs are carried out in the interest of their depositors. All regional rural banks, commercial banks (Indian and foreign), and state cooperative banks are scheduled banks. Non- scheduled banks are not involved in the second schedule of the RBI Act, 1934. At present there are merely three such banks in the country.

REGIONAL RURAL BANKS:

The Regional Rural Banks (RRBs) the newest form of banks, came into presence in the middle of 1970s (these are sponsored by individual nationalized commercial banks) with the objective of developing rural economy by providing credit and deposit facilities for agriculture and other productive activities of all kinds in rural areas.The importance is on providing such facilities to small and marginal farmers, rural artisan's, agricultural laborers, and other small entrepreneurs in rural areas.

COOPERATIVE BANKS:

Cooperative banks are organized under the provisions of the Cooperative Credit Societies Act of the states. The major recipient of the Cooperative Banking is the agricultural sector in particular and the rural sector in general.Long-term agriculture credit is provided by the Land Development Banks. The funds of the RBI meant for the agriculture sector actually pass through CCBs and SCBs. The cooperative credit movement has now spread to urban areas also and there are many urban cooperative banks coming under SCBs. The cooperative credit institutions operating in the country

are mainly of two classes: agricultural and non-agricultural. There are two separate cooperative agencies for the provision of agricultural credit: one for short and medium-term credit, and the other for long-term credit.

V. Banking now and then

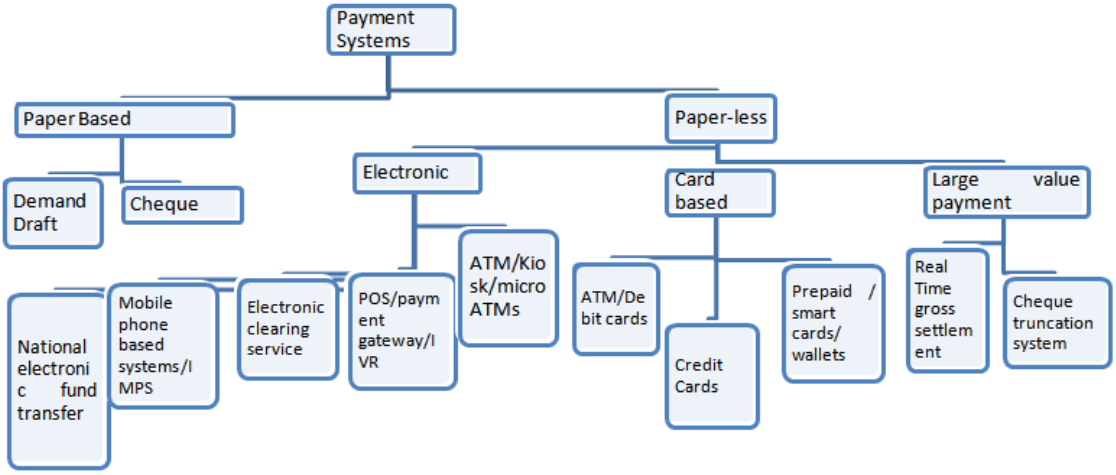

Figure8: Details of Payment System

Expanse of digital banking

According to the RBI Report in 2016-17 there are 2,22,481 Automated Teller Machines (ATMs) and 25,29,141 Point of Sale devices (POS). Implementation of electronic payment system such as ECS (Electronic Clearing Service), NEFT (National Electronic Fund Transfer), RTGS (Real Time Gross Settlement), Mobile banking system, Debit cards, Prepaid cards, Cheque Truncation System, Credit Cards, have all gained wide recognition in Indian banks. These are all notable innovations in the digital revolution in the banking sector. Online banking has changed the face of banking and brought about a notable change in the banking operations.

National Electronic Funds Transfer (NEFT) is the most frequently used electronic payment method for transferring money from any bank branch to another bank in India. It operates in half hourly batches. Real Time Gross Settlement (RTGS) is largely used for high-value transactions which are centered on 'real time'. The smallest amount to be remitted through RTGS is Rs. Two Lakhs. There is no upper limit. Immediate Payment Service (IMPS) is an immediate electronic funds transfer facility presented by National Payments Corporation of India (NPCI) which is available 24 x 7.

The usage of Prepaid payment instruments (PPIs) for purchase of goods & services and funds transfers has improved greatly in recent years. The value of transactions through PPI Cards (which include gift cards, foreign travel cards, mobile prepaid instruments, & corporate cards) & mobile wallets have jumped drastically from Rs.108 billion and Rs. 85 billion respectively in 2014-15 to Rs. 279 billion and Rs. 535 billion respectively in 2016-17

Table below shows Increase in volume related to RTGS, RECs, Debit card, Credit cards, prepaid payment instruments and Mobile banking:

Volume (Million)					
Year	RTGS	Retail Electronic Clearing (ECS, NEFT, IMPS)	Cards (Debit, Credit)	Prepaid Payment (m-Wallets, PPI Cards, Paper Vouchers	Mobile Banking
2015-16	98.4	3141.5	10038.7	748.0	389.5
2014-15	92.8	1687.4	8424.0	314.5	171.9
2013-14	81.1	1108.3	7219.1	133.6	94.7
2012-13	68.5	694.1	6174.5	66.9	53.3
2011-12	55.1	512.4	5731.6	30.6	25.6

Table 1: Increase in volume related to RTGS, RECs, Debit card, Credit cards, prepaid payment instruments and Mobile banking

VI. LIMITATIONS

- **Security Risks -** External threats such as hacking, spoofing and sniffing expose banks to security risks. Banks are also exposed to internal risks especially frauds by employees in collusion with customers / employees.
- **Financial Knowledge / Customer Awareness -** Lack of knowledge amongst people to use e-banking facilities is the major limitation in India.
- **Fear factor -** One of the biggest obstacle in online banking is inclination to conventional banking method by older generation and mostly people from the rural areas. The fright of losing money in the online transaction is a wall to usage of e-banking.
- **Training -** Lack of suitable knowledge and skills is a major constraining for employees to deal with the innovative and changing technologies in banks. Training at all levels on the changing trends in IT is the requirement of the day.
- The high speed internet connectivity at rural places in India is big challenge. Experience shows that we have failed in providing 24x7 internet connectivity in rural and remote places.

VII. CONCLUSION

The mobile and wireless market has been one of the fastest growing markets in the world. The arrival of technology and the escalating use of mobile and smart phone devices, has given the banking industry a new platform. Connecting a customer anytime and anywhere to their money and needs is a must have service that has become an unstoppable necessity. This worldwide communication is leading a new generation of strong banking relationships. The banking world can achieve superior interactions with their public base if they accommodate all their customer needs. They have a unique challenge to keep their customer alliances and keeping up with the new technologies, and competitive strategies that other banks also have to offer the public. Conveniences of services plus outside locations like ATMS are crucial to every banks success. Meeting all challenges including safety and security are perfect examples of good banking strategies. In order for the financial institutions to effectively grow they must embrace the new technologies and customize them to suit their economic success and the public's success.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

IoT Based Cars: A Paradigm Shift in Automobile Industry

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ABSTRACT
The Indian automobile industry is one of the largest industry in the world. The Government of India and the major automobile players are working together to make India a leader in the two wheeler and four wheeler market in the world by 2020. Technological advancements have been reshaping the manufacturing industry. Internet of Things (IoT) is one of the new technologies based on connecting things to make communication among various devices via the sensors, actuators, internet etc. This technology has tremendous scope in future for changing world and the way we live. This is a review paper based on studying architecture, components, scope of internet of things (IoT) in the automobile industry and focusing on the car vehicle. Further study helps to identify the advantages, disadvantages and impact of this technology on automobile industry. By 2020it is predicted that, new cars will be manufactured which is fully loaded with new technology.

KEYWORD: *Actuators, Automobile, IoT, Internet, Sensors.*

1. INTRODUCTION

The Internet of things (IoT) is an emerging technology in which objects are equipped with sensors, actuators; internet and a process communicate with each other for specific purpose. Today internet has become universal way for communication, which is touched almost every corner of the globe. We are entering in new era called "Internet of Things (IoT)". IoT is defined differently by different authors. Vermesan er.al.[1]defined the internet of things as interaction between the physical and digital worlds via the sensors, actuators etc. IoT devices are equipped with sensors, actuators, processors for interconnection. The data is captured by the sensors, actuators which is stored and processed intelligently in order to derive useful interfaces from them. This data can be processed, shared via network or remote server for further action. The communication between IoT devices is mainly wireless because they are installed at geographically different locations. After receiving data action needs to be taken on the basis of the derived inferences.

2. Objectives:

1. To study present scenario of automobile industry in India
2. To study the concept of Internet of Things(IoT)
3. To study future scope for IoT in car manufacturing automobile industry.

3. Review of literature:

IoT has a significant impact on automotive industry. Automobile manufacturing companies, internet service providers, and software companies are coming together to build connected car system. Connecting car establishes communication between cars, with other car devices. Recently there are very less cars which are internet enabled but it is expected that the number will rise considerably in less than a decade's time. [3][4].

Infotainment refers to a system in vehicles that delivers a combination of entertainment and information service. Features of In-Vehicle-Infotainment (IVL) system are providing navigation features while driving, managing audio/visual

entertainment content, delivering rear-seat entertainment, connectivity with smart phones. [5].

Sensors such as Gyroscope or orientation sensor and accelerometer can be used to model the driving behavior. Using smart phone in vehicle, data from these sensors can be used to detect driving patterns such as sharp turns, sudden acceleration, hard braking, drifting and speeding. This technique helps to share driver's information with insurance companies for customized premiums. Pay as You Drive (PAYD) and Pay How You Drive (PHYD) are the upcoming use based insurances packages [6].

4. Present scenario of automobile industry in India:

In the world Indian automobile industry ranked at 4th place with sales increasing by 9.5 % year by year to 6.02 million units (excluding two wheelers) in year 2017. Automobile industry is the 7th largest manufacturer of commercial vehicles in 2017. The growing interest of the companies in exploring the rural markets further aided the growth of the sector.

India is a prominent auto exporter and has strong growth expectations in the near future. Automobile exports from India grew at 6.86 percent CAGR between years 2013-2018. Further, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the two wheeler and four wheeler market in the world by 2020. [8]

4.1 Number of automobiles produced in India-

- The automobile manufacturing industry covers the production of commercial vehicles, passenger cars, three and two wheelers year by year.
- There is continuous growth in production from FY12 to FY18.
- It is observed that, total volume grew at a CARG of 4.43 % during years 2012 to 2017.

Fig-1 Number of automobiles produced in India (in millions)
Source: Society of Indian Automobile Manufacturers (SIAM),
Note: FY18- up to Feb. 2018

5. Architecture of IoT:

Figure-2 shows the four stage architecture of IoT system. Stage 1 consists of sensors and actuators. Stage 2 includes sensor data aggregation system and analog-to-digital data conversion. Stages 3 consist of IT systems data processing before it moves to the data center or cloud. Stage 4 stored data is analyzed and, managed suitably for further process.

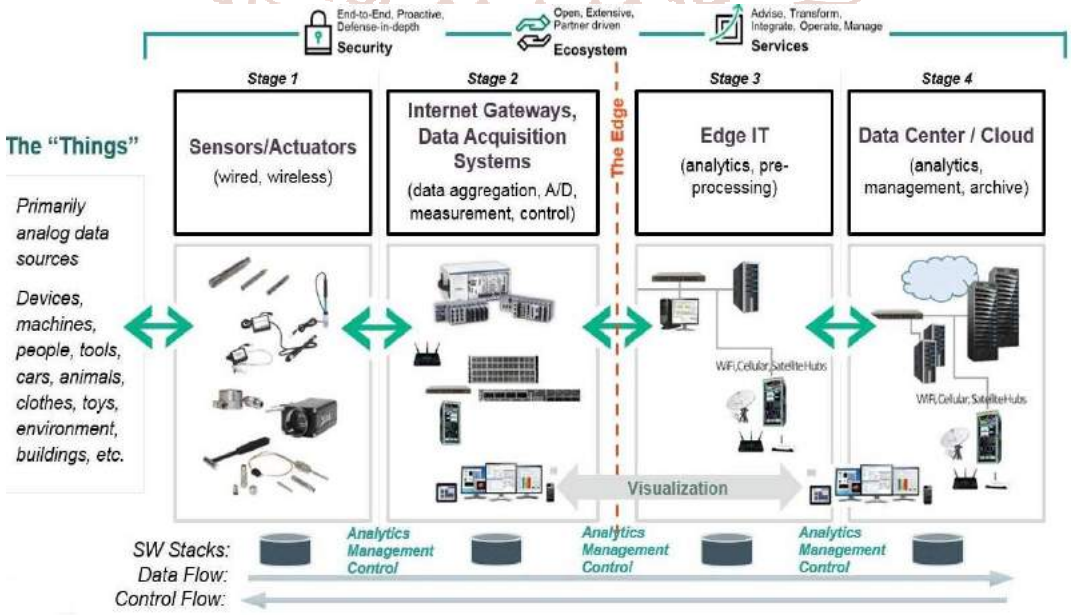

Fig-2.architecture of IoT (Source- https://techbeacon.com/4-stages-iot-architecture)

1. Sensors/actuators-
   In this stage sensors collect data from the environment and turn it into useful data. Actuator is a device which can effect a change in the environment by converting electric energy into some form of useful energy. For example CMOS camera sensor for detecting speed restrictions, present lane departures, warn against obstructions, detecting oil leaks.
2. Internet gateways-
   Data from sensor/actuator is in the form of analog signals. That data needs to be aggregated and converted into digital streams for further processing. The data acquisition systems connects to the sensor network, aggregates outputs, and performs the analog to digital conversion. The internet gateways receive the aggregated and digitized data and routed it via Wi-Fi, LAN's, and Internet to next stage 3 for further processing. Further intelligent gateways can build having capabilities like analytics, malware protection, and data management services. Such systems enable the analysis of data streams in real time.
3. Edge IT-
   The data may require further processing before it enters in data center. Edge IT system performs more analysis. It is located in remote offices or other edge locations, but these sit in the facility/location where the sensors reside closed to the sensors, such as in a wiring closet. This stage concern with security, storage issues, data processing delays. Pre-processing of data, generating meaningful results and passing it to further stage can be done in this stage.
4. Data center and cloud-
   In this stage data needs more in-depth processing and forwarded to physical data centers or cloud-based system, where more powerful IT systems can analyze, manage and securely store the data. [2]

6. IoT based smart car features:

IoT is new technology for car manufacturers introducing entire new layers to the traditional concept of car. it updates to smart car which leads innovative way to drive and stay in touch with the world at the same time. IoT protocols such as MQTT allows for interaction with different kinds of automotive equipment such as- sensors, control units, electronics, GPS, tracking system, traffic on road, other objects (car, vehicle etc.) such smart features are introduced in smart car design.

Fig-3 IoT based smart car features (source- https://www.kaaproject.org/automotive/)[12]

It supports following features-

1. Connected vehicle sensors
2. Real time car telematics tracking
3. Vehicle location tracking and scheduling solutions
4. Fuel tracking
5. Speed control
6. Vehicle leasing solution
7. Car leasing solutions
8. Fleet and driver management
9. Traffic management, workload management

7. Advantages of IoT:

1. IoT boosts the communication between devices. Therefore the physical devices are able to stay connected with transparency, lesser inefficiency and higher quality.
2. Automation and control are features of IoT, because of that physical objects getting connected and controlled digitally and centrally with wireless infrastructure.
3. More information helps making better decisions. All type information is gathered by the sensor which helps for better decision making for controlling car.
4. IoT saves time, money and adopt advance technology for better work done.
5. Automation and control are the unique feature of IoT by avoiding human interface. It also leads to uniformity in the tasks.

8. Disadvantages of IoT:

1. Compatibility is required for tagging and monitoring equipment.
2. Complexity due to failure in software or bug it will generate wrong output or information

3. Privacy and security of data because data is transmitted over network.
4. Lesser employment or unemployment issues in the society.
5. Increases the risk of dependability on technology which results lesser human control on system.

9. Future scope of IoT in car manufacturing automobile industry:

- Car deals will go online
- Revolutionary changes in finance and insurance
- Evolution of driverless and electric cars due to advancement in artificial technology.
- Intelligent vehicle to infrastructure or vehicle to vehicle technology
- Connected cars will turn into hub of infotainment
- Use of navigation system like geographical positioning systems (GPS) or virtual positioning system (VPS) for location detection
- Pay As You Drive(PAYD) and Pay How You Drive(PHYD) are the upcoming use based insurance packages.

10. Conclusion:

India is growing country and automobile sector is one of the leading sector. This industry also provides great opportunities for investment and direct employment to skilled and unskilled labor. By adopting new technologies in auto industry like Internet of Things (IoT) definitely there will behigh demand for such techno savvy products. This technology focuses on automation which reduces time, cost, efforts, and money with high quality in process. Still there are some issues like security, privacy, and complexity etc. but it can be overcome with time.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Knowledge Management in Educational Institutes with the Help of Digitalization

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ABSTRACT

Knowledge can be termed as an output of information analysis. It is further classified as explicit and tacit knowledge. The amount of knowledge generated in Educational Institutes is considerably huge. Every Educational Institute (EI) has teachers who work on a specific subject and its related domains for years all together. These teachers can be termed as experts in their subjects. Subject experts spend a lot of time and efforts to generate knowledge for improving teaching process. By applying their analytical and cognitive skills and experience they generate a set of knowledge that is unique and precious in nature.

When these experts leave the organization, their expertise and the knowledge they generate is also lost. There should be efforts taken to extract this knowledge from the experts and preserve it. Many organizations use the concept of Knowledge Management (KM) for preserving the knowledge generated within organization.

This paper is an attempt to draw a conceptual framework for use of KM techniques in Educational Institutes. It tries to explore the possibility and challenges involved in using KM concepts to preserve knowledge with more stress on tacit knowledge. Further it attempts to examine the role of digitalization in the above mentioned process.

KEYWORD: *Knowledge Management, Digitalization, Educational Institutes.*

I. INTRODUCTION

Data is a collection of facts and figures. When data is processed for a specific purpose it gets converted into information. Information thus produced is either stored or used as and when required. When people intend to use information, they interpret it according to their own level of understanding. Along with this they use their experience, previously stored information, cognitive skills and expertise. This process leads to knowledge generation. Thus, it can be said that knowledge is highly dependent on the person that creates it. Every organization creates knowledge related to its domain. Knowledge is a valuable resource and it is necessary that organizations store the generated knowledge for future use. Knowledge Management (KM) concepts are widely used in organizations for this purpose. According to Luan &Serbian (2002), "KM is about using the brain power of an organization in a systematic and organized manner in order to achieve efficiencies, ensure competitive advantage and spur innovation". Educational Institutes create knowledge on a regular basis .It is necessary that Educational Institutes store, preserve and reuse the knowledge they generate. Use of KM concepts in Educational Institutes can help achieve this objective. The concept of KM is gaining popularity in Educational Institutes. The purpose of this paper is to study the application of KM concepts in Educational Institutes and the specific challenges associated with capturing and sharing of knowledge, with specific emphasis on tacit knowledge. It also attempts to highlight the use of digitalization to strengthen the process of knowledge sharing.

II. Why KM is necessary for Educational Institutes

It is important to understand the nature of working of Educational Institutes with respect to knowledge. It can be rightly said that Educational Institutes are one of the most important knowledge generation centres in the society. Teachers in Educational Institutes work on their domain subject for a number of years. They are involved in learning, researching and teaching certain subjects for a long duration. They gain rich experience and new insights in these subjects. Thus they are capable of handling subject specific problems more effectively as compared to new entrants in the same field. They not only gather information and knowledge and store in their brain, but also are capable of using it as and when necessary. They know which piece of information is to be used in which situation. So, we can say that they have subject knowledge along with the knowledge of when and how to use the subject knowledge. They continuously generate knowledge for teaching or research purpose. These teachers become experts of their subjects. According to Awad &Ghaziri (2007) Knowledge is an attribute of expertise. They further explain Knowledge as "human understanding of a specialized field of interest that has been acquired through study and experience." Therefore the subject experts in Educational Institutes are a rich source of subject specific knowledge.

Knowledge can be explicit or tacit (Nonaka& Takeuchi, 1995). Explicit knowledge is the one which can be easily transferred from one person to another. Subject experts can share explicit knowledge by documenting it in form of text, books, articles, research papers etc. or can be communicated to intended user relatively easily. Tacit knowledge is generated when people use their cognitive skills, experience and concepts in their head to analyse information. This is what the subject experts in Educational Institutes do. Apart from the learned concepts and the documented knowledge, subject experts use their experience, thinking abilities, analytical skills, heuristics and cognitive skills to generate knowledge. We call this as tacit knowledge. Educational Institutes generate explicit and tacit knowledge in large amounts. With the continuously changing educational environment and constant challenges it is necessary that Educational Institutes store the generated knowledge. Many Educational Institutes and Universities are using KM systems wholly or partially for this purpose.

According to Sharma, M &Kaur, M. (2016) KM in educational institutions involves the creation, empowerment, maintenance and safety of the knowledge. They further emphasis that the effective application of the KM strategy and practices in the Educational Institutes can result significant improvement in the functioning and operations of the institutions. As mentioned in the earlier part of paper, it is easier to manage explicit knowledge. It can be documented and stored in any form desired by the Educational Institutes. The major problem is with managing tacit knowledge. According to Dhamdhere, S. N (2015), "tacit knowledge is personal, context specific, therefore hard to formalize and communicate."Because of its unique nature it becomes difficult to capture and share tacit knowledge completely.

III. Capturing and Sharing of Explicit and Tacit knowledge in Educational Institutes

According to Hong, Suh&Yoo(2011), " Knowledge sharing is the process by which knowledge held by an individual is converted into a form that can be understood, absorbed and used by other individuals through channels or networks between known providers and seekers". Nonaka and Takeuchi (1994) introduced SECI model. It suggests of four steps for knowledge sharing, as follows:

i. Socialization- conversion of with tacit to tacit.
ii. Externalization- conversion of tacit to explicit
iii. Combination- conversion of explicit to explicit.
iv. Internalization-conversion of explicit to tacit.

The model is extensively used in many fields including education. Explicit knowledge is comparatively easier to capture and share. As it can be documented, it's easier to share and preserve it. The extent to which tacit knowledge is shared in Educational Institutes is limited. As noted earlier, tacit knowledge is subjective and highly dependent on the person who possesses it. Hislop (2009) states that "Knowledge is always stored in people's brains, sharing of tacit knowledge is difficult, time consuming and one of the biggest challenges of KM."The best example to explain this is teaching someone to play a musical instrument. A Person can be taught all the technical details of how to play an instrument. But using that instrument to create new tunes or melodies depends on that persons own abilities.

Yu & Zhou (2015) have listed four types of tacit knowledge sharing processes as:

i. Peer review – It is a standard processes, where teachers get there articles, books etc. reviewed. They also get suggestions and advice from the reviewers.
ii. Learning community – It acts as a platform to share ideas, concepts and experience.
iii. Thumb – a – lift – It includes making use of online forums and discussion platforms to share tacit knowledge.
iv. Academic conferences- Where ideas, research etc. can be shared

Apart from above stated processes teachers and subject experts can share tacit knowledge by frequent communication new teachers should be continuously guided and trained by the subject experts, this can save a lot of organization time. New teachers should be given a set of best practices for teaching a certain subject, to avoid the situation of 'Reinventing the wheel'. There should be face- to- face interactions with the subject experts. A lot of tacit knowledge can be captured by direct observation; therefore teachers should attend lectures of subject experts and observe them in action. Educational Institutes can help the new teachers to grow by providing them mentors who are experts of their domain subject. This direct interaction facilitates sharing of tacit knowledge. When the subject experts are leaving the Educational Institutes the organization fears loss of valuable tacit knowledge. Practically these experts cannot be stopped from leaving. Educational Institutes can try and extract tacit knowledge with them by various methods like interviews, audio-video recordings, suggestions and best practices. Here the concept of digitalization can play a pivotal role, which will be discussed in latter part of the paper.

IV. Problems in process of Sharing Tacit Knowledge

1. It is subjective – because of the fact that it is highly depend on source person. Even though it is transfer it may not be completely expectable by others
2. Personal Bias, experience plays a very important role in tacit knowledge creation. To make others understand this is very difficult.
3. Willingness to share knowledge is very crucial. If subject experts lack this willingness they will not share it completely.
4. Feeling of being superior to others is also a hindrance in knowledge sharing.
5. In many cases teachers may not be aware of the value of tacit knowledge they carry with themselves.
6. Inhibition and lack of interest can also be a major hindrance.

V. Use of Digitalization for capturing and sharing of knowledge

Oxford dictionary defines digitalization as "Digitalization is the way in which many domains of social life are restructured around digital communication and media infrastructure".

The concept of digitalization is gaining moment rapidly throughout the world. According to doctor Subramacharya, P. (2017) "Digital economy is regarded as the third industrial revolution throughout the world". Indian Government has also launched many programs for digitalization of the economy. Monisha, Budhiraja, K &Kaur, J. (2017) describe digitalization as use of "Electronic technology in various fields that make the collection, storage and processing of data and information easier and convenient to a large extent and this also facilitates the end user to access the needed data throughout the world by simply using the established protocols". Digitalization is used in education sector also. One of its important uses is in capturing and sharing knowledge. As explain earlier it is the process of using technology for capturing, storing and then reusing data and information. Machekhina (2017) notes that digitalization of education is a powerful trend in terms of reformation and modernization of global education environment. These technologies can be used very aptly for capturing knowledge especially in case of tacit knowledge. Audio and video recordings of classroom sections of subject experts can be used to capture tacit knowledge. Similarly, all the tacit and explicit knowledge in the organization can be used to create knowledge repository. This knowledge repository can be modelled on the concept of Experts Systems. Educational Institutes can go on adding the captured knowledge and make it available to other subject teachers and new teachers this knowledge repository can be used in training and development of teachers it makes sure that the knowledge stays in the organization even if the subject experts live the organization.

VI. Conclusion:

Educational Institutes are at the centre of Knowledge creation and sharing. Owing to the dynamic nature of knowledge, its retention is becoming a challenge for the institutes.KM activities along with the digitalization technologies can help education sector in improving the quality of teaching-learning process, research activities. It can help in imbibing quality throughout the organizational processes. Educational Institutes applying KM concepts will have the much needed competitive edge over the others.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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The Impact of Digitalisation on Indian Banking Sector

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ABSTRACT

"Digital" is the new buzz word in all sector. With other sector, banking is also all around the globe shifting towards digitalization. Banks of all sizes and across all regions are making huge investments in digital initiatives in order to maintain a competitive edge and deliver the maximum to its customers. Adoption of digitalization is very important for the banking sector. By embracing digitalization, banks can provide enhanced customer services. This provides convenience to customers and helps in saving time. Digitalization has transformed manual processes, transactions and activities into digital services. Across all verticals, consumer needs have been met in entirely innovative ways, disrupting existing enterprise value chains. Digitalization reduces human error and thus builds customer loyalty. Today, people have round-the-clock access to banks due to online banking. Managing large amounts of cash has also become easier. Digitalization has also benefitted customers by facilitating cashless transactions. Customers need not store cash anymore and can make transactions at any place and time. Several commercial banks started moving towards digital customer services to remain competitive and relevant in the race. Banks have benefitted in several ways by adopting newer technologies. E-banking has resulted in reducing costs drastically and has helped generate revenue through various channels. Commercial Banks in India have moved towards technology by way of Bank Mechanization and Automation with the introduction to MICR based cheque processing, Electronic Funds transfer, Inter-connectivity among bank Branches and implementation of ATM (Automated Teller Machine) Channel have resulted in the convenience of Anytime banking. Strong initiatives have been taken by the Reserve Bank of India in strengthening the Payment and Settlement systems in banks. Indian government, banks, fintech companies have been innovating and changing the way India spends its money. At the same time digital revolution also raises new challenges to the stability and the integrity of the financial system and the protection of consumers.

INTRODUCTION

Digitization is the conversion of data into a digital form with the adoption of technology. Digitization reduces human errors and, therefore, encourages customer loyalty. Banks of all sizes and in all regions are making large investments in digital initiatives in order to maintain a competitive advantage and offer the maximum to their customers. In addition, digitization leads to intelligence and intelligence of solid data, which helps banks to approach customers and get closer to the competition. By adopting digitization, banks are now providing better customer services. This provides convenience to customers and helps save time.

Today, people have access to banks 24 hours due to online banking. Managing large amounts of cash has also become easier. Digitization has also benefited customers by facilitating transactions without cash. Customers no longer need to store cash and can make transactions anywhere, anytime. It is a powerful, modular and open digital participation platform that allows people to boost agility and speed. The main steps of the digital banking process have focused mainly on adding to the existing offer the use of new services enabled with technology to increase

accessibility and value for customers. In this paper, the study focuses on the impact of digitalization on banking, which is a major concern with the payment services provided by the bank to its customers.

Need and Progress of digitalisation in banking sector:

In the late 1980s, to improve customer service, accounting and record keeping the need for computerization was felt in the Indian banking sector. Then in 1988, the Reserve Bank of India established a committee to study Computerization in bank headed by Dr. C. Rangarajan. The process of computerization gained pace with the reform in the Indian economy in 1991-92. One of the main drivers of this change was driven by the growing entries of private and foreign banks in the Banking industry. Several commercial banks began to move towards digital customer service to remain competitive and relevant in the race.

The Commercial Banks in India have moved towards technology through the Mechanization and Automation of the Bank with the introduction to cheaque processing based on MICR, the electronic transfer of funds, the interconnection between bank branches and the implementation of ATMs (ATM) have resulted in the convenience of at any banking time. The Reserve Bank of India has taken strong initiatives to strengthen payment and settlement systems in banks. Now the Indian government is aggressively promoting digital transactions. The launch of United Payments Interface (UPI) and Bharat Interface for Money (BHIM) by National Payments Corporation of India (NPCI) are important steps for innovation in the payment systems domain. UPI is a mobile interface where people can make instant transfers of funds between accounts in different banks on the basis of a virtual address without mentioning the bank account. Indian banks are now working hard for providing following facilities to their customer for increasing their banking business, for attracting more customers etc.

1. Automatic Teller Machine (ATM): -

The ATM is the most popular device in India, which allows customers to withdraw their money 24 hours a day, 7 days a week. With the use of ATM card customer can perform routine banking transactions without interacting with a human cashier. Apart from cash withdrawals, ATMs can be used for paying utility bills, transfer funds between accounts, deposit cheques and cash, balance inquiries, etc.

2. Telebanking: -

Telebanking facilitates the customer to carry out banking transactions not related to cash phone. According to this design, the automatic voice recorder is used for simpler transactions and queries. For complicated inquiries and transactions, manned telephone terminals are used.

3. Electronic Compensation Service (ECS): -

The Electronic Compensation Service is a retail payment system that can be used to make bulk payments / receipts of a similar nature, especially when each individual payment is of a competitive nature and of an amount relatively minor. This service is useful for organisations and government administrative divisions to make / receive large volumes of payments instead of making transfers of funds by individuals.

4. Electronic Funds Transfer (EFT): -

Electronic Funds Transfer (EFT) is a system where anyone who wants to make payments to another person / company, etc. one can approach bank and make cash payments or give instructions to transfer funds directly from his/her account to the recipient / beneficiary's bank account. Full details such as the recipient's name, bank account number, type of account (savings or current account), bank name, city, branch name, etc. they must be provided to the bank at the moment of requesting such transfers so that the amount of the beneficiaries' account is correct and faster. RBI is the EFT service provider.

5. Real-time gross settlement (RTGS): -

The real-time settlement system, through which banks give electronic instructions to transfer funds from their account to the another bank account. The RBI maintains and operates the RTGS system and provides an efficient and faster means of transferring funds between banks that facilitates its financial operations. As the name suggests, the transfer of funds between banks is done in real time.

6. Point of sale terminal: -

Point of sale terminal is a computer terminal that is connected in line to the computerized files of customer information in a bank and magnetically encoded plastic transaction card that identifies the customer with the computer. During a transaction, the customer's account is debited and the computer credits the retailer's account for the amount of the purchase.

Growh of Indian banking sector:

Technological advancements in the digital payment ecosystem are changing lives significantly and providing end consumers with speed, convenience, choice and savings. The following table indicate the percentage change in digital payment in year 2016 when compared with 2015 and 2017 when compared with 2016.[1]

Payment System Indicators

Month/Year		Item	April			% Change 2017 / 2016	% Change 2016 / 2015
			2015	2016	2017		
1	Volume (Million)	RTGS	7.9	8.33	9.54	14.6	5.4
	Value (Rupees Billion)		82,958.17	86,459.34	1,11,743.70	29.2	4.2
2	Volume (Million)	CCIL Operated Systems	0.23	0.26	0.25	-5	13.8
	Value (Rupees Billion)		65,647.89	72,044.93	80,878.53	12.3	9.7
3	Volume (Million)	Paper Clearing	94.37	88.26	99.97	13.3	-6.5
	Value (Rupees Billion)		7,650.61	7,108.17	7,351.49	3.4	-7.1
4	Volume (Million)	Retail Electronic Clearing	211.4	316.89	431.1	36	49.9
	Value (Rupees Billion)		6,586.90	9,169.02	13,700.63	49.4	39.2
5	Volume (Million)	Cards	753.85	925.1	1,035.38	11.9	22.7
	Value (Rupees Billion)		2,297.09	2,630.24	2,877.17	9.4	14.5
6	Volume (Million)	Prepaid Payment Instruments (PPIs)	74.36	69.3	352.23	408.3	-6.8
	Value (Rupees Billion)		27.57	46.72	103.71	122	69.5
7	Volume (Million)	Grand Total	1,142.11	1,408.13	1,928.48	37	23.3
	Value (Rupees Billion)		1,47,409.88	159410.36	1,93,423.72	21.3	8.1

Source: Database of Indian Economy, RBI

Thus from the above table it can be seen that all the payment systems used in India shows positive percentage growth when compared with the year 2016 in the year 2017 except in the CCIL volume in million. But when we observe the CCIL operated systems in value the it shows increase in percentage compared with 2016 in the year 2017.

The Report submitted by Niti Aayog on Digital Payments in July 2018 depict the important information related to overall payment growth and the instrument wise payment growth trends in India.

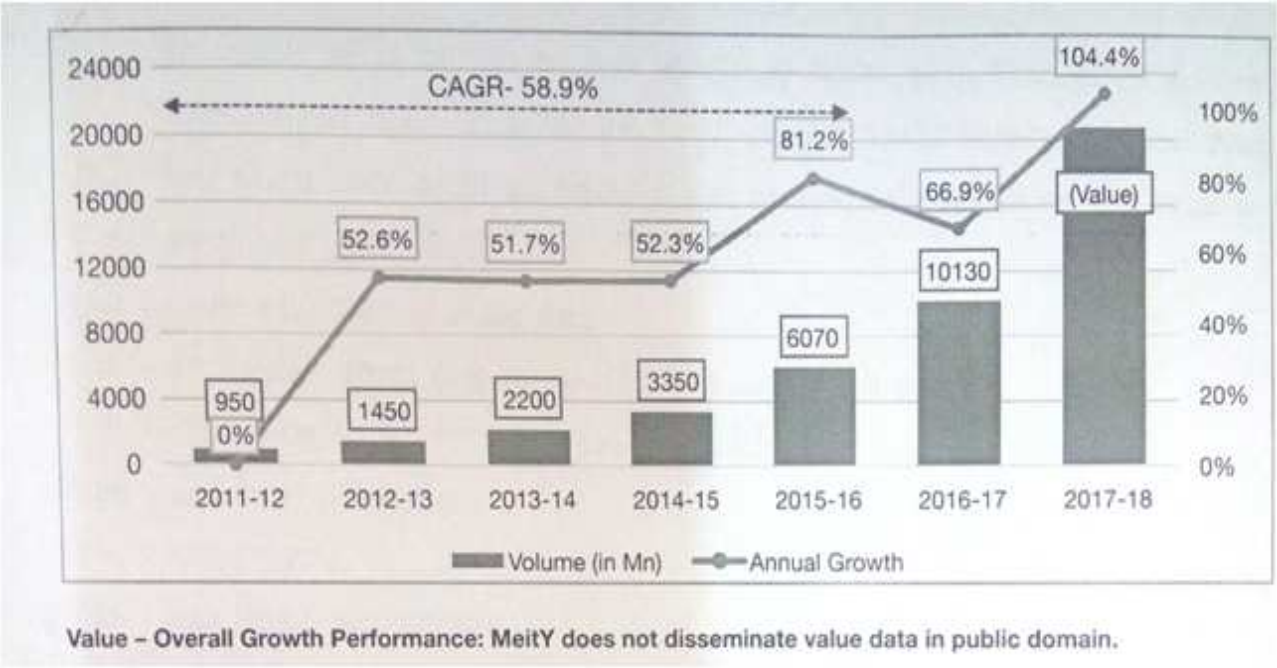
They are as given below

Instrument Wise Growth Trends – Volume:

The retail payment segment accounted for as much as 99 percent of total volumes in 2017-18. From this, the paper compensation ratio that formed 34 percent of the total volume in 2013-14, steadily declined to 7.4 percent in 2017-18. There is a corresponding increase in electronic compensation actions and cards. Within the category of electronic clearing cards and cards, the PPI followed by the debit card and, to some extent, IMPS have shown impressive increases in their shares in total volume in recent years. The total payment of the card, in fact, accounted for the largest part (almost 50 percent) of the total volume in 2017-18. The participation of NEFT has generally increased over the years, except for some fall in 2017-18.

UPI has shown an exponential growth compared to any other payment product and services. The total volume of the UPI transaction has increased by 5024.5 percent in 2017-18. The total value of the UPI transaction has increased by 1481 percent in 2017-18.

Volume – Overall Growth Performance (MeitY Data):



Value – Overall Growth Performance: MeitY does not disseminate value data in public domain.

The volume of global payments increased steadily during the period 2011-12 to 2015-16, registering an average annual growth rate (CAGR) composed of more than 58.9 percent. The growth rate in the volume of global payments accelerated further to 104.4% in 2017-18. Figure 1 indicates trends in digital payments during the period from 2011-12 to 2017-18. The growth in 2017-18 is spectacular and could be attributed to the development of an innovative digital payment platform such as BHIM-UPI, BHIM Aadhaar and Bharat QR Code. It is noteworthy that the growth in 2017-18 is much higher than the growth rate of the trend in the last five years (2011-2016).[3]

Today banks aim to provide a fast, accurate and quality banking experience to their clients. The most important agenda for all banks in India is digitalization. The RBI data shows that the value of transactions through checks as a proportion of the total number of transactions was reduced to 3%. The average number of monthly transactions through checks in 2012 was 16.53 million and, as of June 2018, the number of check-based transactions increased to 94.7 million per month on average.

India's digital payment industry, which is currently worth around USD 200 Billion, is expected to grow five-fold to reach USD 1 Trillion by 2023, as per a report by Swiss financial services holding company, Credit Suisse. Digital payments present a huge opportunity for various digitization initiatives in the country. [4]

PUSH TO ONLINE, APP-BASED PAYMENTS

For 12 months ending June

	Number of transactions (mn)	Total value of transactions (₹ bn)	Value of transactions as a proportion of total deals (%)		
			Cheque	RTGS	Mobile
2014-15	853.04	100,440.75	5.40	75.13	0.03
2015-16	1,040.09	144,093.18	5.00	55.33	0.09
2016-17	1,327.37	158,939.13	3.90	56.24	0.28
2017-18	1,742.71	196,535.39	3.50	55.41	0.71
2018-	2,044.65	219,593.29	3.06	57.75	0.54

Note: Data for other Payment networks like Electronic Clearing System, Forex Clearing, Clearing Corporation of India among others not included

Source: RBI Database on Payment System Indicators

Conclusion:

The banking landscape is changing. A new wave of technology is revolutionizing the way customers interact with their finances. From social to mobile capabilities, banks are reconsidering their way of doing business to offer a better customer experience and remain competitive. By looking at the scenario existing now in India, one can find that People are now taking more and more advantage of the digitalization in case of banking. Traditionally, banking practice use to focus on "product push" (i.e. increasing sales targets) rather than understanding how best to delight its customers. In recent times, banks are keen to become more customer-centric. With the help of digitalization Indian banks are now not only getting more customers but also delivering top-notch services, as efficiency counts as well.

In this innovative business model, it is crucial to ensure regulatory compliance for smooth and long-term execution. The key challenge in the digital age is to ensure that all customers are protected against cybercrime, and that the most advanced cybernetic values are employed. The change to digitalization and the continuity of it should serve to reduce costs for the industry, since this will reduce labor and automate the system.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Opportunities & Challenges - Digital India

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ABSTRACT
Digital India is the beginning of digital rebellion. It is a vision which is created by the Government of India to make sure that government services are made available to citizens electronically, even in remote areas, by improving online infrastructure and by increasing Internet connectivity. The programme has one mission and one intention that are to take nation forward digitally and economically. The proposal will enable people to get engaged in the innovation process which is needed by the economy to move forward. But to implement this is a great challenge. There are many roadblocks in the way of its successful implementation like digital illiteracy, poor infrastructure, low internet speed, lack of harmonization among various departments, issue pertaining to taxation etc . These challenges need to be addressed in order to realize the full potential of this programme. It requires a lot of pains and dedication from all departments of government as well as private sector. If implemented properly, it will open various new opportunities for the citizens of the country.

KEYWORD: *Digital, Infrastructure, Opportunities, Revolution, Roadblocks*

1. INTRODUCTION

The Digital India programme is a flagship programme of the Government of India with a vision to renovate India into a digitally empower society and knowledge economy. Digitalization is one of the most elemental periods of transformation we have ever witnessed. Digital India was a flagship programme launched by the Prime Minister of India Narendra Modi on 1 July 2015 – with an objective of connecting rural areas with high-speed internet networks and improving digital literacy. The vision of this programme is to transform India into a digitally empowered society and knowledge economy. It is one of the major step by government of India to motivate the citizen of the country and connect Indian economy to knowledge savvy world.

2. RESEARCH METHODOLOGY :

The paper is based on the secondary data and the information is retrieved from the internet via journals, research papers and expert opinions on the same subject matter.

3. OBJECTIVE OF THE PAPER:

1. To study the concept of digital India .
2. To find out the importance of this programme.
3. To find out the challenges faced in implementation of this programme.
4. To find out practical solutions and innovative ideas to accomplish the vision of a digital India-a reality.

- **DIGITAL INDIA** 'Digital India' is a central programme to make India ready for knowledge-based future **Vision Areas of Digital India** The Digital India programme is centered on three key vision areas:

4. BENEFITS OF DIGITAL INDIA PROGRAMME

1. The digital India task would make all the government services available to people of country through common service delivery outlets.

2. There would be more clearness as all the data would be made online and would be accessible to citizens of the country.
3. E-Governance will help in reducing corruption and getting things done quickly.
4. Digital locker facility will help citizen to digitally store their important documents like Pan Card, passport, mark sheets etc.
5. It will help in decreasing documentation and reducing paper work.
6. Digital India mission is away for cashless transactions.
7. It can help small businesses. People can use online utensils to expand their business.
8. It can play a key role in GDP growth.

5. PILLARS OF DIGITAL INDIA

Under Digital India programme, key initiatives are in progress, which are as follows

1. **Broadband Highways** The aim is to cover 250000 village Panchayats under National Optical Fibre Network (NOFN) by December 2016. Nationwide internet infrastructure (NII) would incorporate the network and cloud infrastructure in the country to give high speed connectivity and cloud stage to various government departments up to the panchayat level.
2. **Universal Access to Mobile Connectivity** The plan is to increase network dispersion and to provide mobile connectivity to 44000 villages by 2018 with investment of RS 16000.
3. **Public Internet Access Programme** One Common Service Centre(CSC) would be provided to each gram panchayat and 150,000 Post Offices are proposed to be converted into multi service centers.
4. **E-Governance** IT would be used to make the delivery of government services more successfully. There would be incorporation of services and platform-UIDAI, Payment Gateway, Mobile Seva platform, Public redressal etc., through IT. All information would be available in electronic form.
5. **e-Kranti** The plan is electronic deliverance of services to people be it education, health, financial enclosure or justice.
6. Information for AllMyGov.in is a website launched by the government to make easy a 2-way communication between citizens and the government. It is a medium to exchange thoughts or suggestion with government. The citizen would have open right of entry to information throughout open data platform.
7. **IT for Jobs** The aim is to train 10 million people in towns and villages for IT sector jobs in five years. It also aims to provide education to three lakh service delivery agents as part of skill development to run possible businesses delivering IT services. It also focuses on training of five lakh Rural Workforce on Telecom and Telecom connected services and setting up of BPOs in each North-eastern state.

6. OPPORTUNITIES

1. The Digital India programme, India may have an opportunity to encourage and change the world yet again.
2. Positive citizen perception about right of entry to government throughout both conservative and digital channels tender an outstanding and distinguish starting point for governments.
3. Even though clarity seem to be on the agenda of most governments, results are scatter and do not reveal a consistent implementation of this principle.
4. In a recent survey — 56 percent of respondents think that digitization of government will generate a service gap for those without Internet access or for citizens who have not yet embrace digital communications.

7. CHALLENGES

Few of the challenges are-

1. **High level of digital illiteracy:**
   Cities have adopt digitalization but restricted to certain extent. Full fledged digitalization is cashless transaction on daily basis, use of internet services to get government certificates. These require administration change, Taxation changes and change in public way of thinking. So its team works which include citizen's accountability and bear to the new system. There continues to be a general not have of awareness in Public Service Departments of how digital technology changes public service design to deliver agile, easy-to-use, consumerized services at lesser cost and in a way, that emulate our daily experience in the private sector.
2. **Connectivity to remote areas:**
   It is a huge task to have connectivity with each and every village, town and city. The difficulty of connectivity is a complex issue as every state has different laws pertaining to its implementation. Also it is challenging for the central authorities to make a database where such huge information can be stored.

3. **Compatibility with center state databases:**
   Every state has different internet protocols because every state is diversified. Diversified not only in the sense of religion but also in language. Therefore software compatibility with the center is a critical subject. Information shall be saved cautiously.
4. **Cyber Crime:**
   There is cyber risk all over the world and digital India will not be any exemption. Hence we have to a strong anti cyber crime team which maintain the database and protect it around the clock.
5. **Inter Departmental Co ordination:**
   Inside the government there are a variety of departments which should be integrated. Integration has technical as well as corporate problem. Corporate in the sense self ego of the officers and staff of our government services are obstacle in the change. Also the middle man strategy will be eliminating completely because of digital India, hence there will be imminent resistance from the working staff.
6. **Finance:**
   Though there are resources with India but there is an enormous capital cost which is to be invested and the fruits of the investment will be expected after few years.
7. **Net neutrality:**
   The problem is still on the table and we are blindly following the digital India. Net neutrality is having to and we should make confident that digital India exclusive of net neutrality would be a great blow to entrepreneurs and citizens of India.
8. **Changing the mindset:**
   This point will come into picture when you have allocated the necessary resources and material but when it comes to implementing them, most of them will be uncertain to change. People are familiar with years of same of practice that they are not prepared to change.
9. **Exchange of information:**
   The information stored should also be used by other government offices. For example police, surveillance and other security issues can be easily set on with digital India but its co ordination is a massive task. It is not only a technological difficulty but also deals with the question of privacy and safety.

SUGGESTIONS

Few of the suggestions are –

1. Digital literacy is first step in empowering citizens. People should be familiar with how to protect their online data.
2. Digital divide needs to be addressed.
3. PPP models must be explored for sustainable growth of digital communications.
4. Private sector should be encouraged for development of last mile infrastructure in rural and remote areas. To encourage private sector, there must be favorable taxation policies, quicker clearance of projects.
5. To improve skill in cyber security, we need to introduce cyber security course at graduate level and support international certification bodies to introduce various skill based cyber security courses.
6. There is need for successful participation of various departments and demanding commitment and hard work. A variety of policies in different areas should support this objective.
7. For successful implementation, there must be amendments in a variety of legislations that have for long hindered the growth of technology in India.

SOCIAL IMPACT & GOVERNANCE IMPACT

Assessing the impact of digitization on societies is complex because there are no universal metrics that act as a barometer of societal development. Studies often tend to look at the level of inequality in a society but in emerging economies that are in the process of uplifting millions from poverty, a complex relationship between economic escalation and dissimilarity remains. Therefore we analyzed societal impact on two levels: the level of quality of life in a society and the equality of access to basic services that a society requires. However, the analysis reveals that in countries with lower levels of economic development, the impact of digitization is not as marked. The difference appears to be that in fewer developed economies, factors beyond digitization are more significant to quality of life: of primary importance are food; then housing, clothing, water, and energy; followed by health; and finally transportation and communication. As a result, it would appear that, as expected, digitization has an impact on quality of life only when the population has fulfilled its basic needs.

The final area in which we analyzed the impact of digitization was government effectiveness. As for the analysis reviewed above, we relied on three metrics: the transparency of governmental activities, the delivery of e-government services, and the provisioning of public education a key government service. Our correlational analysis demonstrates that greater digitization enables a society to be more transparent, increasing public contribution and the government's capability to distribute information in an accessible manner. Digital technology gives the population more insight into government policies and function an insight that might, in turn, lead to more energetic political participation and support the development of human rights. Additionally, as expected, e-government services are more useful in a digitized environment. Current research indicates that causality in this case acts both ways. Higher digitization contributes to more efficient delivery of e-government services, while better e-government services stimulate an increase in digitization. Finally, digitization supports better delivery of basic government services, such as public education. In general, our investigation indicates that digitization clearly has a positive impact on economic advancement, societal well-being, and government effectiveness, even though this impact varies according to a country's level of digitization. Digitization has an increasing impact on the economy and quality of life as countries advance through the stages of digitization, and more impact on access to basic services and education in countries that are just beginning their journey.

CONCLUSION

The digital economy is the new productivity platform that some experts regard as the third industrial revolution. This is also known as 'The Internet Economy' or Internet of Everything (IoE) and expected to generate new market growth opportunities, jobs and become the biggest business chance of mankind in the next 30 to 40 years. The momentum that 'Digital India' has given to our technological progress is noteworthy indeed. The vision of digital India is impressive. It is a enormous step towards building a truly empowered nation. If successful, it transforms citizen access to multimedia information, content and services. However the objective is still far away since most of the nine pillars of digital India mission are facing serious challenges in implementation. It is imperative that focused constant attention must be given to each and every pillar so that this programme does not end up in failure. In fact we all should be mentally prepared for the change and be ready to face the challenges in implementing this policy, only then it would be possible to make this vision a reality. We all support Digital India but we should be aware of the dangers and setbacks, so that we can prepare ourselves for the forthcoming challenge. We should be mentally prepared for the changes and challenges in implementing the policy, only then it would be possible to change it to reality.

