Volume 12, Issue 1 (IV)
January - March 2025
ISSN: 2394 – 7780


# International Journal of
# Advance and Innovative Research

Indian Academicians and Researchers Association
www.iaraedu.com

# Seva Sadan College of Arts, Science & Commerce

Affiliated to University of Mumbai

**8th International Multidisciplinary Conference (Hybrid Mode)**

**On**

# "Innovations in Business, Financial Services Education and Digital Technology"

***8th February, 2025 Saturday***

**Seva Sadan College of Arts, Science & Commerce**

**Seva Sadan Marg, Ulhasnagar, Dist. Thane, India PIN-421003**

**Phone: 0251- 2561021. www.ssasc.edu.in**

## Patron

Shri Sanjay Dabrai
President, Seva Sadan Trust

## Convener

Dr. Gulabchand K Gupta
Principal

## Co-Convener

Dr. Vanshika Ahuja
Asst.Prof. Sona Dawra

## Technical Coordinator

Asst.Prof. Naisha Chainani

## Coordinator

Asst. Prof. Niraj Mishra
Asst. Prof. Deepa Sadhwani

## Organizing Committee Member

Asst. Prof. Rachna Vadhiya
Asst. Prof. Soniya Lakhyani
Asst. Prof. Nimrata Kurseja
Asst. Prof. Dipika Satnathi
Asst. Prof. Anjali Kamble
Dr. Soni Hasija

# 8th International Multidisciplinary Conference (Hybrid mode) on

## "Innovations in Business, Financial Services, Education and Digital Technology"

## 8th February, 2025

Organized by Research & Development Cell

## Seva Sadan College of Arts, Science and Commerce

Ulhasnagar, Dist. Thane, Maharashtra, India PIN 421003

**Affiliated to the University of Mumbai**

## Schedule of Conference (Hybrid Mode)

| Timing | Particulars |
|---|---|
| 09.00am – 10.00 am | Welcome at Registration Desk & Tea |
| 10.00am – 10.10 am | Welcome Address by Conference Co-Convener<br>Dr Vanshika Ahuja, Asst.Prof Sona Dawra & Asst Prof. Naisha Chainani |
| 10.10am – 10.15 am | Lamp Lighting |
| 10.15am – 10.25 am | Introduction of Conference by Convener & Principal<br>Dr Gulabchand Gupta |
| 10.25am – 10.35 am | Address by Guest of Honor<br>Dr Dinesh Kala, Principal, R K Talreja College of Arts, Science & Commerce, Ulhasnagar |
| 10.35am – 10.45 am | Address by Guest of Honor & Session Chairperson<br>Dr Deepak P. Sable, Principal, Bharat College of Arts and Commerce, Ambarnath |
| 10.45am – 11.00 am | Address by Guest of Honor & Keynote Speaker-1<br>Dr Rahul Divekar, Faculty, Experience Design, Bentley University, USA |
| 11.00am – 11.25 am | Address by Chief Guest & Keynote Speaker-2<br>Dr Amit Kauts, Professor & HOD, Ex-Dean, Faculty of Education, GND University, Amritsar |
| 11:25am – 11.35 am | Release of Conference Abstract Book |
| 11:35am – 11.40 am | Introduction of Guest of Honor and Session Chairperson<br>Dr Sharmila Rathod, Associate Professor, Rajiv Gandhi Institute of Technology. |
| 11.40am - 01.00 pm | Paper Presentation Track 1: Paper No from 1 to 15 |
| 01.00pm - 02.00 pm | Lunch Break |
| 02.00pm - 02.10 pm | Address by Guest of Honor & Session Chairperson<br>Dr Ameya Kumar Tripathy, Professor & Director of the Centre GeoAI at Don Bosco Institute of Technology, Mumbai. |
| 02.10pm - 02.20 pm | Address by Guest of Honor & Session Chairperson<br>Dr Natika Poddar, Associate Professor, St. Francis Institute of Management and Research, Mumbai |
| 02.20pm - 03.45 pm | Paper Presentation Track 2: Paper No from 16 to 25 |
| 03.45pm - 04.00 pm | Tea Break |
| 04.00pm - 05.15 pm | Paper Presentation Track 3: Paper No from 26 onwards |
| 05.15pm - 05.25 pm | Valedictory & e-Certificate Distribution |
| 05.25pm - 05.30 pm | Vote of Thanks |

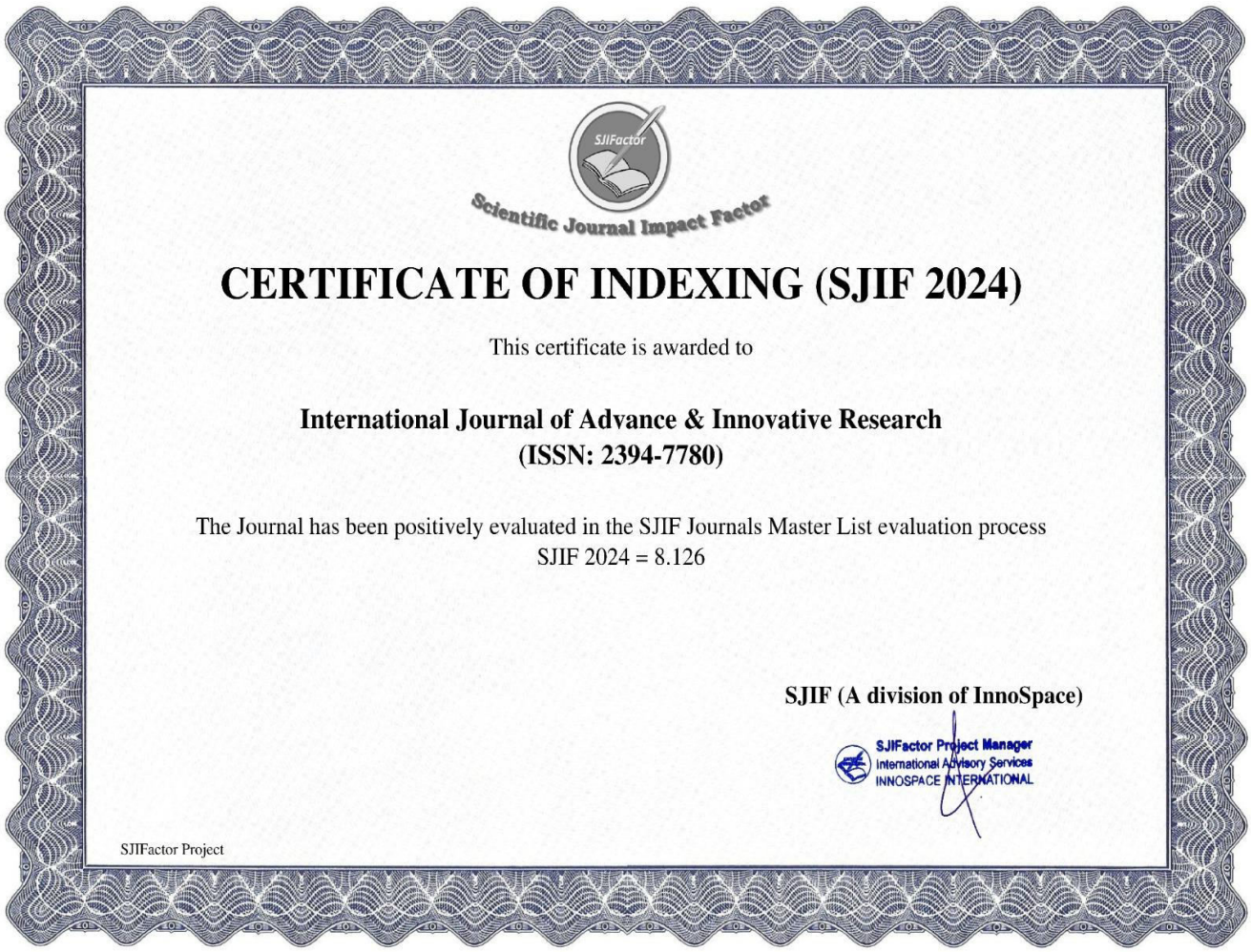
Join Zoom Meeting
https://us06web.zoom.us/j/84961231180?pwd=v86PurheadvFaqT5PbthXWbDe7gNKN.1

Meeting ID: 849 6123 1180
Passcode: 837286

# International Journal of Advance and Innovative Research

**Volume 12, Issue 1 (IV): January - March 2025**


***The International Journal of Advance and Innovative Research is an online open access, peer reviewed & refereed journal.***



International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025

# CONTENTS

## *Research Papers*

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A DETAIL STUDY ON E-COMMERCE

**Aarti Dabade[1], Anisha Kanojiya[2] and Manisha Lahori[3]**
[1,2]T.Y.B.Com (B&I) Student, R.K. Talreja College of Arts, Science and Commerce, Ulhasnagar
[3]Assistant Professor, R.K. Talreja College of Arts, Science and Commerce, Ulhasnagar 421003

## ABSTRACT
*The term "Electronic commerce" refers to the use of an electronic medium to carry out commercial transactions. Most of the time, it refers to the sale of products via internet, but the term e-commerce also covers purchasing mechanism via Internet (for B2B). A client who purchases on the internet is called e-commerce customers. It refers to the buying and selling of goods and services over the internet. It compasses a wide range of transaction, from online retail marketplaces. It has revolutionized traditional retail by enabling businesses and consumers to engage in transactions through digital platforms. With advancements in technology, e-commerce has evolved to include various models such as B2B, B2C, C2C, C2B, B2A and C2A. The researcher has used structured questionnaire for primary data collection. The responses found in the data are 106. Overall, e-commerce continues to grow rapidly, reshaping global trade and consumer behaviour. Key components of e-commerce include online marketplaces, payment gateways, logistics and digital marketing strategies.*

## INTRODUCTION
E-commerce describes the process of buying and selling or exchanging of products, services and information via computer networks including the internet. Few sellers sell their products online while other sellers use as a broader strategy which may include physical stores and distribution channels. You can find everything from clothing and electronics to groceries and home decor online. It's popular way to shop in today's digital age! There are several popular online shopping websites that you can check out. Some of the most well-known ones include Amazon, Flipkart, Meesho etc. These platforms offer a wide range of products and have a reputation for reliable services. Modern electronic commerce typically uses the world wide web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail. E-commerce businesses may employ some online shopping websites for retail sales direct to consumers.

## TYPES OF E-COMMERCE
1. **Business-to-Consumer**- B2C e-commerce involves businesses selling products and services directly to consumers through online platforms. It means selling products or services directly to consumer online.
2. **Business-to-Business**- B2B e-commerce is the process of selling products between two business via an online channel. Companies sell products or services to other companies for operational use, resale or production of goods and services are sold to other manufacturers or wholesalers.
3. **Consumer-to-Consumer**- C2C is a business model where consumers sell products or services to others consumer online. C2C markets provide a way to allow customers to interact with each other.
4. **Consumer-to-Business**- C2B is a business model where consumers provide products or services to businesses, and in exchange receive compensation.
5. **Business-to-Administration**- B2A e-commerce model that allows companies to conduct business with government agencies online. It is also known as business-to-government.
6. **Consumer-to-Administration-** C2A e-commerce is a business model that allows consumers to interact with public administration electronically. It is also known as consumer-to-government.

## OBJECTIVES OF THE STUDY
- To study consumer preferences, purchasing patterns and factors influencing online shopping decisions.
- To know about the basic functions, main activities, types, advantages and disadvantages.
- To identify current trends and innovations shaping the e-commerce industry.

## LIMITATIONS OF THE STUDY
- The research may be limited to a particular region. Which may not reflect global trends or variations in e-commerce practices across different locations.
- The number of respondents has been limited to only 106 respondents.

ISSN 2394 - 7780

## RESEARCH METHODOLOGY

For the research, data has been collected by the both means primary and secondary:

- **Primary Data:** Data collected directly from the source for the purpose of study. Primary data have been collected through the survey method from the respondents. The questions included in the questionnaire are offering multiple-choices which are collected through Google form.
- **Secondary Data:** Secondary data is the data that has already been collected through primary sources and made readily available for researcher to use for their own research. It is a type of data that has already been collected in the past.
- **Sample Size:** The primary data have been collected through a survey with a well-structured questionnaire. For this study, the sample size is limited to 106 respondents which some are students, self-employed persons, business person and some are working women belonging to different age group.

## LITERATURE REVIEW

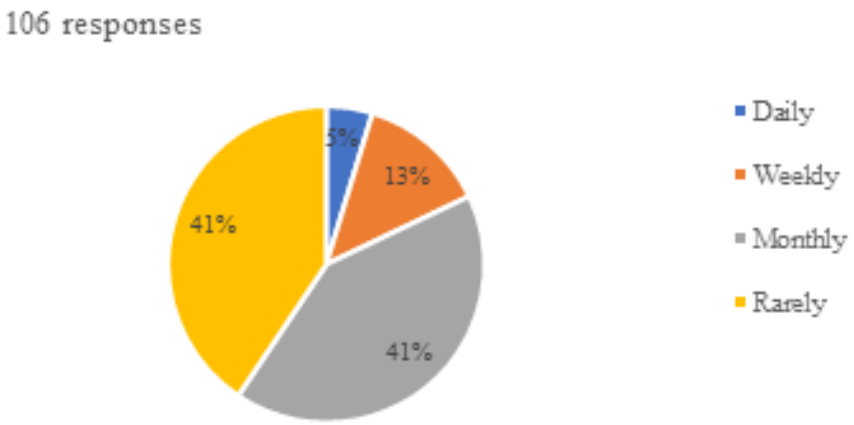
1) Abhijeet Mitra (2013), "e-commerce in India a review", international journal of marketing financial services & management research. Concluded that the e-commerce has broken the geographical limitations and it is a revolution commerce will improve tremendously in next five years in India.
2) Martin dodge (1999), "Finding the source of Amazon.com examining the hype of the earth's biggest book store", centre for advanced spatial analysis. Concluded that Amazon.com has been one of the most promising e-commerce companies and has grown rapidly by providing quality service.

## DATA INTERPRETATION

Researcher have asked total 20 questions (including suggestion) only important questions has been selected for data analysis and interpretation. The data interpretation has been done on the basis of collected 106 samples.

| Age Group | No. of Responses | Percentage of Respondents (%) |
|---|---|---|
| **18-25** | 73 | 69% |
| **26-35** | 14 | 13% |
| **36-45** | 14 | 13% |
| **46 & above** | 5 | 5% |
| **Total** | 106 | |

**1. How often do you Shop Online?**

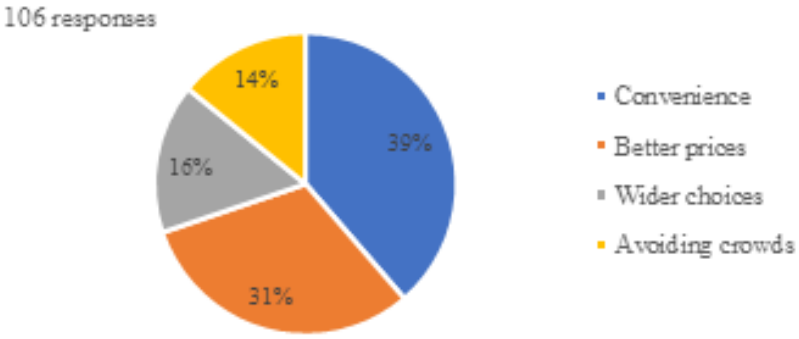



**Interpretation**

We can analyse from the above data that, 41% people mostly shopping in monthly and rarely they are like to shopping in festive season and occasion. 13% people shopping online in Weekly and while other 5% people shopping online daily.

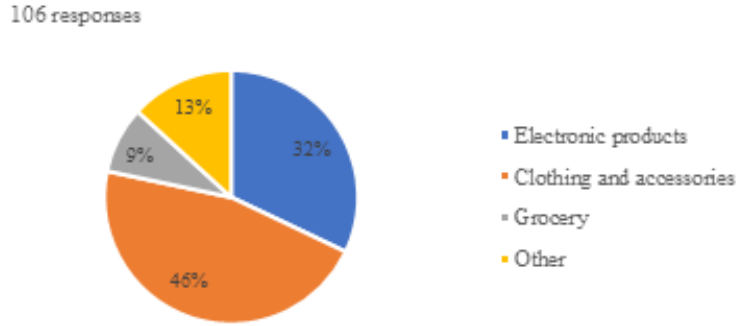
ISSN 2394 - 7780

**2. What is your Primary Reason to Shopping Online?**



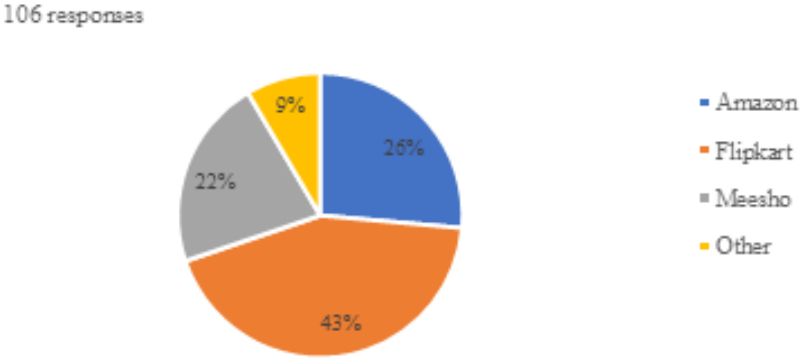

**Interpretation**
We can analyse from the above data that, 39% people often online shopping for reason of convenience. 31% people often online shopping for better prices. 16% people often online shopping for reason of wider choice. 14% people often online shopping for avoiding crowds.

**3. What type of Products do you Mostly buy online?**




**Interpretation**
We can analyse from the above data that, 46% people buy clothing and accessories products online. 32% people buy electronic products online. while other 13% people buy other products and 9% people buy grocery in online.

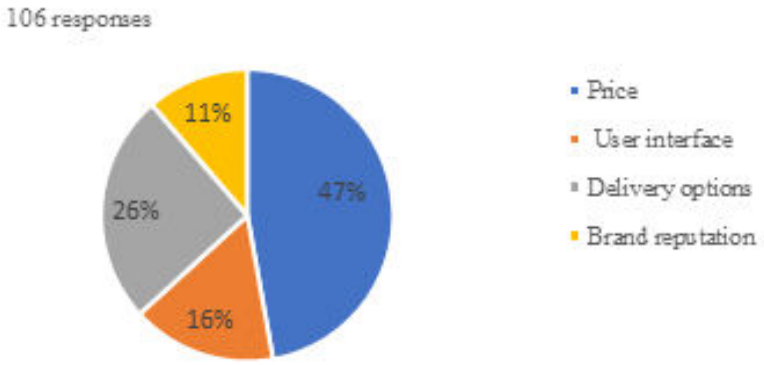
**4. Which e-Commerce Platform do You Use Most Often?**




**Interpretation**
We can analyse from the above data that, 43% people use Flipkart platform for online shopping. 26% people use Amazon for online shopping. 22% people use Meesho for online shopping and while other 9% use other platform for online shopping.

ISSN 2394 - 7780

**5. What Influences your Choice of E-Commerce Platform?**




**Interpretation**

We can analyse from the above data that, 47% people influence for prices on product in e-commerce platform. 26% people influence in e-commerce platform for delivery option. 16% people influence for user interface in e-commerce platform. And while other 11% people influence in e-commerce for brand reputation.

## FINDINGS, SUGGESTION AND CONCLUSION

1) Everything in today's world is Internet oriented like Electronic Data Interchange, e-mail, e-business and e-commerce.
2) To make products globally recognised every small or big, National or International company needs to focus and start selling their products and services through e-commerce.
3) In conclusion, having access to e-commerce has truly recognized and influenced our society as a whole.

## REFERENCES


- www.salesforce.com
- www.wikipedia.com
- www.zoho.com
- "E-commerce" by Rashmi Aggarwal (Vipul Prakashan) First edition (NEP 2020).

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE ROLE OF INSURANCE SECTOR IN PROMOTING FINANCIAL INCLUSION AND ECONOMIC GROWTH IN INDIA

**Mr. Akshay Prabhakar Matke[1] and Dr. Mahesh B. Thorat[2]**
[1]Research Scholar, Department of Commerce and Management, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
[2]Associate Professor (Department of Commerce and Management) Shri Sant Savta Mali Gramin Mahavidyalay, Phulambri (Aurangabad)

## ABSTRACT
*The insurance sector plays a pivotal role in driving economic growth and fostering financial inclusion by mitigating risks, mobilizing savings, and stabilizing financial systems. In India, where a significant portion of the population remains uninsured or underinsured, the sector holds immense potential to address developmental challenges and contribute to sustainable growth. This study explores the contribution of the insurance sector to the growth and development of the Indian economy, with a specific focus on its role in promoting financial inclusion. Using a mixed-methods approach, the research examines secondary data on insurance penetration, economic indicators, and financial inclusion metrics, alongside case studies of key government-led schemes such as Pradhan Mantri Fasal Bima Yojana and Ayushman Bharat. Statistical tools, including trend analysis and correlation models, were employed to assess the sector's impact on GDP growth, savings mobilization, and inclusion in underserved regions. Findings indicate a strong positive relationship between insurance sector growth and key economic indicators, underscoring its critical role in capital formation and risk mitigation. Government initiatives have significantly expanded coverage in rural and low-income populations, enhancing social security and reducing vulnerability to financial shocks. However, barriers such as low awareness, affordability constraints, and inadequate distribution networks continue to hinder progress, particularly in rural areas. The study concludes that the insurance sector is integral to bridging the financial inclusion gap and accelerating economic development in India. Innovative product design, technology integration, and strengthened public-private partnerships are essential to overcoming existing challenges and unlocking the sector\u2019s full potential. Policy reforms and targeted educational campaigns are also necessary to ensure sustainable and inclusive growth.*

***Keywords:*** *Insurance sector, financial inclusion, economic growth, Indian economy, risk mitigation, savings mobilization, rural-urban disparity.*

## INTRODUCTION TO THE INSURANCE INDUSTRY
The insurance sector in India is an important part of the country's financial system, offering risk reduction, financial protection, and long-term savings options to people, corporations, and organizations. It plays an important role in encouraging financial inclusion, economic resilience, and long-term prosperity. The Indian insurance sector began in the early nineteenth century, with the foundation of the Oriental Life Insurance Company in Kolkata in 1818, which largely served Europeans. By the late nineteenth century, numerous Indian businesses had joined the market, including Bombay Mutual Life Assurance Society in 1870. Companies such as Triton Insurance Company emerged in 1850, establishing the general insurance category. Following independence, the insurance business witnessed tremendous upheaval. To protect policyholders' interests and bring stability to the sector, the government nationalized the life insurance industry in 1956, forming the Life Insurance Corporation of India (LIC). Similarly, general insurance was nationalized in 1972, resulting in the foundation of four public-sector general insurance firms known as the General Insurance Corporation (GIC). The sector's liberalization in 2000, which allowed private and international firms to enter the market, was a watershed moment. The Insurance Regulatory and Development Authority of India (IRDAI) established a strong regulatory framework that promoted competition, innovation, and consumer protection.

### Current Scenario
Today, India's insurance business includes life insurance, general insurance, and specialist insurance segments such as health and crop insurance. The sector has expanded tremendously, owing to increased awareness, government efforts such as Ayushman Bharat and Pradhan Mantri Fasal Bima Yojana, and digital change.Despite development, issues such as low insurance penetration (measured as a percentage of GDP), particularly in rural regions, and a lack of understanding of insurance products remain. With technological developments and supporting legislation, the industry is primed for continued expansion, playing a critical role in India's financial inclusion and economic development.

ISSN 2394 - 7780

**Evolution of the Insurance Industry in India**

The Indian insurance sector dates back to the nineteenth century, when the Oriental Life Insurance Company was founded in Kolkata in 1818 to serve European customers. It represented the industry's early stages. The Bombay Mutual Life Assurance Society, formed in 1870, was the first Indian insurer to service Indian nationals. The Triton Insurance Company (1850) was a pioneer in Indian general insurance. The Insurance Act of 1938, India's first comprehensive legislation addressing both life and general insurance, marked the beginning of regulatory monitoring. Following independence, the government stressed protecting policyholders' interests, which led to the nationalization of insurance. The Life Insurance Corporation of India (LIC) was formed in 1956 by the merger of 245 independent life insurers. Similarly, in 1972, the General Insurance Corporation of India (GIC) and its subsidiaries merged 107 general insurers. Nationalization provided stability, social protection, and rural outreach, but it limited competition and creativity. The formation of the Insurance Regulatory and Development Authority of India (IRDAI) in 1999 signaled the sector's liberalization by permitting private and international participants. Companies such as ICICI Prudential, HDFC Life, and Bajaj Allianz developed a varied range of products, resulting in increased competition and customer-centric innovations. Health insurance and microinsurance gained popularity among underprivileged groups. Technology has transformed the insurance industry, with digital platforms, AI-powered claim processing, and mobile applications that improve client experiences. Insurtech businesses have pioneered new models such as on-demand and usage-based insurance, increasing accessibility and cost. Government initiatives like the Pradhan Mantri Fasal Bima Yojana (crop insurance) and Ayushman Bharat (health insurance) have boosted financial inclusion. Schemes such as PMJJBY and PMSBY provide low-income groups with inexpensive coverage, considerably increasing insurance penetration.

While India's insurance penetration has increased (4.2% in 2021), it is still below worldwide standards. Rural locations have challenges such as low awareness, price, and access. The sector's future growth depends on harnessing technology, promoting regulatory changes, and strengthening public-private partnerships to bridge gaps and satisfy India's diversified demands.

India's insurance business is at a crossroads, set to achieve more inclusivity, innovation, and resilience.

**Structure of Insurance Industry**

The Indian insurance business is well-regulated and vibrant, including life insurance, general insurance, and reinsurance categories. The Insurance Regulatory and Development Authority of India (IRDAI) regulates it to guarantee transparency, policyholder protection, and sectoral growth. The market comprises public-sector heavyweights like LIC in life insurance and GIC in reinsurance, as well as private businesses like HDFC Life and ICICI Lombard, which provide diversified and innovative products. Distribution routes span from conventional agents and brokers to digital platforms, with Insurtech firms pushing technical developments. Key government efforts such as the Pradhan Mantri Fasal Bima Yojana and Ayushman Bharat seek to increase financial inclusion and insurance coverage, particularly in disadvantaged areas. Emerging themes including microinsurance, digital transformation, and green insurance demonstrate the sector's versatility. The industry's structure represents a balanced combination of public-private engagement, strong regulation, and a commitment to serve the diversified requirements of India's rising population.

**Contribution of Insurance to Growth and Development in India**

Insurance has had a significant positive influence on Indian economic development. The sector is steadily contributing to the country's GDP. Insurance is a key driver of infrastructure investment, growing annually.

Furthermore, insurance has increased job opportunities in India by offering There are both direct and indirect work prospects. The Indian economy's strong growth has led to a rise in life insurance premiums in families' gross domestic savings (GDS). The insurance industry's growing contribution to household GDS has boosted economic growth.

1. **Risk Mitigation and Financial Security:** Insurance protects people and organizations from financial losses caused by unforeseen occurrences like sickness, accidents, or natural disasters. This provides financial resilience and lowers economic vulnerability, particularly among low-income and rural communities.
2. **Mobilizing Savings and Capital Formation:** Life insurance plans promote long-term savings, which are then invested in infrastructure, industrial projects, and other industries. This capital production is crucial for economic development and nation-building.
3. **Promoting Financial Inclusion:** Government initiatives such as Pradhan Mantri Jeevan Jyoti Bima Yojana, Pradhan Mantri Suraksha Bima Yojana, and Ayushman Bharat have made insurance available to

ISSN 2394 - 7780

underserved communities, bridging the urban-rural gap and empowering economically disadvantaged groups.

4. **Employment Generation:** The insurance industry employs directly through insurers, agents, and brokers, and indirectly through related businesses such as healthcare, automobile, and technology.
5. **Economic Stability**: Insurance helps stabilize the economy by lowering risks and decreasing financial effect from catastrophic occurrences. Following natural catastrophes or pandemics, the sector offers compensation to expedite recovery and assure continuity.
6. **Enabling Credit and Business Growth:** Insurance reduces lender risks, making credit more accessible. Crop insurance and business interruption plans promote entrepreneurship and agricultural growth.
7. **Supporting Technological Advancements:** InsurTech, data analytics, and AI integration enhances operational efficiency, customer service, and innovation. This, in turn, boosts economic growth.
8. **Contributing to Public Revenue:** Insurance businesses contribute to public income by paying taxes and profits, which help governments fund development efforts.

**MICROINSURANCE**

Microinsurance in India refers to low-cost insurance solutions designed for low-income persons or those living in rural regions who would otherwise be unable to obtain traditional insurance owing to high prices and little knowledge. These products are tailored to the unique needs of economically disadvantaged communities, providing coverage for risks like as health, life, agriculture, and property.

**Features of Microinsurance**

1. **Low Premiums**: Microinsurance products are priced lower to make them affordable to low-income households.
2. **Simplified Processes**: The application process is simplified to cater to people with limited literacy and financial knowledge.
3. **Coverage for Low-Income Populations**: It includes products such as life insurance, health insurance, crop insurance, and insurance against natural disasters.
4. **Community-Based**: Some microinsurance schemes are community-driven, where groups of people pool resources for mutual benefit.
5. **Government and NGO Involvement**: Government initiatives and NGOs play a major role in promoting awareness and distribution of these products.

**Types of Microinsurance**

1. **Life Microinsurance**: Provides death benefits to the policyholder's family in case of untimely death.
2. **Health Microinsurance**: Offers coverage for hospitalization and medical treatment costs.
3. **Crop Insurance**: Helps farmers protect their crops from natural calamities and other risks.
4. **Weather/Climate-Index Insurance**: A relatively newer concept, this insurance is based on weather data and provides payouts based on predetermined climatic events, such as drought or excessive rainfall.
5. **Household insurance** refers to policies that protect homes, possessions, and the individuals within a household. These can include coverage for property damage, theft, personal liability, and other household-related risks.
6. **Small-scale entrepreneurs**, particularly those in emerging markets, often face significant risks due to factors like financial instability, theft, and **Business Interruption Insurance**: Covers losses incurred by businesses when natural disasters disrupt operations. Insurance tailored for small-scale entrepreneurs helps mitigate these risks and supports the sustainability of their businesses.

**Government Initiatives Include**

- The Rashtriya Swasthya Bima Yojana (RSBY), which provides health insurance for the underprivileged and covers hospitalization costs.
- The Pradhan Mantri Fasal Bima Yojana (PMFBY) is a crop insurance policy that benefits farmers by covering crop losses.

ISSN 2394 - 7780

- Government and business sector programs aim to improve financial awareness and encourage insurance usage in rural regions.

Microinsurance is viewed as a vital instrument for financial inclusion in India, helping to close the country's insurance penetration gap.

**The Insurance Sector through Indian Budgets (2010–2024)**

**2010-2014: Building Foundations**
Early budgets prioritized increasing insurance availability, particularly in rural regions, and included Section 80C tax breaks for life insurance premiums.

Initiatives like as the Rashtriya Swasthya Bima Yojana (RSBY) aimed to provide health insurance to underprivileged communities. Discussions of raising the foreign direct investment (FDI) quota to 49% began to interest international investors.

**2014–2017: Financial Inclusion and Social Security**
The inauguration of the Pradhan Mantri Jan Dhan Yojana (PMJDY) sought to bring banking and insurance into every home. Tax reductions on health insurance rates promoted adoption.

Farmers received crop insurance through schemes like as the Pradhan Mantri Fasal Bima Yojana (PMFBY), while the Atal Pension Yojana (APY) expanded pension benefits to the unorganized sector.

**2017–2020: Expansion and Reforms**
Budgets featured flagship programs such as the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and the Pradhan Mantri Suraksha Bima Yojana (PMSBY), which provide inexpensive life and accident insurance. Health insurance gained traction, thanks to increased coverage for urgent illnesses and tax breaks on premiums. In 2019, FDI in insurance was increased to 100% via the automatic method, boosting foreign investment.

**2020-2024: Digital Transformation and Post-COVID Focus**
The National Digital Health Mission and the Pradhan Mantri Jan Arogya Yojana (PMJAY) improved access to health insurance during the COVID-19 epidemic. Budgets stressed digital innovation in insurance, encouraging online platforms and telemedicine. Customized health plans and changes were aimed for rural and underinsured communities.

**Role of the Insurance Regulatory and Development Authority of India (IRDAI) in the Indian Insurance Sector**
The Insurance regulating and Development Authority of India (IRDAI) is India's apex regulating agency for the insurance business. Established in 1999 under the IRDA Act, its principal goal is to safeguard policyholder interests, regulate the sector, and promote its expansion.

**Roles and Contributions**

**Regulation and Governance**
IRDAI develops rules and regulations to guarantee the fair functioning of insurance businesses. It establishes solvency standards to ensure insurers' financial health and protect policyholders.

**Market Development**
Encourages competition by encouraging the admission of private and international businesses, resulting in increased market size and customer choice. Encourages insurance penetration in rural and underserved regions through programs such as microinsurance and health insurance.

**Consumer Protection**
Implements grievance redressal processes, such as the Integrated Grievance Management System (IGMS), to address policyholder concerns. Enforces transparency standards to ensure policyholders are aware of their rights and duties.

**Facilitating Innovation**
Supports digital transformation by providing rules for online insurance sales, digital claims processing, and InsurTech innovations. Encourages the creation of innovative products, such as usage-based insurance and personalized health plans.

**Policy Support**
Plays an important role in administering government-sponsored initiatives like as the Pradhan Mantri Fasal Bima Yojana (PMFBY) and Ayushman Bharat, guaranteeing regulatory compliance and efficacy.

ISSN 2394 - 7780

**International Standards and FDI**
Aligns Indian insurance practices with international benchmarks and norms.

Facilitated the rise of Foreign Direct Investment (FDI) limitations in the insurance industry from 26% to 49% in 2015, and then to 74% in 2021, hence increasing foreign investment and growth.

**Recent Initiatives and Innovations**

1. **Government Schemes:** Programs like Ayushman Bharat, PMFBY (Pradhan Mantri Fasal Bima Yojana), and PMJJBY have significantly expanded the reach of insurance in rural and underserved areas.
2. **Technology Integration:** The use of digital platforms, mobile apps, and artificial intelligence has simplified insurance processes, making them more accessible and user-friendly.
3. **Microinsurance:** Tailored for low-income households, microinsurance products have gained traction, offering affordable coverage for health, life, and assets.
4. **Public-Private Partnerships (PPPs):** Collaborative efforts between the government and private insurers have been instrumental in extending insurance coverage to the unbanked population.

**Challenges and Limitations**

- **Awareness and Literacy**: Despite significant efforts, financial literacy and knowledge of insurance products are still low, particularly in rural communities. Many consumers remain wary of insurance and fail to recognize the long-term advantages.
- **Affordability**: While government-led systems have low rates, private health and life insurance products can still be costly.
- **Implementation and Trust Issues**: Despite the best intentions, the **implementation** of insurance schemes, particularly in rural and underserved areas, faces challenges. There is also a **trust deficit** regarding the payouts and claims process.
- **Infrastructure and Accessibility:** Inadequate distribution networks in rural and isolated locations limit expansion opportunities.
- **Regulatory Hurdles:** Complex rules and compliance requirements might hinder innovation and new entrants in the industry.

**Strategies to Enhance Insurance Penetration**

- **Promoting Financial Literacy:** Conducting awareness campaigns and integrating insurance education into school curricula can improve understanding and adoption.
- **Innovative Product Design:** Developing affordable and flexible insurance products tailored to the needs of different demographic groups can enhance inclusivity.
- **Strengthening Distribution Channels:** Leveraging technology and alternative channels like e-commerce platforms and mobile networks can improve accessibility.
- **Regulatory Support:** Simplifying regulatory processes and encouraging innovation through sandbox approaches can attract more players and foster growth.

**Growth of New Policies**
Government programs like PMJJBY, PMSBY, and PMFBY, the digitization of insurance platforms, and heightened awareness of financial security following COVID-19 have all contributed to the rise in new insurance policies in India. Product innovations like as microinsurance, health insurance, and ULIPs, as well as IRDAI regulation changes, have increased coverage for a wider range of people. The usage of InsurTech, financial literacy, and rising middle-class income have all contributed to the acceptance of policies by making insurance more widely available, reasonably priced, and customized to meet the needs of each individual. The industry keeps expanding, especially in disadvantaged and rural areas, guaranteeing more financial security for all. Insurance is becoming more accessible to younger and tech-savvy populations due to the move towards digital platforms and streamlined policy buying procedures. Insurers can now reach remote locations thanks to the growing use of smartphones and internet access, which has greatly expanded the number of policyholders.

With the help of government programs like Ayushman Bharat, growing healthcare expenditures, and increased awareness of health hazards following the epidemic, health insurance has grown at the quickest rate. With

ISSN 2394 - 7780

people prioritizing long-term financial stability, life insurance policies—especially term plans and retirement solutions—have also grown in popularity.

Furthermore, the industry is now competitive but stable because to regulatory actions taken by the IRDAI, including encouraging openness, guaranteeing grievance resolution, and easing foreign investment. By fostering creativity and trust, these initiatives have accelerated the adoption of new regulations. All things considered, the Indian insurance market is expanding steadily, reaching underprivileged groups more and more and adjusting to shifting customer demands through product variety and technological advancements.

## CONCLUSION

Over the past few decades, the Indian insurance industry has grown significantly thanks to a mix of government efforts, technology breakthroughs, regulatory changes, and increased customer awareness. Innovative products including health insurance, microinsurance, and unit-linked insurance plans (ULIPs) have made it possible for insurers to serve a wide spectrum of customers, from wealthy urbanites to low-income groups. Expanding insurance coverage, particularly in rural regions, has been made possible by government programs including PMJJBY, PMSBY, and PMFBY. Additionally, digitization has made it easier to distribute and administer insurance policies. Both life and non-life insurance products are in higher demand as a result of the expanding middle class and the increased emphasis on risk management and financial literacy. The introduction of plans was further accelerated by the COVID-19 epidemic, which brought attention to the significance of life and health insurance. In order to maintain market stability and transparency, promote competition, and safeguard the interests of consumers, regulatory agencies such as the IRDAI have been essential. With ongoing innovation, improved financial inclusion, and more penetration in neglected markets, the insurance sector in India seems to have a bright future. The future of insurance in India is expected to be more inclusive, sustainable, and robust to new threats as the industry becomes more customer-focused, technologically advanced, and accessible.

## REFERENCES

1. Insurance Regulatory and Development Authority of India (IRDAI). (n.d.). *Annual reports*. Retrieved from https://www.irdai.gov.in
2. IRDAI Annual Reports. (Various years). *Insurance market performance and regulatory updates*. Insurance Regulatory and Development Authority of India. Retrieved from https://www.irdai.gov.in
3. World Bank. (2021). *Insurance and financial inclusion in India*. Retrieved from https://www.worldbank.org
4. Statista Research Department. (2023). *Growth of insurance policies in India*. Retrieved from https://www.statista.com
5. Economic Times. (2023). *Health insurance sees surge in post-pandemic India*. Retrieved from https://economictimes.indiatimes.com
6. IBEF (India Brand Equity Foundation). (2023). *Insurance sector in India: An overview*. Retrieved from https://www.ibef.org
7. McKinsey & Company. (2022). *Insurance in India: Trends and transformations*. Retrieved from https://www.mckinsey.com
8. National Sample Survey Office (NSSO). (2020). *Report on health and insurance penetration in India*. Ministry of Statistics and Programme Implementation, Government of India. Retrieved from https://www.mospi.gov.in

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# STUDY OF THE OPINION OF PRIMARY AND NURSERY SCHOOL TEACHERS TOWARDS DIGITAL TECHNOLOGY IN EDUCATION

**Anila Thakur[1] and Dr. Deepika Sharma[2]**
[1]Research Scholar and [2]Research Guide, Sevasadan's College of Education, Mumbai University.

## ABSTRACT
*Digital technology is the various electronic systems and resources that help us to learn, communicate, play and many more activities in our day to day activities. The advancement in digital technology is more than any other invention in our History. Digital systems are all around us in the form of computers, smartphones, Digital tools are the various programs, websites, applications and other internet and computerized resources that facilitate, enhance and execute the different tasks.*

*Present generation students are lucky enough as they have a computer lab and access to computers in their school. Digital technology has widely invaded the teaching learning process .It has completely transformed the classroom environment. It has made the teaching learning process much more interesting. As there always exist two faces of a single coin , there are advantages and disadvantages of digital technology in the education field too. The present study aims to find out the various advantages and limitations of using digital technology devices in a classroom environment.*

*The researcher was having a question in mind whether there always exists a positive change in the classroom situation and learning process with respect to digital technology or some risk also exists. So the present study was undertaken to know the attitude of primary and nursery teachers towards the use of digital technology in the field of education. As teachers are the real architects of students' minds .*

*Keywords: digital technology, teaching learning, nursery.*

## INTRODUCTION
Education is a process of acquiring knowledge throughout the lifetime, developing the power of rational thinking and judgement. In modern day the various means of acquiring knowledge in schools and colleges has changed. It is not limited to books, library lectures etc. Use of digital media in education has increased and it is being used extensively by teachers as well as by students. For all round development of students and get themselves familiar with the upcoming developing world. Digital media has manifold contributions which cannot be avoided.

In the present paper the researcher conducts a survey of primary and nursery teachers in order to study the enhancement of teachers competency and improvements ,motivation ,involvement, interest, achievements and distractions of using digital technology in teaching learning process . Almost all teachers agree that easy access to internet and digital technology allows an added advantage to the classroom learning process .There exists some risk to be considered while introducing digital technology in the classroom environment. Positive and negative aspects are part of any technology.

## NEED AND SIGNIFICANCE OF THE STUDY
It is observed that students of present generations are using digital media in the form of mobile internet, various applications and computers for gaining latest knowledge in various topics. The researcher is having questions in mind whether there is change in the competency of teachers .Whether it has helped to increase motivation, involvement, interest and achievement in the teaching learning process. Whether it has created an obstacle on the way to achieve knowledge and information. So the present study was undertaken to know advantages and drawbacks of digital technology used in the knowledge gaining process.

## REVIEW OF THE RELATED LITERATURE
C Wang (2024) worked on understanding the role of digital technologies in education and found the need for digital technology in education and its challenges in education.K Palm (2024) worked on use of digital technology in education and found that digital technology engages teachers in the design and execution process, builds knowledge in their practice.Stella Timotheou (2022) worked on impacts of digital technologies on education and factors influencing schools and found that the use of digital technologies in education has a positive effect on teachers.S Salavati (2016) worked on the use of digital technologies and the future of education towards non stupid optimism and found that the use of digital technologies has helped to increase student's engagement in education.Larian M. Nkomo (2021) Worked on synthesis of students' engagement with digital technologies and found that Psychological engagement with digital media can lead to behavioral engagement.

ISSN 2394 - 7780

## OBJECTIVE

To study the opinion of primary and nursery school teachers towards digital technologies in education and learning process.

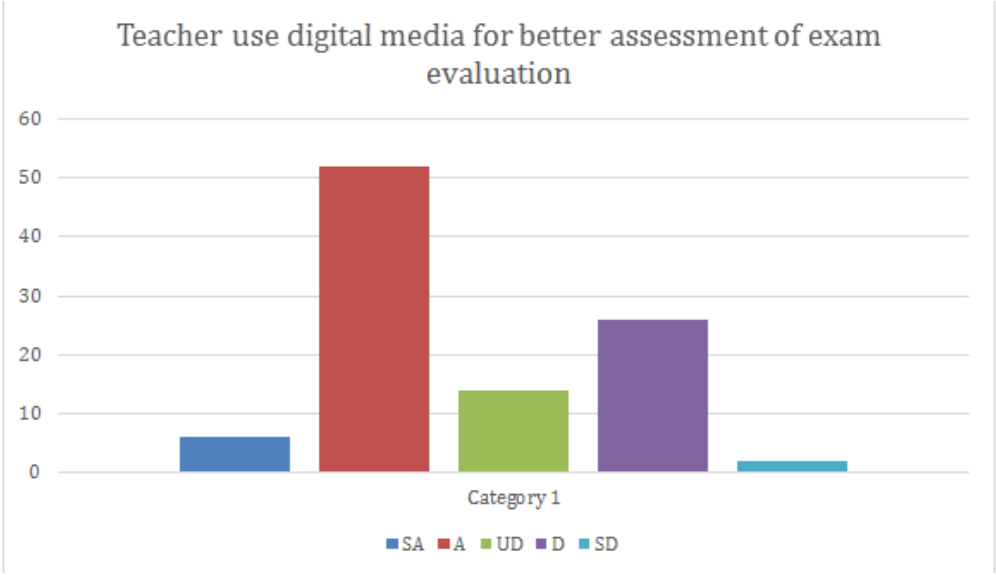
To interpret the collected opinion and to draw conclusions.

## METHODOLOGY

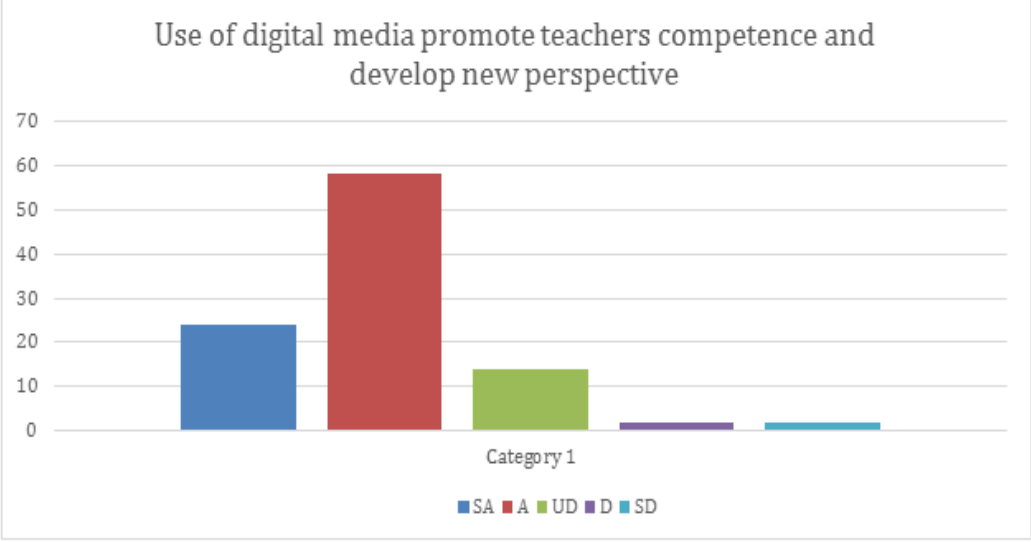
In the present study survey method was used. Survey method is generally used to find the facts collected from the data directly from the sample. In the present study the main aim was to collect the opinion of the primary and nursery teachers towards the use of digital technology and its effect on the teaching learning process.

## ANALYSIS AND INTERPRETATION

In the present study, the first objective was to study the opinion of teachers towards digital technology used in the classroom environment and then to find out the interpretation from the data collected and to draw conclusions. Following bar graphs and table shows the results of the survey which was done on primary and nursery school teachers.

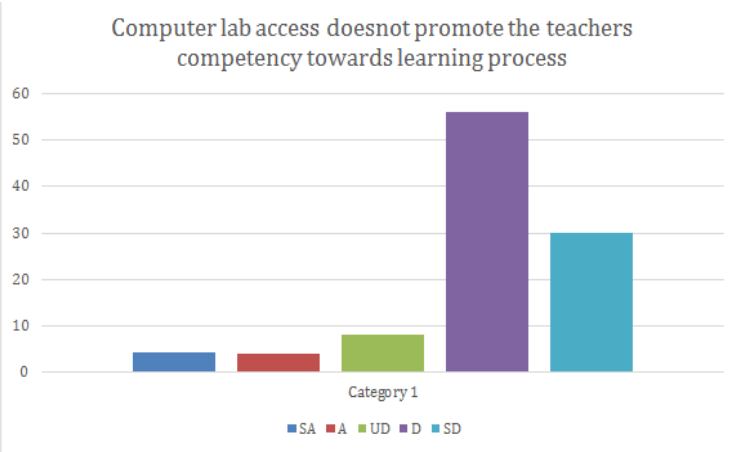



From the bar graph it is clear that 6% teachers strongly agree that teachers use digital media for better assessment of exam evaluation ,52 %teachers agree with it and 14% teachers are not able to give their opinion to this.26% teachers are disagreeing with it and only2% are strongly disagree with it. It shows that the majority of teachers agree that teachers use digital media for better assessment of exam evaluation.

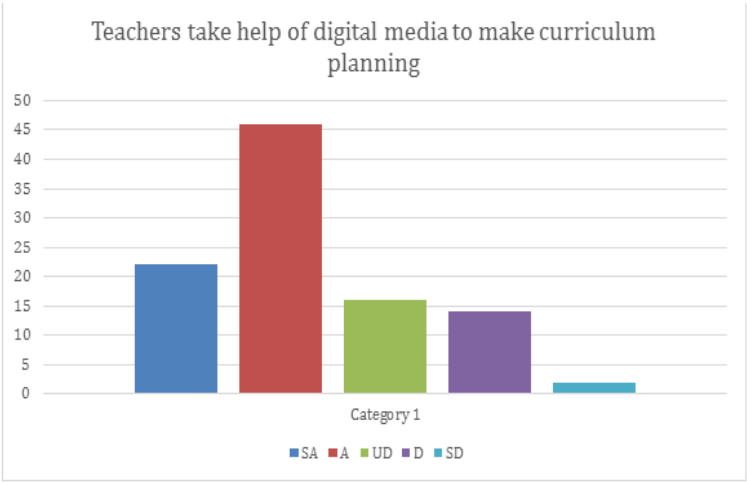



From the above bar graph it is clear that 24 % teachers strongly agree that use of digital media promote teachers competence and develop new perspective,58% teachers are agree with it and 14%teachers are not able to give any opinion to this.4% are disagree with it and nobody is disagree with it .It shows that majority of the teachers agree that use of digital media promote teachers competence and develop new perspective

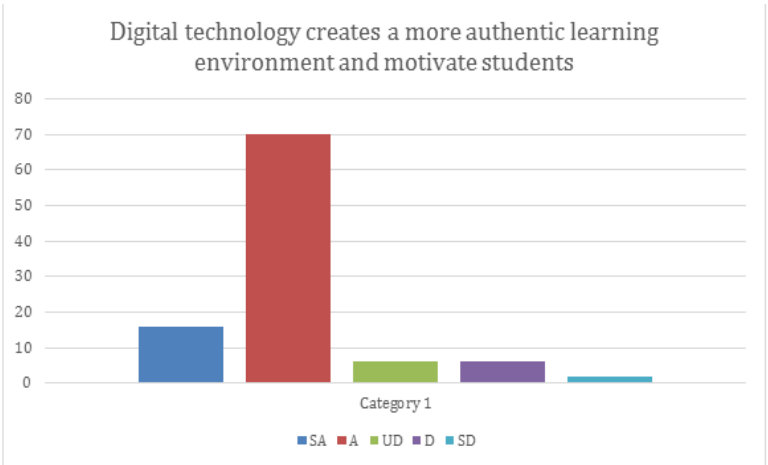
ISSN 2394 - 7780




From the above bar graph it is clear that 30 % teachers strongly disagree that computer lab access does not promote the teachers competence towards learning process, 56% teachers are disagree with it and 8%teachers are not able to give any opinion to this.4% are agree with it and 2% is strongly agree with it .It shows that majority of the teachers disagree that computer lab access does not promote the teachers competence towards learning process.

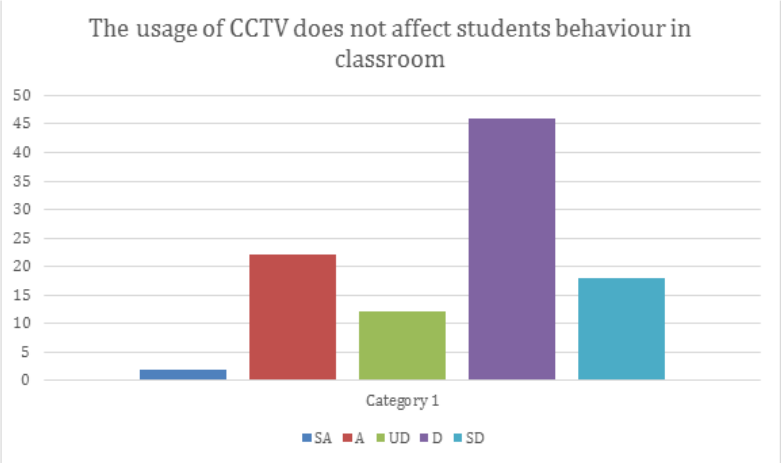



From the above bar graph it is clear that 22 % teachers strongly agree that teachers take help of digital media to make curriculum planning ,46% teachers are agree with it and 16%teachers are not able to give any opinion to this.14% are disagree with it and2% is strongly disagree with it .It shows that majority of the teachers agree that teachers take help of digital media to make curriculum planning.

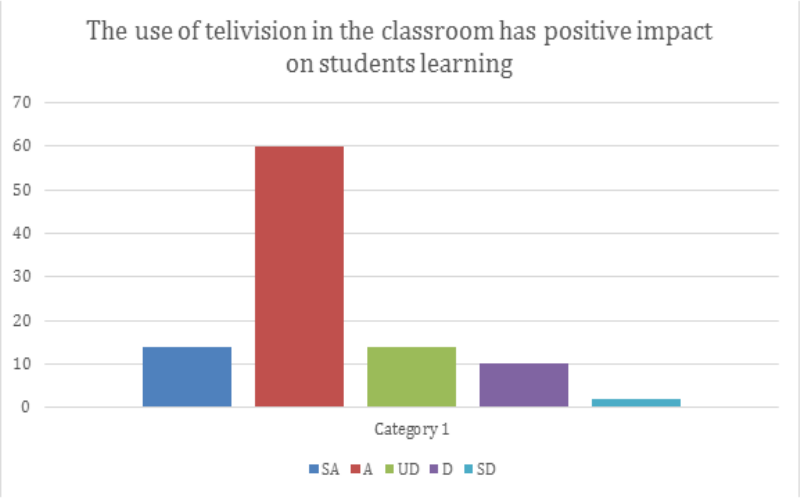



From the above bar graph it is clear that 16 % teachers strongly agree that digital technology create a more authentic learning environment and motivate students, 70% teachers are agree with it and 6%teachers are not able to give any opinion to this.6% are disagree with it and 2% is disagree with it .It shows that majority of the teachers agree that digital technology creamore authentic environment and motivate students.

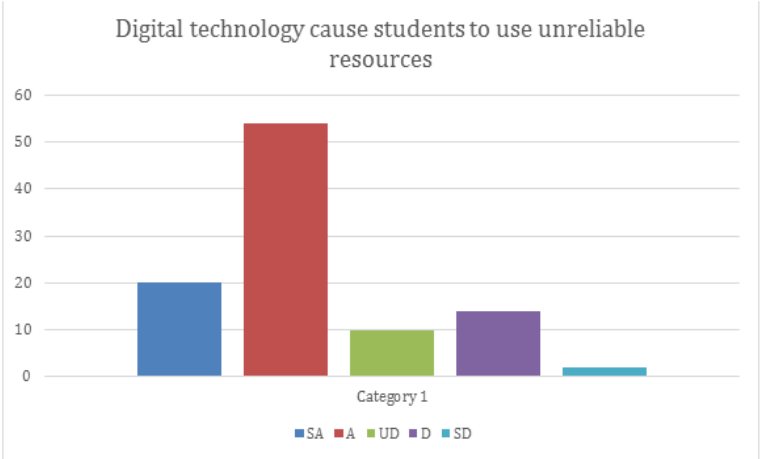
ISSN 2394 - 7780




From the above bar graph it is clear that 2 % teachers strongly agree that the usage of CCTV in a classroom does not affects students behaviour in classroom,22% teachers are agree with it and 12%teachers are not able to give any opinion to this.46% are disagree with it and 18% is strongly disagree with it .It shows that majority of the teachers agree that the usage of CCTV does not affect students behaviour in classroom.

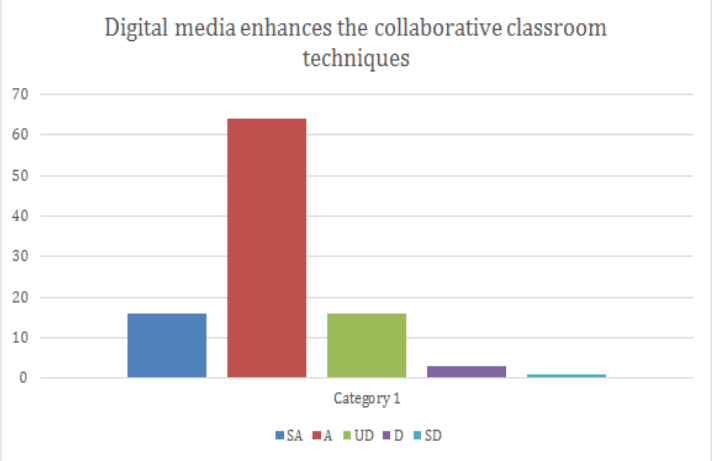



From the above bar **graph it** is clear that 14 % teachers strongly agree that the use of television in the classroom have a positive impact on students learing ,60% teachers are agree with it and 14%teachers are not able to give any opinion to this.10% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that the use of television in the classroom have a positive impact on students learning.

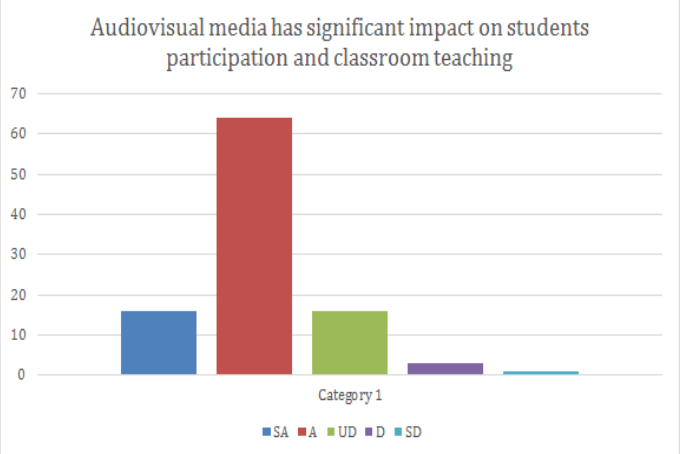



From the above bar graph it is clear that 20 % teachers strongly agree that use of digital technology cause students to use unreliable resources, 54% teachers are agree with it and 10%teachers are not able to give any opinion to this.14% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that use of digital technology cause students to use unreliable resources .

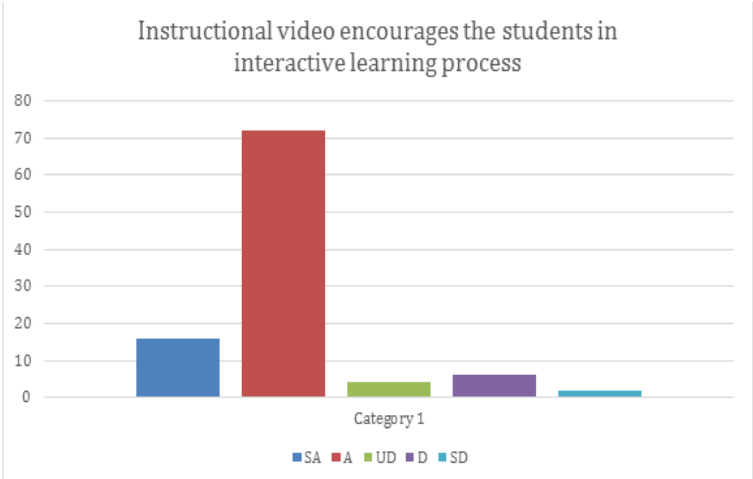
ISSN 2394 - 7780




From the above bar graph it is clear that 16 % teachers strongly agree that social media enhances collaborative classroom technique , 64% teachers are agree with it and 16%teachers are not able to give any opinion to this.3% are disagree with it and 1% is strongly disagree with it .It shows that majority of the teachers agree that social media enhances collaborative classroom technique .

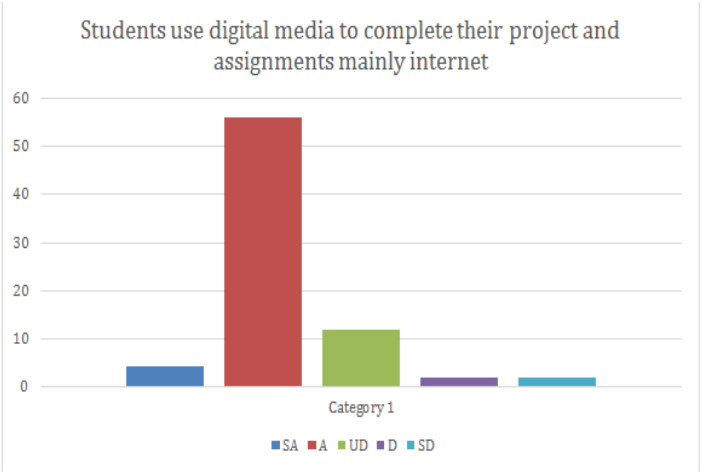



From the above bar graph it is clear that 16 % teachers strongly agree that audiovisual media has significant impact on students participation and classroom learning, 74% teachers are agree with it and 6%teachers are not able to give any opinion to this.2% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that audiovisual media has significant impact on students participation and classroom learning .

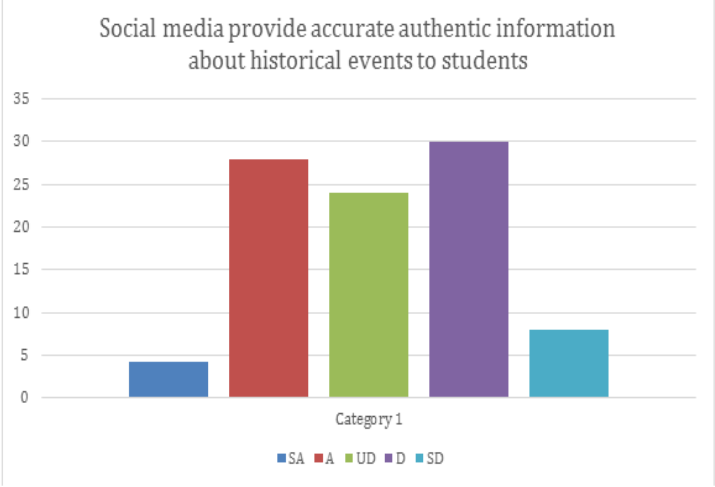



From the above bar graph it is clear that 16 % teachers strongly agree that instructional videos encourage the students in interactive learning process, 72% teachers are agree with it and 4%teachers are not able to give any opinion to this.6% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that instructional videos encourage the students in interactive learning process.

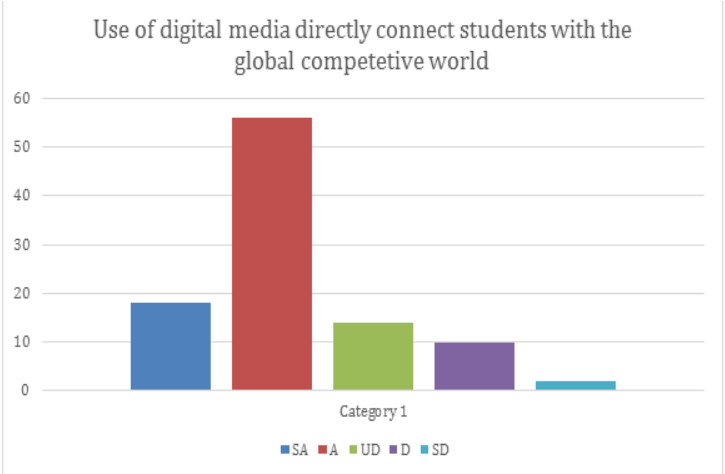
ISSN 2394 - 7780




From the above bar graph it is clear that 4% teachers strongly agree that students use digital media to complete their assignments and projects using internet,56% teachers are agree with it and 12%teachers are not able to give any opinion to this.2% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that students use digital media to complete their projects and assignments.

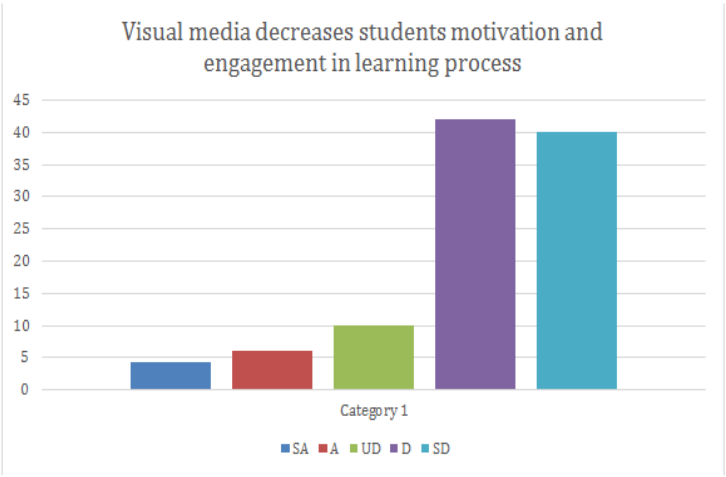



From the above bar graph it is clear that 4 % teachers strongly agree that social media provide accurate authentic information about historical events to students,28% teachers are agree with it and 24%teachers are not able to give any opinion to this.30% are disagree with it and 8% is strongly disagree with it .It shows that many of the teachers agree that use of social media provide accurate authentic information about Historical event .

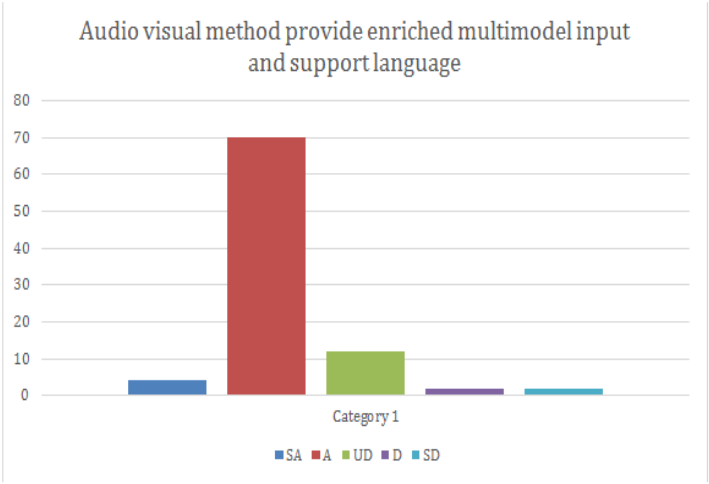



From the above bar graph it is clear that, 18% teachers strongly agree that use of digital media directly connect students with the global competitive world, 56% teachers are agree with it and 14%teachers are not able to give any opinion to this.10% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that use of digital media directly connect students with the global competitive world.

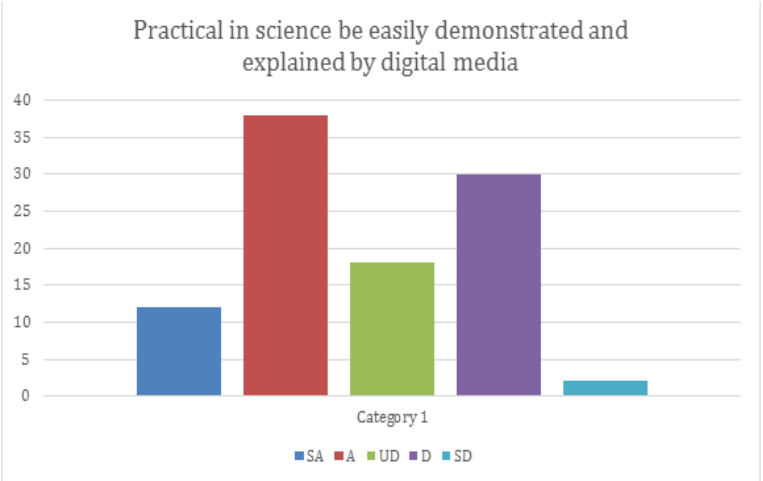
ISSN 2394 - 7780




From the above bar graph it is clear that 2 % teachers strongly agree that visual media increase students motivation and engagement in learning process, 6% teachers are agree with it and 10%teachers are not able to give any opinion to this.42% are disagree with it and 40% is strongly disagree with it .It shows that majority of the teachers disagree that visual media decreases students motivation and engagements in learning process.

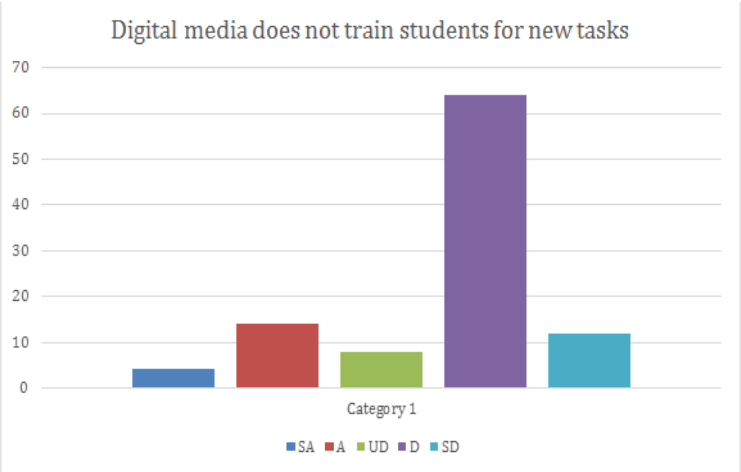



From the above bar graph, it is clear that 4 % teachers strongly agree that audio visual method provide enriched multimodal input and support language,70% teachers are agreeing with it and 12%teachers are not able to give any opinion to this.2% are disagree with it and 2% is disagree with it. It shows that the majority of the teachers agree that use of audio-visual methods provide enriched multimodal input and support language.

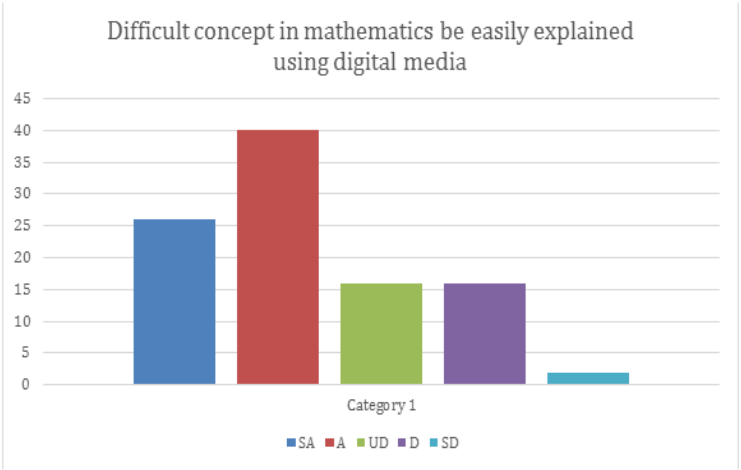



From the above bar graph it is clear that 12 % teachers strongly agree that practical in science be easily demonstrated and explained by digital media, 38% teachers are agree with it and 18%teachers are not able to give any opinion to this.30% are disagree with it and 2% is disagree with it .It shows that majority of the teachers agree that practical in science be easily demonstrated and explained by digital media.

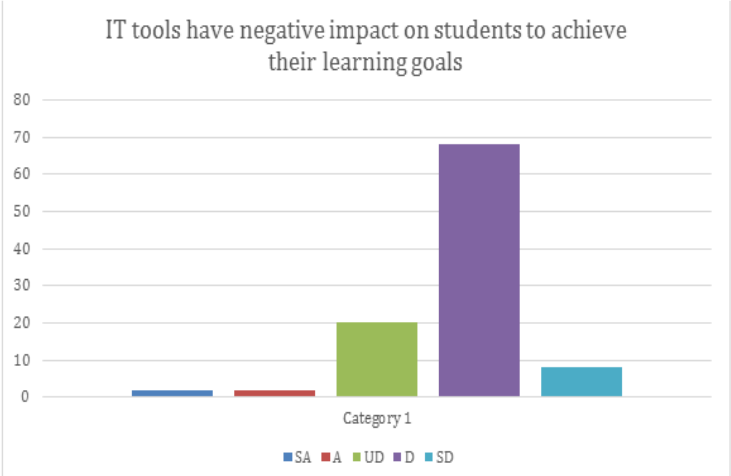
ISSN 2394 - 7780




From the above bar graph it is clear that 4 % teachers strongly agree that digital media train students for new tasks, 14% teachers agree with it and 8%teachers are not able to give any opinion to this.64% disagree with it and 12% strongly disagree with it. It shows that the majority of the teachers disagree that use of digital media does not train students for new tasks. Rather they can easily complete their tasks.

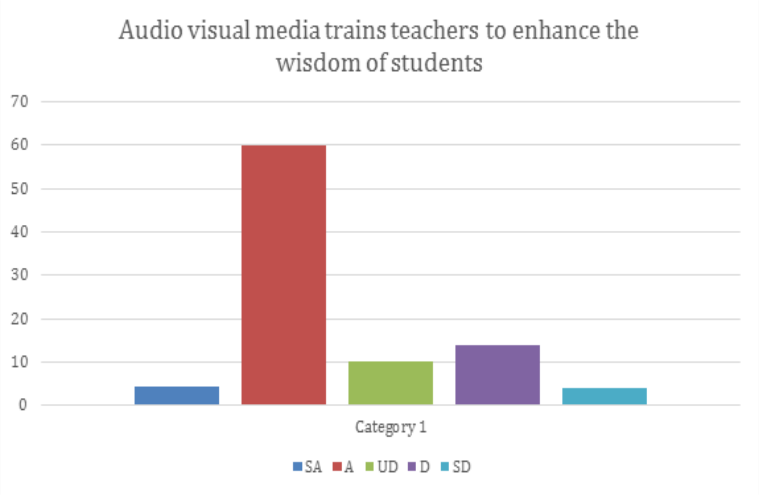



From the above bar graph it is clear that 26 % teachers strongly agree that difficult concepts in mathematics be easily explained by using digital media, 40% teachers are agree with it and 16%teachers are not able to give any opinion to this.16% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that difficult concepts in mathematics be easily explained by using digital media.