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INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Library Consortia: A new way of Resource Sharing in Networked Era

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ABSTRACT
The advancement of technology on one side and its application in libraries to other side, leads to the changes in libraries from single platform to network based system of libraries such as library consortia. The present paper highlights the concept and meaning of library consortium, why the library consortium is needed, features of library consortium. The attempt has also been made to discuss some models of consortium, and prerequisites for formation of library consortium with issues related to library consortium etc.

INTRODUCTION
During the last few decades, tremendous information revolution and proliferation have brought about drastic changes to the function and services in all type of libraries. Information exchange or sharing of information takes new mode of cooperation. With the infusion of ICT, the cooperation mode has gone under a transformation from print based environment to digital environment and which results in the formation of new term library consortium. Library consortium is not a new phenomenon, previously it was known as library cooperation or library resource sharing. But due to advancement of technology on one hand and its application in libraries on other hand, the libraries are changing from single platform to network based system of libraries such as library consortia. In library consortia, sharing of library resources is done to have mutual benefits for providing services to its users and to fulfill their demands. Information is considered as a vital resource for communication and for effective use of information, it is necessary that it should be shared. The motto of consortium is choosing, purchasing and implementing the same integrated library system. Primary purpose of establishing a Library Consortium is to share physical resources. However, increasing number of publishers is using the internet as a global way to offer their publications to the global community of users.

Library Consortia: Concept
A Library Consortium is a group of two or more libraries that have agreed together to cooperate with each other in order to fulfill certain similar needs usually resource sharing. It is not about sharing the resources but also improving access of information.

Definitions of Library Consortia:
Hirsh on (1999) explained that "Library Consortia is a generic term to indicate any group of libraries that are working together towards a common goal whether to expand cooperation on traditional library services such as collection development or electronic information services".

Reasons for Library Consortium:
- **Information explosion:**
  Now days, information is exploiting in various forms and it is impossible for any individual library to acquire information in all the form. In that case it has become essential to acquire resources through Library Consortia.

- **Diversity of user needs:**
  Information requirement of user is ever growing and varies from user to user due to information explosion, new forms of information, presence of

multi-discipline, specialization of subjects etc. Library consortia help to fulfil their individual requirement.

- **Professionalism:**
  Role of library professionals has been changed from mere conservator to facilitator of knowledge and its due to changes has taken place in all the areas.

- **Financial constraints:**
  Today most of the libraries are faced with economic problems and suffering from financial crises. Library Consortia can solve this problem up to the limit through cooperative efforts.

- **Technological Revolution:**
  The rapid progress of information technology through research and development activities all over the world, now tries to satisfy the information need of human being in diverse manner.

Features of Library Consortia:

- Library Consortia provides 24*7 availability of information and resources to the users.
- Library Consortia promotes e-Publishing of information variously.
- Library Consortia assists in direct purchasing from publisher which helps to reduce the cost of purchase. It also promotes rational use of funds.
- Library consortia helpful in developing technical capability of staff.
- Library Consortia proves very helpful and supporting in providing back volume of information.
- Through library consortia sharing of information and resource in different formats or languages is possible which avoids barrier of language.
- It provides different subscription level such as cost benefit per subscription.
- It avoids space problem as using Library Consortia one don't need to purchase or acquire every resource in the library.
- Library consortia help in development of ICT environment which make possibility of obtaining best reading for the largest number per institution.

Models of Consortia:

Below discussed some of the models of consortia are very useful in formation of library consortia:

- **Open Consortia:**
  This type of consortia is open ended and participating libraries have the freedom to join or leave from consortium at any time. INDEST consortium is an example of open consortia.

- **Closed Group Consortia:**
  This type of consortia formed by the same type of member and has a common need to cross the resources in specific area. Examples of this type of consortia are CSIR, DAE, IIM etc.

- **Centrally Funded Model:**
  This type of Consortium depends on the central funding agency and parent body shoulders the financial responsibility of running the consortia. For example INDEST, UGC INFONET, CSIR, ICMR etc,

- **Share Budget Model:**
  The formation of such type of consortia is with the appropriate sharing of funds with of participation member and management of fund is individually handled. IIM and FORSA are examples of this model.

- **Publishers Initiatives:**
  In this type of consortia publisher offered a deep discount consortium price to participating libraries. For example SCIENCE DIRECT, EMRALD,

- **Subject based Consortia:**
  These types of Consortia deal with specific subject. FORSA, UGC, DAE are examples of this type of model.

- **Regional Consortia:**
  These types of Consortia covers specific region. Chandigarh Library Consortia is example of such type of Consortium.

- **E-Journal Consortia:**
  INDEST, JIM Consortia, ICAR Consortia are examples of E-JOURNAL Consortia.

Prerequisite for Consortia Formation:

Formation of consortia needs most important four prerequisites which are discussed below:

- **Hardware:**
  It must necessarily be a Pentium PC/ Server which would support modular enhancements likes CD Writer, document Scanner, CD Net and other network elements.

- **Software:**
  It composed of different components like operating system, which could be either commonly used Windows or UNIX, LINUX etc and any library software which would enhance handling in house resources in an information centre.

- **Netware:**
  One of the major elements for successful Library Consortia is a good network infrastructure in addition to LAN. The campus internet connectivity with a decent bandwidth has to be provided. This could be made possible only with dedicated telephone line and must also be supplemented by fax facility.

- **Human Ware:**
  Library personnel need to be trained in using latest gadgets with which relevant information is stored, analyzed and disseminated to potential users. Training must also be given to library staff to create databases of library documents.

Library Consortium: Issues

- Identification of resources is the major issue in library consortium.
- Lack of technological infrastructure.
- Pricing issues.
- Issues related to the access. The problem of access rights, direct access from publishers and through nodal agency by mounting the database on them.
- Licensing and copyright issues.
- Archival issues- at the end of year the publishers should supply access to that issue permanently or supply a copy of that issue in CD or other form.
- Lack of training for users and staff. Library Consortia required special skills in handling E-Resources.
- Lack of coordination. Library Consortia are lacking for co-ordination of present activities and preparation of new ones.

Conclusion:

In the age of technology, providing access to information resources is more important than the collection building. Libraries in India are facing major problem of static budget and growing prices of library collection. It is difficult for any single library to monitor all the explosion of knowledge filed and accumulate for the users. In last few years a lot of efforts have been taken to overcome the major problems faced by the libraries and best possible solution to this is sharing of resources through library consortium. There is no doubt that library consortia will be able to share the resources for more effectively and efficiently than individual libraries. A successful consortium is based on the principal that, consortium have clear goals, a coherent membership and a structure that matches its goals and membership.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Digitalization in Marketing

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ABSTRACT
Aadyaa Originals Private Limited ("Aadyaa") is a jewellery studio based in Pune, India which has a focus on handmade jewellery in metals like Sterling Silver, Brass and Copper. Established in 2013, Aadyaa has shipped more than 30,000 orders thus far within and outside India.

In this journey, Aadyaa has used Digital Marketing Media solely to cross milestones with regard to turnover, branding, presence in the market. Aadyaa started with a Facebook page wherein friends and family members were the first ones to like the page and become followers. With the increased interaction on Facebook page, Aadyaa launched its own website www.aadyaa.com to ensure a seamless shopping experience for its customers. While the website continues to be the only place where Aadyaa products can be bought online, the traffic to this website is still led by leaders in the digital marketing media like Facebook, Instagram and Google.

Based on a research paper published by Economic Times, online jewellery market in India is expected to reach a mark of INR 5300+ crores by 2020. This signifies a huge potential and to tap into the tier 2 and tier 3 markets, digital marketing media looks to be the most cost-effective marketing and branding channel. Digital marketing media can be used to create your audiences, target segments based on past data and get a boundary-less group of followers who are together only based on interest in a particular brand. All digital marketing media have evolved over a period of last 8 to 10 years and now offer a very powerful analytics dashboard to create your own 'what-if' scenarios. They also offer a plenty of datapoints gathered from publicly shared information of users over internet which help deciding in a budget.

Aadyaa has created varied marketing campaigns on these digital media during new collection launches, events, and exhibitions. As of now, Aadyaa boasts a fan following of over 400,000 on Facebook and close to 50,000 users on Instagram. This includes various celebrities in Indian Film Industry. Digital marketing media remains Aadyaa's only channel for marketing and branding. Digital marketing contributes to over 75 percent of Aadyaa's turnover now.

This paper delves deep into Aadyaa's marketing strategy which has Digital Marketing as the strongest pillar. Paper is been presented in the form of a case study with the help of information provided by Mr. Jaydeep Hingne (Director – Aadyaa Originals Private Limited), research information available in various reports published, and analysis plus suitable assumptions of the author.

INTRODUCTION
As a definition, we can assume that "Digitalized Marketing" is the process wherein any medium or channel in the electronic form is used to connect or interact with customers for drawing their attention to provider's services or products or make the brand presence felt.

Hence, any branding, marketing or advertising over media / channels such as television, internet, mobile devices, tablets, social platforms can be considered as a form of digitalized marketing. The interactions with customers over these channels could be one-way (provider to consumer) or two-way (provider to consumer and vice versa too).

The basic principles of marketing in print media have remained in-tact in digitalization era too. Good

creative design, clarity of the message, usage of language and words, localized themes have all maintained their stay in digitalized marketing.

Launch of Google search engine in 1998 could be considered as the start of evolution of digitalization in marketing. Although, digital billboards and hoardings were used in the industry even before that, those are the examples of static dynamic content without much of intelligence. Search engines like Alta Vista, WebCrawler, Yahoo existed before Google's search engine, however, their operation was limited to only providing the references over web for the searched term. They never collected the data being searched nor really tried to implement a ranking mechanism for search results.

Google launched it's one of the most successful products called 'Ad-words' in 2000 and it proved to be the game changer in the digital marketing arena. They followed it up with content marketing tools a few years after that. Around same time, in 2004, Mark Zuckerberg found Facebook in the US, the social giant, which connects with over a few billion people today across boundaries of nations. The idea behind Facebook was to introduce a tool for people to peep into other people's lives and share their own stories.

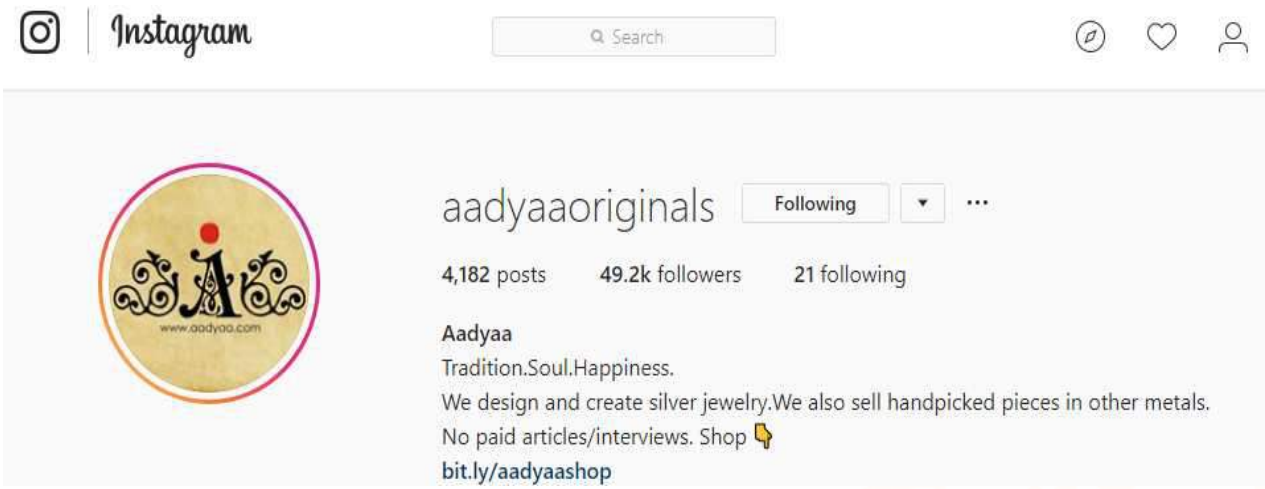
Over a period of time, all the tools and concepts such as SEO (Search Engine Optimization), SEM (Search Engine Marketing), business analytics, traceability of users' path on internet, users' acceptance to share their certain personal information over internet have evolved dramatically and have helped in the meaningful spends in the digitalized marketing field.

When Aadyaa launched its operations in 2013, it started with a Facebook business page wherein post can be created, photos can be shared and information about the products, services and about the brand can be displayed. Soon after, its Facebook page (www.facebook.com/aadyaaoriginals) gathered momentum and started going viral.

Team Aadyaa then decided to make use of marketing offered by Facebook on the business page and started creating various marketing campaigns. These campaigns led to increased revenue, increased number of followers across the globe, and a platform to interact with its customers. Later on, Aadyaa spread its marketing portfolio in other digital marketing channels such as Instagram, Google products, and Twitter.

As of 15th September 2018, Aadyaa's fanbase on Facebook has crossed the milestone 400,000 people. On Instagram, its inching towards 50,000 mark.

A quick snapshot of Aadyaa's Facebook page followers for last 2 years is given below. Growth is 2.7x in last 2 years which could not have been achieved in traditional marketing media.



Print Media vs Digital Media

One of the most debated questions in the field of marketing today is whether print or digital media is more effective. There is no clear answer to this question, especially considering the Indian user base. While tier 1, 2 and even tier 3 cities have become digital savvy today, there exists a huge population which is far away from any sort of Digital media in India.

Government of India has undertaken ambitious programs such as Digital India under which a huge number of services have been made available to Indian citizens and awareness is also created to help people.

As per Magna report published on livemint.com, total spend of advertising in India is expected to hit INR 68,000 crores in 2018. Digital is expected to pick a staggering pie of almost 40% in this huge budget. As per the report, India is probably the only market in the world, where print media also showing growth irrespective of the hurdles like demonetization and GST rollouts.

Summary of Digital vs Print media is as below:

Digital Media	Print Media
More engaging with users	Static content, hence less engaging with users
Spending amount can be decided and altered during campaigns	Spend amount is pre-decided and cannot really be altered
Return on Investment (ROI) measure is relatively easier compared to print media	ROI measurement is difficult in print
Audience can be chosen based on the product / service in contention	Audience cannot be chosen or filtered as such.
Content of most marketing campaigns can be tailored within micro groups of users	Same content goes to all sets of users
Campaigns can go viral	Spread of print media campaigns is at relatively fixed place
Needs internet for most digital media to operate the marketing campaigns	Does not need any internet connectivity as such. Only distribution network of newspapers, magazines is required

In light of the above, Aadyaa has chosen to spend its monies only on digital media for marketing and stayed away from print media. This approach has yielded very good results to Aadyaa and they have managed to achieve approximately 10x returns on the spends done in their digital marketing.

Aadyaa witnessed digital media's power when Bollywood celebrities like Vidya Balan, Shraddha Kapoor wore and flaunted Aadyaa's creations. Apart from Bollywood, celebrities from other industries, such as Sonali Kulkarni, Spruha Joshi, Parna Pethe, Mithila Palkar, Anumol have adorned Aadyaa's creations and their posts have helped Aadyaa garner immense popularity and increased revenue in a very short while.

Portfolio within Digital Media

As far as portfolio of Digital media in marketing is considered, following key types can be considered. While this list is not exhaustive as such, and various other types also can be added to it, key types have been picked to demonstrate the expanse of digital marketing media.

Out of all these types, Aadyaa has chosen only social, internet ads and SEO/SEM related marketing spends till now. Return on investment achieved in these media is well above the industry benchmarks (2x to 4x revenue compared to spends) set by internet giants like Google and Facebook.

Aadyaa will continue to focus on these digital media to reach out to its existing customers as well as mine new customers based on their preferences about jewellery.

Insights from Digital Marketing

A vast amount of data gets captured when any of the campaign is run through digital marketing medium. Through this data, important insights can be gathered and can be made to ensure better utilization of marketing budgets for the organization.

At Aadyaa, following insights are always being watched closely for their campaigns:

1. How many users have connected through the campaign
2. How many conversions have happened through the spend of a particular campaign
3. What is the cost at which conversions are taking place
4. How many concurrent users are connecting to portal of www.aadyaa.com through the marketing campaigns
5. Where are the users based? City and country
6. How users are connecting to the campaigns – desktops/laptops, mobiles, apps, tablets
7. Is there any particular pattern in the buyers' age group / gender / ethnicity?

Limitations of Digitalized Marketing

While digital media are a boon for advertisers as they assist in better utilization of their marketing budgets, from a user's perspective, it may just become an overdose too soon. A typical user having a smart phone in hand and having access to Internet, will get continuous promotional notifications on his social media accounts, internet browsers, search engines.

At the moment, users are enjoying their social accounts free of cost only because there are promotional campaigns run by advertisers. There will soon be a time when users will get an option to pay a fee to get access to use their social accounts without

any ads as such. For the social account provider, it will still be making a huge profit, but for advertisers, it will be a lost potential customer.

Hence, it is essential for the marketing community to create the campaigns cautiously so that only carefully selected audience with high probability of conversion gets targeted and it doesn't act like a bombardment for other set of users.

Conclusion

In conclusion, we can see that there is a huge scope for digitalized marketing in India. While Aadyaa has tried to explore digital marketing's potential in jewellery sector, other key sectors such as banking and financial services, manufacturing, real estate, logistics, textile, electronics also can be targeted well with rightfully created campaigns.

With most advanced tools and techniques in analytics, SEO, SEM, targeting a right user is now a reality. This can help in achieving new customers as well as maximizing the potential of existing set of customers as well.

While the number of brands keep growing every day, it is of paramount importance to create your own space with rightful marketing and branding with the help of media that supports your organization's products and services the most.

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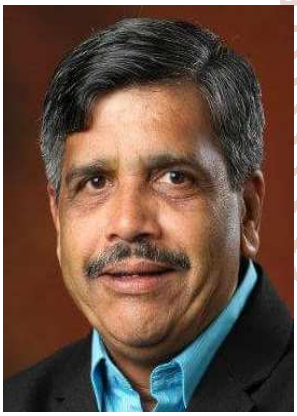

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Dr Marathe has been working in the field of education for last 36 years. He has worked as a Registrar and Visiting Faculty in several institutes in Pune and Mumbai. He is currently working as Associate Professor in Tilak Maharashtra Vidyapeeth, Pune. He also has a keen interest in teaching with focus on Micro and Macro Economics.

Dr Marathe has also worked as a trainer and have been a part of Humanist Movement. He believes in continuous learning process and one shouldn't stop learning at all. He has received PhD in Management in July 2016 from Tilak Maharashtra Vidyapeeth, Pune. Before his PhD, he has completed his MDBA (Marketing) from IMDR, BSc (Statistics) from Shivaji University, and M.A. (Economics) from Pune University.

Portfolio:

- Tilak Maharashtra Vidyapeeth, Pune (June 2017 till date):
  - Teaching in Management Department to BBA and MBA Program.
  - Teaching in Commerce Department to B.com and M.com Program.

- N.L. Dalmia Institute of Management (2015 to 2016) || NMITD Mumbai (2011 to 2014) || Institute of Management Development and Research (1980 to 1995 & 2008 to 2011)
  - Faculty for communication, general management and organization behavior subjects
  - Registrar with General Administration Duties: Admission, Scheduling, Timetables
  - Student Management: Supervising all the administrative arrangements for all the events, festivals, competitions etc. conducted on campus
  - Examination: Supervising examination related all activities (From Form submission to Result declaration and arranging convocation)
  - Accounts: Purchasing material for educational institute, Supervising Payrolls
  - HR: Recruitment, Training and Development, Employee Performance appraisal
  - Supervising Housekeeping and Maintenance work at the institute

- Institute for studies in Technology (1995 to 2008)
  - Faculty forOrganization behavior, PPM, Economics, Marketing, Case studies
  - Placements and internships for students.

- Corporate Trainer
  - Trained employees of Bank of Bhutan in Customer Relationship Management
  - Training program on Personality development, English Improvement and Public speaking for employees of R&D group

- Visiting Faculty for subjects such as Marketing, Business Statistics, Managerial economics, Market Research, Communication and leadership skills, industrial organizations and methods:
  - Symbiosis Institute of Management Services, Pune, India.
  - Institute for Studies in Technology and Engineering, Pune, India.
  - Tilak Maharashtra Vidyapeeth, Pune, India.
  - Arihant Management Institute, Pune, India.
  - Sunrise Training Centre, Pune, India.
  - Sudarshan Management Institute, Pune, India.
  - Technical Institute, Pune, India.
  - Institute of Management and Career Courses, Pune, India.
  - Mitcon institute of Management, Balewadi, Pune, India.

- Presented opinions on live television show:
  - Modern Management Methods on 28th January 2013
  - Union Budget 2013 on 13th March2013

- Research Papers published in journals:

Sr#	Title with Page No	Journal	ISSN/ISBN No
1	Management Education', page 168 to 172	ROYAL	ISSN-2218-8158
2	"On line shopping", page42 to 46	ROYAL	ISSN-2218-8158
3	"A CRITICAL Analysis of Consumer expectations from online purchasing	Mahratta	ISSN-0076-2571
4	Automation and Employability	NA	--

International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Trends and Challenges of ICT in Indian Banking Sector

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ABSTRACT
Recently, geometric technologies are developed in all sector of business, banking, insurance and every sector. India, too is watching high development in Information and Communication Technology. The result of this, Indian Banking Sector is ready for contribution better and improved services to its clients. Uninterrupted origination in ICT in the banking sector has made Computer-generated Banking. Formation of Revolution Workshops is enabling the banks to discover various roads in the banking area like Biometrics, Artificial Intelligence, Robotics, Data Analytics, Wearable technology etc. As the nation welcomes innovations in ICT, banks need to prepare themselves with the mandatory set-up. As major percentage of education to take urban youth in the nation accepts and adopts virtual banking. Banks need efforts to reach out to uneducated rural poor areas also. As the nation observers gifted ICT trends in next generation banking. Banks also need to prepare a design to overcome the tasks. This research paper undertakes the study of application of ICT in order to make the entire banking experience customer centric. The study also highlights the application of developing skill in India. It also lists the experiments postured by improvements in ICT and recommends substitutions to overcome the same. This paper is evocative in nature. Secondary data collected from various websites, reports and journals.

KEYWORD: *ICT, Innovation, Biometrics, Artificial Intelligence, Technology.*

I. INTRODUCTION

Information and Communications Technology or ICT is the set-up and workings that enable to do every calculation and other things speedily. It discusses to the merging of audio-visual and telephone networks with computer networks. ICT assists interface of people and administrations in digital world. ICT modernization in Indian banking sector has placed strong base of recent banking facilities. Net Banking, digital wallets, mobile banking apps is the technique of life. Evolving know-hows will positively take Indian banking to the next level in near future. This paper pursues to study the tendencies and tasks given by ICT innovation in Indian banking sector.

II. Objectives

- To study the developing skills in Indian Banking Sector.
- To study the tasks postured by ICT innovation in near future.
- To propose substitutes to overcome the tasks.

III. Scope

The study covers the technological developments in Indian banking sector only.

IV. Methodology

The study is evocative in nature and is centered on secondary data. The data are composed from various reports, journals, news articles, various bank portals, RBI portal and internet sources.

V. Discussion

5.1. Trends

5.1.1. Developing Fin Tech Technologies in Indian Banking Sector

FinTech means Financial Technology, i.e. proposing economic amenities by making use of recent know-

how. FinTech companies compete with the banking sector today to deliver financial amenities to the clients.

5.1.2. Modernization Labs

As the FinTech Start-ups are concrete way for inflexible race to the traditional banking services, many banks have adopted proactive strategy by establishing their own internal advance labs. Origination labs function with the main objective of estimating and implementing evolving technologies and subsidize to bank's intention of digitalization. E.g.: AXIS Bank has set up its Innovation Lab named Thought Factory.

5.1.3. UPI

National Payments Corporation of India (NPCI) propelled Unified Payments Interface (UPI) in 2016 with 21 member banks. UPI is a system that powers multiple bank accounts into a single mobile application, merging several banking features and seamless fund routing. UPI has been measured as the innovative formation in disbursement system.

5.1.4. Digital Wallets

Digital Wallets permit an individual to make electronic transactions using a smart phone. Consciousness and routine of e-wallets enhanced post demonetization in India. It is certainly one step towards „less cash" economy. Examples of top digital wallets and UPI apps in India

- Paytm
- BHIM App
- Mobiwik
- FreeCharge
- Oxigen
- ICICI Pockets
- PhonePe
- Jio Money
- State Bank Buddy
- Vodafone M-Pesa
- Chillr
- Citrus Wallet
- LIME
- CitiMasterPass
- mRupee
- Trupay
- Airtel money
- MomoXpress
- Ezetap

5.1.5. Wearable Know-how

"To wear your bank on your wrist" is a truth today. Shrewd guard banking aids the clients squared their steadiness, get fake warnings, carry out both financial and information dealings and proposals many more facilities. In India, ICICI has tossed an app named Wear for all smart watches. ICICI is amongst uncommon global players permitting transactions exhausting this app on both Apple and Android platforms. As technology is redefining banking, wearable banking and transactions.

5.1.6. The 3 Big B's

The 3 Big B"s obviously trending today in Indian banking sector are Biometrics, Block chain and Big Data Analytics. India is undergoing innovative alteration in the banking sector in the existence of these 3 Big B"s.

A. Biometrics

Biometrics overcomes numerous difficult. Voice pattern, fingerprints, iris scans, facial geometry are being substituted by keywords to generateuser's character and shorten the login exercise while banking accessible or via a mobile arrangement. Biometrics know-how brands use of biological data and social characteristics that separates one human being from another. Biometrics is safe and rate operative method for validation procedure of the clients of the bank. It eradicates the problem of memorizing passwords, PINs and card numbers. Biometrics substantiation is difficult to copycat but at the same time easy for all people to use. It offers suitability to customers, operative proficiency to the banks and safeguards the dealings.

B. Blockchain

The operational of Bitcoin is centered on Blockchain know-how. Bitcoin is numerical currency that allows the user to accomplish peer to peer dealings without the help of a third party such as banks. A blockchain is a statistics arrangement that is used to generate a numerical record of businesses and share it among a distributed setup of computers. The fundamental standard is cryptography, wherein each member on the network is allowable to employ the record in a safe method without the essential for a chief specialist.

Benefits of Blockchain

- Shared Control
- Reliable and high quality data

- Faster transactions
- Provides audit trail
- Transparency and process integrity

Scope

Block chain know-how proposals distinctiveness authentication through a perceptible record and has possible to condense cyber hazards. It deals giantlatent to Indian banks to gather clearings from across the globe Indian banks can use blockchain to present mechanization through trade-finance, remittances, funds transfer, open account transactions and identity amenities everywhere KYC and secure documents space.

C. Big Data Analytics Big Data are said to be extremely huge data set that has to be analyzed, handled, managed and validated through typical data management tools. Indian banks have millions of customers. The data of these customers is stored in the database. Retrieving the data in meaningful manner becomes a complex process as many times the data collected is unorganized. Big Data Analytics helps in resolving this problem. The analytics tools give the bank insights into personal habits of its customers, allowing it to promote offers accordingly. To achieve competitive edge in today's modern banking era, banks in India are using data analytics to attract new customers, retain them and make the entire process consumer centric

5.2. CHALLENGES

5.2.1. Computerization and AI may lead to unemployment

AI and computerization are the major advances of today's improvement era. Even though the aids are promising, technology revolution attitudes a great hazard to many of the jobs which will be completely automatic and occurrences for job volunteers will therapist. Banking is no prohibiting to this fact.

5.2.2. Voice Revolution will take over online banking

As voice gratitude and voice verification developed, web circulation to banking places and mobile rights might drop by 50% in next few years. Clients will purely TALK to an internet associated trick and achieve most common banking responsibilities within few seconds. The clients, who presently visit the websites for banking responsibilities, also go through the marketing advancements on the site. The banks may drop the chance to fractious sell present clients with drop in web traffic.

5.2.3. Problems associated to Biometrics

Operational issues – A slight could variation the voice excellence and may attitude difficulties in speech confirmation. People who work in labour comprehensive jobs may have injured impressions. Even the senior citizens may have problem in impression substantiation.

5.2.4. Safety matters

In its note on 'Digital Payments - Analyzing the cyber landscape', KPMG stated, fake safety is one of the most serious challenges faced by stakeholders of the digital payment ecosystem. With more and more users favouring numerical outflows, the chances of receiving uncovered to imitation safety risks like online fraud, information theft, and malware or virus attacks are also increasing. Lack of consciousness and poor digital payment environment are some of the crucial explanations that have led to growth in these attacks.

5.2.5. Digital literacy in rural areas

There has been significant progress in the operators of smart phone in rural India in last few years. But not many are aware and self-assured about online banking through smart phones. The primary usage of smart phone is delimited to entertainment and communication only. As the urban tech practicality customers adopt the changing countryside of ICT revolution in banking, Indian rural population yet needs to be educated about the ideas of AI, Biometrics, Blockchain, Big Data etc.

5.3. ALTERNATIVE SOLUTIONS

Following steps can be approved by the banks to overcome the challenges

5.3.1. Transition to AI

Top management and Leadership of the banks should play a substantial role. Active communication regarding the essential and application of AI in the association to all the employees may help realize smooth evolution. All employees unrelated of their age, will have to equip themselves with newest technology creation in the industry and upgrade their skills.

5.3.2. Voice Revolution

As voice uprising takes over, outdated online banking circulation is assured to get displaced. Banking industry should develop its web occurrence by proposing higher end products such as loans, mortgages and financial planning tools. Websites should soon develop to emphasis on superior understandings for financial education, planning and simplifying complex financial decisions.

5.3.3. Biometrics

Multifactor verification with biometrics being conspicuously used could help diminish frauds. Interactive biometrics could afford extra defence to augment banking safety in the future.

5.3.4. Security

As stated rightly in KPMG report, Cyber Security should be shared responsibility of government, organizations as well as the end users. Users should be conscious of the basic safety structures. Organizations should repeatedly update their software and deceit detection systems. The government should emphasis more on cultivating the customers and should implement basic safety standards for organizations. All the breaches should be mandatorily informed.

5.3.5. Digital Literacy

The government of India has launched National Digital Literacy Mission with the vision to sanction at least one person per household with vital digital literacy skills by 2020. It targets to train 60 million rural Indians. This mission will help in cultivating the rural population to appreciate the reputation, ease and benefits of digital transactions. This will boost affordability of Indian banking sector in years to come.

VI. Conclusion

6.1. The advances in Indian banking sector emphasized in the study direct that the banks are ready and organized to take a leap and proposal modern banking services. The current tendencies in banking are building blocks of the „Cashless Economy‟. The initiative of Government of India will very soon achieve its mission and rural India too would be „digitally literate‟. Banks will have to develop a strategy to bridge the gap of technology in rural banks and urban banks

6.2. Scope for future study: An empirical comparative study of public sector and private sector banks will lead to in depth analysis of readiness of the banks and its employees with respect to the trends and challenges of ICT revolution.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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A Brief Study on Cyber Crimes and IT Act in India

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ABSTRACT
Digital India is a campaign launched by GOI to ensure that government services are made available to Indian citizens online. As Digital India encourages cashless payments, but still many people are not very familiar with cashless payments; they have fear in their mind of losing their money. The success of digital India project is depending upon maximum connectivity with minimum cyber security risks. Increasing Technological advancements result into increase in cyber crimes. India has cyber laws to protect the citizens from the growing cyber crimes. The present paper is based on both primary and secondary data. The objectives of the study are to understand growth of internet users in the world and in Asia, to study growing cyber crimes, to understand the opinion of practicing advocates regarding the provisions of existing cyber laws in India to tackle with the cyber crimes and to understand the shortcomings in the IT Act.

KEYWORD: *Internet, unauthorized access, cyber crime, cyber law, spam, hacking.*

INTRODUCTION

Now the computer and internet are the inseparable part our daily life. In present Era, people can access information, store information, share information through internet. The growing fastest world of internet is known as cyber world. Government of India has launched the Digital India campaign. Accordingly, India goes digitally fast, its vulnerabilities also grow at a disturbing pace. With demonetization pushed Indians to adopt E-platforms at a great pace, its vulnerability is also growing fast. After demonetization, India shifts to a cashless economy and now cyber threats are at a new high. A joint study by ASSOCHAM, an ATM Card hack hit the Indian bank in affecting, around 3.2 million debit Card. The study said the attacks on Indian website have increased nearly five times in the past four years. India's budgetary allocation towards cyber security was only about Rs. 42.2 crores(2012-13) whereas US spends $ 658 Million through Department of Home land security & $ 93 Million through US-CERT . Cyber threats will rise as India is seeing a shift towards a cashless economy. [1]

There are huge gaps in India's cyber security infrastructure. According to the survey of ASSOCHAM, India has witnessed 350% rise in cyber crimes in the three years i.e. from 2011 to 2014. According to IEEE Conference report, 72% Indian companies faced cyber attacks in 2015.[2]

ASSOCHAM also reported that attacks on Indian websites have increased five times in last four years. India's budgetary allocation towards cyber security was only 35.45 crores and which is increased to Rs 42.2. crores in the year 2011-2012. [3]

According to National Cyber Record Bureau, in 2012 27605 and in 2011, 21699 Indian websites are hacked. In 2013, total 28481 Indian websites were hacked by various hackers groups operating over the Globe. According to NCRB report, in 2011 total 1791 cases were registered, in 2012-2876 cases and in 2013-4356 cares were registered under Information Technology Act 2000. NCRB reported that 422 cyber crimes are registered under Indian Penal Code which

were increased to 601 in 2012 and increased to 1337 cyber crimes in 2013.[4]

This statistical data of NCRB about cyber crime in India, government's budgetary allocation for cyber security are shocking. Cyber Security is the key to realizing the dream of a truly digital India. This present paper is based on both primary and secondary data. Efforts have been taken to understand the current scenario of cyber crime, the existing cyber law and its major provision, opinion of advocates regarding the lacunas in the Act.

Objectives:

1. To understand the basic concept of the cyber world and cyber crime.
2. To study the growing trend of internet users in the world.
3. To study about the provisions of Information Technology Act in India.
4. To study the proportion of growing cyber crimes and person arrested in India.
5. To point out the possible loopholes in the existing cyber law in India
6. To give suggestions / preventive measures to reduce cyber crimes.

Research Methodology:

In the present study, both primary and secondary data have been used. Primary data is collected by discussions with selected respondents. For the purpose of understanding the available provisions of Information Technology Act, to understand the problems in implementing and tackling with the cyber crimes registered in India, the research has under taken a survey of twenty practicing advocates who are located in different cities and practicing in cyber cases. Convenience sampling method is used for selecting the respondents. Discussions with the advocates helped the researcher to understand the lacunas in IT Act 2000 and IT amended Act 2008. Three point scales has been used to understand the opinions of respondents and weighted average has been calculated. The secondary data has been collected though web sites, e-journals, research papers, theses etc. Information Technology Bare Act, news papers etc. To test the hypotheses, weighted average mean has been calculated to understand the opinion of respondents regarding the lacunas in IT Act.

Limitations of the Study:

The present study covers only two chapters i.e. IX and XI with selected sections / provisions which are related to cyber crimes and punishments under cyber crimes. Due to time constraint only few advocates practicing in Maharashtra are contacted to understand the shortcomings in the Act. .

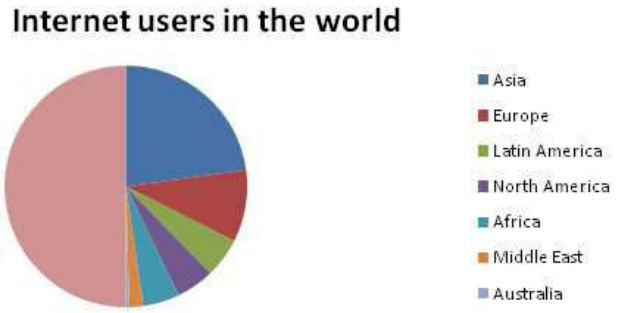
Internet Users in the World:

Today's world is the cyber world. The statistical data about internet users in the world has been published on internet world states indicate that the number of internet users in the world is increasing. Asian countries are leading in the use of internet.

Table No 1: Growth in Internet Users in the world in last three years

Sr. No.	Countries	June 30, 2014		Dec 31 , 2017	
		Int. users in Millions	% to total users June, 2014	Int. users in Millions	% to total users Dec 31, 2017
1	Asia	1386.2	45.66	2013.00	48.7 %
2	Europe	582.4	19.19	704.83	17.0%
3	Latin America	320.3	10.55	437.00	10.5%
4	North America	310.3	10.22	345.66	8.3%
5	Africa	297.9	9.81	453.32	10.9%
6	Middle East	111.8	3.68	164.04	3.9%
7	Australia	26.8	0.88	28.44	0.7%
	Total	3035.7	100.00	4156.93	100.00

Source: www.internetworldstats.com/stats.htm

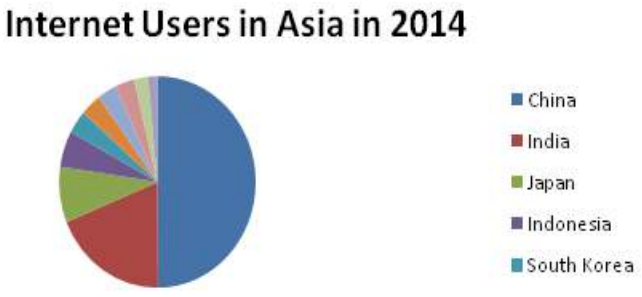


The above table depicts the internet users in the world. Asian countries are most users of internet in the world. Asia tops in the use of internet. Following Asia, Europe is the second largest continent in internet use.

Table No 2: Asian Top Internet Using Countries (In millions)

Sr. No.	Countries	June,30, 2014		Dec 31, 2017	
		Internet Users	% to total	Internet users	% to total
1	China	642.3	49.92	772.00	45.24
2	India	243.0	18.89	462.12	27.08
3	Japan	109.6	8.52	118.63	6.95
4	Indonesia	71.2	5.53	143.26	8.39
5	South Korea	45.3	3.52	NA	NA
6	Philippines	44.2	3.44	67.00	3.93
7	Vietnam	41.0	3.19	63.06	3.70
8	Bangladesh	40.8	3.17	80.48	4.72
9	Pakistan	29.1	2.26	NA	NA
10	Malaysia	20.1	1.56	NA	NA
	Total	1286.60	100.00	NA	100.00

Source: www.internetworldstar.com



The above table depicts the internet user countries and their rank in Asia. China is the top country which ranks first in internet use. In Asia region, India has rank two in internet user countries in the Asia. India is the fastest growing country.

Cyber crime:

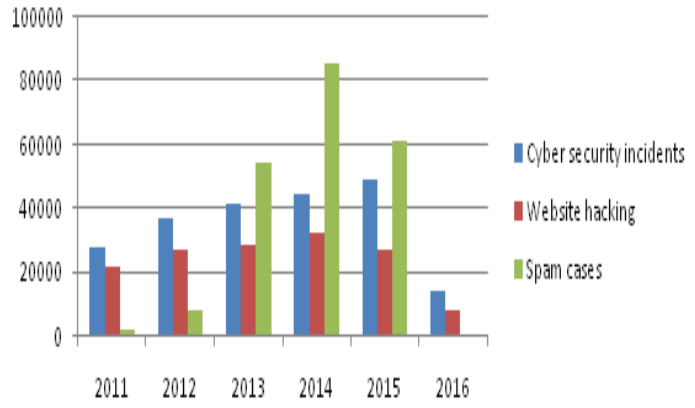
Today all internet users can access the internet anytime from anywhere. Along with the good side internet may be used for many illegal works also. The term cyber crime relates to the violation of network system. It is a criminal activity that takes numerous forms. It may consist of freeing of a virus into a network, the defacing of computer data or it may also be an unauthorized access into the information stored in computer. Cyber crime is not a static term. Cyber crime includes Email-bombing, Hacking, Spreading computer virus, Phishing, identity theft, Internet Frauds, Malicious software, domain hijacking, SMS spreading, voice phishing etc. Identifying the hackers is very difficult as they live three continents away from victim. We were aware about only traditional types of crimes like murder, rape, theft, extortion, robbery, dacoit etc. Now with the development and advancement of science and technology, new weapons such as computers and internet which are used in committing crime have emerged. With the technology increasing criminals don't have to rob banks, nor do they have to be outside in order to commit any crime because by sitting at home, they can commit any crime because they have everything on their lap. Their weapons are mouse, cursors and password.

From many literatures, it is observed that, there is a grave underreporting of cyber crimes in India. Cyber crime is committed now and then but is hardly reported. The cases of cyber crime that reached to the court of law are therefore very few. There are practical difficulties in collecting, sharing, appreciating digital evidence. The act has not succeeded in solving all the problems and satisfying the victims of cyber crime. The rapidly increasing incidence of cyber crime indicates that the nature of traditional crime is changing its shape and being facilitated by digital mediums.

Table No 3. Table showing Cyber Crimes cases registered in India

Years	Cyber security incidents	Website hacking	Spam cases
2011	28127	21700	2480
2012	36924	27605	8150
2013	41319	28481	54677
2014	44677	32323	85659
2015	49455	27025	61628
2016*	14363	8056	13851

***Figures as on March 2016**

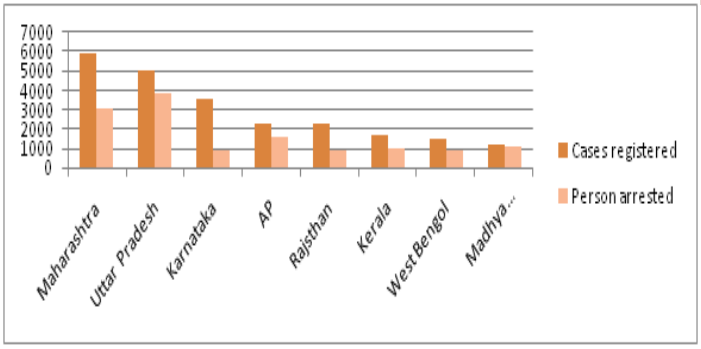


The cyber security incidents are doubled in 5 years i.e. from 2011 to 2015, cyber security incidents were 28127 which are increased to 49455 in 2015. Similarly span cases are also increasing year after year, in 2011 only 2480 spam cases were there but in 2015, the amount of cases increased to 61628.

Table 4: Cyber crimes in different States in India (2011 to 2015)

States	Cases registered	Person arrested	% of cases registered & actual arrested
Maharashtra	5935	3088	52.03
Uttar Pradesh	4990	3868	77.52
AP	2295	1577	24.69
Karnataka	3597	888	68.71
Kerala	1680	958	41.02
Madhya Pradesh	1162	1093	57.02
Rajasthan	2243	920	57.97
West Bengol	1461	847	94.06

http://ncrb.nic.in



The above table shows the total cyber cases registered in different states. Maharashtra ranks first in total cyber crimes registration in last four years. Out of total 5935 cases only 52% people were arrested and AP only 24% people were arrested under cyber crime. It may be because, most of time, the person committing the crime is located outside of the country i.e outside the legal jurisdiction of the court. Even though India has established cross-boundary reciprocal legal rules, many countries won't participate and never honor warrants of arrest.

Table 5: Table showing cyber crimes in India reported by CERT-In

Year	Cyber crimes reported
2014	44679
2015	49455
2016	50362
2017*	27482

Source: Indian Computer Emergency Response Team(CERT-In) *data of 2017 is up to Dec

The above table depicts the cyber crimes in India in last four years. As per the report of Indian Computer Emergency Response Team (CERT-In), a total of 44679 cyber crime cases have been reported in 2014. While in 2016, 50363 cases were reported. In 2017, a total of 27,482 cases of cyber crimes have been reported till Dec 2017. With the high percentage of cybercrime coming forward, the number is expected to shoot up in coming future.[5]

Information Technology Act 2000

The problem of cyber crimes is not confined to one or two countries but the whole world is facing this big problem. India is no exception to this computer generated nuisance. As a measure to prevent and control internet crimes, the parliament enacted the Information Technology Act, 2000 which came into force on Oct 17, 2000. This Act is the sole redeemer to fight cyber crime where computer is either tool or target also falls under the IPC and other legislations of India. This Act applies to the internet and internet associated technology. It offers legal protection to people involved with the use of the internet. IT Act 2000 is a special Act to tackle the problem of cyber crime. The Act was sharpened by the amendment Act of 2008. The IT Act 2000 deals with the various cyber crimes in chapters IX & XI. Chapter IX deals with penalties and adjudication and chapter XI deals with offences. The important sections are Ss. 43,65,66,67, 70, 71, 72. Following are the sections under IT Act 2000.

Section 43
deals with the unauthorized access, unauthorized downloading , virus attacks or any contaminant, causes damage, disruption, denial of access, interference with the service availed by a person. This section provides for a fine up to Rs 1 crore by way of remedy.

Section 65
Deals with tampering with computer source documents:
Whoever intentionally or knowingly destroy, conceal or change any computer's source code that is used for the computer, computer programme and computer system or computer network, The Act provides for imprisonment up to 3 years or fine, which may extend up to 2 years or both.

Section 66
Deals with hacking with computer system and data alteration:
Whoever with the intention to cause any loss, damage, or to destroy, deletes or alter any information that resides in a public or person's computer. The Act provides for imprisonment up to 3 years or fine, which may extend up to 2 years or both.

Section 67
A deals with transmission or publication of material that contains sexually explicit contents, acts etc in electronic form and provide for imprisonment up to a term of 10 years and also with fine up to Rs. 20 lakhs.

Section 70:
Under this section, the appropriate government may, by notification in the official gazette, declare that any computer, computer system or computer network to be protected system. Any person secures or attempting to secure access to a protected system shall be punishable with imprisonment upto 10 years ans shall also be liable for fine.

Section 72,
For breaking confidentiality of the information of computer, It provide punishment for an unauthorized access or disclosure of that information to third person punishable with an imprisonment up to 2 years or fine which may extend to 1 lakh rupees or with both.

Section 73
Deals with publishing false digital signatures false in certain particulars, Fine of 1 lakh, or imprisonment of 2 years or both,

Table 6: A few important sections regarding cyber crimes

Offences	Section under IT Act
Damage to Computer, Computer system etc	Section 43
Power to issue direction for blocking from public access of any information through any computer's resources	Section 69A
Power to authorize to collect traffic information or data to monitor through any computer's resources for cyber security	Section 69B
Un-authorized access to protected system	Section 70
Breach of confidentiality and privacy	Section 72
Publishing false digital signature certificates	Section 73
Act to apply for contravention or offence that is committed outside India	Section 75
Offences by companies	Section 85
Sending threatening messages by mail	Section 503 IPC
Sending defamatory messages by e-mail	Section 499 IPC
Bogus websites, cyber frauds	Section 420 IPC
E-mail Spoofing	Section 463 IPC
E-mail abuse	Section 500 IPC
Online sale of drugs	NDPS Act
Online sale of Arms	Arms Act

Source: www.irjet.net International research journal of engineering and technology Vol 4 Issue 6 , June 2017

Cyber law is important to touch almost all aspects of transactions and activities on and concerned the internet, the worldwide web and cyberspace. In India, IT act 2000 has helped in handling cyber crimes. It has triggered tear in the minds of cyber terrorists. Internet and cyberspace helps people to perform

innumerable transactions. In this competitive Era, to promote the trade & business, internets facilitates convenience and give access to the world of technology. Today most of the transactions and communications are made via cyber space and are carried via electronic means. This act has introduced a legal framework to authenticate, supervise, secure electronic records by way of digital signature encryption modes etc.

Thus IT Act 2000 has both positive and negative aspects as well. After finding lot of shortcomings in IT Act 2000, amendment is done in Rajya Sabha on Dec 23rd of 2008. This Act was renamed as IT (Amendment Act 2008) and referred as ITAA 2008. The amendment is made to IT Act in 2008 to provide relief to computer owners/users by extending the reach of law to almost all the online criminal activities and increasing awareness among the people. It is primarily enacted for the promotion of E-commerce to meet the needs of globalization and liberalization of the economy. The Act suffers from some lacunas as it doesn't provide adequate security against web-transaction nor does it contain adequate provisions to prevent security frauds, stock confidentiality, in the internet trading.

The survey was conducted by the researcher to study the lacunas in the cyber Act. For this purpose the opinion of total 20 advocates who are currently practicing in different cities and handling the cases of cyber crime were considered. As per their view, there are some lacunas in the Act.

Table no 7: Opinions of respondent's regarding provisions of IT Act

Opinions of Respondents	Agree 3	Neutral 2	Disagree 1	Wt avg
1. The amended IT Act is sufficient to tackle with all cyber crimes in India.	3	2	15	1.40
2. The amended IT Act defines hacking or hacker clearly	4	1	15	1.45
3. The amended Act clearly defines the jurisdiction of E-contracts.	1	2	17	1.20
4. There is provision of stamp duty on E-contracts in IT Act.	0	1	19	1.05
5. There are separate provisions regarding online defamation and claim for compensation in sec 43.	0	3	17	1.15
6. The Act covers all the sections with regard to jurisdiction of courts over the parties operating in different countries.	2	2	16	1.30
7. The amended Act deals with the issues of E-Discovery of evidence.	2	2	16	1.30
8. The IT Act deals with spam issues.	3	1	16	1.35
9. Sec 79 & the rules framed in the IT Act are clear & complete rules for Internet Café.	5	1	14	1.55
10. The IT Act deals with pornography by foreign websites.	0	2	18	1.10
11. The IT Act deals with crimes of spreading of virus and worms by websites of foreign origin.	0	1	19	1.00
12. The IT Act deals with crime of selling banned medicines & drugs	2	2	16	1.05
13. The IT Act deals with crimes like selling devices harmful for nation's security.	1	1	18	1.30
14. The Act provides for separate legal jurisdiction for cyber world.	0	0	20	1.15
15. The Act provides for authorized cyber forensic tools for investigation.	0	2	18	1.00
16. Clear guidelines have been issued to lower courts to tackle with cyber cases.	7	3	10	1.10
17. There is unification of internet laws	6	3	11	1.85
18. The required powers have been rendered to police for entering & searching private places	5	5	10	1.75
Total respondents	20	20	20	

The weighted average mean of the responses on the different issues were calculated which are below 1.5 in most of the responses. Through the weighted average mean of responses, the researcher has concluded that there are some lacunas in IT Act 2000 and ITAA 2008. While discussing with advocates, researcher come to know some ground realities and shortcomings in the IT Act. Accordingly following observations regarding the IT Act in India are recorded.