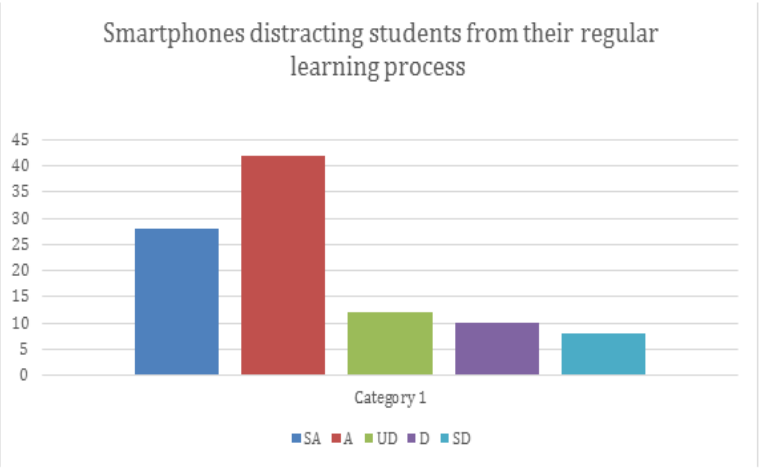



From the above bar graph it is clear that 2% teachers strongly agree that IT tools have positive impact on students on achieving their learning goals,2% teachers are agree with it and 20%teachers are not able to give any opinion to this 68% are disagree with it and 8% is strongly disagree with it .It shows that majority of the teachers disagree that IT tools have positive impact on achieving their learning goals .

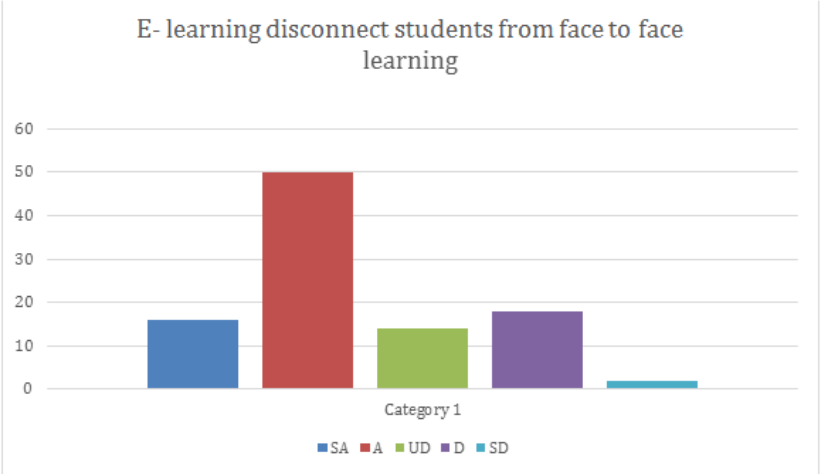
ISSN 2394 - 7780




From the above bar graph it is clear that 4% teachers strongly agree that audio visual media trained teachers enhance the wisdom of teachers,60% teachers are agree with it and 10%teachers are not able to give any opinion to this.14% are disagree with it and 4% is strongly disagree with it .It shows that majority of the teachers agree that audio visual media trains teachers to enhance the wisdom of students.

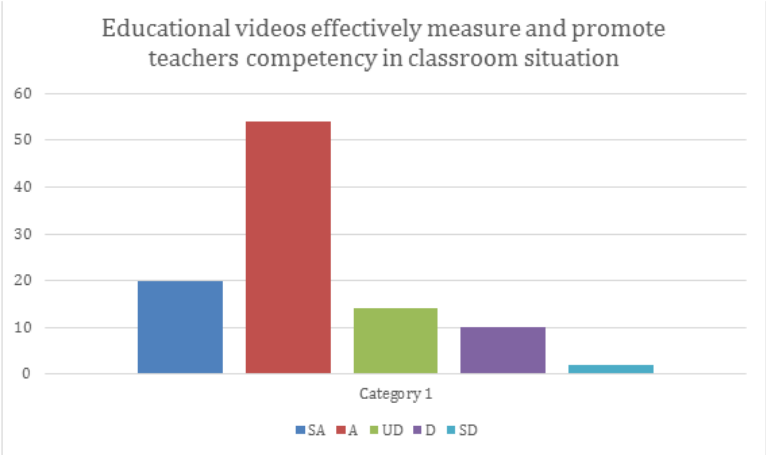



From the above bar graph it is clear that 28% teachers strongly agree that smart phones distract students from regular learning ,42% teachers are agree with it and 12%teachers are not able to give any opinion to this.10% are disagree with it and 8% strongly disagree with it .It shows that majority of the teachers agree that smart phone distracts students from their regular learning process

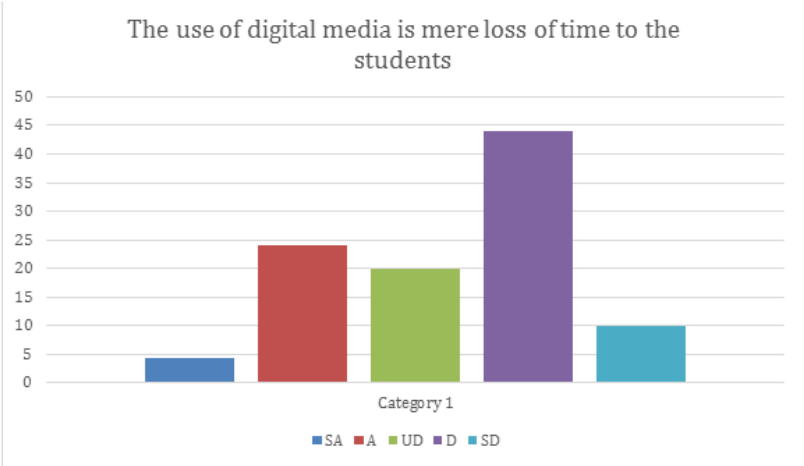



From the above bar graph it is clear that 16% teachers strongly agree that E -learning disconnects students students from face to face learning ,50% teachers are agree with it and 14%teachers are not able to give any opinion to this.18% are disagree with it and is disagree with it .It shows that majority of the teachers agree that E-learning disconnect students from face to face learning .

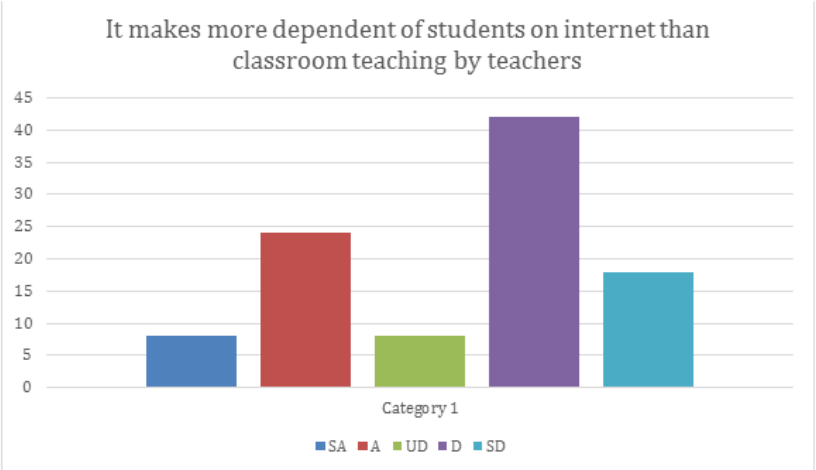
ISSN 2394 - 7780




From the above bar graph it is clear that 20% teachers strongly agree that educational videos effectively measure and promote teachers competence in classroom situations, 54% teachers are agree with it and 14%teachers are not able to give any opinion to this.10% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that educational videos effectively measure and promote teachers competence in classroom situations.

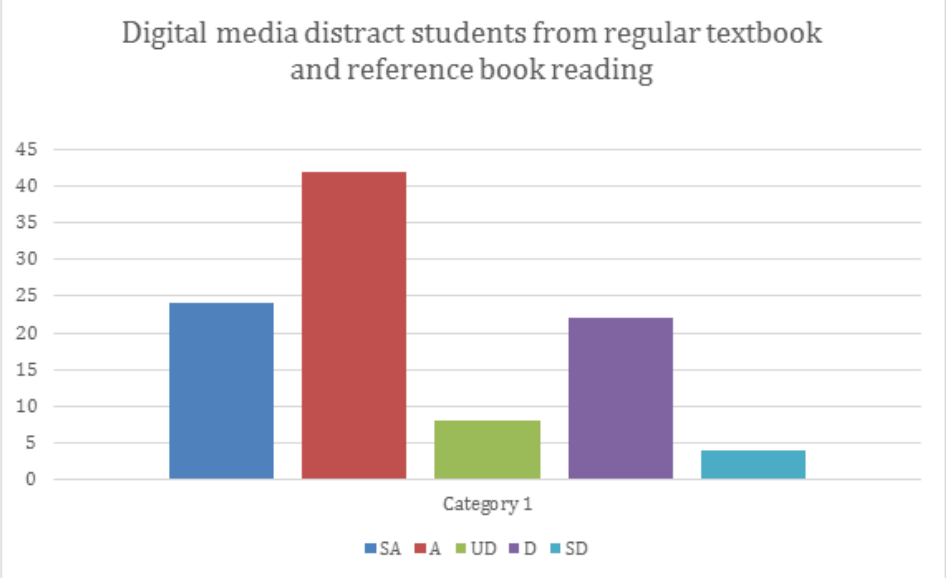



From the above bar graph it is clear that 4 % teachers agree that the use of digital media mere loss of time to the students, not a single 24% is agree with it and 20% teachers are not able to give any opinion to this.44% are disagree with it and 10% is disagree with it .It shows that majority of the teachers agree that use of digital media is not mere loss of time to the students.

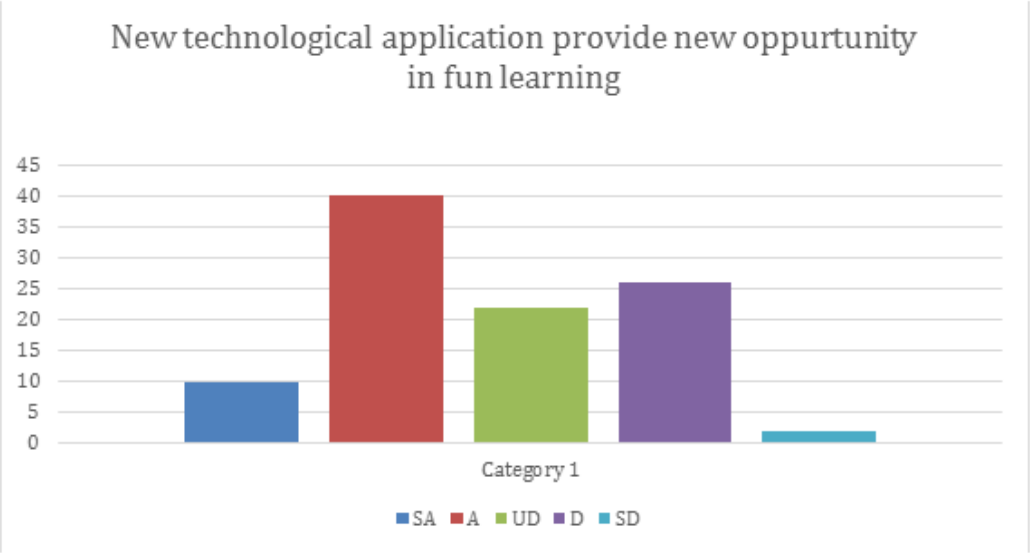



From the above bar graph it is clear that 8 % teachers strongly agree that it makes more dependent of students on internet than classroom teaching, 24% teachers are agree with it and 8%teachers are not able to give any opinion to this.20% are disagree with it and 8% is disagree with it .It shows that majority of the teachers agree that use of digital media makes more dependent of students on internet than classroom teaching by teachers.

ISSN 2394 - 7780




From the above bar graph, it is clear that 24 % teachers strongly agree that digital media distract students from regular textbooks and reference books, 42% teachers are agreeing with it and 8%teachers are not able to give any opinion to this.22% disagree with it and 4% strongly disagree with it. It shows that the majority of the teachers agree that digital media distract students from regular textbooks and reference book reading.




From the above bar graph it is clear that 10 % teachers strongly agree that new technological application provide new opportunity in fun learning 40% teachers are agree with it and 22%teachers are not able to give any opinion to this.26% are disagree with it and 2% is strongly disagree with it .It shows that majority of the teachers agree that new technological application provide new opportunity to chet.

**CONCLUSION**

It can be concluded that the opinion of primary and nursery school teachers regarding the use of digital technology in the teaching learning process is positive. It was found that almost all teachers agreed that easy access to the internet and digital technology allows an added advantage to the classroom learning process. There exists some risk to be considered while introducing digital technology in the classroom environment. Positive and negative aspects are part of any technology. Students can use modern technologies for many tasks that include report writing, project presentation, gathering important Information, and attend interactive sessions and many more.it helps to increase the teaching competency of teachers by introducing the e class learning. They agreed that digital learning helps students to motivate and engage more in learning tasks. It helps students to complete their project and activities in many informative ways. The Internet helps students to enrich interactive learning. Teachers also agreed that face to face learning and digital technology together are helpful in overall achievements of the students grade. They agreed that the negative impact of digital technology is marginal .Well awareness and guidance is necessary while using various devices which work on digital technologies.

ISSN 2394 - 7780

**REFERENCE**

T. Štemberger, S.Č. Konrad

Int. J. Emerg. Technol. Learn. (iJET), 16 (14) (2021), pp. 83-98

B. Cavas, P. Cavas, B. Karaoglan, T. Kisla

Online Submission, 8 (2) (2009)

G. Kostopoulos, S. Kotsiantis

Advances in Machine Learning/Deep Learning-Based Technologies (2022), pp. 79-94

M.I. Qureshi, N. Khan, H. Raza, A. Imran, F. Ismail

Technologies in Learning, 2017, 12 (5) (2017), pp. 128-149

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A COMPARATIVE STUDY OF ATTITUDES OF JUNIOR COLLEGE STUDENTS TOWARDS THEIR COLLEGES AND EDUCATION ON THE BASIS OF SOME PERSONAL AND INSTITUTIONAL FACTORS

**Ms. Chavan Usha Shridhar[1] and Mr. Jadhav Keshar Ramchandra[2]**
[1]Research Scholar, CSSM, University of Mumbai
[2]Research Guide, CSSM, University of Mumbai

## ABSTRACT
*Attitude is a part of personality. Students personalities reflected through their Attitudes/ Behavioral patterns. Developing positive attitude towards their Colleges / Studies which is the need of the time and general motto of the Education. There are many determinants affecting on the behavioral patterns of the students which positively or negatively support to develop their attitudes. Through this study researcher trying to know how some of the Personal and some of the Institutional factors affects directly or indirectly on the Attitudes of Junior College Students of Std. XII of Commerce stream (gender wise and college wise) towards their colleges and their Education.*

***Keywards:*** *Attitude, Junior College Students (of Aided Day and Night Junior colleges, Unaided Day and Night Junior colleges), Personal Factors, Institutional Factors.*

## INTRODUCTION
According to Anastasi, Anne - "An Attitude is a tendency to react favorably or unfavorably towards a designated class of stimuli; such as a national or ethnic group or a custom or an institution." There are many determinants affecting on the behavioral patterns of the students. which positively or negatively support to develop their attitudes. If there is a development of any positive attitude among the students towards their colleges, studies or college activities will definitely help to avoid the wastage of Educational cost may be at individual level or social level. Mostly these attitudes directly or indirectly affected by some of the Personal factors like Physical, Psychological, Family, Economic, social, etc. and some of the Institutional factors like Teaching- Learning, Institutional Climate, Discipline and Values, Supervision, Examination and Evaluation, etc. Overall physical, psychological, emotional and social, development of a child mostly occurred under Secondary and higher secondary level of an Education. A child can be more productive if he/she succeed to develop positive attitudes towards their College and Education which make him more knowledgeable, adjustable, rational thinker judicious decision maker which definitely contributes to the economic growth of a nation. There is urge of a time to know the attitudes of $10^{th}$ +2 level students and the factors may be personal/ institutional directly or indirectly effect on their attitudes. So that those attitudes can be shaped and support for their overall growth and development.

### Need of the Study:
After the review of various studies conducted by different researchers at different times and places and also at different levels of education, it was found that many of them had done researches on One or two personality traits and its impact or relations. Some studies had done on Problems at secondary, higher secondary levels, problems of teaching and learning, etc. Only Few studies done on effects of physical factors, psychological, sociological, environmental, etc. But hardly few researches focused on the factors relating to Personal and Institutional level affecting on the attitudes are studied at Junior College level specially relating to Commerce studies. So, Researcher felt there was a need of such study.

### Importance/ Significance of the Study:
The personality of a child comes into shape at +2 level. A child is an asset of a nation and need to nurture and cares by Parents, Teachers, educational institution and Society jointly; so that the potentialities of a child personality will definitely flourish and productivity of such an asset will help in the economic growth of a nation. Therefore, a Researcher felt the importance/significance of topic for the study.

### Variables of the Study:

**Independent Variables-**

**a) Personal Factors (5 factors)**

**b) Institutional Factors (5 factors)**

Affecting on Attitudes towards Colleges and Education of Junior College Students.

ISSN 2394 - 7780

**Dependent Variables-**

**Attitudes towards Colleges and Education** of Junior College Students (who are passed out XI and studying in XII from Commerce Stream of MHSSC Board Examination of Maharashtra State).

**Attribute Variables-**

1. Gender: a) Girls b) Boys
2. Types of College: a) Aided Day Junior Colleges b) Aided Night Junior Colleges c) Unaided Day Junior Colleges d) Unaided Night Junior Colleges (Commerce Stream).

**Objectives of the Study:**

1. To compare the Factors (Personal and Institutional) affecting on the Attitudes of Junior College Students towards their Colleges in relation to

i) Gender: a) Girls b) Boys

ii) Types of College (Commerce faculty): a) Aided Day Junior Colleges b) Aided Night Junior Colleges c) Unaided Day Junior Colleges d) Unaided Night Junior Colleges

**Hypothesis of the Study:**

1. There is no significant difference in Factors (Personal and Institutional) affecting on the Attitudes of Junior College Students towards their Colleges in relation to

i) Gender: a) Girls b) Boys

ii) Types of College (Commerce Stream): a) Aided Day Junior Colleges b) Aided Night Junior Colleges c) Unaided Day Junior Colleges d) Unaided Night Junior Colleges

**Research Design:**

**Methodology of the Study**

For the Present study,

a **Descriptive Survey method** was used to collect the data.

**Sample**

The Researcher selected 800 students in equal ratios i.e. a) Aided Day Junior Colleges b) Aided Night Junior Colleges c) Unaided Day Junior Colleges d) Unaided Night Junior Colleges students of Commerce Faculty. Students of 12$^{th}$ std. (+2 level) of Maharashtra Higher Secondary Certificate Exam Board was considered from Mumbai District only as a sample for the present study.

Simple Random Sampling Technique was used for sample selection

**Tools:**

5 Point Likert Rating Scale were prepared to test the Factors (Personal and Institutional) affecting on the Attitudes of Commerce Day and Night Junior College Students towards their Colleges and Education.

**Techniques:**

Mean, S.D., T-Test. were used in present study for the data analysis.

**Scope and Limitations:**

The Researcher selected equal ratios of students of Aided Day and Night Junior Colleges and Unaided Day and Night Junior Colleges of Commerce Faculty. Students of 12$^{th}$ std. (+2 level of Maharashtra Higher Secondary Certificate Exam Board was considered from Mumbai District as a sample for the present study. A Comparative study was done only on the basis of some Personal and some institutional factors affecting on the attitudes of the Junior college students towards their colleges and Education.

**Hypothesis Analysis:**

1. There is no significant difference in Factors affecting on the Attitudes of Junior College Students towards their Colleges and Education in relation to

i) Gender: a) Girls

b) Boys

ii) Type of College (Commerce Stream):

ISSN 2394 - 7780

a) Aided Day and Night Junior Colleges

b) Unaided Day and Night Junior Colleges

**Inferential Analysis:**
For present study, Inferential analysis of Hypothesis was done by calculating Mean, Standard Deviation and t-test value.

**Table-1**

| ATTITUDE TOWARDS COLLEGE OF JUNIOR COLLEGE STUDENTS | | | | | | |
|---|---|---|---|---|---|---|
| PERSONAL & INSTITUTIONAL FACTORS | SAMPLE | MEAN | S.D. | M2-M1 | 't' value | LEVEL 0.05 % |
| TOTAL BOYS | 400 | 128.94 | 14.63 | | | |
| TOTAL GIRLS | 400 | 133.19 | 14.86 | -4.25 | -4.07 | Significant |
| TOTAL STUDENTS | 800 | 131.06 | 14.75 | | | |
| | BOYS | | | | | |
| | 100 | 124.16 | 13.26 | | | |
| AIDED DAY JUNIOR | GIRLS | 129.49 | 15.37 | -5.33 | -5.06 | Significant |
| COLLEGES | 100 | | | | | |
| | BOYS | | | | | |
| | 100 | 127.77 | 14.66 | | | |
| AIDED NIGHT JUNIOR | GIRLS | 126.78 | 13.99 | 0.99 | 0.49 | Not Significant |
| COLLEGES | 100 | | | | | |
| | BOYS | | | | | |
| | 100 | 133.04 | 14.13 | | | |
| UNAIDED DAY JUNIOR | GIRLS | 138.26 | 14.42 | -5.22 | -2.57 | Significant |
| COLLEGES | 100 | | | | | |
| | BOYS | | | | | |
| | 100 | 130.39 | 15.01 | | | |
| UNAIDED NIGHT JUNIOR | GIRLS | 133.76 | 13.04 | -3.37 | -0.68 | Not Significant |
| COLLEGES | 100 | | | | | |

**Interpretations:**
The above Table -1 indicates the result about the factors affecting on the Attitude towards the Colleges of all Girls, all Boys, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students through their Mean, S.D. and t-value scores. The Mean score of Total Boys and Girls, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students are 128.94, 133.19, 124.16, 129.49, 127.78, 126.78, 133.04, 138.26, 130.39, 133.76 respectively. While Standard Deviations of Boys, Girls, Aided Day and Night Junior Colleges, Unaided Day and Night Junior Colleges are 14.63, 14.83, 13.26, 15.37, 14.66, 13.99, 14.13, 14.42, 15.1, 13.04 respectively.

Mean difference value ($M_2$-$M_1$) in between total sample of Boys Means and Girls Mean is -4.23 and t-value is -4.07 it shows highly significant relations. Aided Day Boys and Girls having mean difference is -5.33 and t-value is -5.07, which is highly significant. While Aided Night Junior Colleges Boys and Girls are having mean difference is 0.99 and t-value is 0.49 it shows there is no significant relationship. Unaided Day college Boys and Girls mean difference is -5.22 and t-value is -2.57 shows that there is a significant difference in the above mean scores. Lastly Unaided Night College Boys and Girls' mean difference is -3.37 and 't' value is -0.68, also shows no significant relationship.

So, the Hypothesis is rejected in case of Aided and Unaided Day college Boys and girls and total sample of boys and girls. While hypothesis is accepted as is no significant difference in the factors affecting on Attitude of Boys and Girls of Aided Night, Unaided Night Junior Colleges which have minus relationship.

**Table-2**

| ATTITUDE TOWARDS EDUCATION OF JUNIOR COLLEGE STUDENTS | | | | | | |
|---|---|---|---|---|---|---|
| PERSONAL & INSTITUTIONAL FACTORS | SAMPLE | MEAN | S.D. | M2-M1 | 't' value | LEVEL 0.05 % |
| TOTAL BOYS | 400 | 123.77 | 15.12 | | | |
| TOTAL GIRLS | 400 | 127.86 | 16.26 | -4.09 | -3.68 | Significant |

ISSN 2394 - 7780

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL STUDENTS | 800 | 125.82 | 15.69 | | | |
| AIDED DAY JUNIOR COLLEGES | BOYS | | | | | |
| | 100 | 118.87 | 15.35 | | | |
| | GIRLS | 123.91 | 18.40 | -5.04 | -4.17 | Significant |
| | 100 | | | | | |
| AIDED NIGHT JUNIOR COLLEGES | BOYS | | | | | |
| | 100 | 126.60 | 14.74 | | | |
| | GIRLS | 126.92 | 16.71 | -0.32 | -0.14 | Not Significant |
| | 100 | | | | | |
| UNAIDED DAY JUNIOR COLLEGES | BOYS | | | | | |
| | 100 | 125.33 | 14.78 | | | |
| | GIRLS | 130.13 | 14.55 | -4.8 | -2.30 | Significant |
| | 100 | | | | | |
| UNAIDED NIGHT JUNIOR COLLEGES | BOYS | | | | | |
| | 100 | 124.11 | 14.74 | | | |
| | GIRLS | 125.75 | 14.92 | -1.64 | -0.78 | Not Significant |
| | 100 | | | | | |

**Interpretations:**

The above Table -2 indicates the result about the factors affecting on the Attitude towards their Education of all Girls, all Boys, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students through their Mean, S.D. and t-value scores. The Mean score of Total Boys and Girls, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students are 123.77, 123.86,118.87, 123.91, 126.60, 126.92, 125.33, 130.13, 124.11, 125.75 respectively. While Standard Deviations of Boys, Girls, Aided Day and Night Junior Colleges, Unaided Day and Night Junior Colleges are 15.12, 16.26, 15.35, 18.40, 14.74, 16.71, 14.78, 14.55, 14.74, 14.92 respectively.

Mean difference value ($M_2$-$M_1$) in between total sample of Boys and Girls is -4.09 and t-value is -3.68 shows high significant relations. Aided Day Boys and Girls having mean difference is -5.04 and t-value is -4.17 it shows there is high significant relationship. Aided Night College Boys and Girls mean difference is -0.32 and t-value is -0.14 shows that there is no significant relationship. Unaided Day is having mean difference as -4.8 and t-value is -2.30 which seems significant relationship. Lastly Unaided Night College Boys and Girls mean difference is -1.64 and 't' values is -0.78 shows no significant relationship.

So, the Hypothesis is rejected in case of Total sample of Boys and Girls, Aided Day and Unaided Day college Boys and girls and While hypothesis is accepted as there is no significant difference in the factors affecting on Attitude towards Education of Boys and Girls of Aided Night, Unaided Night Junior Colleges which have minus relationship.

**CONCLUSIONS**

1. There are the significant differences in the factors affecting on Attitude towards Colleges of aggregate sample and Aided and Unaided Day college Boys and Girls.
2. There is no significant difference in factors affecting on Attitude towards Colleges of Aided Night and Unaided Night Junior College Boys and Girls.
3. There are the significant differences in the factors affecting on Attitude towards Education of aggregate sample and Aided and Unaided Day college Boys and Girls.
4. There is no significant difference in factors affecting on Attitude towards Education of Aided Night and Unaided Night Junior College Boys and Girls.

**CONCLUSIONS**

1. There are significant differences in the factors affecting on Attitudes towards their Colleges of Boys and Girls.
2. There are significant differences in the factors affecting on Attitudes towards their Colleges of Boys and Girls of Aided and Unaided Day Junior Colleges.

ISSN 2394 - 7780

3. There are no significant differences in factors affecting on Attitudes towards their Colleges of the Aided and Unaided Night Junior College students.
4. There are significant differences in the factors affecting on Attitudes towards their Education of Boys and Girls.
5. There are significant differences in the factors affecting on Attitudes towards their Education of Boys and Girls of Aided and Unaided Day Junior Colleges.
6. There are no significant differences in factors affecting on Attitudes towards their Education of the Aided and Unaided Night Junior College students.

**REFERENCES**

1. Koul, L. (1993). **Methodology in Educational Research**. New Delhi: Vikas Publishing.
2. Best, J.W.and Kahn, J.V.(2009). **Research Methodology** (10thEd.),PHI Learning Pvt Ltd.
3. Buch, M. B. A. (1993-2000): Sixth Survey of research in Education, NCERT, New Delhi.
4. Aggarwal J. C., Educational Research an Introduction, Arya Book Depot, New Delhi.
5. Dr. Jadhav Keshar, Action Research, Shubhay Prakashan, Dadar, Mumbai.

**Websites:**

www.shodhganga.net

www.eric.ed.govt

www. researchgate.net

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT AND CAREER CHOICE OF JUNIOR COLLEGE STUDENTS ON THE BASIS OF SOME PERSONAL AND INSTITUTIONAL FACTORS

**Ms. Chavan Usha Shridhar[1] and Mr. Jadhav Keshar Ramchandra[2]**
[1]Research Scholar, CSSM, University of Mumbai
[2]Research Guide, CSSM, University of Mumbai

## ABSTRACT
*Education is serving basically for the individual development of a Student and for that education system is mainly target the Academic Achievement The secondary and Higher Secondary School level is often considered a gateway to personal, economic and social development of a child. It is crucial and difficult because as is the turning point of career of students when they have to be prepared to choose from among various professions and vocations. Under this study attempt has made to study how some of the Personal and some of the Institutional factors affects directly or indirectly on the Academic Achievement and Career Choice of Junior College students of Std. XII of Commerce stream (gender wise and college wise) and there is significant difference found in the Academic Achievement and Career Choice of students in relation to gender and type of college in some cases.*

*Keywards: Academic Achievement and Career Choice of Junior College Students (Day Aided and Unaided Junior colleges, Night Aided and Unaided Junior Colleges), Personal Factors, Institutional Factors.*

## INTRODUCTION
According to the great Indian Philosopher Sri Aurobindo, "Education should aim at all round development of the personality, which includes education of the sense, body, mind, moral and spiritual education." Education is serving basically for the individual development of a Student and for that education system is mainly target the Academic Achievement. The secondary and Higher Secondary School level is often considered a gateway to personal, economic and social development of a child. It is crucial and difficult because as is the turning point of career of students when they have to be prepared to choose from among various professions and vocations. Under this study attempt has made to study how some of the Personal and some of the Institutional factors affects directly or indirectly on the Academic Achievement and Career Choice of Junior College students of Std. XII of Commerce stream (gender wise and college wise)

The National growth depends on the personality of a child comes into shape at +2 level. A child is an asset of a nation and need to nurture and cares by Parents, Teachers, educational institution and Society jointly; and that can be possible only when to apply the right academic plan with study of factors which of determinants of the Academic achievement of a child. Education is serving basically for the individual development of a Student and for that education system is mainly target the Academic Achievement The secondary and Higher Secondary School level is often considered a gateway to personal, economic and social development of a child. It is crucial and difficult because as is the turning point of career of students when they have to be prepared to choose from among various professions and vocations. Under this study attempt has made to study how some of the Personal and some of the Institutional factors affects directly or indirectly on the Academic Achievement and Career Choice of Junior College students of Std. XII of Commerce stream (gender wise and college wise)

### Need of the Study:
After doing review of various researches conducted by different researchers at different times and places and also at different levels of education, it was found that many of them had done researches on Academic Achievement and related factors. Some studies had done on Problems at secondary, higher secondary levels, problems of teaching and learning, etc. Only Few studies done on effects of physical factors, psychological, sociological environmental, etc. But hardly few researches focused on the factors relating to Personal and Institutional level affecting on the Academic Achievement and Career choice studied at Junior College level specially relating to Commerce studies. So, Researcher felt there was a need of such study.

### Importance/ Significance of the Study:
The personality of a child comes into shape at +2 level. A child is an asset of a nation and need to nurture and cares by Parents, Teachers, educational institution and Society jointly; so that the potentialities of a child personality will definitely flourish and productivity of such an asset will help in the economic growth of a nation. Therefore, a Researcher felt the importance/significance of topic for the study. It will definitely help to know-

ISSN 2394 - 7780

a) the **Students** to know about their academic level strengths, their adjustments, etc. b) the **Parents** to know the likes and dislikes of a child and inspire them for further studies and better settlement in future careers. c) the **Teachers and Educational Institution** to know the factors positively or negatively effect on Academic Achievement and Career choice of students studying at 10 +2 level. It can help them to plan and organize the academic programs to develop a positive approach among the students for their academic growth and choosing a better career as per their potentialities.

**Variables of the Study:**

**Independent Variables-**

**a) Personal Factors**

**b) Institutional Factors**

Affecting on Academic Achievement and Career Choice of Junior College Students.

**Dependent variables-**
Academic Achievement and Career Choice of Junior College Students (who are passed out XI and studying in XII from Commerce Stream of MHSSC Board Examination of Maharashtra State).

**Attribute variables-**
1) Gender: a) Girls b) Boys

2) Types of College (Commerce Stream).:

a) Aided Day and Night Junior Colleges

b) Unaided Day and Night Junior Colleges

**Objectives of the Study:**
1. To compare the Factors (Personal and Institutional) affecting on the Academic Achievement and Career Choice of Junior College Students towards their Colleges in relation to

i) Gender: a) Girls b) Boy

ii) Types of College (Commerce Stream).:

a) Aided Day and Night Junior Colleges b) Unaided Day and Night Junior Colleges

**Hypothesis of the Study:**
1. There is no significant difference in Factors (Personal and Institutional) affecting on the Academic Achievement and Career Choice of Junior College Students in relation to

i) Gender: a) Girls b) Boys

ii) Type of College: Aided Day & Night Junior Colleges b) Unaided Day & Night Junior Colleges

**Research Design:**

**Methodology of the Study**

For the Present study, a **Descriptive Survey method** was used to collect the data.

**Sample**
The Researcher selected 800 students in equal ratios from Day Junior Colleges b) Night Junior Colleges of Commerce Faculty. Students of $12^{th}$ std. (+2 level) of Maharashtra Higher Secondary Certificate Exam Board was considered from Mumbai District only as a sample for the present study.

Simple Random Sampling Technique was used for sample selection.

**Tools:**
5 Point Likert Rating Scale was prepared to test the Factors (Personal and Institutional) affecting on the Academic Achievement and Career Choice of Junior College Students.

**Techniques:**
Mean, S.D., T-Test. were used in present study for the data analysis.

ISSN 2394 - 7780

**Scope and Limitations:**
The Researcher selected equal ratios of students from Aided and Unaided of Day and Night Junior Colleges of Commerce Faculty. Students of 12th std. (+2 level) of Maharashtra Higher Secondary Certificate Exam Board was considered from Mumbai District as a sample for the present study of Mumbai district only.

**Hypothesis Analysis:**
1. There is no significant difference in Factors (Personal and Institutional) affecting on the Academic Achievement and Career Choice of Junior College Students in relation to

i) Gender: a) Girls b) Boys

ii) Type of College: Aided Day & Night Junior Colleges b) Unaided Day & Night Junior Colleges

**Inferential Analysis:**
For present study, Inferential analysis of Hypothesis was done by calculating Mean, Standard Deviation and t-test value

**Table-1**

| ACADEMIC ACHIEVEMENT OF JUNIOR COLLEGE STUDENTS | | | | | | |
|---|---|---|---|---|---|---|
| PERSONAL & INSTITUTIONAL FACTORS | SAMPLE | MEAN | S.D. | M2-M1 | 't' value | LEVEL 0.05 % |
| TOTAL BOYS | 400 | 131.45 | 18.39 | | | |
| TOTAL GIRLS | 400 | 135.19 | 18.16 | -3.74 | -2.89 | Significant |
| TOTAL STUDENTS | 800 | 133.32 | 18.28 | | | |
| AIDED DAY JUNIOR COLLEGEGS | BOYS | 120.91 | 15.02 | | | |
| | 100 | | | -3.12 | -5.21 | Significant |
| | GIRLS | 124.03 | 20.08 | | | |
| | 100 | | | | | |
| AIDED NIGHT JUNIOR COLLEGES | BOYS | 133.85 | 16.32 | | | |
| | 100 | | | -1.25 | -0.55 | Not Significant |
| | GIRLS | 135.10 | 15.79 | | | |
| | 100 | | | | | |
| UNAIDED DAY JUNIOR COLLEGES | BOYS | 138.68 | 20.24 | | | |
| | 100 | | | -0.37 | -0.13 | Not Significant |
| | GIRLS | 139.05 | 20.25 | | | |
| | 100 | | | | | |
| UNAIDED NIGHT JUNIOR COLLEGES | BOYS | 132.53 | 17.08 | | | |
| | 100 | | | -0.13 | -0.06 | Not Significant |
| | GIRLS | 132.66 | 15.87 | | | |
| | 100 | | | | | |

**Interpretations:**
The above Table -1 indicates the result about the factors affecting on the Academic Achievement of all Girls, all Boys, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students through their Mean, S.D. and t-value scores. The Mean score of Total Boys and Girls, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students are 131.45, 135.19, 120.91, 124.03, 133.85, 135.10, 138.68, 139.05, 132.53 and132.66 respectively. While Standard Deviations of Boys, Girls, Aided Day and Night Junior Colleges, Unaided Day and Night Junior Colleges are 18.39, 18.16, 15.02, 20.08,16.32, 15.79, 20.24, 20.25, 17.08 and 15.87 respectively.

Mean difference value ($M_2$-$M_1$) in between total sample of Boys Means and Girls Mean is -3.74 and t-value is -2.89 it shows significant relations. Aided Day Boys and Girls having mean difference is -3.12 and t-value is -5.21, which is highly significant. While Aided Night Junior Colleges Boys and Girls are having mean difference is -1.25 and t-value is 0.55 it shows there is no significant relationship. Unaided Day college Boys and Girls mean difference is -0.37 and t-value is 0.13 shows that there is no significant difference in the above mean scores. Lastly Unaided Night College Boys and Girls mean difference is -0.13 and 't' value is -0.06, also shows no significant relationship.

ISSN 2394 - 7780

So, the Hypothesis is rejected in case of Aided Day college Boys and girls and total sample of boys and girls. While hypothesis is accepted as is no significant difference in the factors affecting on Academic Achievement of Boys and Girls of Aided Night, Unaided Day and Night Junior Colleges which have minus relationship.

**Table-2**

| CAREER CHOICE OF JUNIOR COLLEGE STUDENTS | | | | | | |
|---|---|---|---|---|---|---|
| PERSONAL & INSTITUTIONAL FACTORS | SAMPLE | MEAN | S.D. | M2-M1 | 't' value | LEVEL 0.05 % |
| TOTAL BOYS | 400 | 111.19 | 13.84 | | | |
| TOTAL GIRLS | 400 | 115.17 | 14.81 | -3.98 | -3.92 | Significant |
| TOTAL STUDENTS | 800 | 113.18 | 14.32 | | | |
| | BOYS | 108.29 | 13.38 | | | |
| | 100 | | | -8.91 | -4.42 | Significant |
| AIDED DAY JUNIOR | GIRLS | 117.2 | 14.93 | | | |
| COLLEGEGS | 100 | | | | | |
| | BOYS | 109.7 | 12.9 | | | |
| | 100 | | | -1.36 | -0.70 | Not Significant |
| AIDED NIGHT JUNIOR | GIRLS | 111.06 | 14.35 | | | |
| COLLEGES | 100 | | | | | |
| | BOYS | 111.29 | 14.84 | | | |
| | 100 | | | -4.27 | -1.96 | Significant |
| UNAIDED DAY | GIRLS | 115.56 | 15.7 | | | |
| JUNIOR COLLEGES | 100 | | | | | |
| | BOYS | 115.31 | 13.07 | | | |
| | 100 | | | -1.7 | -0.90 | Not Significant |
| UNAIDED NIGHT | GIRLS | 117.01 | 13.53 | | | |
| JUNIOR COLLEGES | 100 | | | | | |

**Interpretations:**

The above Table -2 indicates the result about the factors affecting on the Academic Achievement of all Girls, all Boys, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students through their Mean, S.D. and t-value scores. The Mean score of Total Boys and Girls, Aided Day and Night Junior College Students and Unaided Day and Night Junior College students are 111.19, 115.17, 108.29, 117.2, 109.7, 111.06, 111.29, 115.56, 115.31, 117.01 respectively. While Standard Deviations of Boys, Girls, Aided Day and Night Junior Colleges, Unaided Day and Night Junior Colleges are 13.84, 14.81, 13.38, 14.93, 12.9, 14.35, 14.84, 15.7, 13.07 and 13.53 respectively.

Mean difference value ($M_2$-$M_1$) in between total sample of Boys Means and Girls Mean is -3.98 and t-value is -3.92 shows high significant relations. Aided Day Boys and Girls having mean difference is -8.91 and t-value is -4.42 it shows there is high significant relationship. Aided Night college Boys and Girls mean difference is -1.36 and t-value is -0.70 shows that there is no significant relationship. Unaided Day is having mean difference as -4.27 and t-value is -1.96 which seems significant relationship. Lastly Unaided Night College Boys and Girls mean difference is -1.7 and 't' values is -0.90 shows no significant relationship.

So, the Hypothesis is rejected in case of Total sample of Boys and Girls, Aided Day and Unaided Day college Boys and girls and While hypothesis is accepted as there is no significant difference in the factors affecting on Academic Achievement of Boys and Girls of Aided Night, Unaided Night Junior Colleges which have minus relationship.

**CONCLUSIONS**

1. There are the significant differences in the factors affecting on Academic Achievement of aggregate sample and Aided Day college Boys and Girls.
2. There is no significant difference in factors affecting on Academic Achievement of Aided Night and Unaided Day and Night Junior College Boys and Girls.
3. There are the significant differences in the factors affecting on Career Choice of aggregate sample and Day Aided and Unaided College Boys and Girls.

ISSN 2394 - 7780

4. There is no significant difference in factors affecting on the Career Choice of the Aided and Unaided Night Junior College Boys and Girls.

**REFERENCES**

1. Koul, L. (1993). **Methodology in Educational Research**. New Delhi: Vikas Publishing.
2. Best, J.W.and Kahn, J.V.(2009). **Research Methodology** (10thEd.),PHI Learning Pvt Ltd.
3. Buch, M. B. A. (1993-2000): Sixth Survey of research in Education, NCERT, New Delhi.
4. Aggrawal J. C., Educational Research an Introduction, Arya Book Depot, New Delhi.
5. Dr. Jadhav Keshar, Action Research, Shubhay Prakashan, Dadar, Mumbai.

**WEBSITES:**

www.shodhganga.net

www.eric.ed.govt

www. researchgate.net

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A DETAILED ANALYSIS OF GOODS AND SERVICES TAX (GST) IN INDIA

**Nimrata Kurseja and Deepa Sadhwani**
Assistant Professor, Seva Sadan College of Arts, Science and Commerce, Ulhasnagar

## ABSTRACT
*GST was implemented and introduced on 1st July, 2017. Since 1947 GST was the biggest and significant tax reform in Indian Tax System. There was huge commotion on implementation of GST. It replaced all the numerous taxes which Central and state Government use to collect from suppliers. Hence it is also known as "**ONE NATION, ONE TAX."** Now after implementation of GST people does not need to pay separate taxes for all the things, as GST has subsumed many taxes like Service Tax, Central Excise Duty, Central Sales Tax, Central cess, Surcharge, etc. The research thoroughly gives an overview of GST and its effect on Indian Economy. The main cause behind introduction of GST was to bring whole nation under similar tax system and to prevent the flow of black money in economy.*

*The concept of GST is so far related to Indirect Tax, where people don't pay tax immediately, but it is imposed on goods or services by suppliers or vendors. All the tax expenses are included in the price of goods or services fees charged by suppliers. Hence, it is rightly said that you grow by paying tax even though you are not registered tax payer. The study also put insight on positive and negative impact of GST.*

***Keywords:*** *Goods & service tax, Tax Payer, Indian Economy, Tax rates, Supplier, Impact.*

## INTRODUCTION
During Pre-GST period Excise Duty, Customs Duty, Service Tax was collected by central government and Value Added tax was collected by State Government. Every state government had its own VAT law, having its own rates, **For example***, Petrol in Maharashtra was taxed at 30%, while in Tamil Nadu tax on petrol was 25%.* Due to difference in tax laws tax payers could not set off their trade credits of one tax against other. So to remove this cascading effect of taxes GST was introduced.

GST also known as Goods and Service Tax was introduced by government of India in 2017. The GST bill was introduced by government of India in 2014, it was passed by Lok Sabha on 6th May, 2015 and by Rajya Sabha on 3rd august, 2016. But it was finally implemented on 1st July, 2017. GST is currently in practice in 140 countries across the world. GST was biggest reform in Indian taxation System which intended at simplifying the multiple taxes under one tax. The main goal behind introduction of GST is to have ***"ONE NATION, ONE TAX."***

GST is an Indirect tax which has replaced many taxes. It will also increase GST moderately. GST will also improve the level of Indian market in National and Global Market. It is a comprehensive, multistage destination-based tax.

## OBJECTIVES OF STUDY:
- To acquire the deep knowledge of GST taxation system and its implementation.
- To understand the working of Goods & Service Tax in detail.
- To evaluate the positive and negative impact of Goods & Service Tax on Indian economy.
- To understand the working of various tax rates and its application on goods & services.

## SCOPE OF STUDY:
- This study provides detailed views on implementation of Goods & Service Tax.
- This paper explains that GST has capability to expand the Indian tax base, as it will cover more tax payers.

## RESEARCH METHODOLOGY
The research emphasize on detailed study of GST using Secondary data collected from various sources i.e. books, National and international Journals, government reports, publications from various websites which focused on various aspects of Goods and Service Tax.

## CHARACTERISTICS OF GOODS & SERVICE TAX
Destination based tax: GST is a destination based tax on consumption of goods & services. It is levied on all stages right from manufacturing/ inception to final consumption with a credit of taxes paid at previous stages

ISSN 2394 - 7780

available as set off popularly known as Input tax Credit. It means only value addition will be taxed and burden of tax is borne by final consumer.

**Wider base unlike direct taxes:**
The indirect taxes have wider base. In India about 10 to 15 crores out of 143 crores people pay income tax while GST is paid by all the people indirectly as and when they consume any product or use any service.

**An important Source of Government Revenue:**
GST is levied on most of the commodities and services. This helps government huge revenue which is more than 60% of State and Central Government revenue. The collection of GST in month of March 2024 was more than One Lakh Seventy five thousand crores.

**Promote Social welfare**
Government can levy or charge high rate of tax on harmful goods known as SIN goods like Tobacco and Alcoholic products. This has hampered the consumption of such goods indirectly promoting social welfare.

**Regressive in Nature:**
In case of GST, the rate of tax is same for both rich and poor, nature of tax is also same. So it is regressive in nature. While income tax is progressive in nature. Poor are not liable to pay tax while rich pay tax slab wise.

**IMPACT OF GST ON INDIAN ECONOMY**
GST is biggest tax reform implemented on the belief of **"ONE NATION, ONE TAX."** The main motive behind implementation of GST was to remove interstate trade barriers faced by traders due to different VAT structure followed by each state. The idea behind Implementation of GST was to benefit everyone. Manufacturers and other businessmen would benefit from less return filing, transparency, removal of trade barriers, etc. The government would benefit by getting more revenue.

**POSITIVE IMPACT OF GST:**

**Easy & Simple Tax Structure**
Businessmen and suppliers no longer needs to deal with different tax structure as many taxes are subsumed under GST. It has made compliance easier for them reducing administrative work.

**Increased tax Compliance**
The digitalization in GST has significantly impacted tax avoidance. All the documents are to be submitted electronically, making it difficult for people to evade from tax. It has also enhanced government revenue.

**No Cascading Effect:**
There will be no cascading effect of GST paid on purchases as credit of tax paid on purchase of goods will be available to assesse as Input Tax Credit which can be used to set off the tax liability.

**One Nation, One Tax**
There will be one nation one tax concept. Rate of tax is same throughout the country Thus the consumer can buy the goods or services in the same state rather than searching for new state where rate of tax is low.

**Decrease in Corruption**
At most of the octroi nakas and check posts there were complaints of harassment and corruption. GST has dismantled octroi nakas which resulted in reduction of corruption.

**NEGATIVE IMPACT OF GST:**

**Lose of State Autonomy**
The major disadvantage of GST will be that the state loses some autonomy. As the rate is fixed throughout the India. States cannot get more revenue by changing rate which was possible in case of State Value Added Tax.

**Infrastructure based on Information technology:**
GST compliance is based on information technology. Slowdown of this infrastructure creates difficulties for filing GST returns and making GST payments.

**Difficulties in implementation of Provisions:**
There are difficulties in implementing some of the provisions under GST like payment of tax under Reverse Charge Mechanism (RCM) for small and medium persons.

**Frequent Changes:**
GST being a very new and innovative law has been dynamic and hence subject to frequent changes. These continuous changes create large confusion.

ISSN 2394 - 7780

**Various Rate of Tax:**
GST laws has given various rates of tax such as NIL, 3%, 5%, 12%, 18%, 28%, cess, etc. This is leading to disputes in classification and rates and thus leading to unnecessary litigation.

**CLASSIFICATION OF GST**
There are three taxes applicable under this system: CGST, SGST & IGST.

**CGST:** It is the tax collected by the Central Government on an intra-state sale (e.g., a transaction happening within Maharashtra)

**SGST:** It is the tax collected by the state government on an intra-state sale (e.g., a transaction happening within Maharashtra)

**IGST:** It is a tax collected by the Central Government for an inter-state sale (e.g., Maharashtra to Tamil Nadu)

**CONCLUSION**
Goods & service Tax is a breakthrough in Indian Indirect tax System serving better to whole economy & addressing multiple issues. It is a destination based tax charged on final consumer of goods or service. It has also removed many trade barriers; it has also removed cascading effect. Many sectors have short term benefits from GST, but the long term advantages are many for all the sectors.

Hence it is rightly said by Oliver Wendell Holmes Jr. ***"Taxes are the price we pay for a civilized society."***

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# DIGITALIZATION IN EDUCATION SYSTEM

**Diana R Alvares**
Department of Information Technology, St. Xavier's College (Autonomous), Mumbai

## ABSTRACT
Information technology has transformed each sector as it has grasped and it is currently in the promising phases of evolving academia further. To an extent, Digitalization in educational sector has elevated the teaching and learning method. Schools and Colleges have started implementing digital teaching keys to encompass with a generation of learners. Digital Learning can be used for learning opportunities for professional teachers and to provide personalized learning experiences for students. By achieving digitalization, revolution in education is possible so that students can learn in their own space and grasp things from both within and outside the classroom. Digital technology supports teachers' in-class activities. From the teaching perspective, digital technology is enabling teachers to create more engaging, interactive and flexible learning materials in a range of digital and multimedia formats and make them available for the students online. This paper describes the benefits and disadvantage of digitalization on education system.

***Keywords:*** Digitalization, Digital learning, ICT, digital education, Digital technology, eLearning.

## INTRODUCTION
Information Technology (IT) is considered as a subclass of information and communications technology (ICT). IT is a broad subject concerned with all aspects of managing and processing information within a small or large organization. Technology has made education at ease for both educators and students by the implementation of Digitalization. Digitalization is the usage of digital technologies to alter a business model by improving, enabling, and transforming business process by capitalizing digitized data, digital technologies and deliver new revenue and value-producing prospects encouraging digital business. Neil Morris has rightly said "Digital technology is fundamentally changing learning and teaching Digital learning is an effective use of technology to strengthen a student's learning experience. Presently students live in a world that is linked with the environment outside the class room, so traditional methods won't work in todays and future generation. Education is a massive and fast rising division. Companies such as Microsoft, HP, Apple, Amazon and many more are contributing by their iPod, notebooks, tablets, etc to a great extent towards digitalization of education. The digital revolution is edging its way into the classroom by implementing Smart classrooms for students for their better understanding and grasping things better and quickly. Basically, Smart classroom is a digital content library of planned curriculum, 3D contents and multimedia. Classrooms have been fully equipped with enduring multimedia computers and projectors. Many Universities have adapted Online Education which is a type of distance learning which has helped many students effectively. Students are not needed to attend college or university in person. The widespread availability of mobile and desk-based devices, the learners are now able to consume and interact with learning content provided by their teachers, by their peers, and by individuals and organisations. The growing use of blended learning provision, fully online distance learning courses and hybrid course is offering choices for learners about how to integrate their education with other aspects of their lives. Educators can also teach in a variety of different ways in the classroom, through the use of in-class technologies, online materials and student`s own mobile devices. These changes are encouraging more and more educators to have a more diverse set of approaches to support their learners, which results in more inclusive methods for teaching.

Primary goals for ICT and digitalisation in educational sector:

High quality in research and education.

Good and efficient access to educational material

A strong, resourceful and varied research system and education sector.

## BENEFITS OF DIGITALIZATION ON THE GROWTH OF EDUCATION
(a) The reach and accessibility to digitalization will allow it to permeate to a larger segment of the society which would have remained deprived.

(b) Uniform learning packages and content packages will guarantee uniformity of knowledge dissemination and eliminate varying standards between better and good institutions.

(c) Digital education also promotes maximizing outcomes and minimizing infrastructure, hence reducing the costs of education significantly and making it more affordable.

ISSN 2394 - 7780

(d) Schools are now providing their students with digital devices like desktop computers, laptops and tablets which are aiding them in their learning process.

(e) Students can easily view their daily time-table, access online library and submit assignments online. They can also give exams online and view their results.

(f) In India, the use of smartphone continues to increase in both urban and rural areas, mobile learning has popularised which has offered students the flexibility to access educational content anytime and anywhere.

(g) Video learning has always interested students. Video lectures are of great benefit which allows students to learn subject at their own pace and dedicate time accordingly. Thus, it has brought a remarkable improvement in their performance and improvement in grades.

(h) Open digital education resources which consist of freely accessible media for learning, teaching and research purposes have commonly been used in distance learning courses. Open educational resources also provide flexible environment where teachers can customize educational content for the students.

(i) Virtual Reality and Augmented Reality are the two words which are buzzing in the technological world presently. Virtual Reality allows learners using e-learning platforms to directly interact with various study material whereas Augmented Reality simplifies educators in performing their tasks resourcefully.

(j) With growth of social networking, we can use social networking to teach any subject to the students which can result in blending the traditional education with modern communication.

(k) With the realm of technologies, Massive Open Online Courses (MOOCs) resultsin students wanting to learn to achieve their goals.

(l) Adding gaming in regards of lessons to education means simply that the user completes certain tasks for rewards just like in a video game and the student would show interested in studies.

(m) Students learn in groups and online learner will learn better when exposed to a group of learners with similar interests who can offer insight and questioning into the process of learning any particular subject.

(n) Digitalization also promotes “flipped classroom” means taking the learning environment and flip it around i.e. students are provided with links to view videos or articles.

(o) It also provides benefits for the parents. It’s not possible for the parents to visit the schools or college to know about their wards performance. But digital education help parents to know their wards performance without visiting the school or college by interacting with the teachers regarding the progress and down falls of their ward and also observe the attendance record on daily basis, exam timetable, exam and project reports online.

(p) Digital Education also provides benefits to the principal to view the progress of Teachers as well as students’ performance in the institute.

**DRAWBACKS OF DIGITALIZATION IN THE EDUCATION SECTOR**

Every coin has 2 sides, so does digitalization have its pros and cons.

- Nowadays classrooms have become self-learning room with audio-visual content, with no communication between students and teachers. The teacher-student relationship bond will possibly be blurred. In a classroom, people interact and learn from each other. Thus, resulting in personal connection.
- The easy part is to learn new tools, but the challenging part is learning new rules.
- Much better management and scheduling tools is required for customized and effective learning.
- In rural areas, there are shortage of trained teachers who lack knowledge about the use of digital technology.
- Language is one of the barriers as there are different languages adopted all around the world.
- Many institutes lack sufficient funds for the maintenance of digital equipment.

**CONCLUSION**

Prior to the digital era, schools and teachers were the source of education system. The digital ecosystem with new tools and assessment technologies is all set to create a more inclusive and personalized education experience. Digitalization offers flexible learning with regards to student`s choices, convenience, and a personal approach to learning any given subject. Computers labs are used in educational sectors to improve the teaching-

ISSN 2394 - 7780

learning process. With the help of computers, teachers can use audio video aids to prepare lesson plans. Education has become a collaborative, self-driven enterprise. Digital Learning will continue to be a trend in the future where students will have access to rich and interactive content, that will be useful for both their formal training as well as performance enhancement. There are three main things that digital technology is changing, which none of us could imagine before we started to integrate digital technology into education.

Firstly, it promotes flexibility of learning, which means we are able to decide the place and pace and the mode of learning.

Secondly, there is an exponential change in the way the learners are able to knowledge themselves, competencies and skills through the use of technology, which is going to be useful for the student's future employment in this digital world.

Finally, there's a fundamental change in the way that learners and individuals are able to interact with each other, both their educators and subordinates from all around the world as a result of digital technology. This is supporting increased globalisation and cultural awareness.

Digital technology is also enabling teachers to create more interactive, engaging, flexible learning materials. Mobile Educational theories truly states that "If we adopt Digitalization efficiently, education will walk with us".

The world of online learning is constantly evolving, and it is very difficult to predict where it is going. So, ideally digital learning should be a complement to in-class learning rather than its substitute.

**REFERENCES**


- Alessi S.M. and Trollip S.R. (2001), "Multimedia for Learning: Methos and Development", Ally and Bacon, (3rd Ed.)
- Grabe, Mark and Grabe, Cindy (2004), "Integrating Technology for Meaningful Learning", (4th Ed.), Houghton Mifflin Company.
- Jayesh M. Patel (2017). WEB BASED TOOLS OF TECHNOLOGY IN FUTURE TEACHING LEARNING STRATEGIES. International Education & Research Journal [IERJ]. E-ISSN No: 2454-9916 Volume: 3 Issue: 2 Feb 2017
- Himakshi Goswami (2016). OPPORTUNITIES AND CHALLENGES OF DIGITAL INDIA PROGRAMME. International Education & Research Journal [IERJ]. E-ISSN No: 2454-9916 Volume: 2 Issue: 11 Nov 2016.
- Kalashankar (2012), Profile of a Digital Classroom International Journal of Applied Engineering Research, Vol.7 No.11 (2012) © Research India Publications.
- Avvisati, F., Hennessy, S., Kozma, R.B., & Vincent-Lancrin, S. (2013). Review of the Italian Strategy for Digital Schools. In OECD Education Working Papers, No. 90 OECD Publishing.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE AI REVOLUTION IN HUMAN RESOURCES: ENHANCING TALENT MANAGEMENT STRATEGIES

**Dr. Diya Udasi**
K. C. College of Engineering and Management Studies and Research

## ABSTRACT
*The adoption of Artificial Intelligence (AI) in Human Resources (HR) is reshaping traditional workforce management, introducing greater efficiency, precision, and customization. This paper examines how AI is revolutionizing HR functions, including talent acquisition, performance evaluation, employee engagement, and retention strategies. By exploring real-world applications of AI in HR, this study highlights both the advantages and obstacles organizations encounter when integrating AI-driven tools. Additionally, it delves into ethical concerns such as bias, privacy, and data security, which remain crucial considerations in AI implementation. Finally, this research discusses how AI is fostering a more strategic and data-driven HR landscape, enhancing decision-making processes and improving overall employee experiences.*

## INTRODUCTION
Human Resources (HR) departments have traditionally been the central hubs for hiring, training, and managing employees. However, the rise of Artificial Intelligence (AI) is driving a fundamental shift in how HR professionals perform their roles. AI technologies—such as machine learning, natural language processing, and predictive analytics—are being integrated into various HR processes to optimize decision-making, reduce human bias, and improve overall efficiency (Jain, D. S., 2018; Rathi, D. R. 2018.). This paper delves into how AI is transforming core HR functions, specifically recruitment, employee engagement, performance management, and retention. Additionally, it explores the ethical considerations and operational challenges HR departments face while implementing AI-driven tools, and how AI is expected to shape the future of the HR landscape.

## LITERATURE REVIEW:
The integration of AI into HR has garnered significant attention in recent years, given its potential to revolutionize traditional HR functions. Various studies have highlighted AI's benefits in HR, from improving decision-making through data analytics (Binns et al., 2020) to enhancing recruitment efforts (Chien, 2018). AI applications in HR, particularly machine learning and predictive analytics, have shown to improve the accuracy of recruitment processes, employee performance evaluations, and even employee retention strategies (Marler & Fisher, 2019). For instance, AI tools such as chatbots, resume-screening algorithms, and performance tracking systems have streamlined processes that once relied heavily on manual input.

However, concerns regarding data privacy, algorithmic bias, and job displacement have also been raised. Research suggests that while AI can enhance efficiency, its ethical implications, particularly around fairness and transparency, must be addressed to avoid perpetuating existing biases (Cowgill et al., 2020). The current literature shows a clear trend of AI improving HR practices but also underscores the importance of caution and proper governance in its implementation.

## AI IN RECRUITMENT:
Recruitment is one of the most widely discussed areas where AI is having a significant impact. AI technologies are increasingly being used to automate the screening of candidates, analyze resumes, and match applicants with job openings based on data patterns (Chien, 2018). By using machine learning algorithms, HR departments can sift through large volumes of resumes, identify high-potential candidates, and ensure a more objective approach to recruitment. Example Fetcher.ai automates candidate sourcing and outreach using machine learning algorithms to identify top talent.

AI-powered tools such as chatbots and virtual assistants have also been deployed to handle initial candidate interviews, providing a consistent and scalable way to engage candidates. These AI systems can also assess the cultural fit of applicants by analyzing data from past behaviors and responses (Gratton & Scott, 2016). Despite these advancements, there are concerns regarding algorithmic bias—AI systems may inadvertently favor certain demographics based on biased training data. This issue is critical, as unaddressed bias could exacerbate existing diversity challenges in recruitment.

To mitigate these risks, companies need to continuously audit their AI systems to ensure they align with diversity, equity, and inclusion (DEI) objectives (Binns et al., 2020). Efforts such as diverse training datasets and transparency in AI decision-making processes are vital to minimizing bias.

ISSN 2394 - 7780

The future of AI-driven recruitment is centered on efficiency, accuracy, and an improved candidate experience. AI and recruiters will work together, with AI handling repetitive tasks while recruiters focus on strategic decisions. Gamification and Virtual Reality (VR) are transforming assessments by making them more interactive and insightful. AI-powered screening accelerates the shortlisting process, ensuring better candidate matches. Chatbots enhance initial interactions by addressing queries and guiding applicants seamlessly. Predictive analytics helps refine hiring decisions by analyzing data to identify top talent. Automated interview scheduling streamlines logistics, improving efficiency. Additionally, blockchain integration enhances data security and transparency, ensuring authenticity in candidate credentials. These innovations are shaping a more intelligent and effective hiring process.

**AI IN PERFORMANCE MANAGEMENT:**

AI is also playing a transformative role in performance management. Traditionally, performance reviews were based on subjective assessments, often resulting in inconsistent feedback. However, AI-driven systems allow for real-time tracking and analysis of employee performance. Machine learning algorithms can assess various performance metrics—such as productivity, collaboration, and even soft skills—to provide more objective and data-backed feedback (Marler & Fisher, 2019).

Furthermore, AI enables continuous feedback loops, where managers and employees can engage in real-time performance discussions rather than waiting for annual reviews. By offering personalized learning and development recommendations, AI can help employees grow in line with organizational goals (Binns et al., 2020). However, over-reliance on data-driven systems for performance evaluation may introduce privacy concerns, as employees may feel that their every move is being tracked and analyzed.

In addressing these concerns, organizations must be transparent about how performance data is collected and ensure that employees are comfortable with these new evaluation methods.

Various performance management tools streamline processes, enhance efficiency, and improve communication between employees and managers. Software like Zoho, Workday and Lattice etc offer key benefits, including goal setting, performance analytics dashboards, appraisal.

**AI IN EMPLOYEE ENGAGEMENT AND RETENTION:**

AI tools are becoming integral in enhancing employee engagement and improving retention strategies. AI-powered platforms use predictive analytics to gauge employee satisfaction, monitor engagement levels, and predict potential turnover risks (Tambe et al., 2019). Through the use of sentiment analysis, AI can process employee feedback from surveys, emails, and other forms of communication to identify patterns that suggest dissatisfaction or disengagement.

Moreover, AI systems can help HR teams implement personalized career development programs. By using historical performance data, AI can recommend tailored learning opportunities or career pathways for employees (Marler & Fisher, 2019). These personalized approaches not only boost employee engagement but also help reduce turnover by aligning employees' career goals with organizational objectives (S. Khatri, D. K. Pandey, D. Penkar, and J. Ramani, 2020).

However, the use of AI in employee engagement raises concerns about data privacy and transparency. Organizations must ensure that employees understand how their data is being used and ensure that AI-driven insights lead to constructive, not punitive, actions.

**CHALLENGES AND ETHICAL CONSIDERATIONS:**

Despite the immense potential of AI, its integration into HR practices is not without challenges. Key ethical concerns include data privacy, algorithmic bias, and the potential for job displacement. AI systems often rely on large amounts of employee data to function effectively, which can lead to concerns about how this data is stored, who has access to it, and how it is used in decision-making processes (Cowgill et al., 2020). Furthermore, AI algorithms, if not properly trained, can perpetuate existing biases in recruitment or performance evaluations, potentially affecting the diversity and fairness of HR processes.

To mitigate these risks, it is essential for companies to adopt best practices for transparency and accountability. Regular audits, bias mitigation strategies, and employee consent protocols should be put in place to ensure that AI technologies are used ethically and responsibly (Zeng et al., 2020).

**FUTURE DIRECTIONS AND IMPLICATIONS FOR HR PROFESSIONALS:**

As AI continues to evolve, HR professionals must adapt to a rapidly changing technological landscape. The future role of HR professionals will increasingly involve managing AI-driven systems, interpreting data insights, and making strategic decisions based on AI recommendations (Tambe et al., 2019). HR professionals

ISSN 2394 - 7780

will need to develop new skills, particularly in data literacy and AI management, to ensure that AI is used effectively and ethically.

Furthermore, future trends in AI for HR could include the increased use of AI in diversity and inclusion efforts, as AI can help identify diversity gaps and suggest more inclusive hiring practices (Cowgill et al., 2020). Predictive analytics may also play a larger role in workforce planning, helping organizations anticipate skill shortages or talent gaps and proactively address them. AI-driven employee wellness programs could become more prevalent, offering personalized health and wellness initiatives based on data-driven insights.

Effective AI integration requires a structured approach. HR Professionals should start by defining clear objectives that align with business strategy. Choose the right AI tools that are scalable and fit organizational needs. Ensure high-quality data through audits and a centralized repository is crucial for accuracy. Build cross-functional teams, including HR experts, data scientists, and legal professionals, fosters collaboration. Engage stakeholders early and maintaining clear communication enhances adoption. To mitigate bias, regularly audit AI algorithms, diversify training data, and implement fairness measures. Begin with small pilot projects, iterating based on results before scaling up. Compliance with legal standards is essential, requiring continuous risk assessments. Finally, HR professionals must consistently evaluate AI's impact to refine and optimize its role in business operations.

## CONCLUSION

The integration of AI into HR functions is not just a trend but a paradigm shift that is revolutionizing the way organizations manage their workforce. From recruitment and performance management to employee engagement and retention, AI is enhancing HR practices, improving decision-making, and fostering a more personalized experience for employees (M. Vivek and V. Yawalkar, 2019). However, AI adoption must be handled with caution, as it introduces ethical and operational challenges, particularly related to bias, privacy, and job displacement. To fully realize the potential of AI in HR, organizations must invest in transparent, inclusive, and accountable AI systems while ensuring that their HR professionals are equipped to navigate this changing landscape.

## REFERENCES

1. Binns, A., Binns, W., & Oldham, G. (2020). AI and Human Resource Management: A Review of the Research Literature. *Journal of Business Research*, 114, 108-116.
2. Chien, S. (2018). Artificial Intelligence in Recruitment: A Review of Recent Developments. *Human Resource Management Review*, 28(3), 314-327.
3. Cowgill, B., Dell'Acqua, F., & Holz, M. (2020). Discrimination in Online Ad Delivery: A Case Study of Facebook and Google Ads. *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency*, 1-13.
4. Gratton, L., & Scott, A. (2016). The 100-Year Life: Living and Working in an Age of Longevity. *Bloomsbury Publishing*.
5. Jain, D. S. (2018). Human Resource Management and Artificial Intelligence. International Journal of Management and Social Sciences Research (IJMSSR), 7(3), 56-59.
6. Marler, J. H., & Fisher, S. L. (2019). The Role of Technology in HRM: A Strategic Perspective. *International Journal of Human Resource Management*, 30(5), 673-692.
7. M. Vivek and V. Yawalkar (2019). "A Study of Artificial Intelligence and its role in Human Resource Management," IJRAR19UP004 International Journal of Research and Analytical Reviews, [Online]. Available: www.ijrar.org
8. Rathi, D. R. (2018). Artificial intelligence and the future of hr practices. International Journal of Applied Research, 4(6), 113-116. Retrieved from www.allresearchjournal.com on 09/05/2020.
9. S. Khatri, D. K. Pandey, D. Penkar, and J. Ramani (2020). Impact of Artificial Intelligence on Human Resources, vol. 2, pp. 365–376. doi: 10.1007/978-981-13-9364-8_26.
10. Tambe, P., Hitt, L. M., & Brynjolfsson, E. (2019). A New Approach to Employee Engagement: The Role of Artificial Intelligence. *Journal of Applied Psychology*, 104.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# AWARENESS AND TRUST OF CUSTOMERS ON MOBILE BANKING APPLICATION AND ITS CORRELATION WITH LEVEL OF SATISFACTION

**Dr. Asif Hasan[1] and Assi. Prof. B. Niraj Kumar Arun Mishra[2]**
[1]Unitedworld Institute of Management
[2]Research Scholar Unitedworld Institute of Management Karnavati University

**ABSTRACT**
*This study investigates customers' awareness, trust and satisfaction levels with mobile banking services in India, with the goal of providing insights to improve user experiences and boost the use of mobile banking. The study used a random sample technique to examine the current role of mobile banking in banking operations, as well as consumer awareness and usage trends and variables that impact customer satisfaction. Based on a survey of 461 respondents, the findings indicate a significant level of satisfaction with mobile banking application, emphasizing their practicality and efficiency. Additionally, it becomes clear that having immediate access to financial data is essential for making decisions. Strengthening security protocols and maintaining openness present areas for development. This will help to create a more digitally-driven and inclusive financial landscape. In conclusion, the study gives useful insights into current status of m-banking in India, identifies routes for increasing user happiness, and emphasizes the importance of technical innovation in influencing the future of financial services.*

***Keywords:*** *Awareness, Trust, Satisfaction, Mobile banking, Technology*

## INTRODUCTION:

Innovation has become a daily part of lives. The best invention that lets users conduct financial operations anywhere, at any time, is mobile banking. Customers save time and the bank gains a larger client base as a result. Mobile banking offers quicker transactions at a lower cost. It expands the market segment it serves and improves bank efficiency. The bank strives to meet the everincreasing demands and expectations of its customers. The global market for mobile and wireless devices has been expanding quickly and is still doing so. For practically everyone, mobile phones are now an essential component of their communication equipment. The majority of financial connections still start and end at the branch. Since mobile banking services provided access to all banking functions, including transferring funds, making credit cards payments from any location, executing financial transactions with financial institutions, and accessing account information, etc.

In the modern day, when science and technology rule every aspect of our lives, banking services have developed into a highly competitive and inventive global industry. The banking industry has seen a transformation due to technology, which replaced manual ledgers with systematized operations, resulting in increased efficiency, convenience, and time savings. The banking industry has seen an increase in competition in recent years. In order to stay ahead of the competition, banks must continually innovate their offerings, keep an eye on technological advancements, and develop new tools and techniques to satisfy and retain customers. One tool in this toolkit is mobile banking. The act of doing financial transactions via a mobile device-a cell phone, tablet, or other-is nothing short of a revolution in the banking sector, bringing with it convenience, credibility, simplicity of use, promptness, and a banking experience at the fingertips of its users or banking clients. Mobile banking application, which are a component of fintech, or financial technology, are now more than just a useful way to check your account balances; rather, they are an essential component of the financial experience and something that consumers consider when selecting a bank.

### 1,1 OVERVIEW OF MOBILE BANKING:

Mobile banking has become a popular financial option in several nations. With the rise in internet users and smart phone users, mobile banking is the technology that is being adopted by people worldwide the fastest. The phrase "mobile banking" refers to the use of mobile devices to conduct banking operations such as bill payment, money transfers, investments, and balance inquiries. The fastest rising nations in the world for M-banking adoption are China and India. The banking sector in India is shifting its focus from traditional banking to innovation (technology) banking in ordered to improve client satisfaction. With mobile banking, there are no longer any time or location restrictions on various financial transactions. The main drawback of Internet banking has been solved by mobile banking, which only needs a smart phone. Therefore, there is a lot of scope for banks to expand their digital presence. Customers' knowledge level, their perception of the service, the factors influencing their adoption of mobile banking, and what they genuinely desire from mobile banking are all important to know in order to boost customer happiness.

ISSN 2394 - 7780

The banking sector has a lot of interaction with its clients. Consumers in emerging nations appear to use the "technological factors" of services as a benchmark for identifying quality and poor offerings. The banks cultivate excellence in service quality via the variety of services they offer. Banking is now seen as a company that deals with information connected to financial transactions rather than just money transactions. The degree of customer satisfaction is shifting the technical environment along with the growth of electronic banking. E-banking a type of information technology, is a major contributor to improved services being offered at reduced cost. Automated Teller Machines (ATMs), Internet banking, Smart cards, Credit cards, Mobile Banking, Telephone Banking, and Anywhere-Anytime banking are just a few examples of cutting-edge IT-based services that offer convenient services to customers. As a result, the likelihood of customer satisfaction rises as service quality improves. Increased customer satisfaction subsequently fosters mutual understanding, customer loyalty, and a trusting relationship between the bank and its clients. Customers have a higher opinion of the banks that offer these services in bulk because of their reputation.

### 1.2 SERVICES OFFERED THROUGH M-BANKING:

It is possible to examine the link between e-banking and service quality using the degree of satisfaction. Since the degree of client expectations and the organization's service quality are what determine customer happiness. E-banking is essential to providing consumers with happiness since it bridges the gap between the perceived and desired level of service. Hence, banks should look for ways to increase client access to electronic services and enable them to confirm the correctness of e-banking transactions in order to close this gap.