1. The IT Act is not sufficient to tackle with all types of cyber crimes in India. Even the amended Act 2008, is lacking in defining the: hacking" and "hacker" clearly. The only IT Act is not sufficient to tackle all types of cyber crimes. For publication of harmful contents or such sites, we have IPC, Communication Decency law, Data Protection Act. IPC & CPC etc deal with the many subjects therefore lacks efficient enforceability mechanism.
2. According to the respondents, IT Act doesn't clearly defined electronic contracts in the Act, Cross border contract since click wrap contracts are not legally recognized as equivalent to digitally signed contract. When we check-in for website, we commonly click on agree to terms of contract. This is a contract without stamp duty. None of the E- contract contains stamp duty. There is no provision related to stamp duty on electronic contract i.e. E-stamp duty.
3. We hear many cases of online defamation to many people. This occurs when defamation takes place with the help of computers and internet. There was no any clause under section 43 of the Act, which describes online defamation and provision for compensation for cyber defamation.
4. The Act lacks in catching the cyber criminal ho commits crimes sitting at another continent. IT Act should applicable to all the persons irrespective of their nationality (i.e. non citizens also) who commit offence under the IT Act outside India, provided the Act or conduct constituting the offence or contravention involves computer, computer system, or computer network located in India under sec 1 & Sec 75 of IT Act. This provision lacks practical value until and unless the person can be extradited to India.
5. The amended IT Act 2000 has not dealt with the issues related to E-discovery. Most of the organizations are relying upon digital evidence. Email and media are the means of communication with each other to conduct and carry on the business. As per the opinion of advocates, IT act doesn't provide for E-discovery.
6. Spam issues are increasing rapidly but IT Act has not dealt with these issues in a detailed manner. As there is no clear definition of the word spam. The practice of sending unsolicited email is getting common in India which is also amounts to breach of individual's right to privacy on the net. The legislature did not think of taking exclusive cognizance to this huge menace.
7. Selected respondents said that, the obligations under section 79 and rules framed there in for intermedatories are applicable to cyber cafes. But they replied that the rules are incomplete rules which need further rules at state government level to control and prevent the cyber crimes.
8. The crime of pornography by foreign websites is let loose in the Act. It has not covered, nor discussed, nor being penalized. This will lead to Indian cyber criminals to host their pornography related websites on foreign shores without being accounted for Indian Territory.
9. Spreading of viruses and worms is a severe cybercrime. But it's very difficult to detect cyber crimes committed by websites of foreign origin like spreading of viruses and worms from abroad.
10. The IT Act doesn't cover online selling of banned medicines and drugs which is a serious offence. A separate NDPC Act deals with this issue. It also not touched the online selling devices which are harmful for our nation's internal security is not described in the IT Act. These issues are tackled by Indian Arms act.
11. The advocates opinioned that the IT Act doesn't have clear sections regarding jurisdiction of courts over the parties staying and operating in different jurisdiction or countries.
12. There is no provision of establishing separate courts for handling cyber crimes. There is a need to form cyber crime courts for criminal trials.
13. The present Act has no provisions regarding authorized cyber forensic tools to be used in investigation. Due to this, investigation agency may face problems in getting evidences and identification, location, prevention and extraction of digital information from a computer system to get a digital evidence to produce before the court.

14. The powers to entering and searching the private places have not been given to police under the IT Act. But unfortunately, many cyber criminals operate from their houses where police cannot reach and cannot search.

15. Through the discussions it is also observed that major offences covered under the IT Act are bailable in nature. Interim reliefs, anticipatory bails etc would be common. Cyber criminals have become use to for this practice; they may not have fear in their mind until they feel fear about the consequences after commitment of offence.

General Suggestions:

1. There is an urgent need to create awareness among the people and basically users of internet about cyber space, different forms of cyber crimes, so that internet users can take some persuasions while operating the internet. To enhance the knowledge about the ITAA Act 2008 is low, there is a need to conduct seminar-workshops on this said subject.
2. Prevention is always better then cures. A netizen should take certain precautions while operating the internet and should follow certain preventive measures for cyber crimes.
3. With the healthy partnership with government, there is a need of safe, secure & trustworthy environment. The Act is passed in 2000, amended in 2008 to cover all the areas. But cyber law has to be changed with changing times..
4. Currently many laws like IPC, Arms Act, Communication Decency law, Data Protection Act, CPC etc deal with the many subjects therefore lacks efficient enforceability mechanism. To avoid the confusion of many laws dealing with the same subject, there is a need of special law dealing with the subject specifically in toto. There is a need of unification of laws by taking all the internet laws to arrive at code which will deal with all the problems related to internet crimes. Unification of internet laws will be the solution.
5. E-commerce is flourishing in India in last 4-5 years. Website owners should responsible to checking the traffic and tap any irregularity on the site. They should adopt some policy for preventing cyber crimes as number of internet users are growing day by day.

Specific Suggestions:

1. Proper Provisions regarding E-contracts and E-stamp duty have to be inserted. Body corporate need to take measures required to provide a supplementary base for validating the contracts. If E-stamp duty is permitted and provided in the Act, it can yield lot of revenue to the government.
2. Special cyber courts with trained judicial officials should be established to decide and settle the cases of cyber crimes.
3. IT department should pass certain guidelines and notifications for the protection of computer system and should some more strict laws to breakdown the criminal activities relating to cyber crime.
4. There is a need of developing cyber forensics and biometric techniques. This will provide technical assistance to the investigating agency in investigation of cyber crime.

Conclusion:

The cyber crime is a new type of crime made by a class of sophisticated and learned criminals. Science and technology is growing fast and they are connecting the Globe by cutting the national frontiers but unfortunately the cyber law is still struggling to define and redefine the boundaries for the control of cyber crimes. The IT Act does not define the data protection principles. It failed to provide any provision related to third country transfer of data. Incidents of copyright theft, hacking, virus attacks etc have increased in last few years. As a result of growing internet users globally, piles of computer crimes are increasing. It seems inability of the legislature to keep cyber crime legislation ahead of the fast moving technological advancements. The IT Act is engaged in prevention and control of cyber crimes within the country's territorial jurisdiction. But unfortunately the Act is forgetting that cyber criminality is a global phenomenon which has no territorial limits at all. There is a need to enact a global cyber law uniformly applicable to all the countries in the world. To avoid the increasing crimes, there is a need to impart education and training for internet users.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

"Digital India's SME's Economy – Switching to Digital is a Necessity not a Choice !!!"

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INTRODUCTION

Digitalization of Indian business is majorly driven by the rapidly advancing digitization of consumers. This has led to increased data traffic and accelerated establishment of new tech-based start-ups to take advantage of the growth opportunities.

The Micro, Small & Medium Enterprises (MSME) sector contributes about 8% of GDP. It also plays a pivotal role in development of the economy by employing almost 80 million people, contributing about 45% of the total manufacturing output and 40% of exports of the country.

However, in a rapidly digitalizing economy, these industries fail to keep pace. Online shoppers in India are growing at compounded annual growth rate (CAGR) of 18% and will reach 220 million by the year 2020. Unfortunately, out of the 51 million SMEs in India, less than 5-6% have an online presence.

The companies migrating to an online platform could potentially increase their revenues by 51%, improve operational efficiency and broaden their customer.

Causes for Low Adoption of Digitalization in the Past:

- Lack of understanding of business benefits technology can deliver across end-to-end value chains
- Lack of guidance on the inherent abilities of technologies and how these can be integrated and institutionalized in their businesses
- Resistance to incurring upfront investment-related costs to implement technology
- Lack of skilled manpower to manage technology setups

According to NASSCOM, the estimated market growth driven by SMAC is expected to be 30% (US$1 trillion) by 2020.

Key Drivers Escalating Adoption of Digitalization Today:

In India, the impetus for adopting SMAC has been facilitated by the following factors:

- The exponential growth in adoption of smart devices to enable easy access to 3G or 4G networks
- The increased popularity of social media
- Rapidly increasing volumes of data being captured by businesses across customer touch-points
- Advancement made in analytic tools and technology that is helping to bring analytics closer to business users and not limit it to statisticians and PhD-holders
- Cloud enabling businesses to deploy mobility and analytic solutions in a cost-effective manner and reducing time-to-market

Indian SME's Need in Global Digital Scenario:

- **Incubation Platform:**
  This directly points to the fact that India lacks business incubation setup. The industry majors need to provide mentorship to SMEs of their domain, on how they could be better aligned with their objectives of a low cost structure, broad basing their services and products, and a more reliable environment for operation.

- **Support from Government:**
  In the most recent UPS Asia Business Monitor report, 81 per cent SME respondents feel that government needs to play a larger role in sustainability practices.

  Let us look at the model deployed by Japan, way back in 1953. Japan Finance Corporation for Small Business (JFS) was created to enable a basic law which would represent a shift in policies to enable development and growth of diverse and independent SME businesses. JFS soon became an integral part of policy drafting and implementation process, and established a deep understanding of the SME market. It built a pool of businesses and understood its pulse. Today, it has more than 100,000 businesses and it leverages this information to groom newer businesses.

  The essence behind formation of JFS was not just funds, but critical advisory, that would keep the businesses alive in long term. There is a strong need for such a platform to be provided in India.
- **Need for Communication:**
  India is awakening to the need of communication and its importance to businesses. Till recent past, PR(Public Relations) was considered a luxury and spelt in the same breath as advertising. However, the communication modes and climate is changing. As a result, businesses are making use of various channels of communication to reach out to their audiences such as clients, masses at large, industry bodies, etc. On the globalized platform, global tools like PR need to be used to gather the outreach and use it towards expanding not only clients but further expansion, forming associations and tie-ups.
- **Valuation and Consolidation:**
  Indian economy has progressed towards building knowledge enterprises to remain competitive in the global arena. Innovation and application knowledge are going to be the key to growth. However, in the SME segment, it remains vastly fragmented across mushrooming businesses. Joint ventures and some kind of consolidation will help pull strengths of companies and businesses together, and fasten the growth and maturity path.
- **Specificity of Focus:**
  The more SMEs are connected to suppliers, buyers and financial institutions, the smoother transactions and fulfilments will be for enterprises. However, while industry and experts had known urban India alone wouldn't fuel growth for the country, every stakeholder chasing the same piece of the pie would lead to redundancies. Different stakeholders taking on very specific problems to solve would, in theory, contribute to a stronger ecosystem for Indian SMEs.

A Stronger Ecosystem for SMEs Increasing Digital India Footprint:

Digitized B2B **(**Business to Business**)** transactions and relationships encompasses more than just Increasing payments access to the Internet even in smaller towns and the rate of Smartphone -led connectivity spreading across the country meant India was prime ground for a campaign like Digital India.

But end-users getting savvier and going online to be connected to services or making purchases isn't the only way Digital India's reach is growing.

With various B2B start-ups viewing the long under tapped SME segment as a huge opportunity, Digital India outcomes may beat expectations sooner rather than later.

There are reportedly more than 40 million SMEs in India. Start-up names such as Tolexo, Power2SME, Rubique and Now Floats aiming to move all kinds of B2B relationships and transactions towards full cycle digitisation, indicates more businesses are now online.

Digital Transformation: How SMEs Can Leverage This Wave Of Technology?

SMEs will thrive if key enablers powered by SMAC (Social, Mobile, Analytics, and Cloud) in India.
Technologies are created in integrated ecosystems to support their following needs:

- Accessibility of expert knowledge and best practices
- Financial independence and risk mitigation
- Targeted marketing reach and sales
- Operational excellence across locations
- Efficient provisioning of services
- Real time insights and decision-making

SMAC Technologies: The new wave Of Growth for SME's:

SMAC technologies are advanced, affordable and pervasive. They are now available to businesses of all sizes. This is opening up an opportunity for SMEs to level the playing field and compete with larger

players. The need of the hour is for SMEs to take the lead in adopting SMAC and make it an integral part of their business strategies. Those that are successful in understanding the power of SMAC and harnessing it across their businesses will lead this new wave of growth.

Steps for Keeping up SMEs Business:

One of the biggest challenges small businesses face in terms of digitalization is many lack the skill set required. A recent report showed that while most small businesses are aware of digital functions, only 26% have produced opportunities to develop these functions.

All types of businesses can benefit from keeping up with digital developments, but for some it's definitely more important than others. Take traders for example. It would be pretty much impossible to keep up with the markets without technology. To be successful, you need to act fast, especially with Forex trading. So, if you're unsure how to use the latest tech, you could be missing out on a lot of potential profits.

To keep up with digitalization, it's important to not only know about the latest developments, but also how to use them and incorporate them into your company. So, along with a fast internet connection, you are going to need to keep your digital skills topped up.

It's a good idea to bring the team together and see what digital skills you already have in your organization. You may just be surprised by the skills already available. Once you have a good idea of the skills your employees do possess, you can then work out which skills are lacking and where improvements could be made.

Automation is another important thing to focus on. There are a lot of day-to-day tasks which can now be fully automated thanks to technology. This not only speeds up production, but it boosts effectiveness and helps you to keep up with your competitors. Look at how many tasks you still do manually and see whether they could be replaced by automated processes.

International Solutions Required For Global Developments:

The meeting held in Dusseldorf, largely focused on international digitalization. The leaders suggested an international framework is required in order to ensure everyone, rather than just a select group, can benefit from global digitalization.

They focused on three key goals they are working towards, which include:

- Continuous Digital Education
- Faster Internet
- Harmonized Technical Standards

SMEs need to continually develop their digital education if they stand any chance of keeping up. In terms of faster internet, the UK is lucky enough to already boast impressive speeds, though further work needs to be done to bring it to all areas of the country. The leaders at the G20 meeting propose setting up faster connections by the year 2025.

Conclusion:

Much of the growth and innovation in a developed economy is fuelled by the SMEs of that country, and it will be no different for India. With cutting edge technologies being available on a pay-as-you-go model, Indian SMEs would finally get to play a pioneering role in the growth of the economy. Overall, while digitalization is important, many businesses aren't taking full advantage of what it has to offer. If you want your business to be truly successful, it's vital you ensure you're keeping up with the latest digital trends.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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E- Health: A Way of Digitalization

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ABSTRACT
Digitilsation is the wave which is been surrounding in the different areas, fields of the business process and the services. The digitalization has its own impact, the pros and cons on the basis of the premises where it has been initiated, developed and the results we get after the whole journey is been completed.

The paper puts the lights on the digitalization in field of health care services, as the digitalization had put the steps in different markets the health center is one of the services were it can be also initiated. As the there is traditional approach of people or the patients to take heath services but the new way of digitilsation will also help to the health services to provide the timely services to the patience instead of having the use of traditional way of searching the specific hospitals for the specific treatment, to take the appointments for specific treatment ,of specific doctors which led to sometime inefficiency, time consuming for the treatment of patient etc.

The paper highlights the points which can be taken into consideration to start with Electronic health care services, the various different platforms and the models which can be used by the health center to widen the scope of this type of services, searching appointment and scheduling at tip of finger ,application and the worth, the reliability which can defined the patients acceptances towards the services, anticipating the challenge and the constraint which might hamper the mobility of the services.

Keywords: *Digitalization, E –Health care services*

INTRODUCTION

Digitalization is bringing the change in carrying out the services. E- Health is an indeed the innovation

enhance the way of automate the process and operation of health care organization which take care about the efficient and effective process , improved accessibility and human interaction which in turn offering an assistance with routine medical tasks and provide easy navigation. The Information Technology will change way of perception of the health care, transforming the relation between the patients and the centers.

The initiated of E-Health services start with the creating the value by understanding the patients needs and the myths surrounding them. Also they should indentify the customer segments and define the position of the services strategically to meet the estimated patient's needs and the demands. One of the way to retain and to attract the customer health care should not only focuses the innovation which points towards the features and design , content on electronic boards but the to work on the actionable services of digitalization thereby having robust and value added features of digitalization by transforming the way of the providers that the heath care center staff and the services and patients functions with interactions which enhance the medical care service accessible to everyone without any geographical barriers by ensuring the acceptance widely

The success to adopt the digitization services depends on the understanding patients digital preferences in the both channel and the services to understating in depth the health care center should take the review from the patients and the people from the different

age group, genders, incomes levels or purchasing power , geographical location i.e. area, region covering the urban, rural and metropolitan, the operating knowledge of the electronic ways which will give the actionable insights information regarding what the patients exactly expects ,their wants which will help to build the health care departments to build the models and the strategy of E Health patients services.

Some of the models can be anticipated as,

1. **People unwillingness to accept the Electronic services about the health care :**

As the medical area is more sensitive and the emotional from point of the perception, patients may not be the fast to adopt but they might adopt it in slowly for reason that digital health care services meet their needs and level of quality they might be expecting from the digitalization and so that it might be align to the traditional approach of the services.

So the myth should be clear removed from the minds of the people by giving proper digital service at right time and with right treatment and the suggestion which is based on the data the patients has been feed into the systems with the particular channel or mode.

2. **The preference channel :**

The health care organization should design the models of the channels which are relevant, user friendly mode, easy to operate by the any type of people, minimum cost factor, time saver, response in minimum time, minimum error in operating the process, cheap mode.

Considering the interaction with health organization with whoever the entity it is it might be an executive of heath care center, doctors, pharmacies

Sources to have preference will be as,

A. Websites or online portal of health care center or hospitals
B. E- Mailingsystems of health care centers
C. Smartphone's App : to define the process/steps in electronics systems
D. Telephones interaction with the mode of video and audio techniques

3. **To build proper STP analysis**

As most of the digital services are adopted quickly by the young generation so it might be the limitation that the digital service utilization will be deprived from the other segment as senior citizens, Adult resemble to age group of more than 50, so the another fact that health care center should research on the age group factor such that it will give the real fact for the segmentation, target and positioning the digital services in proper way.

Based on the digital interaction the age group chart:

Age group

Channel	18-30	30-40	40-50	50-60	60-70	70 and above
Portal view						
Email						
Social Media						
Smart phones APP						
Telephone						

This chart will help to give the information of those age group who will be willing to adopt the digitalization services of health care.

4. **Features on mobile App :**

The health care organization should create a mobile solutions that will help to serve the target audience such that app should focus on prenatal health.

The digital should also be user friendly for the usage with the simple questions with clearly stated with the relevant options and too much of difficult and lengthy question about health problem.

A. Health history

Family history	Habits	Past medical history	Symptoms and review	Pain scale:
				Area /level

B. Personal information:

Age, Kind of job, No. of working hours, Married/ Unmarried status, past medical history.

C. Medication History:

Type of diagnosis, Medicines details, duration and no. of intake of medicines, earlier which recommended hospital and Doctor

D. Allergies: Kind of Allergies.

1. To evaluate the awareness in the people

The following things should be evaluated to anticipate the awareness

A. Awareness of online health care services
B. Ability to execute the process and to receive the services with online platform
C. Fast availability of the search entity, the person or hospital route, prescribed location
D. Percentage of Accessibility of digital services
E. Review of clarity, accuracy and integrity of the online information

The application or the significant can be write in the following ways----

1. Improving the productivity and the patient care:

By giving the vital importance to the areas of inpatients, theatres and outpatients. Focusing on improving the review & feedback of the online treatment provide, different modes for digital interactions, use of primary data for the further uses of theatres process and to improve the flow of process with simple steps and procedures

Also responding to "What If Questions", "Frequently Asked Questions", by design the staff with skills of interaction and coaching which enhance that the health care center helps them to take the better decisions and to take clinical changes .--

2. To monitor the process

By having the eyes on the percentage and no of patients that have demanded to take digital health care services, monitoring the booking appointment for the specific treatment, for a specific day and time and for the doctors, checking forfulfillment of pre operative works

So that the digital health care process will work with minimum error and the trouble for the patients and for the health care center

3. The health care center should stay focused

- For the new improvement the in the digital channel, features , value added services as digital payments, digital reports and forms, remote patients monitoring , consultation via mobile communication etc
- Making the use of business intelligence tools to visualize the data and to improve the productivity and the efficiency
- Making the use of cloud computing application to give new face the information technology that enables the systems to cost less to build , execute and to maintain

Conclusion:

The E- health systems will be having the application to the patients through the utilization of the different models that is medical app on the mobile phones, visiting to the portal of the specific hospital, virtual interactions with the doctors and other entities.

Thus the digitalization is the way of new technologies which help to enables a new, better and more efficient ways to serve the health care service to all the people without having a area constraint.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Role of Mobile Banking in Selected Areas of Karad

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ABSTRACT
The mobile banking is a provision of banking services to customers on their mobile devices. Mobile phones and handheld devices should have been firmly established as an alternative form of payment in most technologically advanced societies. Mobile banking allows customers to conduct financial transactions on a secure mobile app operated by their retail or virtual bank. Mobile banking solutions have many features and capabilities. The Key intention of the study is to evaluate those factors that manipulate the nature of the customers towards mobile banking and on growing tendency towards the online financial institutions. This paper focuses on problems and study and solutions to banking industry to get a benefit from rural areas bank customers to explore banking industry. It provides recommendation for better role of Mobile Banking in rural area customers.

KEYWORD: *Mobile Banking, Mobile App, Virtual Bank, Rural Area*

I. INTRODUCTION

Today we are in the era of globalization. Multinational organizations worldwide have adopted globalization as their first strategic choice. Advancement in technology has facilitated globalization too. The world has literally shrunk become a "global village". Internet banking arrived in India in the late 1990s.

ICICI was the first bank to champion its usage and introduced internet banking to its customers in 1996 with lower internet costs and increased awareness about electronic media, online banking established itself only in 1999. Other banks followed suit, including HDFC, Citibank, IndusInd and the now redundant Times Bank. Internet banking changed both the banking industry as well as banks' services to its customers.

'Anywhere banking' came to be recognized as an opportunity also for differentiated and competitive services. E-Banking in remote rural areas of India is encouraging. It will become one of the most convenient ways of delivering financial services in the future. Over the last few years online banks have started to become more and more popular. There are plenty of reasons for this but there are still quite a few people who are not sure if an online account is a good idea for them. In short, the objective of this study is to examine the illiteracy and concerns of rural areas specifically in karad area bank customer to use mobile banking. The study shows customers' awareness, perception, and the level of satisfaction with regard to mobile banking system. It leads to a solution for banking industry as well as rural areas bank customers in many perspectives. Generally internet mobile is widely used in urbanized area. But in case of rural region mobile banking is not used or it is used in very low scale. The rural area bank customers are not using net banking facility due to some reasons which are studied further ahead.

II. Statement of the Research Problem

Consumer's behavior in banking changed partly as a result of change in the amount of spare time available to individuals. Mobility, independence of time, place and flexibility has become key words in banking.

The features of Mobile Banking such as 24 hours and 7 days availability, almost immediate access and the absence of physical borders. Indeed, the Internet has

been one of the key drivers in promoting mobile banking sector. Thus to study the awareness and illiteracy of mobile banking in rural areas, the topic attempted is "Role of Mobile Banking in selected Rural areas of Karad"

III. Objectives of the study

1. To Study the present status of mobile banking use in selected areas of karad.
2. To study the reliability and satisfaction of mobile Banking users.
3. To study the Mobile Banking provides sufficient services to customers for fulfill their banking needs

IV. Review of Literature

3"Obstacles Towards Adoption of Mobile Banking in Tanzania: A Review ", Joel D. Rumanyika [1],Work focuses on the obstacles towards the adoption of m-banking in Tanzania It has been observed poor network coverage, lack of knowledge of mobile banking users , lack of enough floats, ATMs breakdown and theft, poor security of mobile network are critical obstacles towards the adoption of mobile banking in Tanzania.

"A Study on Customer Perception towards mobile banking in Indian overseas bank", Palani A; Yashodha, P [2] The study revealed that education, gender, income plays an important role in the usage of mobile banking. Inhibitory factors like trust, gender, culture, religion, security and price has an impact on customer mindset towards mobile banking to a little extent.

"Acceptance of E-banking among adult customers: an empirical investigation in India", Dixit Neha, Dr Saroj Datta [3] The research paper has tried to examine the factors affecting the acceptance of e-banking services among adult customers. The findings show that security, privacy, trust, innovativeness, familiarity etc could increase the acceptance of E-banking service among customers.

"A survey of critical success factors in e-Banking: an organisational perspective", Shah Hussain Mahmood, Braganza Ashley and Morabito Vincenzo [4] The research showed that organisations need to manage their Ebanking initiative at a strategic level and treat it as business critical rather than simply a technical or operational issue. They need to pay attention to internal integration, which includes channels, technology and business process integration, and improving the overall services to their customers.

"Microfinance interventions and customer perceptions: a study of rural poor in Punjab" Meenu, Arora Sangeeta [5] This paper is an empirical study carried out in the rural areas of Punjab to find out how far the micro financing services have been successful to meet the financial needs of the rural poor and its impact on the ultimate borrowers

"Bank on Rural India- way to economic development", NSN Reddy, Chief Manager, Andhra Bank HO, Hyderabad [6] With various data base on Indian GDP sect oral contribution, rural income patterns etc, the author has emphasized that India's growth is driven by its service sector and economic development so far has been limited only to urban population and yet to penetrate the rural areas. Studying the income, expenditure, literacy rates and various other factors, the author has supported his views saying that the banking I rural area needs a relook as their needs are beyond traditional products.

V. Sampling methodology

The present study has been completed using Field Survey and Interview methods. In the survey the researcher has approached customer. For this purpose questionnaire are designed. Empirical data is collected from the samples of selected areas of karad through Purposive Sampling Method.

Data Collection Method

Data selection method is based on nature, scope and ready to give information etc. Data is collected by using primary and secondary methods.

Primary Data

Questionnaire method for collecting data is used for this study. This method is most suitable for collected same data from large number of user. A comprehensive questionnaire with various questions are divided under different sections. Each section is designed to collect data about certain topic of Mobile banking. Data is collected through questionnaires from Personal Interview, Survey etc.

Secondary Data

The Secondary data has been collected from Websites, Reports, Books, Journals, News Papers and Magazines.

Sampling Plan

In karad city there are 26 wards from which five wards are selected randomly using Lottery Method from each ward 50 samples are taken for study then total size becomes 250 but actually data was available from five wards 220 respondents were selected from each ward by using purposive sampling method.

VI. Hypothesis of the study

For the research purpose, the researcher has designed following hypothesis:

H0 Mobile Banking not provides sufficient services to fulfil their banking needs.

VII. Data Analysis and Interpretation

Table 1: Demographic Characteristics of Respondents

Sr. No.	Variable	Responses	No. of Respondents	Percentage
1	Gender	Male	143	65
		Female	77	35
2	Age	Below 20 yrs	44	20
		21 to 35 yrs	77	35
		36 to 50 yrs	66	30
		Above 50 yrs	33	15
3	Education	Matriculate	0	0
		Under Graduate	22	10
		Graduate	121	55
		Post Graduate	77	35
4	Occupation	Businessman	55	25
		Employee	66	30
		Farmer	11	5
		House Wife	22	10
		Pensioner	33	15
		Student	33	15
5	Bank Type	Nationalized	88	40
		Private	132	60
6	Account Type	Saving	158	53.4
		Current	61	20.6
		FD	27	9.1
		Demat	34	11.5
		Loan	16	5.4

Table 2: Bank Customer Perspective about Mobile Banking

	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
Mobile Banking performance and poor network	0	5	35	55	5
Mobile Banking is a better way of Banking	40	50	5	5	0
Mobile Banking simple and easy registration procedure	20	70	10	0	0
Mobile Banking useful for conducting banking transaction	70	30	0	0	0
Mobile Banking allows to manage finance more efficiently	45	40	10	0	5
Fear of hacking Mobile Banking Account	0	25	35	5	35
Afraid of loose money while Mobile Banking due to careless mistakes	0	50	15	20	15
To perceive Mobile Banking as secure and protect privacy	20	35	30	15	0
Mobile Banking mostly used services	25	5	40	5	25

Mobile Banking services is a part of life	15	50	25	10	0
Mobile Banking allows me to do my banking anywhere/anytime	30	60	10	0	0
Factors of Mobile Banking adoption	25	20	15	30	10

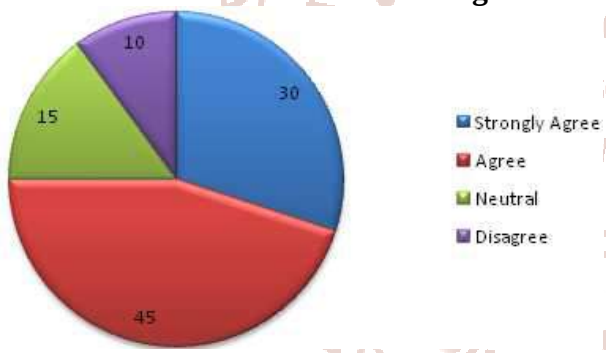
VIII. Hypothesis Testing

H0: Mobile Banking not provides sufficient services to fulfil the banking needs.

Table Mobile Banking provides sufficient services to customers for fulfill their banking needs

Response	No. of Respondents	Percentage
Strongly Agree	66	30
Agree	99	45
Neutral	33	15
Disagree	22	10
Strongly Disagree	0	0
Total	220	100

Fig Mobile Banking provides sufficient services to customers for fulfill their banking needs



The majority of the respondents i.e. 90 % using Mobile Banking are agree with that Mobile Banking provides sufficient services to customers for fulfill their banking needs

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.907[a]	3	.000
Likelihood Ratio	34.340	3	.000
N of Valid Cases	220		

a. 0 cells (_._ %) have expected count less than 5. The minimum expected count is 7.70.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.330	.000
	Cramer's V	.330	.000

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

With SPSS as an analysis package,
Calculated x^2 is 23.907 and Tabulated x^2 is 12.838

Calculated value of Chi-Square is > than Tabulated value of Chi-Square. Therefore Null Hypothesis H0 is rejected.

That means the alternative Hypothesis is
Mobile Banking provides sufficient services to fulfill the banking needs.

VIII. Findings and Results

1. The observed evidences of this study reveal that gender, age, education and occupation of the mobile banking users plays significant role in adapting Mobile Banking services.
2. National sector banks private sector banks have more customers are using Mobile Banking services.
3. Proportion of saving accounts is significantly very large as compare to Current, FD, Loan and Demat accounts.
4. Majority of the respondents using Mobile Banking are agreeing with that the performance of Mobile Banking is dependent on network.
5. Majority of the respondents using Mobile Banking are agreeing with that the Mobile Banking is better way of banking.
6. Mobile Banking users are agreeing with that the Mobile Banking simple and easy registration procedure.
7. All respondents using Mobile Banking are agreeing with that the Mobile Banking useful for conducting banking transaction.
8. Majority of the respondents are using Mobile Banking services allows managing finance more efficiently through Mobile Banking.

9. From all respondents using Mobile Banking services 35% respondents have a fear of hacking Mobile Banking Account.
10. The majority of the respondents using Mobile Banking are Afraid of loose money while Mobile Banking due to careless mistakes.
11. From all respondents using Mobile Banking services 15% are disagree with Mobile Banking as secure and protect privacy.
12. Mobile Banking provides different services to users but most of the customers uses services like A/C Balance Enquiry, Bill Payment, Money Transfer between A/C only 5% uses A/C Statement Enquiry, Other Mobile Banking services.
13. Majority of the customers using Mobile Banking services are disagree with that the Mobile Banking services is a part of life.
14. All of the respondents using Mobile Banking services have allows to users do banking anywhere/anytime.
15. Majority customers are adopted Mobile Banking services because of different factors like Accomplish task more quickly i.e.25%, Any Time Banking i.e.20%, Built-in help facility i.e.15%, Functions fulfill Banking needs i.e.30%, Security i.e.10%.
16. The majority of the respondents i.e. 90 % using Mobile Banking are agree with that Mobile Banking provides sufficient services to customers for fulfill their banking needs.

IX. Conclusion

For mobile banking awareness banks should take some responsive steps like in arranging Workshop, Mobile Banking Training Program and Advertising.

To develop a Mobile Banking learning Web Site and App which helps to provides training and guide lines to non mobile Banking users.

Arrange a customer interaction session in which customers can clear their queries and doubts regarding mobile banking registration, security and privacy.

Create awareness regarding importance of mobile banking in case of conducting mobile banking transaction and show them how it saves your time and money by doing anytime and anywhere banking.
Develop mobile banking apps which work on low configuration mobile and on poor network also.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Classification Technique for Predicting Learning Behavior of Student in Higher Education

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ABSTRACT
In education system it is very important to decide learning behavior of students. Today there is huge competition in higher educational institutes. Quality education is essential for facing new educational challenges. Educational Data Mining is useful to classify students according to their knowledge and learning behavior. It helps teachers to implement different teaching methodology as per learning behavior of student. Researcher used Naïve Bayes classification technique on training data set of students. Classification is a supervised learning approach which categorized data into predefined classes. The implementation is carried out using C#. Algorithm is implemented on set of multivalued attributes to predict slow learner, average learner and fast learner students. The objective of researcher is to extract hidden knowledge from dataset for prediction of learning behavior of student.

KEYWORD: *Training Dataset, Supervised, Unsupervised, Machine learning, Data Mining.*

I. INTRODUCTION

Data Mining is a process of discovering knowledge from database. It is a technique to identify patterns and determine relationship between objects in dataset. Data mining motivates various applications in machine learning to learn from data. It consists of many algorithms which are based on supervised and unsupervised learning. There are different techniques of data mining like classification, clustering, predictive analysis, association rule mining, sequence mining, graph mining, regression and time series analysis etc. Selection and implementation of best suitable algorithm for getting optimum solution to the problem is a challenging task in data mining.

Data mining plays vital role in education system. Predicting learning behavior of student is very critical process. Learning behavior of student depend of different factors like gender, family background, location, age, interest, strength, weakness, culture, curriculum etc. Today education system creates tremendous carrier opportunities in the front of students. It is challenging work for teacher to provide education as per student need and interest. Learning student behavior is very essential for getting better teaching outcome as well as student's satisfaction. A Classification technique in data mining helps teachers to predict student behavior and selecting appropriate teaching methodology to enhance teaching and learning process.

II. Literature Review:

Researcher has gone through previous research related to classification techniques in data mining. It is observed that, Naïve Bayes classification algorithm is used for student's performance classification. Web mining and multifactor analysis technique is implemented for prediction [3]. Decision tree, Random forest and Naïve Bayes theorem is used for classification of student behavior. Researcher evaluate results of all three algorithms and it is found that Naïve Bayes method gives better results than other classification techniques.[4] Naïve Bays algorithm is implemented for slow Lerner prediction using python

and accuracy is compared using WEKA data mining tool.

According to literature review it is found that Naïve Bayes is suitable classification algorithm for multi attribute analysis. It is essential to develop user friendly application which useful in any education sector. Researcher developed application using C# for predicting learning behavior of student by implementing Naïve Bayes theorem.

III. Classification Techniques:

Classification is a supervised learning method where data is divided into different categories or classes. The objective of classification to predict target class for given dataset. There are various techniques of classification like decision tree, Naïve Bayes classifier, nearest neighbor approach, artificial neural network these are important techniques of classification. Accuracy of target prediction is depends upon selection of classification technique. In many real life situations classification is fundamentally probabilistic, it is uncertain to which class record is belong.[1]

IV. Naïve Bayes Classifier:

Bayesian classification is based on Bayes theorem. The posterior probability of the class that a record belongs to is an approximated using prior probability which drawn from training dataset. Classification model estimate the likelihood of the record belonging to each class. The class with highest prevents for Y to happen when events for X probability becomes the class label for the record.[2]

Definition of Bayes Theorem: Given two random variables X and Y, each of them taking a specific value corresponds to a random event. A conditional probability P(X/Y) represents the probability of events for Y to happen when event for X have already occurred.[2]

$$P(X/Y) = \frac{P(X/Y).P(Y)}{P(X)}$$

$$P(Y/X) = \frac{P(X/Y).P(Y)}{P(Y)}$$

V. Training Dataset:

Following table shows training dataset of MCA I year student dataset. Here researcher is interested to predict learning behavior of student from given training dataset using Naïve Bayes algorithm. Student data consists of different attributes like Gender, Area, SSC_Medium, SSC_Percentage, HSC_faculty, Math_At_HSC,Graduation_Marks,Admission_Type, Entrance_Rank,ParentsIncome,,Attendance,Communication_Skill, Learning_Behavior (Class Label) etc.

Table 1: Training Dataset:

Sr. No	Gender	Area	SSC_Medium	SSC_Percentage	HSC_ Faculty	HSC_Percentage	Maths At HSC
1	M	Rural	English	Excellent	Commerce	Poor	Yes
2	M	Urban	English	Good	Science	Good	Yes
3	M	Urban	English	Good	Commerce	Poor	No
4	F	Urban	Marathi	Poor	Arts	Good	Yes
5	M	Rural	Marathi	Poor	Science	Excellent	No
6	M	Rural	Marathi	Average	Commerce	Poor	No
7	F	Urban	Marathi	Excellent	Commerce	Excellent	Yes
8	F	Rural	Marathi	Poor	Commerce	Poor	No
9	M	Rural	Marathi	Excellent	Science	Poor	No
10	F	Urban	English	Poor	Science	Good	Yes

Graduation Marks	Admission Type	Entrance Rank	Parents Income	Attendance	Communication Skill	Learning Behavior
Excellent	MC	Good	High	Poor	Good	Slow
Poor	ER	Poor	Medium	Average	Poor	Fast
Good	MC	Good	Low	Good	Good	Average
Good	MC	Average	Low	Good	Good	Slow
Poor	MC	Poor	High	Average	Poor	Fast
Excellent	ER	Good	Medium	Poor	Excellent	Average
Poor	ER	Good	Medium	Average	Poor	Slow
Good	ER	Average	Low	Average	Excellent	Fast
Good	ER	Good	Low	Good	Good	Fast
Poor	ER	Good	High	Average	Excellent	Average

VI. Student related Variables:

Attributes	Possible Values
Gender	M,F
Area	Urban, Rural
SSC_Medium	English, Marathi
SSC_Percentage	>=70 :Excellent, >=60 &<70:Good, >=50&<60:Average, <50:Poor
HSC_Faculty	Commerce, Arts, Science
HSC_Percentage	>=70 :Excellent, >=60 &<70:Good, >=50&<60:Average, <50:Poor
Maths At HSC	Yes, No
Graduation Marks	>=70 :Excellent, >=60 &<70:Good, >=50&<60:Average, <50:Poor
Admission Type	MC: Management Cota, ER- Entrance Round
Entrance Rank	Good, Average, Poor
Parents Income	>=10 Lacs: High, >=5Lacs & <10Lacs: Medium, <=5 Lacs: Low
Attendance	Below 50: low, >50 &<70: Medium, >70: High
Communication Skill	Good, Poor, Excellent
Learning Behavior	Slow, Fast, Average (Class Labels)

VII. Data Pre-processing:

Data was pre-processed by performing following operations [3]:

1. Converting all fields to categories.
2. Features combine to reduce dimensionality.
3. Missing values are replaced by frequently occurring values.

VIII. Algorithm:

1. Import dataset into Sqlserver
2. Find probability of each class.
3. Select parameter set as per input requirement.
4. For each input record:

i. For each attribute:

   A. Entities are divided into different categories according to categorical data.
   B. Probability is calculated from training dataset.

5. For each attribute in testing dataset

i. For each attribute:

   A. Calculate probability and classify the data accordingly
   B. Return the diagnosis parameter and calculated probability of each class [4].
   C. Compare class wise probability value and Return final classification which has highest probability.

IX. Implementation of algorithm:

Here Naïve Bayes algorithm is implemented on above dataset. C# is used for stepwise implementation of algorithm and predicting data for unknown tuple/record.

Algorithm is implemented to predict learning behavior of student with following known attribute values:

X= Gender=M, Area=Rural, SSC_Medium=English, SSC_Percentage=Poor, HSC_Faculty=Commerce, HSC_percentage=Good, Maths_At_HSC=Yes, Graduation_Marks:Poor, Admission_Type=MC, Entrance_Rank=Good, parents_Income=Low, Attendance=Average, Communicaton_Skill=Good.

In above problem there are three classes:

C1: Learning Behavior Slow

C2: Learning Behavior Fast,

C3: Learning Behavior Average.

Here we need to predict whether X belongs to which class.

P(X/C1)=0.33*0.33*0.33*0.33*0.66*0.33*1*0.33*0.66*0.66*0.33*0.33*0.66=2.66

P(X/C2)=0.66*0.33*0.66*0.33*0.66*0.33* 0.33*0.33* 0.33*1*0.33*0.33*0.33=1.33

P(X/C3)=0.75*0.75*0.25*0.5*0.25*0.25*0.25*0.5*0.25*0.25*0.5*0.75*0.25=3.21

P(X/C1)*P(C1)=2.66*0.3=0.798

P(X/C2)*P(C2)=1.33*0.3=0.399

P(X/C3)*P(C3)=3.21*0.4=1.284

P(X/C3)*P(C3) gives highest probability so X belongs to class C3.

According to Naïve Bayes theorem it is predicted that given tuple X belongs to class C3. Which means that there is highest probability that student is Fast Lerner.

X. Finding:

Implementation of Naïve Bayes theorem using C# we can find out Fast, Slow and Average learners.

Conclusion:

Naïve bays theorem is implemented using C# to determine Slow Learner, Average Lerner and Fast Learner. This application is useful in education system to categories student according to their learning behavior. Proposed application is very user friendly and applicable for any higher education sector. It helps teachers to implement different teaching and learning techniques for providing quality education to the students. Successful implementation of this model will improve overall result and learning interest among students.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Impact of Ebanking in Rural India with Special Reference to Selected Taluk in Erode District, Tamil Nadu

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ABSTRACT
The banking system is the back bone of any economy system. The strength of financial system depends on sound banking system. Due to lack of awareness among people, even after decades of emergence of banking industry it was not used effectively. In recent times the Indian population has started availing the facilities of the banks. E banking trend is spreading at a faster rate in all the countries. Banks provide internet banking services to its national and international customers. The study is an attempt to measure to the awareness of E banking system introduced by banks in rural areas. The study was conducted in Modakurachi village of Erode district of Tamil nadu. The primary data was obtained using a well- designed questionnaire. The questionnaire was equipped with questions relating to demographic factors, level of awareness on E- banking among the respondents and factors influencing to choose E-banking. For this study, 250respondents irrespective of their type of bank account, occupation, age and education all evel have been select edrandomly as a sample of the data analysis. The banks available in the study area are Canara bank, Indian overseas bank, State bank of India and City union bank. Out of 250 respondents, 55.2% were holding account in public sector banks. The awareness level on E banking was 68.8%. The accounts of 34.8% of the respondents were not self- maintained. Majority of the respondents were familiar with internet browsing but were reluctant to use facilities like bill payments and fund transfer, etc. The reasons for not using E banking facilities were found to be that there are no regular banking activities among the customers, lack of high speed internet and the bank website is not user friendly. The banks can consider changing the website bilingual (English& regional language). The errors and frauds happening in internet banking should be reduced to motivate the users of internet banking facilities.

KEYWORD: *E banking,*

INTRODUCTION
The banking system is the back bone of an economy. The strength of financial system depends on sound banking system. An effective and sound banking system uses its savings in productive sectors and also meets the obligations of the depositors. In the chariot of economic progress, banking is the kingpin. Due to lack of awareness among people, even after decades of emergence of banking industry it was not used effectively. In recent times the Indian population has started availing the facilities of the banks. E banking trend is spreading at a faster rate in all the countries. Banks provide internet banking services to its national and international customers. Internet banking is very cost effective and speedy processing method.

The process of using computers/mobiles as a medium for banking services is known as internet banking. The customers access their account information through a web-based service. The bank website permits the customer to log in and do any kind of transactions, but such log in must be authorized by the banking system through personal identification number (PIN). Due to advancement in technology, banks have come forward to accept the change. The banks use electronic and telecommunication networks to provide a huge range of value added services to its customers. Internet plays vital role

between banks and customers to receive and deliver information, this form of banking is described as Internet banking (Reserve Bank of India, 2001).

Defining Electronic banking

A banking system that allows customers to perform bank transactions through internet, Transactions like account transfers, balance enquiries, bill payments, etc. are done through this system. Some banking offer services like loan, credit card applications forms through this system. The banking activities can be classified as transactional and non- transactional activities. Electronic transfer of funds, Payment of bills, Loan |& credit card application

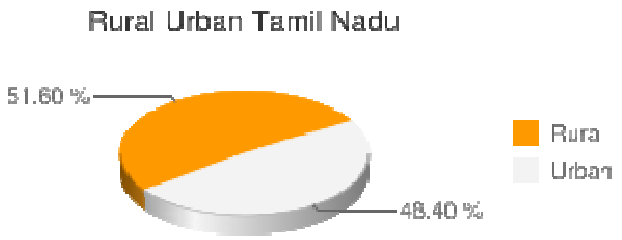
Investment products are few of transactional activities and Viewing of account balance, Viewing of previous transactions, Downloading of Bank statement, Ordering Check book, mobile banking and internet banking application forms are few of non-transactional activities.

RESEARCH SIGNIFICANCE

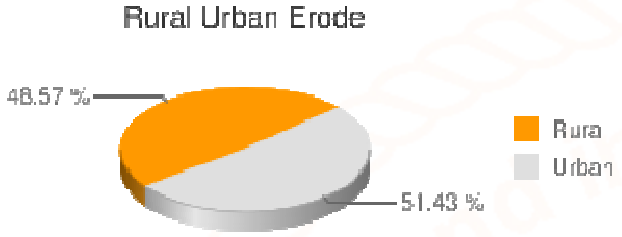
The banking industry, being backbone of Indian economy is undergoing vast changes. Advancement in information technology, global business development and demand from customers has paved way for changes in the banking scenario. The study is a bird's eye view of E-banking in rural India. After demonetization, remonetizati on has taken place. Due to the advancement of technology, banking sector looks ahead for more paperless transactions. This was considered as right time to study about the usage of electronic banking system in rural India. The study aims to understand the awareness about the electronic banking system in rural India. The study was conducted in Modakurachi taluk of Erode district, Tamil Nadu, South India.

STATAEMENT OF THE PROBLEM

According to census 2011, out of 121 crore Indians, 83.3 crore live in rural areas while 37.7 crore live in urban areas. The total population of Tamil Nadu is 7.21 crores out of which 51.6% live in rural areas and 48.4% live in urban areas.(India Population Census, 2011)



The study area is Erode district, which contributes around 3.12% of the total population of Tamil Nadu. Around 51.43% of the Erode district population are staying in urban areas of the district while 48.57 % stay in rural areas.



The around 70% of the total Indian population lives in rural areas. So the study on this topic in rural areas was found to be of high importance. The study aimed to understand the awareness of electronic banking facilities available to the people in rural areas. This would be an eye opener to the people also to move forward to an electronic transaction mode from paper and manual mode of transactions.

Population outline:

The study has been conducted in Modakurachi taluk of Erode district. Modakurachi is a town panchayat. The taluk is divided into 15 wards. The population of the taluk with 3076 families is 9907. The numbers of male are 4931 and female are 4976. The sex ratio is 1009 and the literacy rate is 72.4%. (Statistics, 2014-15)

Data	Male	Female	Total
Population	4931	4976	9907
Literacy	81.25%	63.66%	72.36%

Data from Census report, 2011

OBJECTIVES OF THE STUDY

The following are set objectives of the study.

- To study the impact of demographic factors on the awareness level of respondents about E- Banking.
- To find and analyse the factors influencing use of E- banking.
- To find out the opinion of the respondents regarding the various problems of phone / mobile banking.

REASEACRCH METHODOLOGY

Scope of the study

This study is a demo graphical study, based on usage of E-Banking services by various classes of people irrespective of occupation, age, sex and literacy. The research work was undertaken by getting the research questionnaires filled by the respondents.

Methodology

This study is based on primary data collected from the respondents. The data was analysed with the help of simple statistical tools like percentage, average, t-test, etc.

Data collection and sampling method

The primary data was obtained using a well- designed questionnaire. The questionnaire was equipped with questions relating to demographic factors, level of awareness on E- banking among the respondents and factors influencing to choose E- banking. For this study, 250respondents irrespective of their type of bank account, occupation, age and education allevel have been selected and omlyas a sample of the data analysis. The banks available in the study area are Canara bank, Indian overseas bank, State bank of India and City union bank.

Limitations of the study

- The study area is confined only to Modakurachi taluk, Erode district, Tamil Nadu.
- The sample size of the research is only 250 respondents.
- The data collection was done during the month of January, 2018. The attitude of the customer may change in the future.
- The study considers bank transactions done using internet and mobile only as the e banking activities.

ANALYSIS AND INTERPRETATION

The following table shows the analysis of data collected with related interpretation detailing the results of the analysis.

Table 1: Gender of the respondents

Gender	No. Of Respondents	Percentage (%)
Male	132	52.8
Female	118	47.2
Total	250	100

The above table shows that 52.8% of the respondents are male and 47.2% of the respondents are female.

Table 2: Age of the respondents

Age	No. of Respondents	Percentage (%)
Below 20 Years	52	20.8
21 to 30 Years	124	49.6
31 to 40 years	41	16.4
Above 40 Years	33	13.2
Total	250	100

The above table clearly states that the maximum percentages of the respondents are in the age group of 21 to 30 years. As the study is related to e-banking, this age group are the maximum users.

Table 3: Educational Qualification of the respondents

Educational Qualification	No. of Respondents	Percentage (%)
Below HSC	40	16
HSC	38	15.2
Under Graduate	60	24
Post Graduate	62	24.8
Professional	50	20
Total	250	100

From the data collected from the respondents regarding their educational qualification, it shows that higher percentages (24.8 %) of the respondents are educated up to post graduate level.

Table 4: Occupation of the respondents

Occupation	No. of Respondents	Percentage (%)
Student	43	17.2
Employed	60	24
Self - Employed	74	29.6
House wife	48	19.2
Others	25	10
Total	250	100

From the above table it clearly shows that 29.6% of the respondents are self – employed and 24% of the respondents are employed.

Table 5: Type of bank where account is maintained by the respondents

Type of bank	No. Of Respondents	Percentage (%)
Public sector	138	55.2
Private sector	112	44.8
Total	250	100

The table shows the type of bank where the respondents are maintaining their accounts. Higher percentage (55.2%) of the respondents are having their account with the public sector banks and 44.8% of the respondents are having their account with the private sector banks.