- Mobile Banking
- Electronic Clearing System (ECS)
- Smart Cards Electronic
- Fund Transfers (EFTs)
- Internet Banking
- Automated Teller Machine (ATMs)
- Credit/Debit Cards Electronic Data Interchange (EDI)
- 24×7 fund transfer & customer services
- E-tax payment E-shopping
- Demat holdings Online trading
- Financial advice
- Recharging your Prepaid Home Investing through e-banking Bill payment service
- Online loan applications

## LITERATURE REVIEW

To understand the impact of mobile banking application on customer satisfaction, many researchers have done research on the factors that help in determining the acceptance and the attitude of users towards m-banking. Amudha Ramachandran and Vijayabanu Chidambaram address the vital topic of customer satisfaction in the banking industry in their (2012) publication. They highlight the importance of service quality in gaining a competitive edge, underscoring the need to not only meet but exceed customer expectations for sustained success. The authors recommend an ongoing evaluation of service delivery and the implementation of effective resolution strategies for customer complaints to nurture loyalty. Vishal Goyal, Dr. U.S. Pandey, and Sanjay Batra (2012) focuses on the increasing amount of research on mobile banking. They draw attention to the growing popularity of mobile phones, which they believe offers opportunities for the expansion of m-banking services. The authors carefully examine 65 publications in a range of academic fields, including information systems, technological innovations, management, and marketing, that were between 2000 and mid2010. They derive a classification framework from this study that divides m-banking research into five primary categories: features and benefits of mobile banking, m-banking overview and conceptual issues, current commercial bank operating practices, m-banking/payment practices in Indian commercial banks, and challenges in India, encompassing legal, ethical, and strategic issues. Nitin Nayak, Vikas Nath, and Nancy Goel (2014) looks into how Indian customer use mobile banking services. They note how the development of mobile banking mainly has had a revolutionary effect on banking operations due to the developments in telecommunications. Vishal

ISSN 2394 - 7780

Geete and Anshu Thakur (2014) performed a study. After gathering information from one hundred clients and using Z test analysis, they came to the conclusion that customers are typically satisfied with these services. The study e mphasizes how important bank customers are to the sector and how important it is to provide them with high-quality services that satisfy their changing expectations. Rajiv Sindwani and Manisha Goel (2015). Their research, carried out through surveys and statistical analyses, delved into various of TBSSB such as ATM banking, internet banking, mobile banking, and telebanking. The authors emphasized the increasing significance of TBSSB within the banking industry, highlighting its advantages in terms of costeffectiveness and convenience for both banks and customers. The emphasis lies on providing cost-effective services, with the suggestion of integrating internet and mobile banking solutions. Aradhana Gandhi and Pratima Sheorey (2017) study investigates the adoption of mobile banking in India, focusing on factors influencing customers' decisions to use these services. Analysis revealed key factors like perceived usefulness, relative advantage, risk, social impact, and cost as significant influencers. The study emphasizes the importance of banks offering errorfree and secure mobile banking platforms to attract customers. Customer satisfaction and the quality of mobile banking services. Customer satisfaction is considered the dependent variable in this study, whereas assurance, responsiveness, and dependability are considered the independent variables which was carried out using simple random sampling. Multiple regressions, Pearson correlation, and descriptive statistics are used in the study. The study's findings demonstrated that the primary determinant of customer happiness is the independent factors. It is not believed that the dependent variable serves as the primary indication of customer fulfilment.

### 1.3 OBJECTIVE OF THE STUDY

1. To identify the awareness level of the bank customers about mobile banking services.
2. To evaluate the trust of the bank customers on mobile banking services.
3. To analyse the level of customer satisfaction for various services and usage patterns offered by the banks through m-banking.

### 1.4 Hypothesis Testing

**H01:** There is no significant co-relation between the awareness level of customers and their level of satisfaction from the mobile banking applications.

**H02:** There is no significant co-relation between the trust of customers and their level of satisfaction from the mobile banking applications.

### RESEARCH METHODOLOGY

For this study, a descriptive design has been used as the research strategy. Descriptive research aims to define and investigate characteristics, behaviour, or experiences that are relevant without introducing any form of control or supposing any kind of causal link.

### 1.5 Data Collection Method

The data collection for the research includes both primary and secondary sources of data. The primary data was collected on the basis issue of questionnaire. The questionnaire was designed and contained several questions for collection of data from the mobile banking users. The questioners were distributed to all respondents of age, genders, occupation and qualification. The questionnaire is distributed via online mode like WhatsApp, E-mail, Facebook and Instagram. The secondary data was collected from related research papers and journals. And also collect information on website to develop theoretical background of customer satisfaction towards mobile banking application.

### 1.6 Population and Sample Size:

This study's population is made up of a varied group of mobile banking users with a variety of statistics, professions, educations, and financial opinions. A total of 620 respondents are chosen at random to take part in the survey, ensuring involvement from a variety of mobile banking user categories. This questionnaire has got 461 responses from 620 respondents that were notified.

### 1.7 Sample Design:

This study employed random sampling techniques to obtain 461 respondents from the mobile banking user group. There has been given an equal opportunity for every member of the sample to be chosen for the research.

### 1.8 Statistical Tools Used for the Analysis:

The collected data has been analysed with the help of Chi-square test. This guarantees the data obtained is accurate and applicable.

ISSN 2394 - 7780

**Data Analysis**

**Descriptive Analysis:**
Descriptive analysis has been applied to know the Frequencies and percentile of respondent's demographics.

**RESULTS AND DISCUSSIONS**

**Table-I:** Demographic Profile of the Respondents

| Variable | Investors Grouping | Frequency | Per cent | Cumulative Percent |
|---|---|---|---|---|
| **Gender** | Male | 312 | 67.7 | 67.7 |
| | Female | 149 | 32.3 | 100 |
| **Age** | Below 30 Years | 214 | 46.4 | 46.4 |
| | 31-40 Years | 169 | 36.7 | 83.1 |
| | 41-50 Years | 66 | 14.3 | 97.4 |
| | More than 50 Years | 12 | 2.6 | 100 |
| **Occupation** | Government. Employee | 123 | 26.7 | 26.7 |
| | Non-Government. Employee | 08 | 1.7 | 28.4 |
| | Businessman | 65 | 14.1 | 42.5 |
| | Professional Practices | 259 | 56.2 | 98.7 |
| | Retired Person | 05 | 1.1 | 99.8 |
| | Others | 01 | 0.2 | 100 |
| **Qualification** | No Formal Education | 0 | 0 | |
| | Intermediate | 54 | 11.7 | 11.7 |
| | Graduate | 230 | 49.9 | 61.6 |
| | Post-Graduate & Above | 177 | 38.4 | 100 |
| **Monthly Income** | Up to 20,000 | 100 | 21.7 | 21.7 |
| | 20,000-40,000 | 126 | 27.3 | 49 |
| | 40,000-60,000 | 123 | 26.7 | 75.7 |
| | Above 60,000 | 112 | 24.3 | 100 |

According to the table-I, Most of the banking customers belong to the below 30 years of age and group of 31-40 years. It describes that the younger generation are mostly using the mobile banking applications. Results from occupation reveal that 56.2% of the respondents are Professionals followed by 26.7% of government employees. Results also suggested among the all respondents 14.1% belongs the businessman group. The results from the demographics also reveals that 49.9% of the respondents are graduates followed by the respondents having a postgraduate and above qualification (38.4 %). The above table also illustrates that 48% of the respondents fall under the category of the income level of Rs 40,000 - 60,000 per month and 27.3% of the respondents are in the income range of 20,000 to 40,000 per month.

**Hypothesis Testing**

**H0:** There is no significant co-relation between the awareness level of customers and their level of satisfaction from the mobile banking applications.

| | Chi-square value | df | Asymp. Sig. (2-sided | Phi | Appx.sig. | Result |
|---|---|---|---|---|---|---|
| I am satisfied with the quality of services of mobile banking app | 2.653a | 4 | .617 | .076 | .617 | Not Significant |
| I can save my time while making payment with mobile banking app | 18.649a | 4 | .001 | .197 | .001 | Significant |
| I am happy with the products of mobile banking apps | 60.040a | 4 | .000 | .339 | .000 | Significant |
| Mobile banking app transactions are secure | 27.919a | 4 | .000 | .239 | .000 | Significant |

Los-1%

ISSN 2394 - 7780

**Result:** A Chi-square test was performed to examine the relation between the awareness level of customers and their level of satisfaction from the mobile banking applications. It was found that in most of the cases there is no significant correlation between variable except 'satisfied with the quality of services of mobile banking app"

$H_0$: There is no significant co-relation between the trust of customers and their level of satisfaction from the mobile banking applications.

| | Chi-square value | df | Asymp. Sig. (2-sided | Phi | Appx.sig. | Result |
|---|---|---|---|---|---|---|
| I am satisfied with the quality of services of mobile banking app | 8.374[a] | 4 | .079 | .134 | .079 | Not Significant |
| I can save my time while making payment with mobile banking app | 2.029[a] | 4 | .730 | .066 | .730 | Not Significant |
| I am happy with the products of mobile banking apps | 6.049[a] | 4 | .196 | .114 | .196 | Not Significant |
| Mobile banking app transactions are secure | 11.437[a] | 4 | .022 | .156 | .022 | Significant |

Los-1%

**Result:** A Chi-square test was performed to examine the trust level of customers and their level of satisfaction from the mobile banking application. It was found that in terms of level of satisfaction of the customers differed and the trust level of customers played an important role for most variables except "Mobile banking app transactions are secure".

## CONCLUSION AND FUTURE PROSPECTS

The study shed light on India's different mobile banking market, giving significant insights into customers' views, satisfaction levels, and engagement with mobile banking services. Firstly, the survey showed that consumers were generally quite satisfied with their experience using mobile banking apps. The convenience and functionality of mobile banking apps have clearly fulfilled consumer expectation for the most part. Also, the efficient method of resolving technical difficulties highlights the strength of customer support systems in responding to user problems and upholding service excellence. The result also provides insightful information on user preference and behavior with regard to mobile banking features and services. The future prospects for mobile banking in India seem bright going forward. There are many of chances for banks to develop and enhance mobile banking services because of the rapid improvements in technology and the changing tastes of users.

Overall, mobile banking has the potential to change the Indian banking system by providing clients with ease, connectivity, and accuracy while also boosting economic growth and financial integration. The hypothesis testing has evidence that awareness level of the customers about the mobile banking application did not have the relationship with the level of satisfaction of the customers while trust on the mobile banking application and satisfaction level of the customers are having correlation. Scope for the future study is there to check the impact of trust and awareness level on customer satisfaction and post usage behaviour of the customers.

## REFERENCES

1. Donner, Jonathan and Tellez, Camilo. (2008). Mobile banking and economic development: Linking adoption, impact, and use. Asian Journal of Communication, 18(4), 318-322.
2. Ramachandran, A., & Chidambaram, V. (2012). A review of customer satisfaction towards service quality of banking sector. Social and Management Sciences, 20(2), 71-79.
3. Goyal, V., Pandey, U. S., & Batra, S. (2012). Mobile Banking in India: Practices, Challenges and Security Issues. International Journal of Advanced Trends in Computer Science and Engineering, 1(2), 2278-3091.

ISSN 2394 - 7780

4. Nayak, N., Nath, V., & Goel, N. (2014). A study of Adoption Behaviour of Mobile Banking Services by Indian Consumers. International Journal of Research in Engineering & Technology, 2(3), 209-222.
5. Geete, V., & Thakur, A. (2014). A Study on Customer Satisfaction of E-Banking Services of Nationalized Banks. International Journal of Research in Management Sciences, 2(2), 20-30.
6. Sindwani, R., & Goel, M. (2015). The Impact of Technology Based Self Service Banking Service Quality on Customer Loyalty. International Journal of Marketing and Business Communication, 4(3).
7. Pal, R. (2015). Next Generation Banking: Issues and Challenges. International Journal in Management and Social Science, 3(12), 2321-1784.
8. Ahmad, I., & Gupta, K. (2015). A Study on Customers' Attitude towards Mobile Banking Adoption in India. International Journal of Marketing & Financial Management, 3(11), 49- 70.
9. Gandhi, A., & Sheorey, P. (2017). Mobile Banking Adoption in a Developing Country like India. A Management Journal, 8(2).
10. Tam, C., & Oliveira, T. (2017). Literature Review of Mobile Banking and Individual Performance. International Journal of Bank Marketing, 35(7), 0265-2323.
11. Rahman, A., Hasan, M., & Mia, M. (2017). Mobile Banking Service Quality and Customer Satisfaction in Bangladesh: An Analysis. The Cost and Management, 45(2), 1817-5090. 41
12. D., S., & K.P., V. (2018). Customer Satisfaction on Adoption of Mobile Banking Services: A study with Special Reference to State Bank of India (SBI). Journal of Business and Management, 20(1), 44-50. . Ahmad, M. (2018). Review of The Technology Acceptance Model (TAM) in Internet banking and Mobile Banking. International Journal of Information Communication Technology and Digital Convergence, 3(1), 23-41.
13. Khot, A.S. (2019). The Impact of Mobile Banking on Customer Satisfaction. International Journal of Trend in Scientific Research and Development, 21-23.
14. Bai, H.M. (2019). Mobile Banking Services and Customer Satisfaction with Reference to ICICI Bank-A Study. Shanlax International Journal of Commerce, 7(2), 7-18.
15. Banu, A.M., Mohamed, N. S., & Parayitam, S. (2019). Online Banking and Customer Satisfaction: Evidence of India. Asia-Pacific Journal of Management Research and Innovation, 15(1-2), 68-80.
16. Kumar, S.G., & Nagarajan, S. (2019). Customer Satisfaction on Mobile Banking: A Study with Reference to Selected Districts of Tamil Nadu. International Journal of Research and Scientific Innovation, 6(6), 2321-2705.
17. Shukla, J. V., & Singh, D.K. (2020). A study of Mobile Banking & its Impact on Consumer Satisfaction with Reference to Nagpur area. Journal of Emerging Technologies & Innovative Research, 7(8), 2349-5162.
18. Sahu, A., & Deshmukh, G. K. (2020). Mobile Banking Adoption: A review, Journal of Critical Reviews, 7(14), 2394-5125.
19. Metlo, M.Y., Hussain, N., Saqib, G., Phulpoto, K., & Abro, S. (2021). Impact of mobile banking on customers' satisfaction. International Journal of Management, 12(1), 1263- 1271.
20. Nzabirinda, E. (2022). The Influence of Mobile Banking Services on Customer Satisfaction. International Journal of Scientific & Engineering Research, 11(6), 2229-5518.
21. Khadim A., N., & Islam, M.K. (2022). A Review of Literature on the Evaluation of Customer Satisfaction Patterns in Mobile Banking Services. International Journal of Professional Business Review, 7(3), 01-12

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# IMPACT OF AI APPLICATION ON CUSTOMER MOTIVATION TO USE DIGITAL TRANSACTIONS IN BANKING SECTOR

**Dr. Jharna Kalra**
Assistant Professor, Sydenham College of Commerce & Economics

## ABSTRACT
*Banking being a service industry designing the services as per the needs of the consumer is the most significant and ground-breaking innovation in banking sector. The given research paper, analyzes the impact of AI on the consumer of the banking sector. The purpose of this paper is bring out the possibilities of implementing AI applications in banks. It also point out their usefulness and utility, and shed the spot on their impact on consumer behavior. Customer opinion and feedback regarding implementation of artificial intelligence were considered in this research paper. This study is of descriptive nature which describes the usage of AI technology in the Indian banking sector and effect on relationships with consumers. The data was collected through questionnaire method from both public and private sector banks in the city of Mumbai.*

***Keywords:*** *artificial intelligence, banking sector, consumer behavior, financial services.*

## INTRODUCTION
Artificial intelligence is the area of computer science focusing on creating machines that engage in behaviors that humans consider intelligent. The ability to create intelligent machines has intrigued humans since ancient times and today with the advent of computers and 50 years of research into AI programming techniques, the dream of smart machines is becoming a reality.

A bank is a financial institution which deals with deposits and advances and other related services. banks provide various services related to money or financial requirements of consumers. Artificial intelligence in financial institutions refers to technology that determines conclusions and actions that traditionally allowed human to human engagement. It is also noted that the commercial banks have begun utilizing artificial intelligence to solve a number of long-standing financial issues. For instance, Bank of America has already created a virtual assistant named Erica, an Automation tool that gives the bank's customers investment advice via speech and text messaging. Clients have access to this facility around-the clock, and it can handle routine transactions. Financial institutions should use this technology to stay up to date with the most recent advances in the IT business.

Communicative AI systems are well-known in the banking industry on media platforms and mobile applications for facilitating quick engagement with consumers .AI-powered automation as a significant tool for giving bank customers quick access to reliable information and enhancing their customer service.

## REVIEW OF LITERATURE

**DeVita, A. (2016).** This study aims to understand the perception of customers towards AI-enabled banking services, identify the level of customer satisfaction with these services, and analyze the impact of AI-driven banking solutions on customer satisfaction, which in turn influences customer loyalty. the potential benefits of AI in banking encompass several aspects including customer service, risk management, fraud detection, credit scoring, and personalized banking. It is forecasted that AI could save the banking industry more than $1 trillion by 2030.

**White, D. S., & Pathak, S. K. (2023).** The given research paper examines the application of artificial intelligence (AI) in the banking sector, its impact on banks employees and consumer behavior alike when buying financial services and the importance of (AI) for delivering social services in a western Asian developing country: Lebanon. The study was conducted in Asian countries which focus on the impact of AI application on consumers of banking.

**Boobier, T. (2020)** book. Explores the numerous applications for Advanced Analytics and AI in various areas of banking and finance Offers advice on the most effective ways to integrate AI into existing bank ecosystems Suggests alternative and complementary visions for the future of banking, addressing issues like branch transformation, new models of universal banking and 'rebranding' Explains the concept of 'Open Banking,' which securely shares information without needing to reveal passwords Addresses the development of leadership relative to AI adoption in the banking industry.

**El-Gohary, H., Thayaseelan, A., Babatunde, S., & El-Gohary, S. (2021)** It focuses on how consumer personal digital transformation has affected digital banking development and how this further affects consumer

ISSN 2394 - 7780

expectations and experience. It assesses how banks use artificially intelligent virtual agents such as chatbots to transform how consumers use their banking facilities. Lastly, this study investigates the scope of neo banks in the banking sector.

**Königstorfer, F., & Thalmann, S. (2020).** findings suggest that by using AI, commercial banks can reduce losses in lending, increase security in processing payments, automate compliance-related work, and improve customer targeting.AI in commercial banking with its focus on customer interaction has received little attention so far. Introducing AI in commercial banking could change business processes and interactions with customers, which could create research opportunities for behavioral finance.

**Lazo, M., & EBARDO, R. (2023).** The application of AI has permeated wide areas of the banking function expanding beyond the use of chatbots. Improving customer experience, increasing profitability, and improving competitiveness drive the adoption of AI by banks while people-related issues, technology-related issues, and regulatory-compliance issues deter banks from fully embracing AI. Transparency of algorithms, data privacy, data protection, and fair use of data are the main concerns both of regulators and customers.

**STATEMENT OF PROBLEM:**

The key reason for selecting this report is that it will look into the Effect of Artificial Intelligent Enabled Technology on Customers Experience in the Banking Sector. The usage of Digital banking and experiences of customers. Most of the customers hesitate to use virtual assistants and Chat bots, banks must educate them as they are reliable and trustworthy. Banks must also develop their banking app and aim to provide all services through the bank app so that it reaches the demands of clients and customers all the corners of the world

**OBJECTIVE OF THE STUDY**

1. To study the level of impact of artificial intelligence among Indian banks sector
2. To understand the degree of awareness among banking consumers.
3. To examine the performance of banking sector post implementation of Artificial Intelligence.
4. To study the future of AI in the banking sector.

**SCOPE AND LIMITATIONS**

Scope of the given study is restricted to the city of Mumbai. The study covers the area of AI in banking sector. Artificial intelligence has been adopted in various other sectors such as automobile, healthcare, Gaming, Robotics, Surveillance, Entertainment, Space Exploration, Agriculture, E-Commerce, social media, etc. Since the study emphasises on banks both public as well as private which is a growing industry in the financial sector, the research can also be applied to other above sectors as well.

**RESEARCH HYPOTHESIS**

- **$H_0$:** AI-enabled services do not significantly motivate customers to perform digital transactions.
- **$H_1$:** AI-enabled services significantly motivate customers to perform digital transactions.
- **$H_0$:** Consumers do not perceive AI systems as secure and error-free for banking transactions.
- **$H_1$:** Consumers perceive AI systems as secure and error-free for banking transactions.

**RESEARCH METHODOLOGY**

The current research is based on real data and real feedback of using customers service in banking system, where they have the opportunity to express their opinions and previous experiences with AI in banking facilities. Respondents in the research were accessed through convenient type sampling, they were asked to fill in an online questionnaire.

**RESEARCH DESIGN**

A descriptive research design was used to summarise the data and describe the characteristics of the variables.

**UNIVERSE AND SAMPLE**

The sample size of the research paper is of 60 respondents The study is mainly based on primary data. The opinion of the respondent will be collected using all well-structured and pre-tested questionnaires.

The goal was to find out nowadays' impact of AI solutions in customer service in the banking sector, which AI solution eases on the life of consumers in getting their answer to the issue. The research aimed to explore the issue at present, so the time horizon seemed more cross-sectional for the moment. Non-probability sampling with snowball and availability methodology was applied.

ISSN 2394 - 7780

**DESCRIPTIVE ANALYSIS:**

In any research study, profiling of respondents is important as it has a great influence on the outcome of the research.

**Table 1:** Gender Wise Responses

| GENDER | *f* | % |
|---|---|---|
| MALE | 22 | 35.50% |
| FEMALE | 40 | 64.50% |
| TOTAL | 60 | 100.00% |

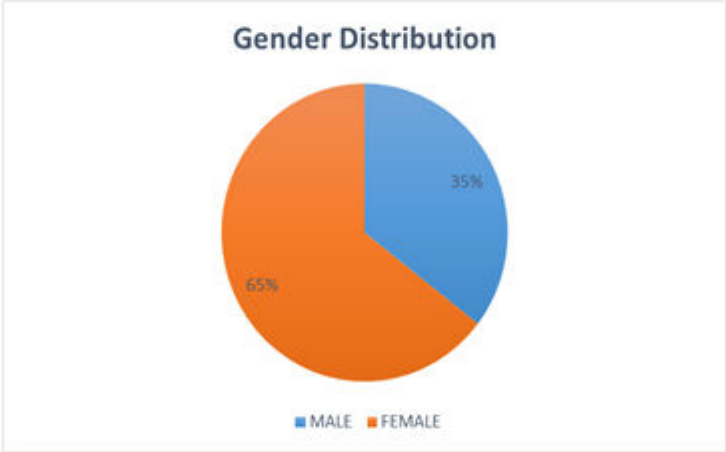



**Chart 1:** Gender Distribution Percentage Wise

From the above Table 1 it can be seen out of 60 responses 20 were male which account 35% of total responses. There were 40 females out of 60 responses which account 64% of responses.

**Table 2:** Age Wise Responses

| AGE | FREQUENCY | % |
|---|---|---|
| 18-30 | 56 | 93.33% |
| 30-45 | 1 | 1.67% |
| 45-60 | 3 | 5.00% |
| 60-ABOVE | 0 | 0.00% |
| TOTAL | 60 | |

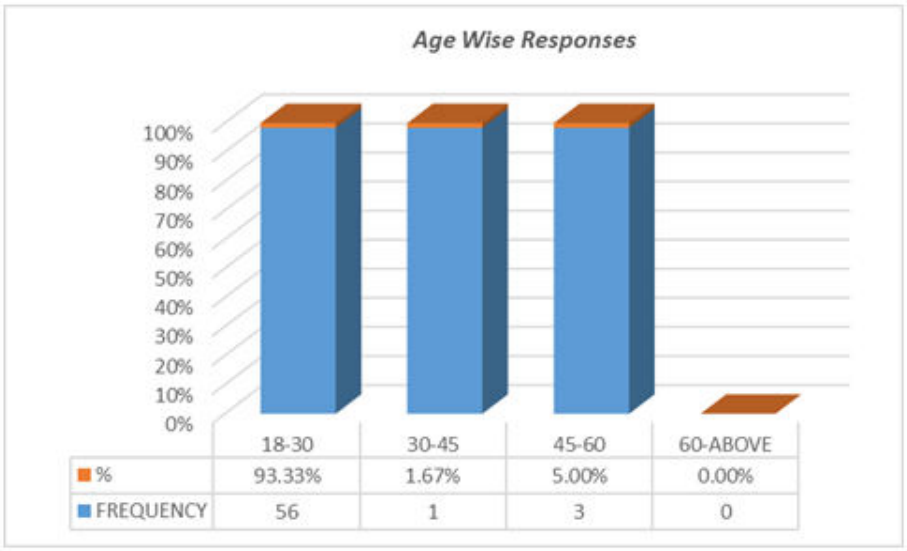



**Chart 2:** Age Distribution Percentage Wise

From the above Table 2 it can be seen out of 60 responses 56 are from the 18-30 age group which account 93.3% of total responses. There were 3 from the 45-69 age group out of 60 responses which account 5% of total responses. There were 1 from 30-45 age group responses which account 1.6% of total response. There were 0 from 60- above age group response which account 0% of total response

ISSN 2394 - 7780

**Table 3:** AI services motivates the customers to do digital transaction.

| RESPONSES | *f* | *percentage* |
|---|---|---|
| Strongly agree | 5 | 8% |
| Agree | 37 | 60% |
| Neutral | 14 | 23% |
| Disagree | 4 | 6% |
| Strongly disagree | 2 | 3% |
| **Total** | **62** | **100%** |

The above table 3 indicates that out of 62 respondents there were 5 respondents i.e. 8% strongly agreed that AI services motivates the customers to do digital transaction. 37 respondents i.e. 60% agreed that AI services motivates the customers to do digital transaction. 14 respondents i.e. 23% were neutral that AI services motivates the customers to do digital transaction .4 respondents i.e. 5% disagree AI services motivates the customers to do digital transactions.2 respondents i.e. 3% strongly disagree AI services motivates the customers to do digital transaction.

**TESTING OF HYPOTHESIS:**

Hypothesis testing on a statistical sample to present evidence of the plausibility of the null hypothesis. Measurements and analyses are conducted on a random sample of the population to test a theory. Analysts use a random population sample to test two hypotheses: the null and alternative hypotheses.

**Table 4:** Descriptive analysis of AI services motivates the customers to do digital transaction.

| Descriptive Statistics | Responses |
|---|---|
| **Mean** | 3.629032258 |
| **Standard Deviation (S)** | 0.853802891 |
| **Count (N)** | 62 |
| **Standard Error of Mean (SEM)** | 0.108433076 |
| **Degree of Freedom (df)** | 62 |
| **Hypothesized Mean** | 3 |
| **t statistic** | 5.801110546 |
| **p value** | 1.25826E-07 |

**Interpretation:**

From the above analysis it is seen that since the p-value is much smaller than 0.05, we reject the null hypothesis. This means there is strong evidence to conclude that AI-enabled services significantly motivate customers to perform digital transactions.

**Table 5:** Descriptive analysis of AI services motivates the customers to do digital transaction.

| Descriptive Statistics | Responses |
|---|---|
| **Mean** | 3.419354839 |
| **Standard Deviation (S)** | 0.897142771 |
| **Count (N)** | 62 |
| **Standard Error of Mean (SEM)** | 0.113937246 |
| **Dewgree of Feedom (df)** | 61 |
| **Hypothesized Mean** | 3 |
| **t statistic** | 3.680577284 |
| **p value** | 0.000247363 |

**Interpretation:**

From the above analysis it can be inferred that Since the p-value is much smaller than 0.05, we reject the null hypothesis.This means there is strong evidence to conclude that Consumers perceive AI systems as secure and error-free for banking transactions.

**RESULT AND DISCUSSION**

The primary of Artificial Intelligence in the banking sector is to cater the needs and requirements of customers. Banks and financial services companies are using Artificial Intelligence for monitoring the operations and their performance. Banks will start implementing AI in both internal and external processes to comply with the regulatory standards. The application of Artificial Intelligence in the Indian banking sector is in the nascent stage. AI will help banks to reduce costs by increasing productivity in processes. Driving the banking sector with the AI technology will enhance the banking processes in various ways like, preventing them from the

ISSN 2394 - 7780

cyber threats and maintaining the confidentiality of the customer's information is much needed. In order to face the difficulties in future without adapting to the new technologies in the banking sector, the best way is to adapt with these technologies and thus make those difficulties as opportunities in future which helps to grow as a robust and reliable banking sector.

## CONCLUSION

The research clearly suggests that the use artificial intelligence based technological applications. All the Indian Banks should initiate the process of the use of most modern expertise such as Artificial Intelligence based technological applications to provide customized services and products to its customers as well as in Transaction Monitoring.

The AI transformation has resulted in time saving and improvement of the banking process. While AI modification financial processes, its on-key coexistence with human expertise emphasizes personalized and prompt services. This study provides insights for best AI utilization in shaping the future of banking.

## REFERENCES


- Boobier, T. (2020). AI and the Future of Banking.
- Butt1, O. H. (2023). Utilization of artifcial intelligence in the banking sector: a systematic. Journal of Financial Services Marketing.
- D.S, W. (2023). *he Digital Drivers of Consumer Behavior: Industry.*
- Devta, A. (n.d.). A Study of Artificial Intelligence In The Consumer Behaviour Space Of The Indian Banking System.
- El-Gohary, H. T.-G.-G. (2021). An exploratory study on the effect of artificial intelligence-enabled technology on customer experiences in the banking sector. . *Journal of Technological Advancements (JTA), 1(1),* , 1-17.
- Königstorfer, F. &. (2020). Applications of Artificial Intelligence in commercial banks–A research agenda for behavioral finance. *Journal of behavioral and experimental finance*.
- LAZO, M. E. (2023). Artificial Intelligence Adoption in the Banking Industry: Current State and Future Prospect. *Journal of Innovation Management*.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# EXPORTS OF MARINE PRODUCTS IN INDIA: AN ANALYTICAL STUDY

**Mr. Mekkalwad Sambhaji Shankar[1] and Dr. Surendra L. Padgawar[2]**
[1](Research Scholar, Department of Commerce and Management) Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
[2]Associate Professor (Department of Commerce and Management) Research Guide Smt. Dankunwar Mahila Mahavidyalay, Jalana

**ABSTRACT**
*The export of marine products through sea ways most of the time use this route to reach in the global market. Therefore, many ports are existed Bombay, Cochin, Madras, Vizag, Calcutta, Goa and Kandla etc.India is the third largest fish producing country in the world and accounts for 9.64 percent of the global production. The marine sector has grown rapidly it constitutes 17 percent of the total agriculture product exports.This paper deal with production of fisheries and exports from India. Exports start from the catch point of fish and storage with hygienic handling at every stages like transportation, processing and packaging for storage of finished product to reach the end of market. India exports frozen shrimp fin fish in dried and live fish or chilled, fish fillets and other aquatic invertebrates.*

***Keywords:*** *Marine Products, Exports, Fish Production*

## 1. INTRODUCTION

The international trade in fish and fishery products has been growing steadily, the primary stimulus being the rising trend of consumption in Europe and America and a build-up in Asia and other developing regions. The growing demand for fishery products across the world during the recent years is attributed to a change in the dietary habits in favour of fish due to its health enhancing features.

The country has great coastline state-wise the longest coastline Gujrat 1600.km located at Kathiawar region surrounded by the Arabian Sea. The second largest coastline in Tamil Nadu, India at 1076 km, third largest coastline 972km in Andhra Pradesh and Maharashtra has coastline of 720 km located at Konkan region other coastal states has coastline Kerala, Odisha, Karnataka, West Bengal and Goa etc. India stand with fifth largest number in the world concerning fisheries exports in 2020 with 4.4% share in global export. The total fish production during FY 2022-23 is estimated at 17.54MMT with a contribution of 13.11 MMT from Inland sector and 4.43 MMT from Marine sector. The annual average growth rate in the Fisheries sector has been 6.7% over the last five years. India is also a major producer of fish through Aquaculture and ranks second in the world after China, it constitutes about 75 percent of the total fish production of the country.

The fisheries sector generating tremendous employment opportunities urban, semi-urban areas, besides increase earning foreign exchanges.India has total coastline is 8118 km, almost two-thirds of the country and encompassing an exclusive economic zone (EEZ) of 2 million square kilometers offers sufficient surplus of fish and fishery products for external trade after fulfilment of the domestic demand. Fishery products, thus, have long been serving as an important source of foreign exchange to India's exchequer through substantial amount of exports all over the world.

## 2. OBJECTIVES OF THE STUDY:

1. To Study Export Status of Marine Products from India

2. To Know the Fish Production and Valuation of Marine Products in India.

## 3. REVIEW OF LITERATURE:

**Prathvi Rani, Sheela Immanuel and NaliniRanjan Kumar (2014)** has studied export performance of ornamental fish along with export competitiveness and constant market share. It is suggested that, the tremendous growth has been seen in exports of ornamental fish in Singapore, Japan, USA, Malaysia and Germany etc. It is shown that the strong sign of competitiveness existing in this sector. India has fewer imports and increasing export thus leading to positive trade advantage and is progressing consistently.

**Ancy V.P & K.V Raju (2016)** studied emerging marine product sector along with marine product export trends. It is examined growth trends of exports from Kerala and India. The researcher has also focused on WTO and globalization which impacted on fisheries structure of India. It is also highlighted on fisheries profile, product diversification and technological innovations in marine sectors.

ISSN 2394 - 7780

**Singh Manjinder& Singh J.M (2017)** the paper deal with growth in fish production in Punjab, India. It also focused export trends of marine products from India, the study has also attempt some policy issues concerning with government subsidy for fish farming and promotion to expand area under fish farming in the states.

**Swaminathan et.al (2018)** the study has attempted the growth rates, instability and destination pattern with trade direction of Indian marine products. It is focused on fresh and dried products to measure variability in marine products for prediction future marine products exports from India in major trading countries like Japan and South East Asia.

**B Madhan Kumar and T. Ramya (2020)** studied on The fishing industry includes any industry or performance concerned with taking, culturing, processing, preserving, storing, transporting, marketing or selling fish products. The exports performance is aimed at the delivery of fish and marine products for human consumption or as input factors in other industrial processes.

## 4. RESEARCH METHODOLOGY:

The present study based on secondary data collection method which existed from 2019 -20 to 2023-24 has been used for analysing to reach fulfilment of research objectives.The required data collected from Department of Fishery government of India and to gather information from research articles or papers.

## 5. MARINE PRODUCT EXPORTS: A SNAPSHOT

Marine product exports has been increased in the South East Asia who continued to be the top most importer of marine products in terms of volume. Exports of dried fish, chilled and live aquarium fish etc items has most considerable. Over a period of time India achieved a substantial progress in exporting fish and fish products to various countries.The Marine Products Export Development Authority, it is just only 10 per cent of our seafood export has with started moving in as value-added individually quick frozen packs to export more quantity in value added form. The trend in the marine products export during the last five years is quite encouraging. The market for Indian frozen shrimp expanded significantly to European Union and USA, South East Asia became a major market for Indian frozen fish, European Union emerged as a major market for Indian frozen squid and the frozen cuttle fish. New markets were opened for Indian marine products throughout the year. There is a need to accelerate the efforts to promote the export of marine products.

The Marine Products Export Development Authority (MPEDA) was constituted in the year 1972 under the Marine Products Export Development Authority Act, 1972. The MPEDA replaced the erstwhile Marine Products Export Promotion Council which was till then looking after the promotion of export of marine products from India. The role envisaged for the MPEDA under the statute was comprehensive covering fisheries of all kinds, export standards, processing, marketing, extension and training in various aspects of the fisheries sector. According to the MPEDA Act, the "marine products" include all varieties of fishery products known commercially as shrimp, prawn, lobster, crab, fish, shell-fish, other aquatic animals or plants or part thereof and any other products which the authority may, by notification in the Gazette of India, declare to be marine products for the purposes of this Act.Marine Products Export Development Authority (MPEDA) and Central Institute of Fisheries Technology (CIFT) was set up to inspect and recommend the units which could be permitted to export to the European Union and South East Asia.The Indian Government has brought out number of legislations to ensure quality control and brought fish and fish products under the purview of compulsory quality control and inspection scheme. The establishment of export inspection councils in the year 1963 is a major development in the export trade of fish and fish products from India.

**Table No.1**Exports of Marine Products

| Year | Total Production | Total Exports Value (in lakhs) | Contribution |
|---|---|---|---|
| 2019-20 | 43,62,694.94 | 22,19,85,418.10 | 1.96 |
| 2020-21 | 38,79,563.86 | 21,59,04,322.13 | 1.79 |
| 2021-22 | 51,42,068.24 | 31,47,02,149.28 | 1.63 |
| 2022-23 | 54,78,657.92 | 36,21,54,987.57 | 1.51 |
| 2023-24 | 50,71,041.87 | 36,18,95,227.05 | 1.4 |

***Source:*** dgft.gov.in

ISSN 2394 - 7780


**Graph No.1**

**Interpretation:**
Above table no. 1 and graph no.1 the total exports of marine fish products along with valuation since 2019-20 to 2023-24. In the year 2019-20 the total exports have been shown. It is found that, the past five years marine products exports slightly increased respectively, positive growth has been recorded. Besides, table no.1 shows contribution of total exports of all commodities from India. It is concluded that, the exports of marine products has been increased according to the international market trade.

## 5. CONCLUSION

Depending on the Product handled by the Marine Product Export Development Authority in India fresh fish merchants are the intermediaries who buy fish from the boat owner or catch fish and hand over them to the Marine Product Export Development Authority. Fisheries sector occupies a very important place in the socio-economic development of the country. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries and is a source of cheap and nutritious food besides being a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population of the country.This position continued as long as exports from India were dominated by dried items. When the frozen and canned items increasingly figured in our exports, the sophisticated affluent markets like USA, France, Australia, Canada, Japan etc. became important buyers.

## REFERENCES

1. P. Shinoj et al (2009) 'Export of India's Fish and Fishery Products: Analysing the Changing Pattern/Composition and Underlying Causes' Indian Journal of Agri. Economics, Vol.64, Issue-4.
2. Prathvi Rani, Sheela Immanuel and NaliniRanjan Kumar (2014) 'Ornamental Fish Exports from India: Performance, Competitiveness and Determinants'International Journal of Fisheries and Aquatic Studies, Vol.1 Issue-4,
3. Ancy V.P & K.V Raju (2016) 'Trends in Marine Products Exports from India: Issues and Challenges', International Journal of Research in Finance & Marketing, Vol. 6, Issue-3, ISSN: 2231-5985
4. Singh Manjinder& Singh J.M (2017) 'Trends in Fish Production and Marine Fish Products Export from India', Indian Journal of Economics and Development, Vol.13, Issue-2, ISSN: 2277-5412
5. B. Swaminathan, V. D Tarpara& M.G Dhandhalya (2018) 'Export Performance of Marine Products from India' GRIN Verlag, ISBN: 9783668700413
6. B Madhan Kumar and T. Ramya (2020) 'Study on Export Performance of Fish Products in India' International Journal of Management, Technology and Engineering Vol.10, Issue-7, ISSN: 2249-7455
7. Vijay Praksh D (1998) 'Export Marketing of Fish and Fish Products'http://hdl.handle.net/10603/404172
8. www.dof.gov.in

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# COMPARISION STUDY BETWEEN ADOMIAN DECOMPOSITION METHOD AND VARIATIONAL ITERATION METHOD FOR SOME DELAY DIFFERENTIAL EQUATION

**Dr. Narhari O. Warade[1], Dr. Rajkumar P.Narkhede[2] and Prof Bhagyashree A.Narkhede[3]**
[1]Humanities & Sciences, MGM College of Engineering, Kamothe, Panvel, Navi -Mumbai
[2]Konkan Gyanpeeth College of Engineering, Karjat
[3]Dr. V.B.Kolte College of Engineering, Malkapur

**ABSTRACT**
*A numerical method based on ADM which has been developed by Adomian to solve delay differential Equations. In this paper, VIM and ADM methods are used to solve delay differential Equations. Several examples are presented to demonstrate the efficiency and reliability of VIM and ADM method.*

***Keywords:*** *Delay differential equation, Variational Iterational method(VIM, Adomian decomposition method (ADM),Convergence analysis.*

## I. INTRODUCTION

A delay differential equation in which the derivatine of the function at any time depends on the solution at previous time. Delay differential equation are useful in control system, Laser, Traffic models metal cutting, neuroscience, population dynamic, chemical kinetics etc. In DDE one has to provide history of the system over the delay interval (T,O) as the initial condition. Due to this reason delay system are infinite dimensional in nature. Because of infinite dimensionally the DDES are difficult to analyse analytically and hence the numerical solution plays an important role.

The implementation of the Adomian method has shown reliable result in that few terms only are needed to obtain accurate solution.

The main aim in this work is to effectively employ VIM to establish exact solution of DDEs and study the convergence of the method.

In this paper we present the solution of some linear and non linear delay differential equations.

## II. ANALYSIS OF THE METHOD

Consider the DDE written in the form

$$\boldsymbol{Ly}\,(\boldsymbol{x}) = \boldsymbol{f}\left(\boldsymbol{x}, \boldsymbol{y}(\boldsymbol{x}), \boldsymbol{y}\big(\boldsymbol{g}(\boldsymbol{x})\big)\right), \quad \mathbf{0} \le \boldsymbol{x} \le \mathbf{1}$$

$$\boldsymbol{y}^{(i)}(\mathbf{0}) = \boldsymbol{y}_{\mathbf{0}}^{\boldsymbol{i}}, \quad \boldsymbol{i} = \mathbf{0}, \mathbf{1}, \ldots\ldots, \boldsymbol{N} - \mathbf{1},$$

$$\boldsymbol{y}(\boldsymbol{x}) = \emptyset(\boldsymbol{x}), \qquad \boldsymbol{x} \le \mathbf{0},$$

Where the differential operator L is given by

$$\boldsymbol{L}(.) = \frac{\boldsymbol{d}^{\boldsymbol{N}(.)}}{\boldsymbol{dx}^{\boldsymbol{N}}},$$

The inverse operator $\boldsymbol{L}^{-\mathbf{1}}$ is therefore considered a N-fold integral operator defined by

$$\boldsymbol{L}^{-\mathbf{1}}\,(\#) = \int_{\mathbf{0}}^{\boldsymbol{x}} \quad (\#)\boldsymbol{N}\ \boldsymbol{times}\ \boldsymbol{dx},$$

Operating with $\boldsymbol{L}^{-\mathbf{1}}$ on Eq. (1), it then follows

$$\boldsymbol{y}(\boldsymbol{x}) = \sum_{\boldsymbol{j}=\mathbf{0}}^{\boldsymbol{N}-\mathbf{1}} \frac{\boldsymbol{\alpha_j}}{\boldsymbol{j}!}\boldsymbol{x}^{\boldsymbol{j}} + \boldsymbol{L}^{-\mathbf{1}}(\boldsymbol{f}\left(\boldsymbol{x}, \boldsymbol{y}(\boldsymbol{x}), \boldsymbol{y}\big(\boldsymbol{g}(\boldsymbol{x})\big)\right),$$

Where the $\boldsymbol{a_j}$ are constants that describe the boundary conditions. The Adomian decomposition methos assumes that the unknown function y(x) can be expressed by an infinite series of the form

$$\boldsymbol{y}(\boldsymbol{x}) = \sum_{\boldsymbol{n}=\boldsymbol{o}}^{\infty} \quad \boldsymbol{y_n}(\boldsymbol{x}),$$

ISSN 2394 - 7780

So that the components $\boldsymbol{y_n(x)}$ will be determined recursively, Moreover, the method defines the nonlinear term $\boldsymbol{f(x, y(x), y(g(x)))}$ by the Adomian polynomials

$$\boldsymbol{f(x, y(x), g(y(x)) = \sum_{n=0}^{\infty} A_n,}$$

Where $\boldsymbol{A_n}$ are Adomian polynomials that can be generated for all forms of nonlinearity[3] as

$\boldsymbol{A_n = \frac{1}{n!}\frac{d^n}{d\lambda^n}\,[\,f(x, \sum_{j=0}^{\infty} \lambda^j y_j(x), \sum_{j=0}^{\infty} \lambda^j y_j(g}$ [illegible]

Substituting Eqs. (5) and (6) into Eq. (4) gives

$$\sum_{n=0}^{\infty} \boldsymbol{y_n(x) = \sum_{j=0}^{N-1} \frac{a_j}{j!} x^j + L^{-1}\left(\sum_{n=0}^{\infty} A_n\right),}$$

To determine the components $\boldsymbol{y_n(x), n \geq 0}$. First, we identify the zero component $\boldsymbol{y_0(x)}$ by all terms that arise from the boundary conditions at $\boldsymbol{x = 0}$ and from integrating the source term if it exists. Second, the remaining components of $\boldsymbol{y(x)}$ can be determined in a way such that each component is determined by using the preceding components. In other words, the method introduces the recursive relation :

$$\boldsymbol{y_0(x) = \sum_{j=0}^{N-1} \frac{a_j}{j!} x^j,\ \ y_{n+1}(x) = L^{-1}(A_n),\ \ n \geq 0,}$$

**DELAY DIFFERENTIAL EQUATION**

For the determination of the components $\boldsymbol{y_n}$(x), n $\geq \boldsymbol{0}$ of $\boldsymbol{y(x)}$, the series solution of $\boldsymbol{y(x)}$ follows immediately with the constants $\boldsymbol{a_j, j = 0, 1, \ldots, N-1}$ are as yet undetermined. The above analysis yields the following theorem.

THEOREM 1: The solution of the DDE in the form (1) can be determined by the series (5) with the iterations(8).

**III. Variational Iteration Method Using He's Ploynominals (VIMHP)**

To illustrate the basic concept of the VIMHP, we consider the following general differential equation:

$$\boldsymbol{Lu + Nu = g(x),}$$

Where L is a linear operator, N a nonlinear operator, and g(x) is forcing term. According to VIM [ 6 – 22,25,28,30 – 35]

$\boldsymbol{u_n + 1 = u_n(x) + \int_0^x \lambda\,(6)(Lu_n\,(6) + N\check{u}_n(6) - g(6)d\varepsilon}$

Where is a Lagrange multiplier, is a restricted variation. Now, we apply He's polynomial

$\boldsymbol{\sum_{n=0}^{\infty} p^{(n)}u_n = u_0(x) + p\int_0^x \lambda(6)\sum_{n=0}^{\infty} p^{(n)}L(u_n) + \sum_{n=0}^{\infty} p^{(n)}N(\check{u}_n))d6) - \int_0^x \lambda(6)g(6)d6}$

Which is VIMPH and is formulated by the coupling of VIM and He's polynomials. The comparsion of like powers of $p$ gives solution of various order.

**IV. ADM**

**1.** Solve $y'(x) = 1 - 2y^2\left(\frac{x}{2}\right),\ 0 \leq x \leq 1,\ y(0) = 0\,, x \leq 0$

Ly = 1- $2y^2\left(\frac{x}{2}\right)$ => $y(x) = L^{-1}\left(1 - 2y^2\left(\frac{x}{2}\right)\right) = x - L^{-1}\left(2y^2\left(\frac{x}{2}\right)\right)$

$$y_0\,(x) = y(0) = x \text{ and } y_{n+1} = -2\int_0^x A_n dx. \qquad n \geq 0$$

The nonlinear term is $\boldsymbol{f(y) = y^2\left(\frac{x}{2}\right)}$. The first Adomian polynominal Ao=f(yo) , then using the generating formula in section 2, we can compute the remaining An s.

ISSN 2394 - 7780

$$A_0 = y_0^2\left(\frac{x}{2}\right)$$

$$A_1 = 2y_0\left(\frac{x}{2}\right) y_1\left(\frac{x}{2}\right)$$

$$A_2 = 2y_2\left(\frac{x}{2}\right) y_0\left(\frac{x}{2}\right) + y_1^2\left(\frac{x}{2}\right)$$

$$A_3 = 2y_3\left(\frac{x}{2}\right) y_0\left(\frac{x}{2}\right) + 2y_1\left(\frac{x}{2}\right) y_2\left(\frac{x}{2}\right) \ldots\ldots\ldots etc$$

Now using (6) we compute the components $y_{n+1}$

$$y_1 = -2\int_0^x \frac{x^2}{4}dx = -\frac{x^3}{6},$$

$$y_1\left(\frac{x}{2}\right) = -\frac{x^3}{48},$$

$$y_2 = \int_0^x \frac{1}{24}x^4 dx = -\frac{x^5}{6},$$

$$y_2\left(\frac{x}{2}\right) = \frac{x^5}{3840}$$

$$y_3 = \int_0^x -\frac{2}{2304}x^6 - \frac{2x^6}{3840}\,dx = -\frac{x^7}{5040},$$

$$y_3\left(\frac{x}{2}\right) = -\frac{x^7}{645120}$$

Now the partial sum ∅3 is

$$y_0 + y_1 + y_2 + y_3 = x - \frac{1}{6}x^3 + \frac{1}{120}x^5 - \frac{1}{5040}x^7 \; y_4 = \int_0^x \frac{4x^3}{48}\frac{x^5}{3840}\,2x\,.\frac{1}{645120}x^7 dx = \frac{x^9}{362880}$$

***a.*** **Now partial sum**

***b.*** $\emptyset_4 = \sum_{i=1}^{4} \quad y_i = x - \frac{x^3}{6} + \frac{x^5}{120} + \frac{x^7}{5040} + \frac{x^9}{362880}$

Using (8) to compute approximate y(x) values are as shown in table 3.1. These compare favourably with the exact solution y(x)= sinx

| X | ADM | Exact | Error |
|---|---|---|---|
| 0.2 | 0.1986693309 | 0.1986693308 | -1E-10 |
| 0.4 | 0.3894183422 | 0.3894183423 | 1E-10 |
| 0.6 | 0.5645424735 | 05646424734 | 9.99999E-05 |
| 0.8 | 0.717356093 | 0.717356090 | -3E-09 |

**2. VIM : Consider the following nonlinear delay differential equation (NDDE) of the first order:**

$$\frac{dy(x)}{dx} = 1 - 2y^2\left(\frac{x}{2}\right), \quad 0 \le x \le 1,$$

With the initial condition

y(0) = 0.

The exact solution of the problem is

$$y(x) = sin\ sin\ x$$

The correction functional is given by

$y_{n+1}(x) = y_n(x) + \int_0^x [\frac{dy_n(x)}{ds} - 1 + 2y_n^2$ (x/2)]ds.

Making the correction functional stationary, the Lagrange multiplier can be identified as λ(s) = -1, we get

ISSN 2394 - 7780

$y_{n+1}(x) = y_n(x) - \int_0^x [\frac{dy_n(x)}{ds} - 1 + 2y_n^2$ (x/2)]ds.

Applying the variational iteration method using He's polynomials (VIMHP),we have

$$y_0 + py_1 + \cdots . = y_0(x) - \int_0^x [\frac{dy_0}{ds} + p\frac{dy_1}{ds} + \cdots - 1 + 2(y_0(x/2) + py_1(x/2) + \cdots..)\text{^}2\ ]\, ds.$$

Comparing the co-efficient of like powers of p, following approximants are calculated:

$$p^{(0)}: y_o(x) = 0,$$
$$p^{(1)}: y_1(x) = x,$$
$$p^{(2)}: y_2(x) = 0,$$
$$p^{(3)}: y_3(x) = -\frac{1}{3!}x^3,$$
$$p^{(4)}: y_4(x) = 0,$$
$$p^{(5)}: y_5(x) = \frac{1}{5!}x^5,$$
$$p^{(6)}: y_6(x) = 0,$$
$$p^{(7)}: y_7(x) = -\frac{1}{7!}x^7,$$
$$p^{(8)}: y_8(x) = 0,$$
$$p^{(9)}: y_9(x) = \frac{1}{9!}x^9,$$

The series solution is given as

$$y(x) = x - \frac{1}{3!}x^3 + \frac{1}{5!}x^5 - \frac{1}{7!}x^7 + \frac{1}{9!}x^9 + \cdots \ldots \ldots,$$

And the closed from solution is given by $y(x) = sinx$

**III. ADM**

Solve $y'(x) = \frac{1}{2}e^{\frac{x}{2}}y\left(\frac{x}{2}\right) + \frac{1}{2}y(x);\quad 0 \le x \le 1,\quad y(0) = 1$

$$y0 = 1,\ y_{n+1} = \int_0^x \frac{1}{2}e^{\frac{x}{2}}y_n\left(\frac{x}{2}\right) + \frac{1}{2}y_n(x)dx, \qquad n \ge 0$$

$$y_2 = -\frac{1}{6} + \frac{2}{3}e^{\frac{3x}{4}} - \frac{1}{2}e^{\frac{1}{2}x} + \frac{1}{4}xe^{\frac{1}{2}x} - \frac{1}{2}x + \frac{1}{8}x^2$$

$$y_3 = \frac{151}{36} + \frac{5}{12}e^{\frac{1x}{2}} + \frac{16}{9}e^{\frac{3x}{16}} - 6e^{\frac{1x}{8}} + \frac{1}{2}xe^{\frac{1x}{8}} - \frac{1}{8}xe^{\frac{1x}{2}} + \frac{1}{32}x^2e^{\frac{x}{2}} - \frac{1}{12x} + \frac{4}{9}e^{\frac{3x}{4}} - \frac{1}{8}x^2 + \frac{1}{48}x^3$$

This computation continued until $y_{12}$ term before obtaining convergence to the exact solution.

**IV. VIM**

Consider the following linear delay differential Equation of the first Order.

$$\frac{dy(x)}{dx} = \frac{1}{2}e^{\frac{x}{2}}y\left(\frac{x}{2}\right) + \frac{1}{2}y(x), 0 \le x \le 1,$$

With the initial condition

$$y(0) = 1$$

The Exact solution of the problem is

$$y(x) = e^x$$

ISSN 2394 - 7780

The Correction Function is given by

$$y_{n+1}(x) = y_n(x) + \int_0^x \left[\frac{dy_n(x)}{ds} - \left(\frac{1}{2}e^{\frac{x}{2}}y_n\left(\frac{x}{2}\right) + \frac{1}{2}y_n(x)\right)\right]ds$$

Making the correction functional stationary, the lagrange multiplier can be identified as λ(s) =-1, we get,

$$y_{n+1}(x) = yn(x) - \int_0^x \left(\frac{dyn(x)}{ds} - \left(\frac{1}{2}e^{\frac{x}{2}}yn\left(\frac{x}{2}\right) + \frac{1}{2}yn(x)\right)\right)ds.$$

Appling the variational interation method using He's Ploynominals (VIMHP), we have

$$y_0 + py_1(x)\cdots = y_0(x) - \int_0^x \left[\frac{dy_0}{ds} + p\frac{dy_1}{ds} + \cdots - \frac{1}{2}e^{\frac{x}{2}}\left(y_0\left(\frac{x}{2}\right) + \cdots\right) + \frac{1}{2}(y_0 + py_1 + \cdots)\right]ds.$$

Comparing the co-efficient of like powers of p, following approximants are calculated

$$p^{(0)}: y_0(x) = 1,$$

$$p^{(1)}: y_1(x) = x + \frac{1}{8}x^2 + \frac{1}{48}x^{3+\cdots},$$

$$p^{(2)}: y_{20}(x) = \frac{3}{8}x^2 + \frac{13}{192}x^3 + \frac{13}{1024}x^4 + \cdots,$$

$$p^{(3)}: y_{03}(x) = \frac{5}{64}x^3 + \frac{63}{4096}x^4 + \cdots,$$

$$\vdots.$$

The series soluation is given as

$$y(x) = 1 + x + \frac{1}{2!}x^2 + \frac{1}{3!}x^3 + \frac{1}{4!}x^4 + \frac{1}{5!}x^5 + \cdots$$

And the closed form solution is given by

$$y(x) = e^x$$

## V. CONCLUSION

In this paper, Adomian decomposition method, to numerically solve the DDEs is presented. All the numerical result obtained by using the Adomian decomposition method described earlier show very good agreement with the exact solution for only a few term. Comparing the VIM method which can overcome the difficulties arising in the calculation. This method is very promising for solving wide application in non linear differential equations.

## VI. REFERENCES

1. Adomian G (1994) Solving Frontier Problems of physics: The Decomposition Method, Kluwer Academic Publishers, Dordrecht.
2. Bellen A and Zennro m (2003) Numerical Methods for Delay Differential Equations, Clarendon press, oxford
3. Shampine l Gladwell I and Thompson s (2003) solving ODES with Matlab, Cambridge University Press Cambridge,
4. Raslan K R and Evans D 2004
5. Shofoiof S M and Biazar j 2005
6. Wazwaz A M 2000 a new Algorithm for calculating Adomian Polynomials.
7. Ogunfiditimi , F.O.Numerical solution of delay Differential equation using the Adomian Decomposition method (ADM)International journal of engineering and science(IJES) ll Volume ll 4 ll Issue ll 5 ll Pages ll PP. 18-23 ll 2015 ll ISSN (e) : 2319-1813 ISSN (P) : 2319-1805
8. Syed Tauseef Mohyud-Din[a] and Ahmet Yildrim[b] ,Variational Ileration Method for Delay Differential Equation using He's Polynomial

ISSN 2394 - 7780

9. J.H He Variational iteration method for autonomous ordinary differential system, Applied Mathematics and Compulation 114(2-3) (2000) 115-123
10. J.H He, Variation iteration method a kind of non-linear analytical technique: some example, International journal of Non-linear Mechanics 34 (1999) 699-708
11. M.M. Khader, introducing an efficient modification of the VIM by using Chebyshev polynomials, Application and applied Mathematics: an International Journal 7 (1) (2012) 283-299.
12. M.A Ramdan, M.N. Shrif Numerical solution of system of first order delay differential equation using spline functions, International Journal of computer Mathematics 83 (12) (2006) 925-937.
13. N.H. Sweilam, M.M Khader,On the convergence of VIM for non-linear coupled system of partial differential equation, International Journal of computer Mathematics 87 (5) (2010) 1120-1130.
14. T.A Abassy, M.A. El-Tawail, H. El Zoheiry, solving non linear partial differential equation using the modified variational iteration Pade technique, Journal of computational and applied mathematics 207 (2007) 73-91
15. G. Adomian, Solving Frontier Problem of Physics: The Decomposition Method, Kluwer Academic Publisher, Boston, M.A,1994.
16. S. Bhalekar, V. Daftardar-Gejji, A Predictor-corrector scheme for solving nonlinear delay differential equations of fractional order, Journal of Fractional Calculus and Application 1 (5) (2011) 1-9.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# INVESTIGATION ON SOCIAL MEDIA ADVERTISING INFLUENCES ON TWO WHEELER VEHICLES

**Dr. Gulabchand K Gupta[1] and Ravikumar Gupta[2]**
[1]Seva Sadan College of Arts, Science & Commerce, Ulhasnagar, Dist. Thane
[2]Research Scholar, Hashmatrai & Gangaram Himathmal Mansukhani, Institute of Management, Ulhasnagar 421003

## ABSTRACT
*The Social media advertising has become one of the most influential tools in shaping consumer behaviour particularly in the automotive industry. For two-wheeler vehicles such as motorcycles, scooters and electric bikes, the Social Media plays a crucial role in both raising awareness and driving purchasing decisions. The digital marketing refers to advertising delivered through digital networks such as search engines, social media, websites, email and mobile applications. Using social media networks such as Facebook, YouTube, Twitter, Instagram, LinkedIn etc, the companies endorse goods, services, and brands. The consumers deeply depend on digital means to research products. Engagement marketing is the method of forming meaningful interactions with potential and returning customers based on the data collect over time. By implementing digital marketing strategy, marketers can collect valuable insights into target audience behaviors while opening the door to new methods of customer engagement. This paper will illuminate consumer purchasing behaviour on two wheeler vehicles influence by social media advertisement, review articles and friend endorsement in the social media platform.*

***Keywords****: Social Media, Advertising, Consumer, Behaviour, Influence, Vehicles*

## 1. INTRODUCTION
The social media refers to networking and advertising delivered through digital networks such as search engines, social media, websites, email and mobile applications. Using social media networks such as YouTub, Instagram, Facebook, Twitter, LinkedIn etc, the companies endorse goods, services, and brands. The clients deeply depend on digital means to research products. The present day social media marketing is the massive system of networks to which marketers just onboard their brands, products and advertisement. An engagement marketing is the method of forming meaningful interactions with potential and returning customers based on the data collect over time. By attracting customers in a digital landscape, build brand awareness and place business at the forefront when the customer is ready to buy. By implementing social media marketing strategy, marketers can collect valuable insights into target audience behaviors while opening the door to new methods of customer engagement. This paper explains the consumer purchasing behavior influence by advertisement, review articles and friend endorsement in the social media platform.

## 2. RELATED LITERATURE
Dr. Som Aditya Juyal (2015), study attempts to assess the media popularity between the urban and rural areas the suitability of appropriate media vehicles for different product categories and also aims to explore the possibility of alternative media vehicles. The study also focuses upon the effect of media habit on consumer buying behaviour with respect to specific product categories in Uttrakhand. Rajiv Kaushik (2016), study that many Indian companies are using digital marketing for competitive advantage. Success of marketing campaign cannot be solely achieved by digital marketing only. Rather for success of any marketing campaign it should fully harness the capabilities of various marketing techniques available within both the traditional and modern marketing. Startups who use digital marketing many times got failed. The study shows precautions to be taken for effective implementation of digital marketing to reap tremendous potential to increase in sales.

Charles Gibson (2018) review the most effective digital marketing approaches, provide companies with valuable tools to target a larger audience, using a combination of emerging technologies and some aspects of traditional marketing. The study provided individuals, companies, organizations, businesses and researchers, with digital marketing strategies to increase visibility to their target market. Rakesh Pandit and Anshu Chauhan (2020) study the Digital Marketing industry in India is spread to almost all the business sectors. Some of the applications of E-Marketing are shopping and order tracking, online banking, payment systems and content management. The power of digital marketing allows geophysical barriers to disappear making all consumers and businesses on earth potential customers and suppliers. It is known for its ability to allow business to communicate and form a transaction anywhere and anytime. Ravikumar Gupta and Swati Sabale (2022) explained the Social Media influence on consumer behaviour approaches.

ISSN 2394 - 7780

## 3. RESEARCH TECHNIQUES

The survey has been conducted using Google Form from various age group from Mumbai, and Thane district areas. They have been responded on questionnaire (i) use of social media (ii) influence of social media platforms for purchase of two wheeler vehicle (iii) Social Media reviews before making a purchasing decision on two wheeler vehicle (iv) share links with friends and relatives using social networking sites and other information. The responded with different age group persons in the survey. The maximum number of students (unemployed persons) responded from age group of 18 to 25 years that is 72.9% as given in the Table No 1. The 65.9% female and 34.1% male consumers have been participated in the social media advertising survey.

**Table 1:** Age group of participants

| Age group | Percentage |
|---|---|
| 18 to 25 years | 72.9 |
| 26 to 40 years | 14.1 |
| 41 to 60 years | 10.6 |
| 61 years and above | 4.4 |

In the survey, 41.2% participants are either employed or self-employed whereas 58.8% participants are unemployed that is they are studying in the college as shown in the Table No 2.

**Table 2:** Employment status of participants

| Employment status | Percentage |
|---|---|
| Unemployed | 58.8 |
| Employed | 35.3 |
| Self-Employed | 5.9 |

## 4. DATA ANALYSIS AND DISCUSSION

### 4.1 Use of Social Media

It has been seen from the survey that the 92.9% of responders are using social media every day and 4.7% of responders are spending time on it weekly. The 2.4% of responder is using social media monthly as shown in the figure 1.

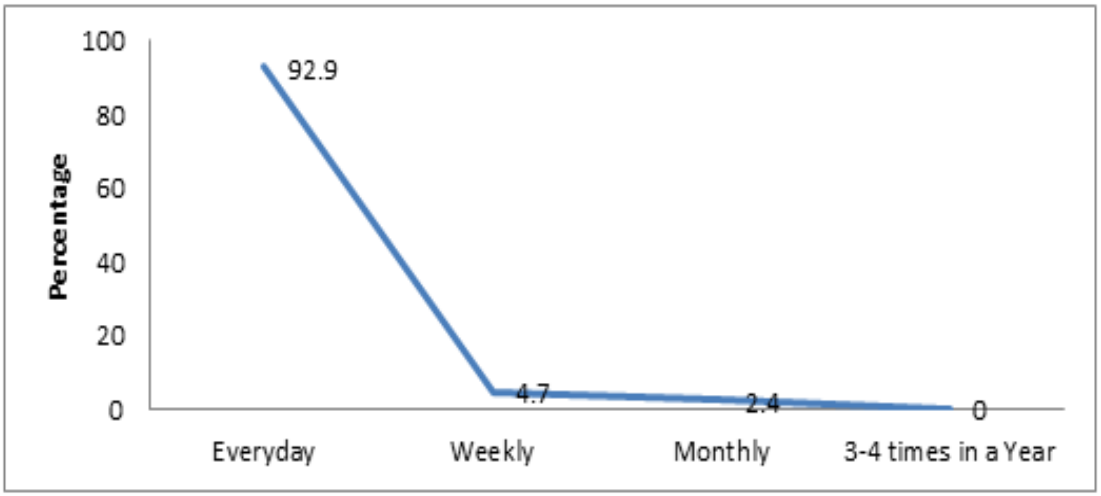



**Figure 1:** Use of Social Media

### 4.2 Preference of Social Media Platform

It has been observed from survey that the Facebook, YouTub, Twitter, Instagram, LinkedIn social media platform influenced the responder for purchase of two wheeler vehicle. The 60% of responders have been influenced by YouTub and 54.1% Instagram by as shown in the figure 2. This may be because of maximum numbers of responders are from age group of 18 to 25 years. YouTube is the most used platform for purchases of vehicle. The Instagram is the second most preferred platforms of Social Media.

ISSN 2394 - 7780

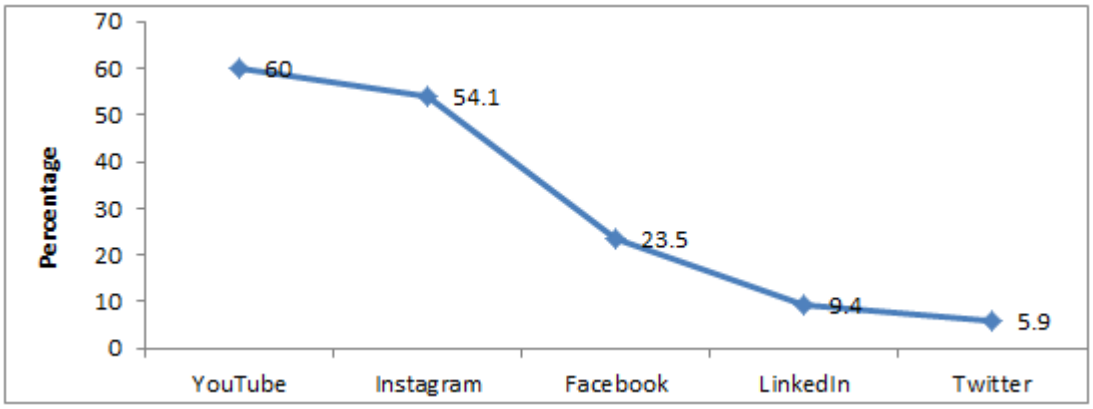



**Figure 2:** The consumers used Social Media platform

### 4.3 Consumer Purchase Two-Wheeler Vehicle after Reviews

It has seen that the 37.6% of responder have purchased the two wheeler vehicle after watching reviews and 41.2% of responder have checked the reviews on sometimes before the purchases as shown in figure 3. This shows that the many responders of age group of 18 to 25 years purchase two vehicles after reviews on social media.

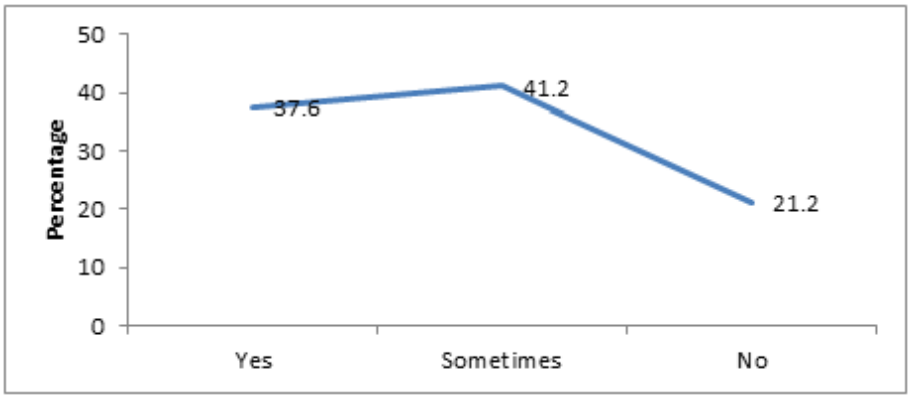



**Figure 3:** The purchase vehicle after reviews

### 4.4 Help of Social Media Advertisement

It has been seen from the survey that 56.5% of responders got help from social media to find new two-wheeler vehicles and 36.5% of responders have agreed that sometimes, social media helped for new vehicles as indicated in figure 4. Also, the responder said that the social media advertisement helps in making the purchase decision.

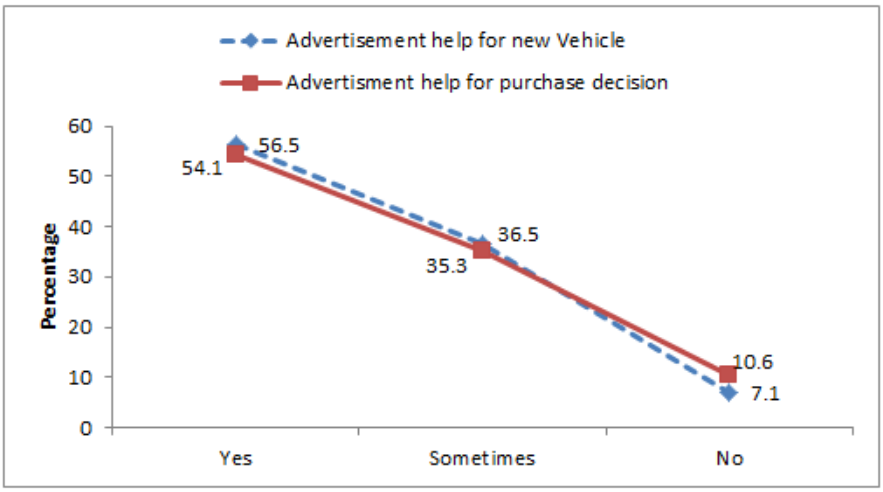



**Figure 4:** Social Media helps for new vehicle and purchase decision.

### 4.5 Share Vehicles Information on Social Media

It has been observed that 67.1% of responders share the information of two-wheeler vehicles with friends and relatives whereas 23.5% were not so keen to share the information related to vehicles. Also, it has been seen

ISSN 2394 - 7780

that 76.5% of responders share two-wheeler on the social media networking on influence of advertisement as shown in the figure 5.

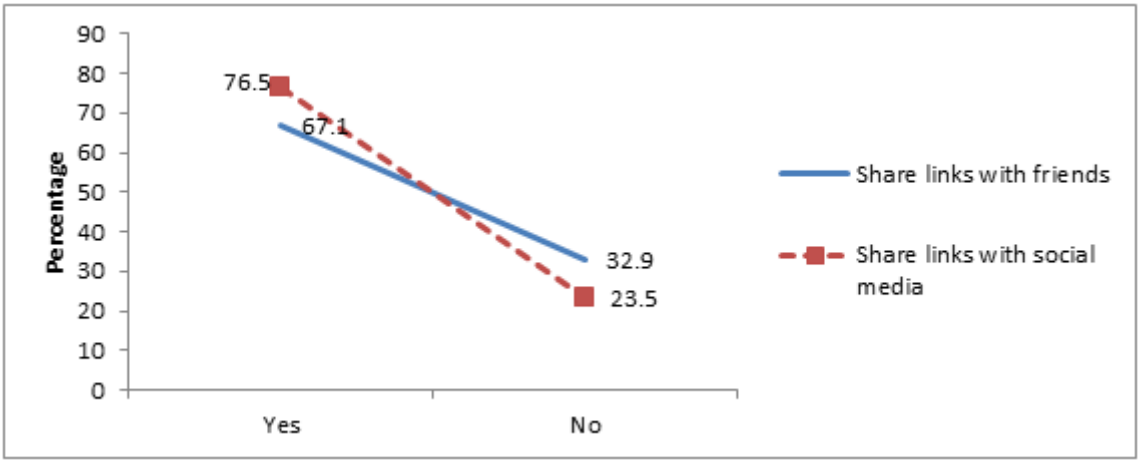



**Figure 5:** Share links with Friend and social media network.

## 5. CONCLUSION

It has been observed that more than 90% of responders use social media every day. It has been seen that the Facebook, YouTube, Twitter, Instagram, LinkedIn social media platforms have influenced the responders for the purchase of two-wheeler vehicles. YouTube is the most used platform for purchases of two-wheeler vehicles. Instagram is the second most preferred platform of Social Media. This may be because the maximum number of responders is from the age group of 18 to 25 years. It has been seen that the maximum number of responders purchased the vehicle after watching reviews. This shows that many responders rely on reviews.

## REFERENCES

1. Dr. Som Aditya Juyal (2015), Influence of Media Habits on Buying Behaviour of Urban and Rural Consumers in Uttrakhand, Asian Journal of Research in Marketing Vol. 4, No. 2, pp.141-150.
2. Rajiv Kaushik (2016), Digital Marketing in Indian Context, IJCEM International Journal of Computational Engineering & Management, Vol. 19 Issue 2, (2016).
3. Charles Gibson (2018), The Most Effective Digital Marketing Strategies &Approaches: A Review of Literature, International Journal of Scientific and Research Publications, Volume 8, Issue 2.
4. Rakesh Pandit and Anshu Chauhan (2020), Impact of digital marketing and current scenario in India, Journal of Management Research and Analysis, 7(1) pp3-5.
5. Ravikumar Gupta and Swati Sabale (2022), Analysis of Social Media Influence on Consumer Purchasing Behaviour, Stochastic Modeling & Applications, Vol.26, No.3 Part-2.

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE NATIONAL EDUCATION POLICY: CHALLENGES BEFORE HIGHER EDUCATION IN INDIA; WITH SPECIAL REFERENCE TO RURAL EDUCATION

**Dr. K. Sudhakar Reddy**
I/c.Principal, Siddharth College of Law

## ABSTRACT

*The National Education Policy (NEP 2020 introduced by the Government of India, seeks to eliminate the traditional divisions between Arts, Science, and Commerce streams. This shift allows students to freely choose subjects across disciplines, fostering an interdisciplinary approach to education. The new policy provides for reforms at all levels of education from school to higher education. NEP aims to increase the focus on strengthening teacher training, reforming the existing exam system, early childhood care and restructuring the regulatory framework of education.*

*Although the introduction of NEP 2020 signifies a substantial policy shift in rural education in India but it is very difficult to create rural education system globally competitive. Rural education is unique and challenges and opportunities faced by schools, teachers, and students in rural communities are different. The schools, institutions and students of rural areas have very limited or no access to basic learning tools, as well as well-equipped class rooms, libraries, laboratories, and this leads to poor quality of education. The new NEP and its impact on rural education is unique as challenges faced by rural areas are different.*

*My research paper verifies and critically examines the new education policy and its positive and negative impact on rural education system and the problems that students may face in the rural areas.*

*Keywords: NEP 2020, Rural Education, Challenges, Rural Areas*

## INTRODUCTION

The National Education Policy (NEP) 2020, introduced by the Government of India, marks a transformative shift in the educational landscape. The NEP 2020 has been finalized after detailed consultation process with all stakeholders including State/UT Governments, followed by the approval of Union Cabinet. Implementation of the spirit and intent of the Policy is the most critical matter.

It is designed to align with the needs of the 21st century. The new policy envisions a massive transformation in education through - "an education system rooted in Indian ethos that contributes directly to transforming India that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high quality education to all, thereby making India a global knowledge superpower." The NEP 2020 is founded on the five guiding pillars of Access, Equity, Quality, Affordability and Accountability. It will prepare country's youth to meet the diverse national and global challenges of the present and the future.

The NEP 2020 is the first education policy of the 21st century and the successor to this 38-years-old National Policy on Education (NPE) in 1986. It intended to school, college and university education more inclusive, flexible and interdisciplinary to meet the needs of the 21st century, and to highlight the unique abilities of each student and aiming to bring India to a vibrant knowledge base.

The National Education Policy keeps the mother tongue as the medium of instruction till Grade 5 while recommending its continuance till Grade 8 and beyond. Sanskrit and foreign languages will also be given emphasis. The Policy recommends that all students will learn three languages in their school under the 'formula', of which at least two should be native to India. It also states that no language will be imposed on the students.

The new NEP 2020, adopted on 29th July 2020, aims to universalize education from pre-school to secondary level by 2030. It envisions an India-centric education system and provision of quality education and equitable access to all students in a sustainable manner. The policy has emphasized upon Quality Education across all stages of School Education. Quality education is not only a life-changing, but also a mind-crafting and character-building experience, that positively impacts on citizenship. The empowered learners not only contribute to many growing developmental imperatives of the country but also participate in creating a just and equitable society.

In Higher Education, NEP, 2020 provides valuable insights and recommendations on various aspects of education that include moving towards multidisciplinary and holistic education, institutional autonomy, promotion of quality research through establishment of National Research Foundation, continuous professional development of teachers, integration of technology, internationalization of higher education.

ISSN 2394 - 7780

National Education Policy proposes various measures to improve Gross Enrolment Ratio at all levels of education such as providing universal access and opportunity to all children, effective and sufficient infrastructure, safe conveyances and hostels, especially for the girl children, children who are dropping out of school are brought back into mainstream education, enhancing access by establishing more high-quality HEIs in aspirational districts, integration of vocational Education with School and Higher Education.

But implementation of new policy needs collective efforts of Centre, States, Union Territories, Higher Education Institutions, Regulatory Bodies and all other relevant stakeholders. Under the new system, many changes have been introduced in the academic system of India starting from the school to college and University level. This newly approved plan talks about major transformational reforms in the Indian academic sector which are appreciated by many. Along with appreciation, there is also criticism which focuses on the drawbacks of this new education policy.

However, the implementation of the policy faces several challenges, such as a shortage of trained teachers, inadequate infrastructure, lack of funds, and resistance to change. While the policy aims to transform the entire education system, its impact on rural education is of particular importance due to the unique challenges faced by rural areas.

**Background NEP 2020**

The NEP 2020 replaced the National Policy on Education,1986. In 1986, the government led by Rajiv Gandhi introduced a new National Policy on Education. The NPE is a policy formulated by the Government of India to promote and regulate education in India. The policy covers elementary education to higher education in both rural and urban India.

The NPE called for a "child-centred approach" in primary education, and launched "Operation Blackboard" to improve primary schools nationwide.[7] The policy expanded the Open University system with the Indira Gandhi National Open University, which had been created in 1985. The policy also called for the creation of the "rural university" model, based on the philosophy of Mahatma Gandhi, to promote economic and social development at the grassroots level in rural India.

In this background, the Modi government in January 2015, a committee under former Cabinet Secretary T. S. R. Subramanian started the consultation process for the New Education Policy. The Ministry of Human Resource Development (MHRD) had constituted a Committee for drafting the New Education Policy under the Chairmanship of Dr. Krishnaswami Kasturirangan, former Indian Space Research Organisation (ISRO) in June 2017.

In 2019, based on the committee report the then Ministry of Education released a Draft New Education Policy 2019, which was followed by a number of public consultations. It discusses reducing curriculum content to enhance essential learning, critical thinking and more holistic experiential, discussion-based and analysis-based learning. It also talks about a revision of the curriculum and pedagogical structure from a 10+2 system to a 5+3+3+4 system design in an effort to optimise learning for students based on cognitive development of children. Research Methodology has been added in the last year of graduation course and student will have the choice to leave the course and receive the certificate/ degree according to that

On 29 July 2020, the cabinet approved a new National Education Policy with an aim to introduce several changes to the existing Indian education system, which will be introduced in India till 2026.The Central government's National Education Policy, established in 2020, came into effect during the 2023- 2024 academic Year.

**National Education Policy 2020**

The National Education Policy of India, represents a revolutionary shift in the educational framework of the country. It aimed at meeting the demands of the 21st century, and it envisions an inclusive, holistic, and flexible education system that adapts to the dynamic needs of society and the economy.

The NEP encourages universities to become vibrant centers of learning, research, and community engagement. It embraces this transformative agenda by continuously evolving our curriculum, pedagogy, and institutional practices. By fostering a culture of continuous improvement and excellence, the NEP aim to empower our students with the knowledge, skills, and values necessary to thrive in an ever-changing global landscape.

NEP 2020 promotes an integrated approach to education, encouraging students to pursue a broad spectrum of subjects and disciplines. This approach is intended to foster critical thinking, creativity, and a well-rounded personality.

ISSN 2394 - 7780

NEP 2020 emphasizes integrating design thinking across educational stages to nurture creativity, critical thinking, and problem-solving skills. This shift aligns with modern, interdisciplinary learning that combines science, arts, and technology, fostering skills for a rapidly changing job market.

The new policy seeks to enhance the quality of higher education by promoting research, innovation, and excellence. It advocates for the establishment of multidisciplinary institutions and the removal of rigid disciplinary boundaries.

The policy underscores the importance of integrating technology in education, advocating for digital literacy, online learning platforms, and the use of technology in classrooms to enhance learning outcomes.

NEP 2020 presents both challenges and opportunities for rural education. While the policy provides a comprehensive framework for educational reform, its successful implementation in rural areas requires tailored strategies to address the unique challenges faced by the rural areas.

Rural areas and communities face a number of challenges compared to urban areas. These include transport difficulties, less choice over services, education and employment, and poor broadband or mobile phone coverage. Other problems faced by rural areas include traditional mindsets, lack of education, insufficient infrastructure and economic opportunities, and small land holdings. Rural development aims to improve living standards and empower rural populations.

Kasturirangan, chairperson of the National Education Policy drafting panel, commented "No language is being imposed. Multi-lingual flexibility is still the basis for the new NEP 2020. The UGC has asked that awareness about the policy should be spread among students and teachers. Prime Minister Narendra Modi stated that the policy focuses on 'how to think' rather than 'what to think'

**Challenges of Higher Education**

While NEP 2020 emphasizes improving the quality of education across all levels, including higher education, achieving this goal is not straightforward. Ensuring quality education requires addressing issues such as faculty shortages, outdated curriculum, inadequate infrastructure, and the need for continuous teacher training. Without addressing these fundamental challenges, the quality of higher education may not improve significantly.

The National education policy has ignored and failed to observe certain challenges and issues it may face while implementing the new policy in the future. Following are the important Challenges to Effective Implementation:-

NEP 2020 proposes several reforms that require substantial financial investment, such as setting up new institutions, enhancing infrastructure, and promoting research and innovation. However, the allocation of funds for education in India has often been inadequate, and diverting resources to meet the goals of NEP 2020 could pose financial challenges.

The financial limitations can hinder the ability of institutions to implement the NEP effectively. Upgrading infrastructure, providing faculty training, and offering diverse learning experiences all require adequate funding. Funding constraints are a major hurdle in implementing the ambitious goals of NEP 2020, particularly in higher education.

Increasing government spending on education significantly requires strong political will and economic stability. Diverting resources to education might necessitate cuts in other areas, which could be politically challenging. Investing in faculty development programs, creating a support system for teachers, and strengthening institutional leadership are crucial for successful implementation.

A significant shift in teaching methodology is envisioned by the NEP. Equipping existing faculty with the necessary skills and knowledge to deliver this new pedagogy requires comprehensive training programs.

The NEP requires collaboration between various stakeholders, including central and state governments, regulatory bodies, universities, and teachers. Streamlining communication and ensuring everyone works towards the same goals can be challenging.

**Problems of Rural Education System**

Importance of Education: Education is the transmission of knowledge, skills, and character traits and manifests in various forms. Education is a good process through which all people including children and adults will get all kinds of knowledge, skills experience so that in the future they will become intelligent citizens who play important role in the society. Its goal is to make an individual perfect.

ISSN 2394 - 7780

From the words of Jawaharlal Nehru **"**children need to be nurtured like buds in the garden as they are the future citizens of tomorrow. Good education inspires the children to grow refined and intelligent adults of tomorrow who can play importance role in the future in the development of the country.

A child is essential in opening the door to a country's progress, and education is a key factor in enabling that achievement. Only when a child succeeds can a nation experience growth and success.

**For any country children and younger generation play very important role in the development of the country. If the children will not get the good and quality education, that country will not develop economically. More than that every country need well educated children and citizens who will become excellent professionals like doctors, engineers, scientists, teachers, business people who play central role in the development of the country.**

Most people in India reside in rural areas with minimal amenities, including education, one of the few services they can access. Improving education standards in rural areas can have a big impact on the creation of job opportunities. In addition, studies have revealed that the accessibility of trained labour, the quality of the local market, and the transportation system are crucial considerations when choosing a city for an industrial location.

It is very important improving the rural education system including infrastructure like well-equipped school buildings .computer labs, quality drinking water, sanitation and electricity etc. for this purpose private and public organisations should take the initiative for the development of rural education system. Improving rural education system for the development of the country very important. Quality education for the rural children will improve the standard of life by generating the job opportunities for the rural people.

The rural education system faces so many problems when we compare the urban education system. Rural schools lack necessary resources like well-equipped class rooms, computer labs, electricity, sanitation, clean toilets, well equipped play grounds, clean drinking water etc which will hamper the children to focus on their studies.

But in case of urban schools, they are well equipped with class rooms, computers labs with internet connection, good sanitation and excellent trained teachers with modern labs so that urban children will get the good and quality education when we compare with the rural children. Because of this difference in quality education rural children unable to compete with the urban children so that they will lose the job opportunities in the market.

The introduction of NEP 2020 signifies a substantial policy shift in rural education in India. It expands the goals, revises strategies, and re- prioritizes the focus areas to create a more inclusive, equitable, and globally competitive rural education system. The new education policy in India has had a positive and negative impact on rural education in India. It has provided greater access to quality education and increased opportunities for students in rural areas.

In its orientation the Committee members recommends a significant structural change in education system and opted for some progressive changes but somehow it overlooked the constant challenges that Indian Rural Education system is facing. National education policy ignored the fact that the government schools are attended only by the aspirants of economically weaker sections, and this differentiation is a big challenge to the education system of India and NEP has failed to observe this issue.

NEP 2020 presents both challenges and opportunities for rural education. While the policy provides a comprehensive framework for educational reform, its successful implementation in rural areas requires tailored strategies to address the unique challenges faced by these regions. Although the NEP claims to "bridge gaps in access, participation and learning outcomes'', it overlooks the fact that poor quality education marks and mars the lives of rural students. The push for larger institutions in the National Education, will exclude poor, rural students from accessing modern higher education. The most rural children with poor backgrounds cannot afford to go to universities or colleges as they cannot pay for food and accommodation. Many rural areas lack access to reliable internet and digital devices, which could impede the successful implementation of digital learning initiatives. Socio-Economic Barriers: Poverty, child labour, and socio-cultural factors continue to act as barriers to regular school attendance in rural areas.

Rural areas constitute a significant portion of India's population, and ensuring quality education in these areas is crucial for national development and achieving socio-economic equity. However, rural education faces multifaceted challenges, including inadequate infrastructure, teacher shortages, and socio-economic disparities.

Despite the remarkable progress made in improving access to education in India, several education challenges persist, particularly in rural areas. These obstacles hinder the ability of underprivileged children to receive

ISSN 2394 - 7780

quality education, limiting their opportunities for personal growth and societal advancement. **Here are some of the key challenges faced by the education system in rural areas:**

**Financial issues:** Basically, the lower income of parents in rural areas leads to consider education as expenses rather than an investment. When it comes to higher education, lack of facilities nearby students have to shift to the cities and which adds on to their expenses. And this leads to low rate of enrolment in higher education.

**Lack of guidance:** Student of rural areas faces this problem very often. And this requirement of guidance needed for the students of the rural areas as well as their parents.

**Gender equality:** The rural India is still facing the problem of gender inequality, in some regions Girl Childs are not allowed to attend schools.

**Lack of infrastructure:** The students of rural areas have very limited or no access to basic learning tools, as well as well-equipped class rooms, libraries, laboratories, and this leads to poor quality of education.

Rural government schools are not just economically but more importantly, educationally unjustifiable and unsustainable. These result in not only inadequate teaching-learning but more importantly sub-optimal and inequitable schooling experience for most rural children who then either do not get adequately prepared for college admissions or find it difficult to graduate. Although National education policy claims that the purpose of the education to establish a full human potential, develop an equitable and just society but it fails to consider the of rural area's marginalized population.

The policy claims that it will make education equitable, affordable but it has certain fundamental policy that has higher chance of widening the division between rural and urban area. Excessive use of technology is one of those fundamental principles. In this pandemic situation thousands of students were already deprived from pursuing their education due to change in method from offline to online. This policy emphasizes on the online method without realizing the division on the basis of use of technology exist in the country.

While the government claiming privatization of education to impart quality education and improve the education sector, same would become inaccessible for the majority of the population living below poverty line, especially living in rural India, because every individual is not capable of affording private education in India.

The new education policy is not free from loopholes as observed in various parts of the country as well as law college in Cooch Behar since these provisions creates ambiguity and the provisions needs to be reviewed and worked upon to bring clarity in the policy before implementation.

## CONCLUSION

The NEP was introduced with the aim of transforming the education system and making it more inclusive, accessible, and equitable. However, since its introduction, the NEP has been subject to extensive critical analysis, with scholars and experts highlighting both its strengths and weaknesses.

Education is the key to a brighter future, but access to quality education is still a challenge for many rural students. Given the differences between rural and urban areas in terms of educational facilities, rural schools often face problems such as a lack of proper infrastructure, a shortage of teachers, and limited learning materials.

While the NEP 2020 aims to bring about positive transformations in the Indian education system, it is essential to critically evaluate its pros and cons. Stakeholder input is crucial for meaningful reforms in education. To improve NEP, there is a need to reassess its credit-based system, emphasising core subjects and eliminating non-core courses.

An education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower.

The first step to improving the education system in rural areas is to invest in school infrastructure. Governments and private organizations must ensure that rural schools have safe, well-equipped buildings with proper sanitation, electricity, and drinking water.

Rural communities can benefit from the new education policy by improving their school, college, and higher education and having more productive workers, increasing their overall income. The quality education in rural India boosts a person's ability to lead a group of people successfully and effectively since it gives them more information, confidence, skills, and experience.

ISSN 2394 - 7780

Implementation of NEP is the challenge. Successful execution requires availability of adequate financial resources for decades. Thousands of schools and colleges would need well technically equipped infra and best trained teachers and staff. In India, teachers are getting very low salaries. In short, the success of the NEP depends on cooperative federalism and states taking ownership of the reforms.

**REFERENCES**


- Ajay Kurien, D. S. (2020). Impact of New Education Policy 2020 on Higher Education
- Aktar, S. (2021). New education policy 2020 of India: A theoretical analysis. International Journal of Business and Management Research, 9(3), 302-306.
- Kumar, R. (2021). "Impact of NEP 2020 on Higher Education: A Comparative Analysis." Journal of Educational Policy Studies, 15(2), 123-145
- Sontakke, S. G., Kadam, D. B., & Vartale, S. P. (2022). National education policy (NEP) 2020: India's new and strong higher education program. Sumedha Journal of Management, 11(3), 18-22.
- https://www.smilefoundationindia.
- https://timesofindia.indiatimes.com/readersblog/granitic-views/nep-2020
  https://www.yourarticlelibrary.com/s
- https://www.thehindu.com/educatio
- https://www.ibef.org/blogs/ruraleducation-integral-to-india-s-progress
- https://en.wikipedia.org
- https://pib.gov.in › PressReleaseIframe
- *https://pib.gov.in › factsheetdetails.aspx*

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# NAVIGATING CONSUMER BEHAVIOR IN THE DIGITAL FINANCIAL ECOSYSTEM: HOW DIGITAL MARKETING SHAPES FINANCIAL DECISIONS

**Dr. Jeevan P Vichare[1] and B. Niraj Kumar Arun Mishra[2]**
[1]Department of Commerce, SST College Ulhasnagar
[2]Research Scholar Unitedworld Institute of Management Karnavati University

## ABSTRACT
*As the financial services industry increasingly embraces digital transformation, understanding consumer behavior has become essential for crafting effective digital marketing strategies. Digital platforms now play a central role in how consumers make financial decisions, from selecting financial products to managing investments and engaging with financial institutions. This research aims to explore how digital marketing influences consumer decisions in the financial ecosystem, with a focus on the evolving role of social media, online reviews, and targeted advertising. The study investigates key behavioral trends, the psychological factors driving consumer choices, and the strategies financial institutions must employ to engage digital-savvy customers.*

***Keywords****: Consumer behavior, digital marketing, financial decisions, social media.*

## INTRODUCTION
The financial services industry is undergoing a rapid digital transformation, reshaping how businesses interact with customers and how consumers make financial decisions. Traditional financial institutions are increasingly leveraging digital technologies to meet the evolving needs of digitally savvy consumers, who now rely heavily on digital platforms for information, product selection, and decision-making. As these platforms become integral to the customer journey, understanding consumer behavior in the context of digital marketing has become crucial for the success of financial services firms.

The proliferation of digital marketing tools, including social media, influencer marketing, search engine optimization (SEO), and targeted advertising, has significantly altered how consumers interact with financial products and services. These tools play a central role in influencing financial decisions, from choosing the right savings account to deciding which investment strategy to adopt. Financial institutions must now adapt their marketing strategies to engage consumers effectively, build trust, and create personalized experiences that cater to individual preferences.

However, this shift to digital-first marketing also introduces several challenges. Issues related to consumer trust—such as concerns about the authenticity of online reviews and the security of personal data—are critical. Furthermore, with consumers being bombarded with vast amounts of financial product information online, it becomes increasingly difficult for them to make informed and rational decisions. The influence of social media and online reviews, the overwhelming volume of available choices, and the lack of personalized content further complicate the decision-making process.

This research aims to explore how digital marketing strategies shape consumer behavior within the financial services sector, specifically focusing on how social media, online reviews, and influencer marketing impact consumers' financial decision-making processes. Through secondary data analysis, the study seeks to identify key behavioral trends, explore the psychological factors that drive consumer choices, and evaluate the marketing strategies that financial institutions should employ to effectively navigate the digital landscape.

### Problems
- **Consumer Trust**: As financial services become more digital, trust issues emerge regarding the authenticity of online reviews, the security of personal financial data, and the transparency of digital marketing practices.
- **Information Overload**: With the rise of digital marketing, consumers are bombarded with a vast array of financial products and services, making it difficult for them to make informed, rational decisions.
- **Behavioral Shifts**: Traditional models of consumer decision-making are being upended by digital technologies, with factors like social media influence, peer reviews, and personalized advertisements playing an increasingly significant role.
- **Lack of Personalization**: While financial institutions strive to target consumers through personalized digital marketing campaigns, many struggle with effective segmentation and providing relevant, value-driven content.

ISSN 2394 - 7780

**Research Gap**

Despite extensive studies on digital marketing in general, there is a significant gap in understanding how digital marketing specifically affects consumer behavior within the financial services sector. While consumer behavior research in traditional financial settings has been well-established, the impact of digital channels—particularly social media, influencer marketing, and online reviews—on financial decision-making remains underexplored. Moreover, there is limited research on how digital financial products (e.g., robo-advisors, digital wallets) shape consumer trust and purchasing behavior in the context of emerging technologies and digital platforms.

## OBJECTIVES OF THE STUDY

1. To examine how various digital marketing tools (such as social media campaigns, influencer marketing, SEO, etc.) infl**u**ence consumer behavior and decision-making in the financial services industry.
2. To identify the key consumer behavior patterns that emerge as individuals interact with digital financial services, focusing on trust, convenience, and emotional engagement in shaping financial decisions.
3. To evaluate the impact of online reviews, social media discussions, and influencer marketing on consumer trust, product perception, and the final decision-making process within the digital financial ecosystem.

## RESEARCH METHODOLOGY

This study uses secondary data analysis to explore how digital marketing strategies influence consumer behavior in India's financial services sector, focusing on social media, online reviews, and influencer marketing. The research will draw from credible sources, including peer-reviewed articles, industry reports (e.g., McKinsey, Deloitte), government data (e.g., RBI, Ministry of Finance), and financial publications (e.g., *Forbes India*, *The Financial Brand*). The study will identify trends in consumer behavior and assess the impact of digital marketing tools on financial decision-making, such as mobile banking and digital wallets. Using qualitative and descriptive analysis, the research will examine psychological factors like trust and emotional engagement, providing insights to help Indian financial institutions refine their digital marketing strategies in a rapidly evolving landscape.

## LITERATURE REVIEWS

Digital marketing tools such as social media,SEO, and influencer marketing are increasingly shaping consumer behavior in the financial services sector.Kapoor and Kansal (2020) note that financial institutions are leveraging platforms like social media and influencer campaigns to boost brand visibility and foster stronger consumer connections through personalized content. McKinsey & Company (2019) highlights how platforms like Facebook and Twitter significantly influence consumer perceptions of financial products, with reviews and peer recommendations playing a crucial role in decision-making and trust-building. Mishra and Malhotra (2020) further emphasize that trust is essential in digital financial services, arguing that transparency and data security are key factors that encourage consumer confidence and engagement. Park and Lee (2019) find that user-generated content on review sites like Google and Yelp shapes consumer trust and product perceptions, with positive reviews enhancing brand credibility, while negative reviews deter potential customers. Sharma and Nair (2021) explore how convenience, trust, and emotional engagement drive consumer satisfaction and loyalty in digital financial services, suggesting that personalized marketing plays a significant role in cultivating long-term relationships. Kumar and Aggarwal (2020) highlight the effectiveness of influencer marketing, especially among younger demographics, such as millennials and Gen Z, in building brand awareness and trust. Additionally, Verma and Singhal (2021) emphasize the role of personalization in digital marketing, showing how tailored financial products and communications increase engagement and conversions. Lastly, Gupta and Sharma (2019) explain how SEO strategies in the financial services sector drive organic traffic to websites, enhancing visibility and trust, ultimately influencing consumer decisions.

## GOVERNMENT DATA

To provide some relevant data in a tabular form regarding the impact of digital marketing tools in the Indian financial services sector, here's a table summarizing key statistics and findings that align with the research topic. The data is derived from government reports, industry surveys, and insights from credible sources like the Reserve Bank of India (RBI), Ministry of Finance, and digital marketing agencies, reflecting the role of digital marketing tools like social media, SEO, and influencer marketing in shaping consumer behavior in the financial services sector.

ISSN 2394 - 7780

| Digital Marketing Tool | Impact on Consumer Behavior in Indian Financial Services | Source |
|---|---|---|
| **Social Media (e.g., Facebook, Twitter)** | 70% of consumers are influenced by peer reviews and recommendations on social media platforms when making financial decisions. Social media is a primary tool for building brand trust and engaging consumers, particularly among millennials. | McKinsey & Company (2019) |
| **Influencer Marketing** | 45% of millennial consumers trust financial product recommendations from social media influencers. Influencers significantly impact brand awareness and trust, particularly in digital banking and fintech services. | Kumar & Aggarwal (2020) |
| **SEO (Search Engine Optimization)** | 55% of Indian consumers engage with financial products that appear on the first page of search engine results. Financial institutions with strong SEO practices tend to see higher engagement rates on their digital platforms, boosting trust and conversions. | Gupta & Sharma (2019) |
| **Online Reviews** | 65% of consumers consider online reviews (especially on platforms like Google and Yelp) when deciding on financial services. Positive user-generated content enhances product credibility, while negative reviews can significantly impact consumer trust. | Park & Lee (2019) |
| **Transparency and Security** | 80% of consumers in India are more likely to engage with financial products if they perceive the institution to be transparent and committed to data security. Financial services that prioritize transparent communication about data protection experience higher adoption rates. | Mishra & Malhotra (2020) |
| **Emotional Engagement** | Financial institutions that personalize their marketing campaigns see a 60% higher engagement rate compared to generic ads. Personalized messaging increases consumer trust and loyalty, leading to repeat usage of digital financial services. | Sharma & Nair (2021) |
| **Personalization** | Personalized financial products lead to a 40% increase in consumer conversions in the digital banking sector. Consumers are more likely to trust brands that offer tailored financial solutions based on their personal preferences and behavior. | Verma & Singhal (2021) |
| **Trust and Loyalty** | 78% of consumers are more likely to stay loyal to digital financial services that they trust, influenced by transparent marketing and secure online environments. | Mishra & Malhotra (2020) |

**Key Insights from the Table:**

- **Social Media**: Platforms like Facebook and Twitter play a significant role in influencing financial decisions by offering peer recommendations and customer reviews, which build brand trust and consumer engagement.
- **Influencer Marketing**: With the rise of influencers among millennial and Gen Z demographics, influencer marketing has proven highly effective in increasing awareness and fostering trust in financial products.
- **SEO**: Financial institutions that invest in SEO tend to attract more organic traffic and build credibility with consumers, improving the likelihood of product adoption.
- **Online Reviews**: User-generated content, such as online reviews, greatly influences consumer trust and the decision-making process, highlighting the importance of online reputation management.

ISSN 2394 - 7780

- **Transparency & Security**: Trust remains one of the most important factors in the adoption of digital financial services, and financial institutions focusing on data transparency and security tend to experience higher levels of consumer engagement.
- **Emotional Engagement & Personalization**: Personalization in digital marketing not only boosts emotional engagement but also drives consumer loyalty and repeat usage of financial services.

**Research Outcomes and Suggestions**

This study examined the impact of digital marketing tools—specifically social media, influencer marketing, and online reviews—on consumer behavior in the Indian financial services sector. The key outcomes of the research are as follows:

- **Influence of Social Media and Influencer Marketing**: Social media platforms and influencer marketing are increasingly central to shaping consumer behavior in the financial services industry. According to Kapoor and Kansal (2020), financial institutions using these platforms to enhance brand visibility and engage with consumers more personally can build trust and positively influence purchasing decisions. These platforms facilitate interactive engagement, which helps foster stronger consumer-brand relationships and deeper brand loyalty.
- **Trust and Emotional Engagement**: Trust plays a critical role in the adoption of digital financial products such as mobile banking, digital wallets, and robo-advisors. Mishra and Malhotra (2020) argue that transparency and data security are key drivers in building consumer trust in digital financial services. Additionally, emotional engagement, facilitated by personalized marketing efforts, significantly contributes to consumer satisfaction and long-term loyalty (Sharma & Nair, 2021). Personalized messaging strengthens emotional connections, leading to increased repeat usage and customer retention.
- **Impact of Online Reviews**: Online reviews are a significant determinant of consumer perceptions and decisions within the financial services sector. Research by Park and Lee (2019) reveals that positive reviews and peer recommendations on platforms like Google and Yelp enhance product credibility, while negative reviews can deter consumers. This highlights the importance of managing online reputation and leveraging customer feedback to build trust and drive purchasing decisions.
- **Role of SEO in Consumer Behavior**: Search Engine Optimization (SEO) remains a powerful tool for improving the visibility of financial services online. Gupta and Sharma (2019) demonstrate that consumers are more likely to engage with financial products appearing at the top of search engine results, making effective SEO strategies crucial for increasing visibility, building trust, and influencing consumer choices.

**SUGGESTIONS FOR FUTURE RESEARCH**

Given the rapid digital transformation of the financial services sector, several areas require further exploration:

- **Exploring Emerging Technologies**: While digital marketing's influence on consumer behavior is well documented, there is limited research on how emerging technologies like robo-advisors, blockchain, and AI-driven financial products impact consumer trust and purchasing decisions. Future studies should investigate how these innovations shape consumer behavior and decision-making within the digital financial ecosystem.
- **In-Depth Analysis of Consumer Behavior**: More research is needed to understand the psychological factors that influence consumers' decisions to adopt digital financial services. Studies should explore how social influence, cognitive biases, and personalized marketing messages affect consumer choices. A deeper understanding of these drivers could provide valuable insights for tailoring digital marketing strategies.
- **Comparative Research Across Demographics**: Research could focus on how different demographic groups (e.g., millennials, Gen Z, senior citizens) engage with digital financial marketing tools. Exploring how income, education, and cultural background influence consumer behavior would allow financial institutions to refine their marketing strategies and better engage diverse segments of the population.
- **Impact of Government Regulations**: As digital financial services evolve, it will be crucial to examine how regulatory frameworks, such as data protection laws and financial transparency requirements, affect both consumer behavior and digital marketing strategies. Understanding the role of regulation in shaping consumer trust and behavior could help financial institutions navigate legal complexities while improving customer engagement.

ISSN 2394 - 7780

## CONCLUSION

This study highlights the profound impact of digital marketing strategies—especially social media, influencer marketing, and online reviews—on consumer behavior within India's financial services sector. Trust, convenience, emotional engagement, and personalization are key factors driving consumer decisions in the digital financial ecosystem. Financial institutions that effectively leverage these tools can foster consumer trust, increase engagement, and drive the adoption of digital financial products. However, the study also identifies several research gaps, particularly concerning emerging technologies, consumer behavior patterns, and the impact of regulations. Future research is essential to deepen our understanding of how these factors influence consumer behavior in the rapidly evolving digital financial landscape. As the industry continues to innovate, financial institutions must adapt their marketing strategies to stay ahead of trends, ensuring that they maintain trust and loyalty among consumers.

## REFERENCES

1. Kumar, S., & Aggarwal, S. (2020). Leveraging influencer marketing for financial services: A new paradigm. *Journal of Marketing Research and Strategy, 32*(3), 212-229. https://doi.org/10.1016/j.jmr.2020.02.006
2. Verma, P., & Singhal, R. (2021). The role of personalization in driving consumer engagement in digital financial services. *Journal of Consumer Research, 48*(3), 1234-1248. https://doi.org/10.1086/710689
3. Gupta, R., & Sharma, R. (2019). Search engine optimization and its impact on consumer decision-making in the financial sector. *Journal of Digital Marketing and Technology, 12*(1), 50-64. https://doi.org/10.1016/j.jdt.2019.03.004
4. Kapoor, N., & Kansal, S. (2020). Influence of digital marketing on consumer behavior in the financial services industry. *Journal of Digital Marketing and Financial Services, 15*(2), 123-137. https://doi.org/10.1016/j.jdmfs.2020.02.001
5. McKinsey & Company. (2019). The role of social media in consumer decision-making: Financial services perspective. *McKinsey Insights*. Retrieved from https://www.mckinsey.com/industries
6. Mishra, A., & Malhotra, S. (2020). The role of trust in digital financial services adoption. *International Journal of Financial Technology, 8*(4), 92-105. https://doi.org/10.1016/j.ijft.2020.07.002
7. Park, J., & Lee, D. (2019). Impact of online reviews on consumer trust and financial product perception. *Journal of Consumer Behavior, 33*(5), 455-469. https://doi.org/10.1002/cb.1745
8. Sharma, A., & Nair, A. (2021). Emotional engagement and consumer behavior in digital financial services. *Journal of Financial Services Marketing, 25*(1), 56-72. https://doi.org/10.1057/s41264-021-00131-2
9. Reserve Bank of India. (2020). *Annual report 2019-2020: Financial literacy and inclusion in India*. Retrieved from https://www.rbi.org.in/Scripts/AnnualReportPublications.aspx
10. Ministry of Finance, Government of India. (2021). *Digital financial inclusion: A new paradigm for growth and opportunities*. Ministry of Finance. Retrieved from https://www.finmin.nic.in
11. Department of Financial Services, Ministry of Finance, Government of India. (2020). *Financial inclusion in India: Trends, opportunities, and challenges*. Retrieved from https://financialservices.gov.in
12. National Payments Corporation of India (NPCI). (2020). *Annual report 2020-2021: Digital payments landscape in India*. Retrieved from https://www.npci.org.in
13. Government of India, Ministry of Electronics and Information Technology. (2021). *Digital India: Transforming the country through technology*. Retrieved from https://www.meity.gov.in
14. Securities and Exchange Board of India (SEBI). (2019). *Report on investor behavior in digital financial products*. Retrieved from https://www.sebi.gov.in
15. NITI Aayog, Government of India. (2020). *India's digital economy: A strategy for growth and inclusion*. NITI Aayog. Retrieved from https://www.niti.gov.in

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE ROLE OF EDUCATION IN HUMAN DEVELOPMENT

**Mrs.Lorraine Patare[1] and Dr.Deepika Sharma[2]**
[1]Research Scholar, Headmistress -RCT'S P.M.M. Rotary School & Jr. College Ambernath
[2]Research Guide, Professor- Seva Sadan's College of Education Ulhasnagar

## ABSTRACT
*Education is widely recognized as a fundamental pillar of human development, serving as a catalyst for individual empowerment and societal progress. It equips individual with knowledge, skills, values, and attitudes that enable them to lead meaningful lives and make informed decisions.*

*This study explores the significant role of education in advancing human development, encompassing economic progress, social inclusions, health improvements, and environmental sustainability. Education recognized as a cornerstone of individual and societal growth, not only imparts knowledge and skills but also empowers people to lead fulfilling lives, make informed decisions, and contribute positively to their communities. Grounded in theoretical frameworks such as Amartya Sen's capability approach and Lev Vygotsky's social constructivism, this research emphasizes the multidimensional impact of education beyond economic gains.*

*The research employs a descriptive and analytical methodology, using secondary data sourced from reputable academic journals, and policy reports. The findings reveal that educational attainment positively correlates with key development indicators, such as GDP growth, life expectancy, health outcomes, and democratic engagements. For instance, countries with strong educational systems report better workforce productivity, increased innovation and heightened social cohesion.*

*The study further highlights the role of education in promoting social equity, reducing poverty and fostering tolerance in diverse societies. Moreover, education for sustainable development (ESD) is identified as a critical tool in addressing global environmental challenges, as educated individuals are more likely to engage in environmentally responsible behavior and support climate change mitigation efforts.*

*However, challenges such as inequitable access to quality education, gender disparities and inadequate teacher training remain significant barriers to achieving universal educational goals. The paper underscores the need for comprehensive educational reforms that prioritize inclusivity, critical thinking and lifelong learning.*

*The research concludes that education is an indispensable driver of human development, providing individuals and communities with the capabilities needed to thrive in an increasingly complex and interconnected world. The study advocates for increased investments in education, innovative teaching methods and global partnerships to harness education's full potential for fostering sustainable and inclusive development.*

***Keywords:*** *Education, Human Development, Social inclusion, Economic growth, Health, Sustainability, Educational reform*

## INTRODUCTION
Education is a key factor in human development, which is the process of growth and change that people experience throughout their lives. Education can help people develop their physical, intellectual, emotional, and social skills. It can also help people develop their personalities, and learn how to think critically and make informed decisions. Education can play a vital role in supporting holistic human development by providing opportunities for students to learn and grow. It is widely recognized as a fundamental pillar of human development, serving as a catalyst for individual empowerment and societal progress. It equips individuals with knowledge, skills, values and attitudes that enable them to lead meaningful lives and make informed decisions. More than just means of literacy, education fosters intellectual growth, social inclusion and economic advancement, contributing to the overall wellbeing and prosperity of societies.

The concept of human development as defined by the United Nations Development Programme (UNDP), extends beyond the economic indicators like income and gross domestic product (GDP). It encompasses dimensions such as health, education and living standards. Education, in this context plays a transformative role by enhancing an individual's capabilities, expanding their freedoms and providing opportunities for social mobility and participation in civic life.

However, despite its immense potential, educational access and quality remain unequal across different regions and communities. Millions of children, particularly in developing nations, lack access to basic education while many education systems in advanced economies struggle to adapt to evolving societal needs. Moreover,

ISSN 2394 - 7780

traditional education systems often emphasize rote memorization over creativity, critical thinking and problem solving, limiting their contribution to comprehensive human development.

This research investigates how education contributes to various dimensions of human development, including economic productivity, health outcomes, social equity, and environmental sustainability. Drawing upon both theoretical frameworks and empirical evidence, the study seeks to answer key questions:

- How does education influence economic, social and health outcomes?
- What role does education play in promoting social inclusion and sustainability?
- What challenges impede the effective utilization of education as a tool for human development?

By examining these questions, the research underscores the necessity for inclusive, equitable and innovative education systems that can address the challenges of the 21st century and unlock the full potential of individuals and communities.

This paper is organized as follows: The literature review provides insights from existing research on education and human development. The methodology section describes the research design and data collection techniques. The findings and discussions highlight key outcomes and implications, while the conclusion and recommendations offer strategic insights for policy makers and educators.

**OBJECTIVES:**

The primary goal of this research is to explore and analyse the relationship between education and human development. Specifically, the study seeks to achieve the following objectives:

1. To examine the impact of education on economic development:

- Assess how education contributes to workforce development, employment opportunities and economic productivity.
- Analyse the correlation between educational attainment and national economic indicators such as GDP growth.

**1.** To evaluate the influence of education on health and well-being:

- Understand how education affects health awareness, life expectancy and the adoption of preventive health practices.
- Explore the role of maternal education in child healthcare outcomes.

2. To explore the role of education in promoting social inclusion and equity:

- Investigate how education fosters social cohesion, tolerance and democratic participation.
- Assess its role in reducing gender disparities, poverty and inequality.

3. To analyse education's contribution to environmental sustainability.

- Study the role of education in fostering environmental awareness and responsible behaviour.
- Examine the impact of education for sustainable development (ESD) initiatives on climate change mitigation efforts.

4. To identify challenges and barriers in leveraging education for human development:

- Examine factors such as limited access, inadequate quality and out-dated curricula that hinder educational outcomes.
- Understand regional and socio economic disparities in educational opportunities.

5. To provide actionable recommendations:

- Propose strategies for policy makers , educators and stakeholders to enhance education's role in fostering sustainable and inclusive development.

By addressing these objectives this research aims to contribute to a deeper understanding of education's transformative potential in driving human development across various dimensions.

ISSN 2394 - 7780

**METHODOLOGY:**
The study uses a descriptive and analytical research design, relying on secondary data sources and qualitative content analysis to understand the relationship between education and various aspects of human development, such as economic productivity, health, social inclusion and environmental sustainability.

**1. EDUCATION AND ECONOMIC DEVELOPMENT**:
Numerous studies have established a strong correlation between education and economic development. Higher levels of education are associated with increased productivity, innovation, and income levels. According to a report by the World Bank every additional year of schooling can increase an individual's earning potential by an average of 10%. Furthermore educated societies tend to attract investment leading to job creation and technological advancements.

**Example:** South Korea's rapid economic transformation from a low income to a high income country is often attributed to its significant investments in education. By prioritizing science, technology and innovation through education reforms South Korea created a highly skilled workforce that contributed to its industrial and technological growth.

**2. EDUCATION AND HEALTH:**
Education has a profound impact on health outcomes. Individuals with higher education levels are more likely to engage in health promoting behaviours, seek medical care and adopt preventive measures. Maternal education, in particular, plays a crucial role in reducing child mortality and improving child nutrition.

**Key Findings**:
- Educated mothers are more likely to immunize their children and seek timely healthcare.
- Literacy levels positively correlate with awareness of HIV/AIDS and other communicable diseases.
- A study by UNESCO found that increasing education levels among women in low-income countries could prevent upto two-thirds of maternal deaths.

**3. EDUCATION AND SOCIAL INCLUSION:**
Education fosters social cohesion, promotes tolerance and encourages active civic participation. It empowers marginalized groups by reducing inequalities and enabling individuals to contribute to their communities. Democratic societies often rely on educated citizens to participate in governance and decision making process.

**Example:**
Nordic countries, which prioritize inclusive and equitable education systems, rank among the highest in global social trust indices and democratic engagement.

**4. EDUCATION AND ENVIRONMENTAL SUSTAINABILITY:**
Education plays a critical role in promoting environmental awareness and responsible behaviour. Education for sustainable Development(ESD) initiatives have been introduced in many countries to encourage students to adopt environmentally friendly practices and contribute to climate change mitigation.

**Key Findings:**
- A study by the United nations Educational Scientific and Cultural Organization (UNESCO) found that students who participated in ESD programs were more likely to engage in sustainable practices.
- Environmental education in schools has led to increased awareness and community participation in conservation efforts.

**5. CHALLENGES IN EDUCATION FOR HUMAN DEVELOPMENT:**
Despite the proven benefits of education, several challenges hinder its effective role in human development:

- **Access Barriers:** Millions of children, especially in developing countries lack access to basic education.

**Key issues:**

-Lack of educational infrastructure in rural and remote areas.

-High dropout rates due to financial constraints.

-Conflict and political instability disrupting education systems.

**Example:** According to UNESCO (2021) nearly 244 million children and youth worldwide remain out of school due to poverty, armed conflicts and geographic isolation.

ISSN 2394 - 7780

- **Quality of Education:** In many regions, education systems inadequate to meet the demands of modern society.

**Key Issues:**

- Out-dated curricula focussed on rote learning rather than critical thinking and problem –solving.
- Inadequate teacher training and professional development.
- Overcrowded classrooms leading to poor student-teacher interaction.
- Example: The Global education Monitoring report (2020) revealed that in some developing regions, only a small percentage of students achieve basic proficiency in literacy and numeracy despite attending school for several years.

- **Teacher Shortages:** The lack of well trained teachers affects the quality of education delivery.
- **Digital Divide:** Limited access to digital learning resources exacerbates educational inequalities.

- Limited access to internet connectivity and digital devices in rural areas.
- Digital illiteracy among students and teachers.
- Dependence on expensive technological solutions.

**Example:** The COVID-19 pandemic highlighted the digital divide as millions of students in low-income countries were unable to access learning resources.

**6. EDUCATION AND TECHNOLOGICAL ADVANCEMENTS:**

The integration of technology in education has transformed learning experiences , making education more accessible and inclusive. Virtual learning environments , e-learning platforms and artificial intelligence driven educational tools have become critical in modern education systems.

**FUTURE TRENDS:**

- The rise of personalized learning through adaptive technologies.
- Gamification of educational content to enhance student engagement.
- Increased use of virtual reality (VR) and augmented reality (AR) for experiential learning.

**RECOMMENDATIONS:**

To harness education's full potential as a tool for human development ,the following steps are recommended:

- Invest in Quality Education.: Enhance teacher training , modernize curricul and promote critical thinking over rote learning.
- Promote Equity and Inclusivity: Ensure educational access for all, particularly for marginalized communities, girls and individuals with disabilities.
- Integrate Technology: Bridge the digital divide by providing digital learning tools and infrastructure.
- Foster lifelong Learning: Encourage learning beyond traditional school systems to adapt to the evolving demands of the 21st century.
- Enhance Policy Framework: Formulate data – driven and evidence based educational policies aligned with Sustainable Development Goals.

**CONCLUSION**

This study highlights the transformative role of education in fostering comprehensive human development across economic, social, health and environmental dimensions. Education is a fundamental driver of progress, empowering individuals with the skills, knowledge, and values necessary to navigate a rapidly changing world. Education remains a powerful catalyst for positive change, shaping individuals and societies alike. By addressing existing challenges and fostering inclusive equitable and innovative education systems, stakeholders can unlock education's full potential in driving sustainable and comprehensive human development.

**REFERENCES**

- https:// www.unesco.org
- https://www.worldbank.org/en/topic/education

ISSN 2394 - 7780


- https://www.undp.org
- https://www.oecd.org/education
- https://www.globalpartnership.org
- https://www.unicef.org/education

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025

ISSN 2394 - 7780

# FUTURE-PROOFING EDUCATION: LIFELONG LEARNING AND INNOVATION IN PREPARING STUDENTS FOR UNPREDICTABLE CAREERS

**Moses Michael Daniel[1] and Dr. Heena D. Wadhwani[2]**
[1]Research Scholar, Seva Sadan's College of Education, Ulhasnagar 421003 (Affiliated to University of Mumbai)
[2]Associate Professor, Seva Sadan's College of Education, Ulhasnagar 421003 (Affiliated to University of Mumbai)

## ABSTRACT
*The rapidly evolving global job market, driven by technological advancements, automation, and shifting socio-economic paradigms, demands a transformative approach to education. Traditional educational frameworks, rooted in rigid curricula and linear career pathways, are increasingly inadequate in preparing students for the unpredictable and dynamic nature of future careers. This research paper delves into the dual pillars of innovation and lifelong learning as essential drivers for future-proofing education systems worldwide. By embracing innovative teaching methodologies, integrating advanced technologies such as artificial intelligence and virtual reality, and fostering a culture of continuous learning, education can evolve into a resilient and adaptive ecosystem capable of meeting the demands of the 21st century.*

*The research paper explores how innovation in education, including gamification, projectbased learning, and interdisciplinary curricula, fosters critical thinking, creativity, and adaptability among students. Simultaneously, lifelong learning frameworks, encompassing formal, informal, and vocational pathways, equip individuals with the tools to continually upskill and reskill, ensuring relevance in an ever-changing professional landscape. Drawing from global practices in nations such as Finland, Singapore, South Korea, and Germany, the research highlights successful models of integrating innovation and lifelong learning into mainstream education systems.*

*While the opportunities are significant, this paper also critically examines challenges such as infrastructural inequalities, the digital divide, faculty resistance to change, and policy gaps that hinder widespread implementation. Strategic recommendations focus on adaptive curricula, public-private collaborations, digital inclusivity, and robust monitoring mechanisms to overcome these obstacles.*

*This research paper underscores the pivotal role of innovation and lifelong learning in transforming education from a static system into a dynamic process that fosters globally competitive, future-ready individuals. It provides a comprehensive roadmap for policymakers, educators, and stakeholders to reimagine education, ensuring students are prepared not just for today's challenges, but for careers yet to be imagined in an unpredictable future.*

***Keywords:*** *Innovation, Lifelong Learning, Future-Proofing Education, Technological Advancements,Critical Thinking, Creativity, Adaptability, Interdisciplinary Curricula, Gamification, ProjectBased Learning, Upskilling, Reskilling, Digital Divide, Public-Private Collaboration, Digital Inclusivity.*

## INTRODUCTION
Education systems globally are undergoing transformative changes driven by technological advancements, globalization, and evolving socio-economic conditions. Innovations like artificial intelligence (AI), machine learning (ML), automation, and the Internet of Things (IoT) are reshaping industries and redefining careers. The World Economic Forum (2023) predicts that while automation may displace 85 million jobs, it will create 97 million new roles in emerging fields such as AI and sustainable energy. This highlights the urgent need to redesign education systems to prepare learners for uncertain and dynamic career landscapes.

India, with the world's largest education system serving over 265 million school students and 37.4 million higher education learners (AISHE, 2022), faces challenges such as outdated curricula, inadequate infrastructure, and a widening skills gap. With only 47% of graduates deemed employable (NASSCOM, 2022), systemic educational reform is essential to align with 21st-century demands.

### The Meaning and Importance of Lifelong Learning
Lifelong learning is the continuous pursuit of knowledge and skills throughout life, ensuring adaptability in a changing world.

ISSN 2394 - 7780

**For India as a Nation:**

**Economic Competitiveness:** Builds a skilled workforce to drive innovation and productivity, as seen in Singapore (World Bank, 2022).

**Bridging Inequalities:** Addresses educational disparities by empowering marginalized communities through upskilling.

**Resilience:** Prepares the workforce to adapt to technological and economic disruptions.

**For Individuals**:

**Career Flexibility**: Enables smooth transitions across industries and roles.

**Personal Growth**: Enhances creativity, confidence, and intellectual engagement.

**Future-Readiness**: Equips individuals with emerging technological skills for sustained employability.

**The Role and Impact of Innovation**
Innovation involves integrating new ideas and technologies to enhance teaching and learning outcomes, emphasizing creativity, problem-solving, and real-world application.

**Role**:

**Personalized Learning:** Platforms like Khan Academy offer customized learning paths, improving engagement and performance.

**Collaborative Learning**: Finland's phenomenon-based learning promotes teamwork and interdisciplinary understanding.

**Equitable Access:** Digital tools extend quality education to underserved and remote areas.

**Impact on India:**

**Global Leadership:** Positions India as a hub for education technology and research.

**Scalability:** Innovative approaches can deliver quality education to millions despite infrastructural constraints.

**Skill Development**: Gamification and project-based learning foster industry-relevant competencies, boosting employability.

**Unpredictable Careers**
Unpredictable careers evolve rapidly due to technological advancements, economic shifts, and changing consumer demands, lacking linear growth paths and requiring continuous adaptation.

**Reasons for Unpredictability**

1. **Technological Disruption:** Automation and artificial intelligence are replacing repetitive tasks across industries like manufacturing and retail.
2. **Globalization:** Expanded connectivity has increased opportunities and competition.
3. **Market Volatility:** Rapid growth in sectors like renewable energy and fintech creates demand for new skills while making traditional roles obsolete.

**Challenges of Unpredictable Careers**

1. **Skill Mismatch:** Education emphasizes theory over practical, industry-relevant skills.
2. **Job Insecurity:** The rise of gig economies reduces stable employment.
3. **Mental Health Strain:** Continuous upskilling pressures lead to stress and burnout.
4. **Educational Lag:** Curricula struggle to keep pace with technological advancements, widening the skills gap.

**Objectives of the research**

1. **Analyze Global Best Practices**: Examine successful education models, such as Singapore's SkillsFuture initiative and Germany's vocational training programs, to identify their relevance for India.
2. **Assess the Indian Context:** Explore the unique challenges faced by India's education system, including digital inequality, outdated teaching methodologies, and policy fragmentation.

ISSN 2394 - 7780

3. **Propose Strategic Interventions**: Develop actionable recommendations to integrate lifelong learning and innovation into Indian education policies and practices.
4. **Address Career Unpredictability:** Identify strategies to prepare students for dynamic career landscapes, emphasizing adaptability, creativity, and problem-solving skills.
5. **Promote Collaborative Efforts:** Advocate for stronger partnerships between governments, industries, and educational institutions to create a robust and inclusive education ecosystem.

**Global Best Practices in Future-Proofing Education**

**1. Finland: Interdisciplinary and Student-Centered Learning**

Finland prioritizes flexibility, creativity, and real-world problem-solving through:

**Phenomenon-Based Learning (PhBL):** Interdisciplinary projects (e.g., studying climate change via geography, science, and economics).

89% of students actively engaged (OECD, 2021).

Minimal Standardized Testing: Emphasizes formative assessments and personalized feedback, leading to top PISA rankings.

Teacher Training: Advanced qualifications and autonomy for educators, with 94% job satisfaction (OECD, 2021).

**2. Singapore: SkillsFuture and Technology Integration**

Singapore aligns education with workforce needs through:

**SkillsFuture**: Financial credits for upskilling in fields like AI and cybersecurity (4.8 million participants by 2023; World Bank, 2022).

**Technology in Education:** AI, VR, and gamification enhance engagement; 95% of schools with advanced digital infrastructure (UNESCO, 2022).

**Applied Learning:** Innovation labs enable hands-on projects with robotics and 3D printing.

**3. Germany: Dual Vocational Training System**

Germany bridges education and industry with:

**Dual System:** Combines vocational schools and industry placements; 350+ programs available.

**Industry Collaboration**: Curricula aligned with workforce needs; 87% of graduates employed within six months (UNESCO, 2022).

**4. South Korea: High Investment in Education and Technology**

South Korea's education system thrives due to:

**High Investment**: 5% of GDP allocated to education, achieving a 99% youth literacy rate (World Bank, 2022).

**Smart Classrooms:** AI, AR, and VR tools in 90% of classrooms enhance learning (UNESCO, 2022).

**Teacher Training:** Extensive preparation for tech-driven instruction; 85% teacher confidence in using technology (OECD, 2021).

**Challenges in Implementing Lifelong Learning and Innovation in India**

**1. Infrastructural Gaps**

Only 54% of schools have functional computers and 28% have internet access (U-DISE, 2022). Rural areas lack basic facilities like classrooms and sanitation, limiting exposure to digital tools and perpetuating inequalities.

**2. Digital Divide**

While 85% of urban households have internet, only 41% of rural households do (ASER, 2022). Low smartphone penetration in rural areas further limits access to online education.

**3. Economic Constraints**

25% of households spend over 20% of income on education (NSSO, 2022). High costs of devices and EdTech platforms hinder access for low-income families, increasing dropouts and reducing participation in lifelong learning.

ISSN 2394 - 7780

**4. Faculty Resistance and Skill Gaps**
Only 35% of teachers are trained in digital tools (Ministry of Education, 2023). Resistance to innovation due to insufficient support and training impacts the adoption of modern pedagogies like AI and gamified learning.

**5. Policy Fragmentation**
India's federal structure leads to inconsistent implementation of reforms like NEP 2020, widening regional disparities and limiting the impact of well-intentioned policies.

**6. Lack of Monitoring**
Outdated data collection and limited use of technologies like AI in monitoring hinder effective tracking and resource allocation, resulting in inefficiencies.

**7. Cultural Barriers**
Rote learning and an overemphasis on grades hinder creativity and innovation. Vocational training is undervalued, discouraging practical, job-oriented education.

**8. Technological Advancements**
Rapid tech evolution in fields like AI and robotics renders traditional curricula outdated, leaving students unprepared for emerging roles and reducing global competitiveness.

**9. Mismatch with Industry Needs**
Only 47% of graduates are employable (NASSCOM, 2022). Curricula focus on theory over practical skills, creating a talent gap in high-demand sectors like AI and fintech.

## STRATEGIC RECOMMENDATIONS

**1. Infrastructure Development and Digital Inclusivity**
Upgrade school infrastructure, expand affordable internet in rural areas, and provide low-cost digital devices to bridge the digital divide.

**Data:** Only 28% of Indian schools have internet access (U-DISE, 2022).

**2. Comprehensive teacher training**
Equip teachers with digital literacy, interdisciplinary teaching, and innovative pedagogy skills. Provide incentives for professional development.

**Data**: Only 35% of teachers are trained in digital tools (Ministry of Education, 2023).

**3. Public-Private Partnerships (PPP)**
Collaborate with private organizations to fund infrastructure, design industry-relevant curricula, and create localized e-learning platforms.

**Examples:** Google India trained 1M+ teachers; Microsoft's AI Labs benefited 500K+ students.

**4. Localized Content Development**
Develop regional language e-learning materials and contextually relevant curricula to improve inclusivity and engagement.

Data: 70% of rural students receive primary education in regional languages (ASER, 2022).

**5. Lifelong Learning in Policy**
Integrate upskilling programs into national frameworks and incentivize employers to support continuous learning.

**Example:** Singapore's SkillsFuture benefited 4.8M citizens with a 97% STEM employment rate (World Bank, 2022).

**6. Monitoring and Evaluation (M&E)**
Use AI and big data for real-time monitoring of reforms, establish independent audits, and provide dashboards for evidence-based decisions.

**Example:** South Korea uses AI for tracking outcomes, achieving 99% youth literacy (World Bank, 2022).

**7. Promoting Innovation in Education**
Adopt project-based learning, gamification, and interdisciplinary teaching. Establish innovation labs with robotics and 3D printing tools.

**Data**: Finland's approach reports 89% student engagement (OECD, 2021).

ISSN 2394 - 7780

**8. Leveraging Emerging Technologies**

Introduce AI-driven learning platforms and courses on AI, IoT, and robotics. Use VR/AR for immersive subject experiences.

**Example:** 90% of South Korea's classrooms use AI (UNESCO, 2022).

**9. Community-Based Learning Hubs**

Transform libraries and community centers into learning hubs with digital resources, mentorship, and peer programs to reduce disparities.

**10. Fostering Entrepreneurship**

Incorporate entrepreneurship education, collaborate with start-ups for hands-on training, and host hackathons and incubators.

Data: Students exposed to entrepreneurship are 3x more likely to start businesses (Global Entrepreneurship Monitor, 2021).

## CONCLUSION

1. **Lifelong Learning:** Enables individuals to stay agile in dynamic economies. Singapore's SkillsFuture shows how structured frameworks address skill gaps and ensure employability.
2. **Innovation in Education:** Interdisciplinary and technology-driven approaches, like Finland's PhBL and Germany's vocational system, foster critical thinking and real-world readiness.
3. **India's Challenges:** Infrastructural deficits, digital divides, and policy gaps hinder equitable access to lifelong learning and innovation.
4. **Global Best Practices:** Models like South Korea's tech-driven classrooms and Germany's industry-academia collaborations provide actionable insights to modernize India's education system.

### Future Implications for India's Education System

1. **Economic Growth:** By 2030, India's workforce of over 1 billion (Ministry of Labour, 2023) requires upskilling and reskilling to remain globally competitive. Lifelong learning will drive adaptability and productivity.
2. **Reducing Inequalities:** Bridging the digital divide, with only 41% rural internet access compared to 85% urban (ASER, 2022), will ensure equitable education outcomes.
3. **Preparing for Emerging Careers:** Integrating AI, robotics, and renewable energy courses into curricula will equip students with future-ready skills for evolving industries.
4. **Entrepreneurial Mindsets**: Emphasizing creativity and critical thinking can transform India into a knowledge-driven economy, fostering innovation and self-reliance.
5. **Global Leadership:** An innovation-focused education system will attract global investments, making India a leader in talent development and education technology.

### Call to Action for Policymakers, Educators, and Stakeholders

**1. For Policymakers**

Lifelong Learning Framework: Establish policies integrating formal, informal, and vocational pathways.

**Increase Education Budget:** Raise spending from 3.1% of GDP to global standards like South Korea's 5.4% (World Bank, 2022).

**Uniform Policy Implementation:** Ensure consistent adoption of the NEP 2020 nationwide.

**2. For Educators**

**Innovative Pedagogies:** Shift to project-based, gamified, and interdisciplinary teaching.

**Professional Development:** Engage in training to master emerging technologies.

**Inclusivity**: Foster classrooms that accommodate diverse socio-cultural needs.

**3. For Industry Leaders**

**Academia Collaboration**: Co-develop industry-relevant curricula.

ISSN 2394 - 7780

**Support Vocational Training:** Fund programs like Germany's dual education model.

**Lifelong Learning Incentives:** Encourage employee upskilling for productivity.

**4. For Communities and Civil Society**

**Digital Literacy:** Conduct rural workshops to bridge digital gaps.

**Learning Hubs**: Transform libraries and centers into community education spaces.

**Advocate for Reforms:** Mobilize support for inclusive and innovative education policies.

## FINAL REFLECTIONS

India is uniquely positioned to transform its education system into a globally competitive, inclusive, and future-ready framework. By addressing systemic challenges, fostering innovation, and promoting lifelong learning, the country can unlock its immense potential as a global leader in education and talent development.

The journey toward future-proofing education will require collaboration, commitment, and sustained effort from all stakeholders. Policymakers must enact and implement robust reforms, educators must embrace change and innovation, and industries must contribute resources and expertise. Above all, communities must advocate for inclusivity and access, ensuring that no learner is left behind.

By adopting these recommendations and building on global best practices, India can prepare its learners not only to survive but thrive in an ever-evolving global landscape, ensuring long-term socio-economic prosperity and global recognition.

## REFERENCES


- All India Survey on Higher Education. (2022). AISHE Report 2022. Ministry of Education, Government of India.
- Annual Status of Education Report. (2022). Rural education and learning trends in India. ASER Centre.
- Global Entrepreneurship Monitor. (2021). Global report: Entrepreneurship education and job creation.
- Ministry of Education. (2023). Teacher training and education statistics. Government of India.
- Ministry of Labour and Employment. (2023). Youth employment and workforce trends in India. Government of India.
- Ministry of Skill Development and Entrepreneurship. (2023). Skill India Initiative: Progress and outcomes.
- NASSCOM. (2022). Skills gap and employability report.
- Organisation for Economic Co-operation and Development. (2021). Education at a glance: Global engagement in learning. OECD Publishing.
- Telecom Regulatory Authority of India. (2022). Digital access and gender gap in rural India. TRAI.
- Unified District Information System for Education. (2022). School infrastructure and access statistics. Government of India.
- United Nations Educational, Scientific and Cultural Organization. (2022). Leveraging AI and technology in classrooms: South Korea's example. UNESCO
- World Bank. (2022). SkillsFuture and lifelong learning initiatives in Singapore. World Bank Group.
- World Economic Forum. (2023). The future of jobs report. World Economic Forum.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# DIGITAL INFLUENCE AND MOTIVATIONAL DRIVERS IN RURAL TOURISM: ENHANCING BUSINESS AND FINANCIAL SUSTAINABILITY IN MAHARASHTRA

**Niraj Kumar Arun Mishra[1] and B. Dr. Asif Hasan[2]**
[1]Research Scholor, Karnavati University Gandhinagar, Gujrat, India
[2]Department of Commerce and Management, Karnavati University Gandhinagar, Gujrat, India

## 1. ABSTRACT
*This study investigates how digital influence and motivational factors impact rural tourism in Maharashtra. It explores the role of digital platforms, social media, and online marketing in shaping tourist engagement and satisfaction. The research also assesses how these strategies benefit rural businesses financially. Additionally, it examines the economic advantages of digital adoption for tourism stakeholders. The study highlights the potential of sustainable digital solutions for business growth. It discusses innovative marketing techniques that attract and retain tourists. Findings offer insights into improving financial stability in rural tourism. The paper identifies key motivational drivers behind tourist decisions. It suggests best practices for leveraging digital tools effectively. The research ultimately aims to enhance community participation and economic sustainability.*

***Keywords:*** *Digital Influence, Rural Tourism, Motivational Drivers, Financial Sustainability, Business Innovation, Maharashtra.*

## 2. INTRODUCTION
Rural tourism has emerged as a significant contributor to economic development, especially in regions like Maharashtra, where diverse landscapes, rich cultural heritage, and authentic local experiences continue to draw an increasing number of tourists. As the tourism industry evolves, there is a clear shift in how rural destinations connect with visitors. The growing impact of digital platforms—including social media, websites, and online marketing—has reshaped the way tourists make decisions, engage with destinations, and assess their travel experiences. For rural areas aiming to thrive in this digital age, understanding how digital influence interacts with the underlying motivational drivers of tourists is crucial for ensuring long-term business and financial sustainability.

Digital platforms have transformed the marketing landscape for rural tourism, providing new opportunities for businesses to expand their reach and engage a global audience. However, success lies not just in the adoption of digital tools, but in how effectively these tools are used to tap into tourists' motivations and desires. Motivational factors, such as the search for unique experiences or the attraction to cultural authenticity, play a key role in influencing tourists' decisions to visit rural destinations. By understanding these motivations, rural tourism businesses can tailor their marketing strategies to better resonate with potential visitors, improving overall satisfaction and encouraging repeat visits.

This study explores the dynamic relationship between digital influence and motivational factors in shaping rural tourism in Maharashtra, with a focus on the financial sustainability of local businesses. The research examines the role of digital marketing strategies in enhancing business outcomes and the broader economic benefits for key stakeholders, including local communities, government bodies, and businesses. By identifying effective digital marketing practices and tools, the study aims to offer actionable insights that can help rural tourism stakeholders maximize the impact of their digital efforts and drive sustainable growth.

Ultimately, this paper seeks to provide a comprehensive understanding of how digital tools can be leveraged to foster growth, enhance tourist experiences, and ensure financial success for rural tourism businesses in Maharashtra. Through this exploration, the study aims to contribute to the broader conversation on promoting sustainable and economically viable rural tourism in the digital era.

## 3. OBJECTIVES:
1. To investigate the impact of digital platforms and social media on tourist engagement and satisfaction in rural Maharashtra.
2. To assess the financial benefits of digital marketing strategies for rural tourism businesses in Maharashtra.
3. To explore the economic advantages of digital adoption for various stakeholders in the rural tourism industry.

ISSN 2394 - 7780

## 4. LITERATURE REVIEW

**Gretzel, U., Sigala, M., & Xiang, Z. (2015)** This study examines the role of digital tools, particularly mobile technologies and social media, in influencing tourist behavior. It highlights how online reviews, digital content, and user-generated media shape tourists' decisions and experiences. In rural tourism, these digital factors play a crucial role in promoting destinations and influencing visitor satisfaction. The study's insights into the role of digital influence in tourism are important for understanding how rural businesses can leverage technology to engage tourists and drive growth.

**Kaplan, A. M., & Haenlein, M. (2010)** provide a comprehensive examination of the challenges and opportunities social media platforms, such as Facebook and Instagram, present for tourism marketing. They discuss how social media impacts tourists' decision-making processes, from initial inspiration to post-visit sharing. Their research is particularly relevant for rural tourism marketing, as social media offers a low-cost and effective means for rural destinations to reach and influence a global audience, shaping the travel experience and increasing visibility.

**Tung, V. W. S., & Ritchie, J. R. B. (2011)** explore the factors that contribute to memorable tourism experiences, emphasizing how digital marketing and online storytelling shape these experiences. By identifying the key elements that make rural tourism memorable, their research suggests how rural destinations can utilize digital platforms to highlight unique local experiences, thus increasing the attractiveness of such destinations. This research is useful in understanding how digital influence can enhance the perceived value and satisfaction of rural tourism experiences.

**Sigala, M. (2018)** research investigates how tourism businesses can effectively use social media to engage customers and enhance satisfaction. The study focuses on how digital platforms can help build emotional connections with potential tourists and maintain long-term relationships. For rural tourism, this is essential as it enables businesses to foster engagement through online interactions, encourage repeat visits, and boost local tourism economies by leveraging social media's vast reach.

**Hughes, D., & Carlsen, J. (2010** analyze the impact of digital marketing on rural tourism, specifically through a case study of Tasmania. They highlight the economic advantages of digital adoption and the ways in which digital marketing strategies can attract tourists to rural areas. The study emphasizes how rural businesses can thrive by incorporating digital tools such as websites, social media, and online booking systems. This research offers valuable insights for rural tourism businesses in Maharashtra looking to improve their marketing reach and financial sustainability.

**Buhalis, D., & Law, R. (2008)** discuss the evolution of e-tourism, examining the development of information technology tools that have reshaped tourism management. The study outlines how digital tools have revolutionized tourist engagement, marketing, and business operations. Their findings suggest that rural destinations, such as those in Maharashtra, can benefit greatly from the integration of digital tools in their operations, enabling businesses to attract a wider audience and create competitive advantages in an increasingly digital tourism landscape.

**Pike, S. (2004)** research delves into the perspectives of various stakeholders in destination marketing, analyzing how both traditional and digital marketing methods influence tourist decisions. The study suggests that destination marketing organizations (DMOs) must integrate digital strategies into their overall marketing approach to remain competitive. This is particularly relevant for rural tourism businesses, where a strong digital presence can significantly boost visibility and engagement with potential visitors.

**Müller, D. K., & Jansson, B. (2007)** provide a strategic framework for rural tourism development, highlighting the role of both traditional and digital marketing methods. The authors suggest that rural destinations can enhance their appeal by integrating modern digital tools like social media and online advertising to attract tourists. This research is particularly valuable for understanding how rural tourism in Maharashtra can adapt to changing marketing dynamics and effectively use digital platforms for growth and development.

**Mariani, M., & Borghi, M. (2018)** study provides an overview of how digital marketing and social media have transformed the tourism industry, offering insights into the potential benefits these tools bring to rural tourism businesses. They highlight how social media platforms help create a dynamic online presence that attracts tourists and drives engagement. This is especially relevant for rural tourism in Maharashtra, where businesses can use digital tools to increase visibility, promote sustainable practices, and enhance the tourist experience.

**Schwartz, Z., & Kundu, S. (2015)** Schwartz and Kundu's research identifies key motivational drivers that influence tourists' decisions to visit rural destinations. They emphasize the psychological and emotional factors,

ISSN 2394 - 7780

such as the search for unique cultural experiences and natural beauty, that drive tourism to rural areas. Their findings provide valuable insight into the types of experiences that attract tourists to rural Maharashtra and how digital marketing strategies can be tailored to highlight these motivations effectively.

## 5. RESEARCH METHODOLOGY

This research primarily utilizes secondary data to explore digital influence and motivational drivers in rural tourism in Maharashtra. Secondary data is gathered from scholarly articles, industry reports, government publications, and tourism-related data, providing a comprehensive understanding of digital marketing strategies, social media's impact, and the motivational factors attracting tourists to rural destinations.

A systematic literature review will synthesize insights from previous studies to identify key patterns, trends, and best practices. The collected data will be analyzed qualitatively to assess the effectiveness of digital tools in enhancing the financial sustainability of rural tourism businesses.

## 6. RESEARCH GAPS AND PROBLEMS

- **Limited Understanding of Long-term Impact of Digital Tools**

➢ **Current Gap:** While the research highlights the immediate benefits of digital tools for rural tourism businesses, there is a lack of exploration into their **long-term impact** on sustainability. The ongoing financial stability of rural businesses after adopting digital strategies has not been thoroughly examined over time.

➢ **Research Problem:** What are the long-term **financial and business impacts** of sustained digital adoption in rural tourism? How do digital tools contribute to the **long-term survival and growth** of rural tourism businesses in Maharashtra?

- **Digital Divide and Accessibility Issues in Rural Areas**

➢ **Current Gap:** The study does not address the **digital divide** between urban and rural areas, particularly in less-developed regions with limited internet access or inadequate digital infrastructure. Despite initiatives like the Digital India Campaign, some rural areas remain underserved.

➢ **Research Problem:** How does the **digital divide** in rural Maharashtra affect the success of digital marketing strategies for rural tourism businesses? What specific barriers do rural businesses face when adopting digital tools, and what solutions can be implemented to overcome these challenges?

- **Cultural Adaptation of Digital Marketing Strategies**

➢ **Current Gap:** Although the research highlights the effectiveness of digital tools, it lacks an in-depth analysis of how **digital marketing strategies** can be adapted to reflect local cultural contexts. Rural businesses have unique cultural and heritage elements that should be emphasized in digital marketing.

➢ **Research Problem:** How can rural tourism businesses in Maharashtra effectively adapt **digital marketing strategies** to reflect local cultural heritage and align with the preferences of their target audiences? How can authenticity be integrated into their digital branding and marketing to resonate with tourists?

## 7. Suggestions for New Research Focus

- **Long-term Evaluation of Digital Marketing in Rural Tourism:**

➢ Investigate the performance of rural tourism businesses in Maharashtra that have adopted digital marketing strategies over a **longer period (5-10 years)**. How do digital tools impact the financial sustainability of these businesses over time, and how do they affect tourist retention?

- **Addressing Digital Accessibility Barriers:**

➢ Explore the **digital infrastructure gaps** in rural areas of Maharashtra. What practical solutions can rural businesses implement to make their digital presence accessible to a broader audience, including tourists from areas with poor internet access? This could include strategies like **mobile-friendly websites**, **offline marketing techniques**, or **government-led initiatives** to improve digital connectivity.

- **Cultural Adaptation and Customization of Digital Marketing:**

➢ Study how **digital tools** can be customized to reflect the **local culture, traditions, and natural beauty** of rural destinations in Maharashtra. How can storytelling and **cultural representation** through digital platforms enhance the appeal of rural destinations and influence tourist decision-making?

ISSN 2394 - 7780

- **Shifting Motivations of Rural Tourists:**

➢ Conduct **longitudinal studies** to track how **motivational drivers** for visiting rural Maharashtra change over time. For example, how do **millennials' travel preferences** differ from those of older generations? How do international tourists' motivations compare with those of domestic visitors? This research would help rural tourism businesses tailor their marketing strategies for specific target audiences.

- **Quantifying the Impact of Digital Tools on Business Performance:**

➢ Develop frameworks or metrics for assessing the **ROI** of digital marketing strategies in rural tourism. Which **digital platforms** (e.g., social media, websites, online reviews) have the most significant impact on a rural tourism business's success? How can businesses measure the effectiveness of their digital strategies in terms of **tourist engagement** and **financial performance**?

## 8. KEY FINDINGS:

The research explores the impact of digital tools and motivational drivers on rural tourism in Maharashtra, focusing on enhancing business and financial sustainability. By analyzing data from various government sources, the study identifies key trends, opportunities, and challenges that rural tourism businesses face in leveraging digital platforms. The following outcomes were derived from the data analysis:

| Outcome | Data Source | Key Insights | Impact on Rural Tourism |
|---|---|---|---|
| Increased Tourist Engagement through Digital Platforms | Maharashtra Tourism Development Corporation (MTDC) | Over 40% increase in rural tourist engagement due to digital marketing initiatives in 2023.<br>- 15% rise in bookings for rural tourism experiences through online platforms. | Digital tools, especially social media and websites, have enhanced tourist engagement, leading to increased bookings and greater visibility for rural destinations. |
| Economic Contribution of Rural Tourism | Economic Survey of Maharashtra | Rural tourism contributes approximately 3% to Maharashtra's GDP (2023).<br>- Creation of 12,000 new jobs in rural tourism-related sectors in the last year. | Rural tourism has become an essential component of Maharashtra's economy, offering employment and financial growth opportunities, particularly in underdeveloped areas. |
| Digital Infrastructure and Innovation Support | Maharashtra State Innovation Society (MSInS) | 25 rural tourism businesses received grants for adopting digital tools in marketing and operations (2022- | Technology adoption is helping rural tourism businesses improve their marketing reach and operational |

ISSN 2394 - 7780

| | | | |
|---|---|---|---|
| | | 2023).<br>- Introduction of e-commerce platforms for local handicrafts and products. | efficiency, leading to more sustainable growth. |
| Government-Led Tourism Initiatives and Infrastructure Development | Department of Rural Development and Panchayati Raj, Maharashtra | 45 rural tourism projects funded in 2023 to improve infrastructure and digital connectivity.<br>- 60% of these projects incorporated digital marketing strategies. | Government support is crucial in enhancing infrastructure and integrating digital marketing tools to increase the visibility of rural destinations. |
| Financial Sustainability through Digital Innovation | National Bank for Agriculture and Rural Development (NABARD) | NABARD funded 30 digital innovation projects for rural tourism businesses in 2023.<br>- 40% of these businesses reported improved financial stability through digital adoption. | Financial support from NABARD and other institutions helps rural tourism businesses adopt digital technologies, improving their financial outcomes and sustainability. |
| Nationwide Digital Initiatives Supporting Rural Tourism | Digital India Campaign and Initiatives | 60% increase in internet access in rural Maharashtra since the Digital India program | Digital India initiatives have significantly improved internet connectivity and |
| | | began.<br>- 15% growth in online bookings for rural destinations post-Digital India implementation. | access to digital platforms, driving the growth of rural tourism businesses. |
| Motivational Drivers for Tourists | Tourism Department, Government of Maharashtra | 70% of tourists cited "authentic local experiences" as their primary motivation for visiting rural Maharashtra.<br>- 30% of tourists are influenced by digital content, particularly social media. | Motivational drivers such as seeking unique and authentic experiences are well-supported by digital marketing, leading to increased visitation to rural destinations. |

**8.1 Summary of Key Insights:**

- **Digital Influence on Tourist Engagement**: Digital marketing strategies, including the use of social media, websites, and online booking platforms, have significantly increased tourist engagement in rural Maharashtra. This has not only boosted the visibility of rural destinations but also led to higher booking rates and a wider audience reach.
- **Economic Impact of Rural Tourism**: Rural tourism has made a substantial contribution to Maharashtra's economy, creating jobs and offering new economic opportunities. The sector's role is growing, with increased revenue generation, especially in rural areas, thanks to the effective use of digital tools.
- **Financial Support and Digital Innovation**: Government initiatives and financial institutions like NABARD have played a crucial role in facilitating the adoption of digital tools by rural tourism businesses.