Table 6: Reason for visiting the bank

Reason for visiting bank	No. of Respondents	Percentage (%)
Deposit	105	42
Withdraw	52	20.8
Avail Services	44	17.6
Enquiry	31	12.4
Others	18	7.2
Total	250	100

The above table points out the reason for visiting the bank by the respondents. Majority (42%) of the respondents visit the bank for the purpose the depositing their amount in the bank.Around 20.8% of the respondents are visiting the bank for the purpose of withdrawal.

Table 7: Awareness of E- banking facility

Awareness of E-Banking facility	No. Of Respondents	Percentage (%)
Yes	172	68.8
No	78	31.2
Total	250	100

The above table shows that the 68.8% of the respondents are aware of the E-Banking facility provided by their banks and 31.2% of the respondents are not aware of the E- Banking facility provided by their bank.

Table 8: Awareness level of E- banking services

Awareness level of E-Banking services	No. of Respondents	Percentage (%)
Fully aware	120	48
Aware	52	20.8
May be	30	12
Unaware	15	6
Totally unaware	33	13.2
Total	250	100

Table 8 is the awareness of E-Banking services provided by their bank. The results shows that 48% of the respondents are fully aware of the services provided by their respected banks. Around 20.8% of the respondents are aware of the E-Banking services. The study reveals that around 13.2% of the respondents are totally unaware of the E-Banking services.

Table 9: Reasons for lack of awareness

Reasons for lack of awareness	No. Of Respondents	Percentage (%)
Education	78	31.2
Lack of facility	85	34
Account not self-maintained	87	34.8
Total	250	100

The above table shows the reasons for the lack of awareness on E-Banking among the respondents. The reason with higher percentage (34.8) is that the account is not self- maintained.

Table 10: Reason for using the E-Banking facility

Reasons for using E-Banking facility	No. Of Respondents	Percentage (%)
Easy	75	30
Safe and secure	52	20.8
Low transaction charges	45	18
Not used	78	31.2
Total	250	100

Table 10 states the reasons for using the E- Banking facility by the respondents. ROUND 31.2 % of the respondents have not used the facility and 30% of the respondents used the facility as it is easy and 18% of the respondents are using the facility because of low transaction charges.

Table 11: Usage of E-Banking facility based on familiarity

Usage of e- banking facility based on familiarity	Strongly familiar	Familiar	Neutral	Very less familiarity	Completely not familiar	Total
Internet browsing	120	52	30	40	8	250
visiting bank website	112	46	29	35	28	250
Access of online banking information	108	44	25	42	31	250
Viewing account statements	115	50	30	25	30	250
Transfer funds	110	41	22	28	49	250
Make bill payments	115	52	26	27	30	250

Avail banking facilities online	100	48	22	35	45	250

The above table shows the usage of E-Banking facility based on the familiarity of the facility. Majority of the respondents (120 respondents) are familiar with internet browsing which is makes them familiar with the E-Banking facility.

Table 12: Reasons for not using E-Banking facility

Reasons for not using e-banking facility	Rank					Total
	1	2	3	4	5	
Lack of enough knowledge	49	60	72	25	44	250
No computer	20	32	35	43	120	250
Lack of high speed internet	95	74	49	22	10	250
Non-user friendly bank website	64	44	40	72	30	250
No regular banking activities	22	40	54	88	46	250
Total	250	250	250	250	250	

The above table shows that the reasons for not using E-Banking facility. Around 95 respondents say that lack of high speed internet facility is the reason for not using the facility.

CONCLUSION

The banking industry being back bone for economic development is undergoing vast advancement through technology. But does this technology advancement in banking sector reached the rural areas, The customers in rural areas are maximum aware of E banking services but are reluctant to use it due to pitfalls in the system. The customers will start to use the services of the banks if the bank website is made user friendly and fraud free. There were many studies made in the past on various aspects related to E banking services. The services provided in rural banks can be enhanced like that of urban area banks. The study reveals that knowledge of E banking, no regular banking activities and lack of high speed internet are the drawbacks of E banking in rural areas.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
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ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Fin Tech Banking – The Revolutionized Digital Banking

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ABSTRACT
India is one of the fastest developing countries in the world and the changes taking place are also very frequent in the financial environment of India. Where Fintech is and will play a major part of the financial world. Fintech is the need of an hour, where it will be completely digitalized in all respects. Today, Comparing India with other countries with respect to its digital growth results in a drastic positive change. This change is helping the nation's economy as well as augmentation of the individuals. Digital India being a flagship programme of the nation's Prime Minister Shri. Narendra Modi under the incorporation of Indian Central Government, Fintech plays and will play a very vital role and impact on the programme fulfilling the needs and requirements of the time. This will also empower the citizens which will lead to a better standard of living.

The main focus of this research paper is on the Fintech's role in Indian Banking, financial services and financial gateways. Also providing an insight on future banking in collaboration with Fintech.

Objective:
The objective of this research paper is to explain the changes taking place due to implementation and execution Fintech program in the entire Financial world of India, and hence changing the scenario with respect to the traditional techniques of banking with that of new implication of FINTECH into banking and enhancing the technique of the conduct of banking in India and providing the services there of. In addition to this, an attempt is also made to understand the significance of digital India after implementation of Fintech in financial world.

Methodology
The paper is based on the secondary data and the information is retrieved from the internet via journals, research papers and expert opinions on the same subject matter.

INTRODUCTION
Fintech is the axiom within the world of digital banking which refers to the use of technology across all the financial services functions. It is the exchange of paper-based processes. Is a term used to refer to "financial technology". Fintech is entirely a new perception for almost all consumers and does not have a specific definition. The term is used to refer to the technological revolutions that relate to the concepts such as financial literacy and education, stock investment, cyber security, blockchain technology, retail banking, crypto-currencies like Bitcoin and Ripple, among other innovations.

One more vital concept of Financial inclusion also refers to Fintech solutions which provides more reasonable finance substitutions to deprived and low-income people who, like the unbanked/under banked, may or may not have little or no reach to mainstream financial services. India is one of the most developing nation among the world where Fintech is adopted to

operate in developing markets to streamline and ease the financial services.

Previously, Fintech was primarily used for back-office functions by leveraging software to help bank workforces handle accounts, execute transactions, maintain and record the customer databases, etc. Today, however, Fintech has transformed how banks operate. No longer relegated to the gloomy corners of back-offices, Fintech has taken centre stage by making itself indispensable to customer-facing processes. Every digital transaction, be it online shopping, foreign currency exchange, stock investments, or money transfers, is possible at our fingertips thanks to Fintech.

Major Factors deriving the Fintech revolution

Mobility has had anenormousrole to play in the Fintech revolution. The perception of **smartphones** provided the consumers an easier way to interact with banks and gain real-time views into their bank accounts. Unavoidably, as mobile apps grew in sophistication, so did customer ultimatum for intuitive banking services. Today, digital transformation within banks united with flexibility has transformed the very nature of banking. Customers no longer have to struggle with long queues, wait time and postponement to conduct their day to day banking activities.

The smartphone revolution soon gave an emergence to another development – the explosion of online payment apps that integrate with bank accounts, allowing seamless online shopping, investments, transfers, and mobile-to-mobile payments. Finally, the rising number of online platforms and applications fuelled the need for faster, smarter and more robust security protocols to safeguard customer data. As cyber-attacks such as ransom ware, malware and phishing become increasingly sophisticated, mere login IDs and passwords are no longer strong enough to thwart intruders. Today, merchants as well as consumers need innovative security products that use AI, machine learning and advanced fraud analytics tools to protect their transactions, assets and data.

Implication of Fintech into banking- The disruption of financial services.

Here are some ways in which Fintech is changing the game for the financial services industry:

1. Chabot's for customer service – Chabot's are bits of software that use natural language processing and machine learning to uninterruptedly learn from human interactions. This is becoming a popular tool for banking industry to streamline customer-facing interactions such as handling queries or directing customers to relevant departments. Some Chabot's can even provide investment advice such as Erica, the Bank of America's Chabot. Robots, such as the one used by UBS, scan customer emails for trading instructions and execute these autonomously, reducing the time taken from 45 minutes to two minutes. The use of these Chabot's not only improves customer gratification and reduces costs but also frees agents in call centres to focus on value addition.

2. Machine learning and AI for fraud detection – Identifying fraudulent transactions is the main goal of anti-money laundering departments. For most banks, this involves a combination of software and people. Security software generates alerts on the possibility of a fraudulent transaction or a virus attack. Then, it is up to human investigators to determine whether the transaction or attack is a false positive or a real threat. With the increasing sophistication of attacks, this time-consuming process can cost banks millions of dollars, loss of data and customer confidence, and negative brand reputation. According to McKinsey, the adoption of data aggregation platforms, machine learning-driven statistical modelling and process automation can transform AML operations by infusing new efficiencies. More importantly, machine learning algorithms can leverage historical records to determine patterns and predict the possibility of fraud and attacks before they occur, reducing manual effort by nearly 50%.

3. Omni-channel banking and obsolescence of bank branches – As banking shifts from being a branch-specific activity to one that permeates all digital channels (mobile, social and online), the importance of having several brick-and-mortar bank offices decreases. In fact, studies show that the adoption of omni-channel banking is driving several banks to reduce the number and size in area of their branch offices. In the European Union alone, nearly 9100 bank branches were shut down by the end of

2016 owing to higher adoption of electronic payments and online/mobile banking.

4. Biometrics for stronger security – There is a lot of interest in finding ways to use biometrics such as vocal patterns, irises, thumbprints, facial recognition, etc., to add an extra layer of authentication for transactions. Biometrics promotes usability by enabling quick authentication, avoiding the frustration that comes with remembering multiple passwords. In fact, several banks are investing in biometrics-based authentication solutions that use the forward-facing camera to scan one's iris or the in-built thumbprint scanners in smartphones to strengthen security.

5. Blockchain for digital transactions – Crypto currencies are taking the banking world by storm by providing users with faster and cheaper ways to transact. The distributed ledger system of blockchain leverages stringent controls enabling smart contracts and auditable data. According to NASDAQ, the most notable application of blockchain will be in how it transforms payments for banks as well as customers by reducing the cost and time taken to transfer money. Additionally, by building inherent trust, blockchain provides the perfect trading platform for securities exchanges. It does this by ensuring transparency, thereby minimizing risk, human errors and transactional fees.

6. India Stack: Through the introduction of India Stack, the government has provided a world-class technological framework to entrepreneurs, innovators and corporations, allowing for the accelerated growth of Fintech ventures. The scenario somewhat resembles the policy support offered by the government to the telecom industry in the 90's, with Fintech taking centre stage in many reform initiatives.

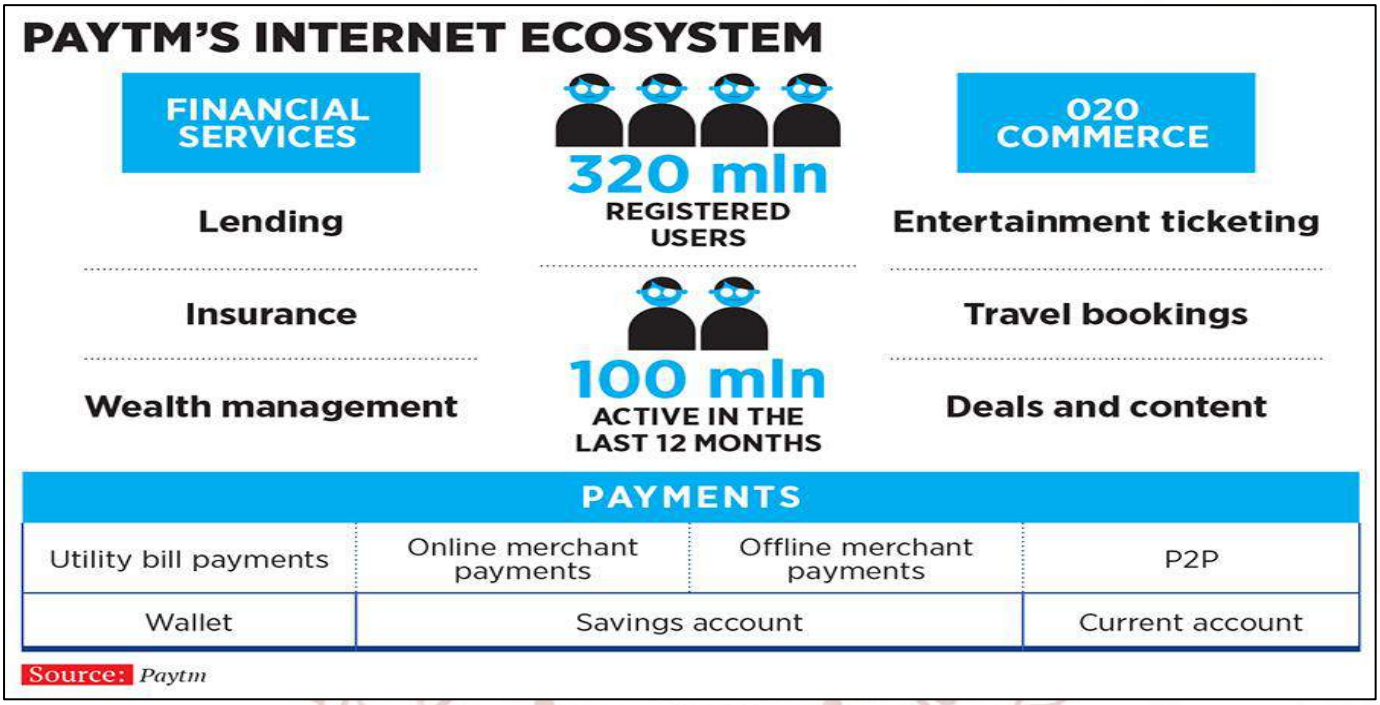
7. Startup India Program: The Start-up India program, launched by the central government, includes the simplification of regulatory processes, tax exemptions, patent reforms, mentorship opportunities and increased government funding.

8. Jan Dhan Yojana: Financial inclusion in the country has grown significantly due to initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY), regarded as the world's biggest financial inclusion program, with an aim to facilitate the creation of bank accounts for large underserved or unserved sections of India's billion plus population.

9. National Payments Council of India Initiatives: The National Payments Council of India (NPCI), through the introduction of the Unified Payments Interface (UPI), has leveraged the growing presence of mobile phones as acquiring devices, substantially reducing the cost of infrastructure for Fintech ventures. With the smartphone user base expected to expand to about 500 million users by 2020, up from

about 150 million in 2016, the digital banking footprint is projected to grow faster than ever before. The NPCI has also introduced several innovative products, such as RuPay cards, which will allow for immediate money transfers and a more convenient experience for the customer. These initiatives provide a solid foundation for a digitally enabled financial sector in India, giving Fintech start-ups the opportunity to leverage these technologies and initiatives to be adopted into the mainstream banking experience in India.

10. Public Relations: Moreover, the government has also played a strong role in encouraging and educating consumers in the economy towards digitized monetary systems, providing a much need PR push towards digitisation. The industry is still suffering from regulatory uncertainties, particularly with respect to new business models enabled by Fintech applications such as P2P transactions, crowd funding and data security. More than 40% of industry incumbents and start-ups reported such regulatory uncertainties to be a major hurdle while working to implement innovative solutions.

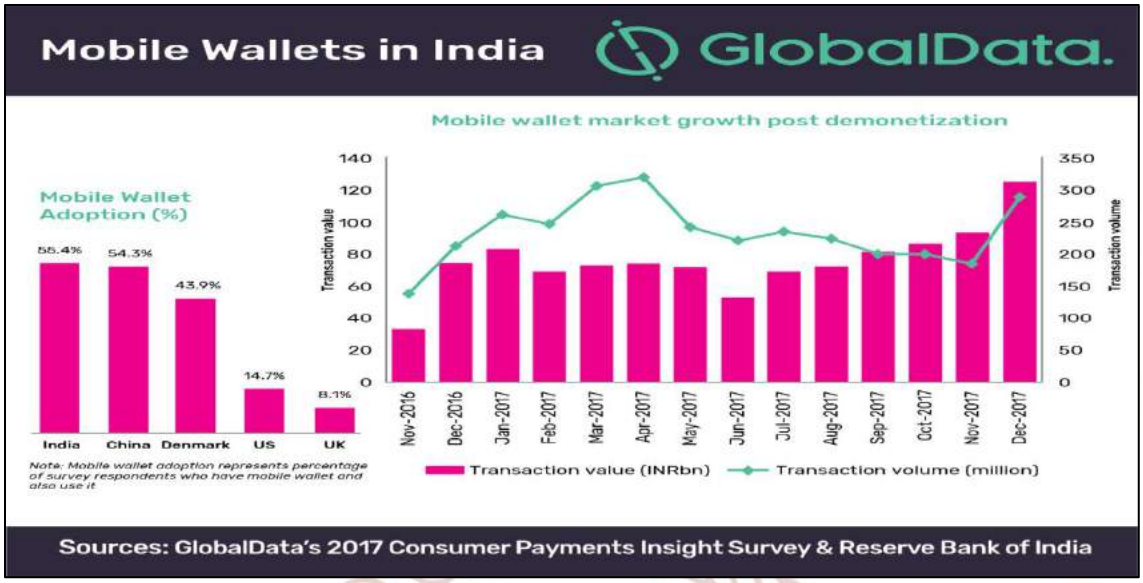


11. Funding Trends: The Fintech sector saw a decrease in global funding in 2016 due to increased global uncertainty, driven by lack of clarity surrounding Brexit and the US presidential election, among others. VC-backed global Fintech investment in 2016 was $12.7 billion, which was down 13% from 2015's record high of $14.6 billion. A breakdown by geographical region found that Fintech investment in Europe and the US was affected the most. VC-backed funding was down 25% YoY in Europe and 29% YoY in the US in 2016.

12. Aadhaar Adoption: The RBI recently has permitted Aadhaar based biometric authentication, which will consent for bank accounts to be opened through e-KYC at any Banking Correspondent (BC) location. This will allow financial services companies to do e-KYC checks more frugally, thereby reducing transaction costs for customers.

Facts & Figures

The Fintech industry attracted over US$13.1b in VC-backed investments in 2016, about five times more than investments four years earlier (see Figure 1). The growth of the industry has strengthened the common belief that Fintech will disrupt banking. But collaboration — not competition — will be the primary driver of disruption. A government push for financial inclusion, digitization and startup activity has led to the introduction of policy initiatives which provide a strong foundation to the Fintech sector in India.



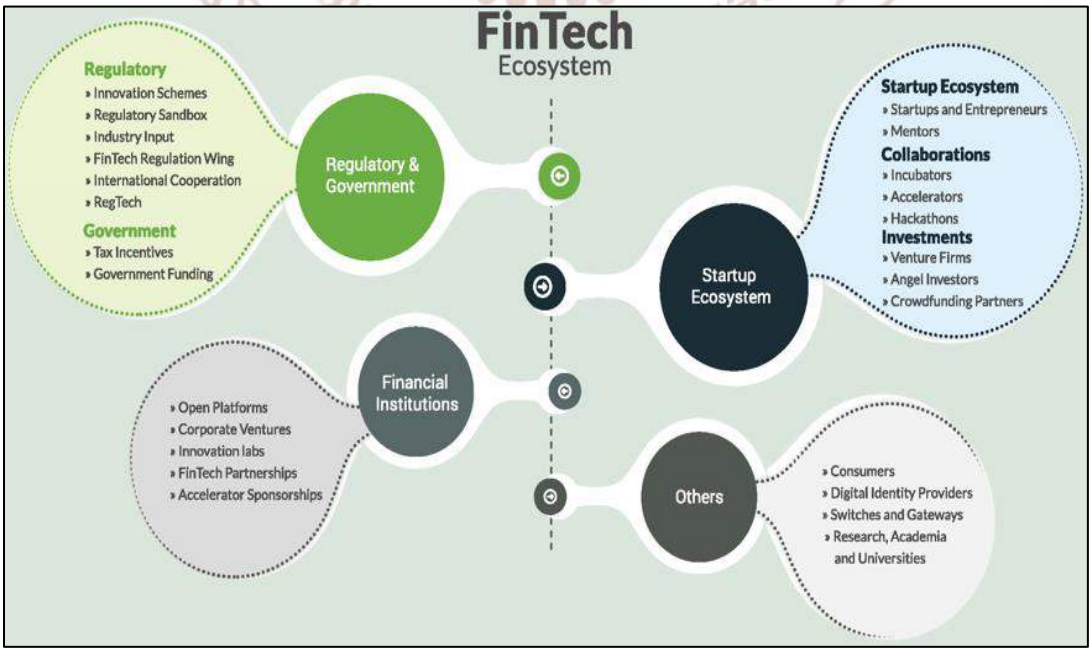
Current stake of Fintech in banking activities till 2017

Fintech Adoption Rates across 10 different country Markets –

Countries	Percentage
Average	33%
China	69%
India	52%
United Kingdom	42%
Brazil	40%
Australia	37%
Spain	37%
Mexico	36%
Germany	35%
South Africa	35%
United States	33%

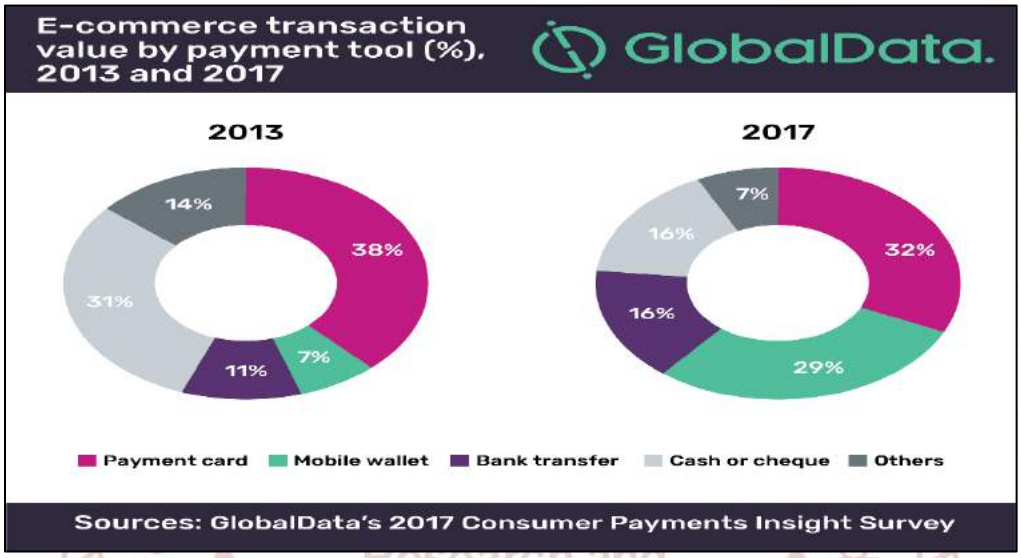
Fintech adopted banking vs Traditional Banking

Banking at today's date become an Easy & On-The Go activity. Gone are the days when banking use to be difficult task, an annoying activity, which in many cases required an entire day off for the usual transaction. Innovations with the collaborative Technologies (Internet and Mobile phone) has virtually empowered the banks to be at the customers place ant any place and at any point of time. Today we are able to bank from our smartphone 24X7 and accomplish most of our banking transaction in few seconds, where it was a challenging situations in 90's and early 2000's. The changing time is also changing the needs and wants of the individuals.



Is Fintech good for India?

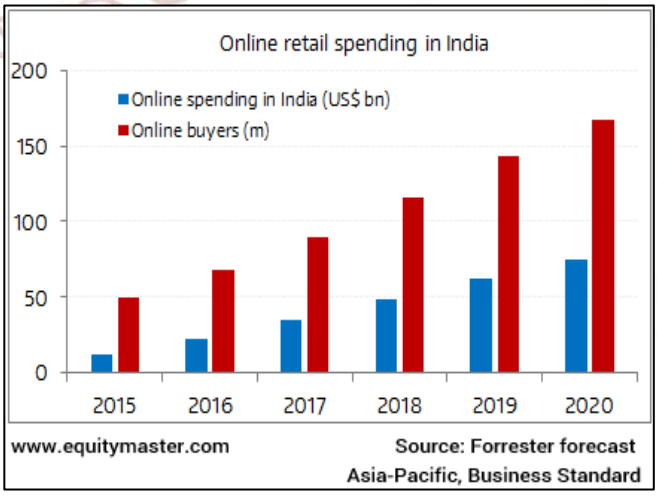
As India is having most of the young generations in the current decade and the also be the same in few more, the changing and challenging minds of the young and enthusiastic generation is in the need of such amazing technologies as of FINTECH. And so the statistical report are showing that in the entire nation citizens are not only showing their interest but are also adopting the change without any hesitation. Where it is saving their costs and the time as well .Lower cost of providing services to under banked and unbanked customers is a major opportunity for Fintech companies. In the backdrop of diverse demographics in terms of literacy, age and region in India, Fintech's with focus on user experience can provide the impetus for financial inclusion. With a target of banking services reaching every person/household in India by 2020, Fintech's have a great role in making government of India initiative possible.

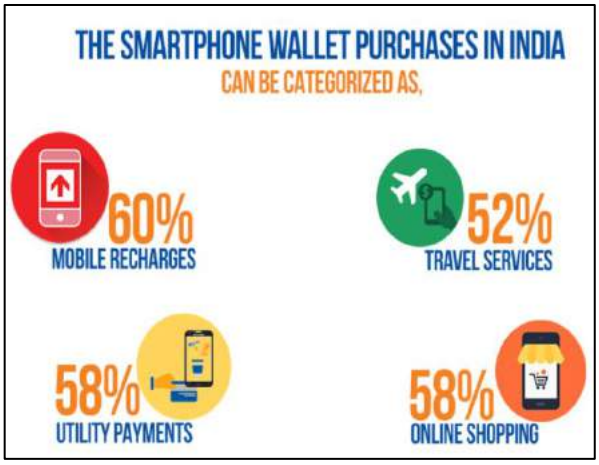


The Government of India, in association with the core regulators such as SEBI and RBI are aggressively supporting the ambition of the Indian economy to become a cashless digital economy and emerge as a strong Fintech ecosystem via both funding and promotional initiatives. With such incentives and mandates, this robust business environment will be the most impactful levers in getting the Indian Fintech market up to speed and enable it to better address these roadblocks like the lack of authentic consumer facts on digital media and truncated technological and digital infrastructure.

In result to implementation and implication of Fintech in India has given and portrayed an amazing result in India been ranked as the Second Highest in Asia Pacific for Digital Payment Adoption. This also results in more than40% of the respondents using Smart phones Wallet in India.

As start-ups emerge as enablers for the business of large financial institutions and seem to be in the limelight, government bodies and other market players and participants have been stoutly serving their part to create an environment for the growth of innovation and technological advancement in the financial sector. Continued strong commitment from the government, the industry and the Fintech firms is critical to allow the Fintech revolution dig its roots deep in any financial system.

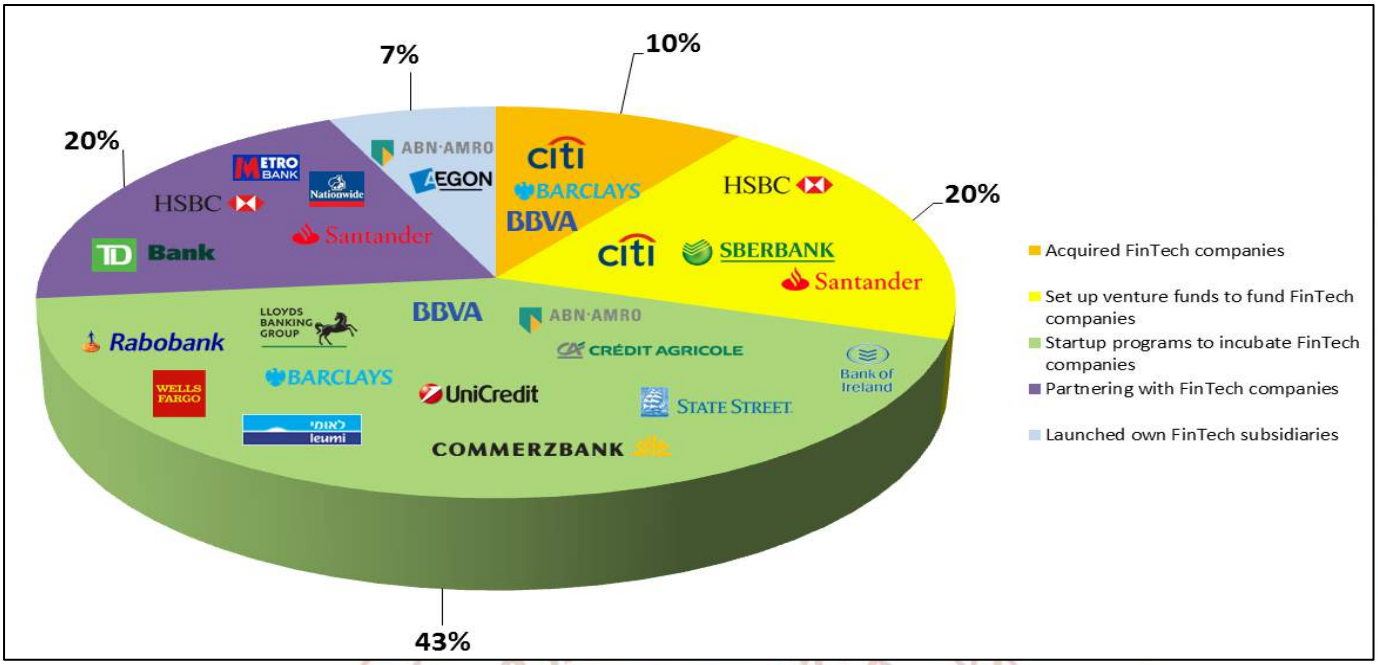




In most emerging markets such as India, strategies focused on collaboration, offering a sustainable change in the market are easy to implement. With the capability to collaborate, start-ups cross the gap from being a small, successful business to potentially scaling their solution for a very large customer base. With improvements in flexibility, accessibility and quality of such products and services, functionality and online experience becomes better, which in turn will lead to greater level of trust in traditional institutions. While digital finance firms have benefited from the governments pro-start up policies and flexible regulatory conditions imposed by the Reserve Bank of India (RBI), formal institutions possess an established infrastructure and legacy that is not easily replaceable. Fintechstart-ups need to encourage greater confidence among Indian consumers, already known for being conservative in their financial preferences. On the other hand, traditional banking and financial institutions can leverage their existing customer base and adopt digital products that nurture strong financial relationships while improving service efficiency and broadening access to meet changing needs. The disruptive potential of Fintech firms can provoke the much needed modernization of the traditional sector, reducing costs in the process and increasing the size of the banking population. Reacting to these opportunities and challenges, banks like Federal Bank announced a partnership with Start-up Village to develop innovative banking products, the U.K. giant Barclays is set to operationalize its fifth global Fintech innovation centre that will be located in India, and Goldman Sachs Principal Strategic Investments Group (GSPSI) is looking to invest in Bengaluru's Fintechstart-up scene. Mobile wallet firms like such as FreeCharge, MobiKwik, Oxigen, Paytm, etc have witnessed a surge in usage of their wallets and the money loaded into them post November 8. Now, the habit of evading taxes will not change overnight, but other major hurdles such as awareness, internet connectivity and infrastructure in terms of digital payments can be dealt with now. While urban centres mostly enjoy high speed internet connectivity, suburban areas are deprived of a stable internet connection.

One good thing is that people from the rural parts of India can impeccably transact through mobile phones with the help of the recently launched UPI (Unified Payments Interface) by NPCI (National Payments Corporation of India) making digital transactions as simple as sending a text message. While the Indian market is large and warmed up for financial innovations, start-ups do face a unique set of challenges. While the government is trying to simplify the development of new financial technologies, the market regulations are still tough. Also, access to consumer data is scarce as India is still a case-centric country, leading to a high risk for fraud and loops in security and there is lack of consumer education which prevents people from getting on board easily. The digital revolution is transmuting operations across the financial and banking sector. What looks cheering is that the Indian government and regulatory institutions have endorsed an entrepreneurial climate for Fintech in India. However, policies and governance will need to match the speed of innovation in this sector, predominantly to ensure secure and transparent growth.

Promote a Digital Approach to Financial Inclusion – Promote digital financial services as a priority to drive development of inclusive financial systems, including through coordinated, monitored, and appraised national strategies and action plans. Of course, in countries with widespread access to banking, incumbents' pursuit of digital by default strategies risks causing damage through the exclusion of consumers who cannot, or choose not to engage with digital channels, particularly if bank branch closures ensue. It will be significant that those working in the consumer interest maintain sight of the interests of these groups and guarantee they are treated impartially by breadwinners.



Benefits of Fintech in future

As Fintech becomes more mainstream and commercialized, it endures to fascinate greater regulatory inspection from a number of different federal and state regulators. Fintech is also a very major source of creating jobs as moreover a large number of start-ups and venture are emerging to acquire the need of the time. Countries and states like with high Fintech acceptance rates and the homes of many Fintech start-ups, such as California and New York, have begun implementing oversight protections for consumers by mandating compliance for Fintech start-ups to the concerned Department of Financial Oversight in California and the Department of Financial Services in New York. India, also being the one of the major adopter of the Fintech has a very abundant impact on its economy.

Conclusion

Fintech is such a kind of innovation where the entire world is embracing such new and efficient technique of service. Where the combination of higher spending power and a freer adaption of technological adoption mean that banks and other financial institutions have an entire market of willing and able customers to offer better financial products/services at lower costs. The fact that unbanked population in India halved from 577 million to 233 million speaks volume about the advancement of financial inclusion efforts. Technology is the chief enabler and equalizer today. As we connect one-on-one in real time, it has created enormous new flows of trade for markets that were underserved or overlooked. Cell phone subscription in India has crossed one billion. So the first massive change in the network effect of financial inclusion is that millions of people who previously had zero access to digital services are now on the network and are connected for good. It is also very inspiring that we have a central bank that is equally fervent about promoting modernisations and technology.

The Reserve Bank in its continued efforts towards building vigorous and secure payment and settlement systems for accomplishing a less-cash society published Vision 2018 which highlights the need for making regulations more responsive to technological developments and innovations in the payments space. India now has the best digital infrastructure for financial universalization and the fact that we have the Jan-Dhan, Aadhaar and Mobile (JAM) layer, we have an indigenous Indian stack that is boosting us from being data poor nation to a data rich nation. In addition to this the data available through GST Network, under which companies will upload nearly three billion invoices every month and government will effectually have real-time economic data 24X7. Fintech adoption and moving away from tradition banking method would not be without complications.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

The Role of AcademicLibraries in Technical Environs for Quality Education

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ABSTRACT
The explosion of information and increase in the use and craze of Internet, academic libraries has faced new challenges to look for new ways to meet the user's demands and expectations. It is essential to bring information to various users has encouraged the creation of many advanced services linking new technology with services and its day to day transactions. In the current technical environment, library professional need to redefine their role. By using of new technologies in academic library, they can give best services to library users. An academic library has to play the role as a central gateway for library users to access, to search, transform and utilize information resources in a variety of printed and electronic formats through databases, networks, applications and systems.

As our educational system is getting more and more dynamic. Hence, the academic librarians have to change themselves and try to apply new technologies in their libraries. This paper is focused on the significance and various sources of modern technology in academic libraries, which will contribute tremendous changes in services and make it easy to conduct daily routine library work and also explains the need of new technologies in academic libraries and various new technologies in academic libraries.

INTRODUCTION

In this age of information and ICT, academic libraries are required to work individually or as a team to deliver service oriented and user applications, instructions, programs, projects and services. An academic library has to provide users with dynamic tools, facilities, resources and various services to support their learning activities which cover assignments, projects, presentations, research papers etc. An academic library shall provide best supporting and training facilities and instructors for designing, developing, integrating, and implementation of various teaching courses, programs workshops tec. In these services new technologies in academic library is very imperative for giving best services to library users.

Need of Academic Library Users in Technical Era

In last 25 years, libraries were reliant on their own resource to understand their user's information needs, but that time they have some limitations i.e. time, location, financial lacunae etc. Then came an era of computerization where libraries started working in collaborative manner being connected through networks or consortia to utilize the resources. However, with the introduction of technology, the scenario has totally changed as today they can provide information 24 x 7 and crossing all the geographical boundaries, this is possible because of the computers and accessing the networking and consortia in libraries. Today's users have specific information needs. Today's student's information requirements are becoming more and more personalized. Academic libraries are focusing on appropriate, timely and multilevel services for their academic users by using different service models such as WWW, File Transfer Protocol, Bulletin Board Services and email.

'In a quickly changing educational atmosphere, academic libraries need more time and staff resources to meet the needs of faculty and students. They are also looking for tools that shine a light on their energetic contributions toward the success of their academic institutions'[1]. (https://www.oclc.org/en/academic.html). The college or academic library is played significant role in this rapid altering computing period. Their role contains: classification and assortment of information, its institute of administration, storeroom recovery and distribution to correct clients at precise era at exact place at right value and in exactly arrangement.

Academic library:

'An academic library is a library that is involved to a higher education institution which assists two complementary purposes to support the school's course and to support the research of the university faculty and students'[2].(Curzon, Susan)

All college libraries have improved their facilities and information resources arrangements. Now days we are living in the era of computer and information technologies which is plays extremely fundamentals responsibility in library discipline i.e. for collection, storage, organization, processing and analysis of information.

New Technologies for Academic Libraries:

There are some new technologies for academic libraries which is very useful for quality education.

1. **Computerization. :**
   At the moment, everyone is going to use computers in ever-increasing information in ways never probable extremely soon little years before. The computer is a good number for helpful contemporary instrument, however developed.
2. **Digitization. :**
   Library digitization is the process of utilizing computers, database, multimedia equipment, networks, video equipment and web technologies to electronically collect, classify, copy, compress, scan, store, and transform, conventional library information resources.
3. **Library Automation. :**
   Library automation was the first step towards the procedure of new technology in academic libraries. It brings excessive revolution and save the time of users and academic staff for collecting information. Library automation mentions to use of computers, associated peripheral media such as software for automation, magnetic, tapes, disks, optical media etc.
4. **ICT Technology. :**
   It is typically called ICT which is frequently used as a comprehensive synonym for developing teaching-learning process. Other than, it is typically a further universal word that anxiety the role of united communications and the addition of telecommunications. It also consists of all technological earnings used to grip information and support, communication, together with computer and internet, communication middleware as well as important software.
5. **Internet and Wi-Fi Technology. :**
   The internet is a worldwide system of unified computer network. It uses for the standard internet protocol set to provide billions of users wide reaching. It is a network of system which consists of millions of confidential, community, educational, commerce, and administration networks of limited to worldwide range. Academic libraries are using the internet to sustain their essential purpose and services; achievement, movement, and classification and given that admission to the internet as a self-governing services.

   Wi-Fi Technology is the best way for academic library to attract new generation users at library. Users need not wait for the desktop computer engaged by other users. The Wi-Fi facility enables them to access the internet using their mobile devices. Wi-Fi technologies should give the college students, a friendly environment and motivate them to come to the library. This will be enable quick access of online materials and would connect them with the other libraries.
6. **Barcode Technologies. :**
   It can be clear as a self-restricted communication with information prearranged in a sequence of black blocks of unreliable breadths and colorless places between each two of them. The bars and places stand for a sequence of characters or numbers. These are legible only by a scanner which sends meaning to the computer that interpret such bars on 0's and 1's instead of characters in such as can be recognized by computer only. The barcode has a tag of book attainment of exacting library and classify the book with tag.

7. **Collection Development with E – Database. :**
   Academic libraries should develop both print and non print collection; it willhelp to students use at library. With the ever expanding technology informationis stored both print and digital formats. So, academic library should need a collection of audio and video materials and should have subscription to e-journals and e- books etc.
8. **Institutional Repositories. :**
   An Institutional Repositories is an online source for collecting, preserving and disseminating information in digital form which is the intellectual output of an institution, particularly academic and research institution. I R are accessible from remote places and can be downloaded by users desiring to have it, though there could be some regulations for using the institutional repositories.
9. **Social Networking. :**
   Social networking services are an online service that focuses on building and reflecting of social networks and social relations among the people. Various social networking sites like face book, MySpace, What's app, Blogs, etc. can be used for information dissemination in academic library.
10. **Library 2.0.:**
    The term Library 2.0, first coined by Michal Casey in on his blog Library Crunch, refers to a number of social and technological changes that are having impact upon libraries, its staff and their customers, and how they could interact. It is a model for reorganized form of library services that replicates a transition within the library world in the way services are delivered to users. Library 2.0 is a concept that personified new age group of academic library services to meet the present day user's needs and expectations.[3] (https://en.wikipedia.org/wiki/Library 2.0).
11. **RFID Technology. :**
    Radio frequency identification is a term used for technologies exploiting radio waves for identifying individual items automatically. The most common way is storing a serial number identifying a product (Book/Documents) and related information on a microchip attached to an antenna. RFID is one of today's most thrilling and fastest growing technologies for increasing efficiencies, improving profitability and an important area of study in today's information environment. Due to hike in prices of books and documents, it becomes very essential to secure the library collection. RFID is the most effective way for protect the collection of library.
12. **Virtual Library. :**
    Virtual Library is the place from where access to universal knowledge on the desktop. It creates it's on outfits. The main goal is to provide virtual experience to the users due to the explosion of knowledge. Virtual library creates constant touch between the learning resources centre and the users and making the learning more interesting.

The 'give and take' system of the library must not be only to a library.21st century is century of knowledge, so informative library services has been very essential in this digital era.

Conclusion:

21st century is actually age of Information, knowledge and information Communication Technology. The role of academic library professionals has become more challenging in modern world. So, librarians keep update themselves about the new technologies and implement them effectively. Academic libraries are very important part of the academic institution. Use of technologies in the information science in term of designing and developing the information services and product that means library services has always good result. Hence, by using of new technologies in academic library, information needs of users can fulfill immediately by providing best library services to them.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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New Era of Web Security by Implementing of Penetration Testing

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ABSTRACT
Computer and network security are one in every of the foremost difficult topics within the data Technology analysis community. Web security could be vital subjects which will have an effect on a large vary of web users. People, who use web to sell, purchase and even to speak desires their communications to be safe and secure. This paper is discussing the various aspects of web and networking security and weakness. Main components of networking security techniques like the firewalls, passwords, encryption, authentication and integrity also are mentioned during this paper. This paper handles completely different net attacks and additionally offer some tricks employed by hackers to hack the net world equally it contains a shot has been created to investigate impact of DOS, SQL injection, Cross site scripting, Sniffing/ Request secret writing on net application in terms of outturn and latency etc. The anatomy of an internet applications attack and also the attack techniques also are lined in details. The protection of high-speed web because the growth of its use has stained the bounds of existing network security measures. Therefore, alternative security defense techniques associated with securing of high-speed web and laptop security within the world ar studied similarly like, DNS, One-Time word and defensive the network as a full. This paper is additionally surveyed the worm epidemics within the high-speed networks and their unexampled rates unfold.

KEYWORDS: *Network Security, Security Techniques, website protection, Penetration, website security investigation.*

1. INTRODUCTION
Penetration testing may be a accepted methodology for actively evaluating associate degreed assessing the safety of a network or associate degree in-formation system by simulating associate degree attack from an attacker's perspective. A penetration tester should essentially follow bound methodology therefore on with success establish the threats faced by associate degree organization's network or info assets from a hacker associate degreed scale back an organization's IT security prices by providing a stronger come on security investments. This paper provides an summary of methodology of penetration test-ing and also the tools used.

This approved arrange to appraise the safety of a network or associate degree infrastructure by safely making an attempt to use the vulnerabilities helps find the loop holes within the network. These loopholes might enable associate degree offender to intrude and exploit the vulnerabilities.

Penetration tests will have serious consequences for the net-work on that they're run. If it's being badly conducted it will cause congestion and systems blinking. Within the worst case situation, it may end up within the precisely the issue it's supposed to stop. This is often the compromise of the systems by unauthorized intruders. it's thus very important to possess consent from the management of a company before conducting a penetration check on its systems or network. [4]

1.1 Necessity of Network Penetration check
1. The IT infrastructure is changing into a lot of advanced and wider. the interior networks are given access over the net to the legitimate users beside the user credentials and also the privilege

level, after all placed outside the firewall. This will increase the surface of attack. Such infrastructure has to be assessed often for security threats.
2. Identification of what form of resources area unit exposed to the outer world, determinant the safety risk involved in it, detective work the attainable sorts of attacks and preventing those attacks.

1.2 advantages of Penetration Testing

1. Proactive identification of the criticality of the vulnerabilities and false positives given by the auto-mated scanners. This helps in prioritizing the remedy action, whether or not the vulnerability is to be patched straightaway or not supported the criticality.
2. Penetration testing helps compliant the audit regulatory standards like PCI DSS, HIPAA and GLBA. This avoids the massive fines for non-compliance.
3. A security breach might value heavily to associate degree organization. There could also be a network period resulting in an important business loss. Penetration testing helps in avoiding these monetary falls by distinguishing and ad-dressing the risks. [4]

Depending on the requirements, there are a unit 2 sorts of penetration testing.

1. External Penetration check – This check shows what a hacker will see into the network and exploits the vulnerabilities seen over the net. Here the threat is from associate degree external network from web. This check is performed over the net, bypassing the firewall.
2. Internal Penetration check – This check shows risks from at intervals the network. for instance, what threat an interior discontented worker will cause to the network. This check is performed by connecting to the interior local area network.

Depending on the data, there are a unit 3 sorts of penetration testing, Black box, White box and grey box. [6]

1. Recorder – This check is administrated with zero data concerning the network. The tester is needed to accumulate data victimization penetration testing tools or social engineering techniques. The in public offered info over web could also be employed by the penetration tester.
2. White Box – This check is termed complete know-ledge testing. Testers area unit given full info concerning the target network

   The information will be the host science addresses, Domains in hand by the company, Applications and their versions, Network diagrams, security defences like IPS or IDS within the network.
3. Grey Box – The tester simulates an enclosed employee. The tester is given AN account on the internal network and commonplace access to the network. This check assesses internal threats from workers at intervals the corporate.

2. STEPS IN PENETRATION TESTING METHODOLOGY

2.1 Preparation for a Network Penetration check

To carry out a thorough penetration testing and create it a hit, there ought to be a correct goal outlined for a penetration tester. A gathering between the penetration checker and also the organization which needs a penetration test should be command. The meeting ought to clearly outline the scope and also the goal of the check. The network Diagram should be provided to the Pen tester* just in case of a white box penetration testing to spot all the crucial devices that need penetration testing to be done, this is often not needed just in case of a recording machine check.

Another vital agenda of the meeting ought to be the time window and also the period of the check. The organization should clearly outline the time window which can be its non-business hours. This is often to make sure that the Pen tester isn't interrupted and conjointly the business of the organization is unaffected. Thanks to the weird traffic usage by the pen check might cause network congestion or might bring down the network by blinking the systems. for example, a Denial –Of- Service check meted out on a web payment entry might cause the disruption within the network and inflicting inconvenience to the purchasers thereby acquisition loss to the organization.

Pen checker ought to ensure that any data or knowledge obtained throughout the test ought to be either destroyed or unbroken confidential. this is often a awfully vital precaution to be taken. The organization will sue the pen testers otherwise.

2.2 The vital Steps followed in a thorough Penetration Testing

2.2.1 Intelligence or operation

This is a awfully vital step a Pen tester should follow. When the pre coming up with and also the goal definition, the pen tester should gather the maximum amount data as potential regarding the target net-work. vital to notice, this is often the case once it's a recording machine testing and once the organization has not provided any data to the tester.

A Pen tester should gather data from AN attacker's perspective. Something that's helpful to attackers is critical to be collected:

- Network Diagrams
- IP Addresses
- Domain names
- Device kind
- Applications and their versions.
- Security defenses like IDS, IPS.

To gather this data we glance into:

A. Google & Social or skilled networking web-sites
B. Monster.com
C. science Registries
D. DNS Registrars
E. The Company's web site.

2.2.1.1 Google & Social or skilled Networking Websites:

Search with the keyword beside the corporate name. The relevant data from the search results will be selected. For example, search with the keyword „AS A firewall" with the corporate name „Demo Bank". A LinkedIn profile of a worker performing at Demo Bank will be obtained because the search results. By this we will get to understand that Demo bank's network contains of AS a Firewall. Resumes of the employees provide out heap of knowledge.

2.2.1.2 Monster.com:

Lot of knowledge will be obtained from the task Sites. Search with the corporate name and also the list of search results seem, which provides data relating to the network de-vices or the applications victimization that the company's network infrastructure is made.

2.2.1.3 Science Registries:

When the science Addresses aren't provided by the organization, the Pen tester has got to resolve the block of science addresses be-longing to the organization. Science Address registries facilitate America to find them.

- ARIN – yankee register for net Numbers. US Region.
- RIPE - Réseaux science Européens. Could be a cooperative fo-rum receptive all parties curious about wide space science networks in Europe.
- APNIC – Asia Pacific Network data Centre. Asia Pacific region.

For instance, to seek out the block of science addresses happiness to Google. Enter the key word Google in http://whois.arin.net/ui. [1][5]

2.2.1.4 DNS Registrars:

Use the Whois.net or the other who is databases to seek out all the sub domains. lookup is another windows tool to seek out the science addresses related to the given name, to seek out the name server and for zone transfers. AN example is as shown within the screenshot below.

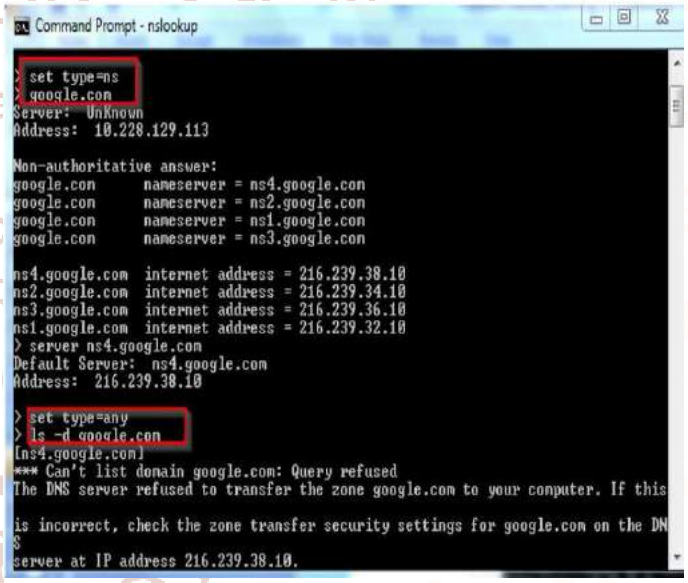

Figure 1: NS Lookup

Techniques	Open Source Search	Name, admin, IP addresses, name servers	DNS Zone Transfer
Tools	Google Search Engine	Who is ARIN APNIC	Nslookup ls Dig deeper Sam spade

3. CONCLUSIONS

A network will ne'er be utterly secure. A Pen tester ought to have the data of however a hacker can work to penetrate the network by finding new loop holes and vulnerabilities. There square measure zero-day attacks that return up daily. The network ought to be totally patched with the newest OS and therefore the patches for the software package put in. Penetration take a look at ought to be frequently performed. each quarterly could be a recommended period of your time for a perfect pen take a look at. [3]

Amidst varied constraints like lack of your time and improper definition of scope of the project, penetration take a look ater has got to perform the test to the most effective of the potency by creating use of the tools well. it's higher to own tiny automation scripts for time intense tasks.