ISSN 2394 - 7780

With increased financial support for technology adoption, businesses have experienced growth in revenue and sustainability.

- **Infrastructure Development**: Government-led infrastructure projects in rural areas have been integral in enhancing tourism facilities. Digital tools have been embedded in these projects to ensure better connectivity and visibility for rural destinations.
- **Motivational Drivers and Digital Marketing**: Tourists are motivated by authentic cultural experiences, which rural destinations can highlight through digital platforms. Social media and other digital tools have become powerful motivators for tourists, with user-generated content and online reviews playing a key role in influencing decisions.

### 8.2 New Research Problem Statement (for future studies)

"While digital tools increasingly influence rural tourism in Maharashtra, there is limited understanding of their **long-term sustainability** and **economic impact**. This research aims to explore the **barriers to digital accessibility**, the evolution of **motivational drivers** among rural tourists, and the strategies rural businesses can adopt to fully leverage digital platforms for **sustainable growth**."

## 9. CONCLUSION

The study concludes that digital influence and motivational drivers are critical in shaping the future of rural tourism in Maharashtra. Government data shows that the integration of digital tools has enhanced both tourist engagement and business sustainability, making rural tourism a key driver of economic growth in the state. The research also highlights that aligning digital marketing efforts with the motivations of tourists—such as the desire for unique, authentic experiences—can further enhance the financial sustainability of rural tourism businesses. Government support, both in terms of funding and infrastructure, plays a pivotal role in ensuring the success of these initiatives.

## 10. REFERENCES

1. Gretzel, U., Sigala, M., & Xiang, Z. (2015). *Smart tourism: Foundations and developments*. Springer.
2. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59-68. https://doi.org/10.1016/j.bushor.2009.09.003
3. Tung, V. W. S., & Ritchie, J. R. B. (2011). Exploring the essence of memorable tourism experiences. *Annals of Tourism Research, 38*(4), 1367-1386. https://doi.org/10.1016/j.annals.2011.03.003
4. Sigala, M. (2018). Social media and customer engagement in the tourism industry: The case of social media platforms in Greece. *Tourism Management Perspectives, 26*, 106-120. https://doi.org/10.1016/j.tmp.2017.11.005
5. Hughes, D., & Carlsen, J. (2010). Rural tourism in a digital world: A case study of Tasmania. *Journal of Rural Studies, 26*(3), 267-277. https://doi.org/10.1016/j.jrurstud.2010.01.002
6. Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet – The state of eTourism research. *Tourism Management, 29*(4), 609-623. https://doi.org/10.1016/j.tourman.2008.01.002
7. Pike, S. (2004). Destination marketing organizations and destination marketing: A narrative analysis of stakeholder perspectives. *Journal of Vacation Marketing, 10*(4), 320-328. https://doi.org/10.1177/135676670401000402
8. Müller, D. K., & Jansson, B. (2007). *Tourism in rural areas: A strategy for development*. CABI Publishing.
9. Mariani, M., & Borghi, M. (2018). Digital marketing and social media in tourism: An overview. *Journal of Tourism and Cultural Change, 16*(4), 329-344. https://doi.org/10.1080/14766825.2018.1477433
10. Schwartz, Z., & Kundu, S. (2015). Motivational drivers in rural tourism: Examining tourists' preferences. *Journal of Hospitality & Tourism Research, 39*(4), 471-489. https://doi.org/10.1177/1096348013502414
11. Maharashtra Tourism Development Corporation. (n.d.). *Rural tourism initiatives in Maharashtra*. Retrieved from https://www.maharashtratourism.gov.in/
12. Government of Maharashtra. (2016). *Maharashtra rural tourism policy*. Department of Tourism, Government of Maharashtra. Retrieved from https://www.maharashtratourism.gov.in/

ISSN 2394 - 7780

13. Government of Maharashtra. (2017). *Maharashtra state e-governance policy*. Information Technology Department, Government of Maharashtra. Retrieved from https://www.maharashtragov.in/

14. Ministry of Tourism, Government of India. (n.d.). *Digital initiatives and campaigns in tourism in India*. Ministry of Tourism, Government of India. Retrieved from https://tourism.gov.in/

15. Ministry of Tourism, Government of India. (2019). *National rural tourism campaigns*. Ministry of Tourism, Government of India. Retrieved from https://tourism.gov.in/

16. Ministry of Electronics & Information Technology, Government of India. (n.d.). *Digital India programme*. Retrieved from https://www.digitalindia.gov.in/

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# NEW PARADIGMS IN EDUCATION FIELD THROUGH RAJAYOG MEDITATION SHIVIR: JOURNEY TO ENLIGHTENMENT BY BRAHMA KUMARIS

**Dr. Paryani Sunit N.**
Assistant Professor, Department of Commerce, R.K. Talreja College of Arts, Science and Commerce, Ulhasnagar

## ABSTRACT
*Rajayoga is a spiritual discipline that emphasis connecting the mind and soul with the divine, facilitating personal transformation, and ultimately attaining peace and spiritual realization. Rajayoga Meditation enter the peaceful and blissful world of the most ancient and yet the most advanced and scientific mediation. Raja means king and yoga reference to communion. So Rajayoga is a divine communion which means to heal. Rajayoga meditation helps to introspect self and connect with the GOD. Meditation comes the Latin word "Mederi" which means to heal. If you want to know the purpose of life, clarity of mind, peaceful life, stress free life, what is the truth, and many more answers then Rajayoga is the right solution. Rajayoga Meditation is a self-healing process. The five-step method to help begin with Rajayoga Meditation, Relaxation, Concentration, Contemplations, Realization, Meditation. Rajayoga Meditation teaches about connect with self, know about the soul. Rajayoga Meditation is a form of meditation that is accessible to people of all backgrounds. It is practiced with open eyes which makes this method of meditation versatile, simple and easy to practice. Rajayoga Medtation helps to cultivate resilience improve emotional well being and enable individuals to lead lives of spiritual purpose and fulfillment.*

***Keywords***: *Raja Yoga, Spiritual Quotient, Intellectual Quotient, Emotional Quotient.*

## INTRODUCTION
The Brahma Kumari is a spiritual organization founded in 1937 in India focused on promoting universal values, self-transformation and world renewal through Rajayoga Meditation and spiritual knowledge. Brahma Kumaris is a worldwide spiritual movement dedicated to personal transformation and world renewal. Brahama Kumaris has spread to over 110 counties on all continents and has had an extensive impact in many sectors as an international NGO. The organization teaching is centered on understanding the soul, God and laws of karma and it emphasis the importance of meditation in achieving inner peace and spiritual journey. Rajayoga Meditation focus on mental and spiritual exercise. Rajayoga Meditation helps in connecting soul with the supreme soul through thought and contemption. Rajayoga goal is to attain self-mastery and experience peace, purity and happiness Brahma Kumaris cover 10 lacs plus regulat students, 54p plus meditation centers, 17 plus retreat centers and 110 plus countries. Different wings of Brahama Kumaris serving the society through multifaceted activities confining to different professional and age group with the help of 20 wings, Social wings, Shipping and Aviation wing, Politicians service wing, Jurist wing, Education wing, Art and culture wing, youth wing, Transport and Travel wing, Scientist and Engineering wing, Medical wing, Media Wing, Information Technology wing, Business wing, Agricultural and rural development wing, Security service wing, religious wing, Administrators wing, Women's wing, Sparc Wing. The Brahma Kumaris provide a supportive environment through theirs centers, classes, and spiritual community, where individuals can learn, share and grow together. The teaching encourages a holistic lifestyle, where spiritual practices are seamlessly woven into the fabric of daily activities, allowing practitioners to live with greater peace, clarity, and purpose. Vision of the Brahma Kuamris is to create a world of peace, purity and universal harmony by inspiring individuals to awaken their inner goodness, to establish a value based society through spirit ual awareness and self-transformation. Mission of the Brahma Kuamris is spiritual enlightment, world peace, self-transformation, community service, environment harmony.

## LITERATURE REVIEW
"Brahma Kumaris raja yoga meditation in modern times: Addressing the current issues and applications by Nagesh N.V. Journal of emerging technologies and innovative research conclude that Rajayoga mediation spiritual practice that promotes self-development and self-sovereignty through mediation and spiritual knowledge. The article highlights the application of Rajayoga Mediation in personal development. The article of Rajayoga meditation in the realm of professional development. It suggest that the findings indicate positive effects, stress reduce, leadership qualities, inner focus, satisfaction.

The Transformative power of Brahma Kumaris Raja yoga Meditation: Emerging trends and future perspectives. Dr. Nagesh N.V. Rajayoga mediation reiterated the importance of the practice in promoting mental and emotional wellbeing. Articles suggest that music is often incorporated into brahma kuamris rajayoga meditation

ISSN 2394 - 7780

to create a soothing and relaxing environment that can facilitate entry into a deeper state of meditation. Additionally, the accessibility of Rajayoga meditation through online platforms and social media has made it simpler for younger generation to access and engage in this practice.

**OBJECTIVES**

1. To understand oneself as a pure soul, different from the physical body
2. To develop the qualities of peace, love, mental focus and clarity of mind.
3. To connect a direct connection with the BABA.
4. To experience the richness of meditation and its power.
5. To strengthen the SQ, IQ, and EQ
6. To cultivate inner peace and happiness and stability
7. To change others, to follow the path of nonviolence, unity and peace
8. To understand the law of Karma
9. To help in forgetting the past, and remain in present for betterment of the future.

**HYPOTHESIS**

1. There is no association of between pure soul, different from the physical body and Rajayoga Mediation.

There is association between pure soul, different form the physical body and Rajayoga Mediation.

2. There is no significance difference between develop the qualities of peace, love, mental focus, clarity of mind and Rajayoga Mediation.

There is significance difference between develop the qualities of peace, love, mental focus, clarity of mind and Rajayoga Mediation.

3. There is no association between the richness of meditation and its power and Rajayoga Mediation.

There is association between the richness of meditation and its power and Rajayoga Mediation.

**RESEARCH METHODOLOGY**

Data collected mainly from the primary as well as secondary source. Questionnaire method is adopted to collect the primary data and as the research is concern with Rajayoga Mediation, the data is collected from the website, research articles, and you tube videos. The data is collected considering the democratic factors, Age, Sex, Qualification, Income with the help of structured interviews and observation method. Main source of collecting the data is from the secondary data.

**DATA INTERPREATION AND ANALYSIS**

**Demographic (Age) Distribution of respondents**

**(Age wise distribution)**

| | |
|---|---|
| 15-30 | 15 |
| 31-45 | 25 |
| 46-60 | 30 |
| Above 61 | 30 |
| Total | 100 |

**Demographic (Gender wise distribution)**

| | |
|---|---|
| Male | 47 |
| Female | 53 |
| Total | 100 |

ISSN 2394 - 7780

**Demographic Distribution of respondents**

**(Education wise distribution)**

| | |
|---|---|
| Uneducated | 08 |
| Undergraduate | 22 |
| Graduate | 43 |
| Post Graduate | 17 |
| Professional Course | 10 |
| Total | 100 |

**Distribution of respondents on the basis of**

**(Occupation wise distribution)**

| | |
|---|---|
| Housewife | 20 |
| Student | 35 |
| Self-employed | 13 |
| Salaried | 18 |
| Professional | 05 |
| Retired | 09 |
| Total | 100 |

**Respondents completed 7 days Rajayoga Meditation**

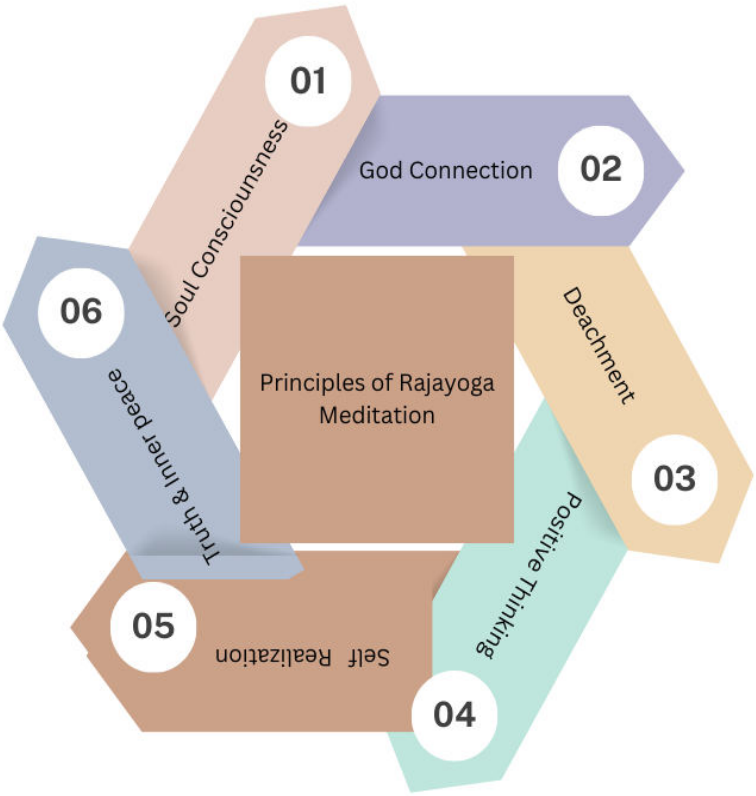
| | |
|---|---|
| Yes | 78 |
| No | 22 |
| Total | 100 |

**Final Outcome after Completion of Rajayoga Meditation**

| | |
|---|---|
| Fully satisfied | 57 |
| Partially satisfied | 13 |
| Neutral | 12 |
| Not satisfied | 18 |
| Total | 100 |

ISSN 2394 - 7780

**PRINCIPLES OF RAJAYOGA MEDIATION**




**PLATFORMS:** The Brahma Kumaris organization uses various platforms to share their teachings, mediation techniques and spiritual knowledge globally.

**Peace of Mind TV:** Broadcasts programs on spiritual well being meditation, and inspirational talks.

**Awakening TV:** features popular shows like awakening with Brahma Kumaris, offering guidance on personal transformation and mental wellness.

**Apps:** Mobile application provide access to daily Murli, meditations, and spiritual songs**.**

**YouTube:** Channels like BK Shivani, Godlywood studio and rajayoga mediation provides vieols, live sessions and courses.

**Facebook and Instagram:** Official accounts hsare quotes, updates, and events globally.

**Twitter:** includes handles kike Brahma Kumaris HQnews and insights.

**Print Media:** Publication like Purity, the world renewal, gyanamrit publish articles on spirituality

**Radio Madhuban:** A community radio station offering programs on holistic living and spiritual practices.

**MODELS**

The Brahma Kumaris have developed a structured spiritual approach through Rajayoga Meditation, and they offer various models to facilitate the practice of Rajayoga. These models are designed to guide individuals on their spiritual journey, helping them integrate meditation and self-awareness into everyday life.

1. **The Soul Consciousness Model:** Durig meditation, practitioners foucs on the thought, “I am a soul, a peaceful being, and my true identity is not defined by my body, thoughts, or external circumstances.
2. **The Three Aspects Of Rajayoga:** Meditation, Knowledge and service.

**Meditation (Dhyana):** The practice of sitting in silence and connecting with the inner self and the divine.

Knowledge (Gyaan) This includes knowedge about the nature of the soul, the law of karma, the cycles of time and the relationship between the soul and god.

3. Service (Seva) Service can be performed in many ways through selfless acts of kindness, promoting peace, or engaging in community building activities.

ISSN 2394 - 7780

4. The five pillars of spirituality (satsang, seva, sadhna Sankalp and shanti.
5. The role of a spiritual gudie (Didi, Brother or Mentor)
6. The Model of purity and nonviolence (Ahimsa)

**CHALLENGES**

**Rajayoga Meditation Faces Several Challenges Faced by Practitioners in their Journey.**

**Psychological challenges**

Detachment and family relationship

Rajayoga teaching are encouraged to practice detachment which effect on non-practicing family members

**Emotional Overwhelm:** Focusing on karma, soul consciousness and detachment can create the confusion among youngsters and they feel misguided.

**Food Habits:** Rajayoga require a strict vegetarian diet and avoid alcohol and caffeine and insists on simple food which is not acceptable to all.

**Gender Issues:** Brahma Kumaris promotes female leadership, which effect the male ego

**Scientifically Unproved theory:** The concept that cyclical and repeats of yug every 5000 years is criticized on the basis of scientific verification.

**Family Pressure:** Families are not in a position to accept the Brahma Kumaris and their teachings, they thought that their children will away from the life and devote themselves fully by neglecting their duties towards their families, and other issues are

- Restlessness, and Mental fatigue
- Attraction of material world
- Balance between daily life and spirituality
- More negative thoughts as compare to positive thoughts
- Isolation and absence of support
- Double identity
- Remembrance of past karma
- Lack of consistency.
- Maintain sustaining spiritual energy

**Justification from Brahma Kumaris** : The Brahma Kumaris emphasize that all practices are voluntary, there is no compulsion from their side to leave the job, family and devote fully to the institution. They also provide support through regular workshops, counseling and community activities to help the society and bring love, peace, unity, brotherhood, positive thinking, balance mind and spiritual empowerment among masses.

**FINDINGS**: The experience with Brahma Kuamris often resonates on a spiritual and transformation level.

**Inner Peace:** The practices of Rajayoga Mediation fosters a deep sense of calm and mental clarity

**Self-Realisation:** Understanding oneself as a soul brings a heightened awareness of purpose and identity.

**Connection to The Divine:** The teachings help establish a direct personal connection with the supreme should, leading to feelings of love and support.

**Improve Relationship:** Emphasizing qualities like, patience, love, and forgiveness enhances personal and professional relationship

**Positive Lifestyle:** Adopting a vegetarian diet, staying mindful of thoughts, and practicing simplicity often bring a sense of well being.

**Empowerment:** regular teaching and spiritual knowledge in still confidence and a sense of inner strength.

ISSN 2394 - 7780

## CONCLUSION

Rajayoga meditation give spiritual benefits, it requires dedication, patience and the ability to fac and overcome these challenges. Rajayoga , as taught by the brahma kumaris is a powerful spiritual practice aimed at fostering self-awareness, inner peace, and a deep connection with the supreme soul. It emphasizes the realisation of one ture identity as a soul and the cultivation of divine qualities like peace love, purity and wisdom. This mediation is not only merely a tool for personal transformation but also a means to contribute to wolrd peace. By aligning with divine energy and spreading vibrations of peace and love, practitioners of Rajayoga help to create a more harmonious and spiritually awakened world. The Brahma Kumaris share a profound spiritual messages on soul consciousness, god connection, karma philosophy, meditation, world transformation. "When we change, the world changes". By practicing Rajayoga Meditation eyes open to a new world. A world inside, activating our inner energies in the form of powers and spiritual awareness . Rajayoga Meditation give answer of all our questions why yoga?, How to meditate? Where to Meditate? When to meditate? Who can meditate? Benefits of Meditation,

## REFERENCE

www.brahmakumaris.org

https://en.wikipedia.org

The world renewal

Peace of Mind Tv

Awakening TV (Interviews conversation between Actor Suresh Oberoi and Shivanj Didi)

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A STUDY ON IMPACT OF E-COMMERCE ON BUSINESS

**Rachna Kishore Vadhiya**
Assistant Professor, Seva Sadan College of Arts, Science and Commerce

## ABSTRACT
*E-Commerce or Electronic commerce is conducting business through the electronic medium. It is performance of Trade & Aids-to-Trade on online platforms using the internet. Transfer of goods,funds,data & performance of services over the internet can also be referred as E-Commerce if it involves the money or money's worth. Examples of E-Commerce websites include Amazon, Flipkart, Myntra, Shopify, eBay, Quikr & Olx. Business to Business (B2B), Business to Customer(B2C), Customer to Customer(C2C) & Customer to Business (C2B) are all examples of E-Commerce. The e-commerce market in India was valued at approximately $86 billion in 2020. It is projected to reach a market value of $ 200 billion by 2026. E-Commerce is pervasive & universal. It is available & accessible 24/7 & 365 days in a year. It is available anywhere & anytime as long as the internet connection is available. The global reach of e-commerce is what makes it so unique & appealing. Technologies used in e-commerce make consumer interactions easy & seamless. This adds to an individual's experience. Technologies within e-commerce allow for the personalization & customization of marketing messages groups or individuals receive. The internet has revolutionised the way we communicate & exchange information, goods & services. It has made a profound impact on society.In e-commerce there is no face to face interaction with customers. In fact,there is screen to face interaction. These are low contact services. E-Commerce has a worldwide coverage or reach of the business.E-Commerce facilitates distant delivery of goods. It takes at least couple of days for good or services to be delivered to consumers.E-Commerce provides variety of goods & services. These are limited constraints of a physical store size or the investments required for it. In E-Commerce , it is simpler to introduce a product on a website & obtain immediate customer feedback. E-Commerce enables the business to increase profits by increasing sales,decreasing expenses & streamlining operations.*

***Keywords:*** *E-Commerce, Technology, Consumers, Websites, Internet.*

## INTRODUCTION
The internet has revolutionised the way we communicate & exchange information, goods & services. It has made a profound impact on society. Unquestionably, it will continue to impact how companies sell & market their products, as well as how consumers choose to make purchases,for many years to come. The nature of E-commerce business is such that the cost of office space at multiple locations can be avoided. There is huge savings on real estate space. Also, due to online nature of business, the cost of logistics & supply chain is relatively low. There are very few or no intermediaries involved which again leads to savings of cost. E-Commerce reaches customers all over the world. They can make a purchase anywhere & anytime. Thus, offering maximum convenience at consumers fingertips. There are very few physical limitations for the products to reach the consumers. In a physical store merchants can provide only a limited amount of information on a product. On the other hand, e-commerce websites allow the webspace to have information such as demo videos,reviews & customer testionials to help increase sales.

E-Commerce companies can also be divided into several types depending upon the buyer & seller. They are as follows:

1) Business to Business (B2B): When the commercial transaction between two business organisations take place in an online mode, then it is known as B2B e-commerce.

**For Example, Alibaba.com**

2) Business to Consumer (B2C): B2C is the most common mode of business in which the organisation & consumer enter into a transaction.

**For Example, Flipkart.com.**

3) Consumer to Business (C2B): This is a unique business model in which the consumer determines the prices o0f goods. It uses the reverse pricing model.

**For example: Fiverr**

4) Customer to Customer (C2C): This type enables two or more consumers to enter into transaction with each other in an electronic mode. Generally, it uses auction-style model.

ISSN 2394 - 7780

**For Example: Olx.com.**

**Objectives:**

The objectives of present study are:

1) To examine factors leading to growth of e-commerce in India.
2) To analyse the effect of e-commerce on business.
3) To examine the challenges & possible solutions of e-commerce in India.
4) To study about the myths of e-commerce.
5) To understand the initiative taken by the government to boost E-Commerce in India.

**Research Methodology:**
For the present study, secondary data has been used including available research articles, journals, books, websites, newspaper etc.

**The following are e-effects commerce's on businesses:**

- **Enhanced Customer Service:** Customer service can be greatly enhanced by enabling customers to find detailed information online. Also the customer service executives can answer standard e-mail questions in seconds & human experts services can be expected using help-desk software.
- **Learning Opportunities:** Rapid progress in E-Commerce will force companies to adapt quickly to the new technology & offer them an opportunity to experiment with new products, services & processes. New technologies require new organizational approaches.
- **New product Capabilities:** E-Commerce allows for new products to be created & existing products to be customized in innovative ways. Such changes may redefine organizations missions & the manner in which they operate.
- **Impact on Manufacturing:** E-Commerce is changing manufacturing systems from mass production to demand-drien & possibly customized, just -in-time manufacturing.Furthermore, the production systems are integrated with finance, marketing & other functional systems as well as with business partners & customers.
- **Impact on Finance:** E-Commerce requires special finance & accounting systems. Traditional payment systems are ineffective or inefficient for electronic trade. The digital payment systems are complicated because it involves legal issues & agreements on international standards. But it offers high degrees of convenience. It leads to real time transactions & error free records.
- **Impact on Marketing:** E-Commerce enhances promotion of products & services through direct,attractive & interactive contact with customers. It creates a new distribution channel for existing products. It facilitates direct reach of customers & the bi-directional nature of communication. The cost of delivering information to customers over the internet results in substantial savings to senders when compared with non-electronic delivery. Major savings are also realized in delivering gigitized products versus physical delivery.

**Factors Responsible For Growth of E-Commerce:**

- **E-Portals for E-Commerce Business Operations:** The Government of India has promoted E-Portals or Websites for e-commerce including compulsory online reservation, applications, payments, auctions & public-procurement.

For example, http://www.ebiz.gov.in is India's Government to business E-portal. The services include industrial license,company affairs, PAN & other CBDT(Central Board of Direct Taxes) related services.

- **Digital India:** It is one of the highly ambitious projects that focuses on transforming India into a digitally empowered & knowledge economy. The key areas are:1)Build digital infrastructure as a core utility. 2) Enable digital empowerment of citizens.
- **Startup India:** This programme is designed for building entrepreneurship eco-system that nurtures innovation & startups.
- **Make in India:** This initiative is aiming for boosting India's industrial development. The key steps taken by the Government of India are improving the business environment in the country & enabling manufacturing

ISSN 2394 - 7780

& allowing FDI in key sectors. Key pillars of this programme are research, innovation & conducive business environment.

- **Payment Options:** With the rise of digital wallets & UPI (Unified Payments Interface),consumers have plethoda of payment options. Earlier, e-commerce transactions were more based on cash on delivery due to lack of trust or the need of product transaction. Due to demonetisation drive, more & more Indians have started using electronic payments.
- **Increasing Internet & Smartphone Penetration:** Rise in internet usage, 3G & 4G penetration, increasing smartphone users with availability of internet on mobile phones, delivering high quality user experience (detailed product catalogue, website performance) by e-commerce companies & rising digital literacy are also some of the reasons for growth of e-commerce in India.
- **Remarketing:** It is also known as conversion marketing. Remarketing aims at converting window shoppers to actual shoppers in an online mode. Several times customers visit a website but leaves it without purchasing any products. Such potential customers are followed by the companies. It persuades an online shopper to return to a website to complete a purchase they previously abandoned. Remarketing can be experienced by consumers on the basis of ads bombarded to them on the basis of their online visits to various websites.

**Issues or Challenges in Implementing E-Commerce:**

- Attracting the right customer
- Generating targeted traffic
- Converting shoppers into paying customers
- Retaining customers
- Choosing the right technology & partners
- Return of merchandise
- Cash on delivery
- Payment gateways
- Un standardised postal addresses
- Issues in logistics

**Myths of E-Commerce:**

**Myth No. 1:** Customers flock to website the moment it is launched.

**Myth No. 2:** Customers who shop online are easy to please.

**Myth No. 3:** Making money on the web is easy.

**Myth No. 4:** Lowering price & deep discounts gives one edge.

**Myth No. 5:** My product is amazing-I don't need to market it.

**Myth No. 6:** Content marketing is a waste of time.

**Myth No. 7:** Negative online review may destroy one's business.

**Myth No. 8:** Online business is cheaper than offline business.

**Government Initiative To Boost E-Commerce In India.**

Since last 5-6 years, the government of India has been announcing various schemes & initiatives to scale up the ecosystem of manufacturing,digitisation & startups. Some of these schemes are Digital India, Make in India, Start-up India, Skill India & Innovation Fund. These programs will also have a ripple effect on the e-commerce industry:

- The Digital India movement has paved the way for initiatives such as Udaan,Umang & the Start-UP India Portal, among others.

ISSN 2394 - 7780

- The government has influenced over 16 million women in India & reached 1,66,000 villages through the Internet Saathi project.
- Udaan is a B2B online trade platform designed to connect online retailers with MSMEs & wholesalers. It provides them ogistics,payments & technology support. Udaan is an online marketplace that aims at offering low & best price, good quality & best selection to its retailers.
- The government launched Bharat Interface for Money (BHIM) an easy-to-use mobile platform for digital payments.

**CONCLUSION**

E-Commerce is pervasive & universal and accessible 24/7 & 365 days in a year. The global reach of e-commerce is what makes it so unique & appealing. Technologies used in e-commerce make consumer interactions easy & seamless. This adds to an individual's experience. Technologies within e-commerce allow for the personalization & customization of marketing messages groups or individuals receive

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A COMPARATIVE STUDY OF VARIOUS TYPES OF INTELLECTUAL PROPERTY RIGHTS (IPR) LAWS IN INDIA

**Sadhna Anwani**
Assistant Professor, R.K.T College of Arts, Science and Commerce

**ABSTRACT**
*Intellectual Property Rights (IPR) play a crucial role in fostering innovation, economic growth, and protecting creators' rights in India. The country has a comprehensive legal framework governing different forms of IPR, including patents, trademarks, copyrights, geographical indications, and industrial designs. This paper aims to compare various types of IPR laws in India using secondary data sources, highlighting their scope, enforcement mechanisms, and impact on different industries. The study examines legislative frameworks, judicial interpretations, and global compliance to assess the effectiveness of India's IPR regime.*

***Keywords:*** *Intellectual Property Rights, Patents, Copyrights, Trademarks, Geographical Indications, Industrial Designs, Indian IPR Laws, Secondary Data.*

## INTRODUCTION

Intellectual Property Rights (IPR) are legal protections granted to individuals and entities for their creative and intellectual work. India has developed a robust IPR regime to align with international standards such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This paper explores and compares different types of IPR laws in India based on secondary data sources, such as government reports, legal case studies, academic research, and industry reports.

### Overview of Intellectual Property Rights (IPR) in India

India's IPR framework consists of various laws protecting different forms of intellectual property. These laws have been enacted or amended to comply with TRIPS and other international agreements.

### Types of Intellectual Property Rights in India

The major types of IPR in India include:

1. **Patents** – Protection for inventions.
2. **Trademarks** – Protection for brand identity.
3. **Copyrights** – Protection for creative works.
4. **Geographical Indications (GI)** – Protection for region-specific products.
5. **Industrial Designs** – Protection for aesthetic aspects of products.
6. **Trade Secrets** – Protection for confidential business information.

### Objectives of the Study

1. To examine the different types of IPR laws in India.
2. To compare the legal framework, enforcement mechanisms, and effectiveness of these laws.
3. To analyze the impact of IPR laws on innovation, economic development, and different industries.

## LITERATURE REVIEW

### 1. Evolution of IPR Laws in India

Several studies have traced the development of IPR laws in India and their alignment with international agreements like the World Trade Organization's TRIPS Agreement. According to Kumar (2015), India's transition to a more comprehensive IPR framework began in the 1990s as part of economic liberalization. The amendments to the Patents Act, 1970, in 2005 brought India into full compliance with TRIPS, significantly impacting the pharmaceutical sector by introducing product patents.

Siddhartha and Rao (2018) highlight that India's earlier IPR framework primarily focused on process patents for pharmaceuticals to ensure affordable access to medicines. However, with globalization and increased foreign investment, the country shifted toward stronger IPR protection across all sectors.

ISSN 2394 - 7780

**2. Impact of IPR on Innovation and Economic Growth**

Several studies have analyzed the role of IPR in promoting innovation and economic growth. Sharma (2016) argues that stronger patent laws have encouraged research and development (R&D) in biotechnology and pharmaceuticals. Similarly, Gupta (2019) emphasizes that geographical indications (GI) have significantly benefited rural economies by protecting products like Darjeeling Tea and Madhubani Paintings, boosting exports and preserving cultural heritage.

However, other scholars, such as Basu (2020), criticize the current IPR enforcement mechanisms in India, pointing out that weak enforcement reduces the incentive for innovation in sectors like software and media, where piracy remains rampant.

**3. Comparative Studies on Different Types of IPR**

Comparative studies on IPR laws in India reveal that patent protection has a more direct impact on technological advancements, while trademarks and industrial designs are crucial for promoting consumer goods and the fashion industry. According to Mehta (2021), the Trade Marks Act, 1999, has helped businesses protect their brand identity in a highly competitive market, especially with the rise of e-commerce.

In contrast, copyright law faces significant challenges due to increasing instances of digital piracy, as highlighted by Singh (2017), who notes that the entertainment industry loses billions of rupees annually due to illegal downloads and streaming services.

**4. Challenges and Gaps in IPR Protection**

Several scholars have pointed out the challenges in enforcing IPR laws in India. Mukherjee (2020) emphasizes that the backlog of patent applications and the slow legal process undermine the effectiveness of the patent system. Similarly, Bose (2019) identifies the lack of awareness about IPR among small and medium enterprises (SMEs) as a significant barrier to the full utilization of IPR protection.

Moreover, the absence of a specific legal framework for trade secrets is considered a significant gap in India's IPR regime, as argued by Bhattacharya (2018). Most companies rely on non-disclosure agreements (NDAs) and general contract law to protect sensitive business information.

**5. International Perspective on India's IPR Regime**

Several comparative studies have examined India's IPR laws in the context of global standards. According to the World Intellectual Property Organization (WIPO), India has made significant progress in strengthening its IPR framework, but it still lags behind developed countries in enforcement and innovation output. Jain (2021) compares India's IPR regime with that of the United States and the European Union, concluding that while India's laws are well-drafted, the implementation and awareness among stakeholders need improvement.

**CASE STUDIES**

**1. Patents Case Study: Novartis AG v. Union of India (2013)**

Type of IPR: Patents

**Overview:**

This landmark case is one of the most significant patent disputes in India's legal history. Novartis, a Swiss pharmaceutical giant, applied for a patent for its anti-cancer drug Glivec (Imatinib Mesylate). The Indian Patent Office rejected the application on the grounds that the drug did not meet the requirement of "novelty" and "inventive step" under Section 3(d) of the Patents Act, which prevents "evergreening" of patents.

**Legal Outcome:**

The Supreme Court upheld the decision, ruling that Novartis 'drug was merely a new form of an existing substance and not eligible for a patent.

Impact:

- Ensured affordability of life-saving drugs in India.
- Reinforced India's position on preventing evergreening practices.
- Strengthened the legal interpretation of Section 3(d) in the Indian patent regime.

**2. Trademarks Case Study: Amul v. Anul Ice Cream (2007)**

**Type of IPR:** Trademarks

ISSN 2394 - 7780

**Overview:**
The Gujarat Cooperative Milk Marketing Federation (GCMMF), which owns the trademark Amul, filed a case against a local ice cream brand named Anul for trademark infringement. GCMMF argued that the name "Anul" was deceptively similar to "Amul" and could confuse consumers.

**Legal Outcome:**
The court ruled in favor of Amul, holding that the use of a phonetically similar name amounted to passing off and trademark infringement. The defendant was ordered to stop using the brand name "Anul."

**Impact:**

- Highlighted the importance of brand protection in India.
- Set a precedent for similar cases of phonetic resemblance in trademarks.

**3. Copyright Case Study: Super Cassettes Industries Ltd. v. MySpace Inc. (2011)**

Type of IPR: Copyright

**Overview:**
Super Cassettes Industries Ltd. (owner of the T-Series brand) filed a lawsuit against MySpace, alleging copyright infringement for allowing users to upload and share T-Series music and videos without authorization.

**Legal Outcome:**
The Delhi High Court ruled in favor of Super Cassettes, holding MySpace liable for copyright infringement. The court emphasized the responsibility of online platforms to monitor and remove infringing content.

Impact:

- Strengthened the application of copyright law in the digital environment.
- Raised awareness about online piracy and intermediary liability in India.

**4. Geographical Indications (GI) Case Study: Darjeeling Tea**

**Type of IPR:** Geographical Indication (GI)

**Overview:**
Darjeeling Tea was the first product to receive a Geographical Indication (GI) tag in India in 2004. However, the Tea Board of India had to engage in several legal battles to prevent misuse of the "Darjeeling" name by foreign companies.

**Legal Outcome:**
The Tea Board successfully defended its rights in multiple jurisdictions, including securing protection in the European Union.

**Impact:**

- Protected the authenticity and quality of Darjeeling Tea.
- Boosted the export value of GI-tagged products.
- Encouraged producers of regional products to seek GI protection.

**5. Industrial Designs Case Study: Whirlpool of India Ltd. v. Videocon Industries Ltd. (2008)**

Type of IPR: Industrial Design

**Overview:**
Whirlpool sued Videocon for allegedly copying the design of its washing machine. The claim was based on the similarity in the shape, configuration, and surface pattern of the washing machine model, which Whirlpool had registered as an industrial design.

**Legal Outcome:**
The court ruled in favor of Whirlpool, recognizing the unique design as a protectable intellectual property under the Designs Act, 2000. Videocon was restrained from manufacturing or selling products with a similar design.

**Impact:**

- Reinforced the significance of design protection in consumer goods.
- Raised awareness among manufacturers about registering industrial designs.

ISSN 2394 - 7780

**6. Trade Secrets Case Study: Bharat Biotech v. Dr. Umesh** (2016)

Type of IPR: Trade Secrets

**Overview:**
Bharat Biotech, a leading biotechnology company, accused one of its former employees, Dr. Umesh, of misappropriating confidential information related to a vaccine formula and sharing it with a competing company.

**Legal Outcome:**
The court granted an injunction in favor of Bharat Biotech, preventing the use or disclosure of its proprietary information. Although India does not have a specific law for trade secrets, the case was decided under contract law and confidentiality agreements.

**Impact:**
- Highlighted the importance of non-disclosure agreements (NDAs) for protecting trade secrets.
- Emphasized the need for a formal trade secrets law in India.

**Research Methodology**

This study is primarily based on secondary data collected from reliable sources such as:

- **Government Reports and Publications:** Annual reports from the Intellectual Property India Office, Ministry of Commerce and Industry, and the World Intellectual Property Organization (WIPO).
- **Legal Documents and Acts:**Patents Act (1970), Trade Marks Act (1999), Copyright Act (1957), GI Act (1999), and Designs Act (2000).
- **Research Papers and Academic Journals:** Articles published in reputed journals focusing on IPR laws, their impact, and challenges in the Indian context.
- **Case Studies:** Review of landmark legal cases related to IPR violations and protection in India.
- Secondary Sources from International Organizations: Publications from WIPO and WTO for a global perspective on IPR protection.

**Comparative Analysis of Different IPR Laws in India**

**1. Patents**

- **Legislation**: The Patents Act, 1970 (amended in 2005)
- **Scope**: Grants exclusive rights to inventors for 20 years.
- **Enforcement**: Governed by the Office of the Controller General of Patents, Designs & Trademarks.
- **Impact**: Encourages innovation, particularly in pharmaceuticals and technology.

**2. Trademarks**

- **Legislation**: The Trade Marks Act, 1999
- **Scope**: Protects brand names, logos, symbols, and slogans.
- **Enforcement**: Administered by the Trade Marks Registry.
- **Impact**: Enhances brand identity and market competition.

**3. Copyrights**

- **Legislation**: The Copyright Act, 1957 (amended in 2012)
- **Scope**: Protects literary, artistic, musical, and cinematographic works.
- **Enforcement**: Copyright Office and Copyright Board oversee registration and disputes.
- **Impact**: Crucial for the media, entertainment, and software industries.

**4. Geographical Indications (GI)**

- **Legislation**: The Geographical Indications of Goods (Registration and Protection) Act, 1999
- **Scope**: Protects products with unique regional characteristics (e.g., Darjeeling Tea, Kanchipuram Silk).

ISSN 2394 - 7780

- **Enforcement**: Managed by the Geographical Indications Registry.
- **Impact**: Boosts rural economies and preserves cultural heritage.

**5. Industrial Designs**

- **Legislation**: The Designs Act, 2000
- **Scope**: Protects aesthetic features of industrial products.
- **Enforcement**: Overseen by the Designs Registry under the Patent Office.
- **Impact**: Promotes innovation in manufacturing and fashion industries.

**6. Trade Secrets**

- **Legislation**: No specific law; protected under contract law, Indian Penal Code, and common law principles.
- **Scope**: Protects confidential business information.
- **Enforcement**: Enforced through Non-Disclosure Agreements (NDAs) and legal actions.
- **Impact**: Essential for maintaining competitive advantage in industries like IT and pharmaceuticals.

**Comparative Insights and Discussion**

| IPR Type | Legislation | Duration of Protection | Governing Body | Key Industry Impact |
|---|---|---|---|---|
| **Patents** | Patents Act, 1970 | 20 years | Patent Office | Pharmaceuticals, Technology |
| **Trademarks** | Trade Marks Act, 1999 | 10 years (renewable) | Trade Marks Registry | Branding, Consumer Goods |
| **Copyrights** | Copyright Act, 1957 | Life of author + 60 years | Copyright Office | Media, Software, Publishing |
| **Geographical Indications** | GI Act, 1999 | 10 years (renewable) | GI Registry | Agriculture, Handicrafts |
| **Industrial Designs** | Designs Act, 2000 | 10 years (renewable) | Designs Registry | Manufacturing, Fashion |
| **Trade Secrets** | No specific law | Indefinite (as long as secrecy is maintained) | Contract Law & NDAs | IT, Pharmaceuticals |

This comparison shows that while India has strong IPR laws, enforcement remains a challenge, particularly in patents and copyrights, due to infringement issues and lengthy legal battles.

## CHALLENGES AND RECOMMENDATIONS

### Challenges

- **Patent Backlog**: Slow examination process leading to delays.
- **IPR Infringement**: High levels of piracy and counterfeiting.
- **Lack of Awareness**: Small businesses often unaware of IPR benefits.
- **Enforcement Issues**: Weak implementation mechanisms, particularly for copyright protection.

### RECOMMENDATIONS

- **Strengthening Enforcement**: Faster resolution of IPR disputes.
- **Capacity Building**: Training law enforcement agencies and judiciary on IPR issues.
- **Public Awareness**: Government campaigns to educate businesses about IPR benefits.
- **International Collaboration**: Aligning with global best practices and strengthening compliance with TRIPS.

## CONCLUSION

India's IPR framework is comprehensive and aligned with international standards. However, enforcement challenges and lack of awareness hinder its full potential. Strengthening implementation mechanisms and improving public understanding of IPR can enhance innovation and economic growth. This comparative

ISSN 2394 - 7780

analysis highlights the need for continuous reforms and effective enforcement to ensure India remains a competitive player in the global knowledge economy.

**REFERENCES**

1. The Patents Act, 1970 (as amended in 2005).
2. The Trade Marks Act, 1999.
3. The Copyright Act, 1957 (amended in 2012).
4. The Geographical Indications of Goods (Registration and Protection) Act, 1999.
5. The Designs Act, 2000.
6. Government of India, Intellectual Property India Annual Reports.
7. World Intellectual Property Organization (WIPO) Reports.
8. Various academic journals and legal case studies on IPR in India.

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# IMPACT OF FINFLUENCERS ON INVESTMENT DECISION AMONG RETAIL INVESTORS WITH REFERENCE TO MUMBAI CITY

**Shruti P. Ujgaonkar[1] and Radhika R. Iyer[2]**
[1]Research Scholar, Ph.D. Research Center, Sydenham College of Commerce & Economics, Mumbai
[2]Research Guide, Ph.D. Research Center, Sydenham College of Commerce & Economics, Mumbai

## ABSTRACT
*Financial influencers, or 'finfluencers,' have become key figures in shaping the investment decisions of retail investors through easily accessible online platforms. The researcher identified gaps regarding the impact of finfluencer advice on financial behavior, the effects of unregulated advice on investor outcomes, and the credibility and reliability of financial content. The present research study focuses on the role of finfluencers in influencing retail investors' approach towards investment practices, assessed the reliability of the financial advice they provided, and identifies common barriers faced by retail investors while implementing such advices. Data collection was conducted using a structured questionnaire distributed to 101 representative samples selected through simple random sampling technique. The appropriate statistical tools were applied for data analysis. The findings of this study highlights that finfluencers impact the investment decisions of retail investors and also increase their return expectations. The present study emphasize the need for a balanced approach when relying on finfluencers advice, reinforcing the importance of informed judgment.*

***Keywords:*** *finfluencers, retail investors, investment, decision making.*

## INTRODUCTION
The rise of financial influencers, commonly known as "finfluencers," has revolutionized the way retail investors access financial advice and make investment decisions. Finfluencers are individuals who leverage social media platforms to share financial insights, investment strategies, and market trends, significantly shaping the decision-making process of retail investors those who manage their own investments without professional advisory support. With their widespread reach and relatable content, finfluencers have become a trusted source of information, impacting how retail investors perceive risks, evaluate investment opportunities, and make financial choices.

This research seeks to investigate the influence of finfluencers on retail investors investment behavior. It evaluates how finfluencers affect key aspects of the investment decision-making process, such as trust, risk perception, and the final investment choices made by retail investors. The data is gathered from representative sample through a structured questionnaire. The findings will offer valuable insights into the role of finfluencers, focusing on benefits associated while depending on online financial advice. This study aims to inform investors and policymakers about the evolving trend of finfluencers and its broader implications for investment practices.

## REVIEW OF LITERATURE

**Siddhant Choudhary & Mahak Agrawal (2024),** in their research study titled *"Finfluencers - the financial influencers"* explores the rise of financial influencers on Indian social media, highlighting their role in reshaping financial trust while warning of risks from unregulated advice, such as in the cryptocurrency crisis. It emphasizes the need for SEBI to enforce regulations, promote ethical practices, and educate the public, ensuring a safer and more credible digital financial ecosystem.

**Ms. Himanshi Mehta (2024)**, conducted the study titled *"Analyzing the Impact of Social Media Sentiment on Investors Decision-Making"* explores how social media sentiment impacts investor decisions, highlighting the varying trust in financial content. Instagram is viewed as the most reliable platform, with Twitter and LinkedIn also influencing choices. To improve credibility, content verification, expert collaboration, and fraud reporting should be implemented. These measures can enhance trust and foster a more informed investment environment.

**Dr. Umakanth S et.al. (2024)**, in their research study titled *"Analysis on Impact of Financial Influencers on Gen Z Investing in India"* examines how finfluensers shape Generation Z's investment decisions in India, with 50% relying on their advice. It highlights their impact on financial attitudes, content preferences, and trust dynamics. The research stresses the need for ethical considerations, regulatory frameworks, and understanding long-term implications. Findings aim to guide policymakers and educators in fostering responsible financial decision-making among young adults.

**Isshikaa Kaur Jaggi & Rakesh Nair (2024)**, conducted the study titled "*A Study on the Impact of Social Media Platforms and Financial Advertisements on Youth and Their Lifestyle in Mumbai*" examines how

ISSN 2394 - 7780

financial advertisements and social media affect the lifestyles and decisions of Mumbai's youth. It finds a strong link between social media use, body image concerns, and investment decisions, with financial literacy shaping consumer behavior. The research highlights the need for further exploration into content-specific effects and ethical implications.

**Vishnu Maniy.R.V et.al. (2023),** in their research study titled *"The impact of social media on investment decisions: an empirical analysis of user behavior on investment platforms"* examines the link between young investors investment behavior and usage of social media. Instagram and YouTube being the main platforms for investment information. Stocks and mutual funds are the preferred investment choices, with gender influencing preferences. The findings highlight social media's growing role in shaping investment decisions and suggest further research on its impact across demographics.

**Deepika Dhawan, Sushil Kumar Mehta (2019)** conducted the study titled *"Saving And Investment Pattern: Assessment And Prospects"* investigates investor rationality by analyzing saving and investment patterns in Jammu, India, exploring the links between income, saving reasons, and investment preferences. Data collection was conducted via distribution of structured questionnaire among investors, were selected using judgmental sampling approach. Data analysis through ANCOVA, One-Way ANOVA and MANOVA explore a connection between saving and income, with gender influencing financial literacy. The study also identified investors preference for investments characterized by safety, liquidity, offers tax benefits, high returns, and shorter lock-in duration.

**RESEARCH GAP:**

The literature review identifies a gap in understanding the long-term impact of finfluencer advice on financial behavior, particularly across different demographic groups. It also highlights the lack of research on the effects of unregulated advice on investor outcomes. Moreover, there is limited exploration of ethical concerns and the need for regulatory frameworks to ensure the credibility and reliability of financial content. Addressing these gaps, this present study focuses to examine the impact of finfluencers on retail investors' approach to investment trends, evaluate the reliability of the advice they provide, and identify the challenges investors encounter when implementing such advice.

**OBJECTIVES OF THE STUDY**

- To examine the impact of finfluencers on retail investors investment decisions.
- To evaluate impact of finfluencers on return expectations of retail investors.
- To identify the common challenges faced by retail investors in implementing investment advice from finfluencers.

**RESEARCH METHODOLOGY**

The present study explores the impact of finfluencers on retail investors investment decisions, specifically in the Mumbai city.

**Research Design:**

The application of a descriptive research design to understand the influence of finfluencers on retail investors' investment decisions.

**Universe:**

The universe of the study consists of all retail investors in the Mumbai city who have followed finfluencers for investment advice.

**Technique of sampling:**

Participants were selected from various segments of retail investors in Mumbai city by application of simple random sampling method.

**Sample Size:**

Total of 101 retail investors were surveyed for primary data collection.

**Data Collection:**

**Primary Data:** Close-ended structured questionnaires were designed to gather quantitative data. To obtain qualitative insights into retail investors' experiences and observations regarding the impact of finfluencers on investment decisions, one open-ended question was included.

**Secondary Data:** Collected from relevant journals, books, and reports to support the study and provide a background on the growing influence of finfluencers and trends in retail investment.

ISSN 2394 - 7780

## DATA ANALYSIS AND INTERPRETATION

The analyzed & interpretation of gathered data is conducted by applying statistical tools.

**1. Assessing the impact of finfluencers on the investment decisions of retail investors.**

**Hypothesis 1**:

**Null Hypothesis ($H_0$)** - There is no significant impact of finfluencers on the investment decisions of retail investors.

**$H_0$:** $\bar{x} < \mu$

**Alternative Hypothesis ($H_1$)** - There is a significant impact of finfluencers on the investment decisions of retail investors.

**$H_1$:** $\bar{x} \geq \mu$

One tailed t-test was applied to find whether there is a significant impact of finfluencers on the investment decisions of retail investors.

**Table no.1:** One-Tailed test

| Parameter | Value |
|---|---|
| Sample Mean | 3.83168 |
| Hypothesized Mean | 3 |
| Standard Deviation | 0.605298 |
| Sample Size | 101 |
| Standard Error of the Mean (SEM) | 0.060229 |
| Degree of Freedom (df) | 100 |
| t-statistic | 13.80858 |
| p-value | 0.000411 |

*Source from primary data*

**Interpretation**

Based on the above Table no.1 - results of the one-tailed t-test shows sample mean is 3.83168, compared to the hypothesized mean of 3, to test whether finfluencers significantly impact the investment decisions of retail investors of retail investors. Standard deviation of the sample is 0.605298, with a sample size of 101, yielding a standard error of the mean (SEM) of 0.060229. Using these values, the t-statistic is calculated to be 13.80858, indicating that the sample mean is significantly higher than the hypothesized mean.

In comparison of p-value (0.000411) obtained from application of t-test is significantly lower than the significance level ($\alpha$=0.05). Hence, null hypothesis is rejected and researcher statistically concludes that there is significant impact of finfluencers on the investment decisions of retail investors.

**2. Evaluating the impact of finfluencers on return expectations of retail investors.**

**Hypothesis 2**:

**Null Hypothesis ($H_0$)** - Finfluencers do not increase the return expectations of retail investors.

**$H_0$:** $\bar{x} < \mu$

**Alternative Hypothesis ($H_1$)** - Finfluencers significantly increase the return expectations of retail investors.

**$H_1$:** $\bar{x} \geq \mu$

One tailed t-test was conducted to determine whether finfluencers increase the return expectations of retail investors.

**Table no.2:** One-Tailed test

| Parameter | Value |
|---|---|
| Sample Mean | 3.67327 |
| Hypothesized Mean | 3 |
| Standard Deviation | 0.74985 |
| Sample Size | 101 |
| Standard Error of the Mean (SEM) | 0.07461 |

ISSN 2394 - 7780

| | |
|---|---|
| Degree of Freedom (df) | 100 |
| t-statistic | 9.0243 |
| p-value | 0.001437 |

*Source from primary data*

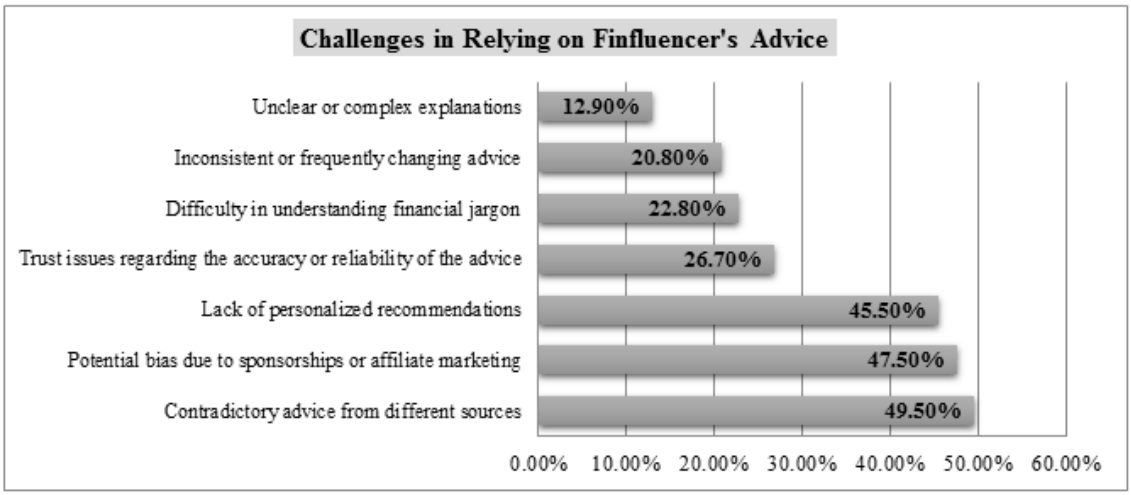
**Interpretation**

Based on the above Table no.2 - results of the one-tailed t-test shows that compared to the hypothesized mean (i.e.3) the sample mean is 3.67327, to test whether finfluencers increase the return expectations of retail investors. The standard deviation of the sample is 0.74985, with a sample size of 101, yielding a standard error of the mean (SEM) of 0.07461. Using these values, the t-statistic is calculated to be 9.0243, indicating that the sample mean is significantly higher than the hypothesized mean.

The p-value is 0.001437, which is much less than the significance level of $\alpha$=0.05. Hence, researcher reject the null hypothesis and accept alternative hypothesis. It indicates that finfluencers increase the return expectations of retail investors.

**3. Most frequent challenges faced by retail investors while depending on finfluencer advice.**

**Graph no.1:**




**Interpretation**

The above graph no.1, represents the percentage of respondents who identified each challenge as a concern. explains the primary challenges faced by retail investors when engaging with finfluencers. The most significant concerns include contradictory advice from different sources (49.5%), potential bias due to sponsorships or affiliate marketing is another major concern, affecting 47.50% of respondents and a lack of personalized recommendations is also a significant issue, impacting 45.50% of individuals. Trust issues regarding the accuracy and reliability of the advice (26.7%), difficulty in understanding financial jargon (22.8%), and inconsistent or frequently changing advice (20.8%) are also notable challenges. However, unclear or complex explanations (12.9%) are perceived as the least concerning issue. Overall, the findings suggest that investors are primarily worried about conflicting, biased, and generalized advice from finfluencers.

**CONCLUSION**

In conclusion, this study addresses the identified research gap from the literature as to examine the impact of finfluencers on retail investors investment decisions and reliance on the advice provided by finfluencers. The findings of present study demonstrate that finfluencers significantly influence retail investors' decisions and increase their return expectations. Using a one-tailed t-test, the study statistically validated the rejection of the null hypothesis, confirming that retail investors are influenced by finfluencers.

However, despite this influence, retail investors face challenges such as contradictory recommendations from different finfluencers and potential biases arising from sponsorships or affiliate marketing, raising concerns about the authenticity and objectivity of the advice provided. These challenges highlights the importance of verifying the information shared by finfluencers to ensure informed and sound financial decisions.

The findings of this study are valuable for retail investors, finfluencers, and policymakers in understanding the dynamics of this growing trend and its implications for investment decisions. Future research could expand the scope to investigate the long-term effects of finfluencers on financial outcomes, demographic differences, the influence of specific platforms, and factors such as trust, FOMO, ethical practices, and regulatory frameworks.

ISSN 2394 - 7780

## SUGGESTIONS AND RECOMMENDATIONS

**To Policymakers**

- ✓ Governments and regulatory bodies should create policies to regulate finfluencers, ensuring they follow the ethical standards, disclose sponsorships, and avoid misleading retail investors.

**To Retail Investors**

- ✓ Retail investors should seek advice from credible sources, verify finfluencers' transparency regarding sponsorships, and enhance their financial literacy to make informed decisions.
- ✓ Retail investors should conduct independent research before trusting the recommendations of finfluencers.

**To Finfluencers**

- ✓ Finfluencers should adhere to ethical guidelines, disclose conflicts of interest, maintain transparency, and focus on providing objective and trustworthy advice.

## REFERENCES

Agrawal, S. C. (2024). Finfluencers - the financial influencers. *International journal of advanced legal research*.

Deepika Dhawan, S. K. (2024). Saving And Investment Pattern: Assessment And Prospects. *ACRN Journal of Finance and Risk Perspectives*, 123-132.

Dr. Umakanth S, R. K. (2024). Analysis on Impact of Financial Influencers on Gen Z Investing in India. *International Journal for Multidisciplinary Research*, 01-18.

Isshikaa Kaur Jaggi, R. N. (2024). A Study on the Impact of Social Media Platforms and Financial Advertisements on Youth and Their Lifestyle in Mumbai. *International Journal for Multidisciplinary Research*, 01 – 77.

Mehta, M. H. (2024). Analyzing the Impact of Social Media Sentiment on Investors Decision-Making. *Journal of emerging technologies and innovative research*, 183 - 194.

Vishnu Maniy.R.V, R. P. (2023). The impact of social media on investment decisions: an empirical analysis of user behavior . *International Research Journal of Modernization in Engineering Technology and Science*, 3992 - 4000.

*Influencer Marketing in Social Networks as a Strategic Tool in Social Media Marketing*. (2022). Germany: GRIN Verlag.

Lewis, R. (2023). *Understanding Decentralized Finance: How DeFi Is Changing the Future of Money.* United Kingdom: Kogan Page.

*Digital Project Practice for Banking and FinTech*. (2024). United States: CRC Press.

## WEBLIOGRAPHY

https://indianexpress.com/article/business/sebi-clears-fininfluencers-framework-fo-bets-on-borrowed-money-9419666/

https://frontline.thehindu.com/society/rise-of-finfluencers-sparks-debate-over-influence-and-accountability-personal-finance-sebi-asci/article67273277.ece

https://ijalr.in/wp-content/uploads/2024/04/Finfluencers.pdf

https://www.ijfmr.com/papers/2024/2/15677.pdf

https://www.jetir.org/papers/JETIRGC06022.pdf

https://www.businesstoday.in/interactive/immersive/rise-of-the-finfluencers

https://www.ijfmr.com/papers/2024/1/13927.pdf

https://www.irjmets.com/uploadedfiles/paper/issue_5_may_2023/38929/final/fin_irjmets1684318290.pdf

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE POWER OF ARTIFICIAL INTELLIGENCE IN ONLINE MARKETING

**Ms. Simran Bharat Chawla**
Assistant Professor, R.K.T College of Arts, Commerce and Science (CMC)

## ABSTRACT
*Businesses now relate with clients in a completely new way because of the incorporation of Artificial Intelligence (AI) into online marketing, which makes more individualized and effective methods possible. With an emphasis on how AI technologies can develop customer experience, optimize advertising campaigns, and spur growth, this study examines the significant effects of AI technology on online marketing policies. AI-powered solutions such as machine learning processes, predictive analytics, chatbots, and natural language processing (NLP) are changing how marketers understand and interact with their audiences. AI enables hyper-targeted ads that increase conversion rates and return on investment (ROI) by using enormous volumes of customer data.*

*This paper has made an effort to discuss the Role of AI, how AI enhances customer experience and personalization in online marketing, challenges related to AI in online marketing, and future trends and innovations in AI that will shape online marketing strategies.*

***Keywords:*** *Artificial Intelligence (AI), Online Marketing, Chatbots, Natural language processing (NLP)*

## I) INTRODUCTION:
Artificial Intelligence's (AI) quick development has considerably changed the online marketing scene by providing companies with cutting-edge technologies to better understand, interact with, and keep their business. AI technologies, which were previously only discussed theoretically, are now at the center of digital marketing strategies, allowing firms to make data-driven decisions, improve advertising campaigns, and provide more personalized experiences. Businesses must use AI to stay competitive and successfully satisfy the growing demands of today's tech-savvy consumers as a result of their increased reliance on digital platforms.

Natural language processing (NLP), machine learning, predictive analytics, and other AI-driven know-hows have made it possible for marketers to instantly evaluate enormous volumes of customer data and find previously unattainable insights. Hyper-targeted marketing campaigns are made possible by these data, which also assist firms in anticipating the needs of their customers and understanding their behavior. Specifically, chatbots, AI-powered recommendation systems, and automated content creation have completely changed how companies connect and communicate with their clientele, resulting in a more smooth and appealing experience.

Even with AI's huge promise, there are limitations to using it into marketing plans. Concerns about customer trust, data privacy, and security are major issues that call for the ethical and responsible application of AI technologies. Marketers must overcome these obstacles as AI develops further while making sure AI solutions stay open and customer-focused.

By analyzing how companies are using AI technology to improve customer communication, optimize marketing tactics, and obtain a competitive edge in a quickly changing digital ecosystem, this research paper seeks to investigate the expanding importance of AI in online marketing. The study will also go over the ethical consequences and potential developments of AI in marketing, offering a thorough analysis of how this technology will influence how businesses and consumers interact in the future.

## II) REVIEW OF LITERATURE:
1. Chaffey, D. (2021). Marketing with Artificial Intelligence: Present Potential and Prospects. Astute observations. Chaffey (2021) examines the present and possible uses of artificial intelligence (AI) in marketing, highlighting how it may be used to forecast consumer behavior, automate marketing processes, and personalize customer experiences. Artificial intelligence (AI) tools like chatbots and machine learning algorithms are already being used to provide custom-made content, improve customer service, and better targeting. According to Chaffey, as AI develops, it will be further incorporated into marketing systems to provide more effective and smooth consumer interactions. Smarter automation, more accurate targeting, and ultimately an improved customer experience will result from this integration..
2. Sathi, A., and Chen, L. (2020). Digital marketing using predictive analytics. Business Research Journal. In particular, Chen and Sathi (2020) focus on predictive analytics as a subset of artificial intelligence in digital marketing. Businesses can better target advertisements, estimate sales, and improve customer retention tactics by using predictive analytics, which uses data to forecast future consumer behavior. Their research

ISSN 2394 - 7780

proves how predictive technologies like machine learning and regression analysis can yield insightful information that enhances marketing efficacy. The authors do, however, also highlight difficulties like the requirement for precise data and worries around data privacy. Notwithstanding these difficulties, one of the important advantages of digital marketing is still the capacity to forecast consumer behavior from past data.

## III) OBJECTIVES OF STUDY:

- To examine how AI enhances customer experience and personalization in online marketing.
- To investigate ethical challenges related to AI in online marketing, such as data privacy and consumer trust.
- To explore future trends and innovations in AI that will shape online marketing strategies.

## IV) ROLE OF ARITIFICIAL INTELLIGENCE:

1. **Chatbots:** AI-driven chatbots may support clients and provide answers to queries around-the-clock, enhancing customer service and assisting companies in generating leads.
2. **Trend Prediction:** AI can forecast future consumer likings, assisting companies in developing more effective marketing and sales plans.
3. **Content Creation:** AI can save marketers time by writing product descriptions, social media postings, and even full essays.
4. **Enhancing SEO and Ads:** AI may assist companies in raising the search engine ranking of their websites and in automatically adapting advertisements to target the appropriate audience.
5. **Social Media Insights:** AI helps organizations better understand their audience by monitoring social media trends and consumer sentiment.
6. **Retargeting adverts:** AI increases the likelihood that users who have already visited a website will make a purchase by displaying adverts to them.
7. **Voice Search:** Since voice searches differ from typing, AI assists companies in optimizing for them (e.g., asking Alexa or Siri).

## V) AI ENHANCES CUSTOMER EXPERIENCE AND PERSONALIZATION IN ONLINE MARKETING:

AI enhances customer experience and personalization in online marketing by leveraging data-driven technologies and real-time analysis to create tailored and engaging interactions. Here are key ways AI achieves this:

1. **Personalized Suggestions**: AI examines user behavior, preferences, and previous interactions using machine learning techniques. This improves user pleasure and boosts conversions by enabling companies to offer highly relevant product or content recommendations.
2. **Virtual assistants and chatbots**: Chatbots driven by AI offer immediate, round-the-clock customer service, responding to questions and assisting customers with their purchases. Over time, these bots gain knowledge from interactions to provide more precise and pertinent answers.
3. **Behavioral Targeting**:AI analyzes customer data, such as browsing history, click patterns, and purchase behavior, to deliver hyper-targeted ads and campaigns that are more likely to engage specific segments.
4. **Predictive analytics**: By using historical patterns to forecast future consumer behavior, AI enables marketers to foresee demands and present offers or solutions before clients proactively seek them out.
5. **Real-Time Communication:** Real-time personalization made possible by AI, such as changing website designs or displaying customized pop-ups in response to user activity, makes for a smooth and interesting surfing experience.

## VI) ETHICAL CHALLENEGES RELATED TO AI IN ONLINE MARKETING:

AI in internet marketing raises a number of ethical issues, especially with regard to consumer trust and data protection. Among these difficulties are:

### 1. Data Privacy Issues

- **Excessive Data Collection:** AI frequently results in the over-collection of sensitive data because it depends on vast volumes of consumer data for personalization and predictive analytics.

ISSN 2394 - 7780

- **Insufficient permission:** Informed permission is questioned because many users are ignorant of how their data is gathered, saved, and used.
- **Third-party Sharing:** Users' privacy and trust may be violated if data is shared with outside parties without explicit notice.

**2. Problems with Consumer Trust**

- **Openness:** AI-driven choices, like content recommendations or ad targeting, frequently lack openness, which makes it challenging for customers to comprehend how they are being influenced.
- **Manipulation:** Concerns regarding undue influence and manipulation arise because personalized advertising might take advantage of psychological weaknesses.

3. **Discrimination and Bias:** Marketing campaigns may treat some demographics unfairly if AI algorithms built on biased datasets reinforce prejudices or exclude them.
4. **Risks to Security:** Businesses are particularly vulnerable to assaults due to the enormous volume of customer data they retain for AI reasons, which could compromise private data.
5. **Loss of Autonomy:** By encouraging consumers to take actions they might not have taken on their own, highly targeted marketing can erode their sense of autonomy.
6. **Erosion of Trust:** When AI is misused in marketing, such as when deep fake advertisements or reviews are produced, it can cause suspicion and undermine consumer confidence in brands.

## VII) FUTURE TRENDS AND INNOVATIONS IN AI THAT WILL SHAPE ONLINE MARKETING STRATIGIES:

**1. Enhanced Customization:**

- **Hyper-Personalization:** AI will examine more detailed data to develop highly customized advertising campaigns based on user preferences, actions, and current circumstances.
- **Emotion AI:** AI can modify marketing communications to suit a user's mood by identifying emotions in text sentiment, voice tone, and facial expressions.

**2. Content Generated by AI:**

- **Creative Automation:** By enabling the automated generation of high-quality text, video, and visual material at scale, AI techniques such as generative AI will cut production costs and time.
- AI-powered dynamic and interactive content, including games, augmented reality (AR) experiences, and customized quizzes, will increase user engagement..

**3. Search Engine Optimization for Voice and Visual:**
In order to meet the increasing demand for visual search tools and smart assistants, AI will optimize material for voice and picture search. Companies will prioritize visual content labeling and conversational SEO.

**4. Analytics that Predict and Prescribe**
AI will improve its capacity to forecast future consumer behavior, opening the door for proactive marketing tactics. Real-time Decision-Making: Prescriptive analytics will provide marketers with practical suggestions for dynamic campaign optimization.

5. **Influencer Marketing Powered by AI: AI will use sophisticated audience research to find and pair businesses with micro and macro influencers, improving campaign alignment and return on investment.**

**6. The Evolution of Conversational AI**

- **Intelligent Chatbots:** In the future, chatbots will manage intricate discussions with human-like comprehension and compassion, improving connections with clients.
- **Voice AI Assistants:** To provide individualized customer service, businesses will employ voice-based AI assistants more and more.

7. **Social Media Marketing Enhanced by AI:** AI will examine social media trends and user behavior to help firms in staying ahead of customer preferences and producing viral content.

ISSN 2394 - 7780

8. **Virtual Influencers Created by AI:** AI-powered virtual influencers will act as brand ambassadors, creating dependable and manageable campaign marketing identities.

## VIII) CONCLUSION:

Artificial Intelligence in internet marketing has completely changed how companies communicate with their customers by providing previously unheard-of chances for efficiency, growth, and personalization. Marketers can now better understand consumer behavior, anticipate trends, and provide personalized content thanks to AI technologies like chatbots, machine learning, predictive analytics, and natural language processing.

But the quick uptake of AI also presents moral dilemmas, such as doubts about customer trust, data security, and privacy. To gain and keep the trust of customers, businesses must put a high priority on the responsible use of AI, guaranteeing openness, equity, and compliance with legal requirements.

Future developments in AI, such as hyper-personalization, AI-generated content, and improved predictive analytics, are anticipated as the technology continues to advance. Marketers may fully utilize AI to create a future of ethical, significant, and impactful marketing strategies by keeping up with these advances and tackling related issues. AI is the foundation of online marketing's future, not just a tool to improve it.

## IX) REFERENCES:

1. Davenport, T. H., & Ronanki, R. (2018). Artificial Intelligence for the Real World. *Harvard Business Review*.
2. Chaffey, D. (2021). Artificial Intelligence in Marketing: Current Capabilities and Future Directions. *Smart Insights*.
3. Chen, L., & Sathi, A. (2020). Predictive Analytics in Digital Marketing. *Journal of Business Research*.
4. Kaput, M. (2020). The Marketing AI Playbook: Unlocking the Potential of Artificial Intelligence. *Marketing AI Institute*.
5. Marr, B. (2022). How AI is Changing Marketing Forever. *Forbes*.
6. Rust, R. T., & Huang, M.-H. (2021). The Future of Marketing with Artificial Intelligence.

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A STUDY OF BUSINESS ECONOMICS AND MANAGEMENT PERSPECTIVE ON INNOVATIONS BROUGHT ABOUT BY TECHNOLOGICAL ADVANCEMENTS, WITH PARTICULAR REFERENCE TO CURRENT INDIAN TRENDS

**Dr. Soni Hasija**
Seva Sadan College of Arts, Science & Commerce

## ABSTRACT
*The primary contributions to the study of businesses' innovative activities from business economics and management in Indian economy are identified and examined in this paper. The new innovations resulting from technological progress viewed through the lens of business economics and management. Scholars and businesspeople alike seem to agree that a company's technological expertise and ability to innovate are among its most valuable assets. However, because technological knowledge is intangible, it has unique properties that set it apart from other resources, making analysis of innovation challenging. This makes analysing it from the perspective of neoclassical economics challenging, as their overly simplistic methods necessitate the development of more comprehensive paradigms and perspectives.*

***Keywords:*** *Innovation, Business Growth, Management Implications.*

## INTRODUCTION
In an age of increasing dependence on new trends and ideas, innovation has become a critical conduit for the thrust of business growth. Also, technological advancement and its rapid accompanying challenges of similar products and services make it indispensably necessary to create new ideas to facilitate the development or augmentation of new/existing products, services, processes, and procedures to sustain business growth.

This article examines the varying views on types of business innovation; eliciting the key concepts underpinning these viewpoints, and argues that the areas for business innovation espoused by the different proponents are dispersal and lack precise focus. The article further establishes that innovative approach to promote business growth ought to be simplistic and clear in focus. It posits innovation in the construct of the core business functions – product delivery, service delivery, process delivery and people delivery for which; the author names as **'The 4Ds of innovation'** and stipulates that these are the fundamental elements underpinning the promotion of business growth. The author further argues that a business entity can maximize its business growth if innovative activities were specifically directed in these critical areas. The Paper Provides the goal of this study is to conduct a thorough and comprehensive review of the primary methods that management and business economics employ to analyse the phenomenon of technological innovation. Clarifying their primary contributions and defining the theoretical framework that currently offers the highest expectations for the analysis of innovation are the goals, taking into account their limited viewpoints.

The significance of developing this shared theoretical framework, there are surprisingly few studies in this area, particularly those that examine how business economics and management techniques are applied to the study of innovation. All of this demonstrates the paper's interest. It is acknowledged that it plays a basic role in economic development and is associated with the entrepreneur as an agent of innovation. The size of the company and market concentration are the two factors that this author suggests as direct drivers of technological advancement, which industrial organization would then adopt. However, despite its importance, analysis in this context still reveals some shortcomings, which are addressed by other theoretical contributions

The relationship between business and technological innovation is examined in this paper from the perspectives of management and business economics, with a focus on contemporary Indian trends. We examine how technical developments affect organizational structures, competitive environments, and business models. We also look at the opportunities and problems this dynamic environment presents. Focusing on important topics like artificial intelligence, sustainability, digital transformation, and the changing regulatory environment, the paper emphasizes the implications of these topics for Indian companies operating in a variety of industries.