4. FUTURE SCOPE

Hackers square measure finding a lot of and other ways everyday to penetrate through the network. There square measure Zero-day attacks which require heap of your time and new tools to be discovered to safe guard the network. There's a demand to develop new penetration testing tools, than looking forward to the present previous ones. New methodologies and processes square measure to be discovered and enforced to create the penetration testing a lot of complete.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
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Importance of Banks in Cashless Transactions under Digitalization System

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ABSTRACT
Banking sector plays an important role in economic development of India, huge changes in digitalization system and new techniques in technology have changed the entire banking system. Basically Indians are slow in nature to adjust the modern techniques from the traditional methods. Union government of India forced Indian citizens to switch to the cashless transaction by taking bold decisions of demonetization. After note ban decision people of the nation depressed the system of note ban, but due to the digitalization system faster changes has taken place in the distribution and circulation of rupees notes. Effect of digitalization, net banking, mobile banking, debit card, credit card, e-services, and e-payments number of changes has been taken in banks. Sweden is the first nation to adopt cashless transaction in the world. 10-15% of Indian population and up to 40% of Brezile and Chaina's population has adopted cashless transaction. But recently in India more than 30% of Indian citizens are using cashless transaction. A common man can transact his banking business by using electronic apps easily. Even in rural area's banks are also started to adopted digital system to provide faster service to their customer. By using digitalization services profits can be easily access through good services. There are number of problems may disturbed after by using the system but these can be manageable if we aware about the threats of technology. Today's cashless transaction shows the remarkable changes have been took place in the mind of costumers. In present scenario, Indian economic sector have been identified faster progress in the world even in suffering serious diseases like black money, terrorism, illegal propriety etc, and also hope that these can be manageable by the legal cell the country.

A. Introduction

Modern banking system plays an important role in boosting the Indian Economy in the world. After the demonetization there is real struggle against Black Money, Corruption, Crimes and terrerisium. In such a situation, Indian Banks are playing a role model in the field of digitalization to adopt cashless transaction to all types of customers and facing the problems of security and cyber crimes. Banks are started to provide services and products through electronic devices with the help of Internet. The role of RBI is amazing to make plans and policies in the right time to help all banks to collect banned currency notes and issue new Notes. It is time to give grate credit to all Banks' employees and Management, those who are dedicated their time and energy at the time of demonetization decision by the government. Today cashless transaction shows the remarkable changes have been taken place in the minds of customers. Recently new apps like BHIM, PhonePe, Google Pay etc, are providing best service to customers.

B. Review Of Literature

1. Manpreet Kaur (2017) Explained in his paper the effect of demonetization on Indian Economy and how to people should adjust the cashless payment system. He said the cashless system has provides fringe benefits our society like time management. Low cost of transaction and paper less business.
2. Lokesh (2017) He explained in his paper about demonetization and cashless transaction will short

term negative effect on economy but long term benefits to all in the future. Banks are busy to proved quicker service to the society.

3. Nitin and Sharmila (2016) explained the system of cashless business after the demonetization and started to circulate the cash systematically. They desired that all short term problems can be solved by using digitalization system in the banks.
4. Vijay and Shiva (2016) It is the real test of all banks to adjust the system of demonetization and provide quick service to the society by facing operational and security problems.

C. Objective Of The Study

1. To know the services available in the banks relating to cashless transactions.
2. To analyses the favorable and unfavorable outcomes of cashless transactions.

D. Methodology Of The Study

The present paper is prepared by using secondary data available in the news papers, Magazines, Journals, Books and government web site. The study tries to bring out the importance banks in cashless transaction under digitalization system.

E. Importance Of Banks In Cashless Transaction Under Digitalization System

Sweedon is the first nation to adopt cashless transaction in the world. In India 10-15% of population and up to 40% of Brezile and Chaina's population has adopted cashless transaction, and recently in India, more than 30% of the population using cashless transaction. There was revolution in paper transaction converted in to digital transaction by using credit card, debit cards, EFT or online business to maintain purity in the financial matter. All kinds of business like buying and selling of things, Vegetables, Business centre, taxi centre, Petroleum centre and reduce the huge cost on printing notes. As per the information available in the Feb 2017 Yojana Magazine relating to RBI information the following table shows the cash transaction existed during the year 2015-16 in the world.

Chart of cash circulation (% in GDP)

Nation	2011	2012	2013	2014	2015
India	12.1	11.9	11.5	11.6	12.3
Brazil	3.8	4.00	3.9	4.00	3.8
South Korea	3.8	4.00	4.2	5.00	5.8
Sweden	2.8	2.5	1.7	2.00	1.7
U.K	3.8	3.5	3.5	3.8	3.6
America	6.2	6.9	6.9	6.6	7.4

The above table shows that India has same percentage of use of currency note since form 2011 to 2015, but Sweden has lowest currency notes always since from 2011-2015. Compare with all contrary in the above table India has highest currency notes using country.

As per the statistic reports relating to use of cards holders for each person during the year 2015-16 shows the below:

India - 50% of total population
Sweedan - 2.5 each person
South korea - 5.5 each person
Brazil - 4.1 each person
cheena -4.00 each person

From the above information it is clearly show that all four countries except India is using minimum electronic cards.

Objectives of cashless transaction:

1. To avoid use of papers notes maximum to reduce the cost of printing of notes.
2. (20 To reduce the laborious work to pay and collect the money in the banks.
3. To create faith on money transaction by using electronic devices.
4. To provide best service to all kind of customer without disturbing their will power.
5. To strengthen our economy by making huge business through digitalization media and boost the GDP.
6. To maintain solvency position not only in national level but also international level.
7. To provide proper knowledge to common man of the nation to addict the new system to make more business.
8. To remove the black money in the gross level.
9. To know all feature of banks all business by using digital device in any place, at any time.

In the present scenario all categories of Banks are adopted digitalization technology by reducing laborious and cost of paper to print the Notes and use through paper work. The following are the facilities available in all banks to provide cashless transaction to the society .Money can transfer and deposited one account to another account easily.

a. Internet Banking
b. On Line Banking
c. Automatic Teller Machine
d. Telephone Banking

e. Banking Automated Clearing System
f. Clearing House Automated Clearing System
g. Electronic Data Interchange
h. Electronic Clearing Service
i. Smart Cards
j. Debit And Credit Cards
k. New Apps Like Bhim, Phonepe, Google Pay Etc.

Advantages of Cashless Transactions

Rapid changes in digital area number of advantages are available to all the people are as under:

1. Easy to payment: it creates awareness among the people to pay any king of bill through electronic devices by using their secret code to pay easily their bill leads to reduce the labor and cost.
2. Riskless business and no tension: by using proper code and password in right direction to fill all the information neatly. No doubt no risk to anybody and same time avoids the security problems easily.
3. Reduce the cost of printing the notes: the problem of security and cost can be reducing by using cashless transaction. The cost of printing notes RS 2700 Cores in the year 2015 it is shows that printing cost is very high.
4. Reduce the crimes: the time has to be come at the door level to reduce the crime rates by using digital system in cashless business can reduce the misappropriation of using or managing the financial transaction.
5. Reduce the Demand and collection: cashless transaction reduce the demand of notes and keeping huge amount in the bank. The circulation of the money can be done only through cashless business transferring funds from one account to another account with lesser cost

Disadvantages

1. Difficult to adopt: The digitalization has needed knowledge of use of new banking facilities and there is the problem of literate the people.
2. Security Problems: Cashless transactions are facing security problems due to the virus problems.
3. More work and stress: Due to the shortage of employees, employees are put under heavy work to manage the customers and transactions.

F. Conclusion

It is time to show the caliber of digitalization system to boost the economy of the nation in the international level. Effect of demonetization disturbs the mind of the people in shorter period but it provides positive energy to the society to adjust the new system banking transactions. Governments are trying to provide necessary plans and police time to time than it is possible to build strong economy for smooth running the banking activities.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

The Impact of Whatsapp Messenger usage on Students Performance

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ABSTRACT

This study seeks to empirically identify the impact of social network (what Sapp messenger) on the performance of students in Ideal Institute of Management and Architecture, Kondigre from the perspective of the students. To achieve this, data was collected with help of structured questionnaire from 60 students of MBA and B. Architecture from same institute. The study revealed that, what Sapp instead of making communication easier and faster thereby enhancing effective flow of information and idea sharing among students, rather has impacted negatively on the performance of students. The study among students unveiled that what Sapp takes much of students study time, results in procrastination related problems, destroys students' spellings and grammatical construction of sentences, leads to lack of concentration during lectures, results in difficulty in balancing online activities (what Sapp) and academic preparation and distracts students from completing their assignments and adhering to their private studies time table.

KEYWORD: *What Sapp Messenger, Usage, Impact, Students Performance.*

INTRODUCTION

These days it seems hard to escape the presence of technology. Most people will praise the many technological gadgets that they use in their everyday lives. Many of us depend on it to get us through the day, to do our job, to get around, and to find certain things. Technology is evolving at a very fast rate, and what most people did not even think could be real a few years ago, is now becoming a reality. What Sapp is one of the changes in technology that is commonly used on specific mobile phones and computers? Since the Smart phones became popular, many messaging services were launched but What Sapp has become very popular among them. This Application is highly addictive and can create a great impact on regular users, and apart from that it can leave a trace that becomes difficult to control and cure. Some of the most prominent technological innovations are smart phones, laptops and using the internet. They have greatly affected many aspects of our lives. Today the Internet continues to grow day by day at an incredible speed. The research examines the effect of the What Sapp messenger and the invading technology represented in the use of personal computers and Smartphone on the behavior of students and their academic performance in Ideal Institute of Management and Architecture, Kondigre. The subjects of interest about the students are their friendships and social lives, family relations, general health and personal achievements on campus. What Sapp Messenger has been around for a while but recent updates have improved the functionality of the application since its release date. The main purpose behind this application is to replace SMS with a cross platform mobile messenger that works on an internet data plan. If you have unlimited text, it is still beneficial as it is a convenient way to skip international fees that carriers may charge. It is currently available for I Phone, Android, Windows Phone, Nokia, Samsung, Blackberry etc. It is popular because there is no cost to message friends and family other than the internet data plan that user already have on their phones. It is easy to get started. Simply enter the telephone number of the device into the app. It then sorts through the contacts (with your permission) on the phone to figure out who else also has the app already installed. Users can then invite more contacts

or go ahead and start sending messages to the ones that the app discovered. The What Sapp messenger was purposely created by Brian Acton and Jan Koum (2009) to make communication and the distribution of multimedia messaging more easily and faster. In as much as the application brings us so many benefits, it has also got it flaws that are currently causing more harm than good among the students today. In cognizance of the rate at which our youth are hooking up to social media, there is the need to educate them on its advantages and dis advantages in their academic performance accordingly.

Objectives:

The preliminary study examines the use of What Sapp Messenger amongst students at Ideal Institute of Management and Architecture, Kondigre. The researcher attempted to understand the perceived high-level of usage of social What Sapp Messenger amongst the students by looking at the intensity of it usage and how it affects their academic performance.

- The main objective of this paper is to evaluate the degree of the negative impact of the use of What Sapp Messenger on students' performance in Ideal Institute of Management and Architecture, Kondigre.
- Also to determine the relationship between the use of the application and academic performance.
- And finally, some recommendations for overcoming these problems will be discussed.

Literature Review:

Literature review for this paper was covered on Social Media and students performance. Social media has become a growing phenomenon with many and varied definitions in public and academic use. Any activities where humans share stories and influence others can be considered social networking Nicholson,(2011). Social networking or media is a great forum for discussing mutual topics of interest, and perhaps even meeting or renewing acquaintances with other humans virtually. According to Greenwald (2009) and Deloitte (2009), 55% of employees visit a social media site at least once a week.

Definition of Social Media

Social media can be defined as forms of electronic communication through which users interact among people in which they create, freely share, exchange and discuss information, ideas, personal messages, and other content about each other and their lives using a multimedia mix of personal words, pictures, videos and audio, utilizing online platforms while they are connected to the Internet Cox & Rethman, (2011).Since their appearance, social media have changed different aspects of people's lives. Social media that were emerged by the rise of Web 2.0 technologies are characterized by several significant features such as user generated content, online identity creation and relational networking Margo, (2012). According to Smith (2010),"Social media sites are virtual platforms for interactivity and information exchange ... where issues are debated and defined ... Social media users collaborate in content creation ..., are proactive in searching information ...,and value control in social media participation (p. 330)".Social media are also defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user generated content" Kaplan & Heanlein, (2010, p.61).To consider some context of the ubiquitous nature of social media, Nielsen (2010) argues that social media accounts for nearly one-quarter of all internet activity, and LinkedIn has over 80 million professionals in over200 countries. Other platforms such as Face book, Twitter, MySpace and YouTube are available for everyone; it was traditionally created to connect with individuals from all over the world to include employees, friends and families. However, as the number of users increase to millions, organizations are also trying to connect with employees more so than ever. Social Media has changed the way people around the globe communicate with one another. However social networking has existed right from the onset of humanity. The concept of social networking has evolved, much like other innovations, and is becoming increasingly sophisticated with advancements in technology Edosomwan, Prakasan, Kouame, Watson, & Seymour, (2011).Currently, there are hundreds of SNSs that can draw millions of people, with diverse technological affordances. Social network sites are web based services that enable individuals to construct a semi-profile within a bounded system, articulate a list of other users with whom they share connection with, views and go through their list of connections and those made by others within the system, although the nature and nomenclature of these connections has variation Boyd and Ellison, (2007). The ability of making it possible to meet new friends is not the major characteristics of social networking sites, but solely because the social network can be made evident due to the possibility it

had been made eloquent. The outcome of these relationships of individuals that would ideally not have met each other is made possible. Although it's not the real aim, and most times new connections are usually between ―latent ties Hay, (2006), they already knew each other physically. On larger perspectives, on social network sites, members are not online with the intention of discovering new acquaintances but to interact with old friends which already exist on their list. To put in more words, the social networking as an important coordinating property of these sites is titled―Social Network Sites William et al, (2009).

Students and use of Social Networking Sites

Social Networking Site is a communication tool for members. This kind of platform was designed as a way for friends, family, or strangers to have discussions and interaction or be in contact with each other. It allows members to explore new opportunities and experiences. Social Networking Sites allow students to express themselves, communicate, and collect profiles that highlight their talents and experience. Students are increasingly utilizing these social networks for friends' news feeds, personal updates, events and activities, notes, and messages. According to an extensive study by the Office of Communications (Of com) of the United Kingdom, almost half (49%) of children aged 8-17 who used the Internet had set up their own profiles on a social networking site Of com, (2008a); Dowd all, (2009).Positive perceptions obtained from users of social networking sites i.e. effective learning which has resulted in an easy learning climate among students Mazer, et al., (2010). In another study conducted by Keenan and Shirii, (2009) they explored how social networking sites encourage friendliness through the use of Face book, Twitter and LinkedIn.

Academic Performance

Tuck man (1975) defined performance as the apparent demonstration of understanding, concepts, skills, ideas and knowledge of a person and proposed that grades clearly depict the performance of a student. Hence, their academic performance must be managed efficiently keeping in view all the factors that can positively or negatively affect their educational performance. He proposed that internet is advantageous to both students and teachers if used as a tool of knowledge creation and dissemination. In addition, academic performance defined by Kobal and Musek, (2001) refers to the numerical scores of a student's knowledge, representing the degree of a student's adaptation to school work and the educational system. Social media, Internet-based tools that promote collaboration and information sharing Junco, Helbergert, &Loken, (2011), can be used in academic settings to promote student engagement and facilitate better student learning Kabilan, Ahmad, &Abidin, (2010). Because student engagement represents the time and effort that students invest in collaborative and educational activities Kuh, (2001), it is often linked with the achievement of positive student learning outcomes, such as critical thinking and individual student development Carini, Kuh, &Klein, (2006); Kuh, (1993).

In the study conducted by Englander et al., (2010), he observed that students spend more time using SNSs for other purposes apart from educational use, thus affecting their academic performance. In another study Nalwa and Anand, (2003), shows that students like to use internet for their own responsibilities and this affects their academic performance. This study is further elaborated by Karpinski, (2009) where they stated that SNSs users had lower grade rankings than students who never engage in social interactions. However there are general benefits associated with users of SNSs. Roblyer et al., (2010) explained that SNSs are sources of communication among students and lecturers in their respective faculties. Furthermore, Kolek and Saunders, (2008) resolved that users of SNSs who are students have no effect whatsoever with their academic performance.

After a critical review of various literatures on social media, the researchers could identify that there are gaps in knowledge as far as the negative effect of the use of "What Sapp" and students' performance. This research also demonstrates the improvement in this area in some way, filling in gaps and adding to knowledge in and understanding of this particular field.

Methodology

Introduction

The idea behind this particular section is to reveal the rationale for the research methodology, the method and Strategy adopted in collecting data for the research. This part also seeks to reveal how the researchers conducted the research to be able to investigate the impact of social networks on the performance of students in Ideal Institute of

Management and Architecture, Kondigre with particular emphasis on What Sapp usage.

Research Methods

The researcher made use of both primary and secondary data, which were gathered from diverse sources, including, text books, journals/articles, and internet sites.

The primary research is tailored to suit the needs of the research. This research involves the collection of raw data, which forms the main basis for achieving the research objectives. An attempt was made at collecting and analyzing primary data which has gone a long way to validate the findings and conclusions drawn from the research. The qualitative research approach was deemed to be appropriate by the researchers hence its adoption. It has been observed that the use of multiple data collection methods, such as observation, interviews, document analysis and questionnaires are very important. With the importance of multiple sources of data very vital to the reliability of this research Stake, two primary sources of evidence were used: questionnaires, and interviews. The self-administered questionnaire method was employed because of its cost effective nature relative to interviews. Large number of participants can be involved and a lot of data collected in a relatively shorter time and at less cost. Although participants in this method are more likely to abandon the research in the course of responding, its privacy and anonymity promotes genuine answers. The less pressure on participants was also considered as a better way of convincing respondents to participate fully. With this method, interviewer biases are non-existent Gratton & Jones, (2004). However, problems can arise if questions are unclear, as the respondent cannot check what the researcher intended. A well-designed questionnaire was therefore important, especially ensuring that it was worded in simple English and an unambiguous manner to avoid this problem.

Sample Size

The population under-study consists of total 60 MBA & B.Arch. students in Ideal Institute of Management and Architecture, Kondigre. The data was analyzed through the use of frequency tables.

Results and Discussion

This part analyses the responses given by respondents through the administration of structured questionnaire and interview conducted. In order to make interpretation and analysis easier, tables are presented first, followed by its interpretation and analysis.

Table: Gender Distribution

Gender	Number of Respondents	Percentage
Male	40	66 %
Female	20	44 %
Total	60	100 %

Source: Survey data

The table above represents the number of students interviewed. Sixty students were interviewed from institution under study. Out of these, 66% represent male students while 44% were female. Out of the total number of students interviewed, 72 % of the interviewees said they use the what Sapp messenger on their phones for chatting with their friends on different issues instead of academic purposes on campus. They also mentioned that they use the application to send funny images to their colleagues. According to them the use of the application has negative impact on their studies.

Table: Reasons for Using What Sapp:

Reasons	Frequency	Percentage
Academic Work	12	20 %
General Information	06	10 %
Chatting	30	50 %
Family	12	20 %
Total	60	100 %

Source: Survey data

Students were asked the reasons why they most often use what Sapp on their mobile phones. The results in the table above shows that majority of the students use the application for chatting with friends on different issues rather than academic work on campus, and this is represented by 50% of the total number of respondents. This also indicates the link between usage of the application and poor academic performance among the majority of the students. The more friends a student has on what Sapp, the more time he/she spends on the application" according to most students interviewed. A student who has a lot of friends on what Sapp is most likely going to be responding to more people and thus spending more time chatting. The study looked at students engaged in the use of the application for other purposes including academic work, general information, and family. The above table indicates that only 20% of the respondents use the application for academic work, 10% mainly

for general information while 20% use it for family issues.

Table: Time Spent On What Sapp:

Time	Frequency	Percentage
1-2	12	20 %
3-5	36	60 %
6-7	06	10 %
Over 8 hours	06	10 %
Total	60	100 %

Source: Survey data

The respondents reported the number of hours they spent using What Sapp per day.20 % spent 1-2 hours, 60%spent 3-5 hours per day, 10% spent 6-7 hours and 06% spent more than 8 hours per day. The study shows an average student spends over 5-8 hours every day engaged in using what Sapp on their mobile phone. We were able to discover that there is an inverse relationship between two factors which is, the more time a student spends using what Sapp, the less time he or she has to attend to academic matters such as class work, assignments, preparation for class test, mid-semester exams and end of the semester's examination which account for the student's lower or poor grade Points. The more time a student spends on what Sapp, the "less likely they are to participate in class, thus according to most of the students we interviewed. If students bring their mobile phones to class, they get bored of the lesson and find their way onto what Sapp. These detracts their attention from the main lesson, and are not able to fully understand what is going on, hindering participation and drawing them even further into what Sapp making it more difficult for them at the end of the day.

Table: Students were asked whether What Sapp affect them positively or negatively in their studies

Effect	Frequency	Percentage
Positive	18	30 %
Negative	42	70 %
Total	60	100 %

Source: Survey data

As indicated in the table above, 70% percent of the respondents said the use of what Sapp has more negative effect on their studies and only 30% percent said it has positive impact on their studies. Most of them explained why they said it affects them negatively. A student can be stacked on his/her phone for hours chatting with friends through what Sapp without noticing the number of hours spent behind the phone not for any relevant reason. Little time is left for academic purposes since much of their precious time is wasted on what Sapp chatting with friends. They later become less equipped and inadequately prepared for quizzes conducted and major end of semester examination which makes them less productive and effective. Procrastination-related problems are another negative effect on students' performance. One of the main questions that need to be asked is academic procrastination that might evolve as a possible outcome of What Sapp usage. Ellis and Knaus define this term as ''a failure to initiate or complete a task or activity by predetermined time'' (1977 cited in Sharma, 1997, pp. 17-18). In other words, it can be described as a specific behavioral pattern that is dedicated for doing any non-academic activities resulting in postponing completion of academic tasks (Sharma, 1997, p. 18). Most students also feel lazy typing most sentences and words and retire to the short hand form of typing. This style of writing destroys the students' spellings and grammatical construction of sentences. For example, word slike 'forward, come, tomorrow, goodnight' and others are being written as '4wrd, kam, 2mrw, and gud9t etc,' also phrases like 'happy birthday' is being written as 'H.BDAY' Thank you is written as 'TY', WETHANK GOD is also written as 'WTG'. This has affected the way students write in English classes and in their examinations resulting in destruction of their grammar and the way they spell English words.

Conclusion and Recommendations

From the preceding discussions, it is evidently clear that; what Sapp has been a necessary evil for students in Ideal Institute of Management and Architecture, Kondigre. This stems from the fact that, it can enhance the performance of students if used positively. In that, it makes communication easier and faster thereby enhancing effective flow of information and idea sharing among students. However, if used negatively it has adverse impacts on the performance of students. Among the negative impacts we identified include the following: it takes much of the students studies time, results in procrastination related problems, destroys students grammar and spellings, leads to lack of concentration during lectures and difficulty in balancing online activities and academic preparation. Similar to most research, this paper has limitations that point to further opportunities. Although, framed within an academic context, the research can be utilized to investigate the use of What Sapp not only at colleges, but also at home,

workplace, and various other settings, and for a variety of different audiences such as teenagers, young adults, the elderly, or families. For future research, it may be more helpful to examine how a student's psychological state influences motivations for the use of What Sapp. In summary, the purpose of this paper was to identify the impact of what Sapp on the performance of students in Ideal Institute of Management and Architecture, Kondigre. The study found that, instead of making communication easier and faster thereby enhancing effective flow of messages and idea sharing among students, What Sapp has rather impacted negatively on the performance of students.

Recommendations:

The Researcher therefore, recommends the following:

- Management should intensify guidance and counselling sessions in their respective institutions.
- Time management should be incorporated into the curriculum.
- Unannounced quizzes should be conducted frequently by lecturers to compel students to sit-up.
- Cell phones should either be forbidden in lecture halls or switched off if allowed in, instead of the prevailing practice of allowing them in but must be put on mute.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Digitisation in Banking

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ABSTRACT
A digital shift is taking place globally over wide range of sectors to stay ahead in the competition in their respective fields to which banking industry is no exception. Digitalization is inevitable for banking industry and hence "Hop on the digitalisation express" should be the goal of every bank in the world. The financial landscape is on the verge of change and has essentially revolutionised the business model of banking industry. In the new digital era, increasing expectations of the customers across all delivery channels, be it ATM, Internet banking or mobile banking is a standard requirement. Customer centric digitalised operations will increase the efficiency and effectiveness in banking services in the challenging, dynamic environment. Millenials are more eager to do their banking transactions and financial planning via e-banking and hence a key to success of banks is offering everything on electronic media. Projecting the banks offerings on third-party sites and providing value added services on mobile application using the open API economy will be crucial too. Not only are the Customers, the key players of digitalisation as the banks are constantly striving hard to remain one step ahead of customers but also the competitors and the regulatory agencies are acting as drivers to digitalisation. Customers expect a seamless multichannel experience and a consistent, global service from banking sector.

KEYWORDS: *e banking, internet banking, mobile banking*

INTRODUCTION

Digitalisation has transformed manual processes and transactions into digital services. Across all verticals, consumer needs have been met in entirely innovative ways. The government's drive towards making India a cash light digital economy and increasing revenues by empowering the citizens are in synergy. The wide scope of digital banking spans from, dealings from the front desk which customers experience and helps in building customer relationship, to the back end that bankers operate through their internal infrastructure and the bridge that connects the two ends .A digital bank facilitates at all functional levels of banking through all service delivery channels. Customer (CRM) is an integral part of a digital banking system, since it helps banks to directly communicate with their customers.

In today's world Digital is a buzzword and Banks have to stay in race to meet the ever increasing demands of new tech savy generation. Digital Banking is not only used for front desk operations like Internet Banking, Mobile Banking, Direct Banking, use of Social Media in Banking, Artificial Intelligence, Robotics, Chat-bots, Cognitive computing, Block-chain, Big Data, voice biometrics etc but also includes various back-end modernization programs integrated with front end users to achieve overall goals of digital Banking which includes legacy modernization, Integration, CRM, Document Imaging etc.

Due to accelerated technological improvements and fierce competition, banking sector is working under constant pressure.

History-

In 1988, Reserve Bank of India set up a Committee on computerization in banks headed by Dr. C. Rangarajan. In late 1980, banks were urged to digitalise their operations, in order to improve the customer service and MIS reporting and hence started using Information Technology initially with the introduction of standalone PCs and migrated to Local Area Network (LAN) connectivity within the bank branch setup. With further advancement, banks adopted the Core Banking solution. Thus branch banking changed to bank banking. Core Banking Solution (CBS) enabled banks to enhance the customer servicing through anywhere and anytime banking. Different Core banking platforms such as Finacle designed by Infosys, BaNCS by TCS, FLEXCUBE by i-flex etc gained popularity during this time.

The process of Computerization gained pace with deregulation and liberalisation in 1991-92 which led to rising competition from private and foreign banks. Several commercial banks started moving towards digitalised customer services by adopting banking solutions by joint venturing with information technology firms.

RBI has been a driving force for Bank Mechanization and Automation with the introduction to MICR based cheque processing, Electronic Funds transfer, Inter-connectivity among bank Branches and implementation of ATM (Automated Teller Machine) Channel . Strong guidelines from Reserve Bank of India have strengthened the Payment and Settlement systems in banks.

Goals of digitalised banking –

1. The goal of integrating banking services and technology is convenience, flexibility, simplicity and security of operations for customers and to meet the industry's rapidly rising customer expectations.
2. Targeting the new customers by way of innovative digitalized products
3. Moving from lifecycle banking to lifestyle banking where bank will remain a constant part of daily life of its customers providing ultimate personal and near real time solutions.

Advantages of digitalisation –

1. Huge saving in cost and time of banking - Automated banking software solutions work in place of cumbersome, redundant manual labour. Traditional bank business processes are time consuming and costly and prone to human error. Hence banks need to implement BPR (business process reengineering) Paperless working will definitely reduce storage space cost as well as increase human efficiency due to qualitative digital data and faster sensitivity to changing market trends in the hyper dynamic macro environment.

   e.g. E-banking has resulted in reducing costs to the extent that the cost of a bank transaction on Branch Banking is estimated to be in a range of Rs.70 to Rs.75 while it is around Rs.15 to Rs.16 on ATM, Rs.2 or less on Online Banking and Rs.1 or less on Mobile Banking.

2. Accurate and reliable operational performance with no scope for human error – The prerequisite for banks aspiring to digitalise their operations is financial accuracy. Traditional banking had40% error rate which needed recomputing and was worsened with lack of IT integration between branch , Head office and back office adding up to complexities in verification and authentication procedure.
3. Faster speed of delivery channels – customers are enjoying round the clock connection with banks and availability of services at the fastest speed.
4. Improved customer satisfaction and relationships due to 24/7 support availability, customer follow up process automation.
5. Acquisition and retaining of customers thereby achieving leadership in competitive environment. – The fierce competition ultimately aiming to increase customer strength results due to CRM solutions that assist the banks to maintain closer relationships with tech savvy consumers. Banks maintain pool of data containing customer history therby facilitating quick access to email and other forms of online communication. Banks can effectively utilise customer reward programmes for continued loyalty and satisfaction of customers.
6. Cost effective for banks as well as customers. ATMs help banks reduce overhead costs, especially if they are available at various strategic locations beyond branch offices. Banks can take data-driven dynamic decisions with the aid of digital analytics which lend helping hand to both customers and banks.

7. *Business efficiency* –Reduced cost and enhanced speed improve the efficiency of internal functions leading to increased human productivity.
8. Transparency is ensured due to which problems of fake currency or black money will dissolve.
9. Approaching fast on the new horizon of cash-light India or a cashless future which excludes Paper money.
10. Customer centricity – In the pre digital era banks used to focus on pushing and selling the existing available products to customers but with digitalisation at the core of everyday life , the ultimate goal of banks is to make customer happy. Digital infrastructure provides billions of customers with affordable broadband and low-cost devices. Banks should focus on innovating new products and services that are meeting the changing expectations of customers, maintain competitive edge and match with the latest technology trends
11. Physical cash handling has reduced – possibility of misplacement of cash or the potential for money to be stolen is reduced to a great extent, additionally, digital cash can be traced and accounted for more accurately in cases of disputes. As consumers can purchase with the help of apps, there is less need to carry physical cash in their purses and handling large amount of cash can be avoided.
12. In the absence of personal intervention , all customers are treated at par ,be it urban or rural .
13. Benefits to government : -
    A. Digital transactions can be easily monitored and any payment made by any customer to any merchant will be recorded in the system. Thus there will be no means for illegal transactions. By prohibiting cash-based transactions and using only digital payments, the government can efficiently expel the black economy.
    B. Increase in Revenues: I*n case of* digital economy, when the transactions are digitized, monitoring sales and taxes becomes easy. Since each transaction is recorded, the customers will get a bill for their purchase, and the merchants are bound to pay the sales tax to the government. This, in turn, increases the revenue of the government, thus resulting in growth of the overall financial health of the country.
    C. Empowerment to People: One of the greatest advantages of moving towards digitalisation is that it gives an empowerment to the citizens. When the payments move digital, each and every individual is bound to have a bank account, a mobile phone, etc. This way, the government can easily transfer the subsidies directly to Aadhaar-linked bank accounts of people. In short, people no longer have to wait to receive the incentives and subsidies that they are bound to receive from the government. This feature is already in place in most cities. One example of that would be the LPG subsidy that government gives to the common people. This subsidy payment is done via bank transfers these days.
14. Risk management software can detect and respond to market changes more quickly than expert risk managers.

Disadvantages of digitalisation -

1. Though digitalisation leads to unemployment in one area but new jobs are created in IT sector, cyber security, research Team etc.
2. Large sections of Indians are digitally illiterate so they are not comfortable in digital banking.
3. Banking environment is more prone to hacks and cyber attacks as financial data is more vulnerable.
4. Some concrete bank branches may cease to exist with the increasing use of online banking.

Requirements in digitalised banks –

A. A vibrant digital future will need a strong underlying technology with right omni channel development platform which will incorporate features like easy app management, inbuilt security and strong feasibility.
B. The required infrastructure should provide mass data storage, infinite computing power, and pervasive connectivity, advanced analytical tools enabling the customer to perform their operations on one simple finger touch.
C. An integrated IT infrastructure is utmost essential .High speed and transparent processing of transactions which results in wide spectrum of products and security offered to the consumers at fair prices resulting into high quality relationships with banks.
D. The software solution should be flexible adapting to constant customisation and avoiding rigidity.
E. A strong in house IT team is a must.

Challenges of digitalized banking-

Banks are facing competition from non-banking companies as well as smaller Fintech companies.

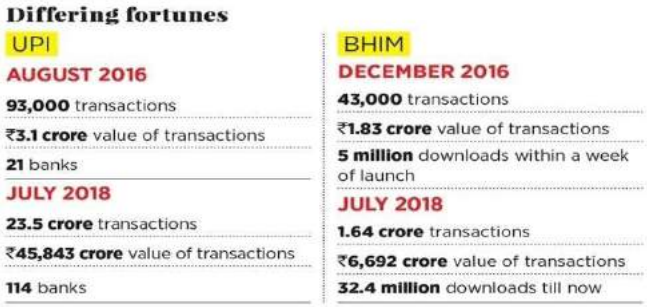
1. Cyber crime – Siphoning of funds on massive scale by cyber attackers is possible. Money and data security is at constant threat by hackers. All businesses big or small face growing cyber threats which damage image and reputations of the bank. The key challenge in the digital era is safeguarding the customers from cybercrimes with advanced cyber securities incorporated in the IT infrastructure of the bank.
2. Choice of technology-user's choice of device that will be used for smooth functioning is important .Office goers will prefer Laptops and desktops while those who travel for business prefer tablets and depend upon high quality cameras. Device compatibility with software plays crucial role. The customers are more enthusiastic to use full range of e-commerce financial services.
3. Achieving error free or flawless app-customers especially younger ones experience power while banking through smart phone applications. Keeping control over one's expenses and monitoring investments at any time and from any place in the world is the core benefit made available to customers by banking and financial applications .The organizations which fail to adopt this technological advancements to overcome the outdated approaches and inefficiently handled customer relationships will be out from competitive market and will not be able to retain the customers.
4. Targetting the new customers by way of innovative digitalized techniques can pose a problem to banking industry. Digital Banking Readiness Index (DiBrix) can be used in the process for evaluation.
5. Sustainability – Post successful innovation and implementation , the next challenge is sustaining as leader in the market
6. Quality and speed should go hand in hand- In the process of offering maximum financial products and services to widen customer base, it leads to compromises on quality of products. The challenges in fast paced and dynamic digital world are manifold.
7. The next phase of growth for cards is from the tap-and-pay feature, through NFC-enabled contactless technology where swiping or dipping a card is eliminated; instead payment can be made when it is brought close to either a PoS machine or card reader. These cards have become popular in Australia, UK and France especially for metro travel or toll-and-transit facilities
8. Good user experience on digital channels or user friendly nature is crucial to the overall customer experience and acceptance. And banks that neglect the digital channels are reducing their chances with their best customers. Poor digital experience could shift affluent customers towards other alternatives, whereas a website or mobile app that provides great user experience could enhance the bank's revenue from the tech-savvy customer.
9. Traditional banks are facing severe competition from FinTech companies, which are financial technology firms that facilitate banking and financial services.
10. Launching new innovative products which are sometimes difficult to automate
11. Mergers and acquisitions and new government rules and regulations are difficult to incorporate into existing IT solution and customization of the software to continuous changes becomes tedious due to rigid software.
12. Many banks do not have expert in house infrastructure to support the changing business priorities
13. Risk Management/Mitigation helps in reducing intervention delays, continuous monitoring, fraud detection, smarter, deeper, faster controls.

Bank Opportunities-

1. Competitiveness –Banks can innovate simple products which are fairly priced and attract more customers to withstand the competition.
2. Marketing and Branding – Digital marketing with convergence of networks can strengthen the brand image.
3. Risk Management / mitigation , dashboards, Data Analytics, Fraud prevention , Real time operations , Process Dematerialisation, Digital signatures will enable the bank to be a market leader.
4. The digital Banking is concerned with 2 aspects both having digital technology underneath them.
   A. A new thrilling experience to the customer who has a plethora of e-services available to him.
   B. efficient , effective business model in the organisation
5. High speed, secured and transparent processing of transaction which results in wide spectrum of products and security proffered to the consumer at fair prices and high quality relationships with banks.

BASIC SERVICES OFFERED:

1. Mobile banking –It refers to the use of smart phone or other cellular device to perform online banking tasks such as monitoring account balances , transferring funds between accounts , bill payment etc
2. Automated Teller Machine- It is electronic telecommunication device that facilitates customers to perform functions like
3. Internet Banking- Online banking, also known as internet banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website. The online banking system will typically connect to or be part of the banking system operated by a bank and is in contrast to branch banking which was the traditional way customers accessed banking services.
4. RTGS- Real Time Gross Settlement systems through which funds get transmitted by way of transfer of money or securities[1] from one bank to another on a "real time" I.e. a payment transaction is not subjected to any waiting period, with transactions being settled as soon as they are processed and on a "gross" basis i.e. "Gross settlement" means the transaction is settled on one-to-one basis. Settlement means transactions undertaken once are irrevocable.
5. NEFT-National electronic funds transfer is a payment system in which individuals can electronically transfer funds from any bank branch to any individual having an account with any other bank branch in the country.
6. CTS-cheque Truncation System or Image-based Clearing System (ICS) is implemented by Reserve Bank of India (RBI), commencing in 2010, for faster clearing of cheques. In this system cheque images and magnetic ink character recognition (MICR) data are captured at the collecting bank branch and transmitted electronically.
7. IMPS- Immediate payment service IMPS is managed by the National Payments Corporation of India (NPCI) and offers an inter-bank electronic fund transfer service through mobile phones. Unlike NEFT and RTGS, the service is available 24/7 throughout the year including bank holiday
8. NACH – National Automated clearing house introduced by National Payments Corporation of India, is a centralised clearing service that aims at providing interbank high volume, low value transactions that are repetitive and periodic in nature offering credit and debit service to corporate, banks, and financial institutions.
9. UPI- (Unified payment Interface)It is a unique interface that allows instant transfer of money from one bank account to another on a mobile platform leading to swift payment across banks. It will allow smart phones to substitute costlier POS machines. This technological government programmes expected a mass behavioural shift from cash to cashless transactions.



The shift towards UPI gathered pace, post-demonetisation, when there was a scarcity of cash in the market. Though payment interfaces such as NEFT and RTGS and the debit card have done their share of work, payment through UPI is safer and quicker enabling real-time, 24X7 payments for the masses.

10. NUUP is National Unified USSD platform (USSD stands for unstructured supplementary service data) is a mobile banking service based on USSD.
11. Debit cards / smart cards, payment gateway - RuPay launched in 2012 has challenged the duopoly of Visa and MasterCard in the payments gateway world.

    As of June 2018, as per RBI record, there were 94.4 crore debit cards in India, out of which almost 50 crore are RuPay-powered debit cards amounting to 50 % market share. Debit and credit card transactions still form the bulk of digital payments which can be validated from the following. RBI's data shows transactions through debit and credit cards in June 2018, wereas follows –There were 3.93 crore credit cards and 94.4 crore debit cards used in India including individual and corporate cards. The value of credit card transactions in the month of June 2018 is Rs. 46,629 crore and Debit card transactions in the same period went up by 33 % to Rs. 3,15,627 crore. Percentage of Debit and credit card transactions to all digital transactions in terms of volume- 22.5 %
12. PPI- Prepaid payment instrument

13. POS-point of sale – Businessman has to acquire a point-of-sale (PoS) machine for processing card payments from banks with which they already have an existing account. Each machine would have a fixed cost of approximately Rs 13,000 as well as monthly rentals of □500-600. Additionally, there would be an RBI-mandated merchant discount rate (MDR), which a merchant is charged for processing card transactions amounting to 0.75-1 % and 2-2.5 % per transaction on debit and credit cards respectively. A key feature of devices today is their 'interoperability', which means they are able to accept not just card payments, but also UPI-based payments, transfers from net banking, and 'tap-to-pay' methods, e-wallets, Aadhar-enabled payments (AEPS) using near-field communication (NFC) technology.
14. BHIM – Bharat Interface for money, comparative analysis is as under

	December 2016	July 2018
Volume	43000	1.64 crores
Value	1.83 crore	6692 crores

BHIM transactions have risen to 1.64 crore (valued at □6,692 crore) in July 2018, from 43,000 transactions (valued at □1.83 crore) in December 2016 when it was launched by Prime Minister Narendra Modi in New Delhi a month after demonetisation was announced.

The app offers payment solutions by accessing bank accounts and is linked to over 95 private and public sector banks. Within a week of BHIM's launch, the app had been downloaded more than 5 million times. BHIM to some extent has been usurped due to innovative products by companies such as Google (with its Tez payment system), Paytm and PhonePe.

Apparently BHIM was launched as stop-gap solution to improve the cash flow following demonetisation.

15. Paytm - With Paytm users can pay bills, buy movie tickets, pay school fees or buy digital gold, apart from shopping on Paytm Mall.
16. BPSS – Bharat bill payment syatem
17. Mobile wallet –The mobile wallets dominated the market immediately after the demonetisation.
18. The banks have also implemented e-kyc (know your customer) system.

Analytics –

1. Today mobile banking and mobile wallets are fastest growing options in payment industry
2. As per the data of 5 banks in December 2016
   A. NEFT, CTS, NACH and cards account for bulk of transactions by volume (76%)
   B. RTGS, NEFT, CTS account for (89%) of transactions by value.
3. It is clear that increased smart phone users in India will grow digital baking in India National Automated Clearing House, or NACH, introduced by National Payments Corporation of India, is a centralised clearing service that aims at providing interbank high volume, low value transactions that are repetitive and periodic in nature. Offering credit and debit service to corporate, banks, and financial institutions, exponentially.
4. Mere technological advancement will not shift the traditional banking pattern to digital banking in India because basically India is a cash economy , prevalence of digital illiteracy and reluctance of large section of population to go for digital payments. The design and delivery of various financial services channels is influenced by accelerated technological advancements (online transaction by way of internet and mobile phone) shift in customer preferences and regulating infrastructure adopting to digitalisation
5. The Pradhan Mantri Jan DhanYojana by way of 220 million cards and 282 million accounts (as per 29.3.2017) has provided infrastructure for universal access to banking. The unbanked population has reduced from 577 million to 233 million.
6. In 2018, HDFC Bank has also introduced newer products such as digital loans against shares and loans against mutual funds. If there is an emergency, instead of redeeming mutual funds, the bank will offer a loan in three minutes through net banking, holding the customer's mutual fund account as collateral.
7. The digital journey for banks like state bank of India and ICICI has been holistic. ICICI Bank has invested in FingPay and used some of its solutions towards its Eazypay app. SBI has tied up with Reliance Jio for integrating its digital banking app Yono with MyJio app. Yono (you only need one) has 2.5 million users and enables users open an SBI account digitally, transfer funds and get a pre-approved personal loan digitally.

8. The most interesting app of HDFC - EVA (electronic virtual assistant), an AI-powered banking chatbot, has been configured for voice through Google Assist and Amazon's Alexa. EVA has answered more than 8 million queries from a million customers and is now integrated with the bank's interactive humanoid IRA (interactive robotic assistant).
9. HDFC Bank has collaborated with Google Tez to operate its UPI handle while, on Facebook, it has tied up with Niki.ai, a Ratan Tata-backed fintech, to create a chat platform, perform ecommerce transactions and also pay bills or buy insurance through Facebook Messenger. The bank's expense tracker on mobile is with Money View while it's Digital Command Centre—where the bankuses internet and all social media platforms—were built in collaboration with a LocoBuzz. The bank also works with assessment technology provider Talview, which helps it carry out interviews on video, as part of its HR policy.

Futuristic features –

Predictive banking – The wearable technology like smart watches, smart eye ware, gesture controlled devices, sensors embedded in cooking utensils cars can enable the bank to create innovative products for its customers. Banks will be part of everyday routine activities of all human beings. As there is infinite potential for banks and fintech companies to explore and innovate on different fronts eg. Banks can offer customised insurance products based on health data (pulse rate, blood pressure, sleeping time, daily physical exercise, calorie and nutritional intake) which will be captured from fitness band worn by humans.

Digitalisation in banking is adoption of existing and evolving technological changes efficiently and effectively in the internal business processes of banks as well as working towards superior customer's relationships and experience. The futuristic innovative technology is changing the face of bank's business model.

Revolutionalising from traditional banking to state of art digital banking has ultimately paved way for customer satisfaction and value through infinite operational efficiency. Banks have started with reduction in number and size of branches (both number of units and size of existing facilities) and replacing with ATM's, digital kiosks for account operating, and customer enquiry thereby heightening the digital maturity. Today traditional banks differ from digital market entrants who offer end to end online process offering customers to open a new account using digital channels and some value added services like digital document safekeeping, access to financial news, digital investing, and personalised digital alerts, digital saving tools, online chat, and social media banking

- BaaS - Banking as a Service (allows for third party integration)
- BaaP - Banking as a Platform (for integrating core systems with software)
- Cloud-based Infrastructure (allows less dependence on IT staff)
- White Label Banking (such as joint-branded credit cards)[14]

These solutions are built on enhanced technical architectures as well as different business models.

CONCLUSION:-

With the increasing usage of smart phones and emerging technologies, digitization of banking sector is inevitable, to escalate up to the increasing expectations of the world. It indeed reduced human errors and increased convenience of general public in banking operations.There is no doubt that pros of digitization are outweighing the cons but the fact that cyber threats are also on the rise, banks must be very careful and should be prepared to handle cyber attacks.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Artificial Intelligence & its Role in Industry

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ABSTRACT
In today's digital era "Artificial intelligence" has been used in nearly all industries. AI has many applications in various different sectors like healthcare, aviation, IT, manufacturing etc. AI helps in reducing human errors, risks, best results with accuracy, does risky and/or hazardous jobs like bomb defusing, saves training cost. But at the same time AI has few risk factors like human intelligence can be replicated up to certain limit only, lesser jobs, hurt learners, affects human thinking powers.

KEYWORD: *Artificial Intelligence, Healthcare, Manufacturing, IT.*

INTRODUCTION
"Artificial Intelligence" as its name says its non-natural intellect. If needs to be explained in simple words, it's just a work done by machines but by applying intelligence like humans do. As this intelligence is not natural like humans do have, we call it as artificial intelligence. This intelligence is added by humans in machines for accomplishing certain tasks. Through this intelligence machines can perform learning, planning, problem solving, perception, manipulation, cognitive abilities etc.

Broadly AI has two two major types,
1. Narrow AI.
2. General AI.

Narrow AI also known as Weak AI is focused on one narrow task. General AI also known as Strong AI or Full AI, where machines will have ability to perform general intelligent actions.

Advantages:
1. Chances of error are almost nil and greater precision and accuracy is achieved.
2. Space exploration
3. Fraud detection in smart card-based syst
4. Digital assistants
5. Diligence
6. Repetitive and time-consuming tasks efficiently.
7. Intelligent machines can be employed to do certain dangerous tasks. They can adjust their parameters such as their speed and time, and be made to act quickly, unaffected by factors that affect humans.
8. Surgery simulators use machine intelligence in training medical professionals. AI can be used to simulate brain functioning, and thus prove useful in the diagnosis and treatment of neurological problems. As in case of any other field, repetitive or time-consuming tasks can be managed through the application of artificial intelligence.
9. Robotic radio surgery helps achieve precision in the radiation given to tumours, thus reducing the damage to surrounding tissues

Drawbacks of AI:
1. Over human intelligence and thinking power
2. unemployment
3. over human physical health
4. voice recognition issues
5. over young generation and children's mental and physical growth
6. machine/techno dependency
7. resources(like electricity)
8. machine will rule human and will not take any input from human even in most critical decisions

9. risky in case of cyber attacks, when decisions are totally based on machines then in unpredictable crisis time its difficult or impossible to handle
10. while implementing AI human may miss out imp factors or possibilities to include in it
11. nuclear attacks through AI
12. cost incurred in the maintenance and repair
13. updated to suit the changing requirements
14. 14.ethics and moral values
15. data, but the storage, access, and retrieval is not as effective as in case of the human brain, do not get better with experience, like humans, Machines may not be as efficient as humans in altering their responses depending on the changing satiations',
16. Imagine robots working in hospitals. lack of emotions & feelings
17. creative fields
18. Intuitive abilities that humans possess, the way humans can judge based on previous knowledge, the inherent abilities that they have, cannot be replicated by machines. Also, machines lack common sense.
19. Control of machines goes in the wrong hands, it may cause destruction. Machines won't think before acting. Thus, they may be programmed to do the wrong things, or for mass destruction.
20. fear of robots superseding humans, they might enslave us and start ruling the world
21. Greed to play God, man may destroy himself.