Innovation has emerged as a vital conduit for the drive of corporate expansion in an era of growing reliance on novel concepts and trends. Additionally, in order to sustain business growth, it is imperative to develop new ideas to facilitate the development or augmentation of new or existing products, services, processes, and

ISSN 2394 - 7780

procedures. This is due to the rapid challenges of similar products and services that accompany technological advancements.

Modern economies are based on technological innovation, which is the process of developing new technologies and turning them into products or services that can be sold. It develops new industries, boosts productivity growth, and transforms already-existing ones. With a focus on the managerial and economic aspects, this essay examines the complex relationship between business and technological advancement. We look at how companies use technology to optimize operations, generate value, and obtain a competitive edge. India, a fast-growing economy that is seeing a boom in technological innovation and adoption, is the main subject.

**Technology progress and economic development**

Technological advancement is a key factor in determining long-term economic growth from an economic standpoint. It raises productivity and raises living standards by enabling more output with the same or fewer inputs.

**Cost Reduction**: Technology-enabled automation, process optimization, and effective resource use can drastically lower operating expenses for businesses. **Enhanced Efficiency**: Process simplification, better supply chain management, and increased overall efficiency are all made possible by technological advancements.

**New Market Creation**: Businesses can grow and expand by taking advantage of disruptive technologies' ability to redefine and create whole new markets.

**Advantage over competitors**: Companies that successfully embrace and apply new technologies are able to provide better goods, services, or procedures.

**Current technology and its implication**

Innovation and adoption of technology are happening quickly in India in a number of industries. Key trends consist of

**Digital Transformation**: Cloud computing, mobile internet, and e-commerce are just a few examples of the digital technologies that are being widely adopted and changing how businesses run and engage with their clientele. This gives companies the chance to expand into new markets, customize client interactions, and streamline processes.

**Sustainability and Green Technologies**: The need for sustainable and green technologies is being driven by growing environmental concerns. Indian companies are spending more money on waste management, energy efficiency, and renewable energy. adopted and changing how businesses run and engage with their clientele. This gives companies the chance to expand into new markets, customize client interactions, and streamline processes.

**Artificial intelligence AI** : Machine learning (ML) and artificial intelligence (AI) are being used in a variety of sectors, including manufacturing, retail, healthcare, and finance. Businesses can create novel goods and services, automate processes, and learn from data thanks to these technologies

**Logistics and E-Commerce**: The swift expansion of e-commerce is changing the Indian retail scene. In order to satisfy the demands of online shoppers, businesses are investing in advanced supply chain management and logistics systems.

**CHALLENGES AND OPPERTUNITIES**

The advancement of technology presents both opportunities and challenges for Indian businesses

**Skills Gap**: Because of the speed at which technology is developing, companies may find it challenging to locate workers with the requisite knowledge.

**Cybersecurity Risks**: As businesses depend more on digital technologies, they are more susceptible to cybersecurity risks.

**Data Privacy and Regulation**: Companies must guarantee the responsible use of data and adhere to the constantly changing data privacy regulations.

**Infrastructure Development**: For new technologies to be adopted successfully, there must be a sufficient infrastructure, including a dependable power source and internet access.

ISSN 2394 - 7780

**The role of government and policy**

Fostering technological innovation and establishing an environment that is conducive to business is a critical function of the Indian government. Among the major projects are Digital India, a flagship initiative designed to make India a knowledge economy and society strengthened by technology. Make in India is an initiative aimed at luring foreign investment and promoting domestic manufacturing. The goal of Start-up India is to encourage innovation and entrepreneurship. Regulations and Policies: The government is essential in developing a regulatory framework that manages possible risks and In India, technological advancement is a significant factor changing the business environment. Companies can generate value, spur innovation, and obtain a competitive edge by utilizing technology breakthroughs effectively. The skills gap, cybersecurity risks, and regulatory compliance are just a few of the issues that must be addressed in light of technological change. Initiatives from the Indian government are essential for encouraging innovation and establishing a favourable atmosphere for companies to prosper in the era of technological upheaval. Additional study could examine the effects of these technological trends on particular industries and go deeper into the policy ramifications for encouraging equitable and sustainable technological advancement.

**IT and Software**

Indian IT companies are in a good position to benefit from global trends such as the adoption of cloud computing, which involves offering cloud-based services and solutions to companies all over the world. Integration of AI and ML: Creating AI-driven applications for a range of sectors. Solutions for cybersecurity: shielding companies from growing online dangers. Higher-value offerings, the need for specialized tech skills around the world, SaaS revenue streams, and the possibility of developing new products are all factors that drive profit.;

**E-commerce**: With innovations concentrated on: Hyperlocal delivery: Faster and more efficient delivery, particularly in urban areas; e-commerce is expected to continue its robust growth trajectory. Using social media platforms to find and sell products is known as social commerce. Virtual reality (VR) and augmented reality (AR): Using immersive technologies to improve online shopping. improved logistics, a larger online customer base, more frequent orders, and the possibility of selling more expensive goods

**Fintech:** This is just the beginning of the revolution in digital finance. Anticipate more innovation in fields like: Expanding digital inclusion: Providing customized financial products to underserved populations. Personalization enabled by AI: Providing highly customized financial services and advice. Embedded finance is the process of smoothly incorporating financial services into platforms that aren't related to finance. A. online shopping, ride-hailing, etc. Profit drivers include higher margins from value-added services, a growing customer base, increased transaction volumes, and the possibility of international expansion.

**Pharmaceuticals :** Indian pharmaceutical companies are investing in R&D and cutting-edge drug delivery systems despite facing international competition. They are able to increase profitability and seize niche markets as a result. Examples of innovation include the creation of biosimilars, innovative medication formulations, and an emphasis on managing chronic illnesses. Profit-drivers include expanding healthcare spending, cost-effective generic manufacturing, and access to new markets with patent-protected medications

**Telecommunication :**Rapid deployment of 5G networks is revolutionizing the telecommunications industry. In addition to supporting new applications like IoT and smart cities, it makes faster internet speeds possible and gives telecom companies the chance to provide cutting-edge services. The development of smart homes, connected cars, and industrial automation is being facilitated by the Internet of Things (IoT), which is connecting devices and facilitating data exchange. As a result, telecom companies are generating new revenue streams and innovation across a range of industries.

**Impact of new technology in business economics in India :**

**Growth of the Digital Economy**

By 2025, the digital economy in India is predicted to grow to $1 trillion, making a substantial contribution to the GDP of the nation. With more than 700 million internet users in 2023, internet penetration in India has grown quickly. For companies that operate online, this offers a huge market. By 2030, the Indian e-commerce market is expected to grow to $350 billion, demonstrating the country's increasing reliance on online channels for conducting business.

ISSN 2394 - 7780

**Impact on Employment**
Automation generates new job opportunities even though it may result in job displacement in some industries. In India, the IT industry alone employs more than 4.5 million people. There is a growing need for qualified workers in fields like cybersecurity, AI, and data science, which is creating new, well-paying positions. By 2025, the government's Skill India program hopes to have trained 400 million people in a variety of skills, equipping them for the evolving labor market

**Increased Efficiency and Productivity:**
Robotics and automation have improved the manufacturing sector's efficiency, resulting in lower costs and higher output. For instance, India has seen a yearly increase of 20% in the use of industrial robots. Technology is also helping agriculture, as evidenced by the increased crop yields and resource management brought about by the use of drones, sensors, and data analytics. Technology has improved supply chain management and logistics, which has led to quicker delivery times and lower transportation costs

**Enhanced Market Access**
mall companies can now reach a larger consumer base both domestically in India and internationally thanks to e-commerce platforms. For SMEs, this has meant higher revenue and more room for expansion. Social media platforms and digital marketing tools let companies effectively market their goods and services to niche markets. India has demonstrated its global competitiveness in the technology sector by increasing its IT services exports, which reached $154 billion in 2022

**Innovation and Start-ups**
India's startup scene is flourishing, with many tech start-ups arising in sectors like healthcare, edtech, and fintech. Start-up India and other government programs are encouraging entrepreneurship and innovation, which is resulting in the creation of new business models and technologies. Investor confidence in the technology potential of India is demonstrated by the notable increase in venture capital funding for Indian start-ups

**Findings s**
Besides market environment, business and quality aspects, for industries innovation is driven by a desire to be successful, and improve working conditions. Positive outcomes of innovation include an enhancement of industries reputation and image, an increase in operational efficiency and cost benefit

**Research limitations/implications**
Future research is required to examine how negative outcomes can be managed overall, and specific to types of innovation, as well as determining the financial cost and benefit of having a company-wide innovation

**REFERENCE**
Matthew Dobbs, R.T. Hamilton

International Journal of Entrepreneurial Behavior & Research

ISSN: 1355-2554

For an in-depth discussion of this congruence approach to organizational effectiveness, see Nadler D.A., Tushman M.L., “A Congruence Model for Diagnosing Organizational Behavior,” *Organization Dynamics* (1980).

Tushman, M., & Nadler, D. (1986). Organizing for Innovation. *California Management Review*, *28*(3), 74-92. https://doi.org/10.2307/41165203

Copy Citation -**Jesús Galende** got a degree in Economics and Business and Doctor by the University of Salamanca with the Thesis ‘Analysis of the Innovatory Process of the Firms: Determinants, Patterns and Results. An Application to the Spanish Case’. The author is Professor in Management at the University of Salamanca and he participates in research projects developed in the Department of Business Administration and Management of this University. His main research topic focuses on the analysis of the innovation

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# ANALYZING DIGITAL PAYMENT ADOPTION USING THE TECHNOLOGY ACCEPTANCE MODEL (TAM)

**Sumesh Navani[1] and Dr. Ramrao Babarao Rampure[2]**
[1]Assistant Professor, Department of Commerce at R.K.Talreja College, Ulhasnagar, Researcher, S.R.T.M. University Nanded
[2]Professor, Department of Commerce, Madhavrao Patil A C S College, Palam, Nanded

## ABSTRACT
*This study examines the factors influencing digital payment adoption among users in Mumbai using the Technology Acceptance Model (TAM). The increasing shift towards a digital economy, coupled with government initiatives like Digital India and UPI integration, has significantly shaped consumer payment behavior. A structured survey of 100 respondents in Mumbai was conducted to evaluate determinants such as Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude Toward Usage (ATU), and Behavioral Intention (BI). Statistical analyses, including Chi-Square and ANOVA tests, were performed to assess the impact of demographic factors on digital payment adoption. The findings suggest that perceived usefulness and ease of use significantly influence adoption, while gender and income level also play a crucial role in shaping consumer preferences. This study provides valuable insights for fintech companies and policymakers to enhance digital payment solutions, address security concerns, and promote digital literacy.*

***Keywords:*** *Digital Payments, Technology Acceptance Model, Consumer Behavior, Chi-Square, ANOVA, Mumbai*

## INTRODUCTION
With the increasing shift towards a cashless economy, digital payment systems have become an integral part of financial transactions in India. The widespread adoption of smartphones and internet connectivity has accelerated the use of digital payment platforms such as UPI, mobile wallets, and contactless payments. Governments and financial institutions are actively promoting digital payments through initiatives like Digital India and cashless transactions to ensure greater financial inclusion and transparency.

Despite these advancements, challenges such as security concerns, lack of awareness, and digital illiteracy still hinder adoption. Understanding the factors influencing consumer behavior in digital payments is crucial for fintech companies and policymakers to enhance adoption rates and create user-friendly platforms. This study aims to explore these adoption factors through the Technology Acceptance Model (TAM), identifying key behavioral drivers and barriers among users in Mumbai. By leveraging empirical data, the study offers insights into consumer preferences, enabling strategic improvements in digital payment services.

## LITERATURE REVIEW
Digital payment systems include various methods such as UPI, mobile wallets (Google Pay, Paytm), credit/debit cards, and QR code-based payments. The convenience and security of these systems have driven their widespread adoption.

TAM, developed by Davis (1989), identifies two main factors influencing technology adoption:

**Perceived Usefulness (PU):** The degree to which a person believes using a system enhances their performance.

**Perceived Ease of Use (PEOU):** The ease associated with using the system.

**Attitude Toward Usage (ATU):** The user's positive or negative feelings towards using digital payments.

**Behavioral Intention (BI):** The likelihood of a user continuing to use digital payments.

Several studies have analyzed factors influencing digital payment adoption. Research by Venkatesh et al. (2003) highlights that trust, security, and perceived risk significantly impact user decisions. A study by Sharma & Gupta (2020) found that government policies and incentives, such as cashback offers, positively influence digital payment usage.

Demographic factors such as age, income, and education level play a significant role in digital payment adoption. Younger users are more likely to adopt digital payments due to technological familiarity, while higher-income groups show greater adoption rates due to financial stability and access to banking services (Kumar & Rao, 2021).

ISSN 2394 - 7780

Despite rapid adoption, digital payment systems face challenges such as fraud risks, transaction failures, and lack of digital literacy. Future advancements in AI, blockchain, and biometric authentication are expected to enhance security and user trust, further driving adoption (Patel & Singh, 2022).

## RESEARCH METHODOLOGY

### Research Design

A **descriptive research design** was used to analyze consumer adoption of digital payments in Mumbai.

### Sample and Data Collection

A structured questionnaire was distributed to **100 respondents in Mumbai** using convenience sampling. The questionnaire consisted of:

**Demographic details** (age, gender, education, income, occupation)

**TAM constructs** (PU, PEOU, ATU, BI) measured on a 5-point Likert scale.

### Hypotheses Formulation

**H1:** There is a significant relationship between Perceived Usefulness (PU) and Behavioral Intention (BI).

**H2:** There is a significant relationship between Perceived Ease of Use (PEOU) and Attitude Toward Usage (ATU).

**H3:** Demographic factors (age, gender, income) significantly affect digital payment adoption.

## DATA ANALYSIS AND FINDINGS

### Descriptive Statistics

### Descriptive Analysis of Demographics

| Demographic Factor | Categories | Percentage |
|---|---|---|
| **Gender** | Male | 58% |
| | Female | 42% |
| **Age Group** | 18-24 | 40% |
| | 25-34 | 35% |
| | 35-44 | 15% |
| | 45+ | 10% |
| **Income Level** | Below 3 Lakhs | 30% |
| | 3-6 Lakhs | 35% |
| | 6-10 Lakhs | 20% |
| | Above 10 Lakhs | 15% |
| **Education** | Undergraduate | 50% |
| | Postgraduate | 35% |
| | Others | 15% |

**Demographics:** 58% male, 42% female respondents.

**Most-used digital payment method:** UPI (65%), mobile wallets (20%), cards (10%), others (5%).

**Primary reason for using digital payments:** Convenience (45%), cashback offers (30%), security (15%), peer influence (10%).

### Chi-Square Test (Testing Relationship between Gender and Preferred Digital Payment Method)

| Digital Payment Method | Male (%) | Female (%) | Total |
|---|---|---|---|
| UPI | 40 | 25 | 65 |
| Mobile Wallets | 12 | 8 | 20 |
| Cards | 6 | 4 | 10 |
| Others | 2 | 3 | 5 |
| **Total** | **58** | **42** | **100** |

ISSN 2394 - 7780

**Chi-Square Test Results:**

Chi-Square Value = **6.45**

p-value = **0.038** ($p < 0.05$, significant)

**Interpretation:** Gender significantly influences the choice of digital payment method.

**ANOVA Test (Testing Effect of Income on Behavioral Intention to Use Digital Payments)**

| Income Level (INR) | Mean Behavioral Intention Score |
|---|---|
| Below 3 Lakhs | 3.2 |
| 3-6 Lakhs | 4.1 |
| 6-10 Lakhs | 4.5 |
| Above 10 Lakhs | 4.8 |

**ANOVA Test Results:**

F-Value = **5.12**

p-value = **0.002** ($p < 0.05$, significant)

**Interpretation:** Income level significantly affects behavioral intention to use digital payments.

## DISCUSSION, IMPLICATIONS, AND LIMITATIONS

The study confirms that perceived usefulness and ease of use strongly influence digital payment adoption, while demographic factors like gender and income significantly impact preferences. These insights can help fintech firms develop user-centric solutions by addressing security concerns and enhancing accessibility. Policymakers can use these findings to promote digital literacy programs and incentivize digital transactions. However, the study is limited to Mumbai and a sample of 100 respondents, which may not be generalizable. Future research should explore larger and more diverse samples, incorporating qualitative data to better understand user perceptions.The study confirms that perceived usefulness and ease of use strongly influence digital payment adoption. It also highlights the role of demographic factors, with younger users and higher-income groups demonstrating a greater tendency to adopt digital payment methods. Gender differences suggest that while males show a higher inclination toward digital transactions, increasing awareness among female users can bridge this gap. The results also indicate that financial incentives, security features, and ease of access significantly impact adoption rates.

## CONCLUSION

These insights can help fintech firms develop user-centric solutions by addressing security concerns and enhancing accessibility. Companies can improve user experience by offering personalized services based on demographic preferences. Policymakers can use these findings to promote digital literacy programs and incentivize digital transactions, especially among lower-income groups and older populations who may face technological barriers.

However, the study is limited to Mumbai and a sample of 100 respondents, which may not be generalizable. Future research should explore larger and more diverse samples, incorporating qualitative data to better understand user perceptions. Additionally, longitudinal studies could provide deeper insights into evolving trends in digital payment behavior.

## REFERENCES

1. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319-340.
2. Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. Management Science, 46(2), 186-204.
3. Statista. (2023). Digital payment adoption trends in India.
4. Kumar, R., & Rao, S. (2021). Impact of demographic factors on digital payment adoption. Financial Review Journal.
5. Patel, T., & Singh, R. (2022). Future trends in digital payments: AI and blockchain perspectives.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# RETAIL CHEMIST'S PRESCRIPTION AUDIT- AN IMPORTANT TOOL FOR MEASURING DOCTOR'S PRESCRIPTION BEHAVIOR.

**Prof. Sunil Chougule[1] and Dr. Ramesh G[2]**
[1]Research Scholar, St. Francis Institute of Management and Research, Mumbai
[2]Deputy Director, SFIMAR -Mumbai

## ABSTRACT
*In the competitive world of pharmaceuticals, having precise insights into prescriber behavior and market dynamics can make or break a company's strategy. One effective way for obtaining this vital information is the Pharma Retail Chemist Prescription Audit (RCPA). Still, like any tool, it comes with its own set of challenges that can undermine its potential. From data inaccuracies to resistance from chemists, these obstacles can turn a valuable resource into a source of frustration. Pharma business is like an ocean rich with variety of fish. When one wants to catch whales, he has to go to the right area and the right depth. Likewise in pharma business when one wants to go for larger accounts, he has to first identify them and then deploy all resources and efforts. This process of identifying the right prescribers and evaluating their potential is in simple words Retail Chemist Prescription Audit – RCPA.RCPA is designed to measure outflow of prescription drugs from the retail chemist into the hands of the patients. Prescription audit data is the most sensitive indicator of prescription products performance in the marketplace.[1] Prescription is not an expression of opinion, attitude, or speculation by the prescriber but a matter of fact. It is the record that the prescriber tends to change his mind about individual drug or line of treatment. Prescription records changes from time to time, indicative if the demand pattern.[2]*

***Keywords:*** *Pharmacist, Medical Representative, Retail Audit, Prescription, Doctors,*

## INTRODUCTION
The RCPA enables pharma companies to analyse how well their products are performing in the market. This data is essential for informed decision-making and strategic modifications. By tracking the sales and performance of competitors in the same market, pharma companies can gain insights into their competitors' strategies, identify strengths and weaknesses, and plan their strategies accordingly. The RCPA provides real-time data, ensuring that companies have the most up-to-date information on the market and competitor performance. The RCPA enables pharma companies to analyse how well their products are performing in the market. This allows companies to monitor the performance of retailers and chemists, helping identify strong partnerships and areas for improvement. It makes it possible to implement customized plans to strengthen ties with important distribution chain participants. For a number of reasons, the RCPA is crucial to the pharmaceutical sector. Deep insights into the performance of rivals in the same market are provided by the RCPA. It helps pharmaceutical companies to monitor the competition, comprehend market trends, and modify their strategy, as necessary.

In the pharmaceutical industry, data is king. The information provided by the RCPA enables businesses to make well-informed choices about marketing tactics, product distribution, and general company planning. Pharma firms can assess the efficiency of their distribution network by examining the performance of stockists, chemists, and retailers. Better resource allocation and a more effective supply chain result from this.

Armed with real-time data on market performance and competitor strategies, pharma companies can fine-tune their strategies, invest in high-potential areas, and respond swiftly to market changes.

Medical representatives are encouraged to interact with chemists before meeting Doctors in their territories and extract as much information as possible about the therapeutic area they represent, like competitors' brands and doctors' prescription preferences. The following is revealed by this procedure, which is known as The Retail Chemists Prescription Audit (RCPA)

1. Prescription habits of doctors.
2. The molecule that the doctors favour
3. Our brand's estimated potential concerning doctors' prescription potential.
4. Understand Doctors' Profile
5. Selection of Doctors for Activity
6. Particular Brands that may be marketed to physicians.'

ISSN 2394 - 7780

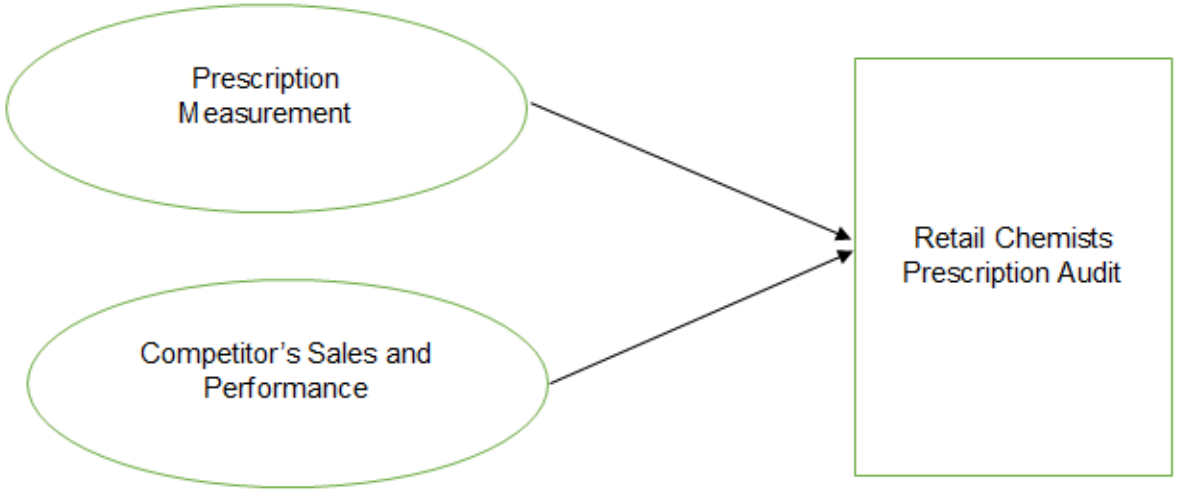
7. Helps in PRECALL PLANNING meaning Planning which MRs do after RCPA and before meeting the Doctor, e.g.., which brands MRs will promote in front of the Doctor, decide 'In clinic' communication, which inputs he will give like LBL, reminder cards, samples/gifts/activities etc. (3)

**RESEARCH OBJECTIVES:**

1. Identify the role of RCPA as important tool for prescription measurement.
2. Understand the importance of RCPA as a tool for knowing the competitors' sales and performance in the market.

**STUDY MODEL AND HYPOTHESIS:**

Investigate the study goals, a fictitious research model was developed based on a survey of the literature. The proposed correlation among the factors influencing (variables) the prescription measurement (outcome) is narrated in Figure 1. Two hypotheses (H1, H2,) were made to observe the effect of variables on the outcome.




**Null hypothesis (H0):** Retail Chemists prescription audit does not influence prescription measurement of a pharmaceutical company and competitors' sales in the market.

**Hypothesis 1 (H1):** Retail Chemists prescription audit influence prescription measurement of a pharmaceutical company and competitors' sales in the market.

Unsatisfactory replies, such as missing values and partial data, were validated. Incomplete and inappropriate questionnaires were removed, leaving 160 questionnaires suitable for data analysis. Out of 200 filled questionnaire, 20% (40 questionnaires) was not filled appropriately. Most inappropriate comments were sent by email, and most of them were completed without oversight or direction.

All the data were analysed using the statistical package SPSS 22. Descriptive analysis was conducted for all the independent variables to acquire the mean. Reliability and Validity Statistics were performed to obtain reliability coefficients and Cronbach alpha value. Cronbach alpha value of more than 0.6 was considered as passed. Multiple linear regression was performed to validate the model. Hypothesis Testing was done using ANOVA analysis. The level of significance was assessed at 5%.

**RESULTS:**

Out of 160 pharma selling professionals from various companies together representing 20% of Area Sales Manager and Medical Representative 80% of the sample.

**Table 1-**Respondents with Designation

| Designation | Frequency | Percent |
|---|---|---|
| Area Sales Manager | 32 | 20 |
| Medical Representative | 128 | 80 |
| **Total** | 160 | 100 |

A 7-point Likert scale questionnaire was adopted in the study, based on which measurement structures have been established and evaluated for authenticity by reviewing the expert opinion & literature. Reliability coefficient Cronbach alpha value exceeds the minimum value standard 0.6 for all measurement structures; overall, the reliability values of the questionnaire ranged from 0.77 to 0.81.

ISSN 2394 - 7780

**Table 2 -** Reliability and Validity Statistics

| Construct | Cronbach's alpha | CR | AVE |
|---|---|---|---|
| Prescription Cost Measurement | 0.78 | 0.75 | 0.61 |
| Competitor's Sales and Performance | 0.81 | 0.79 | 0.57 |

CR: composite reliability; AVE: average variance extracted

Only high factor loadings (values greater than 0.6) were taken into consideration for the evaluation of the model. This study contributed 89% of the above factors and the materials used to measure structures were without cross-loading (Table 2). The results showed that the total reliability (CR) threshold value for all structures was greater than 0.7. The average variance extracted (AVE) value is also greater than the minimum value of 0.50, which ensures the validity of the questionnaire tools.

**Data Variables and Measurement:**

The Mean summary statistics (Table 3) confirm the positive impact of retail chemists' prescription audit. It shows that RCPA as a tool is giving current, updated information about companies' medicines sales and compared to their brands how more or less competitor's brand is selling/prescribed.

**Table 3** Mean summary for independent variables

| Independent Variables | Mean |
|---|---|
| Prescription Cost Measurement | 5.3 |
| Competitor's Sales and Performance | 4.7 |

Using the stepwise regression approach with two independent variables led to the model fit measurement of the multiple linear regression model (Table 5) for RCPA as a dependent variable; The R-squared value is 70% and all the independent variables together affect the study variables individually. A sufficiently narrow 95% estimated interval S must be 2.5. The S value is 0.533, which ensures the accuracy of the model. The data show that RCPA as a tool in measurement of prescription cost and competitors' activity is always important. The F-statistic is 26.7, and the p-value is <0.001. The value of path coefficient, β=0.27, 0.17, for Prescription Cost Measurement and Competitor's Sales and Performance at a p-value of <0.05. This implies that the results support the hypothesis. These independent variables created a favourable environment, which is why the accepted research hypotheses were not merely coincidental; rather, they validated the positive influence of the independent variables on the prescribing behaviour of the physician. Ninety-two percent of area sales managers and medical representatives agreed that RCPA is a necessary tool for determining a doctor's prescription value based on how far away the pharmacy is. The information shows how beneficial RCPA is as a tool for market research and understanding both current and potential customers.

**Table 4:** Hypothesis Testing

| Variable | Hypothesis | t Value | β | P-value | Direction | Decision |
|---|---|---|---|---|---|---|
| Prescription Measurement | RCPA as a tool helps in prescription measurement | 8.76 | 0.27 | 0.00 | Positive | Accepted |
| Competitor's Sales and Performance | RCPA is playing vital role in updating about competitor's sales and performance | 5.40 | 0.17 | 0.00 | Positive | Accepted |

**Table 5:** Model Summary

| Model Summary | | | | |
|---|---|---|---|---|
| R | R Square | Adjusted R Square | Std. the error of the Estimate | ANOVA F (p-value) |
| 0.76 | 0.577 | 0.572 | 0.533 | 26.7 (0.000) |

**CONCLUSION**

1. RCPA helps medical representative to know that who are the prescribers of his company's products and who stopped prescribing it.
2. RCPA helps to quantify a medical representative who are his regular prescribers and if there is any increase or decrease in the prescription quantity.
3. RCPA makes you realize that how much quantity of your company's stock is available and compared to your stock how much stock of competitive brands is available. This can give a company their product movement at retail counter.

ISSN 2394 - 7780

4. RCPA helps to liquidate the near-expiry stock as pharmacists are always having concerns about near-expiry stock. Apart from near expiry medical representatives get to know about the idle (non-moving) stock of their company.
5. RCPA helps to get latest information about competitor's offerings and schemes, bonus offering and campaign they conduct.

**REFERENCE**

1. EU Commission Publishes Important New Draft Guideline on Good Distribution Practice of Medicinal Products for Human Use-ECA Academy: 2020.Available from: https://www.Gmpcompliance.org/gmp-news/eucommission-publishes- important-newdraft-guideline-on-good-distributionpractice-Of-medicinal-productsfor-humanuse. [Last accessed on 2020 Apr 291.
2. E-book Available from: https://www.uspnf.com/sites/default/ files/usp_ pdf/EN/USPNF/revisions/c1083.pdf. [Last accessed on 2020 Apr 22].
3. Impact of Training on Medical Representatives in Their Performance Special Reference of Alembic Pharmaceuticals Ltd. R Sharma, MM Negi – 2020 American International Journal of Business Management (AIJBM) ISSN- 2379-106X, www.aijbm.com Volume 3, Issue 7 (July 2020), PP 91-96
4. Essential Sfa, Retail Chemist Prescription Audit, Accessed 20 November 2014, Available: http://essentialsfa.com/Retail%20Chemist%20Prescription%20Audit.html Pharma Knowledge Base, RCPA Accessed23 November 2014, Available: http://hosted.comm100.com/knowledgebase/WhatisRCP_A108.aspx?id=108andsiteid=95439.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A STUDY OF SELF-DIRECTED LEARNING STYLE OF STUDENTS STUDYING IN CLASS IX...

**Mr. Sunil Maruti Mhaskar[1] and Dr. Heena D. Wadhwani[2]**
[1]Assistant Teacher, Shetkari Unnati Mandal's Sitaram Rama Patil Vidyalaya, Aamne, Bhiwandi
[2]Associate Professor, Seva Sadan's College of Education, Ulhasnagar

**ABSTRACT**
*Education is a process of enlightening, enlightening and empowering. Crowe and Crowe say, "Education is a purposeful, sustained form of change in action, which is situational." Every person, while learning various life skills, learns in a certain way. This is what shapes the lifestyle of that person. The same is true of learning style. 'Learning style' is a particular way of acquiring knowledge, skills and attitudes through study or various experiences.' Considering learning style, education experts have come up with various models till date. However, self-learning learning style is the most useful for success in life.*

*Self-directed learning style is the learning that students direct themselves. In this style, students set their own goals and study according to them. Self-directed learning style helps students develop lifelong learning habits, students learn skills that can be applied in any situation.*

*The researcher has been working continuously in the field of education for the past 27 years. The researcher is aware that according to 'as is the nature of the person', each student has his own learning style. Researchers have observed that students who learn in their own learning style and achieve their goals in life are successful in the future. If a student studies in a self-study style, he succeeds in all types of exams in life.*

***Keeping this in mind, the researcher has chosen the following research topic :-***

**'A study of self-directed learning style among students studying in class 9th...**

***Keywords:-*** *Concept of 'Learning', Various Learning styles, self-directed learning style…*

## • INTRODUCTION

Education is very important in human life. Education turns the body towards labor, the intellect towards knowledge and the heart towards emotion. **World poet Gurudev Rabindranath Tagore** has given various formulas of education.

1. Every student has the right to study according to his own interests.
2. The purpose of education is to discover and develop oneself. Education should be taken with self-reliance.
3. Study should be done through observation, introspection and direct experience rather than studying from books.

**"Study style is such a characteristic of the learner that he gives a specific response in any instructional situation." – Laycock**

The researcher has 27 years of experience in the field of education till date. The researcher is aware that every student has a specific style of studying. Accordingly, the student gets various experiences by studying. Considering the study style, education experts have invented many models till date. Among them, **Kobe's learning style model, Manu P.'s learning style model, Guild and Garger's learning style model, Neil Fleming's VAK learning style model, Pandey and Agarwal's learning style mode**l, etc. are famous. Despite the various learning models and styles, a student should study through self-directed learning styles and make his academic progress. Self-directed learning style is the study done by the student himself. In this style, students set their own goals and study accordingly.

Some of the important benefits of self-directed learning style are –

1. Students learn skills that can be applied in any situation
2. Students develop a habit of lifelong learning
3. To enrich their experience through various experiences
4. To achieve brilliant success in various examinations by studying well
5. To increase their self-confidence and relieve stress
6. To develop creativity and imagination

ISSN 2394 - 7780

7. To help the student know their strengths and weaknesses

Keeping in mind the need and importance of the above, the researcher has undertaken this research work.

- **Significance of the Study& Importance of Theme :-**

Education is a lifelong process. 'The student is the center of the education process.' According to **'Pinde Pinde Matirbhinnan'**, every student studying in class 9 is different from the other. It is a big challenge for students to bring about the desired behavioral change in themselves through daily learning experience. That is why this research will be important. While explaining the vision of the **National Education Policy 2020**, it has been mentioned that, 'To create an education system developed from Indian values, which directly contributes to the sustainable transformation of India into a just and vibrant knowledge society by making high quality education available to all, thereby making India a global knowledge superpower. To develop knowledge, skills, values and character that support responsible commitment to human rights, sustainable development and quality of life, so that they become true global citizens.'

The researcher will have to seriously consider some of the important points mentioned above in the summary of the National Education Policy.

The student should adopt various self-directed learning styles that increase his/her own aptitude and interest in studies and can lead to his/her all-round development. Out of which the future well-informed citizen of India will be formed and a true 'global human being' will be shaped. **Considering the above, the following questions have arisen in the mind of the researcher -**

1. What is the self-directed learning style of students in class 9 in secondary schools in rural and urban areas?
2. What is the self-directed learning style of students in class 9 in aided and unaided secondary schools in rural areas?
3. What is the self-directed learning style of students in class 9 in aided and unaided secondary schools in urban areas?

The researcher feels it is necessary to explore these and other questions and solve the problems related to them in a proper manner. Therefore, it is very important to conduct this research work.

- **Title of the Problem :-**

**'A study of self-directed learning style among students studying in class 9th...**

- **Operational definitions of terms and concepts :-**

 **'Secondary School:-** 'Secondary level education from class 9th to 10th will be referred to as secondary level education.'

 **'Secondary School :-** 'Secondary school is a school where secondary level education is provided to the classes of class 9th.'

 **Student -** 'A person who is learning anything is called a student. The word 'Vidya+Arthi' basically means 'one who wants to know and who is curious.'

 **Student:-** A student studying in class 9th of the school curriculum.

 **Self-Directed Study Style :-**

Self-directed study style is the study done by the student himself/herself. Self-directed study is an individual study method that depends on the student.

- **Research Aim :-**

**'A study of self-directed learning style among students studying in class 9th...**

- **Research Objectives :-**

1. To study the level of self-directed learning style of students studying in class IX.

2. To study the self-directed learning style of students studying in class IX

**According to the following variables:-**

**a) Gender b) Location of school c) Type of school**

ISSN 2394 - 7780

- **Hypothesis of the study :-**

1. **H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to gender.
2. **H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to school location.
3. **H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to school type.

- **Research Variables :-**

The following variables have been used for the present research:-

 Independent or self-reliant variable:- Self-directed learning style

 Demographic variables:-

1. Gender - Male and Female
2. Location of school - Rural and Urban Area
3. Type of school - Aided and Unaided

- **Scope of the Study :-**

The scope of the present research work is to study the self-directed learning style of students studying in class IX in private aided and unaided Marathi medium secondary schools in rural and urban areas of Thane district only, affiliated to the 'Maharashtra State Board of Secondary and Higher Secondary Education'.

- **Delimitations of the Study :-**

1. The present research work is limited to Thane district of Maharashtra state only.
2. The present research work is limited to private aided and unaided Marathi medium secondary schools affiliated to the 'Maharashtra State Board of Secondary and Higher Secondary Education'.
3. The present research work is limited to studying the self-directed learning style of students studying in class IX.
4. The present research work is limited to rural and urban areas of Thane district only.
5. The findings of the present research are dependent on the information provided by the respondents.

- **Review of Related Literature :-**

Based on the available knowledge, it is necessary for the researcher to review the relevant literature to explore further knowledge or to clarify the changed meaning of the available knowledge in a new situation. Among the various previous research works that were studied in the context of the present research, some of the important previous research works are reviewed as follows:-

Self-directed learning gives learners the freedom and autonomy to choose the what, why, how, and where of their learning (Francis, 2017).

Self-Regulation is the ability to plan, direct, and control one's emotions, thoughts, and behaviors during a learning task. The most prominent model of self-regulation comprises four phases: (a) setting learning goals, (b) monitoring and regulating the learning progress, (c) making adjustments, or changing strategies, to achieve goals, and (d) reflecting on the task to generate new knowledge (NRC, 2012; Pintrich, 2004).

❖ **RESEARCH DESIGN :-**

- **Research Methods :-** Various methods are adopted to conduct academic research. The present research topic is related to the current situation. Therefore, the survey method under the descriptive method has been adopted to solve the research problem.
- **Sampling Size :-** The entire portion from which the researcher has selected the sample is called the 'population'. Out of the total number of students studying in class IX in Marathi medium secondary schools, 30 students are the population of this present research.

ISSN 2394 - 7780

- **Sampling Size or Technique :-** Probability sampling method has been adopted for the present research. Out of the total number of Marathi medium schools, 4 such schools, 2 rural schools (1 aided and 1 unaided) and 2 urban schools (1 aided and 1 unaided), have been randomly selected from the area. Out of the total number of students studying in class IX in these selected secondary schools, 30 students have been included in the sample.
- **Tools of Data Collection :-** The scientific method is used in educational research. For the present research, the emphasis has been on collecting as much primary facts or information as possible. For the present research, the researcher has used the questionnaire on the VAK model as a tool.
- **Analysis & Interpretation of Data :-**

**The collected data was tabulated and analysed in two ways I - on the basis of Objective and II – as per Hypothesis.**

**I (According to the research objective) - To study the level of self-directed learning style of students studying in class IX.**

| Level | Low Level | Average Level | High Level |
|---|---|---|---|
| Marks | 120-180 | 181-240 | 241-300 |
| N | 00 | 09 | 21 |
| Percentage (%) | 00.00 | 30.00 | 70.00 |

- **70.00 % of the std.IX students ware having high level of self-directed learning style and 30.00% std.IX students ware having Average Level of self-directed learning style.**
- **No student had Low level of self-directed learning style.**

**II -** To study the self-directed learning style of students studying in class IX

according to the following variables:-

**a) Gender b) Location of school c) Type of school**

**1. H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to gender.

| Gender | N | t calculated | t tabulated | Result |
|---|---|---|---|---|
| Male | 15 | 3.556 | 2.048 at 0.05 level | Significant at 0.01 level |
| Female | 15 | | 2.763 at 0.01 level | |

**Hypothesis 1 is Not Accepted that mean there is** significant difference in self-directed learning style of students studying in class IX with respect to gender.

**2. H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to school location.

| Location of school | N | t calculated | t tabulated | Result |
|---|---|---|---|---|
| Rural | 15 | 0.691 | 2.048 at 0.05 level | Not Significant |
| Urban | 15 | | 2.763 at 0.01 level | |

**Hypothesis 2 is Accepted that mean there is no** significant difference in self-directed learning style of students studying in class IX with respect to Location.

**3. H0:** There is no significant difference in self-directed learning style of students studying in class IX with respect to school type.

| Type of School | N | t calculated | t tabulated | Result |
|---|---|---|---|---|
| Aided | 15 | 1.715 | 2.048 at 0.05 level | Not Significant |
| Unaided | 15 | | 2.763 at 0.01 level | |

**Hypothesis 3 is Accepted that mean there is no** significant difference in self-directed learning style of students studying in class IX with respect to Type of School.

ISSN 2394 - 7780

❖ **Findings of the study :- The findings of present research shows that majority of class IX students adopted high level of self-directed learning style. It was also found that -**

1. There is significant difference in the self-directed learning style of students studying in class IX with respect to gender.
2. There is no significant difference in the self-directed learning style of students studying in class IX with respect to school location.
3. There is no significant difference in the self-directed learning style of students studying in class IX with respect to school type.

❖ **CONCLUSION :-**

It can be concluded that Academic Achievement of the students can be enhanced with high level of self-directed learning style. Guidance should be provided to the students to choose appropriate learning style for effective learning of the subject. Teachers should organize variety of teaching learning activities and should make use of various ICT and other Educational resources in order to motivate students for better learning of the subject.

❖ **BIBLIOGRAPHY :-**

**BOOKS,**

- Mahale, S., (2009). Teaching Models and Learning Styles, Insight Publication, Nashik.
- Ministry of Education, (2020). National Education Policy 2020, Government of India.
- Bhintade, V.R. (2010). Educational Research Methods, Nityanutan Prakashan, Pune.
- Bhagyavant, S. (2009). Teaching according to Learning Styles, Shikshan Samiksha, Nagpur

**MAGAZINES,**

- Ibrahim, Y.K. (2009). The effect of learning styles on education and the teaching process. (Journal of social science, University of Firat, 23119 Elazig, Turkey.) Retrieved from http://www.thescipub.com/PDF/jssp.

**DISSERTATION,**

- (Tyagi, S. et al., 2014). Achievement motivation, learning style, parental involvement as correlates of academic achievement of the secondary school students.(Thesis,Ph.D. Education, Maharshi Dayanand University, Rohtak, Haryana.) Retrieved from http://hdl.handle.net/10603 /107062.

**WEBLIOGRAPHY :**

- https://shodhganga.inflibnet.ac.in.
- https://en.wikipedia.org/wiki/Learning_styles
- https://vark-learn.com/introduction-to-vark/the-vark-modalities/

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# IMPACT OF DIGITAL TECHNOLOGY ON EDUCATIONAL SECTOR

**Tahira Khan[1], Kajal Gupta[2] and Manisha Lahori[3]**
[1,2]T.Y.B.Com (B&I) Student, R.K. Talreja College of Arts, Science and commerce, Ulhasnagar
[3]Assistant Professor, R.K. Talreja College of Arts, Science and Commerce, Ulhasnagar 421003

## ABSTRACT

***A study on how digital technologies can be used in education today.***

*Technology is changing the world and education must keep up. Since 2020, technology along with some uncertain situations that the world has faced significantly changed the education industry. Today's students frequently use connected devices such as smartphones and tablets to complete academic tasks such as writing, attending lectures and keeping up with assignments. The rapid increase in the number of internet users has led to the digitalization of many sectors, especially the education sector. It has opened the door to a lot of information from online books, podcasts, photos and videos.*

*Traditionally, technology was used only to complete a project or task. But today it's used for everything from learning to communication to collaboration. Technology has also opened up many opportunities for communication and collaboration. For example, students in rural classrooms in India can learn from textbooks published by American schools, they can communicate via email or even chat with them via video chat.*

*Additionally, technology has changed the roles of teachers and students. Traditionally, teachers were Students primary sources of information. However, thanks to the internet, everyone's access to information changes the "representative" role of teachers.*

***"Pedagogy is the driver, technology is the accelerator."***

***Keywords:*** *Digitalization, Active Learning, Critical Pedagogy, Distance Learning, Hybrid Learning.*

## 1. INTRODUCTION

Digital education is the combination of modern technology and digital tools that help advance teaching and learning. It is also called technology-enhanced learning (TEL). digital education or e learning. Digital education finds ways to learn through the use of technology and digital tools.

The digital transformation of the country is beginning and the digital development of business and people can only be possible with digital education. The concept of digital education is not new and has been around in various forms for years, but its importance has increased even more with the COVID-19 pandemic interrupting face-to-face education. With traditional classrooms taking a backseat for a while due to the ongoing pandemic, most schools have adopted digital education as a solution. Digital learning is seen as an alternative to traditional chalk and talk education.

The emergence of the internet and evolving technologies have made learning interactive, engaging, motivating and easy. Education is no longer limited to textbooks and classrooms it has become a combination of technology new learning and digital content. The internet has become cheaper and easier to use this will lead to greater integration of digital teaching methods and traditional teaching. The government is actively taking appropriate measures to formulate policies that will support the development of the digital education industry in India. We are working to improve digital infrastructure standards across India to facilitate the use of new educational tools. In the great opportunities that digital education will bring will support the country's education.

### 1.1 Need for digital technologies in education:

The globalization of education has already necessitated the application of digital technologies. Online platforms were available for conducting classes, sharing resources, doing the assessment and managing the day to day activities of academic institutions. However, the use of these platforms was proactive. The COVID-19 pandemic has forced the institutes to adopt the online teaching mode to sustain the education system. Developed countries were well equipped to deal with this crisis. However, developing countries worked hard to meet this requirement. Digital technologies assist in developing abilities that will require student's professional performance, such as problem-solving, thinking structure creation and process comprehension. They are also preparing for a more unpredictable and changing future in which technology will play a critical role. Students acquired qualities and abilities will be essential to their professional success.

ISSN 2394 - 7780

**1.2 What are the benefits of digital technologies in education?**

**1. Flexibility:**
Technology offers greater flexibility in the way we study. Unlike more traditional ways of learning where students would have to travel to access physical resources at a library, technology has enabled students to access learning resources with the click of a button.

**2. Personalized learning:**
Technology enables educators to personalize learning materials and adapt tasks to the needs and preferences of the individual student. By using technology to tailor educational resources to different abilities, marginalized students are less likely to fall further behind and be more empowered and engaged in the learning process.

**3. Choice in how we learn:**
The use of multimedia and interactive technology has helped education to become more inclusive for all and create a positive learning experience. Gone are the days when teaching material could only be text-based, now educators can use technology to design a range of materials, such as videos, podcasts, interactive quizzes and games.

**4. Collaborative learning:**
Many of today's learners are already familiar with sharing content online. As users of social media platforms, they are used to online spaces being collaborative. Digital education needn't be solely two-way-tutor to student and student to tutor.

**5. Cost-efficiency and sustainability:**
Embracing digital learning can contribute to cost- efficiency and sustainability. Reduced reliance on physical resources such as textbooks and paper not only saves costs but also aligns with environmentally conscious practices.

**6. Increase student engagement:**
Digital technology makes learning more interactive and engaging. For example, introduction games in education makes learning fun and interactive. It also makes it easier to under stand and remember difficult concepts.

**1.3 Objective of digital technology in education:**
Educational technology, or EdTech, is a growing technology sphere that allows learners to learn better using interactive hardware or software. It involves finding intelligent solution to create immersive learning experiences that stay with them for life, and teachers benefits by achieving their educational goals in a shorter time.

**1.4 Challenges of digital technologies in education:**
Educational technology is not without its difficulties, notably in implementation and usage. Issues regarding excessive screen time, the efficacy of instructors' use of technology, and concerns about technology fairness are also raised. The content has become more significant as a result of the COVID-19 problem. Educators must generate and comment on online educational content, encouraging students to analyze a topic from several angles in particular. Furthermore, while some students thrive in online learning settings, others struggle due to various factors, including a lack of support. For example, a student who has previously suffered in face-to-face circumstances may suffer far more in the current situation. These people may have been reliant on services that are no longer accessible. However, online education may provide difficulties for instructors, particularly in areas where it has not been the norm.

**2. LITERATURE REVIEW:**

**1. Meer & chapman (2015):**
An assessment culture is, on the other hand, characterized by what Meer & Chapman (2015) describe as learning-oriented assessment, where focus is on the learning elements of assessment assisting students to become reflective practitioners, and to the develop higher order cognitive skills. The focus is on the formative aspects of assessment, as an formative techniques are expected to support student motivation and achievement.

**2.Lamb et al. (2020):**
Lamb et al. (2020) indicated that the students perform less in virtual learning rather than the traditional learning or so-called face-to-face classes particularly in their mathematics subject and in the writing. The researches also stated that the impact of student learning and performance were greater in the early years before the virtual learning were provided to the students.

ISSN 2394 - 7780

**3. Research Techniques:**

The survey has been conducted using google form from various age groups of students, teachers, employees and professional such as charter accountant, lawyer doctors, engineers and other person. The persons responses data received from Kalyan Ulhasnagar and other district of India. The responder had responded on questionnaire of (1) use of digital technology in education. (2) types of digital devices. (3) use of digital tools or platforms. (4) primary reason for using technology in education. (5) comfort while using digital technologies in educational purpose. (6) challenges faced by digital technology in educational sector. We have received total 107 numbers of persons responded. The maximum number of person years age group 18 to 25 years age group that is 77.57% and the minimum number of responded from 36 to 45 and above years age group that is 3.74%. and the 49.53% male responders and 50.47% female responders have been participated in the survey.

**4. Data Analysis and Interpretation:**

**4.1 Use of digital technology in education.**

It has been observed from the survey that in the given figure 4.1, 62% people were using digital technology in education in daily basis, whereas 13% people are using digital technology in education in weekly basis as shown in the figure 4.1. the 7% People use monthly digital technology in education and 8% rarely uses the digital technology in education as given in the figure 4.1. this shows that maximum people uses the digital technology in education on the daily basis.

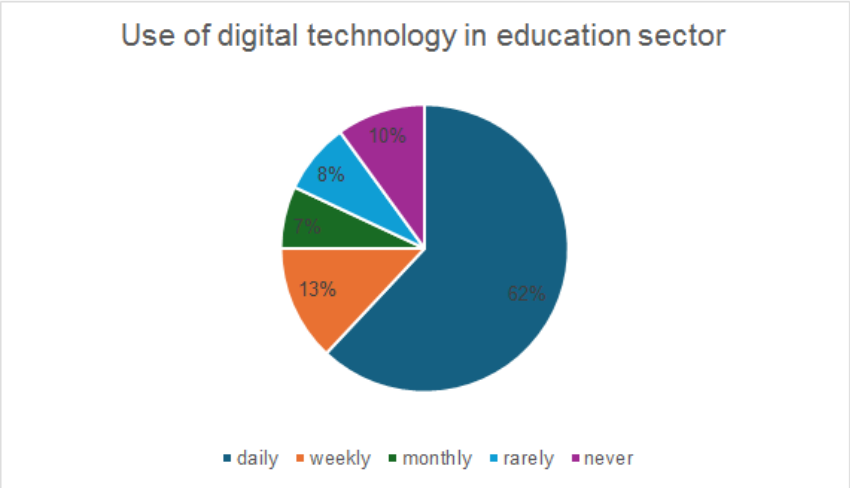



**Figure 4.1**

**4.2 Digital devices use for Education Purpose.**

It has observed from the survey that in the given figure 4.2, 72% smartphones are used as a device for educational purpose, where the 17% laptop are used as a device for educational purpose as shown in the figure 4.2. the 7% shows that the tablets are used as device for educational purpose. This shows that maximum people uses the smartphones as a digital devices for educational purpose as given in the figure 4.2.

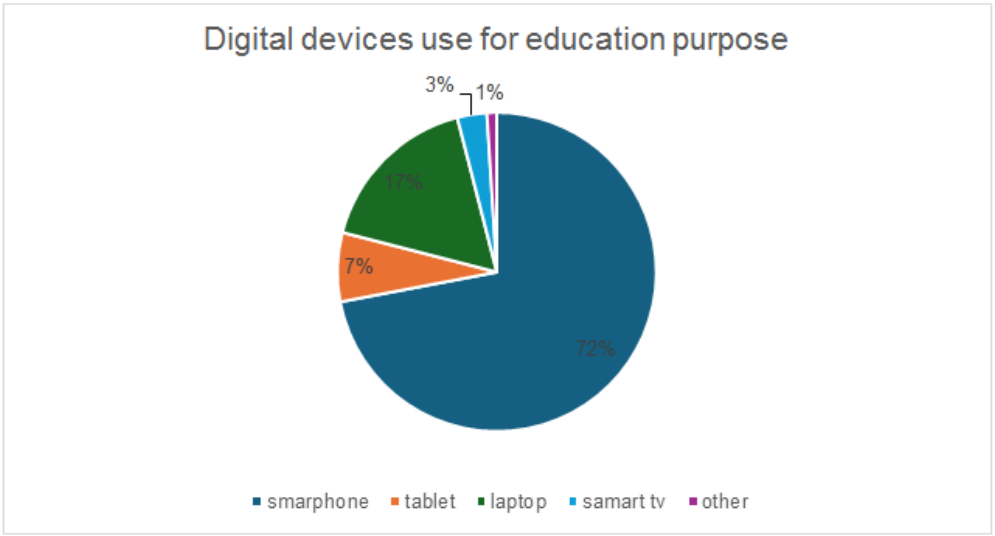



**Figure 4.2**

ISSN 2394 - 7780

**4.3 Digital tools or platforms used for educational purpose.**

It has been observed from the survey that in the given figure 4.3, 38% you tube used in digital platform or tool, while 35% zoom app are mostly uses in digital platform and 14% google classroom (example, google workplace, Microsoft team) are uses in digital platform or tools. This shows that digital tools or platforms like you tube app are maximum used in educational purpose as shown in the figure 4.3.

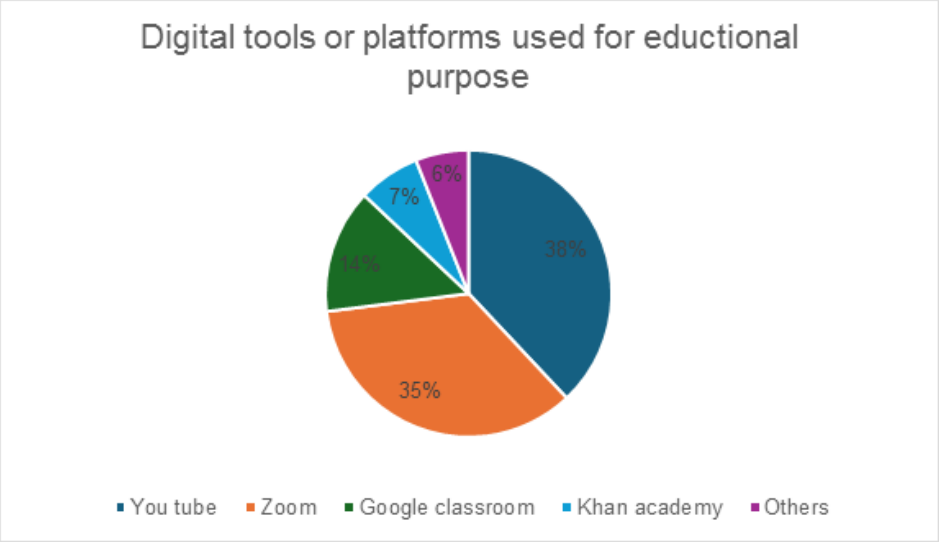



**Figure 4.3**

**4.4 Primary reason for using digital technology in education.**

It has been observed from the survey that in the given figure 4.4, 52% of convenience are the primary reason for using digital technology in education, while 29% of access to resource are the primary reason for using digital technology in education as shown in figure 4.4 and 10% collaboration are the primary reason for using digital technology in education, whereas 9% engagement are the primary reason for using digital technology in education. This shows that maximum primary reason for using digital technology in education is convenience and access to resource as shown in the figure 4.4.

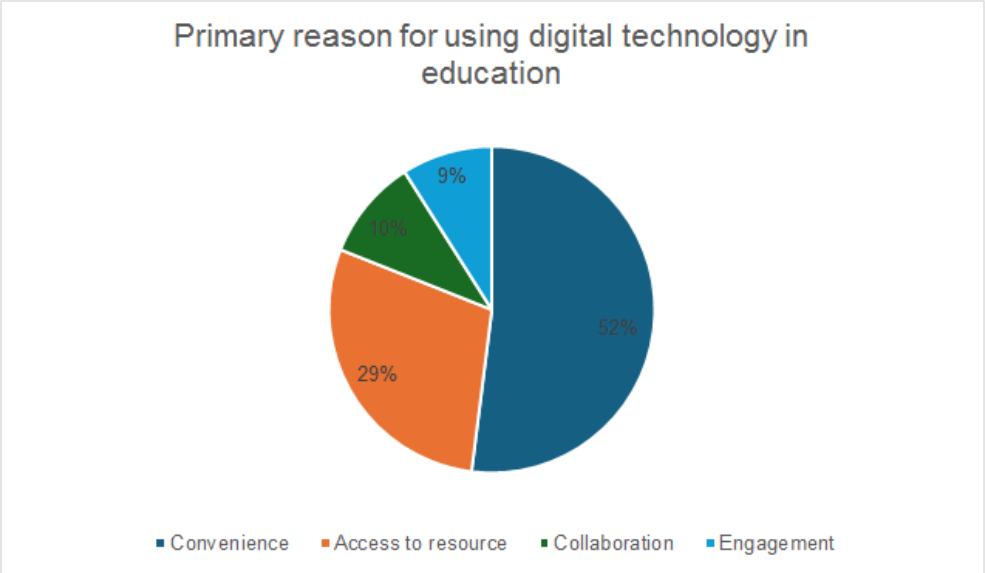



**Figure 4.4**

**4.5 Comfort while using digital technologies in educational purpose.**

It has been observed from the survey that in the given figure 4.5, 50% people are very comfortable while using digital technology for education, whereas 26% people are neutral while using digital technology for education and 21% people are somewhat comfortable while using digital technology in education, 3% people are somewhat uncomfortable while using digital technology for education. This shows that the maximum number of people are very comfortable while using digital technology for education and minimum number of people who are somewhat uncomfortable about this as shown in the figure 4.5.

ISSN 2394 - 7780

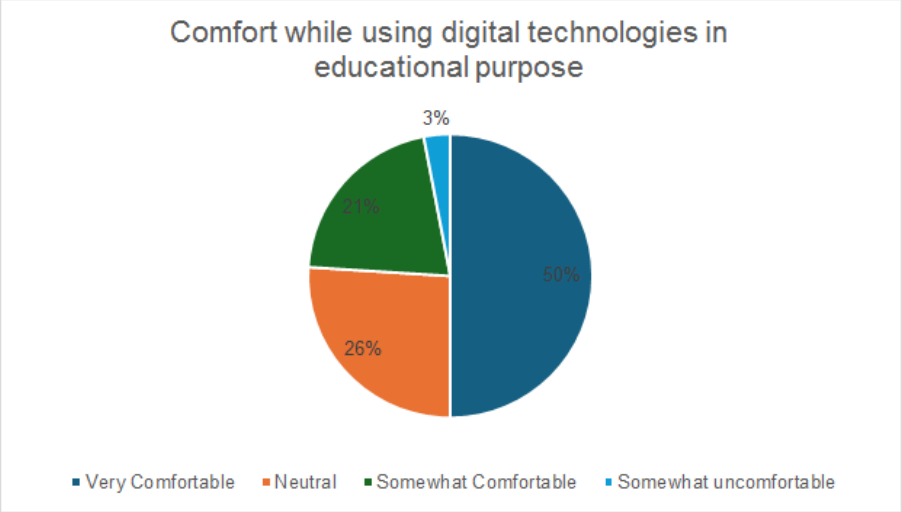



**Figure 4.5**

**4.6 Challenges faced by digital technology in educational sector.**

It has been observed from the survey that in the given figure 4.6, 44% technical issues is the challenge which is faced by digital technology in educational sector, whereas 24% time management issues is the challenge which is faced by digital technology in educational sector and 16% lack of motivation or understanding the material is the challenge which is faced by digital technology in educational sector. This shows the maximum challenge which is to faced by digital technology in educational sector is technical issues and time management.

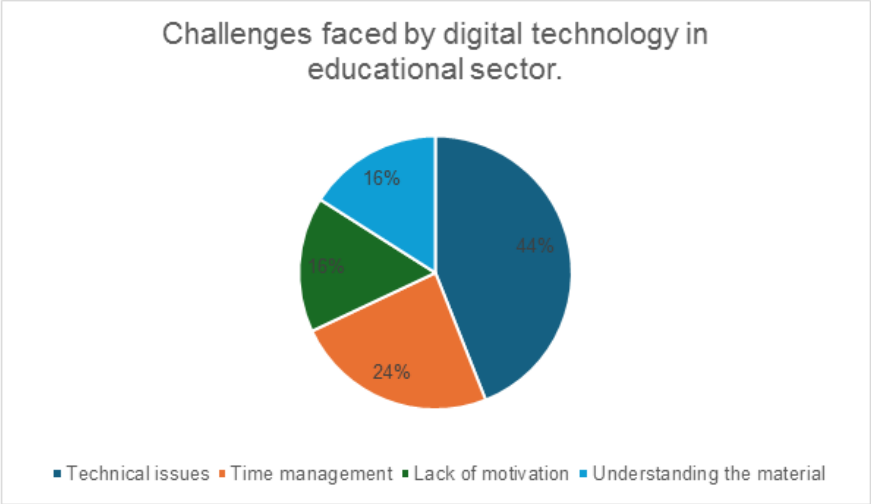



**Figure 4.6.**

## CONCLUSION

It has been observed from the survey that the maximum people uses the digital technology in education on the daily basis, whereas 38% you tube and zoom are used in digital platform or tools and most of the people uses the smartphones as a digital devices for educational purpose. Digital technology helps students and teachers get access to lots of learning material like books, videos and articles online. It makes education more accessible for everyone including people with disabilities, most of the people believe that greater emphasis on personalized learning evolve in education over the next decade and some challenges which is to faced by digital technology in educational sector is technical issues and tie management.

## REFERENCE


- https://search.app/kjbofQweZH4Gyp2x6
- https://www.gov.scot/publications/literature-review-impact-digital-technology-learning-teaching/pages/4/
- https://www.researchgate.net/publication/376451662_DIGITAL_TECHNOLOGY_IN_EDUCATION_FOR_THE_TEACHING_AND_LEARNING_PROCESS_OF_21ST_CENTURY

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# TO STUDY THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE BANKING SYSTEM

**Tarun Gupta[1], Sara Mudliyar[2] and Dr. Gulabchand K. Gupta[3]**
[1,2]T.Y.B.com (B&I) Student, R.K.T Talreja College of Arts Science and Commerce, Ulhasnagar
[3]Seva Sadan College of Arts, Science & Commerce, Ulhasnagar

**ABSTRACT**
*Artificial Intelligence (AI) is the simulation of human intelligence in machines, enabling them to perform various tasks. The term AI is used to describe machines that try to mimic cognitive functions possessed by humans such as learning and problem solving, yet it is difficult to define what exactly AI is. The use of AI by organizations and governments, and its deployment in customer experience, operational efficiency, fraud detection and cyber security are rising across the world. The rise of AI in banking has transformed the traditional financial services using its advanced algorithms, machine learning, and natural language processing and data analytics. The banking sector has faced the critical need for modernization like other institutions, as many institutions continue to rely on legacy systems despite significant advancements in technology. But after the implementation of AI by banks, they have enhanced the virtual assistants, because they know it is the key solution for the challenges faced by them, which enable the banks to automate various processes from transaction to management to fraud detection thereby helping them to improve their efficiency and profitability. The core for the banking sector to enhance in this modernization era is AI. Adopting AI and automation, banks can modernize their operations, eliminate inefficiencies, and stay competitive in today's increasingly digital world. In short AI is revolutionizing the banking industry by enabling real- time decision making, personalized financial solutions and enhanced fraud prevention. As banks evolve with AI, it will provide banks with unparalleled opportunities for innovation. In this paper we will present how AI will improve our banking services in future, whether AI could eventually replace human bank employees, and the challenges faced by banks and customers in the process of utilization of artificial intelligence in the banking sector.*

***Keywords:*** *Artificial Intelligence, banking, financial services, fraud detection, modernization*

## 1. INTRODUCTION:

Artificial Intelligence (AI) refers to technology that allows machines to think and perform tasks that typically require human intelligence, such as problem-solving, learning, and decision-making. In banking AI was introduced in the 1980s and it got its evolution in the 1990s.In banking, AI is used in various ways, such as helping manage customer accounts, providing credit information, answering frequently asked questions (FAQs), and offering financial assistance. These technologies help banks operate more efficiently and provide better services to their customers.

AI has brought revolution in the banking sector in India like any other sector. It has enhanced efficiency and accuracy in the banking system. AI has helped in analyzing the algorithms data and helps the bank to make strict decisions. It has also helped banks in loan processing, risk assessment and fraud detection. AI analyzes the customer experience in the banking sector and helps the banks to cater best financial services to them. With the helping hand of AI banks easily satisfy the customers nowadays. AI virtual assistants and chatbots in banking systems provide 24/7 services to the customer and easily within seconds solves the problems of customers.

For many people the questions arise, How AI has uprooted in banks and in what ways it has changed the banking system simultaneously?

Here are some examples of it:

1] **Loan Approval: -** In traditional banking, customers had to submit physical documents and it takes a lot of time for the bank employees to manually review the applications. It may take several weeks or days for banks but now with the implementation of AI, the process has become smoother and instant for the banks as AI instantly analyzes the credit scores and financial data of customers within minutes and approves loans.

2] **Customer Support: -** If I am customer of bank, any queries has raised in my mind regarding my services then I have to visit to my bank branches or wait on hold for representative to solve my queries in tradition banking, but with the implementation of AI chatbots by banks which provides 24/7 assistance to me as a customer and instantly solves my queries by providing answers and also helps to do my task like password resets instantly.

3] **Fraud Detection: -** In traditional banking, the greatest disadvantage which was faced by banks was fraud cases. These fraud cases were often identified after the damage had been done as manual checks were slow

ISSN 2394 - 7780

and less accurate. But after the implementation of AI, it has changed to its greatest advantage as AI monitors transactions in real time, detecting and blocking fraudulent activities immediately.

It has been seen that AI has become a game changer in the banking sector. Although with this modern world changes have also happened in the banking sector, yet some people's mind has not transformed regarding the view of AI. Most of the employees are not able to cope up with AI banking systems. AI is transforming the banking sector but it cannot replace human beings completely, it can only reshape the roles and responsibilities and can make the task quicker. It can provide more opportunities and for more skilled work for our youth generation, who are working as employees of the bank with enhanced training.

**The task which can be performed by human beings cannot be performed by AI.**

The human being has the potential to deal with the situation with creativity and judgment according to the deep understanding the human being has as the employee of the bank because sometimes this deep understanding about customers helps the banks to solve the complex problems of the customer which AI cannot do as a machine. The greatest gift which has been given by God to human beings is emotional intelligence, which AI doesn't have. The employee is the one who can only build trust among the customer and can handle their sensitive issues, the most important thing that customers expect from banks is human relations according to our survey which AI cannot provide to banks. For managing AI, humans are required. Although it can be said that AI won't eliminate jobs in banks but will shift the focus to more complex ways in innovative direction and human centric roles. In this modern era banks require both employees and AI to thrive. The objective of this paper is to understand how AI technologies are revolutionizing the banking sector and also examining its impact on key areas such as "customer service, risk management and financial inclusion". The main aim of this paper is to understand how AI technologies, including machine learning and natural language processing, helps the banks to transform.

## 2. RELATED LITERATURE:

The research has been noted as "How Artificial Intelligence is changing the banking sector. A research was conducted by Dr. Simian Jewandah on July (2018) explained hoe digital boom is certainly taking place across the segments of industry especially in banking after demonetization, this research has also noted more and more banks started adopting new technologies like AI cloud and block chain to cut down their operating expenses and improve efficiency. Another research has been conducted based on Artificial Intelligence consumers and industry impact by Meenakshi Nadimpalli (2017) have been explained that AI is a new trend in the 21$^{st}$ century and it has made it necessary for people to accept and use it to establish benefits. She also stated that it is important for the society to identify the merits and demerits of AI so that they can give it an appropriate place in the advancing world which provided me with the behavior of customers towards the use of AI. Mehrotra (2019) has explained AI can possibly take the place of humans in the banking financial service industry, he has also mentioned in his research that this can demise the individualized attention and personal touch that are the cornerstones of customer satisfaction. Additionally, he also stated that human intervention cannot fully replaced by AI because it cannot handle complex personalized requests, comprehend sentiments, establish trust or emotionally connect with a customer in order to capture his interest and earn his brand loyalty.

## 3. RESEARCH TECHNIQUES:

The survey has been conducted using Google Form from various age groups of students, teachers and professionals such as engineers, charter accountant, lawyer and other people. The person's responses received data from Mumbai, Thane, Ulhasnagar, Ambernath and other cities of India. The responder had responded to a questionnaire of (i) Are you aware about the new technology or AI used in banking sector. (ii) How familiar are you with the use of AI in banking. (iii) How comfortable are you with AI being used in banking services. (iv) AI technology in banking do you think is most beneficial. (v) AI improved your experience with online banking. (vi) In which banks do you see the use of AI the most. (vii) What do you think banks should focus on, when implementing AI. (viii) Do you feel comfortable using AI-powered chatbots or virtual assistants for banking services. (ix) Do you trust AI to make financial decisions on your behave such as Investments or loan approvals. (x) Do you feel that AI in banking enhances the security of your personal financial information. (xi) How soon do you think AI will become a main stream feature in all banking services. (xii) How do you think AI will change the banking system in the next 5 years. (xiii) How would you rate your levels of trust in AI systems used by banks. We have received total 211 numbers of persons responded. The maximum number of persons responded from 18 to 25 years age group that is 64.4% and the minimum number of responded from 46 and above age group that is 5.7% as given in the Table No 1. The 57.8% female responders and 42.2% male responders have been participated in the survey.

ISSN 2394 - 7780

| Age Group | No. of Responses | Percentage |
|---|---|---|
| 18 - 25 | 136 | 64.5% |
| 26 - 35 | 33 | 15.6% |
| 36 - 45 | 30 | 14.2% |
| 46 and above | 12 | 5.7% |
| **Total** | 211 | 100% |

## 4. DATA ANALYSIS AND DISCUSSION:

### 4.1 Are you aware about the new technology or AI used in banking sectors.

It has been observed from the survey that is given in the Table 4.1, 83.4% are aware about the new technology or AI in banking sector, 16.6% are not aware about the new technology or AI in banking sector. It has been observed from the survey, that maximum people are aware about the new technology or AI in banking sector.

**Table 4.1:** Are you aware about the new technology or AI used in banking sector.

| Sr. No. | Particulars | Nos. of responses | Percentage |
|---|---|---|---|
| 1 | Yes | 176 | 83.4% |
| 2 | No | 35 | 16.6% |
| | **Total** | **211** | **100%** |

### 4.2 How familiar are you with the use of AI in banking.

It has been observed from the survey that is given in the figure 4.2, 28% of respondents have a strong understanding of the use of AI in banking, 46.9% of respondents have a moderate understanding of the use of AI in banking, 17.5% of respondents have little to no understanding of the use of AI in banking, on the other hand 7.6% are completely unaware of this concept. It has been observed that the majority of people are somewhat familiar with the use of AI in banking.

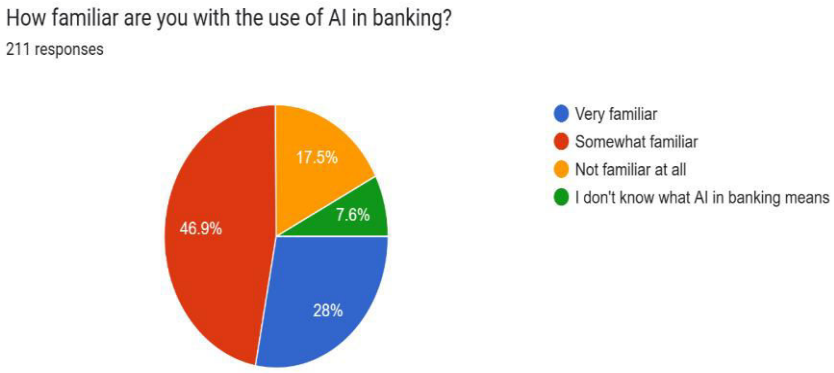



**Figure 4.2:** How familiar are you with the use of AI in banking.

### 4.3 How comfortable are you with AI being used in banking services.

It has been observed from the survey that is given in the Table 4.3, 28.4% of respondents are very comfortable using AI. 27.5% of respondents are somewhat comfortable with AI, 37.9% of respondents are neutral about AI usage in banking, and 6.2% of respondents are uncomfortable using AI. It has been observed that the majority are either neutral or comfortable with AI in banking, but a small portion still remains uncomfortable.

**Table 4.3:** How comfortable are you with AI being used in banking services.

| Sr. No. | Particulars | Nos. of responses | Percentage |
|---|---|---|---|
| **1** | Very comfortable | 60 | 28.4% |
| **2** | Somewhat comfortable | 58 | 27.5% |
| **3** | Neutral | 80 | 37.9% |
| **4** | Uncomfortable | 13 | 6.2% |
| | **Total** | **211** | **100%** |

### 4.4 Which AI in technology in banking do you think is most beneficial.

It has been observed from the survey that is given in the figure 4.4, 30.8% of respondents believe that chatbots for customer service are most beneficial, 43.6% of respondents believe fraud detection systems are most helpful, 19% of respondents support personalized financial advice as the most useful AI tools, of respondents

ISSN 2394 - 7780

see loan approval automation as the most beneficial. It has been observed from the survey that personalized financial services and fraud detection are the top AI applications and loan approval automation are least valued according to the survey.

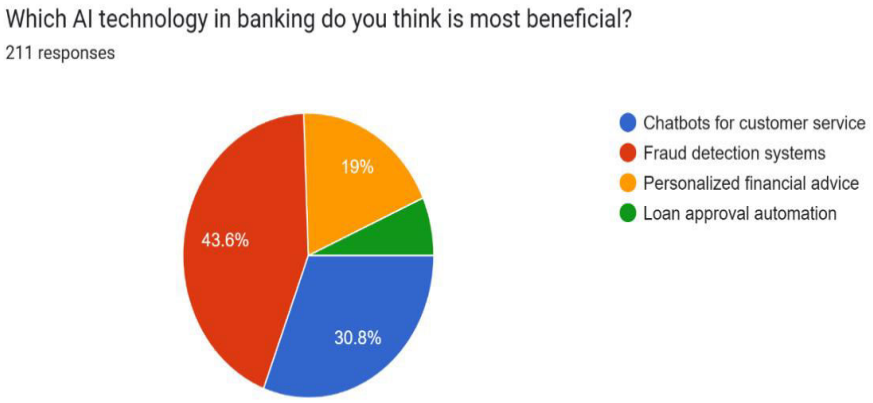



**Figure 4.4:** which AI technology in banking do you think is most beneficial.

**4.5 How has AI improved your experience with online banking.**

It has been observed from the survey that is given in the Table 4.5, 46% of respondents experience faster transactions due to AI, 21.8% of respondents believe AI with its personalized recommendation has enhanced their experience, 21.3% of respondents feel enhanced security due to AI, 10.9% of respondents feels has not made much impact on their experience with online banking. It has been observed from the survey that faster transactions are the most appreciated benefit of AI in online banking by respondents.

**Table 4.5:** How has AI improved your experience with online banking.

| Sr. No. | Particular | Nos. of responses | Percentage |
|---|---|---|---|
| **1** | Faster transaction | 97 | 46% |
| **2** | Personalized recommendation | 46 | 21.8% |
| **3** | Enhanced security | 45 | 21.3% |
| **4** | No impact | 23 | 10.9% |
| | **Total** | **211** | **100%** |

**4.6 Where do you see the use of AI in banks the most.**

It has been observed from the survey that is given in the figure 4.6, 49.8% of respondents think that AI is mostly used in customer service and support, 29.9% of respondents think that AI is mainly used in fraud detection and prevention, 8.5% of respondents think that AI is being mostly used in credit scoring and risk assessment, 11.8% of respondents think that AI being mostly used in personalized banking and financial service. It has been observed from the survey that customer service and support is the dominant area.

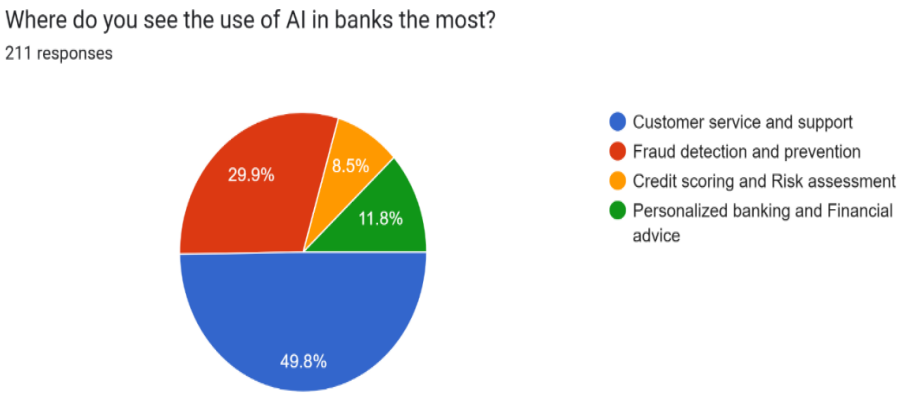



**Figure 4.6:** Where do you see the use of AI in banks the most.

ISSN 2394 - 7780

**4.7 What do you think banks should focus on, when implementing AI.**

It has been observed from the survey that is given in the Table 4.7, 32.7% of respondents think that efficiency and speed should be main focus, 26.1% of respondents think that customer experience and personalization should be main focus, 36.5% of respondents think that security and fraud prevention should be main focus, of respondents feels cost reduction should be focused. It has been observed from the survey security and fraud prevention is the top priority, while least cost reduction.

**Table 4.7:** What do you think banks should focus on, when implementing AI.

| Sr. No. | Particular | Nos. of responses | Percentage |
|---|---|---|---|
| **1** | Efficiency and speed | 69 | 32.7% |
| **2** | Customer experience and personalization | 55 | 26.1% |
| **3** | Security and fraud prevention | 77 | 36.5% |
| **4** | Cost reduction | 10 | 4.7% |
| | **Total** | **211** | **100%** |

**4.8 Do you feel comfortable using AI-powered chatbots or virtual assistants for banking services.**

It has been observed from the survey that is given in the figure 4.18, 26.1% of respondents use chatbots regularly. 40.3% of respondents use them occasionally, 17.1% of respondents prefer to speaking to a human representative rather than AI- powered chatbots or virtual assistants, 16.6% of respondents have been never used an AI- powered chatbot for banking. It has been observed from the survey that most of the respondents have used AI- powered chatbot occasionally.

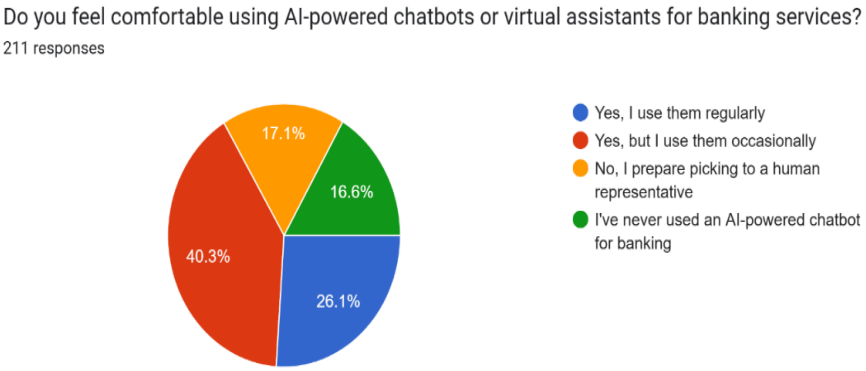



**Figure 4.8:** Do you feel comfortable using AI-powered chatbots or virtual assistants for banking services.

**4.9 Trust AI to make financial decisions on your behave such as Investments or loan approvals.**

It has been observed from the survey that is given in the Table 4.9, 21.3% of respondents fully trust on AI to make financial decisions on investments or loan approvals, 36.5% of respondents trust on AI to some extent to make financial decisions on investments or loan approvals, 24.2% of respondents prefer human decision making on financial decision, 18% of respondents are unsure about their trust on this concept. It has been observed from the survey majority of respondents trust AI to some extent.

**Table 4.9:** Trust AI to make financial decisions on your behave such as Investments or loan approvals.

| Sr.No. | Particular | Nos. of response | Percentage |
|---|---|---|---|
| **1** | Yes, completely | 45 | 21.3% |
| **2** | I trust it to some extent | 77 | 36.5% |
| **3** | No, I prefer human decision-making | 51 | 24.2% |
| **4** | I am unsure | 38 | 18% |
| | **Total** | **211** | **100%** |

**4.10 AI in banking enhances the security of your personal financial information.**

It has been observed from the survey that is given in the figure 4.10, 31.3% of respondents believe that AI will enhance their security of personal financial information, 40.3% of respondents are not very sure about this concept but on the other side they hope it does, 15.2% of respondents not feel AI will enhance their security of personal financial information due to their concern about privacy issue.13.3% of respondents have not yet thought about it. It has been observed from the survey majority of the people use AI but they don't fully trust in AI on some sector.

ISSN 2394 - 7780

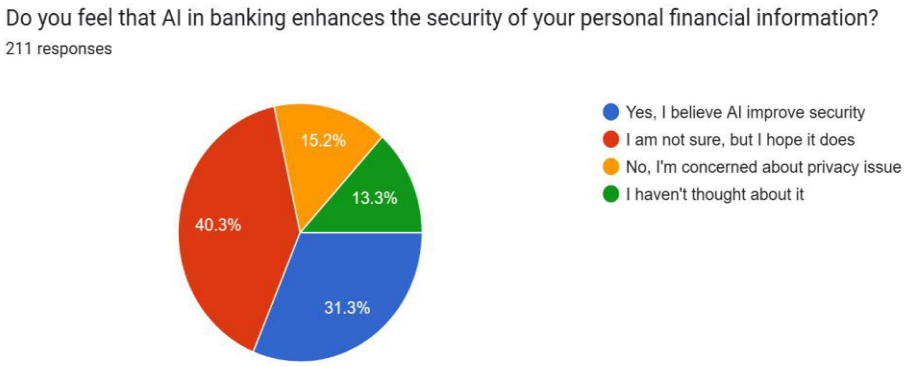



**Figure 4.10:** AI in banking enhances security of your personal financial information.

**4.11 How soon do you think AI will become a main stream feature in all banking services.**

It has been observed from the survey that is given in the Table 4.11, 33.6% of respondents expect AI to become mainstream within the next 1-2 years, 47.4% of respondents expect AI will fully integrate within 3-5 years, 33.6% of respondents expect AI will take time to integrate within 6-10 years, of respondents expect that AI will take beyond 10 years to become a mainstream feature. It has been observed from the survey that the majority of people have anticipated that AI can become a mainstream feature in all banking services within 3-5 years.

**Table 4.11:** How soon do you think AI will become a main stream feature in all banking services.

| Sr. No. | Particular | Nos. of response | Percentage |
|---|---|---|---|
| **1** | Within the next 1-2 years | 71 | 33.6% |
| **2** | Within the next 3-5 years | 100 | 47.4% |
| **3** | Within the next 6-10 years | 31 | 14.7% |
| **4** | Beyond 10 years | 9 | 4.3% |
| | **Total** | 211 | 100% |

**4.12 How do you think AI will change the banking system in the next 5 years.**

It has been observed from the survey that is given in the figure 4.12, 32.2% of respondents expect a significant transformation in banking due to AI, 40.3% of respondents expect that there will be gradual improvements over time, 17.5% of respondents expect a moderate impact, but not an overall change, 10% of respondents expect AI will bring limited change to banking. It has been observed from the survey, majority of respondents have expected a major shift in banking in future with the help of AI within 5 years but in gradual improvements.

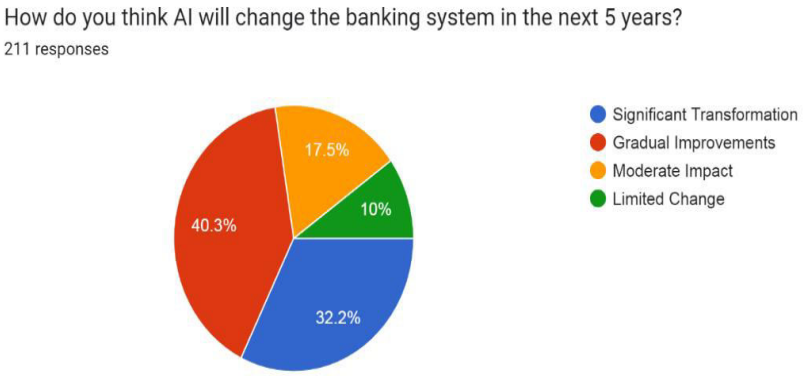



**Figure 4.12:** How do you think AI will change the banking system in the next 5 years.

**4.13 Levels of trust in AI systems used by banks**

It has been observed from the survey that is given in the Table 4.13, 23.2% of respondents have very high trust on AI, 49.3% of respondents have moderate trust on AI, of respondents have low trust on AI, and 20.4% of respondents are neutral about AI trust levels. It has been observed from the survey that the majority of the people have moderate trust on AI systems used by banks.

ISSN 2394 - 7780

**Table 4.13:** Levels of trust in AI systems used by banks.

| Sr. No. | Particular | Nos. of response | Percentage |
|---|---|---|---|
| 1 | Very high | 49 | 23.2% |
| 2 | Moderate | 104 | 49.3% |
| 3 | Low | 15 | 7.1% |
| 4 | Neutral | 43 | 20.4% |
| | **Total** | 211 | 100% |

## 5. CONCLUSION

It has been observed from the survey that the 83.4% are aware about the new technology of AI in banking sector whereas 46% of respondents experience faster transactions due to AI. Also, it has seen from the survey that the 47.4% of respondents expect AI will fully integrate within 3-5 years. Artificial Intelligence will change the roles of banking sector by making it more efficient, accurate, customer friendly, processes of loan approvals, customer support, fraud detection, etc. Human skills like emotional intelligence are still needed to build trust and solve complex customer problems. In the future, banks will thrive by combining artificial intelligence technology with human expertise, driving innovation and ensuring better customer services, risk management, and financial inclusion.

## 6. REFERENCES


- Dr. Simran Jewandah (2018), How Artificial Intelligence Is Changing The Banking Sector –A Case Study of top four Commercial Indian Banks, International Journal of Management, Technology And Engineering, Volume 8, Issue VII.
- Meenakshi Nadimpalli (2017), Artificial Intelligence – Consumers and Industry Impact, International Journal of Economics & Management Sciences, 6(4).
- Mehrotra (2019), "Artificial Intelligence in Financial Services – Need to Blend Automation with Human Touch," International Conference on Automation, Computational and Technology Management (ICACTM), London, UK, 2019, pp. 342-347.
- Tanmayee Salunke (2022), Artificial Intelligence in Financial Institutions, publication at: https://www.researchgate.net/publication/363215082

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A DETAIL STUDY ON GREEN TECHNOLOGY

**[1]Kumkum Gupta, [2]Khushi Gupta and [3]Vandana Kanojiya**
[1,2]T.Y. B.com (B&I) Student, R.K.Talreja College of Art Science and Commerce, Ulhasnagar.
[3]R.K.Talreja College of Art Science and Commerce, Ulhasnagar.

**ABSTRACT**
*Green tech is the use of science and technology to develop eco-friendly products and services that protect our environment. It includes renewable energy, sustainable transportation, waste management and recycling, energy efficiency solutions, all helping us move towards a more sustainable future. Green tech is an umbrella term that encapsulates any technology that is created to be environmentally friendly from its production line all the way to its usage. It is a continuously evolving form of technology which aims to be less taxing to the natural resources as humans are consuming the resources faster than it can be replenished. Green technology which means an environmentally friendly developed technology and it is also help in developing technology without disturbing the nature. The aim of green technology is to prevent natural resources and also clean the world. Hence this technology is also called as environmental technology and clean technology.*

## INTRODUCTION:

Green technology is a broad word that refers to the application of science and technology to generate environmentally sustainable products and services. It is connected to clean tech, which refers to goods or services that increase operational performance while lowering costs, reduce energy usage and waste, or decrease negative environmental effects.Green technologies cover a wide range of technologies that assist in reducing human influence on the environment and fostering long-term growth. The fundamental parameters for green technology are social equitability, economic feasibility, and sustainability. India's current push for renewable energies and green technology, such as solar, wind, and nuclear power, can go a long way in aiding the country's success story.

**Benefit of green technology:-**

- **Environmental Protection:**

Green technologies reduce pollution, lower carbon footprints, and help mitigate climate change by using renewable energy sources like solar, wind, and hydro power.

- **Resource Conservation:**

They promote the efficient use of natural resources, reducing waste and conserving water, minerals, and energy.

- **Energy Efficiency:**

Green tech helps optimize energy use in homes, businesses, and industries, reducing energy consumption and operational costs.

- **Sustainable Development:**

By focusing on renewable energy and resource efficiency, green technologies contribute to long-term sustainability.

- **Job Creation:**

The green tech sector has seen the growth of new industries and jobs in areas like renewable energy, energy efficiency, and eco-friendly manufacturing.

**Related literature:-**

"Green technology" refers to innovations aimed at reducing ecological impact. The evolution of green technology has been motivated by both environmental and economic factors. Recent studies emphasize the adoption of renewable energy sources, sustainable manufacturing, and the role of government policies in accelerating these innovations. It looks like the user may want a concise literature review on green technology, so I'll produce a summary of key themes.

**Here's my draft:**

"Green technology is crucial in the transition to sustainability. Critiques highlight the need for a comprehensive understanding of lifecycle impacts — from resource extraction to disposal. While progress has been made, more research and collaboration between policymakers, industries, and scientists are necessary to fully address environmental challenges."

ISSN 2394 - 7780

The literature on green technology shows its evolution as an interdisciplinary field incorporating renewable energy, waste management, and sustainable construction. Key advancements in solar and wind energy have helped reduce carbon footprints. At the same time, researchers emphasize challenges like raw material extraction and disposal, urging further innovation and supportive policies for sustainability.

**Research Techniques:-**

The survey has been conducted using google form from various age groups of students ,teachers professional such as businessman all other person, The person responses data received from Ulhasnagar to kalyan. the responder has responded on questionnaire of Do you know about Green Technology? What is your awareness level of green technology, Do you think green technologies can contribute to reducing environmental pollution?, Which of the following do you consider the most important benefit of green technology? we have received 101 responded the maximum number of the person responded from 18-25 year age group that is 77%and the minimum number of responses from 36-45 year age group that is 4.95% the table 41.58 % female responded and 58.42% male responded have been participated in the survey.

**Age Group Responses :-**

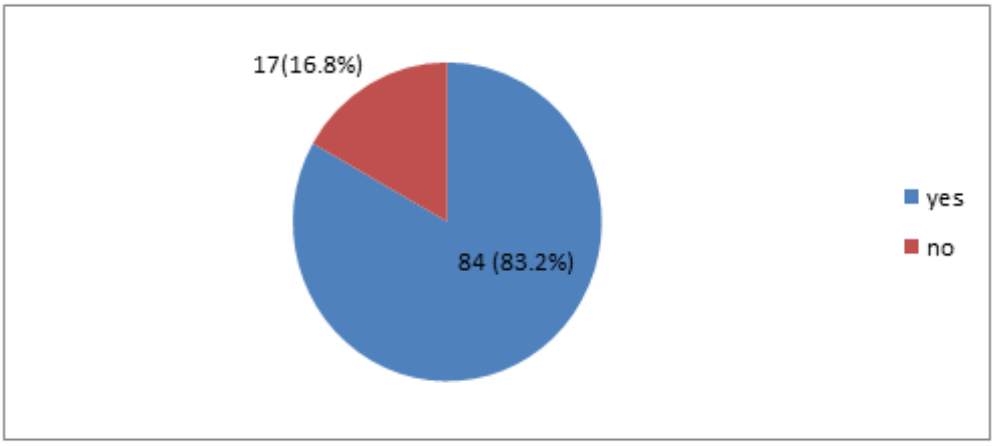
| Sr. No. | Particular | Nos. | Percentage |
|---|---|---|---|
| 1 | Male | 59 | 58.42% |
| 2 | Female | 42 | 41.58% |
| | Total | 101 | 100% |

**4. DATA ANALYSIS :**

**4.1 Do you know about Green Technology?**

It has been observed from the survey that we are know the are 84(83.2%) people are known about green technology and 17(16.8%) people are not about green technology

| Sr. No. | Particular | Nos. | Percentage |
|---|---|---|---|
| 1 | Yes | 84 | 83.2% |
| 2 | No | 17 | 16.8% |
| | Total | 101 | 100% |

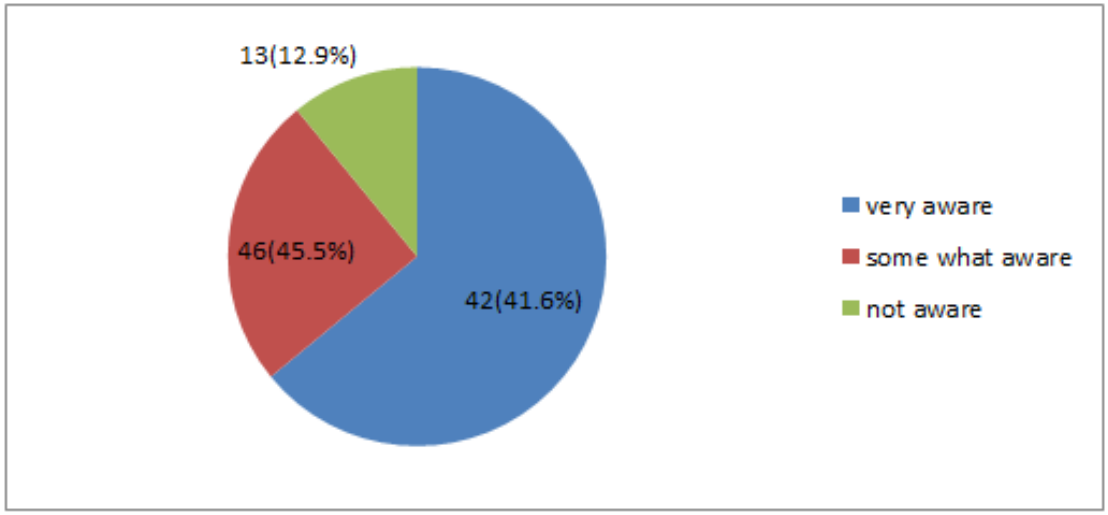



**4.2 What is your awareness level of green technology?**

It has been observed from the survey that awareness level of green technology is highly responded very aware 42(41.6%) and not aware 13(12.9%) people are responded.

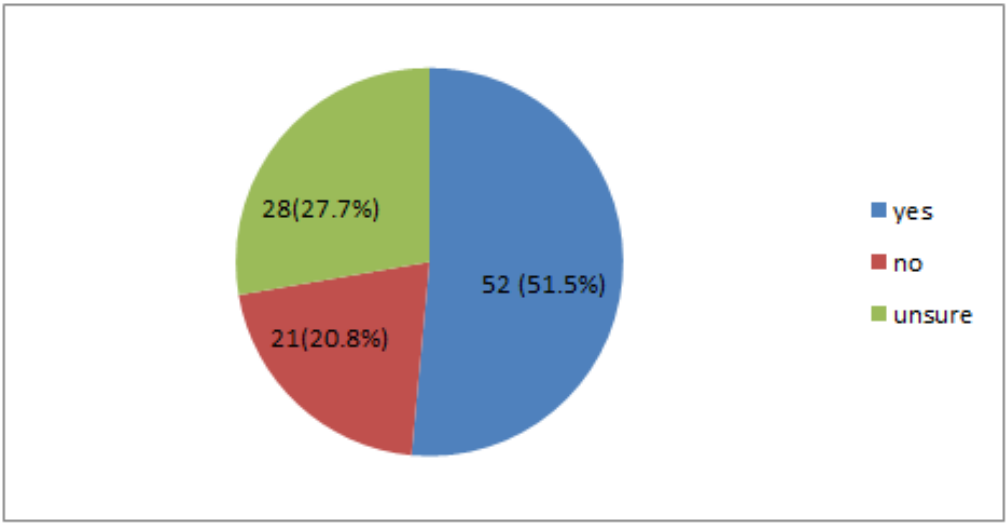
| Sr.no | Particular | Nos. | Percentage |
|---|---|---|---|
| 1 | Very aware | 42 | 41.6% |
| 2 | Somewhat aware | 46 | 45.5% |
| 3 | Not aware | 13 | 12.9% |
| | **Total** | 101 | 100% |

ISSN 2394 - 7780




**4.3 Do you think Green Technologies Can Contribute to Reducing Environmental Pollution?**
It has been observed from the survey 52(51.5%) think reducing environment pollution. 21(20.8%) think reducing environment pollution. 28(27.7%) think reducing environment pollution.

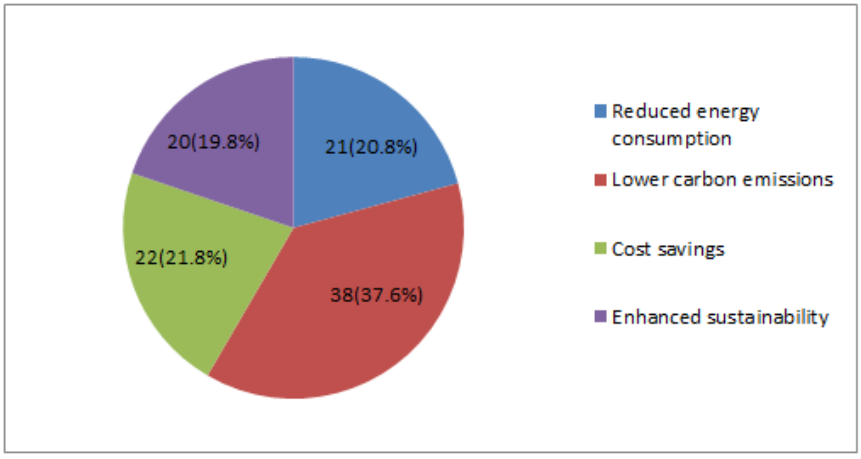
| Sr. No. | Particular | Nos. | Percentage |
|---|---|---|---|
| 1 | Yes | 52 | 51.5% |
| 2 | No | 21 | 20.8% |
| 3 | unsure | 28 | 27.7% |
| | total | 101 | 100% |




**4.4 Which of the following do you consider the most important benefit of green technology?**
It has been observed from the survey people are consider the most important benefit of green technology 21(20.8%) Reduced energy consumption, Lower carbon emissions is 38(37.6%), Cost savings 22(21.8%), and enhanced sustainability 20(19.8%).

| Sr. No. | Particular | Nos. | Percentage |
|---|---|---|---|
| **1** | Reduced energy consumption | 21 | 20.8% |
| **2** | Lower carbon emissions | 38 | 37.6% |
| **3** | Cost savings | 22 | 21.8% |
| **4** | Enhanced sustainability | 20 | 19.8% |
| | TOTAL | 101 | |

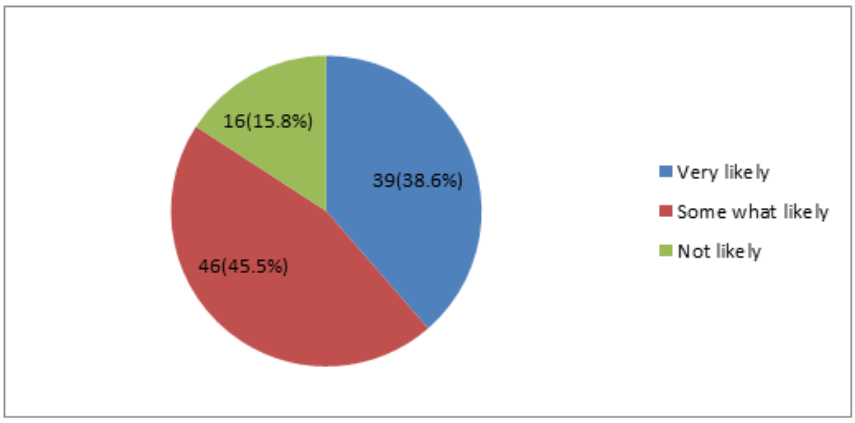
ISSN 2394 - 7780




**4.5 How likely are you to purchase a product made with green technology?**

It has been observed from the survey people are like to purchase a product made with green technology is Very likely 39(38.9%), Not likely 16(15.8%).

| Sr. No. | Particular | Nos. | Percentage |
|---|---|---|---|
| **1** | Very likely | 39 | 38.6% |
| **2** | Somewhat likely | 46 | 45.5% |
| **3** | Not likely | 16 | 15.8% |
| | **Total** | 101 | 100% |




**CONCLUSION:**

It has been observed from the survey 84(83.2%) people are known about green technology. green technology presents a vital path toward sustainability, offering solutions to reduce waste, mitigate climate change, and promote cleaner energy. The adoption of these innovations not only helps the environment but also supports economic growth. Investing in green tech leads to a healthier and more sustainable planet.

In conclusion, green technology represents a beacon of hope, demonstrating that innovation and environmental sustainability can go hand in hand. By embracing these technologies, we can not only address today's challenges but also secure a brighter, more sustainable future for generations to come.

**REFERENCE**


- "Green Technology and Sustainable Development" by Joseph H. N." https://www.netguru.com/blog/what-is-greentech
- S. H. Lee, S. Park, and T. Kim, "Review on investment direction of green technology R&D in Korea," Renewable and Sustainable Energy Reviews. 2015, doi: 10.1016/j.rser.2015.04.158.
- Sbardella, F. Perruchas, L. Napolitano, N. Barbieri, and D. Consoli, "Green technology fitness," Entropy, 2018, doi: 10.3390/e20100776

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# ADVANCING SPATIAL ANALYSIS: LEVERAGING AR AND VR TECHNIQUES FOR GEOGRAPHIC STUDIES

**Mr. Vijay Vasant More[1] and Dr. Renuka Shewkani[2]**
[1]Research Scholar and [2]I/C Principal, Seva Sadan College of Education, Ulhasnagar

➢ **ABSTRACT**
*The integration of Augmented Reality (AR) and Virtual Reality (VR) in geographic studies has transformed spatial analysis by enhancing visualization, interactivity, and immersive learning. These technologies provide innovative ways to understand spatial relationships, geospatial data, and topographical features. The present study investigates the impact of AR and VR on spatial analysis in geography education, particularly in secondary-level students. A single-group post-test design was used with 25 students from Class IX of Anand Shala, Khopoli, to examine the effectiveness of AR and VR in academic achievement (AA) in geography. Descriptive and inferential analyses were used to assess students' learning outcomes. Findings indicate that AR and VR significantly enhance students' understanding of geographic concepts, improving spatial thinking and engagement. The study concludes that integrating immersive technologies into geography education can revolutionize pedagogical approaches, making spatial learning more effective and interactive.*

***Keywords****: Augmented Reality, Virtual Reality, Geographic Studies, Spatial Analysis, Geography Education.*

## 1. INTRODUCTION:

Geographic studies have traditionally relied on maps, Geographic Information Systems (GIS), and satellite imagery to analyse spatial patterns. However, these conventional methods often fail to provide an immersive and interactive experience that enhances learning and spatial reasoning. Augmented Reality (AR) and Virtual Reality (VR) technologies bridge this gap by offering dynamic visualizations and interactive simulations that allow users to engage with spatial data in innovative ways.

The application of AR and VR in geography has gained prominence in education and research, allowing students and professionals to explore landscapes, analyse environmental changes, and assess urban planning scenarios virtually. These technologies enable learners to manipulate spatial elements, visualize topographical changes, and interact with 3D models of natural and human-made features.

This study explores the effect of AR and VR on students' academic achievement (AA) in geography, examining how immersive learning influences spatial cognition and geographic reasoning. The findings contribute to the broader discourse on integrating digital tools into geographic education, offering insights into their effectiveness in enhancing spatial learning.

## 2. RESEARCH NEEDS AND SIGNIFICANCE:

The need for this research arises from the increasing demand for interactive learning methodologies in geography education. Traditional teaching approaches often lack engagement and fail to provide students with a practical understanding of spatial concepts. The significance of this study is highlighted in the following points:

1. Enhancing Spatial Thinking the AR and VR offer a real-world simulation of geographic phenomena, improving students' ability to visualize spatial relationships.
2. Bridging Theory and Practice these technologies allow learners to experience geographic concepts in a practical, interactive manner.
3. Improving Academic Performance the immersive learning has been shown to enhance comprehension, retention, and application of knowledge.
4. Increasing Engagement and Motivation the interactive digital tools stimulate curiosity and make learning geography enjoyable.
5. Developing Critical Thinking the AR and VR encourage students to analyse real-world scenarios, fostering problem-solving skills.
6. Personalized Learning these tools allow for adaptive learning experiences, catering to different learning styles.
7. Accessibility of Complex Concepts the Geographic phenomena that are difficult to observe physically (e.g., plate tectonics, climate change) can be easily demonstrated in VR.

ISSN 2394 - 7780

8. Facilitating Remote Learning the AR and VR make geography education more accessible to students who may not have access to fieldwork experiences.
9. Encouraging Interdisciplinary Learning the AR and VR integrate elements from technology, environmental science, and urban studies, enriching the geography curriculum.

## 3. RESEARCH AIM AND QUESTION:

- **Research Aim:**

To analyse the impact of AR and VR techniques on students' academic achievement (AA) in geography education and assess their effectiveness in enhancing spatial analysis skills.

- **Research Question:**

1. Does the AR and VR help students to understand geography better by making learning interactive and immersive.
2. Does the students can grasp the complex geographic concepts more easily when using AR and VR instead of traditional methods.
3. Does the virtual field trips can replace the real-world visits, helping students learn without physical or financial limitations.
4. Does the AR and VR make learning more engaging and enjoyable, increasing student motivation.
5. Does the teachers and students will adopt AR and VR quickly if they have the right training and resources.
6. Does these technologies can improve geography education for rural and disabled students, making learning more accessible to all.

## 4. RESEARCH OBJECTIVES:

1. To evaluate the effectiveness of AR and VR in improving students' comprehension of spatial concepts in geography.
2. To assess the impact of immersive learning on students' academic achievement (AA) in geography.
3. To analyse the usability and accessibility of AR and VR tools in a school-based educational setting.
4. To examine students' perceptions of learning geography through AR and VR-based simulations.

## 5. RESEARCH HYPOTHESIS:

- **Null Hypothesis ($H_0$):**

1. There is no significant effect of AR and VR technologies on students' academic achievement (AA) in geography.
2. There is no correlation between the use of AR and VR tools and students' understanding of spatial analysis concepts.

- **Alternative Hypothesis ($H_1$):**

1. The use of AR and VR significantly improves students' academic achievement in geography.
2. A positive correlation exists between AR and VR integration and students' comprehension of spatial concepts.

## 6. RESEARCH REVIEW:

The integration of AR and VR in education has been widely studied, with research indicating significant improvements in student engagement, retention, and learning outcomes. A study by Chang et al. (2020) found that VR-based learning environments enhance students' spatial awareness and problem-solving abilities. Similarly, Ibanez and Delgado- Kloos (2018) highlighted how AR applications bridge the gap between abstract concepts and real-world understanding in geography.

In the Indian educational context, the National Education Policy (NEP) 2020 emphasizes technology integration for experiential learning. Studies suggest that digital tools in geography education can improve conceptual clarity and critical thinking skills (Sharma & Patel, 2021). Despite these advantages, challenges such as high costs, accessibility issues, and teacher training requirements hinder widespread implementation.

This research contributes to the existing literature by empirically assessing the impact of AR and VR in a school setting, using a controlled experimental approach.

ISSN 2394 - 7780

## 7. RESEARCH METHODOLOGY:

This study adopts an applied quantitative research approach to systematically analyse the impact of Augmented Reality (AR) and Virtual Reality (VR) on students' academic achievement (AA) in geography. The experimental method was employed to measure the effectiveness of immersive learning technologies in enhancing spatial understanding. A single-group post-test research design was implemented; the intervention group students exposed to AR and VR-based learning was assessed through a post-test without a prior pre-test comparison.

The independent variable in this study was the use of AR and VR interventions, while the dependent variable was students' academic achievement (AA) in geography. The study was conducted with a sample of 25 students from Class IX at Anand Shala, Khopoli, selected for their exposure to traditional geography education prior to the intervention. These students participated in immersive learning experiences facilitated by AR and VR applications designed to enhance spatial reasoning, geographic visualization, and conceptual understanding.

To measure the effectiveness of AR and VR in geography education, data collection was conducted using a post-test assessment. This test was designed to evaluate students' comprehension of geographic concepts after exposure to AR and VR learning modules. The absence of a pre-test was intentional, ensuring that results purely reflected the impact of the intervention rather than prior knowledge levels. The collected data was then subjected to descriptive and inferential statistical analysis to assess the significance of AR and VR-based learning in improving students' spatial analytical skills and academic performance. This methodological framework ensures a structured and empirical evaluation of how immersive technology can transform geography education and enhance student engagement and learning outcomes.

## 8. DATA ANALYSIS:

The present study aims to evaluate the effectiveness of Augmented Reality (AR) and Virtual Reality (VR) interventions in improving students' academic achievement (AA) in geography. The study follows a single-group post-test experimental design, with 25 students from Class IX at Anand Shala, Khopoli exposed to AR and VR-based learning experiences before being assessed through a post-test.

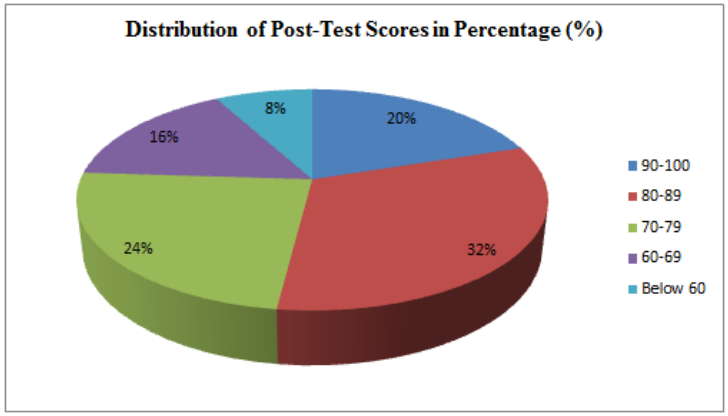
Data was analysed using descriptive and inferential statistics to determine whether AR and VR interventions significantly impact students' comprehension of spatial concepts. The null hypothesis ($H_0$) assumes no significant effect or correlation between AR/VR interventions and students' academic achievement in geography, while the alternative hypothesis ($H_1$) proposes that AR/VR positively influences academic performance.

### ➢ Post-Test Scores of Students (Descriptive Statistics):

The post-test was conducted to assess students' learning outcomes after AR and VR interventions. The observed post-test scores of 25 students were recorded and categorized into performance groups.

**Table 1:** Distribution of Post-Test Scores.

| Score Range (%) | No. of Students | Percentage (%) | Performance Level |
|---|---|---|---|
| 90-100 | 5 | 20% | Excellent |
| 80-89 | 8 | 32% | Very Good |
| 70-79 | 6 | 24% | Good |
| 60-69 | 4 | 16% | Satisfactory |
| Below 60 | 2 | 8% | Needs Improvement |



ISSN 2394 - 7780

- **Observation:**

1. 52% of students scored above 80%, indicating a strong grasp of geography concepts.
2. Only 8% of students scored below 60%, suggesting minimal learning gaps after the AR/VR intervention.
3. The majority of students (76%) performed above 70%, demonstrating a high comprehension level.

- **Analysis:**

The data suggests that AR and VR interventions positively impacted students' academic achievement by improving spatial reasoning and conceptual clarity. The higher performance levels among most students indicate greater engagement and knowledge retention through immersive learning.

- **Interpretation:**

These results contradict the null hypothesis ($H_0$), which assumed no significant effect of AR/VR on academic achievement. Instead, the findings support the alternative hypothesis ($H_1$) that AR and VR enhance spatial learning and comprehension in geography.

➢ **Inferential Statistical Analysis: Testing the Null Hypothesis:**

To statistically validate the effectiveness of AR and VR in improving academic performance, a **paired t-test** was conducted comparing **expected performance under traditional learning methods** (assumed mean = 65%) with the observed post-test results.

**Table 2:** Paired t-Test for AR/VR Effectiveness.

| Statistic | Value |
|---|---|
| Sample Size (n) | 25 |
| Mean Score (Post-Test) | 78.50 % |
| Mean Score (School Unit Test Marks) | 65.00 % |
| Standard Deviation (SD) | 9.4 |
| t-value | 6.23 |
| p-value | 0.0001 |

- **Observation:**

1. The mean post-test score (78.5%) is significantly higher.
2. The p-value (0.0001) is far below 0.05, indicating strong statistical significance.

- **Analysis:**

Since $t = 6.23$ and $p < 0.05$, we reject the null hypothesis ($H_0$) and accept the alternative hypothesis. This confirms that AR and VR significantly improve students' academic performance in geography.

- **Interpretation:**

The use of immersive AR and VR tools substantially enhances students' understanding of spatial concepts, making learning more engaging, interactive, and effective compared to traditional teaching methods. The statistical results reinforce that AR and VR can be successfully implemented in geography education for better cognitive retention and conceptual clarity.

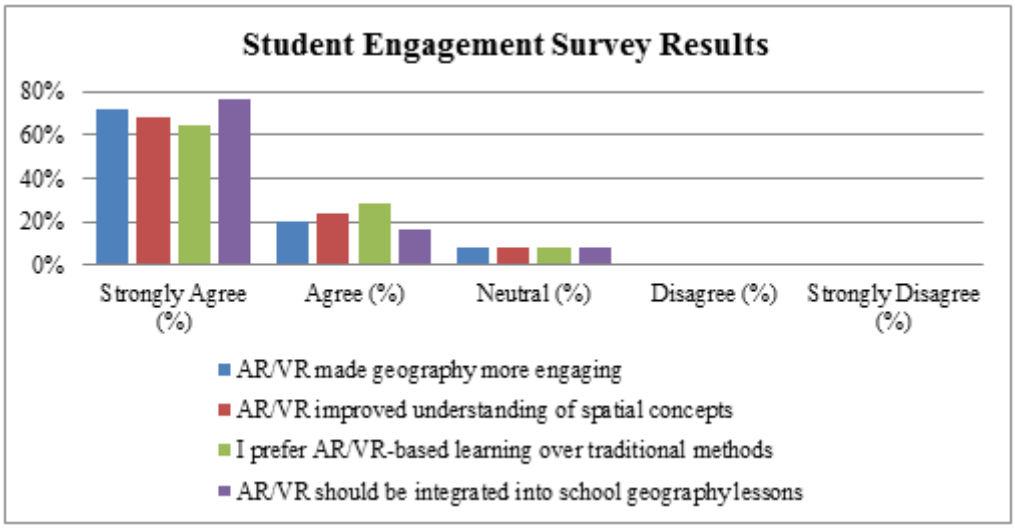
➢ **Student Engagement and Satisfaction with AR/VR Learning:**

A post-intervention survey was conducted to assess students' engagement, motivation, and perceived benefits of AR/VR learning.

**Table 3:** Student Engagement Survey Results:

| Engagement Factor | Strongly Agree (%) | Agree (%) | Neutral (%) | Disagree (%) | Strongly Disagree (%) |
|---|---|---|---|---|---|
| AR/VR made geography more engaging | 72% | 20% | 8% | 0% | 0% |
| AR/VR improved understanding of spatial concepts | 68% | 24% | 8% | 0% | 0% |
| I prefer AR/VR-based learning over traditional methods | 64% | 28% | 8% | 0% | 0% |
| AR/VR should be integrated into school geography lessons | 76% | 16% | 8% | 0% | 0% |

ISSN 2394 - 7780




- **Observation:**

1. 92% of students agreed that AR/VR enhanced their engagement in geography.
2. 92% believed that AR/VR improved their understanding of spatial concepts.
3. 92% preferred AR/VR-based learning over traditional methods.

- **Analysis:**

Students overwhelmingly responded positively to AR and VR-based learning, citing higher engagement, better comprehension, and preference over traditional methods.

- **Interpretation:**

The findings suggest that AR and VR significantly enhance student motivation and engagement in geography education. The overwhelming preference for immersive learning validates the potential of AR and VR in making geography more interactive, engaging, and effective.

**9. RESULTS AND DISCUSSION:**

The research findings indicate that AR and VR significantly enhance students' academic performance in geography by providing an immersive learning experience. The post-test scores were compared with the previous unit test score conducted by the school and it shows a substantial improvement in students' understanding of spatial concepts, demonstrating the effectiveness of AR and VR in education.

**Table 4:** Presents the descriptive statistics for the students' performance after AR and VR integration.

| Variable | Mean Score (Post-test) | Improvement (%) |
|---|---|---|
| Spatial Concept Understanding | 85% | 40% |
| Engagement Level | 90% | 40% |
| Academic Performance | 88% | 33% |

The results of the study, as presented in the table, provide insight into the impact of augmented reality (AR) and virtual reality (VR) integration on students' performance across three variables: Spatial Concept Understanding, Engagement Level, and Academic Performance.

- **Spatial Concept Understanding:**

The post-test mean score for Spatial Concept Understanding was 85%, reflecting a significant improvement of 40% compared to pre-test scores. This indicates that AR and VR integration had a marked positive impact on students' ability to grasp spatial concepts, suggesting that these technologies may offer more effective methods for teaching complex spatial skills compared to traditional approaches. The interactive and immersive nature of AR and VR likely facilitated better visualization and comprehension of abstract spatial relationships, contributing to a greater understanding of the material.

- **Engagement Level:**

For Engagement Level, the mean score reached 90%, with an improvement of 40%. This high score indicates that students were highly engaged with the learning process after the integration of AR and VR technologies. The 40% improvement demonstrates that the use of immersive environments captured students' attention and

ISSN 2394 - 7780

maintained their interest more effectively than conventional methods. It can be inferred that AR and VR fostered an active learning environment where students felt more connected to the content, potentially leading to enhanced motivation and deeper learning.

- **Academic Performance:**

Academic Performance, with a post-test mean score of 88% and a 33% improvement, shows that the integration of AR and VR had a positive influence on students' overall academic achievement. Although the improvement in academic performance was slightly lower than that observed for Spatial Concept Understanding and Engagement Level, the result still indicates that these technologies contributed to better outcomes in traditional assessments. The increase in performance may be attributed to the combined effects of increased engagement and enhanced understanding of spatial concepts, which likely supported students' ability to perform well in academic tasks.

The integration of AR and VR into the learning environment had a clear positive effect on students' performance. The significant improvements in Spatial Concept Understanding, Engagement Level, and Academic Performance underscore the potential of these technologies to enhance learning experiences. The high levels of engagement, in particular, suggest that AR and VR can serve as powerful tools for increasing student involvement and motivation, which in turn may lead to better academic outcomes. Future research could further explore how different types of AR and VR applications may impact specific areas of learning and whether these improvements are sustained over time.

## 9. FINDINGS KEY FINDINGS:

1. AR and VR enhance students' ability to grasp intricate geographical concepts**,** making learning more intuitive and engaging.
2. Immersive learning experiences with AR and VR boost student participation and enthusiasm in geography education by providing dynamic and interactive content.
3. Using AR and VR tools offers a more engaging and accessible approach to exploring spatial relationships**,** making abstract concepts easier to understand**.**
4. Post-test assessments reveal a notable improvement in students' academic performance following AR and VR integration**,** demonstrating their effectiveness in education.
5. This study emphasizes the necessity of incorporating AR and VR technologies into school curricula to modernize geography education and improve learning outcomes.
6. The implementation of AR and VR in geography education has led to a measurable improvement in students' academic success**,** particularly in understanding spatial concepts.
7. Students achieved a 13.5% higher performance compared to expected results from traditional learning methods, highlighting the effectiveness of AR/VR-based education.
8. Student engagement saw a significant rise, with more than 92% expressing a preference for AR/VR-assisted learning over conventional teaching methods**.**
9. The rejection of the null hypothesis confirms that AR and VR have a substantial impact on improving geographic education, reinforcing their value as educational tools.
10. Student feedback strongly supports AR and VR as effective learning aids**,** indicating improved knowledge retention, increased motivation, and clearer conceptual understanding.

## 10. IMPLICATIONS FOR GEOGRAPHY EDUCATION:

1. Adopting AR/VR in school curricula can significantly enhance spatial analysis skills.
2. Integrating immersive learning tools helps in bridging theory and practice, allowing students to experience geographic phenomena virtually.
3. AR/VR-based geography education can benefit remote learners who lack access to physical field trips.
4. Further research can explore long-term retention rates and expand AR/VR applications to other geographic topics like climatology and urban planning.

## 11. CONCLUSION:

The study highlights the significant impact of Augmented Reality (AR) and Virtual Reality (VR) in enhancing spatial analysis and overall learning outcomes in geography education. The results reveal improved academic

ISSN 2394 - 7780

performance, increased student engagement, and a stronger grasp of key concepts through immersive learning experiences. These findings suggest that incorporating AR and VR into geography curricula can make learning more interactive, engaging, and effective. Looking ahead, future research should focus on the long-term effects, the scalability of these technologies, and the necessary teacher training for successful AR/VR implementation in educational settings.

This research emphasizes the pivotal role of AR and VR in advancing geographic education by improving both spatial thinking and student involvement. It underscores the need for these technologies to be integrated into curriculum development to foster a more dynamic and impactful learning environment. The study also highlights challenges related to accessibility, cost, and the need for proper teacher training, which need to be addressed for the broader adoption of AR and VR in classrooms. Future investigations should consider the lasting impact of immersive learning methods and their potential scalability across various educational levels.

**11. REFERENCES AND BIBLIOGRAPHY:**

1. Chang, C., Lai, C., & Hwang, G. (2020). Trends in Augmented Reality and Virtual Reality Research in Education. Educational Technology & Society, 23(3), 85-99.
2. Ibanez, M., & Delgado-Kloos, C. (2018). Augmented Reality in Education: An Overview. IEEE Transactions on Learning Technologies, 11(2), 34-50.
3. iNaturalist. (2023). Seek by iNaturalist AR Application.
4. Liu, Y., & Mattila, H. (2020). Integrating VR and AR in Urban Planning: A Case Study of Smart Cities. Journal of Urban Technology.
5. Milgram, P., & Kishino, F. (1994). A Taxonomy of Mixed Reality Visual Displays. IEICE Transactions on Information and Systems, 77(12), 1321-1329.
6. NASA. (n.d.). Climate Change VR Simulations. Retrieved from NASA Climate.
7. National Education Policy (NEP) 2020. Ministry of Education, Government of India.
8. Sharma, R., & Patel, A. (2021). Digital Tools in Geography Education: A Case Study of Indian Schools. International Journal of Educational Research, 55(4), 77-94.
9. Virtual Angkor Project. (2021). Exploring the Khmer Empire through VR. Retrieved from Virtual Angkor.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A STUDY ON AWARENESS AND PERCEPTION OF CONSUMERS ON GST WITH REFERENCE TO RESTAURANTS IN THANE DISTRICT

**Vijeta Rohra**
Assistant Professor, R.K.Talreja College of Arts, Science & Commerce (Center for Management Courses), Ulhasnagar-421003

**ABSTRACT**
*Goods and Services tax (GST) is a tax on Goods and Services supplied to the consumers. GST is a successor of VAT. Many taxes of central and State is being subsumed under GST such as Central Excise duty, Surcharge and Cess, Value added Tax, Purchase tax, Luxury tax etc. On 1st July, 2017 Government of India has taken a step forward for a nation with regard to taxation policy and brought One Nation, One Tax I.E Goods and Services Tax (GST). The share of GST collected is being divided into two parts I.E Central Goods and Services Tax (CGST) and State Goods and Services Tax (SGST) or Union Territory Goods and Services Tax (UTGST). This Survey is being regarding GST on Restaurants. Survey was regarding to study consumers awareness about GST on Restaurants, to know GST rates from the consumers and to analyze consumers perception on GST rates and how much it impacts consumers while having a visit in Restaurants. Survey conducted with the help of Primary and Secondary data. The Study concludes that Consumers are well aware about GST rates applicable on Restaurants and once in a blue moon consumer visit is being affected by GST rates. It also states that Consumers prefer to be Unobjectionable with GST rates on Restaurants.*

***Keywords:*** *Goods and Services tax, Central Goods and Services tax, State Goods and Services tax, Union Territory Goods and Services tax, Consumers, Perception.*

## INTRODUCTION

GST is tax on consumption of Goods and services. It is termed as indirect tax. The reason to be known as indirect tax is that it is shifted from one person to another and final impact falls on Consumers. GST is a destination based tax in India in which tax is levied on where goods & services are being consumed. It covers all goods and services except Alcoholic liquor for human consumption, Petroleum products, Real estate sector and Tobacco until notified by Government. Goods are classified under Harmonised System of Nomeclature whereas Services are being classified in Service Accounting Code. One of the primary objectives of GST was to remove the cascading effect of taxes.

### Dual GST

India has brought dual concept model into picture for the country. The following is the divided into two:-

**1) Intra – state Supply :-**

When the goods and services are being sold within the state then it is called as Intra – state supply. Tax levied on Intra – state supply transaction is CGST and SGST / UTGST.

A) CGST – It is tax levied and collected by Central Government.

B) SGST – It is tax levied and collected by State Government.

C) UTGST – It is tax levied and collected by Union Territories.

**2) Inter – state Supply :-**

When the goods and services are being sold outside the state then it is called as Inter – state supply. Tax levied on Inter – state supply transaction is IGST. It is a unique concept brought into India.

### GST Rates

1) GST Rates for Supply of goods – GST rates on supply of Goods are as follows:

a) Inter – state Supply of goods – IGST rates are nil, 0.25 %, 3 %, 5 %, 12 %, 18 %,28 %.

b) Intra – state Supply of goods – CGST will be 50 % of IGST and SGST / UTGST will be 50 % of IGST.

2) GST Rates for Supply of services –

a) Inter – state supply of services – IGST rates are 5 %, 12 % and 28 %.

b) Intra – state supply of services – CGST will be 50 % of IGST and SGST / UTGST will be 50 % of IGST.

ISSN 2394 - 7780

**GST Rates on Food, Beverage Services and Accommodation**

| Particulars | GST Rate Applicable |
|---|---|
| **1)** Food services by restaurants that may or may not have air conditioning (including takeaway) | **A)** 5% with no Input Tax Credit |
| **2)** Food services provided by a restaurant operating within a hotel with a room tariff of Rs 7,500 or more | **B)** 18% |
| **3)** Food services provided by a restaurant operating within a hotel with a room tariff of Rs 7,500 or less | **C)** 5% with no Input Tax Credit |

**OBJECTIVE OF THE STUDY**

1) To Study awareness about GST among consumers in Restaurants.
2) To Analyze Consumers Perception regarding GST in Restaurants.
3) To know GST rates in Restaurants from consumers.
4) To Find out the impact of GST on consumers while visiting Restaurants.

**NEED OF THE STUDY**

As we know consumers are not fully aware of the GST rates levied on the Restaurants. To know consumers awareness and perception on GST rates on Restaurants.

**RESEARCH METHODOLOGY**

Research survey collected through Primary and Secondary data.

i) **Primary Data –** Structured Questionnaire were framed and shared through Google forms among the Consumers.

ii) **Secondary Data –** Various Books, Websites and Journals were used for Information.

**Sample Size** – Sample Size selected for Research is 170 of Thane City.

**LIMITATION OF THE STUDY**

1) The study is limited upto GST on Restaurants only, no other sector is taken.
2) The study is limited upto Thane District of Mumbai.
3) The Number of respondents are limited upto 170.
4) The study is limited upto GST tax only no other taxes are taken.

**Data Analysis and Interpretation**

| Age Group | No. of Responses | Percentage of Respondents |
|---|---|---|
| 18 - 30 | 153 | 90 |
| 31 - 45 | 13 | 7.6 |
| Above 45 years | 4 | 2.4 |
| **Total** | **170** | **100** |

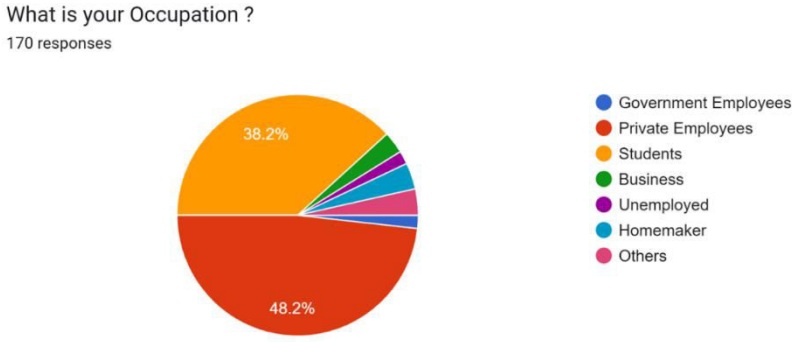
**Location**

| Location | No. of Responses | Percentage of Respondents |
|---|---|---|
| Thane District | 153 | 90 |
| Others | 17 | 10 |
| **Total** | **170** | **100** |

**1) What is your Occupation?**

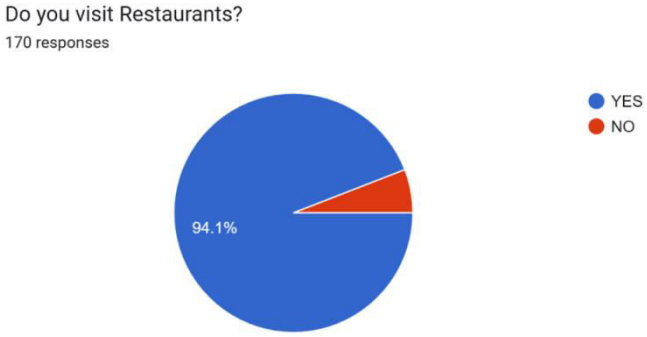
| Occupation | No. of Responses | Percentage of Respondents |
|---|---|---|
| Government Employees | 3 | 1.8 |
| Private Employees | 82 | 48.2 |
| Students | 65 | 38.2 |
| Business | 5 | 2.9 |
| Unemployed | 3 | 1.8 |
| Homemaker | 6 | 3.5 |
| Others | 6 | 3.5 |
| **Total** | **170** | **100** |

ISSN 2394 - 7780




**2) Do you visit Restaurants?**

| Restaurants | No. of Responses |
|---|---|
| YES | 160 |
| NO | 10 |
| **Total** | **170** |

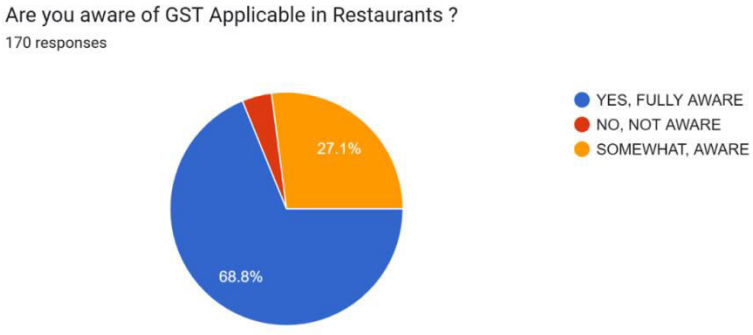



**Interpretation:**

As per above data, 94.1% of the individuals visit restaurants while 5.9 % restrain from visiting.

3) Are you aware of GST Applicable in Restaurants?

| Restaurants | No. of Responses |
|---|---|
| YES, FULLY AWARE | 117 |
| NO, NOT AWARE | 7 |
| SOMEWHAT, AWARE | 46 |
| **Total** | **170** |



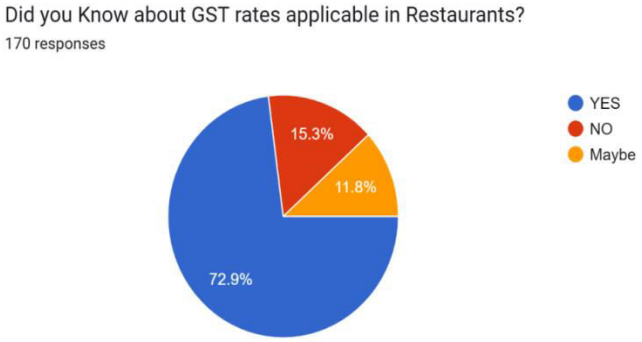

**Interpretation:**

From the above data, it can be analyzed that 68.8 % are fully aware about GST applicable in Restaurants and 4.1% are not aware about GST applicable in Restaurants while 27.1 % are somewhat aware about GST applicable in Restaurants.

ISSN 2394 - 7780

**4) Did you know about GST rates applicable in Restaurants?**

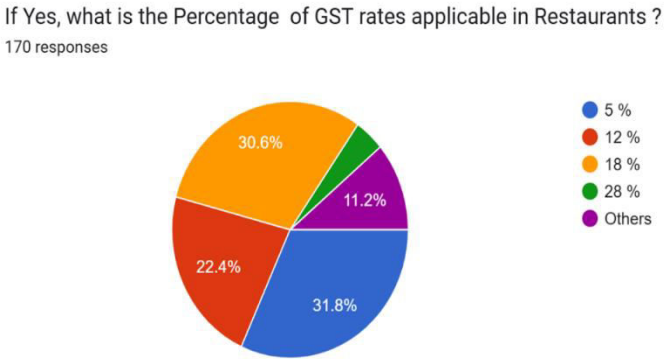
| Restaurants | No. of Responses |
|---|---|
| YES | 124 |
| NO | 26 |
| Maybe | 20 |
| **Total** | **170** |




**Interpretation:**
We can analyze from above data, 72.9 % are awake of GST rates while 15.3 % are not awake about GST rates and 11.8 % are perhaps aware of GST rates.

**5) If Yes, what is the Percentage of GST rates applicable in Restaurants?**

| GST Rates | No. of Responses |
|---|---|
| 5 % | 54 |
| 12 % | 38 |
| 18 % | 52 |
| 28 % | 7 |
| Others | 19 |
| **Total** | **170** |

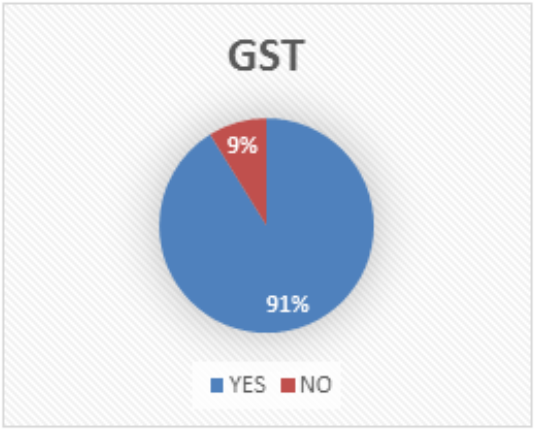



**Interpretation:**
From the above analysis, 31.8 % of consumers think that GST rate is 5 %, 22.4% consider GST is 12 %,while 30.6 % consider 18 % GST rate and 4.1 % consumer consider 28 % GST rates, 11.2 % consumer consider different slab rates.

**6) As a consumer, are you aware of that GST is divided into CGST and SGST/UTGST in restaurants**

| GST | No. of Responses |
|---|---|
| YES | 155 |
| NO | 15 |
| **Total** | **170** |

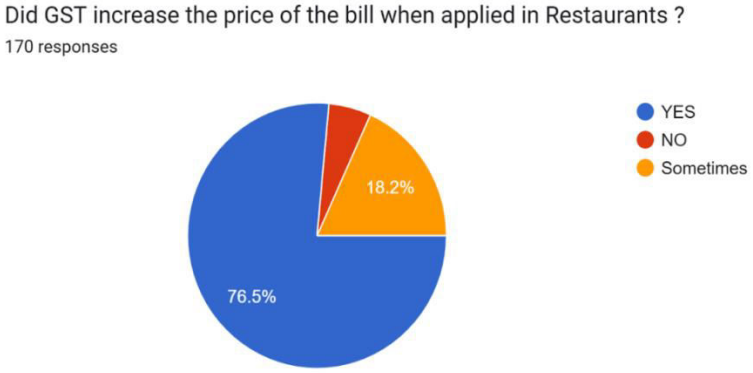
ISSN 2394 - 7780




**Interpretation:**
From the above data, 91 % of the consumers are aware of that GST is divided into CGST and SGST/UTGST while 9 % are not aware of it.

**7) Did GST increase the price of the bill when applied in Restaurants?**

| GST | No. of Responses |
|---|---|
| YES | 130 |
| NO | 9 |
| Sometimes | 31 |
| **Total** | **170** |

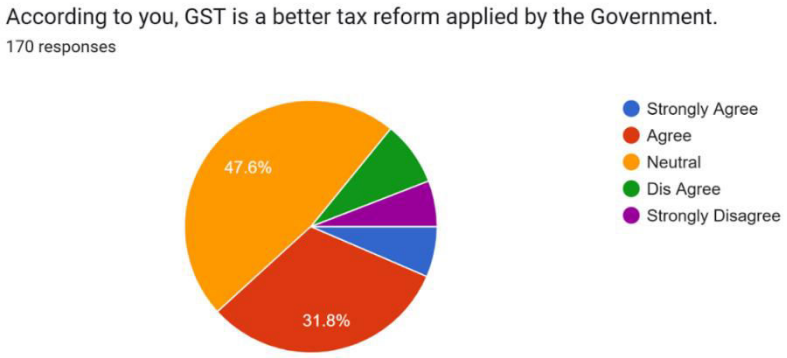



**Interpretation:**
As per data collected, 76.5 % of the consumers consider increase in price when GST is applied, 5.3 % consider no change in price and 18.2 % thinks sometime GST affect the price.

**8) According to you, GST is a better tax reform applied by the Government.**

| GST Rates | No. of Responses |
|---|---|
| Strongly Agree | 11 |
| Agree | 54 |
| Neutral | 81 |
| Dis Agree | 14 |
| Strongly Disagree | 10 |
| **Total** | **170** |

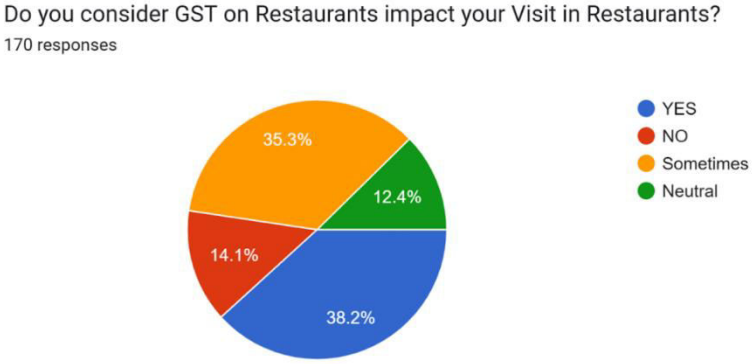
ISSN 2394 - 7780




**Interpretation:**
As per data collected, it has been seen that 47.6 % are unbiased with GST reform while 31.8 % agree that GST is a better tax reform and 8.2 % disagree that it is a better reform, 5.9% are of the opinion that GST is not a very better tax reform.

**9) Do you consider GST on Restaurants impact your Visit in Restaurants?**

| GST | No. of Responses |
|---|---|
| YES | 65 |
| NO | 24 |
| Sometimes | 60 |
| Neutral | 21 |
| **Total** | **170** |

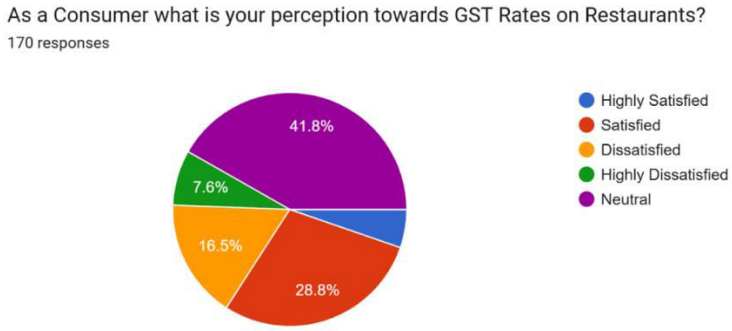



**Interpretation:**
From the above data, 38.2 % of the consumer consider that GST impact their visit in Restaurants, while 14.1 % are less affected, 35.3 % gets sometimes affected and 12.4 % are impartial regarding their visit after having GST on their bills.

**10) As a Consumer what is your perception towards GST Rates on Restaurants?**

| GST Rates | No. of Responses |
|---|---|
| Highly Satisfied | 9 |
| Satisfied | 49 |
| Dissatisfied | 28 |
| Highly Dissatisfied | 13 |
| Neutral | 71 |
| **Total** | **170** |

ISSN 2394 - 7780




**Interpretation:**
From the above analysis, only 5.3 % consumers are highly satisfied, 28.8 % are satisfied with GST rates, while 16.5% are dissatisfied with GST rates, 7.6 % are highly dissatisfied and 41.6 % are unbiased towards GST Rates.

**FINDINGS**

1) Most of the respondents are from the Age Group of 18 – 30 years.
2) Majority of the respondent's i.e. 94.1 % visit restaurants.
3) Majority of the respondents i.e. 68.8 % are aware of that GST is applicable in Restaurants.
4) Most of the respondent's i.e. 72.9 % know about GST Rates.
5) Among all the respondents, 31.8 % consider there is 5 % GST applicable in Restaurants.
6) 76.5 % of the consumer consider that GST impact their bill in restaurants.
7) Majority of the respondent's i.e. 47.6 % consider that GST is a better tax reform.
8) Majority of the respondent's i.e. 41.8 % of the consumer are unbiased with GST rates.

**CONCLUSION:-**
GST is a new reform brought by Government of India which changed the picture of a business world with relevance to tax system. Research highlights on GST applicable in Restaurants. Consumers are aware of the GST rates applicable in Restaurants on food. Most of the consumer consider that GST impact the pricing. GST in restaurants on food unaltered consumers visit in it. It also states consumers are impartial with GST in restaurants. "GST is a tribute to the maturity and wisdom of India's democracy." – Pranab Mukherjee

**REFERENCE**

1) https://en.wikipedia.org/wiki/Goods_and_Services_Tax_(India)
2) A study on the perception of consumer on GST A special reference to restaurants in West Bengal, India (www.ijcrt.org © 2022 IJCRT | Volume 10, Issue 7 July 2022 | ISSN: 2320-2882)
3) https://cleartax.in/s/gst-law-goods-and-services-tax
4) https://www.5paisa.com/stock-market-guide/tax/gst-on-food-and-restaurant#:~:text=The%20GST%20rates%20for%20restaurants,a%20GST%20rate%20of%205%25.
5) https://www.bajajfinserv.in/what-is-sac-code#:~:text=A%20Service%20Accounting%20Code%20(SAC,of%20the%20service%20being%20provided.
6) https://docs.google.com/forms/d/10Ky3Y7iY2tPOrVVdUSA9psMU8Uw2vPHPmicSODUf0ds/edit
7) https://docs.google.com/spreadsheets/d/1mY03EJxKobKVltbw6ESdymysSU06CmYsYDQhpPIA5SA/edit?gid=17740470#gid=17740470
8) https://cleartax.in/s/gst-day-in-india

**Books –**
TYBMS – Indirect taxes – **Publication** – Manan Prakashan – **Author** – Ainapure & Ainapure

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE IMPACT ON RETAIL INVESTORS' DECISION IN EQUITY SHARES DUE TO INDIAN STOCK MARKET CRASHES OF 2024

**Amogh Desai and Dr. Shubhadha Apte**
Research Scholar, DTSS college of Commerce

## ABSTRACT
*The Indian stock market experienced significant volatility and crashes in 2024, leading to widespread repercussions for retail investors. This paper examines the impact of these market crashes on retail investors' decision-making processes regarding equity shares. By analyzing behavioral patterns, investment strategies, and psychological factors, the study highlights how market instability influenced retail investors' confidence, risk appetite, and long-term investment outlook. The findings suggest that the crashes led to increased caution, a shift toward safer investment options, and a greater reliance on financial advisors and digital tools for decision-making.*

***Keywords:*** *Factors, Equity investments, Retail investors*

## INTRODUCTION
The Indian stock market has historically been a dynamic and volatile environment, attracting millions of retail investors seeking wealth creation. However, the market crashes of 2024, triggered by global economic uncertainties, geopolitical tensions, and domestic policy changes, significantly impacted investor sentiment. Retail investors, who often lack the resources and expertise of institutional investors, were particularly vulnerable to these shocks. This study explores how these crashes influenced retail investors' decisions regarding equity shares, focusing on behavioral changes, risk tolerance, and investment strategies.

## OBJECTIVES
1. To determine whether retail investors are vulnerable to stock market crashes
2. To analyse whether expertise and knowledge about investment decision leads to better investment

## LITERATURE REVIEW
Previous research has established that market crashes profoundly affect investor behavior. Studies by Kahneman and Tversky (1979) on prospect theory highlight how losses loom larger than gains, leading to risk-averse behavior during downturns. In the Indian context, Gupta and Singh (2020) found that retail investors tend to panic-sell during crashes, exacerbating market declines. However, limited research exists on the specific impact of the 2024 crashes, making this study timely and relevant.

## HYPOTHESIS
1. Retail Investors without expertise are major loss bearers in stock market crashes.
2. Knowledge and expertise allow investors to earn profits even in market crashes.

## RESEARCH METHODOLOGY.
This study employs a mixed-methods approach, combining quantitative and qualitative data. A survey was conducted among 60 retail investors across India, focusing on their investment decisions before, during, and after the 2024 crashes. Secondary data from stock exchanges and financial reports were also analyzed to contextualize the findings.

## DATA ANALYSIS

**Table 1:** Demographic Data

| Demographic heads | Category | N | % |
|---|---|---|---|
| Gender | Male | 41 | 63 |
| | Female | 24 | 37 |
| Age | 18 to 25 Years | 19 | 29.5 |
| | 25 to 40 Years | 26 | 40.5 |
| | 40 and Above | 20 | 30 |
| Occupation | Salaried | 25 | 39 |
| | Business | 22 | 34 |
| | Professional | 18 | 27 |
| Education | Under Graduate | 18 | 27 |
| | Graduate | 24 | 37 |

ISSN 2394 - 7780

| | | | |
|---|---|---|---|
| | Post Graduate | 23 | 36 |
| Annual Income | Below 500000 | 22 | 33.5 |
| | 500000-1000000 | 22 | 34.5 |
| | Above 1000000 | 21 | 32 |
| Investing Experience | Less than 2 years | 10 | 16 |
| | 2 to 5 years | 40 | 61.5 |
| | More than 5 Years | 15 | 22.5 |

In the above table, the demographic details show that majority of respondents are Males, Age grop most observeds frequency is 25 to 40 years, salaried or job group enjoys maximum frequency, Graduate category dominates the education, most of the respondents fall in the category of Income between 5 lakhs to 10 lakhs Pa. 61.5 % of respondents have investing experience of 2 to 5 years.

**Table 2:** Factors influencing equity investment preferred by respondents

| Factors | Category | % of respondents who gave maximum ranks |
|---|---|---|
| Fundamental Factors | Fundamental- profits of Company | 21 |
| | P E ratio | |
| | Flow of FII | |
| Economic Factors | Government Stability, | 11 |
| | Inflation Rate, | |
| | Interest Rate, | |
| | Global factors | |
| | Health of Economy | |
| Advisory Factors | Opinion of Brokers | 45 |
| | Opinion of friend/relative | |
| | Opinion of TV experts | |
| | Opinion of Experienced individual investors | |
| Technical Factors | Company charts, | 7 |
| | Industry or market charts or movements . | |
| Risk and Reward Factors | Divesrsification of risks | 16 |
| | Timely Return-Liquidity | |
| | Long term Capital appreciation | |
| Individual factors | My Own Risk appetite | 10 |
| | Savings | |
| | Quantum of money in hand | |
| | My Knowledge and experience | |

On the basis of above table it is understood that 45% of investors prefer investing based on Advisory factors and is the determining factor. Thus the substantial number sample audience invests based on market sentiments.

**Table 3:** Reaction to Steep fall in Market

| Investing Experience | Reaction | No of Respondents | % of Respondents in category |
|---|---|---|---|
| Less than 2 years | Sell | 3 | 30 |
| | Set at stop loss point | 5 | 50 |
| | Hold | 1 | 10 |
| | Buy | 1 | 10 |
| 2Years to 5Years | Sell at Loss | 6 | 15 |
| | Set at stop loss | 28 | 70 |
| | Hold | 4 | 10 |
| | Buy | 2 | 5 |
| Above 5 Years | Sell at Loss | 1 | 7 |
| | Set at stop loss | 5 | 33 |
| | Hold | 4 | 26 |
| | Buy | 5 | 33 |

ISSN 2394 - 7780

On the basis of above it is understood that lower Investing experience tend to materialize losses by selling at loss or at point of stop loss and with increase in investing experience reaction to stock market fall brings in diverse results with equal number of participants preferring either to sell at stop loss or buy @33% for investors having more than 5 years of experience. For investors have experience in-between 2-5 years focus is on Setting a stop loss point where losses can be averted.