Role of AI in different industries:

1. Role of AI in manufacturing industry:-

In manufacturing industry, it is majorly used for Real-time equipment maintenance and virtual product designs. Many types of software available in market which are specially designed for this sector.

a. Generative design software:
Are available for creating designs just by giving different parameters as an input.

b. Digital twins:
A digital twin is a virtual model and useful when working with equipment from a remote distance. Sensors collect real-time data, working ailment or location. The system gets as well as processes data which is monitored by sensors.

c. Computer vision:
The most observant human assessor also may fail to find out faults which are of small or micro size. This is not the case with machine with camera. As its more accurate & sensitive so it doesn't miss a bit of data also. After that the images will be sent to human to make decisions and improvements and after that sent back to machine.

d. Case Study:
Landing.ai, a start-up formed by Silicon Valley veteran Andrew Ng, has developed machine-vision tools to find microscopic defects in products such as circuit boards at resolutions well beyond human vision, using a machine-learning algorithm trained on remarkably small volumes of sample images. Once on line, the computer not only "sees," but also processes the information and learns from what it sees. If it spots a problem or defect, it sends an immediate alert, an AI process known as "automated issue identification. [1]

e. Predictive maintenance:
Predictive maintenance—as opposed to preventive maintenance—eliminates guesswork as the machines report their conditions on an up-to-the-minute basis. It also saves businesses valuable time and resources, including labor costs, while guaranteeing optimal manufacturing performance. [1]

2. Role of AI in IT industry: -

AI's major role is to make AI's teach other AI's and IT platforms without human intervention and/or efforts.

Artificial intelligence is being applied in almost every industry and its used up to maximum level in IT industry. In IT data collection, storage capacity and computational power is going on increasing. This massive data is valuable food for AI. This data can be analyzed, processed to comprehend new and changing trends.

Following are some examples of use of AI in IT industry:

1. Natural Language Processing (NLP):- The best example of NPL is speech recognition. It is process of converting phrases spoken by humans to machine readable format. Another example of Machine Vision is Text Translation.
2. Automation:- In this AI makes system work automatically. Such as repeatable and huge tasks which humans needs to perform can be automated. Example:- Robotic process automation.
3. Self-Driving Cars:- In this vehicle is auto piloted with the use of deep learning, computer vision & image recognition.
4. Robotics:- Robots used to perform tasks which are difficult for humans. For example:- Robots are used in NASA for shifting huge objects in space
5. Machine Learning:- This is the process of automation of predictive analysis . Following are the 3 types,
   - Supervised learning,
   - Unsupervised learning &
   - Reinforcement learning.
6. Machine Vision:- In this with the help of camera information can be captured as well as analyzed. It is used in range of applications.
7. In cyber security:- AI can identify any new and doubtful activities and/or weakness very fast and it can be then analyzed to find and stop/alleviate cyber-attacks.

3. Role of AI in healthcare Industry: -

AI has and will have a big role in healthcare industry. In this almost all traditional healthcare related tasks will be performed with the help of innovative data sciences.

Google Deep mind and G Suite aim to solve patient record complications by providing a secure, yet convenient way to access and transfer records while adhering to HIPAA rules and regulations. Deep mind will use block chain technology and cryptography—the same as crypto currencies—to ease the transferring and updating of patient medical records while maintaining security for healthcare professionals.

There are various applications which will collect patient records and processes them to perform diagnosis and help in giving ideal treatment suggestions as well as provide best personalized diet chart for patients. Applications will be even able to predict time duration required for curing illness.

Through predictive analysis, machine learning can look back at a patient's past medical records and find patterns that could suggest that the patient is headed toward a particular illness—like the previously mentioned cancer.

Doctors as well as patients will be benefited greatly with AI in healthcare sector. Doctors can utilize this information and treat patients for their faster recovery.

Future of AI:

With the help of huge data& by applying statistics on that, one day AI will solve our world's biggest issue about climate change. We will have robots which can understand feelings of human, change its own sentiments, be friends with them and help them to stay happy.

CONCLUSION:

AI's is going on becoming smarter than human and after few decades it will be smartest. Which is indeed not a good thing. If AI is not dangerous right now but in near future it is definitely going to be dangerous. AI's will be the one who will take decisions for humans and also AI will control humans. Thus, AI and IT scientists must carefully as they create robots and computers.

Some worldwide standardized Rules, regulations and limitations should be set for use as well as in design

of AI for safety of humans. So that AI doesn't takeover and control humans in future.

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INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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Customer Satisfaction Towards Paytm in Sangli Miraj Kupwad Muncipal Corporation

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ABSTRACT
Digital India's drive towards a cashless economy has modernized the launch of Unified Payment Interface (UPI) applications since its launch in Jan 2016. The usage of smart phones as virtual debit cards has doubled to send or receive money instantly. The current study has been conducted in order to meticulously evaluate and examine the level of customer satisfaction towards Paytm UPI app. The purpose of this study is also to observe and analyze the purpose of using Paytm as one of the UPI applications, reasons for choosing Paytm as an UPI application and to find out the problems encountered by the customers. The primary data for this study was compiled through well-structured questionnaire filled in on a one-to-one basis by 150 customers of Sangli Miraj Kupwad Corporation. The study results clearly in dicates that the majority of the users of Paytm UPI application were in the high level of satisfaction. Hence, the study highlights the important points that Paytm UPI application must consider in order to increase the number of users and to improve their service quality.

KEYWORD: *Paytm, Customer Satisfaction, Unified Payment Interface (UPI).*

INTRODUCTION
Unified Payment Interface is a mobile centric, real time interbank payment system which has the potential to transform and universalize digital payments in India. UPI is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience. In August 2016, NPCI launched Unified Payment Interface (UPI), a next generation mobile based payment system which enables real time bank payments thus making smart phone as a primary payment device for both consumers and merchants and to universalize digital payments in the country. The UPI interface will allow account holders across banks to send and receive money from their smart phones using just their Aadhaar unique identity number, mobile phone number or virtual payments address without entering bank account details.

According to NPCI, so far only 29 banks have agreed to start this service. If your bank is UPI-enabled, you can ask it to connect you to the system. To initiate a transaction, you can use two types of address—global or local. Global address includes your mobile, Aadhaar and bank account numbers. A local address can be a virtual address. Let's say your bank gives you a virtual ID similar to your email ID (for instance, name@ company name). This virtual address will allow you to send and receive money from multiple banks and prepaid payment issuers. Paytm India's largest mobile commerce platform is an Indian commerce shopping website. Since its launch it began to launch various services on the digital platform viz. offering mobile recharge, gas bill, electricity bill, telephone bill payments etc. lately, it offers various facilities such as DTH recharge, insurance facilities to

wider market place to consumers on its mobile apps and web. Within in a short period of time Paytm has scaled to more than 60 million orders per month. Paytm is an acronym for pay through mobile. It entered through India's E-commerce market in 2014 providing facilities and products similar to online business such as flip kart, Amazon, snap deal etc. Paytm has keep on changing from time to time to its terms and conditions as it is a legal contract between an individual customer, user or beneficiary. Paytm is owned by ONE 97 Communications LTD and headquartered in NOIDA, India in 2010. It is privately held company founded by Vijay Shekar Sharma.

Reserve Bank of India In August 2015, granted Paytm license to launch a payments bank. The Paytm Payments Bank is a separate entity in which founder Vijay Shekhar Sharma will hold 51% share, One97 Communications holds 39% and 10% will be held by a subsidiary of One97 and Sharma. The bank was officially inaugurated in November 2017 by the Indian Finance Minister, Arun Jaitley. The inauguration ceremony featured prominent banking personalities including former RBI Executive Director PV Bhaskar, Saama Capital Director Ash Lilani and former Shriram Group Director GS Sun darajan. Vijay Shekhar Sharma and Renu Satti (resigned) (CEO – Paytm Payments Bank) are the other directors of Paytm Payments Bank. Its target is to launch over 100,000 banking outlets across India by end of 2018.

Paytm in 2017 became India's first payment app to cross over 100 million app downloads, with bonanza offer of Paytm Gold, a product that allowed users to buy as little as □1 of pure gold online. It also launched the Paytm Payments Bank and 'Inbox', a messaging platform with in-chat payments among other products. By 2018, it allowed merchants to accept Paytm, UPI and Card payments directly into their bank accounts at 0% charge followed by 'Paytm for Business' app, allowing merchants to track their payments and day-to-day settlements instantly. This led its merchant base to grow to more than 7 million by March 2018.Paytm launched its Paytm Mall app in February 2017, which allows consumers to shop from 1.4 lakh registered sellers raised a whopping $200 million from Alibaba Group and SAIF Partners in March, 2018.

Need For the Study:

Demonetization drive paved way for Unified Payment Interface (UPI) app through Paytm which was promptly promoted by the government. However, the issue of ease of use, transaction delay, security & privacy issues cropped up. Currently, Paytm holds 38% market share in UPI apps. Despite the issues the researchers were interested to know the level of satisfaction derived while using, promoting the Paytm app. and why it's still the unique choice among its rivals.

Literature Review:

Paytm highlighted that brand reposition is based on allied belief (Haugtvedt et al., 1994) while designing, working and developments of Paytm which consolidated an examination on organizing a store, web progression, online gadget and also depicted about electronic portion system (Shwetu Kumar, Vijay Yadav, Atiqu-Ur-Rahman, Aditi Bansal, 2014) FE Bureau (2017).

There is a bright future for m-payment (Bamasak) as Demonetization has increased the growth of Paytm & Mobikwik (FE Bureau 2017) which is known as the Digital payment companies. Considering security in mobile payments, independent security was not a primary driver of mobile payment acceptance (Pousttchi and Dietmar G. Wiedemann2008)

Statement of the problem:

The UPI interface will allow account holders across banks to send and receive money from their smart phones using just their Aadhaar unique identity number, mobile phone number or virtual payments address without entering bank account details. Hence by considering the UPI features, the study of users in Sangli Miraj Kupwad Muncipal Corporation is conducted to determine customer satisfaction towards Paytm in terms of Unified Payment Interface (UPI) apps.

Title of Research:

Customer Satisfaction towards Paytm in Sangli Miraj Kupwad Muncipal Corporation,

Significance of study

The research was conducted to analyze the usage of Paytm by users and to study their satisfaction levels based on different parameters viz. Convenience, Safety and Security, Transaction time and Customer service etc.

Objectives of the research:

1. To find out the level of customer satisfaction towards Paytm (UPI)apps.
2. To study the acceptance level of Paytm in Sangli Miraj Kupwad Corporation as an alternative to the cash transactions.
3. To study the role played by Paytm in Sangli Miraj Kupwad Corporation in supporting growth towards Digital India.

Hypothesis

- **H0:**There is no significant relation between security concern and transaction performed on Paytm.
- **H1:**There is significant relation between security concern and transaction performed on Paytm.

Research design:

The current study is based on primary data collected from 150 respondents from the different parts of Sangli Miraj Kuwad municipal corporation, Maharashtra. A well-structured questionnaire was designed to collect the information from the respondents the questionnaire was designed to study perception of customer towards adoption of digital payment mode. Likert five point scales were used for obtaining responses. The responses have been collected by means of face-to-face interviews by authors.

Sampling unit:

In this research the sampling unit was the customers who have been using the digital payment modes through their smart phones.

Sample size:

For the survey the sample size decided was 150.

Sampling procedure:

The researchers adopted convenient sampling method for collection of primary data, as it is not possible to take appointment from a large number of respondents. Purpose of this research was told to respondents and questions were explained to them in case there was any need for understanding any particular question. There had been no personal bias or distortions were allowed while recording the responses.

Research and Statistical Tools Employed:

Age of the person transacting through Paytm app, Is one of the important parameter in determining the satisfaction level due to the level of knowledge, technological knowhow, work experience which influence the different services offered by the app. hence its includes as prime indicator for satisfaction level. The distribution of respondents in years is shown in Table 1.Its observed that more than half of the respondents below 35 years transact through Paytm app. The least age group transacting through Paytm app. is above 60 years.

Table 1: Age of the Respondents

Age in Years	Frequency	Percentage
Below 35	85	57
36 -60	50	33
Above 60	15	10
Total	150	100

Since gender shapes the knowledge, ability to use Paytm services and compare it with its rivals in terms of satisfaction guaranteed it s included as one of the parameter. The classification of respondents based on gender is depicted as below; the male respondents are the major users of Paytm app. as compared to the female counterparts.

Table 2: Gender of the Respondents

Gender	Frequency	Percentage
Male	95	63
Female	55	37
Total	**150**	**100**

The frequency of using Paytm app. clearly indicates their product offerings and services offered hence, it s used as a major parameter to measure their satisfaction level. The distribution of respondents is highlighted as below; It has been observed that major frequency of Paytm usage is monthly constituting 67% to the total usage followed by the least usage on daily basis i.e. 3%.

Table 3: Frequency of Paytm usage

Usage	Frequency	Percentage
Daily	5	3
Weekly	45	30
Monthly	100	67
Total	**150**	**100**

The purpose of using Paytm app. is classified into recharge, ticket booking, bill payment, shopping online as given below; Majority of the respondents use Paytm for recharge of mobile i.e. 37% followed by ticket booking 20%, online bills payment 28%, online shopping 15% respectively.

Table 4: Purpose of using Paytm.

Purpose	Frequency	Percentage
Recharge	55	37
Ticket booking	30	20
Bill payment	42	28
Online Shopping	23	15
Total	**150**	**100**

The average monthly spending is signified by logging into Paytm malls. It depends upon the buying behavior in terms of the amount spent as given below; Majority of the respondents have spent between Rs. 101 to 1000 only which indicates 51% of the total in comparison to above Rs.2000 which comprises the least i.e. 7% of the total.

Table 5: Average monthly Spending on Paytm

Amount (Rs.)	Frequency	Percentage
Less than 100	23	15
101 to 1000	76	51
1001 to 2000	41	27
Above 2000	10	7
Total	150	100

Table 6: Level of Satisfaction Based on Different Parameters

The level of customer satisfaction towards Paytm app has been measured using five significant parameters using Five point Likert scale. The opinions of which are listed below;

Variable	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
Easy to Download Paytm App	30	62	30	20	8	150
Ease to use	7	38	85	17	3	150
Bank transfer	5	112	25	5	3	150
Less Transaction Time	12	95	28	10	5	150
Secured	20	30	57	28	15	150

Source: Primary data

The high level of satisfaction was recorded in bank transfer followed by less transaction time, ease to download, security. The normal level of satisfaction was recorded in ease to use followed by security, easy to download, less transaction time, and bank transfer. The highly dissatisfied variable were recorded in secured transactions followed by ease to download, less transaction time.

Hypothesis Testing

H0 = There is no significant relation between security concern and transaction performed on Paytm.

H1 = There is significant relation between security concern and transaction performed on Paytm.

By applying chi-square test for table 6, the calculated value (p) is 12.94. Similarly table value for chi-square with degree of freedom 12 at 5% significance level is 21.03. As calculated value is less than table value, hypothesis stating, there is no significant relation between security concern and transaction performed on Paytm, is accepted. It indicates that users use paytm while giving less attention to services provided by paytm.

Major findings:

- The respondents below 35 years transact frequently through Paytm application.
- The male respondents are the major users of Paytm application.
- For the respondents of paytm, major frequency usage is monthly.
- Majority of the respondents use Paytm for recharge of mobile.
- The majority of transactions performed on paytm are between Rs. 101 to Rs. 1000.
- The high level of satisfaction was recorded in bank transfer followed by less transaction time, ease to download, security.

Conclusion:

The present research study concludes that the usage of Paytm is only at a satisfactory level. The customers have issues in ease of use, security issues and slow Paytm server in the usage of Paytm. Paytm has to establish a separate wing with trained staff to address

the issues and problems related to paytm services. The Paytm may initiate necessary action for periodic updation, up gradation and maintenance of both hardware and software and to prevent cases of slow server and complete breakdown of system by having back storages.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

SattvaGuna Enrichment Programm (Course) - An Effective MOOC

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INTRODUCTION

E-education is not entirely new concepts. It is grown in each country. It is taking roots for Indian students as well. One can be provided the best education in the world direct from the persons who wrote the courses for online study. The courses are available for any subject and the levels can be from beginner to higher advances. Individual could find the right course and course level without difficulty. In the 21st Century, students may stay at home and take education across the world. E-education system includes the development of e-materials. Teaching students online, governing students online, providing the infrastructure and support within which e-education can operate, planning and managing e- education. Today MOOC (Massive Open Online Course) is one of the way for geographically dispersed students for participation in web based, free distance learning programme. The word 'MOOC' was coined in 2008 by Dave Cormier (University of Manitoba). 2012 was a big year of MOOCs. In this year, various types of MOOCs became well known throughout the world.

The Digital Literacy Mission was announced as a part of Union Budget 2016 to cover 60 million rural households within next three years, "Digital Highways" that are being created as a part of the "Digital India Mission" will play an important role in connecting India and Bharat. We do believe that the full impact of Digitalization in Education will play become stronger in 2018 and beyond.

Today's students search for university or colleges offering subjects of their choice. Then they enroll for the courses without stepping out of their houses. The students don't have to deal with traffic or boring lectures while persuing the course. Craig (2015) shows the pressure created by the rising cost of higher education and the free offerings of MOOCs. He made the people understand for the first time that the different components of an education offering could be supplied by companies. Various courses in various fields were designed by different organizations related to MOOC. The emergence and use of MOOC for professional teacher development is still uncommon. Researches published were very less on this concept .Over 6.5 million students have enrolled in over 800 free courses from over 200 different learning institutions (Gallagher and Garrett,2013).There are numerous MOOC providers .

Role of the University in MOOC

The Role of the University is to make available these courses to students because Excellent students who could not be accepted as onsite students in prestige universities, due to lack of financing and constraints as to how many can fit into onside classrooms. These students face new opportunities to get a prestige degree in their own homes.

There is nothing particularly new about MOOCs. Most universities have provided online courses for many years. The only difference is the scale. MOOCs are built on efficiency of scale. Lectures, assessments and activities and the expertise of the professor are unique to a particular university. Because of the scale direct and physical involvement by the faculty member is limited. This shifts the responsibility on the shoulders of the individual students and their motivations to learn. MOOC courses can start any time and can be of any length. That makes the MOOC compelling for short term courses that are highly focused on topic or a series of courses that might

build towards a deeper understanding in a knowledge area. They can be offered with a certificate. The credential can be separate from the class itself. University can take the advantage of the format of MOOCs. So the courses can solve the problems in higher education.

MOOCs can be a way for universities to offer high quality, self paced courses to fill the needs at a minimal cost to students. Since MOOCs are not bound by the academic calendar, it could be broken into smaller units of a few weeks that students can take during summer breaks or other times that fit better with their overall schedule. More importantly, it could help high school teachers to complete core courses at their school and give them the opportunity to work with students as mentors, guides and coaches in new, innovative ways.

An online course is available at significantly lower fees or no fees. Therefore, student is provided opportunity for higher education. Student also gets guidance from online tutors who are experienced and fulfill responsibilities. There is continuous use of computer to complete the online course. Therefore, there is improvement of student in computer based skills. Teachers need to keep up to date digital skills because their students will be demanding those skills.

Features of MOOCs

1. MOOC have course structure, goals, mile tones within a set of learning areas or specific topics
2. They are available online and allow connection in remote locations via Internet.
3. Their scope is massive. They allow the access of a large number of students.
4. Their contact is open, giving follow up. In regard to the ownership and license type of the content for its reuse there is no consistent approach and it depends on each platform.

SattvagGuna Enrichment Programme an Effective MOOC for all Teachers in the World

It is believed - right through the ages-that 'teaching' is a 'noble' profession. The teacher is liked, loved and admired - and in many cases- worshipped by the student. Not only the student, but the society at large also expects a lot from the teacher. Needless to say, the noble profession, naturally demands the teacher to be noble one, And here "the SattvaGuna Enrichment Programme" has a role to play. The Kothari Commission Report (1964-66) rightly remarks "The future of a country is being shaped in today's classroom." Obviously, the role of the teacher who solely controls the "class" assumes immense importance. Hence, the researcher intended to prepare the SattvaGuna Enrichment Programme (SGEP) for teachers.

Younger children mostly imitate their parents more as compared to their teachers. But when they reach the adolescence, they become more aware of their 'self'. They become more independent of their parents. They are in a phase of "transition". They are in a mood of overthrowing the bindings of their parents and other elders in the family. They are continuously on the lookout for a "separate identity" of their own. They intend to free themselves from the "bonds and bindings" of their elders in general and parents – in particular. Obviously, this stage becomes a very delicate but decisive in nature. The situation demands somebody else who can replace the parents; who can fill the vacuum. And the only fitting answer is the "teacher". Hence, the researcher chose "the Secondary School Teacher" as her subject matter. Thus, the researcher intends to provide an ideal solution to the problems of the adolescence age-group of students.

According to the Bhagavad Gita (Vendanta Samiti, Bhagavad Gita As It Is, 1986, P. 609, 610) Sattva, Raja and Tama are three basic characteristics (Gunas) present in nature, in human being which are responsible for his/ her good or bad behaviour. Sattva being immaculate is illuminating and flawless. It binds through identification with satisfaction and wisdom. On the other hand Raja which is of the nature of passion, as born of greed of gain and attachment, it binds the soul through attachment to actions and their fruit and Tama, deceptive of all those who look upon the body as their own self, as born of ignorance, it binds the soul through error, laziness and sleep.

Thus, it is clear that Sattvaguna has positive effects on personality and therefore desirable than Raja and Tama. Therefore, it is essential that a programme to enrich Sattvaguna should be prepared and tested. Teacher is an agent of social reconstruction hence, there is a argent need to develop programme to enrich Sattvaguna among the teachers. Teenagers are highly, flexible minded and receptive to 'Sanskaras' they have. They look to the teachers as their ideal models. Hence, Secondary School Teachers have a large scope as well as responsibility to create ideal citizens of the

country. Hence, the researcher has chosen secondary school teachers as participants.

The study will be useful to get guidelines for Teachers. It will also provide guidelines to other professional organizations for arranging personality development programme. The present study is based on Indian Psychology and Philosophy. Researcher studied various related researches. Efforts have been made to establish relation between Indian Psycology and Education. The researcher has conducted SGEP programme. She has thought of applicability of the findings of her research, in the 21st century Education. The SattvaGuna Enrichment Programme (SGEP) is aimed at the teacher because he is the one and only person having authority and responsibility both and accountability, too, in shaping the personality and building the character of his student.

As already stated the need for such programmes will go on increasing.

Five characteristics have been focused on to develop SattvaGuna among the teachers. These are i) Awareness about Sttvik Diet. ii) Positive Attitude iii) Satisfaction of mind. iv) Steadiness of mind. v) Teaching competency.

All these characteristics should be present in the personality, of a teacher. If the teachers are deficient in possessing these qualities, a training programme needs to be conducted that would develop these qualities among the teachers. The researcher has made an attempts to provide such a programme. She has named her programme as 'SattvaGuna Enrichment Programme'. She has prepared it for the Secondary School Teachers but she thinks that her SGEP is applicable to the teachers at any level, in any country, in any community in the world.

In a fast changing world of today the Educators' job is going to become more and more challenging. More attention shall have to be paid to character building of the student. The teachers shall have to serve as role models in the process of character building. The researcher is optimistic that her programme would prove to be a step forward in that direction.

Implementation of the SGEP

SGEP was implemented from 7th December, 2008 to 8th March, 2009 On Sundays.

Time chart of Programm

Sr No.	Name of the Activity	Date / Time
01	Orientation and information about the Programme	7/12/08 8.30 am to 11.00 am
02	Pre-test VCD of a Lecture and Discussion Subject – Life history of Shri. Vishwas Nangre Patil, Lecture and Discussion Subject – Basic concept of ' Trigunas'	14/12/08 8.30 am to 10.00 am 10.10 am to 12 am 12.00 am to 2.00 pm
03	Lecture and Discussion Subject-Concept of balanced diet and Classification of diet according to the concept of ' Trigunas' Lecture and Discussion Subject- Teacher & job Satisfaction related to 'Trigunas	21/12/08 9.00 am to 11.30 am 11.45am to 2.00 pm
04	Lecture and Demonstration Subject-Yoga for Teachers Lecture and Demonstration Subject- Stress reduction Model	28/12/08 9.00 am to 11.30 am 11.45 am to 2.00 pm
05	Lecture and Discussion Subject – Diet & Sleep A Film and Discussion – Wednsday	04/01/09 9.00 am to 11.30 am 11.45 am to 2.00 pm
06	Lecture and Discussion Subject–Sattvik Diet & Mental health Lecture and Demonstration Subject- Sahajyog, and Use of dhyana, Pranayam for teachers	08/01/2009 9.00 to 11.30 11.45 am to 2.00 pm
07	Poster – Presentation & different clippings from internet on positive thinking Discussion on different imaginary situations based on school camps	11/01/2009 9.00 am to 11.30 am 11.45 am to 2.00 pm

	Exchange of books and discussion	2-00 pm. to 2.30 pm
08	Discussion on Problems in life VCD- Life history of Dr. Raghunath Mashelkar,	24/01/2010 9.00 am to 11.30 am 11.45 am to 2.00 pm
09	Audio CD- Lecture and Discussion Shri. Sunil Chincholka 'Dasbodh' – Trigun Vichar	1/02/2010 9.00 am to 11.30 am
09	Game and Discussion – My Circle	11.45 am to 2.00 pm
10	Lecture and Discussion Subject – Follow up Programme, solutions on various problems. Programme of Donation "Velankar Anathashram", Radhakrishna Vasahat, Sangli.	8/02/2010 9.00 am to 11.30 am 11.45am to 2.00 pm
11	Follow up Programme	10.00 am to 1.00 pm

Concluding Remarks

The researcher conducted the programme for three months as scheduled in the research process. After a month she conducted a follow up programme. The SGEP as a part of research ended with the follow up programme but the participant teachers collectively requested the researcher to continue with such programmes. They demanded that even after completing the research work, the researcher and the teachers interested should continue with the activities included in SGEP. They want the researcher to conduct the activities at least once every month on regular basis. This self-evidently indicates that SGEP has come out to be immensely effective and useful from the teachers point of view.

Thus, the researcher is satisfied with the results. She hopes that it will be useful for future study and different courses in education as well as it will be useful as a MOOC.

Actually SattvaGuna is more important in the Education Sector. Above Programme should be used as a course .In the course, audio- Video conferencing, Test material, Notes, Videos. Resources are ready. Therefore it will be useful for the development of MOOC.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Success of Digitalisation in Tourism Industry in India

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ABSTRACT
Digitization offers many new opportunities that can be exploited by providers in the tourism industry. At the same time, competition is being intensified and companies have to keep pace with digitization in order to remain on the same level. Without any question, "digitization can be viewed as the motor of transformation for the tourism industry in the age of the internet economy

Today, more than 57% of all travel reservations each year are carried out with the internet and internet travel booking revenue has grown by more than 73% over the past 5 years, while 65% of tourist book hotels reservations for the same day are made on a mobile device. In the course of this development, travel providers need to tackle the challenges of individually addressing different stakeholders from country to region through knowledge, time, and a sophisticated strategy. Professional digitization strategies of travel providers such as classic travel agencies require resources such as specialists with IT expertise and a certain budget. In return, the introduction and implementation of a digitization project in the tourism sector might lead to considerable cost savings and productivity gains. Significant examples of this are the automation of work-flows, the increase in employee motivation as well as cost and time savings.

This paper is theoretical in nature and based on secondary data. An attempt is made through this research paper to understand the success rate or degree of digitalization that has taken place, so far, in travel and tourism industry which is one of the chief source of employment of any country in the world. Being a comparatively non polluting industry, digitalization will rake in huge amount of revenue for cash starved country like India.

KEYWORD: *Digitization, opportunities, travel reservations, mobile device, cost savings, productivity.*

1. INTRODUCTION

India's traditional outlook received a jolt when the decree of demonetization dawned on them as India, under the leadership of Narendra Modi, envisaged a cashless economy. Spirited responses from the citizens of the country despite initial hiccups have also encouraged further measures. The travel and tourism sector, along with the traditional hotel industry, was one of the prime sectors that witnessed a drastic slowdown during the last couple of months of 2016.

Transformation in travel and tourism industry has certainly led to rise in numbers of people travelling across the globe. According to UNWTO from 674 million in 2000, the overall international tourist arrivals have grown to 1,186 million in 2015. International tourist arrivals worldwide are expected to increase by 3.3% a year between 2010 and 2030 to reach 1.8 billion by 2030. These figures are evidence about the potential travel and tourism industry carries and how digital transformation in this landscape will benefit.

According to a recent report by Ministry of Tourism, the travel and tourism contributed nearly US$ 295.7 billion or 19.2 per cent to the GDP in 2015- 16, while growing at 8.9 per cent year-on-year. Also, the industry is expected to generate 13.45 million jobs across sub-segments such as hotels, travel agents/tour operators and restaurants.

Today one doesn't need to visit a travel agent or tour operator to get hold of various destinations and their

offerings. Internet or rather the advent of technology has educated a consumer in such a depth that they are now the new experts. The need of a travel agent to some extent is getting limited to handling the back-end processes of operating a tour or holiday for their customers, which is still not better handled by technology. The last decade has witnessed massive changes credit to rise in usage of technology. The shift created by technology can be seen across all verticals irrespective of the industry. From aviation to hospitality to B2B travel trade, technology has emerged as the game changer. The very fact that the consumer has easy and detailed access to technology led to the change in the landscape of travel industry across the globe.

With the development of technology over the last decade now there is no or slight difference between a tourist and a traveller. A traveller can anytime become a tourist with the help of knowledge he gains from the internet about the destination he is travelling to. Technology has changed the way people plan, research and book their travel arrangements. Talk about mobile ticketing, online check-ins at airports and hotels, e-visas, digital payments, elaborated information's about the destinations one is travelling to or be it about the Google maps and other related stuffs, cutting out the fear of getting lost in an unknown country, the small digital device in one's hand is enough to handle all the basic travel needs.

2. OBJECTIVES OF THE STUDY

The paper explores how digitalisation will help better define the future of the industry and how the new trend will impact the evolution of the travel, tourism and hospitality sector in the country. The paper also takes a keen look at how the overall technology inclusion among the stakeholders in the industry ecosystem can be realized.

1. To understand the concept of digitalization in travel & tourism
2. To understand the contribution of mobiles, social media, online travel booking in the growth and success of tourism industry
3. to understand the challenges faced by the travel and tourism industry in India
4. to evaluate the future prospects.

3. DATA COLLECTION

Data is collected from secondary sources. The research paper is descriptive in nature and analyses the contribution of various technologies like mobiles, social media, and internet in the success of travel and tourism industry in India.

4. MOBILE TECHNOLOGIES

Today, the mobile phone signal is pervasive, and the use of cell phones and internet services is booming. In fact, the world's poorest households are less likely to have access to a toilet than to a mobile phone. While this unfortunately holds true for India, it also highlights the country's digital transformation. Today, India has over 1 billion mobile subscriptions, more than 400 million internet users and a social media penetration of 14%.While India's progress is significant, untapped potential remains.

The entire Indian travel and tourism ecosystem has evolved as a result of mobile technologies. Digital players, such as MakeMyTrip, Ola and OYO Rooms, have helped connect the market digitally, and even enabled the country to leverage alternative accommodation.

Consumers search for information before a trip, they compare and check opinions of other travelers, and then they reserve tickets, hotels, and even tickets for shows and museums. During the trip, from online check-in to looking up information about restaurants and leisure activities. After traveling, they add their review to the information that other travelers will consult. All of this is done on a mobile device in more After travelling, they add their review to the information that other travellers will consult. All of this is done on a mobile device in more than 50% of cases.

4.1 Increasing prevalence of mobile technologies

- Smartphone's generated one in five online hotel bookings in the second quarter of 2016.
- 88% of travellers with smart phones would switch to another site or app if yours doesn't satisfy their needs

Research by Google shows that an increasing amount of time is spent researching trips on mobile phones, with 40% of US travel site visits coming from mobile in 2016. Visit session times are shrinking and yet conversion rates have grown by nearly 10% on mobile travel sites. Customers are using their phones to search for specific pieces of information and these figures suggest that if they don't find it they will quickly go elsewhere.

5. THE NEW SHAPE OF SOCIAL MEDIA

Digital Innovation Technology has certainly led to innovations. Travel and tourism is now becoming personalised day by day. Each person has his own travelling style and own needs. With the help of technology, a traveller is now able to reach out the perfect choice. Trip Advisor, Zomato, etc., help a traveller choose his ideal preferences. Trip Advisor now claims over 300 million unique monthly visitors to its websites, and carries over 200 million independent reviews. Social media platforms have helped decide where they want to travel. Brochures and presentations about destinations are old school and digital platforms are being used for marketing a destination. Geo-tagging on Instagram and Facebook have helped a lot of destinations and properties to gain popularity. Bigger brands are concentrating their efforts on digital marketing to be in the race. To give an example, St. Regis Mumbai, launched in 2016, has certainly grown out to be one of the top brand hotels in Mumbai and the management gives credits to social media for their success. Vinay Singh, Director of Sales & Marketing, St. Regis Mumbai, exclaimed, "In the era of digitalisation, one would be out of league if absent on social media. St. Regis Mumbai is certainly not behind on social media marketing front. We are ranked number two in terms of Geo-tagging and in terms of Instagram followers. We are analysing what is the need of the hour and are innovating our services to meet the new demands. Trip Advisor is one of the biggest platforms today to look out for best hotels in a city and our next target is to be among the top five hotels in the business capital of India in Trip Advisor's ratings."

6. PARAIDIGM SHIFT

There has been a paradigm shift in the travel industry around the world. Traditional travel agents have been forced to modify and innovate their working style due to birth of online travels agents (OTAs) and direct distribution of services by airlines and hotels' websites. How OTAs have marketed themselves through digital mediums and have eventually helped consumers with the ease of travelling across the globe is a thing to be learned. Travel agents are now certainly working towards digital expansions which will help them reach out the consumer especially millennial, Gen X consumer which refuses go a step ahead without technology. Innovating and offerings their services in a tech-friendly manner and through digital mediums is the key to success for traditional travel agents in today's ever changing landscape.

6.1 Success through Technology

The correct and optimum use of technology has led to the success of OTAs to a greater extent. They have targeted the Genx style of travelling. Travelling to a destination still needs an aircraft, to stay one still needs a hotel and to eat one still needs a restaurant. This was offered previously too but the present day condition is OTAs have worked towards easing out and accelerating these processes. Now one is not afraid to stay at a stranger's home because of Airbnb and similar home stay options. Reviews and ratings have helped tourists make a choice of cuisines. E-commerce platforms like online payment, traveller cards, etc., have reduced the tension of people carrying cash and doing foreign exchange, etc. Neelu Singh said, "Over the years, technology has helped create wider content, increased efficiency in travel transactions and faster tools that help agents to sell destinations and up sell additional services that the customer might choose to buy without increasing any complication of the booking process. Innovations in technology have created a seamless, convenient and connected experience for travellers and travel providers. Innovations in data convergence, reputation management, mobile commerce, digital transformation and automation has helped shape the travel ecosystem in a way that it enabled travel companies to offer not just products but also services that match customer expectations."

6.2 Digital technology and changing consumer behavior

The progression of digital technology continues to raise expectations and alter customer behaviors. Consumers are becoming increasingly empowered and discerning with the wealth of information available online. Trust and ease of fulfillment is now a key to decision-making and personalization form an integral part of this process. In a market where there is endless choice, and where customers are wary of being misled, established brands can succeed by easing the path to purchase. User experience (or UX) has become the top priority for both customer retention and advocacy.

7. NEXUS BETWEEN DIGITALIZATION AND CUSTOMER USE

- **Searching for information before the trip:** Perhaps the most widespread use, since today more than 90% of users check information on the Internet before reserving a trip or hotel. This translates into a responsive website and even into

versions directly envisioned for mobile devices, apps, and useful, quality content creation for the user,

- **Checking recommendations:**
  Although this is part of the process of searching for information before the trip, in many cases, it is done via other channels, not on the company's website, therefore following up with and responding to reviews, especially negative ones.

- **Online check-in and check-out:**
  among the most pragmatic functions, especially for reserving hotels and flights, the possibility to check in online saves time and paperwork for the customer and improves the company's internal management.

- **Secure reservation and purchase process:**
  Increases in online reservations and purchases have also brought with it increased user concern for the security of their personal and financial data. One of the main challenges for any company is to implement disruptive solutions that offer high security in data handling while not causing a poor user experience, since this leads to high percentages of abandonment in the reservation and purchase process.

- **App development:**
  users also search for information during the trip, which has fostered development of both general and specialized apps. In the case of hotels, they can serve to provide information about places and activities both in and outside of the hotel, with mobile services customized according to user preferences. Apps can be developed by tourism organizations and governments themselves to promote local tourism.

- **Smart cities:**
  Some towns, taking a step further in developing apps, have begun to implement geolocating smart systems with beacons that provide useful information for tourism: weather, hotels, culture, Transportation and even additional services such as supervision systems for children.

- **Connectivity:**
  Free mobile connectivity is essential now for many users, both Wi-Fi and 4G, for example. Internet connections are not only offered now in most hotels and other establishments such as restaurants and airports, but there are also areas implementing free Wi-Fi throughout the whole city.

- **Access to devices:**
  Some chains offer their client's devices such as tablets or smart phones during their hotel stay as a courtesy or for a small rental fee, offering access to tourist information and entertainment and practical information. Directly on their website.

- **New business models:**
  The high availability of users and the ability to geolocate them allow for additional, much more customized services, even new services such as reservations at the destination. This trend is even higher both among young people who travel without a set plan and reserve a hotel when they are already at their destination, and in business trips, which are often subject to last-minute changes.

- **Sector-based focus:**
  Apps focused on specific sectors are yielding excellent results in the entertainment and tourism sector, since they meet very concrete needs, such as the third sector, family tourism with children, the elderly, singles, the LGBT community, and even interest-based travel such as ornithology, hiking, scuba diving, or literary tours.

- **Augmented and virtual reality:**
  Beyond mobile devices, augmented and virtual reality experiences can be offered, such as the digital observatory of the Barcelona Skyline at Terraza 83,3, which provides information about the monuments thanks to augmented reality technology, and which also allows immersive visits to some of the monuments with virtual reality goggles.

8. ONLINE TRAVEL INDUSTRY – INDIAN SCENARIO

- The mobile apps have changed the way in which customers interact with brands and vice versa. With Smartphone adoption growing at a phenomenal rate, the number of travel-related searches and bookings via mobiles has sky-rocketed in the past year.

- The Indian government is now taking more initiatives to make various travel and tourism affairs go digital. The fresh approaches are to change the way both international and domestic tourists travel.

- Various travel arrangements, like booking of entrance tickets, have been transformed. A traveler can reserve tickets even before they set foot in India. E-tickets can now be booked for visiting 116 monuments across the country. The services have also been extended to mobile phones, letting travelers enjoy and benefit from the new e-platforms. While in a monument, tourists can use their phones to access the available audio-visual guides and combine them with venue-specific barcodes encapsulating complete information.

- "The 1363 helpline in 12 languages is a unique effort. It is available nowhere in the world. You may find the local language and English but here we have a mix of languages spoken by tourists. So there is an ease of experience. We have made e-ticketing for 116 monuments where you do not need to stand in a queue. Now you can start from your hotel or even your country with the e-ticket for that particular monument. There is a barcode chart accessible on your mobile that has complete information on a site or organization," says an official of the tourism ministry.

- The helpline also offers human's assistance that can be availed by dialing a "tourist's friend" or a tourist facilitator."We are inducting ex-army-men for the purpose and we hope this will help us ensure a sense of safety," the official adds.

- The various languages have also been updated on Incredible India's new website, which will be launched soon. To help the foreign visitors, it will have a lot of details including various travel-related services, prices, comparators, and certified experiential.

9. TOURIST E- VISA FACILITY

The government's 'e-Tourist Visa' facility continued to witness an increase in applications, with nearly 1.08 million tourists arriving through it in 2016 — a significant 142.5 per cent growth. There are continuous speculations about the feasibility of the plan and its ground-level hitches since the electronic visa on arrival scheme surfaced in November 2014. Ambiguities prevailed regarding issues such as payment gateway issues, unresponsive websites and the confusion regarding the availability of e-visa more than twice in a calendar year. Moreover, complaints about the inconsistency of the application form and its low-responsive nature have also diluted the intention of encouraging foreign tourist arrival.

The tourism ministry probably wanted to encourage foreign individuals to travel with a short-term planning, take via routes while travelling to other countries and bring family members while on business visits to India. However, the overall numbers although shown in glorious percentages are far from being satisfactory. While experts believe that India is failing to gain grounds due to lack of proper representation in the international markets, the inconsistent tourism policies can be held responsible for the meagre growth over the last two years.

10. CHALLENGES FACED BY INDIAN TRAVEL AND TOURISM INDUSTRY.

1. Inadequate broadband infrastructure and related service quality

Impact the effective and timely completion of electronic payment transactions, which are critical for the travel and tourism industry. In fact, there is a direct correlation between information communications technology (ICT) readiness and tourism receipts .The travel and tourism industry, like the majority of service industries, is witnessing a rise in services provided through mobile devices, with an increase from 9% in 2015 to 33% in 2016. The increase in mobile device penetration has enabled geotagging and the customization of services as a result of an improved understanding of individual preferences and behaviours. Through digitalization, India will be better able to deliver experiences to travellers and promote its destination.

2. For the traditional travel agents going digital is the path to followed.

They have to get smart and adapt to the changing environment. In the coming years, things will become more complicated for traditional agents as the change is inevitable. Delivering a personalised experience through the help of digital mediums can be the only possible way to stand among the elites of present day travel and tourism industry.

3. **Consumer expectations are changing.**
   Making a task easier is the top motivating factor for downloading travel apps, Ease of use and navigation is nearly twice as important as any other travel app feature. When people have a negative brand experience on mobile, they are 62% less likely to purchase from that brand in the future than if they have a positive experience. 59% of people are likely to recommend a brand if it delivers a frictionless experience across channels

4. **Cash constraints and the culture.**
   There is a big pressure on costs as well as acquiring new guests. With the pressure on the business and the margins, travel companies will have to keep working on cost reduction. And the cost reduction can happen only by increasing the productivity of the employees. A lot of work is to be done on process reengineering, automation and tools for performance improvement.

11. SUCCESS OF DIGITALISATION IN INDIA - THE FUTURE

1. There is nothing constant in this world and this applies to technology as well. Technology interface keeps on innovating itself thereby challenging its users to adapt to every change. OTAs that are already performing well also have to cope-up with this change. Solution they have opted is either merger and acquisitions or innovating their services.

2. Recently Ola Cabs partnered with Google maps to provide Ola Outstation Cabs on Google maps. Similarly MakeMyTrip now has a 24 by 7 customer care centre assisting its customers with ease of operations and stays. Companies are studying the reviews of people on social media and analysing them to offer better customer experiences. Customer involvement has now been extended with the rise in usage of technology.

3. Many tourism and hotel companies are not just putting their web or offline functions in mobile format, but they are also creating experiences and new business models designed specifically for the mobile channel.

4. We could say that mobile technology is developing so quickly that it is hard to get an idea of all the potential it holds for the tourism and travel sector. The digital transformation clearly happens when you listen to clients, understand them, and constantly offer them unique experiences.

5. The travel and tourism industry therefore has also been at the forefront of driving the digital development. Be it in the form of digital marketing techniques, digitization of paper tickets, digitization in payments or hitherto offline post sales services. The long-term players in the industry will constantly have to be on their toes to design unique ways to offer varied services to their target audience.

6. Data science is an area, where a decade or more of history with customers should lead to better suggestions and customization. Another key enabler that has given boost to the online travel industry is the 'Big Data', as it enables the travel companies to engage better with customers and deliver service efficiently and intelligently. It provides us a great opportunity to positively impact both the business-end and the experience at the customer-end through better decision-making, greater product and service innovation and stronger customer relationships that will be delivered by new approaches to customer management, revenue management and internal operations. Indian online travel booking space is in the midst of a critical churning.

7. Mobile has become the most secular driver of online travel business. It has helped in geo tagging and providing relevant content to customers who for the longest time have been used to offline buying of travel services in destination. This has also led to significant growth in last minute bookings on the mobile. The mobile platform is only getting better and bigger. From e-commerce, we are heading to m-commerce era at a fast pace thanks to mobile which is now an indispensable companion available on a 24×7 basis. More importantly, the bandwidth has significantly improved. The entire eco-system which we are noticing today has fundamentally evolved because of mobile. There are three possible disruptors in the space: The mobile internet/app revolution is one of the biggest growth drivers for the industry at large. It has connected many more people in India and expanded the addressable market for companies like ours.

8. The emergence of mobile wallets such as Paytm, PayU and others supplemented this trend by making the payments side of things more democratic. Gone are the days when debit cards were not used for online transactions. Having said that, much more needs to be on the payments side.

9. The accommodation market in India has opened up to beyond branded hotels thanks to digital tools being leveraged to aggregate unbranded hotels or alternative accommodations.

10. The government's e-tourist visa programmed continues to gain traction, with a sharp rise in applications in October 2016. Digital Solutions enhancements are the need of the hour as it really does help the flow of travel.

11. Most OTAs offer packages with custom destination, itinerary, flight and hotel bookings and discounts. Portfolio can be enhanced with things like fare alerts service for flights, progressive web app for hotels, Trip Assistant, hotel check in experience or assist, Personalized hotel search, easy location search for hotels , instant refunds on domestic flights & hotels.

12. CONCLUSION

The Indian travel and tourism sector also contributes significantly to the country's GDP and employment. The direct contribution of travel and tourism sector — which reflects the net value of output generated by hotels, airlines, travel agents, other passenger transportation services (excluding commuter services), and restaurants and leisure industries directly supported by tourists — was expected to rise 6.9 per cent y-o-y in 2017. This account for 3.3 per cent of the country's GDP, and is expected to form 3.5 per cent of it by 2027. In accordance with its GDP contribution, the sector contributes significantly to job creation. The sector directly accounts for 5.8 per cent of the total employment in India. Further, the Indian travel and tourism sector is expected to have attracted capital investment of INR2, 387.7 billion (USD35.2 billion) 03, 04 in 2017 — accounting for 5.7 per cent of the total national investment.

The rapid digitization offers a rare opportunity to disrupt rather than go for incremental changes. For instance, mobile based cab services like Uber and Ola have disrupted the cab hire market, met technology will soon be disrupting established agency market, and marketplaces could disrupt agencies as well as search platforms. Wallets have disrupted traditional methods of payments and Adhaar or UPI could perhaps disrupt wallets in the near future, hence there cannot be a better time for path breaking disruption and the Indian travel industry is well poised to do so. We feel that the onus on disrupting existing technology ecosystem is on the existing players. The companies in travel industry must be able to spot the emerging trends and be able to pivot the organization to become future-ready.

While positive strides are being made in each of these aspects, India still considerably lags in comparison to most nations globally. Several major players in the Indian travel and hospitality sector cite payments as one of the key pressing concerns. The issues concerning payments include lack of integration between the payment systems of banks, mobile wallets and merchants, high cost of digital transactions and lack of facilitation of foreign currency payments. The travel and hospitality sector deals with a large amount of data comprising personal information of travellers, financial transactions and customer behaviour. With increasing digitisation in travel — especially the growth of mobile wallets, Unified Payments Interface (UPI), internet banking and other such digital initiatives taken by the government — the risks of data security are bound to rise

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Resource Sharing and Networking in Libraries

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ABSTRACT
This paper gives the information about resource sharing and network system which is useful in the library daily work. Now days in era of the ICT, the computers make very much impact on every area in our daily life. Library is also not an objection from that. Information explosion is so huge in all area of studies. On the basis of that all / each and every library cannot have that much space and money to store all the information available everywhere. As per the ICT development growth, the libraries have to cop up with the new ideas and techniques available. Resource sharing is the best solution for use of information available in a huge amount. Again, the resource sharing is supported by networking in libraries. With the help of networked system, libraries can share knowledge, equipment etc. on online basis. Library material is available in print and digital format which is used by different users as per their needs. Resource sharing and networking plays a very supportive role in all the areas of library work. On the other hand, libraries can improve their services, performance, and operations related to user's area of studies.

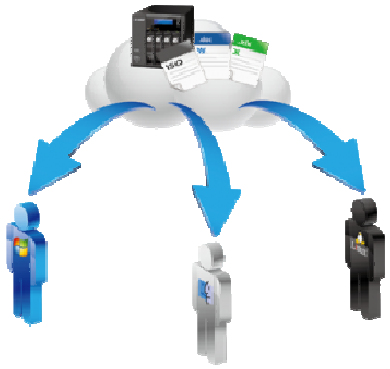
KEYWORD: *Resource Sharing, Objectives of Resource sharing, Networking, INFLIBNET, DELNET*

INTRODUCTION

In the era ICT, the information is available in a digital format such as audio, video, text file etc. Resource sharing is based on co-operation principles which help in storing, accessing information in different areas of studies. 'Five Laws of Library Science' the book written by Dr. S. R. Ranganathan has also highlighted about resource sharing and networking of library material and information on library co-operation. Networking and resource sharing is supporting in usefulness and betterment of library services and operations. Five laws of library science play an important role in daily work of libraries. University Grand Commission (UGC) and other educational bodies also suggest and support for the networking of college libraries for resource sharing in India. In Developing countries like India networking of college libraries under umbrella of universities has been widely supported in different levels of development as per ICT requirements tools and techniques. INFLIBNET and NAAC are also highlighted / stressed on networking of university and college libraries in providing information environment of affiliated institutions. There is growth in the information in published document in a recent era in both print and digital form. As a result of this, no any single library can able to get hold of process to store all document that user need as per his subject. "It is difficult to any single library to get your hands on even one percent of the total document published in the world" (Kent 1978)

Some of the reasons for the requirement of resource sharing and networking are as follows:

a) Information Explosion
b) Increase in literature in both print and digital format
c) Wide range of users in all areas
d) Different areas of specialization
e) Declining funds
f) Cost per publication
g) Variety of needs for literature
h) Required environment for ICT – Limitations for libraries



Interlibrary Loan (ILL) is the initial activity in libraries and information centers to support resource sharing. At the local level union catalogue is used as support to resource sharing. In this case only books and library material is taken into concern. Resource sharing is now taken place by library networks as the ICT application used by libraries. The libraries are located on far places from each other the computer networks are used to connect them and communication technology is used for resource sharing. Thus ICT plays an important role in betterment of resource sharing universally. WWW and internet technology added benefits to networking. Different organizations share the access to E-resources by developing consortium and economic knowledge base in limited funds.

RESOURCE SHARING:

According to John Fetter man, "any and all of the materials, functions, and services which constitute a modern library system, it is amalgamation of people (manpower), processes, ideas, materials, and money which form the substance of a library and can be described as its resources".

The American Library Association (ALA) Seminar on Network and Multi-type Library Co-operation defines the term resource sharing as "The co-operative structures, which cross jurisdictional, institutional, and often political boundaries to join in a common enterprise, several types of libraries — academic, special, and public".

Since 1960, library professionals are using the term resource sharing. Resource sharing can be supported libraries such as co-operative acquisition, cataloguing, classification. Computerized systems overcome limitations such as distance, language, time etc. two way co-operation is needed from the participating libraries in resource sharing and networked process such as developing the collection on shared basis.

Now a day users are more demanding and their expectation from the libraries are above the collection. For satisfying the user needs as their requirement staff have to be more interactive with the latest knowledge and updates related new areas of interest and requirements in best possible way.

OBJECTIVES OF RESOURCE SHARING:

The main objective of resource sharing is maximum services at minimum cost and creating such an environment that serves to meet all needs of user in available materials. Material means reading material of all types, formats acquisition, cataloguing, storage and preservation. Following are the objectives for better sharing:

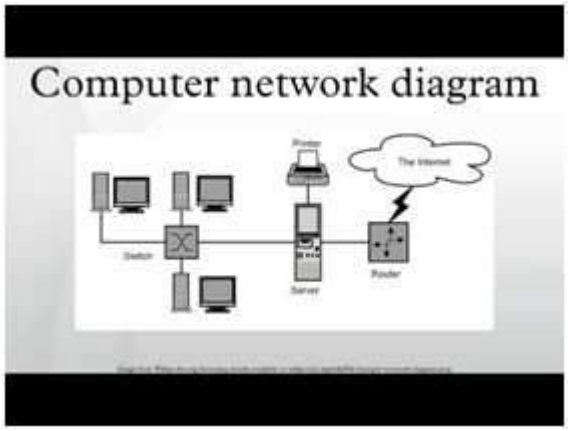
a) To give best services to user
b) To serve with more coverage and facilities
c) To avoid duplication
d) To share experiences
e) To face financial crisis
f) To encourage interaction
g) To give wider access to users
h) To improve ILL productivity and control ILL cost
i) To offer high quality library and information support services
j) To reduce communication gap between the libraries

In the management institution following areas for resource sharing such as collection update, inter library loan, reference services, membership, content page services, centralized processing, human resources, expertise and facilities, database creation, union catalogue, training and software.

NETWORKING IN LIBRARIES:

Networking is a process that fosters the exchange of information and ideas among individuals or groups that share a common interest. It may be for social or business purposes. Professionals connect their business network through a series of symbolic ties and contacts.

A network connects computers, mobile phones, peripherals, and even IoT devices. Switches, routers, and wireless access points are the essential **networking** basics. Through them, devices connected to your network can communicate with one another and with other **networks.**



National commission on libraries and information science National program in 1975 defines network as "Two or more libraries or other organization engaged in common pattern of interaction exchange through communication for some functional purpose. All libraries are having different type of reading material as per their requirement so that libraries having an agreement for network system and exchange of material as their own rules and regulations. For giving facilities to each other libraries are using computers and telecommunication as a tool for communication between them." For communication between the computers systems in the network there are different TCP/IP protocols are available in the internet facilities. For connecting computers to each other types of topologies are there such as bus, star, mesh etc. There are number networks such as LAN, WAN, MAN, and Wireless networks with help of which the distance between the libraries or organization has no matter for communication. Data is available in the form like multimedia, hyper-text which can be available to the user in fraction of minutes. Gopher, e-mail, telnet, FTP and WWW are the user friendly tools available for processing and accessing information. The agreement of co-operations is made by libraries for the purpose of resource sharing of each other material. In ICT era libraries are using computers and automated their library services using software. Library material is present initial in the form of books, journals, magazines in print but now e-resources are available such as e-books, e-journals, e-newspapers. Because of the networked systems the computer can use space, database, program and printer beyond the distance, language cost time.

In India for supporting the concept of resource sharing and networking in libraries some major library networks are working for betterment of libraries:

Information and library network (INFLIBNET): This is autonomous Inter University Center (IUC) of University Grand Commission (UGC) of India under Ministry of HRD in June 1996. INFLIBNET is involved in modernizing university libraries in India and connecting them as well as information centers in the country through a nationwide high speed data network using the state-of-art technologies for the optimum utilization of information. INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India. It gives support to the academic and research institution in automation of libraries, creating union catalogue of serials, thesis, books, monographs, creating database of projects.

Developing Library Network (DELNET): In 1988, DENET was started with financial support by National Information System in Science and Technology (NISSAT). National Information Center (NIC) of the planning commission, Government of India presently supports activities of DELNET. DELNET gives membership to various libraries including universities, colleges, government department and provide technical assistance to them for creating and maintaining bibliographic databases, serials, union catalogue preparation, abstracting services, inter library loan etc.

Management Library Network (MANLIBNET), Ahmadabad Library Network (ADINET), National Information Center Network (NICNET), INDONET, Education and Research Network (ERNET), Calcutta Library Network (CALIBNET) etc. are the number of library networks available in India to support networks. These networks help in resource sharing, staff training, ILL etc. In this way, ICT development changes the working of the library. The libraries using the automated software help each other to ful fill the requirement of the user which is the first priority of the library. As per Dr. S. R. Ranganathan five laws of library science by using the new technologies like resource sharing and networking libraries can satisfy all the five laws such a way that satisfying user need in minimum time and cost.

CONCLUSION:

As the ICT is emerged in the library system, the new technology helps us for faster & accurate work to be done. The main reasons of resource sharing in libraries are information / knowledge explosion, increase in library users, library services, acquisition

problem, economic resources, web based resource sharing. Library network ensure resource sharing manage number of libraries by co-operative nature which help in collection development and reduce duplication of work. The main purpose of library network is to make available network based services to users, document delivery services, bibliographic information services and human resource development.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Digitlal Economy and Digital Divide: Balancing for Growth

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ABSTRACT
The paper examines the issue of the "digital divide" in all societies. It becomes more serious when the societies are already imbalanced with regard to economic and social structures. The people with access are becoming richer while the poor are being left behind aggravating the divide further. In this information era where earning is a function of learning the digital divide will keep a vast section of the society in dark age due to lack of access to information. This is the exact issue of digital divide. This divide is not going to reduce unless there is a conscious effort from the policy makers and planners.. As it is stated correcting the digital divide, will provide the greatest opportunity for people to come out of poverty and ignorance. But the study shows the gap is continuously expanding throwing a big challenge to the planners to balance the twin objective of growth in digitization and reduction in the digital divide.

1. INTRODUCTION

The Digital Economy world over is creating fastest generation of wealth that was never experienced in the history of mankind. The growth is the result of the belief that business and society will be guided by technology and the world of computers in the coming years. This presumption is surprising as vast majority of people still do not have access to basic technological knowledge and resources. Except of few pockets of cities world over there is lack of education and teaching resources for making this dream a reality.

Recognising this gap the individual and government organisations are offering outreach programs in the fundamentals of the emerging technologies. They are emphasizing the importance of technological knowledge for people from all walks of life. In other words these individual and organizational initiatives are attempting to reduce the 'Digital Divide' being experienced among all age groups in the society.

2. DEFINITION OF DIGITAL DIVIDE:

In the recent years the dependence of people on computers has increased for performing all types of tasks. The ability of a person to access the computers and technological gadgets has increased his knowledge about the social and economic events happening in different countries. But everyone in the society is not able to access this technology with ease. The concept of digital divide refers to the gap between the people who are able to access the technology and the people who are not able to access it for variety of reasons. The people falling under the category of less or no access at all are the poor, handicapped, rural and senior citizens.

3. REASONS FOR DIGITAL DIVIDE:

Along with the fast growth of technology there is equivalent or still faster growth of the digital divide. A section of the society that is already connected that includes the rich and educated, are adopting new technologies very fast and becoming more connected. On the other hand there is the other section which has less access to internet and computers are lagging far behind. Number of studies have also highlighted that this divide is becoming wider across the various economic and social classes.

- **LEVEL OF EDUCATION:**
  The gaps in the levels of education appear to be widening the digital divide. People with high level

of education are more likely to access the internet than people with lower levels of education. Research studies have also determined that people with graduate degrees are 10 times more likely to use technology than those with only high school education. Over the years the digital divide between these two groups of educated class increased from 8% to 25%

- **INCOME EARNINGS**
  The income earnings is also related to the digital divide. The higher the income earnings of a family it is more likely to adapt to the new technologies. While the lower income earnings are less likely to go for these advancements in these areas. Poor neighbourhoods do not have the infrastructure of the rich areas. The information technology facilities are available in rich areas. The companies dealing in these equipments get attracted to the rich areas. Poverty makes it less attractive for companies to venture for the poor thereby making the divide still wider.
- **VARIED SOCIAL CLASS**
  Digital divide is also observed across different social class. The progressive class tend view the use of technology as an addition to knowledge and the path for their individual and family progress. While people for the lower class tend to view the investment in computers as a luxury expenditure. The computers isolate the individuals from family life. As a result the gap in internet usage too between these two broad social classes widens creating a bigger digital divide.

4. POSSIBLE SOLUTIONS:

The issue of digital divide is a matter of serious concern. Though it is a serious problem it is not unsolvable. If some of the following measures are undertaken the magnitude of the problem can surely be reduced.

- **INCREASING COMPETITION**
  One of the reasons for the relatively poor to not access the computers are the high cost. The computers market can be considered to be monopolistic where few producers dominate the markets. The Government through policy measures can encourage new entrepreneurs so that the average price reduces. More number of players should also be encouraged to provide the services in the rural areas to reduce the divide.
- **PUBLIC ACCESS CENTERS**
  In rural and semi-urban areas where the due to variety of reasons individuals cannot purchase the computers the Government should invest in creating computer centers accessible at different public places. It will be a convenient and affordable for the poor, unemployed and people from lower classes to use it for their individual and societal benefit.
- **CREATING A POOL OF TRAINERS**
  Number of people do not immediately adapt to the new technologies either due to lack of knowledge or due to the fear of using them due to ignorance. This negative tendency causing the digital divide to increase can be corrected to a large extent if we create a pool of trainers in new technologies in all the areas. They will encourage the poor, unemployed and socially disadvantaged groups to use the technologies and guide them whenever they struck up in their use.
- **CHANGE IN PERCEPTION**
  As stated earlier one of the factors contributing for the digital divide is the perception of the people towards the technology products including the computers as luxury items. Only when this wrong notion is corrected the process of reducing the divide will be initiated. People should start viewing them as necessities. They should understand and accept the power of technology as tools for growth.
- **INVOLVING CIVIL SOCIETY GROUPS**
  The reach of civil society especially the non-government organizations is a well known fact. The ability of the group to reach far and wide can be harnessed to spread the awareness about the technology and computers. Their skill to convince the rural poor will be of immense use for bridging the digital divide.
- **HARNESSING THE C.S.R. RESOURCES**
  In many developing societies the high cost of the information technology infrastructure contributes for increasing the digital divide. The private corporate can be encouraged to invest and create the technology infrastructure in schools especially in the rural areas as a part of their C.S.R initiatives. The success of the private intervention in other areas will also give positive result in reducing the digital divide.

5. SUMMARY

The paper reveals that the issue of the "digital divide" is a matter of concern for all societies. It becomes more serious when the societies are already imbalanced with regard to economic and social structures. The people with access are becoming

richer while the poor are being left behind aggravating the divide further. In this information era where earning is a function of learning the digital divide will keep a vast section of the society in dark age due to lack of access to information. This is the exact issue of digital divide. This divide is not going to reduce unless there is a conscious effort from the policy makers and planners. From the analysis it is clear that the main cause for digital divide is not the cost but the technological illiteracy among the people. The absolute level of illiteracy makes the promotion of technological illiteracy still more difficult. As it is stated correcting the digital divide, will provide the greatest opportunity for people to come out of poverty and ignorance. But as the data in shows the gap is continuously expanding throwing a big challenge to the planners to balance the twin objective of growth in digitization and reduction in the digital divide.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
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A Critical Study on Digital Marketing with Reference to Different Components of Digital Marketing

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ABSTRACT
Digital Marketing is a part of marketing which uses digital channels. Some examples of Digital channels includes advertise on website, YouTube, Face book and sponsorship on YouTube. Content marketing, Social Media marketing, E-mail Marketing, Search Engine optimization (SEO), Search Engine marketing (SEM) and Web Analytics are components of digital marketing. According to a survey by Internet and Mobile Association of India (IAMAI), India will have around 500 million internet users by June 2018.So result of this digital marketing shows growth in Digital Marketing in India.

KEYWORD: *Digital Marketing, E-mail, Search Engine optimization, Search Engine marketing*

INTRODUCTION

Digital Marketing is a part of marketing which uses digital channels. Some examples of Digital channels includes advertise on website, YouTube, Face book and sponsorship on YouTube. Whenever you use digital channel for marketing then it is known as digital marketing. Now days, rates of internet service providers go on decreasing their service rates rapidly, the number of users go on increasing. So definitely the population for digital marketing is more than conventional marketing. Advantage of digital marketing over conventional marketing is that you are easily able to trace number of customers watching your advertisement. You are also able to positive and negative result of digital marking through analysis of data. So there is lot of scope for experiment. [1]

Components of Digital Marketing

Following are the components of digital marketing

1. Content marketing
2. Social Media marketing
3. E-mail Marketing
4. Search Engine optimization(SEO)
5. Search Engine marketing(SEM)
6. Web Analytics

1. Content Marketing:

The key to growing a business online is Content marketing. It is concerned with traffic of users, lead and sale. It rotes around creation, publications and promotions of products [2]. The Content Marketing Institute, an online resource for information defines content marketing as "Content marketing is a strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience — and, ultimately, to drive profitable customer action"[3].

Content marketing first create awareness between customers. Then customer will automatically do research. The research is to purchase high quality product at low price. Customers start comparing same product on different content marketing site or social media by different vendors. Choose the best vendor. [4]

2. Social media marketing:

Now a day's social media is part and parcel of everyone's life. Now social media is also play role of effective business platform. While selecting social

media marketing, selecting proper platform is most important. Along with time, efforts and fun is also important. E. g if you are interested in cooking, fitness and fashion then Instagram and what's up plays important role. To use social media as digital marketing there is need to decide theme and study of competitors work style. From this decide content police. It is not short term job. Its ongoing process, which needs research, continues efforts.[6]

3. E-mail Marketing

Email marketing is said to be one of the strongest digital marketing media**.** Steps involved in this type of marketing are create email list. Manage email follow up. Compile analytics and use them. Justin Bryant in his video Email Marketing Tips and Tricks for Beginners 2016 discusses some tips for digital marketing using email, these are as follows.

Use the right email service. Make it easy to subscribe. Define your audience. Always have a welcome Email. Encourage subscriber to fallow you on social media. Make sure that people will able to easily unsubscribe. Use short punchy subject lines. Segment your list. [7]

4. Search Engine optimization(SEO)

A search engine is a software system that is designed to search for information on the World Wide Web. Google, Bing, Yahoo and AOL are major search engines used by number of customers. A customer enters phrases into a search engine to search and receives a list of Web content which includes websites, images, videos or other online data. Search Engine Optimization is marketing your site on the Internet's most popular Search Engines. The primary goal of SEO is to improve traffic to your website from searches on the internet for phrases that are related to your target. A good site has content that is carefully created, with relevant content, well-structured and easily read and indexed by search engines. [8]

5. Search Engine marketing (SEM)

Search engine marketing (SEM) services help businesses acquire targeted website traffic, build relationships and drive conversions. [9] It is the practice of marketing through paid advertisements that appear on relevant search engine results pages and websites. These advertise can have different formats and are paid for through a bidding process. You can even choose which search engines to use and where/when you want your ads displayed so that you can best reach your audience using your style of advertising.[10]

6. Web Analytics

Web analytics is the measurement and analysis of data to inform an understanding of customer's behavior across web pages. It measure browsing activities of customers. E. ghow many customers visit particular site, how long they stay, how many pages they visit, which pages they visit repetitively. Businesses use it to measure and site performance and purchase conversion rate.[11]

Future of digital marketing

According to a survey by Internet and Mobile Association of India (IAMAI), India will have around 500 million internet users by June 2018. This will create a fascinating business opportunity to sell services and products to a growing population of tech-savvy internet users.[12]Because of this ,digital marketing can be used to target a large number of customers. It is very cost effective. It provides instant data analytics of your marketing. There is scope of change as per result of data analytics. With these advantages there is very bright future for digital marketing in India.

Conclusion:

As population of internet users go on increasing, the users who use social media, YouTube, email, online shopping etc. are huge. Because of this digital marketing is growing industry in India. The facilities like data analytics provide instant result of advertising on digital media. It will help to improve the performance of marketing.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
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Digital Economy and Development of E-Commerce

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ABSTRACT
Everywhere in the world the production and businesses processes are becoming more and more computer and Information Technology based. According to the 'techopedia' definition of Digital Economy is a common term used for all those economic processes, transactions, interactions and activities that are based on digital technology. It is not only based on the use of internet but any of the many digital tools used in today's world.

As a part of the digitalization of business processes the method of marketing and selling have seen a revolutionary change that is in the form of Ecommerce. Again quoting 'Technopedia'

Electronic commerce is the marketing, buying and selling of merchandise or services over the internet. It encompasses the entire scope of online product and service sales from start to finish. The digital tools used in ecommerce include computer platforms, applications, solutions servers and various software formats manufactured by e-commerce service providers and for increasing and facilitating online sale and purchase.

Ecommerce is as much a need of the buyers as the sellers. There are digital modes of financial transactions associated with ecommerce as online payments and refunds are to be managed.

Objectives:
The main objective is to study the development of Ecommerce during the last decade as a result of the digitalization of commercial processes. Other objective is, to study some real examples like, the experience and extent of digital platforms used by the biggest ecommerce company like Amazon.

Methodology:
The information will be collected from secondary sources like, published articles in journals, company web sites through internet and by using library resources. Necessary data will be gathered from secondary sources. This being a qualitative research paper less data will be used.

KEYWORDS: *Ecommerce, digital platforms, digital economy, digital transactions.*

INTRODUCTION
The term digital economy became part of everybody's life in India after Prime Minister shri. Narendera Modi launched the program of Digital India on 1st July 2015. Digital India is an initiative of the Government of India to ensure that government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity. Each and every Indian came in the gamut of digitalization over last decade. Some of the changes were already taking place and activities in the economy were becoming digital activities even before digital India project was launched but now it has become essential to go one step ahead and take it to the common people. Let us understand what digital economy means and what are its implications? Merely having access to digital products as users or consumers will not suffices but more appropriate will be to understand the changing economic references of the age old economic activities such as buying and/or selling in the digitalized era, digitally enabled processes and the future path. The paper attempts to

through light on the connection between the digital economy and development of Ecommerce. For this purpose, meaning and definition of both the concepts is presented below.

Digital Economy:
According to the 'techopedia' definition of Digital Economy, it is a common term used for all those economic processes, transactions, interactions and activities that are based on digital technology. It is not only based on the use of internet but any of the many digital tools used in today's world. The continuous technological innovations are broadening the scope of digital economy. This includes the embedding of connected sensors into more and more objects (the Internet of things); new end-user devices (mobile phones, smart phones, tablets, net books, laptops, 3D printers); new digital models (cloud computing, digital platforms, digital services); growing intensity of data usage through spread of big data, data analytics and algorithmic decision-making; and new automation and robotics technologies (OECD 2015).

Defining Ecommerce:
OECD definition of an e-commerce transaction: "...the sale or purchase of goods or services, Conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders". Whereas the Payment and delivery do not have to be conducted online.

Orders made by telephone calls, fax or manually typed e-mail excluded from e-commerce's definition here.

Business-to-business (B2B)
Online sales between enterprises, including linked to outsourcing and off shoring.

Online presence needed for SMEs to participate in value chains.

Business-to-consumer (B2C)
Involves sales by "pure play" e-commerce enterprises and traditional bricks-and-mortar firms adding online sales channels.

Many ways to reach consumers: social networks, crowd sourcing, e-commerce websites, mobile applications.

Consumer-to-consumer (C2C): e.g. eBay

Government-to-business (G2B): e.g. e-procurement, e-tendering etc.

WTO definition of e-commerce for its studies and papers is, "the production, distribution, marketing, sale or delivery of goods and services by electronic means".

Again, quoting 'Technopedia' 'Electronic commerce is the marketing, buying and selling of merchandise or services over the internet'. It encompasses the entire scope of online product and service sales from start to finish. The digital tools used in ecommerce include computer platforms, applications, solutions servers and various software formats manufactured by E-commerce service providers and for increasing and facilitating online sale and purchase.

There is much more than simple internet involve in digital Ecommerce. According to eMarketer E-commerce companies are highly involved in digital advertising along with digital marketing.

Development of Ecommerce during the last decade and use of Digital Platforms:
The UNIDO's working paper published in 2017 on 'National Development of ecommerce in India'; there is an exponential growth of Ecommerce in India during the last decade. Further the report states that, The E-commerce industry was worth Rs. 351 (5.4 billion US $) billion in 2011 grew at a CAGR of 37% to touch Rs. 1257 billion in 2015, and is estimated to become a Rs. 2,110 billion (31 billion US $) industry by 2016. The same reports projects the value of ecommerce in India till 2020, 101.90 $billions. The ecommerce growth projections show that,

Table 1: E-commerce size ($ billions) in India:

2013	2014	2015	2018	2020
2.9	13.6	16	40.3	101.90

Source: UNIDO's working paper (2017) on 'National Development of ecommerce in India

Table 2: The size of Ecommerce sector in India expressed in Rupees:

Year	Rupees Billion	Percentage growth
2011	351	34%
2012	473	35%
2013	533	13%
2014	815	53%
2015	1257	54%
2016	2110	68%

Source: UNIDO's working paper (2017) on 'National Development of ecommerce in India

In terms of diversity of Ecommerce number of companies have been developed and entered India during last five years. In the range of products and services also there is a continuous addition to the economy. Snapdeal.com, Amazon.com, Flipkart.com (now with Wal-Mart). BigBasket.com, FirstCry.com, Zovi.com, Uber.com, olacabs.com, Cloudacar.com, quickr.com, olx.in, cloudBuy.com, tolexo.com, industrybuying.com, power2sme.com, Amazonbusiness.com, Retailers Shoppers Stop Ltd., Infiniti Retail Limited and the range is increasing to cover multiple sectors such as travel, education, fashion, healthcare, real estate, furniture, grocery and food products, entertainment and many more. The prominent names include, Makemytrip.com, yatra.com, cleartrip.com, goibibo.com Online Real Estate Magicbricks.com, 99acres.com, commonfloor.com, Housing.com Online Fashion Jabong.com, Myntra.com, Zovi.com, yepme.com, limeroad.com, Fabfurnish.com, Pepperfry.com, Online Furniture urbanladder.com Online Education Purple Squirrel Eduventures , Plancess.com Online Food and grocery Zomato.com, Foodpanda.in, TinyOwl.com, BigBasket.com, Grofers.com etc.

Worldwide Development of Ecommerce:

UNCTAD conference 2017 paper on, 'E-Commerce: Global trends and developments' by *Sven Callebaut* Lead Consultant, eTrade Readiness Assessments Division on Technology and Logistics, has presented the data collected from US Census Bureau; Japan Ministry of Economy, Trade and Industry; China Bureau of Statistics; KOSTAT (Republic of Korea); EUROSTAT (for Germany); UK Office of National Statistics; INSEE (France); Statistics Canada; Australian Bureau of Statistics and INE (Spain), which shows the world wide trends in major ecommerce markets. In USA Ecommerce is 39% of GDP, in Japan 60%, China 18%, Korean Republic 84%, Germany 27%, UK 30%, France 23%, Canada 26%, Spain 20% and Australia 16%. Ecommerce as a percentage of GDP has increased in Developed countries and also in the Developing countries. The eMarketer had predicted in July 2014 that the B2C Ecommerce Sales world Wide over the period from 2013 to 2018 would increase from $1.233 Trillion to $2.356. While during this period the share of Asia-Pacific region would be highest i.e. 37.4% while that of North America would be 30.6% and Western Europe would be 22.7%. The Asia-Pacific region is expected to become leading region in ecommerce sales. The increase of ecommerce sales is tied to a growing base of digital buyers or online buyers.

The digital platforms used by Ecommerce Companies:

The consumers all over the world have become digitally active and expect the digitalization of most of the needs of their life. The digital solutions for the needs of the common people have been continuously increasing. Changing customer behavior is another significant factor which every service or product manufacturer as well as provider will take in to consideration before taking any other business decision. Customers spend the majority of their time on digital (e.g. social, messaging) platforms. Hence, Ecommerce companies, financial institutions, educational institutions, healthcare providers must position themselves where their customers are, and create a corresponding digital platform strategy relevant for their market position, customer service proposition and strategic objectives.

From the digital platform provider's perspective, partnerships with Ecommerce companies help create an ecosystem where customers need not leave their home or work place if they need anything and thus become a tension free part of their lives. The creation of online payment gateways and the online banking services as well as other online payment service providers like Paytm have become the important part of the Ecommerce ecosystem. As the economy started to grow more demanding for digital transactions more platforms came in to market. The two sided simple buyer seller platforms are now replaced by multi-sided platforms that bring together consumers, service providers and stakeholders to facilitate value exchange as part of a larger ecosystem. All the agents of the Ecommerce ecosystem actively contribute to its development. The digitalized advertising by Ecommerce companies is another area where digital platforms are widely used but since consumers do not directly come into contact with these digital advertising platforms as they remain in the background there is less awareness about it.

Ecommerce at Amazon:

The digital platform used by the biggest Ecommerce Company Amazon is its own creation. It does not make use of digital solutions created by others for its main online retail platform. It is done through AWS that is Amazon Web services. 10 years ago, Amazon Web Services, the cloud Infrastructure as a Service arm

of Amazon.com, was launched with little fanfare as a side business for Amazon.com. Today, it's a highly successful company in its own right, riding a remarkable $10 billion run rate. The close competitors of AWS are Microsoft, IBM and Google. AWS is the most successful cloud infrastructure company. It's ahead of the other three. In the year 2000 Amazon started its own web services through its own internal developers. AWS was developed by Amazon for fulfilling its own internal requirements of an operating system. The company does not use digital platforms developed by outside agencies. While their competitors in the field of ecommerce use the services of Google, Microsoft and IBM. Developing the internal operating system for the internet was the major step in the success of Amazon in the ecommerce business. Parallel to ecommerce it is a service company too.

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The Latest Trends in Ecommerce:

A major trend in ecommerce this year is international retailers investing across Asia-Pacific to gain access to markets. With special reference to India, 'Walmart's May 2018 purchase of Flipkart. Flipkart is India's major home grown digital retailer. India, with its population of 1.3 billion people, represents the biggest opportunity in Asia-Pacific for retailers. This year, ecommerce will account for just 2.9% of overall retail sales, which translates to $32.70 billion. Fertile ground for growth fuelled the bidding war between Amazon and Walmart for Flipkart.

Prior to the Flipkart bidding war, Amazon had already invested in or acquired at least six ecommerce platforms in India. Those investments led to Amazon capturing 30% of India's ecommerce market, per a May 2018 Citi Research report. Acquiring Flipkart, which holds 30% of the market according to Citi Research, would have clinched dominance in India for Amazon.

Walmart's strong desire to enter India, however, led it to outbid Amazon, paying roughly $16 billion to secure Flipkart. (Source: eMarketer). Simultaneously there is digital transformation taking place in the financial services sector. On the other hand in 2017 KPMG International and Microsoft today announced two important strategic initiatives that will expand the scope of their global alliance: providing clients with a portfolio of digital solutions and enabling KPMG's smart audit platform, KPMG Clara – both built on KPMG business experience and the Microsoft intelligent cloud. There are several examples of such strategies in the global business where digitalization is the key to expansion.

Conclusion:

Process of digitalization of the economy may be at different level in different countries. Within an economy also all sectors may have a different pace of digitalization. Consumer retailing has become most popular due to digital transactions. But the biggest Ecommerce Company relies only on its own digital platform providers rather than using outside ones. Experts in this field have stated that the growth of B2B transactions in digital form is higher than B2C transaction. Digitalization is expected to spread to many more sectors and activities in the coming future. The growth prospects are unlimited though challenges exist.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Using Data Analytics in Journalism Media Systems

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ABSTRACT
From 2010-2018, the computational technology changes are made enormously. Technological gadgets like desktops, laptops are succeeded by mini laptops, tablets, smart phone, and watches.

The traditional journalism media systems said to be in dissolved states right now. In next upcoming decade the media communication of journalism will affect maximum number of changes. The top newspapers like New York Times, Huffington Post, Times magazine are also affected and willing to proceed for changes. The most of historic newspaper Medias are concentrating on digital platform from being destroyed in competitive world. The online subscriptions are given in suitable prices to end users / readers having special discounts, offers etc.

Using data analytics in offline media can lead to increase number of conversion to upcoming trend in gradual way.

I. INTRODUCTION

The journalism sector is changing from print media to digital. The top news agencies like Huffington post, New York Times, Time magazine are already suffering from readership loses. To stop readership and maintain the scope of journalism media in future, media should have to go digital platform. Using digital platform newspaper agencies or media division can analyze user interests, behavior, selection, choices, demands, problems, suggestions, feedback using special data analytics soft ware's / tracking codes.

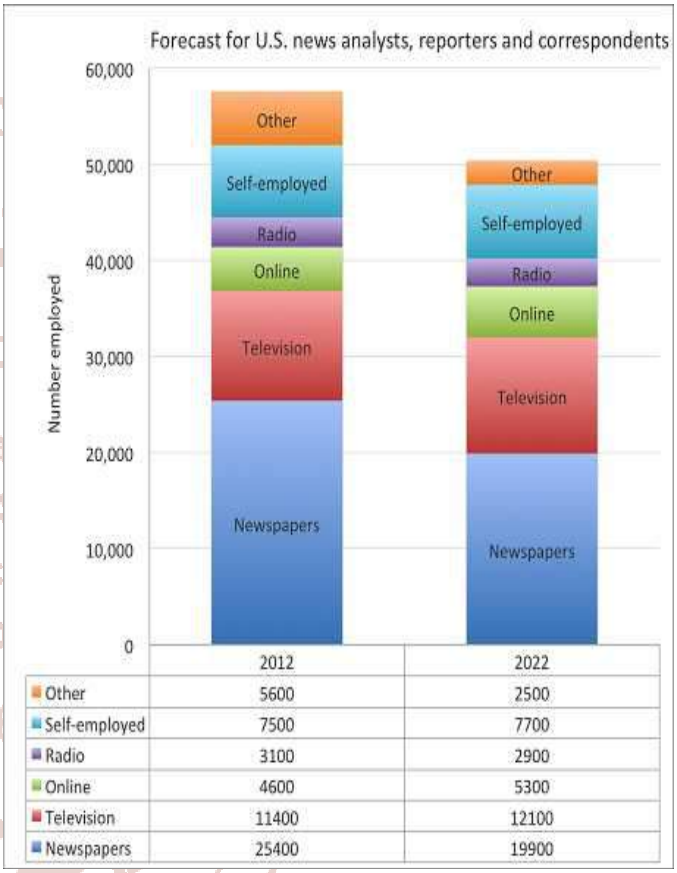

Fig.: A graph showing number of conversion of media manpower compare to 2012 Vs 2022

The special fact finding result of above chart is the rapid growth in technology. The social platforms like Face book, Twitter, YouTube is available for each user using which anyone can exhibit his/her skills to public absolutely free of cost. It is growing online digital media. Also the main disadvantage of these platforms is authenticity of data / news being spread as viral. So offline media is said to be faithful in most of cases.

II. Review of Application in Journalism

i. Studying Expected Reader Category

Before starting any newspaper or magazine or maximizing reader base in certain area, research study is essential step. We have to work on user reading interest according to age, interest, gender, season, area, recommendations, trends and other social factors.

Data analytics tools like Alexa, Google Trends, Google Analytics, Twitter Trends, nearby social networking trends, online surveys will help you to work detail on content what people are searching. You can get clear idea about what user want, what they will like, how much reach will be achieved for certain article.

For example: If research study shows reader age in between 40-70 years in certain city, 60% to that of overall population of city then editor should focus on events, activities, books, old fashioned articles, retirement plan, health related articles so on.

ii. Studying Design Patterns, User Experience, Colors, Page Arrangements, Fonts.

In today's competitive digital world or offline media, user experience for each product is said to be most important and essential aspect for growth. The following factors should be considered to achieve best goals of readers.

A. Studying design pattern layout of offline media like newspaper / magazine.
B. User flexible font sizes should be used as per importance. Proper bold, italics, alignment properties are secondary factors. Unicode based support and printing errors should be taken in mind.
C. Most of offline media printing works on a concept of CYMK color codes. We recommend to use two colors combination techniques. The colors should be decent, vibrant, catchy. The important news should be highlighted in an effective way.
D. Font size should be based on user age specifications. The news which is released for general public purpose should have at least +2 font size as compared to regular font size.
E. Page arrangements are also considerable fact in offline media segment. The pages should be ordered depending on severity of news heads, day and other holiday factor.

You can use Google material design (https://material.io) to study layout structure what user preferences to read.

iii. Analysing Depth of No. of Reads / Article or Page

In newspaper, it is best exercise to calculate user satisfaction regarding certain article or post. Your article should inspire user to give his opinion, feedback, comment, suggestion and recommendation if any. We can get such response in the form of Web API, QR codes, miss call alerts, reply numbers, sms, polling, surveys, direct contact number posting techniques. Such responded data should be collected and dumped in Tableau software to get depth of no. of readers / article or page.

iv. Monitoring Each User Interest Activity under User Privacy Policy Compliance

There are several interesting sections we can provide in newspaper or offline media. Like we can print jobs, jokes, poems, drawings, color filling jobs for child, joining dots, puzzles so on. This type of interest help user to interact with your concepts.

You can post company name as ad in puzzle question. This will induce brand management awareness about a product very easily.

This activity should be monitored / observed as per proper consent from user or giving him privacy policy statement in a printing or other way. You can inspire them giving attractive badges, points, and other techniques.

v. Using QR code / Patterns for Reference Videos, Feedback System

News funnels should be designed such a way that user should react with news / article. We can give QR Code below article using which user can navigate to online feedback form / survey form. If certain article says about past details about a person they can simply provide video link embed in content area of news / article. The article looks like a running scenario.

vi. Emergency News, Alerts, Notifications, Event System

Suppose that there is an event going to exhibit in city Pune. User will read this event details. You can give access code to access it in his/her smart phone like event date, time, venue, place and other details. Tools like Google calendar, Apple notes, and Reminder systems will help to intimate you day before an actual event to be start.

A crisis alerts can be sent to users those are registered with us on email or sms. We can push send notification to each user as per latest updates. Google crisis API is available to measure and work on data, causes, emergency helpline, tracks of historic data.

vii. Provision of Bookmark, Add To Reading List, Synchronization with Third Party Apps Like Apple, Android Cloud

Old fashioned newspapers are no responsive. The newspaper should talk with your opinions. The concept of bookmark is highlighted on the concept of user history about read. We can build specific web application or smart phone application either in android or iOS based platform.

When user reads certain story or article if he / she want to save this article for future reference purpose then such type of facility should be given for users. We can send bookmark request using AWS web links or API masks.

Apple Inc. gives Add to Reading List facility for Safari web browsers. We can send such reference links through API to cloud request. This will enhance the use of reference for news articles.

Synchronization is also one of the best useful features to sync in between offline media as well as online media / services.

viii. Publishing Ads as Per Consumer Behavior

Publishing ads in top leading newspapers is highly expensive. The giant e commerce companies like Amazon / Flip kart work on the concept of data mining and data analytics. The company focuses on top selling / trending products in certain area. Then application gives top list of most selling products. These products can be prepared or gathered together in the form of readymade design. The image quality can be maintained to proper aspect ratio without losing its proportion, colors or bit depth. The said design is sent to advertise / marketing department of newspapers according to region. Each design will reflect in design manner as per region changes. So, the final sales lead ratio will be achieved very easily because proper data history of users is viewed using special data software.

ix. Product Placement in Trending News

Suppose there is trending news about Elon Musk regarding Tesla Inc. Like. Tesla Inc. is going to introduce solar / electric cars. This news will attract the eyes of readers. Maximum lead ratio is achieved here. So brilliantly we can place smart ad campaign in between the content of such news like advertising dry cell batteries, dealer / franchise networks, new opportunities in electric industry so on.

x. Pursuasion of Mind towards Using Online Versions of Media

The future is centralized on digital media. In upcoming 10 years, the offline media will be vanished. Global warming is raising its position. Also people are now aware of global warming so they are willing to use solar based, environment friendly products in day to day use. Concept of paperless offline / social world will lead to expand positions.

So media should focus gathering or persuade the minds of offline reader base to navigate or move online. The attractive offers should be given to make them happy. Also production cost will be reduced due to online usage.

III. CONCLUSIONS

Using data analytics in journalism may help to reduce unskilled manpower in industry. We can automate news selections, procedures, real-time user activity so on. It will help to give the appropriate content to selected users interest using very less resources. Right now it is turning point for offline media / journalism industry.

The courses or graduation degree in the field of Mass and Journalism course should have latest syllabus of content management system, data analytics to use in media. Implementation of data analytic features in offline media can sustain further digital growth in future.

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An Empirical Study of IPPB with Reference to its Vision and Mission Statement

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ABSTRACT
On 19 August 2015 RBI has issued the license to India Post to run a payments bank. On 17 August 2016, IPPB was registered as a public limited government company for setting up a payments bank. India Post Payments Bank (IPPB) was setup under the Department of Posts, Ministry of Communication with 100% equity owned by Government of India. On 17th August 2016 it has been registered as a public limited government company. There are 155,015 post offices and 400,000 postal service workers who are going to provide house to house banking services. The Pilot project was launched in Ranchi (Jharkhand) and Raipur (Chhattisgarh) on 30 January 2017. IPPB will expand in phases across India covering all post offices, through a network of IPPB branches/controlling offices, working on a hub and spoke model. The first phase nationwide inauguration happened on September 1, 2018 with 650 branches and 3250 post offices as access points.

The IPPB has the vision of 'Building the most accessible, affordable and trusted bank for the common man.' and the mission is 'Spearheading financial inclusion by removing barriers and reducing costs for accessing banking services.' This paper is intended to analyze the policies of IPPB to check its alignment with the abovementioned mission and vision of the bank.

KEYWORDS: *Payment Bank, Digitization, Indian Economy, India Post, Doorstep Banking, QR Card*

INTRODUCTION
In September 2013, the Reserve Bank of India constituted a committee headed by Dr. Nachiket Mor to study 'Comprehensive financial services for small businesses and low income households'. The objective of the committee was to propose measures for achieving financial inclusion and increased access to financial services. The committee submitted its report to RBI in January 2014. One of the key suggestions of the committee was to introduce specialized banks or 'payments bank' to cater to the lower income groups and small businesses so that by January 1, 2016 each Indian resident can have a global bank account.

Payment bank is the new type of bank which has been approved by the RBI and the Government of India. Reserve Bank of India gave its in-principle approval for the new kind of banks called as Payments Bank. There are 6 banks which received such license. Currently four banks out of six are caring their transactions. The A payments bank is the small version of the existing banks with the deposit limit of Rs. 1 lakh. These banks are not allowed to issue the cheque book facility to the customers. The payment bank can't advance loans or credit to its customers. The bank can offer the facilities like remittance of funds, Internet banking, bill payments, recharges and other banking facility except the loans and advances.

The main objective of payments bank is the spread of payment and financial services to small business, low-income households, and migrant labour workforce with the help of the technology and internet. The payment bank enables to increase the level of use of financial services to the remote areas of the country.

India Post Payments Bank (IPPB) is set up by the Department of Posts, Ministry of Communication, and Government of India. This bank has been established to utilize the huge network of India post and the postmen to provide house to house banking services. All 3 lakh postmen and gramindaksevaks will be equipped with mobile devices and will increase the customer base with the help of 1.55 lakh India Post offices across the country which is nearly 2.5 times of the bank network. The post payments bank has an advantage to link all its 17 crore post office savings bank accounts.[4]

Apart from the all other facilities of payments bank, IPPB provides a QR Code-based biometric card to its customers. The bank also provides the facility of sweep the balance between the IPPB saving account and the post saving bank account. This will help customer to maintain the balance of more than Rs. 1 lakh which is the maximum limit of deposit set for the payment bank.

Unique Services offered by IPPB:

QR Card: It provides a unique, secure and convenient way to access bank account. Customer is not required to remember PIN/Password, as transactions can be initiated by using biometric authentication. Customers can perform cash transactions, money transfer, bill payments, or cashless shopping using this card. To perform any transaction, customer simply has to scan the QR code on the card and authenticate it through biometric verification.

Doorstep Banking: IPPB provides the opportunity to enjoy banking facilities at home with Doorstep banking services. The wide network of post offices and postal employees will make banking accessible to the remotest corners of the nation. This facility enables to open a bank account, transfer funds, deposit and withdraw cash, recharge or pay bills and accomplish much more by a trusted GDS/Postman at the customers home or office premises This helps to save time, effort and cost of travelling to the bank.

SWEEP facility: The RBI has permitted IPPB to link the Post office saving account. There are more than 17 Crore of such accounts which could be linked with the IPPB account. As the payment bank has the permission to accept the deposit of Rs. 1 lakh per account, the excess balance can be swept to the linked POSA account.

Literature Review:

The bank is providing various services including Mobile banking, Phone banking, SMS banking, missed call banking etc. Bank also provides the various payment services. The unique feature of the bank includes the doorstep banking and use of QR Card.[1]

Financial Inclusion is "The process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost" (Rangarajan Committee, 2008).

The department of post is financially not in good condition. It has the deficit of 119.69 billion in the year 2016-17. As the beacon of inclusive banking, it appears that the choice of IPPB is seems to be incorrect. [2]

One of the key suggestions of the committee on financial inclusion was to introduce specialized banks or 'payments bank' to cater to the lower income groups and small businesses so that by January 1, 2016 each Indian resident can have a global bank account.[3]

Objectives:

1. To analyze the services provided by India Post Payments Bank
2. To check the compatibility of the services provided by the bank with the Vision and Mission statement of the bank.

Data Collection:

The secondary data has been collected from the banks official website, different articles from internet and the newspaper.

Data collection and Interpretation:

Services offered by the bank:

Saving Account:

Bank provides saving account in 3 different variants i.e. Regular saving account, Digital saving account and Basic saving account.

The Regular saving account is the Zero balance account with Interest rate of 4% p.a. This account also provides the facility of fund transfer through IMPS and the facility of Bill payments and recharges. The unique feature of the account is the use of QR card and the facility to link POSA (Post Office Saving Account). As the deposit limit of Rs. 1 Lakh is applicable to the payment bank, the balance above 1 lakh automatically gets swept in to linked POSA

The charges applicable to the various services vary from 0 to 50. There are no charges for deposits and withdrawal, but there is the limit on the amount from Rs. 5,000 to 20,000. There are charges for each transaction for the doorstep facility. The bank also charges the fees for the fund transfer. These charges vary from Rs. 2.5 to 50 per transaction per customer.

The digital saving account is the Digital version of the regular saving account. This account can be opened and operated through the IPPB Mobile App and Android Phone. The basic saving account is also bundled with the same services like regular saving account.

Analysis: Except the doorstep banking service, there is no other service which provides the competitive advantage to attract the new customers. In fact other payment banks like Paytm gives 6% rate of interest and free fund transfer services.

Current Account:

IPPB offers the facility of a Current Account to the small merchants/ kirana stores and individual businessmen. The minimum monthly balance required for this account is Rs. 1,000. The cheque collection charges of Rs 25 to 200 per instrument based on the amount. There are also the charges on cash Deposits above Rs 15,000 per day.

Analysis: The maximum limit of Rs 1 lakh on the account balance, and the charges on the deposit over Rs. 15,000 per day, indicates that the account is not likely to be preferred by the businessmen.

Mobile Banking, Phone Banking, SMS banking and missed call banking:

Through Mobile banking, IPPB provides the facility to operate the bank account on android mobiles. The customer can do almost all the transactions using the IPPB Mobile App. The transactions like Balance and statement enquiry, fund transfer, bill payments, cheque book request, stop payment request and sweep funds etc. can be carried using the mobile banking.

In Phone banking, there is no requirement of having Android mobile with internet connection to use these services. Except Fund transfer and the Sweep funds, all other transactions can be done using Phone banking

SMS banking and missed call banking is used only for the balance enquiry and Mini statement.

Analysis: It seems that IPPB is in line with all other banks in providing these services. The only advantage to the bank seems here that the postmen can be the key factor to guide the customers to use these facilities.

QR Card and Biometric authentication:

IPPB is not providing the normal debit card to its customer instead it provides QR card which depends on the Biometric authentication. For this authentication it uses the ADDHAR database. UIDAI has told to Supreme Court that it cannot insure 100 % biometric matching. In this context if the fingerprint prints doesn't match the customer cannot perform any transaction.

Vision and Mission statement of IPPB:

The Bank has been established with the Vision of 'Building the most accessible, affordable and trusted bank for the common man.' This vision has backed by the existing network of the postmen. The postmen is the most accessible and trusted person for the common man in rural India. The same postmen are going to play an important role as a banker to achieve this vision of the bank.

The bank has formed a Mission of 'Spearheading financial inclusion by removing barriers and reducing costs for accessing banking services.' to achieve its vision. The financial inclusion is depends on role played by the postmen in opening the new accounts. Also the 17 crore Post office saving accounts can be linked to the IPPB account which will provide the

readymade customer base to the bank to achieve the mission of financial inclusion.

Comparison of the banking services with the Vision and mission statement:

The vision / mission component to be achieve	Favourable policies	Adverse Policies
Most accessible Bank	Doorstep Banking.	
Most affordable Bank		There are charges for almost all transactions.
Most Trusted Bank	A postman's personal bonding.	
Spearheading financial inclusion	17 Crore POSA can be linked.	Difficult to reach to Urban customers.
removing barriers in accessing banking services	Biometric authentication.	
Reducing cost of Accessing banking services		High charges compare to other payment banks.

Findings and suggestions:

From the above analysis of the services provided by IPPB, it seems that various policies related to the charges and the limits on the transitions are high and rigid in comparison to other payment banks. Hence we can say that in the long run, bank has to revise the charges on the transaction to achieve the quality of 'affordable' in its Vision statement.

The service like Doorstep banking using the network of the Postmen, indicate that bank is in line with its vision of becoming most accessible and trusted bank.

Conclusion:

The one thing which is not measured or analyzed it the potential of the strong bonding of the Postmen with almost all the villagers, farmers and the rural craftsmen. With the help of this potential, and the banking skills the postmen can be a game changer. In spite of all other drawbacks like the use of only QR cards, charges on the transactions, and the competition by the other banks, IPPB will attract and retain the new customers. If this happens then we can say that IPPB has achieved its mission of Spearheading financial inclusion.

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Digitalization of MSME's : A Need of an Hour

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ABSTRACT
MSMEs in India are a significant donor to the Indian country and are drivers of progress. By its less assets oriented and high labour absorption character, MSME sector has made significant assistance to the developed production, services formation, rural industrialization and export of the country. It is predictable that in terms of value, the sector accounts for about 45 per cent of the manufacturing manufacture and 40 per cent of the total export of the country. Over 6000 products ranging from traditional to high-tech items are manufactured by MSMEs in India. The sector creates largest services opportunity next only to agriculture. The present paper is based on secondary data which covers MSMEs, their role, digitalization in MSMEs, their benefits etc.

INTRODUCTION
MSMEs in India MSME Sector plays a major role in India's there export performance. According to the Ministry of MSME (2011b), just about 45-50 per cent of the Indian export is have a say by this sector. This takes place through merchant exporters, trading houses and export houses. They may also be in the form of export instructions from big units or the manufacture of part use in over exportable goods. It would shock lot of to know that non-traditional crop account for more than 95 per cent of the MSME export. In the last decade, the export arrangement has been additional fuelled by the progress of clothes, leather and gems & jewellery units of this sector. The product groups where the sector dominates in exports are sports education items, ready-to-wear garments, woollen garments &woollens, plastic products, processed food and leather products. According to the fourth survey of MSME, 67 per cent of the enterprises in the register MSMEs sector were occupied in developed, whereas 17 per cent of the enterprise was engaged in the services behaviour. The residual 16 per cent of the enterprise were busy in repairing and conservation. About 90 per cent of the firms were proprietary owned firms. The manufacturing sector is an significant segment and considered to be a key development driver of the Indian country like in several developing countries. By NMCC and NASSCOM (2010), the Indian manufacturing separation has over 53 lakh manufacturing units with 99 per cent of the units employ less than 10 workers. Food & beverages, textiles, non-metallic mineral products, chemical products and machinery &utensils are the top 5 verticals in terms of number of units and they account for nearly 75 per cent of the total number of units in the manufacturing sector. *MSMEs in India* Small scale sector is the spine of Indian manufacturing sector with 90 per cent of the total industrial units. However, according to the statement by NMCC and NASSCOM (2010), the contribution of Indian manufacturing to the national GDP has stagnated over the last few years by about 15 per cent in spite of the progress in the built-up sector. The donation level is found to be much lower when benchmarked with comparable economies such as China (39.3 per cent), Thailand (35.2 per cent), Malaysia (31.1 per cent), Indonesia (24.7 per cent) and Vietnam (20.8 per cent) (NMCC & NASSCOM, 2010). The small sale sector is a significant component of the foundation layer of manufacturing sector and entrepreneurial actions in India. As the productivity and performance of large manufacturing firms would be influenced by the competitiveness of their suppliers, i.e., mainly MSMEs, it is significant to improve productivity levels of MSME to improve the manufacturing sector as an entire.

Challenges faced by MSME sector in India:

Despite the huge potential, the small scale sector face several confront and there have been the inadequacy in capital, technology and marketing. While SME sector in India did well in conditions of the absolute information, its relative performance was on the verge of stagnation. Still the services level remains stagnant on a per unit basis, but has improved considerably in relation to the organized sector services. The number of unregistered units is much higher than the number of registered units. found that cost, excellence and release time are the major pressures on the small industries. According to the study, SSIs speak out that the major constraints are lack of progress conducive environs, inadequate administration support and incentive and poor infrastructure for training. SSIs have highest competitiveness at local level and lowest competitiveness at worldwide *MSMEs in India* level. Use of information to optimize decisions, to define quality standards, and optimization of working surroundings are the chief areas of competency expansion (Singh et al., 2010). According to the fourth all India census 2006-2007, conducted by Ministry of Micro, Small and middle enterprise, Govt. of India, it was uncovered that about 29.40 per cent of the total units were suffering from illness and about 3.73 per cent of enterprises undergo from incipient sickness. Food products and beverages (17.73 per cent), apparel (10.23 per cent), textiles (9.11 per cent) were the top three industries that suffered from sickness. Percentage share of stopped up enterprises at nationwide level was about 22 per cent of the total registered enterprises. According Confederation of Indian manufacturing (CII), Indian MSMEs face several challenges for progress. Some of the evils are high cost of credit, incomplete access to equity capital, problems in supply to government departments and agency, procurement of raw resources at a competitive cost, inadequate infrastructure facilities such as power, road, low skill levels and lack of access to modern technology, lack of accomplished manpower, evils of storage space, designing, packaging and manufactured goods display, absence of suitable device to revive/close sick enterprises rapidly and lack of resources for branding and marketing, lack of right to use to global markets (CII, 2010). Infusing competitiveness, infrastructure development and bringing vast population of MSMEs in the unregistered sector to the usual is the main confront previous to the GOI at there.

Digitalization of Industries:

Manufacturing Industry in India has its history of going through various phases of development over the period of time. It shows the dream of becoming one of high growth sectors in the coming years. Scientific and Technological developments have changed the scenario. Process industries and machine builders and Manufacturers are adopting with Innovative solutions in the fields of software and automation. It is proved that SMEs are the backbone of Indian Industrial development. SSIs have performed remarkably in the industrial development of the country. SSIs has great share in industrial production, in export and in generating employment opportunities. Even having occupying majority share of the industry, they are suffering from various issues which are becoming hindrances in their growth. The major issue of SMEs is quality improvement. As there is extensive manual intervention in manufacturing processes and lack of skilled labor, they can't compete with big industries.

As we are well acquainted that customer demands are dynamic and ever changing in nature, the pressure of competition is also increasing, SMEs have to face these major problems. Digitalization in SMEs will definitely enhance efficiency. Digitalization will reduce cost of production and it may minimize the manufacturing defects. Digitalization will help to meet the international quality standards and it will help them to strengthen their position in the global market.

Digitalization for increasing Revenue:

The growth of SMEs can be driven by E- commerce. Fast growing E-commerce business will help to enhance the revenue. Reduction in cost and operational efficiency will help to reduce the cost and in turn it will increase the revenues to MSMEs.

Digitalization for acquiring larger customer base:

Ecommerce in large cities has flourished. As the number of internet users is increasing, SMEs can develop their customer base in wide range. Digitalization will definitely help SMEs to enhance their customer base.

Digitalization for increasing operational efficiency:

Digitalization will reduce the cost of operation. Ecommerce will reduce the marketing cost such as outsourcing to call centres, advertisement etc. Through the digitalization. SMEs can reduce all the operational expenditures.

Digitalization and Information:
SMEs lack in information regarding new developments and new technologies. Due to digitalization, SMEs can access all type of information on different Medias. Due to digitalization, SMEs will get all the benefits offered by technology.

Governance and Institutional support for MSMEs
The Ministry of Micro, Small and Medium Enterprises is the directorial Ministry in the administration of India for all matter relating to Micro, Small and Medium Enterprises. It designs and equipment policies and agenda from side to side its field organizations and attached offices for promotion and progress of MSME sector. The office of the growth representative is an emotionally involved office of the Ministry of MSME, and is the apex body to advise, coordinate and formulate policies and program for the growth and endorsement of the MSME sector. The office also maintains liaison with Central Ministries and other Central/State Government agencies/ organizations/ financial institution.

Ministry of MSME and its complex of organizations
The Development commissioner office of MSME, have a network of Development institute, Testing Centres, autonomous bodies which comprise Tool Rooms and Tool Design Institutes, Technology Development Centres and preparation Institutes. Other connected agencies of this workplace are National *MSMEs in India* Small industry Corporation (NSIC), Small Industries Development Bank of India (SIDBI) and Khadi & Village Industries expenses (KVIC).

National Small Industries Corporation (NSIC) Ltd. was recognized in 1955 by the GoI with a view to promote, aid and forward the progress of small industries in the country. NSIC continues to remain at the vanguard of industrial development throughout the country with its various programmes and project to help the MSME in the country. The main functions of the company are to promote aid and foster the progress of micro and small enterprise in the country, generally on a profitable basis. It provides a variety of support armed forces to micro and little enterprises by catering to their supplies in the areas of raw material procurement, manufactured goods marketing, credit rating, acquisition of technology, and adoption of modern management practices. The NSIC is directly operating different programmes by a dedicated team of professional at all levels and operate through 142 offices located all over India and one office located at Johannesburg, South Africa.

Small Industries Development Bank of India (SIDBI)
is an top bank set up to provide direct/indirect financial assistance under different scheme to meet credit needs of the small-scale sector and to coordinate the purpose of other institutions in similar activities. Their major operations are in the areas of refinance assistance, direct lending, and growth& support services.

Khadi & Village Industries Commission (KVIC), established under the Khadi and Village Industries Commission Act, 1956, is a statutory friendship engaged in promoting and developing Khadi and Village Industries for provided that services opportunity in rural areas, thereby intensification the rural country. The KVIC has been identified as one of the major organizations in the decentralized sector for generating sustainable rural nonfarm services opportunity.

Divisions of Ministry of MSME
The Ministry of MSME has two Divisions called Small & Medium Enterprises (SME) Division and Agro & Rural Industry (ARI) Division. The SME divider is allocated the work of administration, caution and administrative supervision of the National Small Industries Corporation (NSIC) Ltd. and the three independent national level entrepreneurship development/training organisations. The separation is also accountable for completion of the schemes connecting to marketing and export promotion. The ARI separation looks after the management of two statutory bodies viz. the Khadi & Village Industries Commission (KVIC) and the Coir Board. It also looks after a newly created organization called Mahatma Gandhi Institute for Rural Industrialization (MGIRI). It supervises the completion of the Prime Minister's Services formation Program (PMEGP). The Coir Board is a statutory body established under the Coir Industry Act, 1953 for promote overall development of the coir industry and civilizing the living situation of the workers engaged in this conventional industry. Coir manufacturing is one of the major agro base rural industries in the country. The activities of the Board for expansion of coir industries include enterprise scientific, technological and economic research and

development activities; developing new products & designs; and marketing of coir and coir goods in India and abroad. It also promotes co-operative organizations amongst producers of husks, coir fibre, coir yarn and manufacturer of coir products, ensuring remunerative returns to producers and manufacturers. The Board has promoted two research institutes namely; Central Coir Research Institute (CCRI), Kalavoor, Alleppey and Central association of Coir skill (CICT), Bangalore for responsibility research actions on dissimilar aspect of coir manufacturing.

State Government support for MSMEs

The primary responsibility of promotion and maturity of MSMEs is of the state Governments. However, the GoI, supplements the efforts of the State Governments through a variety of initiatives. The role of the Ministry of MSME and its organizations is to assist the states in their efforts to encourage entrepreneurship, services and livelihood opportunity and perk up the competitiveness of MSMEs in the changed economic situation. State Government executes similar promotional and developmental projects/schemes and provide a number of behind incentives for growth and promotion of MSME sector in their own states. These are executed from side to side State Directorate of industry, who have District Industries Centres (DICs) under them to realize central/state level schemes (www.dcmmsme.gov.in). Apart from profitable banks, at state height, State Financial Corporation's (SFC) and twin function State Industrial growth Corporations are the major sources of long air money to MSMEs.

Government policies and support measures for MSMEs

Since sovereignty, GoI has given importance to the MSME sector, as it creates services opportunities and facilitates mobilization of secretive sector resources. GoI has taken supportive measures such as condition of items for exclusive manufacture by MSMEs, access to credit through priority sector lending program for commercial banks, excise exemption, reservation under Government acquire program and 15 per cent price preferences in purchases, infrastructure development and establishment of institutes of consumerist and skill development. MSME Development Institutes, formerly recognized as Small industry Service organization (SISI), were set up all over India to train youths and tool accommodation were set up with German and Danish assist to give skill preparation and provide technical assistance. At the state level, region Industrial Centres was setup throughout the state. Over a period of time, with liberalization, government policy has moved from protective measures to infusing progress and competitiveness in the sector. Supportive events focused on infrastructure increase, technology and fineness.

Finance

The Government has initiated several measures to facilitate easy access of funds to MSME sector. One such initiative is priority sector lending. For public and private sector banks, 40 per cent of the Net Bank Credit (NBC) is earmarked for the priority sector. Credit to MSMEs is from side to side the priority sector lending policy of the bank. For the foreign banks, 35 per cent is for main concern sector of which 10 per cent is reserved for MSMEs. Any shortfall in lending by foreign banks has to be deposited in Small Enterprise growth Fund (SEDF) setup by SIDBI. The Government has also announce policy package for stepping up credit to small and medium enterprises with the objective of repetition the credit stream to the sector in the next five years. In recent years, the sector has shown interest in alternative sources of funding such as primary/secondary securities market, venture capital and private equity, outside commercial borrowings, factoring services etc. Efforts are being put for Limited Liability Company Act to provide thrust to MSMEs in their move towards corporatization. The management has introduced a Credit Guarantee Scheme which provides collateral free credit ability by eligible lending organization to new and available MSMEs for loan upto 100 lakh per borrowing unit.

Technology

To facilitate skill up gradation and quality improvement, more than a few measures have been initiated by the GoI. The Government has set up ten state of the art Tool Rooms and preparation enters. These tool accommodations are *MSMEs in India* proficient in mould and die creation technology and abreast with latest technology such as CAD/CAM, CNC machining for tooling, void Heat Treatment, Rapid Prototyping etc. Tool Rooms offer guidance programmes on technical skills required for the manufacturing sector. The direction has introduce ISO 9000/14001 Certification Fee Reimbursement Scheme and reimburse 75 per cent of the certification fees subject to maximum of 75,000. To facilitate replacement of old equipment with new ones,

Government introduced Credit Linked Capital Subsidy Scheme with state support of 15 per cent of the store credit required to money the new purchase.

Conclusion:

Everything has two sides digitalization will prove very beneficial for MSMEs but there is dark side also. Actually many MSMEs are very far from the concept of digitalization. MSMEs are still in its infancy to use cashless economy. Digital payments keep the footprints ie proof; so many MSMEs are underreporting to avoid the tax. Digitalization brings transference in transactions but in reality they take more credit from the informal/ unorganized sources of loan. So it seems difficulty that MSMEs will opt for cashless economy. Cyber crimes and financial frauds are the major threats for MSMEs to trust on digital payment platform.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Digitalisation in Rural Entrepreneurship a Paradigm Shift

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ABSTRACT

This study aims to fill that fissure by studying how a digitalization occurring in rural entrepreneurship. This organizing issue is challenging, because stakeholders of rural entrepreneurs are not governed by any formal authority. To answer that question, it accepts forms of organizing as a theoretical view, which provides structure to examine organizing issues. In today, rural entrepreneurship considerably impacts many issues, including economic development, employment, food supply and social security. With increasing numbers of people moving from rural to urban areas due to poor employment opportunities, and the complexity of running their own businesses, the problem of potential social unrest, amongst others, becomes more credible. It is therefore crucial that researchers, particularly in those countries with large rural populations, investigate this problem and provide ways of solving it. Such challenges facing entrepreneurship in remote or rural places require modern, innovative business leaders, skilful political thinkers, and greater numbers of trained professionals, and academics who can think dynamically, and bring their ideas into broader societal use. In most practical cases, individuals who conduct their businesses in rural areas do so by utili sing locally available resources. Their business activities improve the standard of living for local communities by creating employment opportunities for people living in proximate villages and provide sources of entrepreneurial activity to establish industrial and business units in this rural sector of the economy. Similarly, rural entrepreneurship can further be described in terms of rural industrial is at ion. The existence of rural entrepreneurship which leads to viable economies in rural areas is therefore of extreme importance. Regardless of the extent to which rural entrepreneurs engage in a variety of activities, which range far beyond simply agriculture, they are still not fully Indus try alisedin their thinking and approach, due to the number of challenges that confront them in rural regions worldwide

Keywords: *Rural entrepreneurship, Employment opportunities, Industrial is at ion, Challenges in digitalization etc.*

1. INTRODUCTION

India, which was considered as primarily an agricultural economy, is developing at a very fast rate. It has now become a knowledge economy. It has got the world's largest pool of scientists, doctors, engineers and experts in every field. Till few years back India's metros were developed this had all the latest technologies. The evolution of information and communication technologies (ICTs) revolution in India has created a technological divide between the urban areas and rural areas many of India's companies and well educated enjoy the benefits of ICTs, these technologies were not accessible or affordable for the majority of the population. The divide is exacerbated by the deeply ingrained disparities of gender and social class, which determine who can or cannot use technology. Despite recent Liberalization, Privatization and Globalization since the 1990, accessibility is also hindered by language barriers, and a lack of suitable content and applications in local languages. The economic impact of digitalization of rural India is far and wide. To quote in the words of Kane J. Shore a Journalist "What a difference five years can make. In that time, a project to bring the Information Age to villagers in southern India has given 50,000 "information shop" users in a dozen" information shop" users in a dozen communities high-

speed wireless telephone and Internet access. It has also helped improve more traditional Indian communication methods, such as public loudspeaker networks and community newspapers."

India lives in its villages, declared M. K. Gandhi at the beginning of 20th century. "If the facilities available in the cities are not made available to rural population, the Governments will not have done their duties" said by Dr. A. P. J. Abdul Kalam, Former President of India. The life in Indian villages is simple and isolated; although they are connected now a day with cell phones and digital television transmission, yet they are cut off from the main stream of urban areas due to poor road connectivity and market for their agricultural commodities. The health, educational and civil facilities are also either absent or not up to the mark. Making such villages as 'Smart Village' is surely a noble program announced by Government. But no one in villages has seen what exactly, in the Indian conditions, smart village means. The objective of this paper is to discuss about components of Digital India and its nine pillars, adaption of 'look at Villages' policy and the smart villages driving towards smart India and the prerequisites of a smart villages cluster.

2. Concept of Digital India:

The vision of Digital India program is inclusive growth in areas of electronic services, products, manufacturing and job opportunities etc. and it is centered on three key areas – Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand and Digital Empowerment of Citizens.

Bharat Broadband Network Limited acts as the initial milestone of the program, which executes the National Optical Fiber Network project and also the custodian of Digital India (DI) project. Bharat Broadband Network Limited (BBNL) had ordered United Telecoms Limited to connect 250,000 villages through broadband, and planning to create 28,000 sets of BPOs in various states and set up at least one Common Service Centre in each of the gram panchayats in the state. These are the initial steps of Digital India expected to be completed by 2017. The 2016 Union budget of India announced with 11 technology initiatives including the use data analytics to nab tax evaders, creating a substantial opportunity for IT companies to build out the systems that will be required. Digital Literacy mission will cover six crore rural households. It is also planned to connect 550 farmer markets in the country through the use of technology. These are the points that the Government of India hopes to achieve growth on multiple fronts with the Digital India Program. The government aims to target 'Nine Pillars of Digital India' as follows:

A. Broadband Highways
B. Universal Access to Mobile Connectivity
C. Public Internet Access Programme
D. e-Governance – Reforming Government through Technology
E. e-Kranti – Electronic delivery of services
F. Information for All
G. Electronics Manufacturing
H. Digital or IT for Jobs
I. Early Harvest Programmes

3. Impact of digitalization:

The customers are exploring the new buying experience. Bene fits of this technological innovation. Customers are becoming leaders with the evolution of digitization. The ultimate goal of any company is to provide better user experience. A top-notch user experience is the best way to engage the customers. Differentiated experience will increase customer loyalty and improves feedback. With the initiation of digitization, customers are influencing the market ecosystem by analyzing the products/services. They are exploring the new buyer experience with online transactions, shopping etc. This era is called as "Information Age" as customers are becoming particular about the knowledge on product/service. Before the purchase, customers are reviewing the product with research. With digitization, it became easier to provide information to the customers. Through digitization economic benefits are being captured. Consider a simple case of E-ticketing services. The Digitization has made it simpler and convenient to book your tickets just by logging into the respected websites. You will receive confirmation Mail/SMS after the payment process. The websites are optimized for easy navigation and easy payment facilities. No need of waiting at queues or contacting agents for tickets. You can easily book your tickets by sitting at home.

4. Economic impact of digitalization on rural area:

It increases in employment opportunities. The foremost benefit of digitalization is increase in employment opportunities in rural areas. Large number of small entrepreneurs has got employment in provision of Internet in rural areas. The second benefit

is the improvement in standard of living of the people by improving their income. Large numbers of people are getting benefitted by these facilities. They are using internet services and other facilities provided by various schemes like lifelines India and are getting awareness regarding various plant diseases, new methods of farming etc. They are also getting information on various diseases of farm animals and methods by which they can remain healthy and their output also increases.

Rural community is making full use of available techniques and is reducing risk and uncertainty by getting market information online. Fishermen are checking weather conditions before venturing into the sea. They are also carrying mobile phones with them so that in case of any emergencies they can contact their relatives or authorities and they can get help. Large number of rural youth is getting training in using computers, MS Office and Internet. Internet Kiosks are conducting educational and training programs for rural youth. Under various programs large number of rural youth is being trained through village knowledge centers. Rural people have become aware of importance of spoken English, since English is the main language required for Internet.

5. Frame of Rural entrepreneurship:

Business working in rural environments cut off from primary metropolitan sites can be defined as part of rural entrepreneurship, and such enterprises function under extremely complex and turbulent business conditions presented by remote and underdeveloped areas, where local production is primarily committed to subsistence farming. Primary concepts in entrepreneurial practice involve independence, innovation, decision-making, forecasting, implementation and achieving success. However, rural entrepreneurship needs to be better developed to improve its broader economic participation. A transformation in how rural entrepreneurship is practiced could attract greater business success, but effective economic activities can only be achieved by the digitalisation of rural entrepreneurship. Digitalisation can be described in terms of the infrastructural processes associated with digital technologies, in which analogue information is transcribed to digital form and applied in broader social and institutional contexts. Rural areas are perceived to be entirely different from intensively settled urban and suburban areas, and are also distinct from natural landscapes or wilderness, such as forests or mountains. Rural enterprises can benefit from the use of local resources and can produce products or services to meet local demands, since they are able to access cheap labour from within their communities. Although it is acknowledged that no single, unified and accepted definition for the term 'entrepreneur-ship' exists, it is one dimension of strategic posture, which encompasses the risk-taking tendency of businesses, their ability to compete aggressively, their proactive initiatives and their product innovations, which are all entrepreneurial activities, and which indicates that all manner of organisations therefore behave entrepreneur like. Rural entrepreneurship implies the emergence or establishment of entrepreneurial activities in rural areas; in other words, the establishment of industries; which also implies that rural entrepreneurship is synonymous with rural industrialisation. Rural entrepreneurship represents the informal sector of the economy, characterised by small-scale businesses, including small traders and artisans. Rural entrepreneurship can be considered an important solution for reducing poverty, minimising rural-urban migration, addressing economic disparities and alleviating unemployment in developing rural and underdeveloped areas. Rural entrepreneurship presents a major opportunity for those who instead migrate from rural to semi-urban or urban areas and most rural entrepreneurs are faced with the multiple problems presented by the unavailability of primary amenities in these areas of developing countries. Due to this exodus of skills, a lack of educated individuals, financial limitations and insufficient technical and conceptual abilities, together make it difficult for rural entrepreneurs to success-fully establish locally based industries. In most practical cases, individuals who conduct their businesses in rural areas do so by utilising locally available resources. Their business activities improve the standard of living for local communities by creating employment opportunities for people living in proximate villages and provide sources of entrepreneurial activity to establish industrial and business units in this rural sector of the economy. Similarly, rural entrepreneurship can further be described in terms of rural industrialisation.

The existence of rural entrepreneurship which leads to viable economies in rural areas is therefore of extreme importance. Regardless of the extent to which rural entrepreneurs engage in a variety of activities, which range far beyond simply agriculture, they are still not fully industrialised in their thinking and approach, due

to the number of challenges that confront them in rural regions worldwide. The challenges lead to the success of ambitious start-ups remaining low, with factors such as market sizes, government policies and geographical profiles are continuing to influence their long-term performance. There is ostensibly little difference between rural and urban enterprises in terms of their structure, of how such businesses are organised and managed, and of how the characteristics of individual entrepreneurs are exhibited. Thus, it would appear that there is no specific category for, or definition of, rural entrepreneurs, beyond being individuals who manage business ventures in rural settings.

6. The magnitude of rural entrepreneurship digitalisation

The digitalisation of rural entrepreneurship is of tremendously important for the development and competitiveness of rural businesses. Digitalisation is a highly effective strategic growth strategy for businesses in emerging markets of the word, and there is much evidence that, in many countries, the improvement of entrepreneurial activities is regarded as a strategy to boost national productivity and job creation, which also improves their economic independence. Entrepreneurial actions strengthen personal and collective capabilities amongst local communities, and SMEs are currently regarded as mechanisms for economic growth and equitable development in creating labour intensive, capital-saving initiatives that ensure the creation of many new jobs. Small-scale businesses play a survival role for poorer households in the development of self-confidence, business and other skills, and the socio-economic encourage the women. Small businesses provide employment opportunities for rural communities, specifically by minimising migration of rural populations to urban areas, improving standards of living for local communities and promoting rural tourism-related art activities. Enterprise and entrepreneurship are the drivers of economic growth in rural, which indicate that the ongoing challenges facing traditional rural sectors, and the future success of rural economies, are inextricably linked to the capacity rural entrepreneurs, possess to innovate and identify new business opportunities that create jobs and income in these areas. Entrepreneurial development in the form of rural SMMEs has also emerged as a strong agent for socio-economic diversification. Small enterprises are not only important in contributing to local economies, but, from an international perspective, play a vital role in the creation of national marketplace employment which is amongst the largest in the world, is likewise largely supported by SMMEs, and the advanced technology employed in both China and India has assisted in industrialising their vast rural areas and allowed national penetration into widely diverse international markets.

7. Pros and Cons of rural entrepreneurship digitalization:

Pros:

1. Diminish the business costs.
2. Give strength to home-grown entrepreneurs.
3. Right of entry to world markets.
4. Speeding up the manufacturing enterprise.
5. Marketing connections.
6. Improved business transactions.
7. Wider distribution of customer service improvements.

Cons:

1. Sky-scraping setting up costs.
2. Technologically advanced skills are required.
3. Not have of safe cyber security.
4. Lack of privacy and data protection laws.

The cost benefits and importance of digitalisation of rural entrepreneurship must be clearly understood and be encouraged as this will be an important promotional tool for strengthening company brand. The concept of digitalisation will improve and bring new changing trends in emerging markets including rural industries and scale up product development and product diversification, as well as promoting idea generation through use of social media.

Conclusion:

It concludes that due to the various challenges such as lack of broadband availability and electricity in many rural places, there is a lot of improvements need to be done to improve rural business of rural communities as well. It has been found that rural entrepreneurs are also faced with barriers including poor telecommunications infrastructure, management incompetence, lack of marketing skills and insufficient entrepreneurial knowledge, therefore, it is suggested that to government and private sector should be encouraged to work together to improve co-ordination and its policy development for the rural places. National governments should establish steering agencies responsible for championing and

iodinating rural entrepreneurial digitalisation and modern technologies networking systems for rural communities.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Information Technology and Indian Agriculture

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ABSTRACT
Development of technology has opened new opportunities and dimensions for the agriculture sector in India. This technological advancement has enabled the country to shift from a period of traditional subsistence farming to an era of hi-tech commercial farming. India today makes use of technology at every stage of agriculture right from production and processing till marketing. In spite of this, there still remain challenges in its complete adoption by small and marginal farmers which if suitably addressed could lead to the rapid growth of the primary sector in the future years.

KEYWORDS: *Information technology, agriculture, hi-tech, farmers*

1. INTRODUCTION

Technology has changed our lives forever and for the best. Through its influence in different aspects of human life such as medicine, communication, education and transportation among others, life has become easy and comfortable for people. Similarly, technology has also had a huge transformational impact on agriculture in the Indian society. The 1965 green revolution in India brought about a major technological breakthrough, thus creating a long-lasting impact on the nation's primary sector.

With 54.6% (census 2011) of India's population engaged in agriculture and allied sectors (horticulture, floriculture, sericulture, and livestock, bee keeping and fishing) and with 17.4% (2016-17) contribution to the country's gross value added, the sector is an indispensable part of Indian economy. (Department of Agriculture, 2017). Productivity of certain agricultural items has shown a rising trend over the years and today, India ranks first in the production of cotton, jute, pulses and milk and second in the production of wheat, fruits and vegetables. This achievement has been possible due to the adoption of new technologies leading to higher crop yields, efficient utilisation of available inputs and crop diversification patterns. (Ministry of Commerce & Industry, n.d.) (Ministry of Commerce & Industry, n.d.) (FAO, n.d.) (India, 2017)

2. BENEFITS OF INFORMATION TECHNOLOGY (IT) IN AGRICULTURE

Providing food security is a critical issue for countries around the world, India being no exception. With India's population estimated to reach 1.5 billion by the year 2030, ensuring an increase in productivity becomes extremely important to tackle the problem of food security. The rapid adoption of advanced technologies in agriculture right from sowing of seeds till selling of the final product will not only help deal with food insecurity but also increase efficiency, production and income levels. (India's population to surpass China's around 2024, earlier than thought: UN, 2017) (WHAT WE DO, n.d.)

Information technology has a huge role to play in various levels of agriculture. Right from the selection of the seed till the time the final produce is marketed, technology ensures that no losses are faced by the producer during the pre and post-harvest period and those superior quality products reach consumers at reasonable prices.

Technology in agriculture can be used as a direct means for improving the productivity of agriculture and indirectly for helping farmers take more informed decisions regarding the production techniques,

appropriate time for production and harvest and the market price of the final produce. Technology, thus, allows the farmers to take well informed and valuable decisions which consequently have a positive impact on the way activities in agriculture and its allied sectors are performed. (Milovanović, 2014)

From initially being confined to the use of traditional technologies where food was grown by farmers for their own subsistence, India later entered into the era of Green revolution. During this phase, through breeding programs and use of biotechnology, new and high yielding varieties of plants and animals were generated and farmers began using machineries, chemicals, fertilisers and pesticides on a large scale. This led to a shift in farming practices from subsistence to commercial farming. Presently, India is in the phase of high-tech agriculture where machinery is largely being used, infrastructural facilities such as warehouses and cold storages are being built and where the biotechnology sector is rapidly growing, thus, strengthening the country's agricultural segment. There is also a growth in the use of many modern techniques such as genetic engineering, soil, water and pest management and greenhouse technology. (Pandey, 2007)

Various production technologies include soil management, water management, agriculture engineering, disease and pest management, greenhouse technology and use of genetic engineering among others. Processing technologies consist of freezing, pasteurisation, irradiation and heat processing. While, there has been an introduction of marketing portals such as AGMARKNET and e-NAM at the marketing level.

Soil management includes the manufacture and use of products that improve availability of missing nutrients to soil. Water management on the other hand includes water harvesting and the use of micro irrigation systems such as drip and sprinkler irrigation which is cost effective, ensures efficient use and uniform distribution of water. Genetic engineering leads to the introduction or change of genes in crops making them resistant to diseases, drought and extreme weather situations.

The processing method of freezing is used for the preservation of nutritional value, taste and texture of food thus retarding microbial growth and delaying the chemical changes in food and hence its spoilage. While, irradiation is the application of ionizing radiations to food improving the safety and extending the shelf life of food and also eliminating the attack by microorganism and insects.

Government portals such AGMARKNET provides various stakeholders with electronic connectivity to the nation's wholesale markets by collecting and analysing the available market information. e-NAM, on the other hand is an electronic trading portal that brings together existing mandis thus creating a unified national market for various agricultural commodities. The growing smart phone penetration has enabled the launch of various farmer-oriented initiatives such as Mahindra's digital platform offering farmers with crucial farm related information and the 24X7 multi-lingual advisory platforms called MyAgriGuru. This application offers essential information such as weather forecasts, data and access to mandi price charts. The farmers can also interact with agricultural experts in case of doubts. (About Us, n.d.) (About NAM, n.d.) (Pandey, 2007) (Radiation technologies for the prevention of food loss, 2018) (Freezing and Food Safety, 2013) (Sharma, 2018)

Thus, the use of farmer friendly and inexpensive technologies in agriculture has not only brought changes in the production patterns of agricultural crops and increased the quantities of food but also made agriculture a production-cum-profit-oriented, risk reducing, employment generating and export-oriented sector.

3. ISSUES RELATED TO THE USE OF INFORMATION TECHNOLOGY (IT) IN AGRICULTURE

Use of information technology has enabled a large number of technological advancements within the primary sector. However, there are few issues associated with the use of IT in agriculture.

The number of small farmers in India is very large and so are the numbers of small land holdings. This makes it difficult to earn economic value through the use of machineries suitable only for large land holdings. Hence, various efforts are required to undertake research and development (R&D) activities by the government and private players, for developing technologies that are suitable for the small and marginal land holdings of farmers.

Many villages in India lack internet connectivity thus hindering the practical application of IT in agriculture. This issue is being tackled by setting up mobile services and information kiosks by private players. Low literacy levels and lack of skills is yet another issue that hampers the use of various available farmer

friendly applications. Hence, educational and training programmes are required for these people which will lead to growing adoption of computer technology and prepare the agriculture sector for future challenges.

Low availability and at times non-availability of basic infrastructure support system like roads, railways, water and electricity is yet another obstruction in the application of technologies in the agricultural sector. This requires efforts to be made through public-private partnership mode which will help in the development of infrastructural facilities and take the agricultural sector forward. (Pandey, 2007)

4. CONCLUSION

Dynamism and strength of technology is the backbone of agriculture. Technology opens the doors to socio-economic development by creating various opportunities for all those involved in it. Its use leads to improved quality of food products, increased domestic consumption and economic growth through the exports of high-quality value-added products.

Technology has indeed opened new opportunities and dimensions for innovations in the agriculture sector enabling its rapid growth and development. The large number of technological advancements happening within the sector will lead to the sector's growth in the future years. However, there are also a number of issues associated with the use of technology in agriculture which need to be suitably addressed via government support, through public-private partnerships in various technology-oriented projects and efforts to improve literacy and skill development for those in the agriculture sector.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Applicability of ERP in Indian Small and Medium Enterprises

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ABSTRACT
ERP (Enterprise Resource Planning) may be thanks to integrate the information and processes of a corporation into one single system. Its main goal is to integrate knowledge and processes from all areas of the organization and unify it, to supply easy access And an economical work flow. ERP Systems typically accomplish this through one single info that employs multiple software package modules. In India, SMEs area unit the backbone of the economy and area unit nowadays baby-faced with world competition. Therefore, it becomes imperative to appear for means that of responding to the dynamic markets. ERP systems became the foremost common IT strategy for many giant corporations. Gift analysis argues that ERP implementation in Indian SMEs ought to extend its scope on the far side the configuration to the strategic, managerial, and technical and structure problems by considering vital success factors for flourishing ERP implementation at Indian SMEs that will place Indian SMEs on the competitive position. During this paper, we've got examined ERP in Asian nation.

KEYWORDS: *SME.*

1. INTRODUCTION
ERP (Enterprise Resource Planning) may be an outcome of knowledge Technology and is a thanks to integrate the information and processes of a corporation into one single system, exploitation sub-systems that embrace hardware, software package and a unified info so as to attain integration, to store the information for numerous functions found throughout the organization. The term ERP won't to refer concerning however giant organizations of the commercial kind planned to use structure wide resources. nowadays ERP is employed in nearly any variety of organization it does not matter whether or not it's giant, little or what trade it falls in. however will we understand what software package will be thought of ERP? 1st, it should give a corporation with practicality for a minimum of 2 systems or additional. However, several of today's ERP systems will cowl quite simply 2 functions and integrate them into one unified knowledge Base. Human Resources, offer Chain Management, client Relations Management, Financial, producing functions and Warehouse Management functions will be found on trendy corporations underneath one umbrella – the ERP system.[1][15][21] The Key to ERP is integration. Its main goal is to integrate knowledge and processes from all areas of the organization and unify it, to supply easy access and an economical work flow. ERP Systems typically accomplish this through one single info that employs multiple software package modules. the perfect configuration is then to possess one ERP system for a whole organization, however organizations that area unit terribly giant are illustrious to form AN ERP system and so add external interfaces for different stand alone systems thought of additional powerful or ready to fulfill the organization's wants in a very higher means. Recently the ERP vendors have developed and customized the ERP software package for the employment of every kind of industries.[3][11][28] This has created an excellent demand on the employment of ERP among business entities to integrate and maximize their resources. The growing demand for ERP applications among business corporations has many reasons • Competitive pressures to become a coffee value

producer. • to extend the revenue growth. • Ability to contend globally. • maximising the resources and also the want to re-engineer the business to reply to plug challenges (Gattiker and Goodhue, 2005).[7][25]

2. LITERATURE REVIEW

This space has been subjected to a major quantity of previous analysis. Many approaches are taken. Slevin (1987) originally projected 10 CSFs for project management. Their work was engineered upon by The Netherlands (1999). They divided the implementation method into strategic and military science subgroups, adding factors specific to software package comes. the appliance and modification of existing project management techniques to ERP was conjointly self-addressed by Edward Weston (2001), WHO conjointly thought of the problems encompassing the event stages that the project passes through, associated metrics, and also the software package employed in ERP implementations. These problems are more investigated by different researchers. Notably Ahituv et. al., (2002) WHO investigated systems development methodologies for ERP systems, whereas Huang et al., centered upon the requirement for organizations to form a repository of implementation best follow to make sure consistency across ERP implement (Huang,2004). Zviron et al., thought of the problems encompassing the measure of user satisfaction and perceived utility within the ERP context (Zviran, 2005). Whereas Sumner (1999) thought of implementation problems through series of ERP case studies leading to a collection of tips designed to push success in giant software package project implementations. Nah, Lau and Kuang (2001) undertook a literature search of ERP implementations and known eleven CSFs and regarded their relationship to Markus and Tanis's process-orientated ERP Life cycle model (200). Bajwa ANd Garcia (2004) developed an integrative framework for the assimilation of ERP systems, extending the literature within the space of vital extenal antecedents, whereas Gulledge and Sommer (2004) examined the problems encompassing scoping business processes once rending SAP instances. Parr and Shanks (2003) engineered on their earlier analysis into CSFs, characteristic 10 sanctionative factors, then exploitation more case analysis to construct a project part model for ERP implementation. Meantime a cogent study by Somers and Horatio Nelson (2001) conjointly the literature for CSFs and took Cooper and Zmud's six stages IT implementation method model (1990) as a basis for ranking and categorise them by stage. The Somers Horatio Nelson CSF classification was extended by Akkermans and van Helden WHO, through the appliance of a longitudinal case study, showed that interdependencies each indirect and direct exist within the success factors and significantly that 'they all influenced one another within the same direction i.e., all positive or negative, resulting in a self perpetuating or cycle of fine or poor performance' (2002). analysis has conjointly been undertaken on subsets of CSFs classifications; for instance, Sarker and Lee (2003) examined 3 major social enablers in ERP implementations, whereas Gefen (2004) thought of the problem of trust between vendors ANd shoppers inside ERP implementations and Luo and powerful projected a framework for evaluating implementation selections touching on the customization of an ERP (Luo, 2004).

3. CHALLENGES IN ERP IMPLEMENTATION

A lot of companies within the developing countries face varied challenges in implementing technologies like Enterprise Resource coming up with (ERP) systems, together with an absence of human and money resources to support such initiatives (Wright et al., 2002). what is more, the government's commitment to the event of technology infrastructure can even be seen from the Indian Industrial program from 2006-2020, coinciding with the country's vision for 2020.[4] for instance, the govt has enforced varied policies and methods below this arrange that was developed to reinforce the expansion of the industries through the complete price chain and to encourage cluster primarily based industrial development. But numerous studies have discovered that not all ERP implementations ar roaring in rising the productivity and competencies of an organization. consistent with Gattiker and Goodhue (2005), ERP implementation failure rate is from four-hundredth, however firms attempt to implement these systems as a result of they're absolutely essential to responsive coming up with and communication.[5][19] The competitive pressure unleashed by the method of economic process is driving implementation of ERP comes in more and more massive numbers, thus a method framework for managing complicated problem of evaluating ERP comes is needed. it's been found that, distinctive risks in ERP implementation arises thanks to tightly connected interdependencies of business processes, relative databases, and method reengineering (Wright and Wright, 2002). Consistent with Gordon (2006), 3 main factors which will be

command answerable for failure of ERP system are • poor coming up with or poor management • amendment in business goals throughout project • lack of business management support. In another study, it's been found that firms spent massive cash in developing ERP systems that aren't used. From a software system perspective ERP systems is complete. However from the business perspective it's found that software system and business processes ought to be aligned, that involves a mix of business method style and software system configurations (Mabert et., 2003). Thus a strictly technical approach to ERP system style is meager. consistent with Gordon (2006), a careful use of communication and alter management procedures is needed to handle the usually business method reengineering impact of ERP systems which may alleviate a number of the issues, however a a lot of elementary issue of concern is that the price feasibleness of system integration, coaching and user licenses, system utilization, etc. ought to be checked. A style interface with a method arrange is a necessary a part of the system integration method in ERP.[6][8][29]

4. OBJECTIVE OF STUDY

The primary objective of this analysis is to look at the vital success factors of ERP implementation to attenuate the ERP implementation failure rate among the native firms. The analysis was centered in several sectors of the economy. Except for that the study additionally aimed to spot the ERP usage contribution to the business performance of the organizations. ERP implementations completed between 1995 and 1998 in Asian country will provides a sense of specific hurdles that firms could encounter in ERP preparation. Many firms were surveyed, and diverse ERP professionals were interviewed so as to assess the state of ERP in Asian country. The results indicate that Indian firms are moving forward with ERP implementation primarily in response to thrusts from parent collaborators, to revamp so as to fulfill redoubled load, or to scale back lead times and inventory levels, and improve client satisfaction. Resistance to vary was a significant hurdle featured throughout several ERP implementations. in addition, the duplication needed within the initial stage, and also the intense pressure exerted on force proven to be problematic, as did the extent of customization necessitated by disparities between company needs and solutions offered by ERP software system. This downside is decreasing thanks to advances within the software system facility models. [9][14][17] Price overruns additionally proven to be a pervasive downside with ERP implementations. To avoid this downside, prime management should develop the mandatory commitment to ERP, and every one worker ought to be ready for the amendment before the ERP implementation method is started. This model ought to facilitate to eliminate unnecessary project time and price flying.[5][10][24]

5. ERP IN INDIA

Some of the primary Indian firms to possess adopted ERP practices square measure HLL, ONGC, ESSAR, Godrej Soaps, Cadburys, BASF, Telco, Maruti Udyog Ltd., Century textile, Citibank, ACC, ANZ Grindlays, German Remedies, Blue Star, Mahindra & Mahindra, Rallis Asian country, Sony Asian country Pvt. Ltd., Ceat Ltd., Indal, Ford Motors, Kirloskar, hillock prescribed drugs, and Glaxo. Initial tier firms (those with a turnover bigger than Rs.10 billion) implement ERP to extend internal potency and external fight. Once ERP is established at this level, these giant firms begin to need equally exaggerated potency from their suppliers. Hence, second tier firms square measure pressured to implement ERP, and a trickle-down result ensues. High-powered by the axiom that a sequence is merely as robust as its weakest link, Indian business quickly has recognized that so as to figure at most potency, ERP should be enforced in any respect levels. Initially, the bulk of ERP solutions are marketed to firms with bigger than Rs. 2 billion, and typically, consistent with business reports, the full value of deploying ERP has ranged between one and a couple of % of companies' sales. Lower value solutions square measure accessible for relatively smaller sized firms. tho' the market appears to be terribly encouraging for ERP implementation, the timeframe for preparation is also a difficulty. However, since several firms that haven't nevertheless enforced ERP square measure leaders in their markets, it moderately may be assumed that they're going to choose it inside next 5 years. In fact, the ERP market ought to grow at a rate somewhere close to the commercial rate of growth. Some business classes, like automotive, Steel, durable goods, Engineering, and Textiles have shown a awfully high ERP penetration. this implies that these classes represent the best potential markets in next 2 years different industries can follow.[30][16]

6. ERP within the SERVICE SECTOR

Transportation, treatment, cordial reception, traveller service, telecommunication, banking and money

services, and amusement represent the foremost parts of India's service sector, and on inquisitor into the varied desires of those teams, it becomes apparent that the traveller, transportation, and amusement industries don't have specific current desires for ERP. Banking and telecommunication every have terribly specialised necessities that the manufacturing-inclined computer code solutions on the market wouldn't effectively address. an equivalent holds true for the treatment and cordial reception industries. The service sector has the potential to become a vital ERP market inside a couple of years. [26][28] At this point ERP implementation within the services sector is incredibly restricted solely a couple of hospitals and banks have done little scale experiments. New computer code and processes ought to be developed to satisfy the particular demands of the service industries, therefore ERP players ought to begin currently to arrange them for the tremendous potential of this future market.

7. SMES AND ERP

While several new SMEs begin annually, nearly five hundredth stops to exist within the initial three years of business itself. tho' it's assumed that every one SMEs need growth, solely four-hundredth survive on the far side ten years. Majority of the corporations don't consider semi permanent business strategy however focus solely on survival. They consider modification only if the business begins to fail as a results of not keeping track of the ever-changing market situation. The corporations United Nations agency survive and grow square measure those United Nations agency have the power to require risks and answer the ever-changing circumstances (Levy et al, 2006). Associate in Nursing ERP system would permit SMEs to integrate their business functions. SMEs would be ready to increase their potency and productivity by implementing an appropriate ERP system. Over successive 5 years, the ERP market in Asian country is predicted to succeed in Rs. 1,550 large integer ($341 million), consistent with International information Corporation (IDC), a marketing research and analysis firm. Of this, the SME potential in Asian country for the enterprise category is projected to be Rs. 728 large integer ($160 million) forty seventh of the market (Munjal, 2006). ERP vendors like SAP, Oracle, and Microsoft, QAD etc. square measure all making an attempt to extend their client base within the SME phase and have merchandise specifically designed to cater to the wants of SMEs. tho' SMEs square measure risk loth, they're keen on adopting ERP systems for many reasons. a number of them are: • Pressure from larger counterparts: because of globalisation, SMEs nowadays operate during a wider arena. Majority of them have MNCs as their shoppers. These MNCs need SMEs to implement an equivalent ERP system as them to permit for tighter integration in their provide chain, which allows them to style and arrange the assembly and delivery therefore on scale back the turnaround. • Peer pressure: many SMEs square measure adopting ERP systems as their peers have done therefore. • To realize competitive advantage and respond quickly to the dynamic market situation. • E-commerce profits: This benefit can accrue from the shut integration between giant enterprises and SMEs. • Cheaper and quicker web: Easier access to Internet reduces the prices more. • Cheaper hardware and software: With the advances in technology, the prices of each hardware within the style of servers, cables, switches etc. and computer code like databases have come back down.[18][19]

8. CRITICAL SUCCESS FACTORS FOR ERP ADOPTION

Nah et al. (2006) investigated vital success factors for ERP implementation by conducting a literature review. They found that key structure problems were cooperation, change, management, high management support, arrange and vision, business method management and development, project management, monitoring, effective communication, computer code development and testing, the role of the project champion and acceptable business and IT heritage systems. Their study shows that the complicated structure modification problems should be comprehensively addressed which they cannot be overcome by mistreatment technical solutions alone. Similarly, Huang et al. (2003) counsel that additionally to developing the technical aspects of ERP, a lot of effort is needed in understanding the a lot of complicated structure problems concerned.[20] though the ERP systems are increasingly developed over a minimum of a decade, the continual pace of modification in organizations and their environments has resulted in complicated technical structure, cultural and political problems that have created the mixing method a awfully difficult task (Huang et al., 2003). In response to ERP systems implementation problems, there square measure some tutorial journals that have unconcealed specific metrics for ERP implementation success. Somers and Viscount Nelson (2004) square measure well-known joined of the

highest 'guru' of ERP implementation United Nations agency came up with the unified vital success issue model for the industries in us . Their analysis work has received high variety of citation within the literature and might be valid from the scientific discipline citation index (SSCI) platform. Except for that, from analysis perspective, usage of a valid study that has been printed by Somers and Viscount Nelson has been accustomed kind the structure of this study. The thought is to check [23][26] the model/factors projected by these authors and see if it's applicable within the context of a developing country i.e. India.

9. IMPACT OF THE PROPOSED RESEARCH WORK ON ACADEMICS / INDUSTRY

Study can have necessary sensible and analysis implications. The key findings of this study would be of import to the management of the Indian little and medium enterprises (SMEs) corporations once taking selections concerning the adoption of ERP. Moreover, it provides info systems researchers and ERP consultants with higher understanding concerning the adoption of ERP systems within the context of developing countries like Asian country to confirm in implementation of ERP. It, however, ought to be acknowledged that since this analysis emerges from Associate in Nursing in-depth single-case study, the power to generalize the findings is restricted. The findings of the study square measure expected to be a lot of transferable inside the context of Indian SMEs generally. what is more it will also give a benchmark to more enhance the analysis scope of Indian ERP implementation among academicians and researchers.

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International Journal of Trend in Scientific Research and Development (IJTSRD)
International Open Access Journal | www.ijtsrd.com
ISSN No: 2456 - 6470 | Conference Issue – ICDEBI-2018
INTERNATIONAL CONFERENCE ON DIGITAL ECONOMY AND ITS IMPACT ON BUSINESS AND INDUSTRY
Organised By: V. P. Institute of Management Studies & Research, Sangli

Financial Performance of Digital Banking Sector in India

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ABSTRACT
The banking sector is the one of important in financing general thinking which builds much of the financial performance in the modern digital world, growing financial performance lead to improving better functions of an organization. The main objective of this article is to know about the financial performance of Indian public sector banks in the random banks have been selected for the study. Financially stabilized manner some of the variables selected for the study to interpret financial performances like loans and advances, assets, equity shareholder capital, deposits, and net profit margin.

INTRODUCTION
Banking sector plays a vital role in the economic development of a nation; the Banking system of India has a wide network of branches serving a number of services to the people. Efficient Banking system shows the development of nation economically and it proved many times, for example, the subprime crisis period, while every country has gone bankrupt even though the Indian banking sector faced many difficulties but due to efficient financial strength it makes the financial system to maintain the good financial condition. Indian Banking sector have public sector-private sector and foreign sector working in India with their respective competition to other, these banks differ significantly from each other in terms of financial performance.

The economic environment changing all around the world after the global financial crisis, the financial structure in globally has been also change due to slow down. Banking sector is also affected by the crisis. Banking sector is the main component of financial activities therefore measuring the strength and financial soundness of banking institution has become a major task. The functioning of banking sector has change upside down in India also. To check the efficiency of banking system in India, their financial performance is determination. So it is important to evaluate as to the performance of banks has improved after crisis. Such information can provide use full for further route map, to policy maker about understanding the efficiency of banking sector in India.

Today Indian banking Sector is a flourishing Industry; it‘s mainly focused on new Banking technological innovations. Banks innovated to use digital tool to provide effective quality and services to the customer and get high speed in less time with wide area coverage of customers. In the recent scenario it has been changed, there are around 340 banks are working in India, in which are public and private banks. Today all the banks started with the different channels, like, Credit Cards, Debit Cards, Mobile Banking, Internet Banking, E-pay etc. In 2020 Indian banking sector will be fifth largest banking sector and in 2025 third largest banking sector in the world.

The main object of the study is to compare the Financial Performance of the Indian Public Banking Sector. For the analysis secondary data has been chosen to know the financial performance of banks. The financially stabilized manner some of the variables have been selected for the study to analyze the financial performance like loans and advances, assets, equity shareholder capital, deposits, and net profit margin.

ANALYSIS AND INTERPRETATION

ASSETS

	2017	2016	2015	2014	2013
Canara bank	3885 18	3365 45	5480 0.56	4919 21.85	4123 42.61
Union bank of India	3193 83	3163 93	3816 15.93	5357 80.90	3118 60.81

The above table refers to the Total Assets rate of the selected banks for a time period. Here also the Canara bank was in first so it represents the good opinion among the other selected banks. Assets represent the total reserves of the banks. So here the reserves mean that all banks have improved in reserves too.

ADVANCES

	2017	2016	2015	2014	2013
Canara bank	3102 1	2680 1	3300 35.51	3010 67.48	2421 76.62
Union bank of India	3193 83	2777 25	2556 54.57	2291 04.43	2081 02.19

The above table refers to the Advances rate of the selected banks for the time period. In Bank, the Advances represent the assets to the bank because the customers used to pay interest to the bank so it represents the income to banks. All the selected banks are improved all the selected year. Comparing with the banks Union bank performed better to compare with other banks.

DEPOSIT

	2017	2016	2015	2014	2013
Canara bank	5038 88	5103 27	4738 40	4207 22	3558 55
Union bank of India	3783 92	3427 20	3168 69	2976 75	2637 61

The above table refers to the Deposits rate of the selected banks for the time period. In Bank, the deposits represent the liabilities to the bank. All the selected banks are improved all the selected year. Comparing with the banks Canara banks performed better to compare with other banks.

EQUITY SHAREHOLDERS CAPITAL:

Equity share capital represents issuing the shares to the public or third person to improve the cash for the company or banks for that bank will pay the dividend to the share holders. The amount of share capital changes time to time to improvise the share capital.

RETURN ON EQUITY:

ROE is the amount of net income returned as a percentage of shareholders' equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

RETURN ON ASSET:

Return on assets indicates that the profitable factors of the banks which related to total assets. The higher return, more efficient management is in utilizing its asset base. And ratio is calculated by comparing net income to average total asset, and is expressed as a percentage.

NET PROFIT MARGIN:

It is the revenue left after all expenses deducted from sales, the measurement shows the amount of profit that a business can extract from its total sales. The net sales part of the equation is gross sales minus all sales deductions, such as sales allowances.

CONCLUSION

The selected variables provide different meaning like assets and liabilities of the banks. The results prove that in there of deposits, loans and assets the Canara bank performs well during the selected period of time. Both deposits and loans are in the better way compared to other banks. NPM has been reduced for all the banks. To conclude the study some factors in total they have a good volume of exposure but the ratios are coming down so the banks should concentrate on every possible move for better growth. In the perspective of this domestic and international development, the banking sector has to chart out a perfect path for the development in its own.

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