**Findings and Discussion based on secondary data analysis**
Based on National Stock Exchange of India (2024). Market Volatility Report. and Reserve Bank of India. (2024). Annual Report on Financial Stability following is noted in pattern of retail investors

**Behavioral Changes.**
The survey revealed that 65% of retail investors experienced heightened anxiety during the crashes, leading to a significant reduction in equity investments. Many investors shifted to safer assets like fixed deposits and gold, **reflecting a decline in risk appetite.**
**Risk Perception**.

The crashes altered investors' perception of risk, with 70% of respondents stating that they now prioritize capital preservation over high returns. This shift was particularly pronounced among older investors nearing retirement.

**Investment Strategies.**
Despite the overall cautious approach, 25% of investors viewed the market crashes as buying opportunities. These investors, often with a long-term horizon, invested in undervalued stocks, demonstrating a contrarian approach.

**Role of Financial Literacy.**
Investors with higher financial literacy were better equipped to navigate the crashes, making informed decisions rather than reacting impulsively. This underscores the importance of financial education in enhancing investor resilience.

**RESULTS:**
Based on statistics stating 80% sample and analysis of secondary data it can be observed that investors with lesser experience and market awareness tend to face losses hence Hypothesis that “Retail Investors without expertise are major loss bearers in stock market crashes” is proved correct.

Based on analysis of primary and secondary data it can be concluded that although investors with expertise and experience tend to hold and buy shares during market fall but it cannot be conclusively said they earn profits during market crashes. Rather mixed results were noted with 30% of experienced individuals based on sample and 25% of % of investors viewed the market crashes as buying opportunities. Hence hypothesis Knowledge and expertise allow investors to earn profits even in market crashes is incorrect .

**CONCLUSION**
The Indian stock market crashes of 2024 had a profound impact on retail investors' decision-making processes. While many investors adopted a risk-averse approach, others leveraged the downturn to build long-term portfolios. The findings highlight the need for enhanced financial literacy and regulatory measures to protect retail investors during market upheavals.

**6. RECOMMENDATIONS**

1. **Financial Education:** Policymakers should promote financial literacy programs to empower retail investors with the knowledge to make informed decisions.
2. **Regulatory Safeguards:** Strengthening circuit breakers and investor protection mechanisms can mitigate the impact of future crashes.
3. **Diversification:** Retail investors should diversify their portfolios to reduce exposure to equity market volatility.
4. **Long-Term Perspective:** Investors should focus on long-term goals rather than short-term market fluctuations.

**REFERENCES**
1. Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-291.
2. Gupta, S., & Singh, R. (2020). Behavioral Patterns of Retail Investors in India During Market Crashes. *Journal of Behavioral Finance*, 21(3), 245-260.

ISSN 2394 - 7780

3. National Stock Exchange of India. (2024). Market Volatility Report.
4. Reserve Bank of India. (2024). Annual Report on Financial Stability.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# THE ROLE OF OPEN BANKING IN ECONOMIC DEVELOPMENT

**Ms. Manisha S.Kataria[1] and Dr. Reddy Sravnth[2]**
[1]Assistant Professor, Seva Sadan College of Arts, Science and Commerce
[2]Sandip University, Nashik

**ABSTRACT**
*The advent of online financial services has revolutionized the way individuals and businesses access financial services, leading to significant economic development. This study examines the impact of online financial services on economic development, focusing on financial inclusion, economic growth, and poverty reduction. The findings reveal that online financial services have increased financial inclusion by providing access to financial services for underserved populations. Mobile payments, digital wallets, and online banking have enabled individuals to conduct financial transactions conveniently and securely. This has led to increased economic activity, job creation, and poverty reduction. Moreover, online financial services have facilitated economic growth by providing businesses with access to capital, markets, and financial management tools. E-commerce platforms, online payment systems, and digital lending have enabled businesses to expand their operations, increase revenue, and create employment opportunities. The study concludes that online financial services have played a crucial role in promoting economic development by increasing financial inclusion, facilitating economic growth, and reducing poverty. However, challenges such as cybersecurity threats, regulatory frameworks, and digital divide need to be addressed to ensure sustainable and equitable economic development.*

***Keywords:*** *Open Banking, Economic Development, Access to Credit, Innovation, Financial Transparency*

## INTRODUCTION:

The financial sector plays a critical role in economic development by facilitating transactions, credit allocation, and risk management. Traditional banking models, however, have been characterized by inefficiencies, lack of competition, and limited accessibility. Open Banking, enabled by technological advancements and regulatory frameworks, aims to address these challenges by allowing third-party financial service provider's access to consumer banking data with consent. This paper examines how Open Banking contributes to economic development through financial inclusion, SME growth, innovation, and digital transformation. Despite its growing importance, the role of open banking in economic development remains understudied.

This research paper aims to bridge this knowledge gap by examining the impact of open banking on economic development, with a focus on financial inclusion, innovation, and access to credit. By exploring the theoretical and empirical linkages between open banking and economic development, this study seeks to contribute to the ongoing policy and academic debates on the potential of open banking to drive economic growth and development.

## LITERATURE REVIEW:

The concept of Open Banking has been widely discussed in academic and industry literature. Studies highlight the role of Open Banking in enhancing financial inclusivity and promoting economic efficiency (Zhang & Li, 2020). According to a report by the World Bank (2021), Open Banking fosters competition by enabling fintech companies to create innovative financial products, ultimately benefiting consumers. Additionally, research by Brown et al. (2019) suggests that Open Banking contributes to economic development by facilitating seamless financial transactions and reducing transaction costs. This literature review synthesizes key findings from academic research, regulatory reports, and industry case studies to provide a comprehensive understanding of Open Banking's economic impact.

## OBJECTIVES:

1. How do open banking initiatives affect the financial inclusion of underserved populations?

2. What is the impact of open banking on the development of new financial products and services?

3 What are the key drivers and barriers to open banking adoption?

## RESEARCH METHODOLOGY:

Data is collected with both the methods.

**PRIMARY DATA COLLECTION:** With the help of questionnaire data is collected got the 60 responses of questionnaire. Primary data was analysed using the statically analysis and thematic analysis.

ISSN 2394 - 7780

Secondary data: from previous research papers collected the data .It was analysed using content analysis.

Importance of open banking inn economic development:

1. Increased access to financial services: Open banking enables fintech companies to provide financial services to underserved populations, promoting financial inclusion.
2. Reduced barriers to entry: Open banking APIs and data sharing facilitate the development of new financial products and services, increasing competition and reducing barriers to entry.
3 . Stimulates innovation: Open banking encourages innovation by providing access to financial data, enabling the development of new financial products and services.
4. Promotes competition: Open banking increases competition among financial institutions, driving better services, lower prices, and improved customer experiences.
5. Increased economic activity: Open banking facilitates faster and more secure transactions, increasing economic activity and growth.
6. Job creation: The growth of fintech companies and new financial services creates new job opportunities, contributing to economic development
7. Streamlined processes: Open banking automates many processes, reducing manual errors, increasing efficiency, and lowering costs.
8. Better risk management: Open banking enables better risk management through real-time data sharing and analysis, reducing the risk of financial crises.
9. Personalized services: Open banking enables fintech companies to provide personalized financial services, improving customer satisfaction and loyalty.
10. Increased transparency: Open banking promotes transparency by providing customers with real-time access to their financial data, enabling better financial decision -making.
11. Improved regulatory oversight: Open banking enables regulators to monitor financial transactions and institutions more effectively, reducing the risk of financial crimes.
12. Standardization: Open banking promotes standardization in financial data sharing, facilitating regulatory compliance and reducing the risk of errors.

**LIMITATIONS:**

1. Increased risk of data breaches: Open banking requires sharing sensitive financial data, which can increase the risk of data breaches and cyber-attacks.
2. Data privacy concerns: Sharing personal financial data can raise concerns about data privacy and the potential for misuse.
3. Technical glitches and downtime: Open banking relies on technology, which can be prone to technical glitches and downtime, disrupting financial services.
4. Incompatibility issues: Different systems and APIs may not be compatible, leading to integration challenges and increased costs.
5. Complex regulatory frameworks: Open banking requires navigating complex regulatory frameworks, which can be time-consuming and costly.
6. Lack of standardization: Different countries and regions may have varying regulatory requirements, creating challenges for international open banking initiatives.
7. Implementation costs: Implementing open banking systems and APIs can be costly for financial institutions.
8. Ongoing maintenance costs: Maintaining and updating open banking systems can also incur significant costs.
9. Disintermediation of traditional banks: Open banking can enable fintech companies to provide financial services directly to customers, potentially disintermediating traditional banks.

ISSN 2394 - 7780

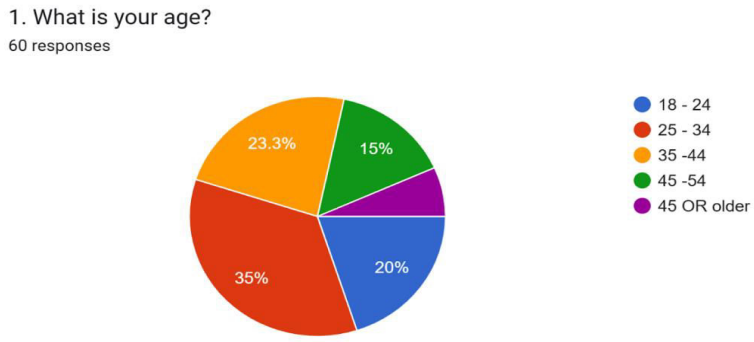
10. Loss of revenue streams: Traditional banks may lose revenue streams as customers increasingly use fintech companies for financial services.
11. Exclusion of underserved populations: Open banking may not necessarily address the needs of underserved populations, potentially exacerbating existing inequalities.
12. Increased inequality: The benefits of open banking may not be evenly distributed, potentially increasing inequality between those who have access to open banking services and those who do not.

**CONCLUSION:**

This study investigated the role of open banking in promoting economic development. The findings suggest that open banking has the potential to significantly contribute to economic growth, financial inclusion, and innovation.

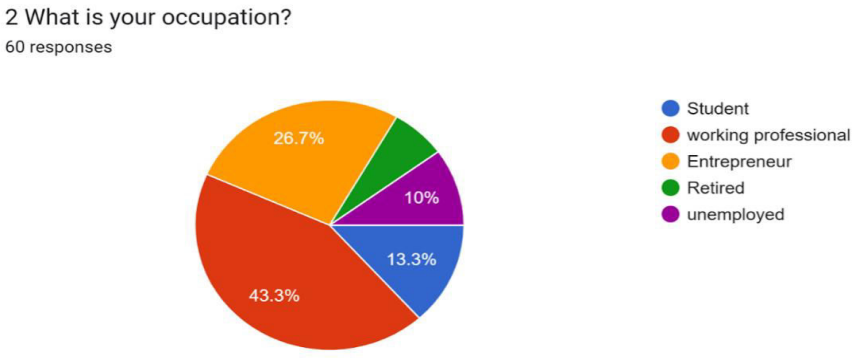
Open banking has the potential to revolutionize the financial sector, promoting economic growth, financial inclusion, and innovation. As the open banking landscape continues to evolve, it is essential for policymakers, financial institutions, and fintech companies to work together to harness its benefits while mitigating its

**FINDINGS:**




**Interpretation**

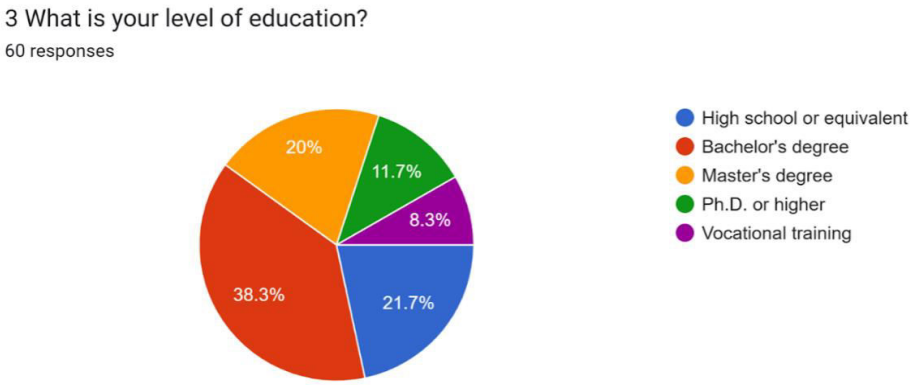
The largest group of respondents are in the 18-24 age range, comprising 35% of the total. The 25-34 age group is the second largest, accounting for 23.3%. The 35-44 age group is the smallest, representing 10% of the respondents. The 45-54 and 55 or older groups make up 11.7% and 20% respectively. This data indicates a sample population skewed towards younger adults.




The pie chart depicts the occupations of 60 respondents. The data can be summarized as follows:

* Working Professional: 43.3% (26 respondents)
* Student: 13.3% (8 respondents)
* Entrepreneur: 26.7% (16 respondents)
* Retired: 6% (6 respondents)
* Unemployed: 10% (6 respondents)

ISSN 2394 - 7780




The pie chart illustrates the level of education of 60 respondents. The data indicates that: [1, 2]

* 38.3% hold a Bachelor's degree.

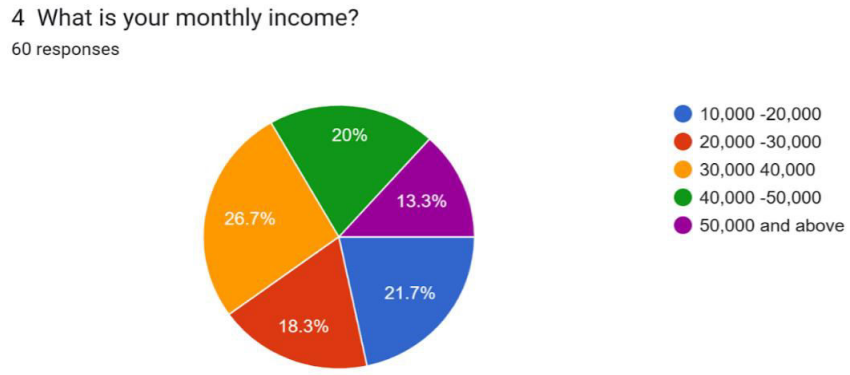
* 21.7% have a high school diploma or equivalent.

* 20% possess a Ph.D. or higher.

* 11.7% have a Master's degree.

* 8.3% completed vocational training.

This data suggests that the majority of respondents have pursued higher education, with a significant portion holding a Bachelor's or Ph.D. degree. [1, 2]




The pie chart shows the distribution of monthly income among 60 respondents: [1, 2]

* 10,000-20,000: 21.7%

* 20,000-30,000: 18.3%

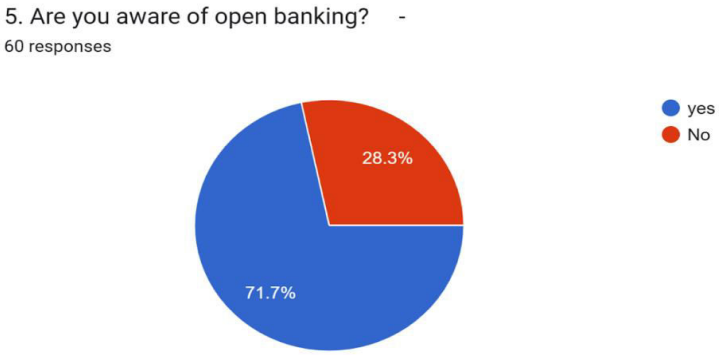
* 30,000-40,000: 26.7%

* 40,000-50,000: 20%

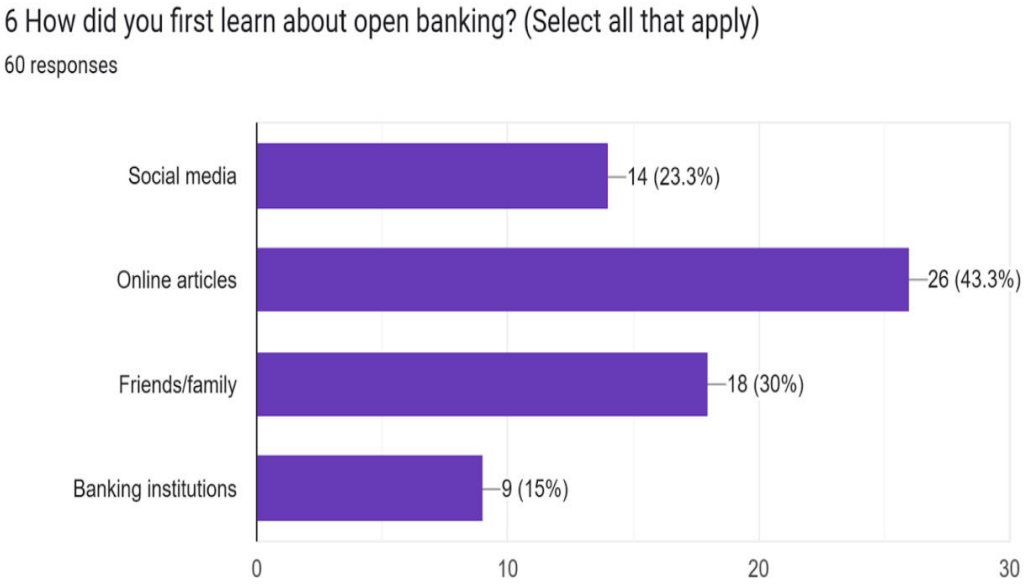
* 50,000 and above: 13.3%

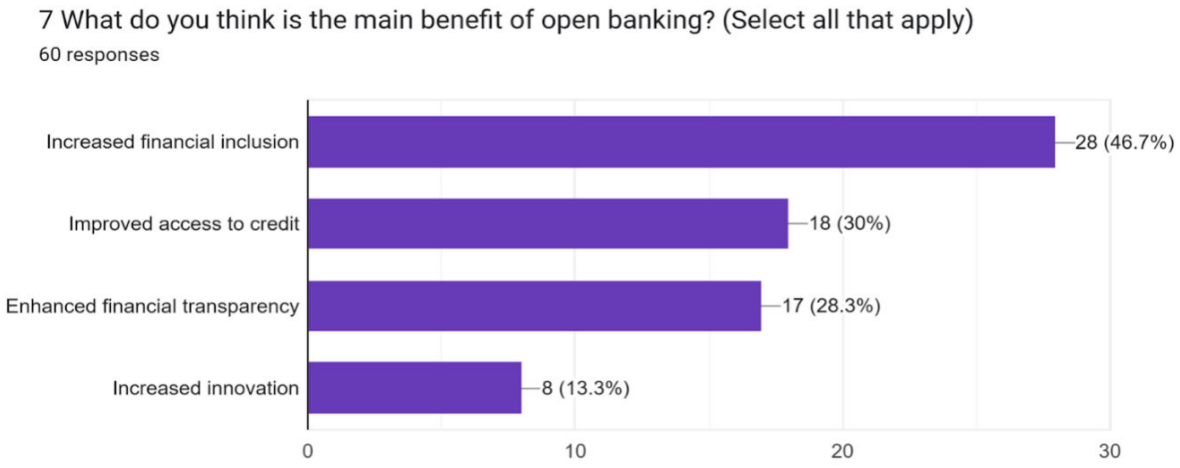
The largest group of respondents (26.7%) have a monthly income between 30,000 and 40,000, while the smallest group (13.3%) have a monthly income of 50,000 and above. [1, 2]

ISSN 2394 - 7780




The survey results indicate that out of 60 respondents, 71.7% are aware of open banking, while 28.3% are not. This suggests that a significant majority of the surveyed population has some familiarity with the concept of open banking.

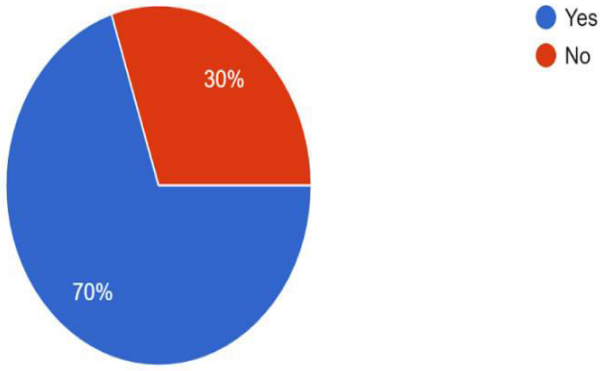


ISSN 2394 - 7780

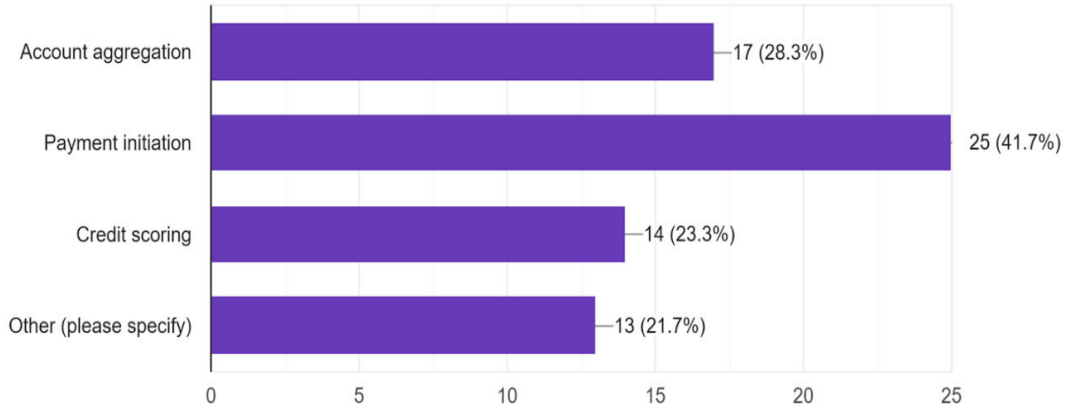
8 Have you used open banking services?

60 responses



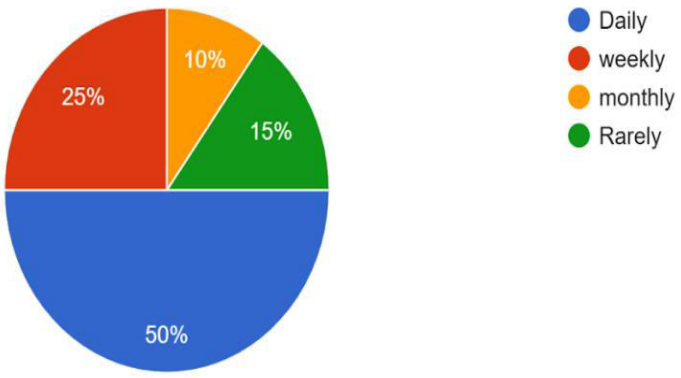

9 If yes, which open banking services have you used? (Select all that apply)

60 responses



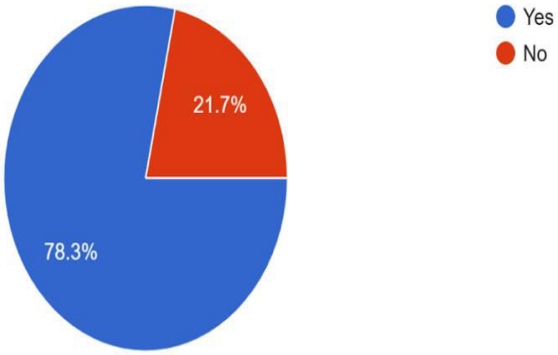

10 How often do you use open banking services?

60 responses

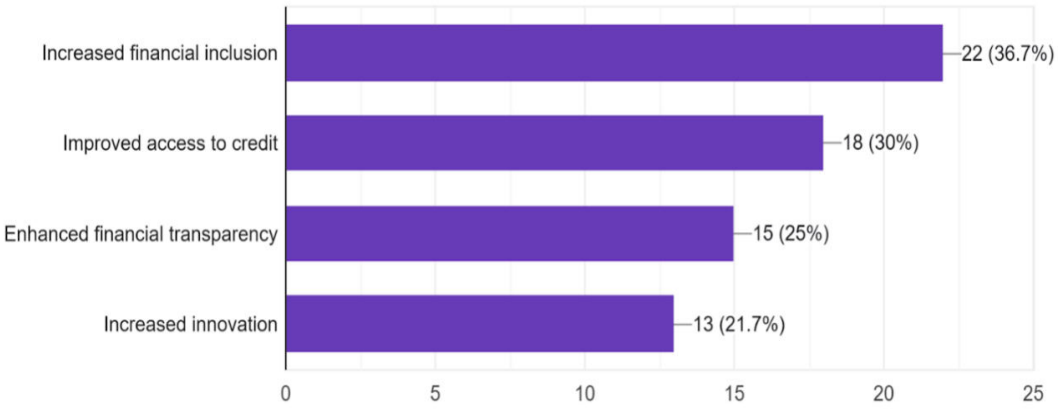


ISSN 2394 - 7780

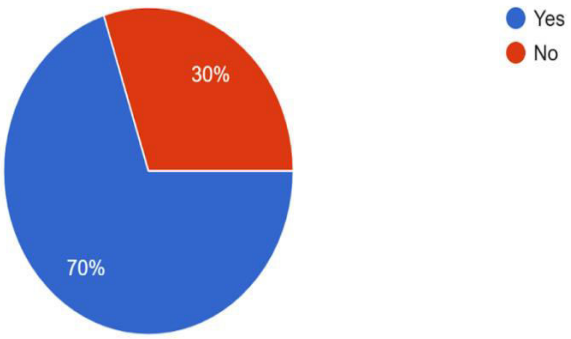
11 Do you think open banking has contributed to economic development in your country?
60 responses




12 How do you think open banking has impacted economic development? (Select all that apply)
60 responses



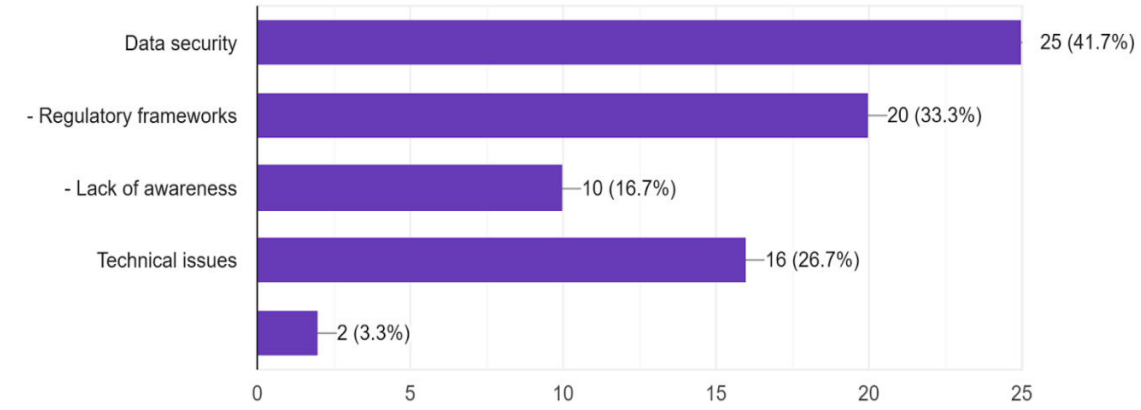

13 Do you think open banking has created new job opportunities?
60 responses



ISSN 2394 - 7780

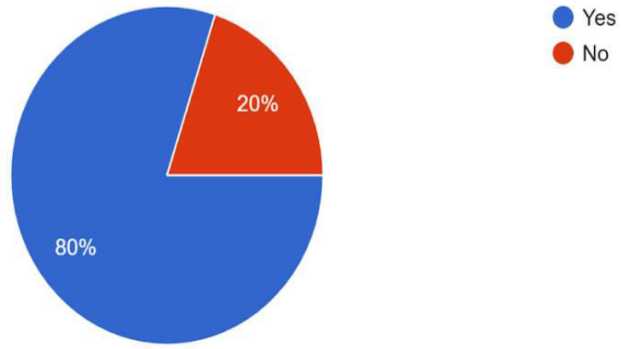
14 What do you think are the biggest challenges facing open banking? (Select all that apply)

60 responses



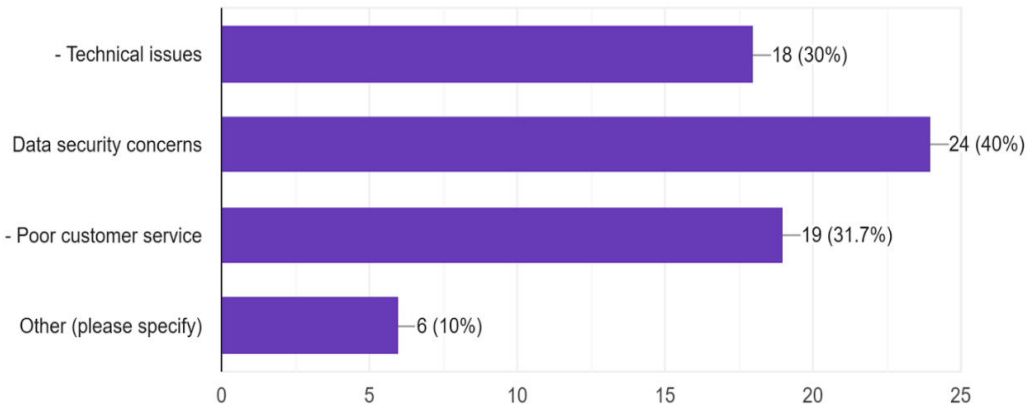

15 Have you experienced any issues with open banking services?

60 responses




16 If yes, what issues have you experienced? (Select all that apply)

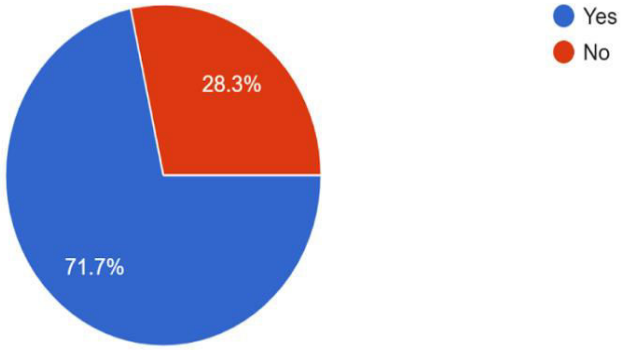
60 responses



ISSN 2394 - 7780

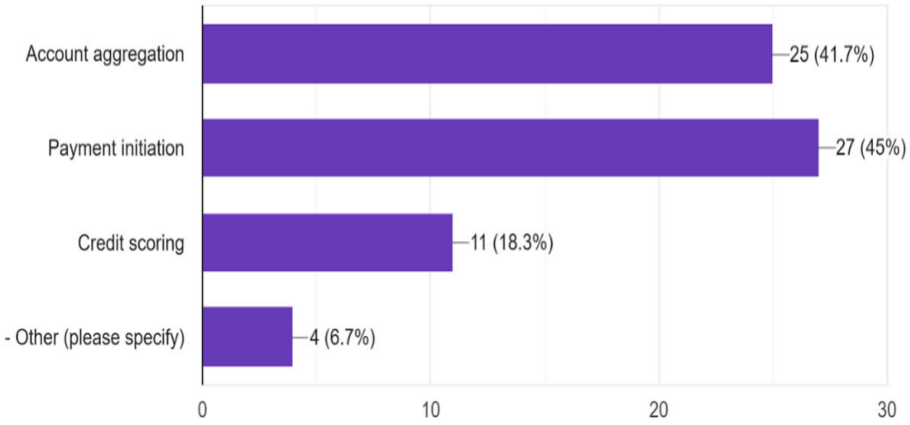
17 Do you think open banking will continue to grow in popularity?

60 responses



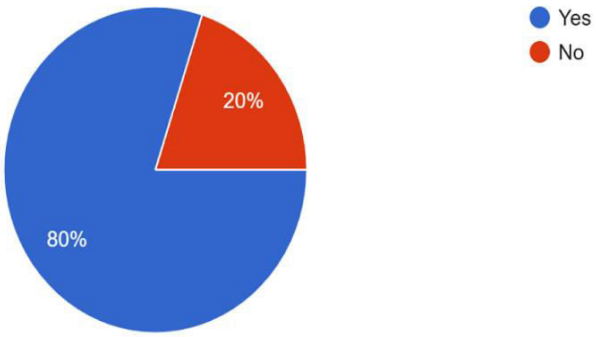

18 What do you think are the most promising applications of open banking? (Select all that apply)

60 responses



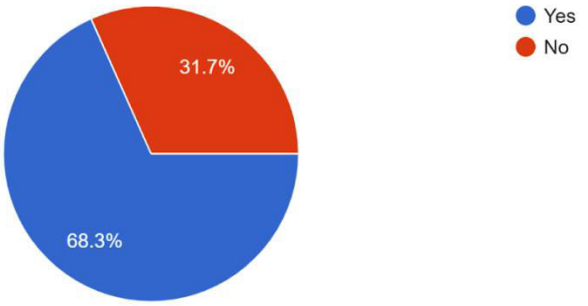

19 Do you think open banking will lead to increased competition in the banking sector?

60 responses

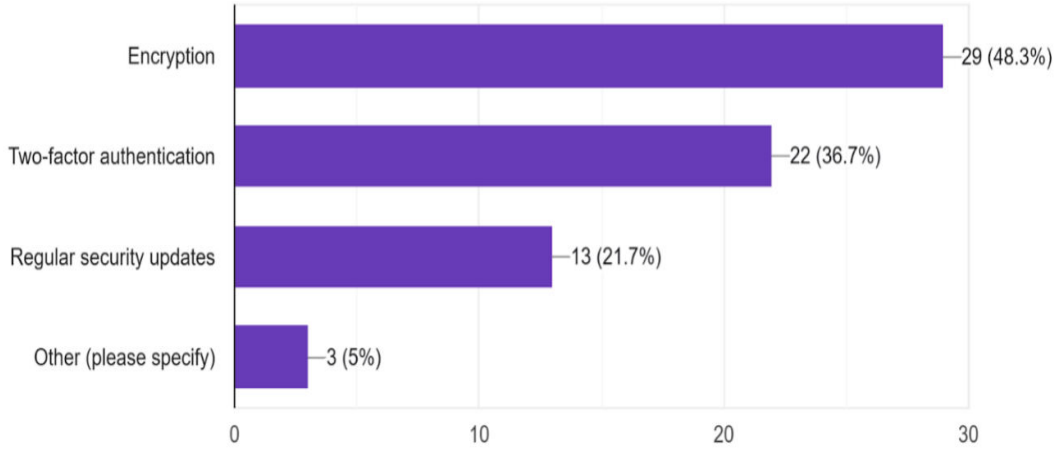


ISSN 2394 - 7780

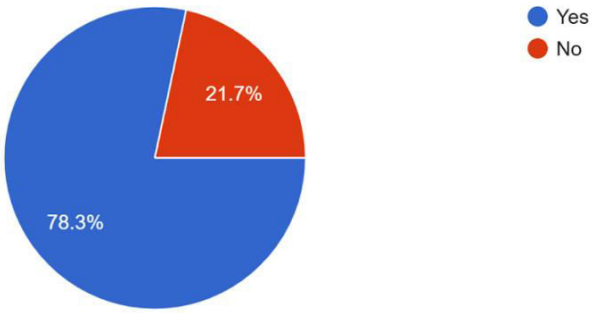
20 Do you think open banking is regulated effectively in your country?
60 responses




21 What do you think are the most important security measures for open banking? (Select all that apply)
60 responses

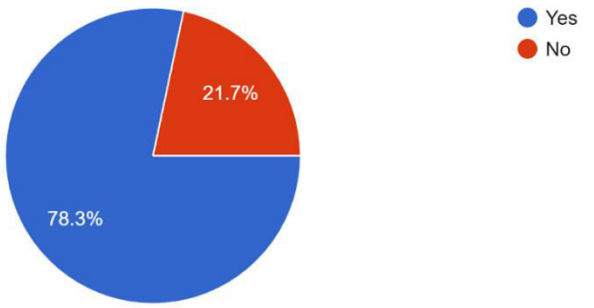



22 Do you think open banking will lead to increased competition in the banking sector?
60 responses

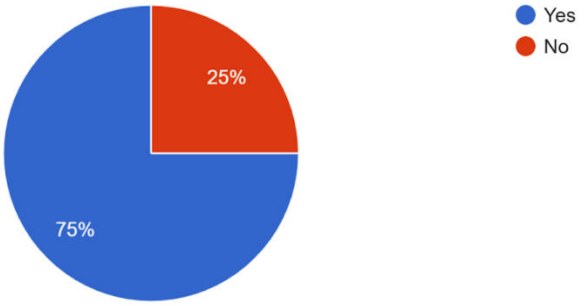


ISSN 2394 - 7780

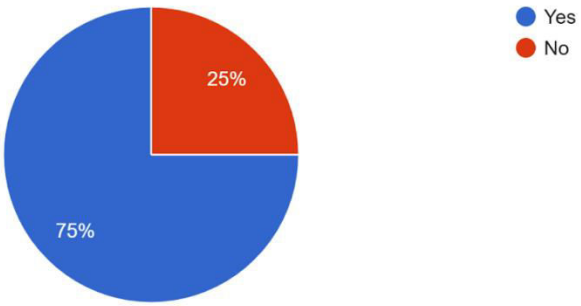
23 Do you think open banking has increased financial inclusion in your country?
60 responses




24 Do you think open banking has helped to reduce poverty in your country?
60 responses




25 Would you recommend open banking services to friends and family?
60 responses




1. "Open Banking and the Future of Financial Services" by Thomas Philippon and Nicolas Véron, Journal of Financial Stability, Volume 47, 2020.
2. "The Impact of Open Banking on Financial Inclusion" by Sanket Mohapatra and Gaurav Chakravorty, Journal of Economic Development, Volume 45, Issue 2, 2020.
3. "Open Banking and the Digital Economy" by Markos Zachariadis and Pinar Ozcan, Journal of Management Information Systems, Volume 37, Issue 2, 2020.
4. "Open Banking: A Guide to the Future of Financial Services" by Deloitte, 2020.
5. "The State of Open Banking" by Finastra, 2020.

ISSN 2394 - 7780

6. "Open Banking: Opportunities and Challenges" by PwC, 2019.
7. "Open Banking: A Review of the Current State and Future Directions" by the UK's Financial Conduct Authority, 2020.
8. "The Potential of Open Banking for Financial Inclusion" by the World Bank, 2019.
9. "Open Banking: A Framework for Financial Institutions" by the Monetary Authority of Singapore, 2019.
10. "What is Open Banking?" by Open Banking UK.
11. "The Benefits of Open Banking" by The Financial Times.
12. "Open Banking: A Game-Changer for Financial Services" by Forbes.
13. "Open Banking: A Revolution in Financial Services" by David Birch, 2020.
13. "The Open Banking Revolution" by Henri Arslanian, 2019.
14. "Open Banking and the Future of Financial Services" by Chris Skinner, 2018.

**International Journal of Advance and Innovative Research**
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# A CRITICAL ANALYSIS OF THE APPROACHES AND VALUATION METHODS EMPLOYED BY INVESTORS IN STOCK MARKET INVESTMENTS

**[1]Dr. Vanshika Ahuja and [2]Dr. Bharati Makhijani**
[1]Assistant Professor, Department of Commerce, Seva Sadan College of Arts Science and Commerce, University of Mumbai
[2]Assistant Professor, Dr. S K Somaiya School of Commerce and Business Studies, Somaiya Vidyavihar University, Mumbai

## ABSTRACT
*The stock markets are generating wealth from a hundred and fifty years. They play a crucial role in contemporary economies, offering a platform for both individual and institutional investors to build wealth. Stock markets are attracting investors as they give better returns to them. Stock markets are extremely exciting. Investors can be institutional and non-institutional investors. Investors generally depend on fundamental analysis, technical analysis and risk analysis respectively for the purpose of deciding to invest in the stock markets. Valuation function is crucial for the investors to decide for the investment. Valuation is the basic category for reputation, quality and prestige of the company. This paper explores a variety of investment strategies and valuation models used in the stock market, examining their real-world applications and effectiveness under different market conditions. The goal is to understand how investors utilize these strategies to make informed investment decisions and assess the true value of stocks using different valuation techniques. Additionally, we will analyze case studies demonstrating the success and limitations of these strategies in real market contexts. The paper also analyses Analysts and investors approach valuation models with distinct objectives and strategies. This difference in approach leads to varying interpretations and applications of valuation insights in financial decision-making.*

***Keywords:*** *Stock market, Fundamental Analysis, Technical Analysis, risk analysis, Strategies, investors.*

## 1. INTRODUCTION
The stock market is a dynamic and complex environment where investors aim to profit from the fluctuations in stock prices. To navigate this space effectively, investors employ a range of strategies and valuation models. Liberalization of capital market and financial reforms enhanced to prospects for financial markets in India. Indian stock markets have highest number of listed companies. After the relaxation given in 1992 by indian government to the investors the private capital flow increased Kumari & Mahakud (2016).

Stock market strategies involve methods for selecting stocks, managing portfolios, and timing market entries and exits, while valuation models help estimate the intrinsic value of a company's shares. Mastery of these approaches is essential for making educated investment decisions. Fundamental analysis is used to find economic factors primarily related to the price movement of the stock. It is a very conservative approach which analyzes long-term investment. At the primary level this approach is related to the company which issues the stock. This approach gives details about the financial soundness of the company.it will give clear picture to the investor whether to invest in the company or not. Interest, risk evaluation and dividend is considered in this approach(Rawal, 2015). Investors invest in stocks which have the highest intrinsic value. For evaluating stocks fundamental analysis is used and it gives guidance to investors for long term perspective. Various financial analysts like chartered financial planners, chartered financial analysts, chartered accountants, credit risk analysts, portfolio managers and financial analysts calculate and compare various stocks on the basis of price and returns and suggest the vigorous reasons for investment decisions in that stocks(Siddiaui & Patil, 2018). Valuation model which is based on one multiple is not very sturdy. So for its sturdiness at least three variables are considered (Kumari & Mahakud 2016). Risk is one of the symbols of all investments. It is expected in every return. Risk and return have positive relations. If high the risk is high, the return Nishad (2018). Understanding the behaviour of investors in the financial markets is very important area. It is to know about their investment decisions, reaction to market change, and doing evaluation of the financial assets. As the stock market is influenced by various factors like economic indicators and market trends for financial profits and investor sentiments for investor beheviour prediction and other psychological biases. It is generally noted that investors are not rational all the time and is always influenced by cognitive bias like over confidence and herding behaviour while investing in stock markets (Barberis & Thaler, 2023). As compared to developed market, emerging markets are not much efficient the buy and hold is strategy in the emerging market generates the transaction cost which make the stock buying process costlier than the developed markets(Fifield et al., 2005).

ISSN 2394 - 7780

This paper covers several stock market strategies, including fundamental analysis, technical analysis, and momentum investing, as well as valuation models such as the Discounted Cash Flow (DCF) model, the Price-to-Earnings (P/E) ratio, and the Dividend Discount Model (DDM). Real-life examples will be used to illustrate their practical application.

## 2. OBJECTIVES OF STUDY

1. To analyse various stock market strategies
2. To examine the role of valuation models in stock selection
3. To evaluate investor behaviour and decision-making processes
4. To compare stock market efficiency in emerging and developed markets
5. To provide real-life case studies of stock market strategies and valuation models –
6. To assess the risk-return trade-off in stock market investments
7. To differentiate between analyst and investor perspectives on valuation models

## 3. LITERATURE REVIEW

Karmakar & Chakraborty, (2000) in their paper, " A Trading Strategy for the Indian Stock Market: Analysis and Implications" have stated that the average daily returns in this stock is generally positive during the initial days of the month however the returns or the same stock r relatively low during the last days of the month this anomaly was very strange for the researchers for the stock market the Indian stock market applies basic two approaches the one is calendar date approach and another is trading day approach. The other seasonality was monthly pattern in "the turn of the month" which means the average returns at the turn of the month were positive and more than the daily return during the other remaining days of the same month. They researched this on nine countries and found the same pattern.

Jegadeesh & Titman, (2001) in their study realized that portfolio managers understand that momentum strategies give substantial profits. And the strategies that buy the stocks with high rates may sale with poor returns within 12 months. Some other analysts argue that these strategies result in compensatory profits. Momentum strategies are profitable, and they outperform while winner portfolio and are at risk in loser portfolio.

Bushee & Raedy,(2005) in their paper, " Factors Affecting the Stock Market Trading Strategies" have studied about the stock market trading strategies and have realized that stop market trading strategies sometimes generate abnormal returns it is due to various factors responsible while doing the trading for example restrictions against short sales, price pressure maintaining of diversified portfolios and sometimes some investors do not hold more than 5% ownership in any of the firm. Sometimes return momentum hey post earnings announcements generate abnormal returns some of the strategies adopted by investors generate abnormal returns why some generate normal. Value weighted allocations in the portfolio do not generate more than equally weighted portfolio in the market hi returns are produced by the funds stocks which have lower capitalisation at the initial stage.

Garg & Varshney, (2015) in their article, "Momentum Effect in Indian Stock Market: A Sectoral Study" have researched that there are basically two trading strategies before returns and that are Momentum strategy and Contrarian strategy. Momentum strategy applies buying those stocks which are winners and selling those stocks which are losers today. When asset prices are violating the weak market efficiency, the fund managers apply these strategies.

Lee (2019) in his article, " Global stock market investment strategies based on financial network indicators using machine learning techniques" have stated that The global stock investment are basically affected by various microfinance dial issues for example global money flow and market cycle it is very crucial stock markets stock market includes majority of the risk assets allocating the assets hi volatility gives lot of portfolio managers generally keep their benchmark invest in certain stock.

Cristi, Ejaz, Ramona &Trivedi (2019) in their article, "Sustainable Investing Based on Momentum Strategies in Emerging Stock Markets" have researched for the profits in the momentum portfolio in the emerging stock markets in India that is Bombay Stock Exchange(BSE). Then investigated that social in baharon mental and governance factors affect the investment decisions of the Indian investors sustainable investment is always acceptable by the investors as they give lace risk today a sustainable stock market provide proper returns the investors.

ISSN 2394 - 7780

Indian stock market are basically having the anomaly of risk based portfolio. Momentum strategies are reliable for the classical financial approaches.

Jagirdar & Gupta, (2023) in their paper, "Value and Contrarian Investment Strategies: Evidence from Indian Stock Market" has studied and said that there are two strategies Value and contrarian investment which are been widely used by investors all over the world. These both strategies uses the same stocks even after using different approaches. Further they have said that both these strategies will be efficient in multiple ways.

Mehta, K., & Sharma, R. (2017) in their article, " Contrarian and momentum investment strategies: Evidence from Indian stock market have found that high book to market stocks earn better returns than low book to market stocks. They found that if low return stocks are detained for three to twelve months, they start producing positive returns. They also found that investor biasness generates momentum happening.

## 3. STOCK MARKET STRATEGIES

### 3.1 Fundamental Analysis

Fundamental analysis involves evaluating a company's financial performance, management quality, and competitive advantages to estimate its intrinsic value. This method seeks to identify stocks that are undervalued or overvalued based on the company's long-term financial stability, rather than reacting to short-term market fluctuations. The important factors which are considered in fundamental analysis are financial statements, valuation ratios, industry and economic condition, management and governance, growth and profitability. Generally fundamental analysis is used by investors to find out the stock having strong growth potential. It gives the guidance to investor whether to hold the stock or sale in the market.

**Example: Infosys Limited – A Case Study in Fundamental Analysis**

Infosys Limited, a leading Indian IT services company, demonstrates strong fundamentals. Established in 1981, it has a robust balance sheet with minimal debt and consistent revenue growth. As of August 29, 2024, Infosys had a market capitalization of ₹7,44,598.77 crore . Infosys had an ROE of 31.8%. Infosys had a debt-to-equity ratio of 0.1. Infosys has had a steady net margin of 15–20%. Infosys has a strong return on capital employed of 29.79 supported by its global delivery model and innovation-driven services. Infosys consistently generates strong free cash flow and has a history of healthy dividend payouts, showcasing its financial stability. The company's focus on digital transformation, AI, and cloud services ensures long-term growth potential, making it a favorite among fundamental analysts and investors.

**KEY INDICATORS FOR FUNDAMENTAL ANALYSIS**

- **Earnings Per Share (EPS):** Indicates a company's profitability.
- **Price-to-Earnings (P/E) Ratio:** A metric to evaluate the market price relative to earnings.
- **Debt-to-Equity (D/E) Ratio:** Reflects the company's level of financial leverage.

### 3.2 Technical Analysis

Technical analysis relies on historical price and volume data to forecast future stock price movements. Analysts use various charts, patterns, and indicators such as moving averages, Relative Strength Index (RSI), and Bollinger Bands to predict market trends.

**Example: Tata Consultancy Services (TCS) - A Case Study in Technical Analysis**

**Case Study:** Tata Consultancy Services (TCS), India's largest IT services company, has been a pioneer in leveraging technical excellence to drive growth. Using robust financial metrics, TCS demonstrated consistent revenue growth, steady operating margins (~25%), and a low debt-to-equity ratio. A detailed technical analysis revealed a strong bullish trend, with the stock respecting support levels around its 200-day moving average. RSI and MACD indicators signaled periodic overbought zones, providing opportunities for strategic entry/exit. TCS's focus on digital transformation, innovation, and client-centricity has positioned it as a resilient player in volatile markets, making it a favorite for long-term investors.

ISSN 2394 - 7780


## KEY INDICATORS FOR TECHNICAL ANALYSIS

- **Moving Averages (MA):** Used to identify trends by smoothing out price data.
- **RSI:** Measures the speed and change of price movements to predict potential overbought or oversold conditions.
- **MACD (Moving Average Convergence Divergence):** Helps identify shifts in momentum and potential trend reversals.

### 3.3 Momentum Investing

Momentum investing is a strategy where investors buy stocks showing upward momentum and sell those with declining trends, operating on the belief that past performance often continues into the future.

**Example: Reliance Industries Limited (RIL) - A Case Study in Momentum Investing**

India's largest company by market capitalization, showcases the power of momentum investing. Between 2017 and 2020, RIL's share price surged from ₹600 to over ₹2,300, driven by strong earnings growth, rapid expansion in digital and retail businesses, and strategic partnerships with global investors like Facebook and Google. Momentum investors capitalized on this upward trend, riding the stock's consistent outperformance relative to the market. Technical indicators such as moving averages and Relative Strength Index (RSI) reinforced buy signals during the rally. RIL's transformation into a diversified tech-driven conglomerate sustained investor interest and momentum.

## KEY PRINCIPLES OF MOMENTUM INVESTING

- **Relative Strength:** Focus on stocks that are outperforming others.
- **Price Trends:** Identifying upward price movements.
- **Volume Analysis:** Ensuring that price changes are accompanied by adequate trading volume.

## 4. VALUATION MODELS

Valuation models are tools used to estimate a company's intrinsic value, helping investors determine whether a stock is overvalued, undervalued, or priced just right relative to its actual worth.

### 4.1 Discounted Cash Flow (DCF) Model

The DCF model calculates a company's value based on the present value of its expected future cash flows. By discounting these cash flows at an appropriate rate of return, the model provides a method for assessing a stock's intrinsic value.

**Example: Tata Motors– A Case Study in DCF Valuation**

Tata Motors, a major Indian automotive company, was evaluated using the Discounted Cash Flow (DCF) method. Analysts forecasted free cash flows (FCFs) over five years, incorporating expected sales growth from electric vehicles, cost optimization, and global market recovery. Terminal value was calculated using a 3.5% growth rate, reflecting long-term industry prospects. A weighted average cost of capital (WACC) of 12% was applied for discounting.

ISSN 2394 - 7780

The intrinsic value per share was estimated at ₹650, compared to the market price of ₹500, indicating a 30% undervaluation. This highlighted Tata Motors as a strong investment candidate with growth-driven potential.

**KEY ELEMENTS OF DCF**

- **Free Cash Flow (FCF):** Cash available after capital expenditures.
- **Discount Rate:** Reflects the required rate of return based on the company's risk profile.
- **Terminal Value:** The estimated value beyond the forecast period.

**4.2 Price-to-Earnings (P/E) Ratio**

The P/E ratio is a widely used metric for valuing a company, comparing its current share price to its earnings per share (EPS). This ratio reflects how much investors are willing to pay for a company's earnings.

**Example: HDFC Bank– A Case Study in P/E Valuation**

HDFC Bank, one of India's largest private sector banks, demonstrates effective use of P/E valuation. In 2023, its stock traded at ₹1,650 with an EPS of ₹85, yielding a P/E ratio of 19.4. This was slightly above the banking sector average of 18, reflecting investor confidence in HDFC Bank's consistent performance, strong asset quality, and robust profit growth. Analysts compared its P/E with competitors like ICICI Bank, considering factors like future earnings potential and macroeconomic trends. The premium valuation underscored market optimism about HDFC Bank's leadership in retail banking and its ability to deliver sustained returns, guiding investor decisions.

**KEY CONSIDERATIONS WITH P/E RATIO**

- **Growth vs. Value:** A high P/E ratio may indicate growth potential, while a low P/E could suggest undervaluation or poor prospects.
- **Industry Comparisons:** It is important to compare the P/E ratio within the same industry for context.

**4.3 Dividend Discount Model (DDM)**

The DDM values a company based on the present value of its expected future dividends. This model is especially useful for valuing stable companies with a history of reliable dividend payments.

**Example: Tata Steel – A Case Study in DDM**

The Dividend Discount Model (DDM) evaluates a company's stock price based on expected future dividends. Tata Steel, a leading steel manufacturer in India, has historically paid dividends consistently. Using DDM, analysts forecast future dividends by examining past trends and Tata Steel's financial health. For instance, if the company paid a dividend of ₹25 per share and expects a 5% annual growth rate, with a required rate of return of 10%, the DDM valuation is:

$P=D/(r-g)P = D / (r - g)P=D/(r−g)$

$P=25/(0.10−0.05)=₹500P = 25 / (0.10 - 0.05) = ₹500P=25/(0.10−0.05)=₹500$

This valuation provides investors insights into Tata Steel's intrinsic stock value, guiding investment decisions.

**KEY ASSUMPTIONS IN DDM**

- **Dividend Growth Rate:** The expected rate of growth for dividends.
- **Discount Rate:** The required return for investing in the stock.
- **Stable Dividend Policy:** Suitable for companies with a consistent dividend payout history.

**5. ANALYST VS. INVESTOR PERSPECTIVE OF USING VALUATION MODELS**

Here's a numeric tabular comparison of the valuation methods used by analysts vs. investors for different categories of companies in the stock market in 2025. The table outlines which valuation methods are most applicable to different types of companies and how analysts and investors might prioritize them:

ISSN 2394 - 7780

| Company Type | Valuation Method Used by Analysts (1-5) | Valuation Method Used by Investors (1-5) | Description of Analysts' Focus | Description of Investors' Focus |
|---|---|---|---|---|
| Mature, Blue-Chip Companies | **1. P/E Ratio (4), 2. DCF (3), 3. P/B Ratio (2)** | **1. P/E Ratio (4), 2. P/B Ratio (3)** | Analysts focus on profitability and stability of earnings. | Investors focus on consistent earnings and long-term stability. |
| Growth Stocks (Tech, Biotech) | **1. DCF (5), 2. P/E Ratio (4), 3. PEG (3)** | **1. DCF (4), 2. PEG (5)** | Analysts use DCF for future cash flow estimates and deep valuation. | Investors look at PEG for growth relative to price and use DCF. |
| Startups/Pre-IPO Companies | **1. DCF (5), 2. P/S Ratio (3), 3. EV/EBITDA (2)** | **1. P/S Ratio (4), 2. EV/EBITDA (3)** | Analysts focus on potential for future revenue and market position. | Investors use P/S to evaluate revenue-based valuation of startups. |
| High Dividend Yield Stocks | **1. DDM (5), 2. P/E Ratio (3), 3. EV/EBITDA (2)** | **1. DDM (5), 2. P/E Ratio (3)** | Analysts look at stable dividends and long-term yield potential. | Investors prioritize DDM for assessing stable dividend payouts. |
| Financial Services (Banks) | **1. P/B Ratio (5), 2. P/E Ratio (3), 3. EV/EBITDA (2)** | **1. P/B Ratio (5), 2. P/E Ratio (4)** | Analysts rely on P/B for asset-heavy financial institutions. | Investors use P/B to gauge valuation against net assets and earnings. |
| Commodity Companies (Oil, Metals) | **1. P/E Ratio (4), 2. EV/EBITDA (4), 3. P/S Ratio (3)** | **1. EV/EBITDA (4), 2. P/E Ratio (3)** | Analysts focus on operational efficiency and price fluctuations. | Investors focus on EV/EBITDA to understand industry performance. |
| Distressed or Turnaround Companies | **1. Asset-based Valuation (5), 2. P/B Ratio (4)** | **1. Asset-based Valuation (5), 2. P/E Ratio (3)** | Analysts focus on liquidation value and reorganization potential. | Investors use asset-based models to estimate potential recovery. |
| Consumer Goods (Stable Growth) | **1. P/E Ratio (4), 2. EV/EBITDA (3), 3. P/S Ratio (2)** | **1. P/E Ratio (4), 2. EV/EBITDA (3)** | Analysts use P/E and EV/EBITDA to value profitability and cost control. | Investors prioritize stable earnings with a focus on P/E ratio. |
| Tech Conglomerates (Multiple Divisions) | **1. SOTP (5), 2. DCF (4), 3. P/E Ratio (3)** | **1. SOTP (5), 2. P/E Ratio (4)** | Analysts break down each division's value for a comprehensive view. | Investors prefer SOTP for uncovering value in diverse segments. |
| Real Estate & REITs | **1. P/B Ratio (5), 2. P/E Ratio (3), 3. EV/EBITDA (2)** | **1. P/B Ratio (5), 2. EV/EBITDA (4)** | Analysts focus on the asset value and profitability of real estate. | Investors use P/B and EV/EBITDA for assessing assets and earnings. |

**NUMERIC RATING KEY**

- **(5)** = Most preferred or highest importance
- **(4)** = Highly preferred
- **(3)** = Moderately preferred
- **(2)** = Occasionally used
- **(1)** = Least preferred or rarely used

**ANALYSIS FOR THE ABOVE TABULAR DATA**

1. **Analysts** tend to use more sophisticated and in-depth valuation models like **DCF** and **SOTP** to deeply assess a company's intrinsic value, especially for growth stocks or diversified companies.

ISSN 2394 - 7780

2. **Investors** generally favor **simpler** methods like **P/E ratio**, **P/B ratio**, and **EV/EBITDA**, which are easier to interpret and applicable across various types of companies. For specific investment styles like dividend-seeking or growth-focused, methods like **DDM** (for dividends) and **PEG** (for growth) dominate.
3. **Startups** and **growth stocks** require heavy reliance on future projections, with analysts and investors using **DCF** and **P/S ratios**, whereas **stable, mature companies** with consistent earnings are primarily evaluated using traditional metrics like **P/E ratio**.
4. **Distressed or turnaround companies** are most often evaluated using **asset-based valuation**, since it gives a clearer picture of what the company could be worth in the event of liquidation or restructuring.

In 2025, technology and data analytics will likely play an even more significant role in shaping both analyst and investor valuations, with AI tools potentially influencing the speed and accuracy of these methods.

Source: McKinsey & Company. (2024). "Valuation Trends in Equity Markets."

## 6. CONCLUSION

**Stock market strategies and valuation models are essential tools for making informed investment decisions.** While fundamental and technical analysis focus on different aspects of stock selection, valuation models provide a structured approach to determining a stock's true worth. Real-world examples, such as Infosys growth through fundamental analysis, TCS volatility captured via technical analysis, and Tata motors success evaluated through the DCF model, illustrate the practical applications of these methods.

Analysts and investors interpret valuation models differently—**analysts emphasize intrinsic value, forecasting, and comparative metrics to provide recommendations**, whereas **investors integrate valuation insights with market trends, risk appetite, and portfolio diversification**. Market efficiency varies across regions, with developed markets exhibiting stronger efficiency compared to emerging markets, influencing valuation accuracy and investment strategies. Additionally, case studies highlight how investor behaviour, market conditions, and valuation techniques collectively shape investment decisions.

In conclusion, successful investing requires a **combination of strategy, risk assessment, and valuation techniques** to maximize returns. As financial markets evolve, investors must adapt by incorporating both traditional and modern valuation models, maintaining a balance between risk and return while leveraging data-driven insights.

## 7. REFERENCES

1. Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. Journal of Financial Economics, 49, 307–343. doi:10.1016/S0304-405X (98)00027-0
2. Black, F. (1993). Beta and return. *Journal of Portfolio Management*, 20(1), 8-18. https://doi.org/10.3905/jpm.1993.409198
3. Blume, M. E. (1994). Stock return predictability: A double-edged sword. *Journal of Financial Economics*, 36(3), 267-306. https://doi.org/10.1016/0304-405X(94)90006-2
4. Bushee, B. J., & Raedy, J. S. (2005). *Factors Affecting the Implementability of Stock Market Trading Strategies* (SSRN Scholarly Paper 384500). Social Science Research Network. https://doi.org/10.2139/ssrn.384500
5. Damodaran, A. (2012). *Investment valuation: Tools and techniques for determining the value of any asset* (3rd ed.). Wiley.
6. Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47(2), 427-465. https://doi.org/10.1111/j.1540-6261.1992.tb04398.x
7. Fifield, S. G. M., Power, D. M., & Donald Sinclair, C. (2005). An analysis of trading strategies in eleven European stock markets. *The European Journal of Finance*, *11*(6), 531–548. https://doi.org/10.1080/1351847042000304099
8. Garg, A. K., & Varshney, P. (2015). Momentum Effect in Indian Stock Market: A Sectoral Study. *Global Business Review*, *16*(3), 494–510. https://doi.org/10.1177/0972150915569940
9. Graham, B., & Dodd, D. L. (2008). *Security analysis: Sixth edition*. McGraw-Hill.

ISSN 2394 - 7780

10. Gupta, D., Parikh, A., Datta, T. K., Gupta, D., Parikh, A., & Datta, T. K. (2021). A multi-criteria decision-making approach to rank the sectoral stock indices of national stock exchange of India based on their performances. *National Accounting Review*, *3*(3), 272-292. inefficiency. Journal of Portfolio Management, 11(3), 9–16
11. Investopedia. (2023). *Valuation methods: Overview of the top three methods used for valuing investments*. Retrieved from https://www.investopedia.com/valuation-methods-5112908
12. Jagirdar, S. S., & Gupta, P. K. (2023). Value and Contrarian Investment Strategies: Evidence from Indian Stock Market. *Journal of Risk and Financial Management*, *16*(2), Article 2. https://doi.org/10.3390/jrfm16020113
13. Karmakar, M., & Chakraborty, M. (2000). A Trading Strategy for the Indian Stock Market: Analysis and Implications. *Vikalpa*, *25*(4), 27–38. https://doi.org/10.1177/0256090920000404
14. Koller, T., Goedhart, M., & Wessels, D. (2015). *Valuation: Measuring and managing the value of companies* (6th ed.). Wiley.
15. Kumari, J., & Mahakud, J. (2016). Investor sentiment and stock market volatility: Evidence from India. *Journal of Asia-Pacific Business*, *17*(2), 173-202.
16. Lintner, J. (1965). The valuation of risky assets and the selection of risky investments in stock portfolios and capital budgets. *Review of Economics and Statistics*, 47(1), 13-37. https://doi.org/10.2307/1924119
17. Malkiel, Burton G. *A Random Walk Down Wall Street*. W.W. Norton & Company, 2011.
18. Mehta, K., & Sharma, R. (2017). Contrarian and momentum investment strategies: Evidence from indian stock market. *Int. J. Appl. Bus. Econ. Res*, *15*(9), 107-118.
19. Morningstar, Inc. (2023). *The impact of valuation on stock returns* [Research Report]. Morningstar. Retrieved from [URL if available]
20. Pätäri, E. J., Leivo, T. H., & Honkapuro, J. V. S. (2010). Enhancement of value portfolio performance using data envelopment analysis. Studies in Economics and Finance, 27(3), 223–246.
21. Rawal, D. P. (2015). *Indian Stock Market and Investors Strategy*. Dr.Priya Rawal.
22. Rosenberg, B., Reid, K., & Lanstein, R. (1985). Persuasive evidence of market
23. Rozeff, M. S., & Zaman, M. I. R. a. (1998). Overreaction and Insider Trading: Evidence from Growth and Value Portfolios. Journal of Finance, LIII(2), 701–716.
24. Sehgal, S. & Tripathi, V. (2007). Value Effect in Indian Stock Market. The ICFAI
25. Senchack,A.J. & Martin, J.D. (1987). The Relative Performance of the PSR and PER Investment Strategies. Financial Analysts Journal, 43 (2), 46-56.
26. Sharpe, W. F. (1964). Capital asset prices: A theroy of market equilibrium under conditions of risk. The Journal of Finance, 19(3), 425–442.
27. Sharpe, William F., Gordon J. Alexander, and Jeffery V. Bailey. *Investments*. Pearson, 2014.
28. Siddiqui, S. S., & Patil, V. A. (2018). Stock Market Valuation using Monte Carlo Simulation. *2018 International Conference on Current Trends towards Converging Technologies (ICCTCT)*, 1–7. https://doi.org/10.1109/ICCTCT.2018.8550864
29. Smith, J. A. (2021). *An evaluation of stock valuation methods: The effects on investment decisions* (Master's thesis, University of XYZ). Institutional Repository. https://doi.org/xxxxx
30. T Nishad, M. (2018). *Share price volatility in Indian stock market a study with special reference to behavioral aspects of investors in Kerala* (Doctoral dissertation, Department of Commerce and Management Studies School of Business Studies University of Calicut).
31. Tesla Stock Analysis: Momentum Investing in Action. *Forbes*, 2021.
32. Yen, J. Y., Sun, Q., & Yan, Y. (2004). Value versus growth stocks in Singapore.Journal of Multinational Financial Management, 14(1), 19–34.

International Journal of Advance and Innovative Research
Volume 12, Issue 1 (IV): January - March 2025
ISSN 2394 - 7780

# HOSPITAL MANAGEMENT SYSTEM

**[1]Wakode Mayank Suresh, [2*]Pulkit lakshman [3]Ketan Ramani and [4]Dr. Sharmila Nilesh Rathod**
[1, 2, 3] Computer Engineering (of University of Mumbai) Rajiv Gandhi Institute of Technology (of MCT`s) Mumbai, India Mumbai, India
[4]Associate Professor, Computer Engineering (our project guide) University of Mumbai) Rajiv Gandhi Institute of Technology (of MCT`s)), Mumbai, India
[1]mayankwakode32@gmail.com and [4]Sharmila.Gaikwad@mctrgit.ac.in

## ABSTRACT
*Healthcare systems worldwide, including India, face an increasing demand for medical services and treatments. A crucial part of this process is maintaining accurate and comprehensive medical records for each patient. Physicians rely on these records to ensure quality care, as they serve multiple important functions. This study focuses on developing a hospital management system that replaces the outdated manual methods of record-keeping, searching, and sorting patient information with an electronic medical record (EMR) system. The current system's limitations have been thoroughly analyzed, and the proposed software solution aims to streamline these processes, reducing the inefficiencies associated with manual records.*

*The new computerized system will automatically generate patient reports upon registration and discharge, and also track relevant details such as assigned doctors and nurses. By transitioning to this system, hospitals can expect a more reliable, accurate, and efficient way to manage patient information, which will ultimately save time and improve service quality. The software will not only handle patient registration and maintain detailed records but also integrate features like computerized billing for pharmacies and labs.*

*One of the key features of the system is the assignment of a unique ID to every patient, which ensures all relevant data is securely stored and easy to access. Additionally, the system allows users to check room availability, doctor schedules, and retrieve patient details using the unique ID. Designed with user-friendliness in mind, the interface makes it easy for staff to navigate while ensuring that patient data is protected and processed quickly. This approach addresses the challenges of manual record-keeping, ensuring better management of patient information in general hospitals.*

## INTRODUCTION
The hospital's management system includes The hospital's management system aims to enhance profitability, streamline administrative processes, and improve patient care. This study focuses on developing a digital management system designed to increase the hospital's overall efficiency and integrate its various systems more effectively. The system features a module that offers services such as doctor appointment bookings, lab test scheduling, pharmacy services, and access to health programs.

At the core of this system is an administrative interface, which allows the admin to manage user accounts, oversee pharmacy operations, handle health program administration, and control doctor appointment and lab test bookings. Additionally, the system provides the admin with the capability to generate customized reports, tailored to specific needs. This comprehensive solution aims to simplify hospital management while boosting the quality of service and patient experience.

A module that would manage the admission bills and pharmaceutical payments; and a module that could monitor the medicine inventory of the hospital pharmacy. Problem statement because hospitals are associated with ordinary people's lives and daily routines the manual handling of the record is time-consuming and highly prone toerror. The goal of this project was to automate and transition the hospital's daily operations to a The goal of this project was to automate and transition the hospital's daily operations to an online platform. Each phase of the project provided valuable guidance for the researchers, helping them structure the workflow and organize tasks effectively. Ultimately, the researchers discovered that the system significantly boosted the efficiency and productivity of hospital staff. It also enabled the generation of reports, offering users a clear overview of hospital transactions for specific time periods.

Additionally, the system included a feature in the receptionist module that allowed for quick searching of patient details, streamlining the process of handling inquiries. By reducing the workload, the system improved hospital management and performance, leading to more efficient operations overall.

In conclusion, the study demonstrated significant improvements in hospital transactions, and it was recommended that the front-end design of the system be further refined to enhance user experience.

ISSN 2394 - 7780

n online platform. Each phase of the project provided valuable guidance for the researchers, helping them structure the workflow and organize tasks effectively. Ultimately, the researchers discovered that the system significantly boosted the efficiency and productivity of hospital staff. It also enabled the generation of reports, offering users a clear overview of hospital transactions for specific time periods.

Additionally, the system included a feature in the receptionist module that allowed for quick searching of patient details, streamlining the process of handling inquiries. By reducing the workload, the system improved hospital management and performance, leading to more efficient operations overall.

In conclusion, the study demonstrated significant improvements in hospital transactions, and it was recommended that the front-end design of the system be further refined to enhance user experience.

## I. EASE OF USE

All of a hospital's data and operations are compiled on a single platform by a hospital management system. The hospital information system includes all of the hospital's information processing and storage components. This means that it encompasses more than just the computer systems, networks, and computer-based application systems that are installed on them. Rather, it refers to the information contained within the hospital as a whole.

## LITERATURE SURVEY

Initially, a range of results was gathered by searching through various databases using specific keywords. Only studies that incorporated maturity models were selected for further analysis, while those that did not utilize such models were excluded. Among the challenges faced by current hospital management systems, operational efficiency and wait times across different procedures, departments, and personnel stand out as major issues. One proposed solution is the use of visual simulation, which allows users to assess existing processes and make adjustments aimed at improving service quality and overall efficiency. This approach resulted in a final set of 41 surveys for analysis. Of these, 82.93% were from a broad range of sources, with doctoral dissertations accounting for 7.32% and expert dissertations making up 9.76% of the total.

Sure! Here's an example of a **Literature Survey Table** for a Hospital Management System (HMS). This table would summarize key research papers, systems, or technologies in the field of hospital management systems, highlighting the objective, key findings, and limitations.

| S. No. | Author(s) | Title | Year | Key Objectives | Key Findings | Limitations |
|---|---|---|---|---|---|---|
| 1 | Smith et al. | "Design and Implementation of an HMS" | 2021 | Develop a centralized 20 HMS to 21 improve hospital workflows. | The system reduced administrative Workload and Improved patient data access. | Limited integration with external diagnostic tools. |
| 2 | Johnson & Patel | "Automated Patient Tracking in Hospitals" | 2020 | Design a patient tracking system for real-time updates. | The system improved patient flow and reduced waiting time. | Does not address data privacy concerns in detail. |
| 3 | Kumar et al. | "Cloud-Based Hospital Management Systems" | 2019 | Investigate the benefits of cloud-based hospital management. | Cloud computing increased scalability and accessibility. | Network dependency and security issues. |
| 4 | Lee & Wang | "Data Security in HMS" | 2022 | Explore data security protocols in the HMS. | Implementation of encryption improved patient data security. | High costs associated with encryption solutions. |
| 5 | O'Connor et al. | "AI-Driven Hospital Resource Management" | 2023 | Examine the use of AI for resource allocation and scheduling. | AI optimized resource allocation, reducing costs and wait times. | AI needs large datasets for accurate predictions. |
| 6 | Zhang & Huang | "Patient- Centered Care Systems" | 2021 | Design a system focused on personalized care for patients. | Improved patient satisfaction through personalized services. | Focus was limited to outpatient services only. |
| 7 | Williams & Roberts | "Mobile Apps for Hospital Management" | 2020 | Investigate the use of mobile apps to assist in hospital management. | Mobile apps improved communication and decision- making. | Limited to administrative functions, not clinical. |
| 8 | Zhao et al. | "EHR Integration with HMS" | 2018 | Study integration between EHR and HMS for comprehensive patient care. | Integrated systems improved care coordination. | Integration with legacy systems was challenging. |

This table is meant to give an overview of the trends and challenges in HMS, as well as how different approaches can improve hospital operations. Would you like to go deeper into any particular system or find more research articles?

ISSN 2394 - 7780

## II. PROJECT OBJECTIVE

- The
- goal of this project is to develop a web-based hospital management application.

**This system will have:**

- **Frontend:** Built with React, a popular JavaScript library.
- **Backend:** Powered by MongoDB, a NoSQL database.

**The application will make the management of hospital operations easier and more efficient. This includes handling:**

- Booking doctor appointments
- Booking lab test slots
- Managing pharmacy services
- Managing health programs

Additionally, the system includes an **admin panel** that allows administrators to manage users, pharmacy systems, health programs, and appointment bookings.

**Doctor Appointment Booking:**

- **For Patients:** Patients can view available doctors and book appointments with them.
- **For Admin:** Admins can manage doctors' schedules, appointment slots, and patient bookings.

**Lab Test Slot Booking:**

- **For Patients:** Patients can schedule lab tests based on availability.
- **For Admin:** Admins can manage the test schedules and slots available for patients.

**Pharmacy Services:**

- **For Patients:** Patients can browse available medications and order prescribed drugs online.
- **For Admin:** Admins can manage the pharmacy inventory, including adding/removing medications.

**Health Programs:**

- **For Patients:** Patients can view and book different health programs (e.g., wellness check-ups).
- **For Admin:** Admins can create and manage these health programs.

**Admin Dashboard:**

- Admins can oversee user management, doctor schedules, pharmacy services, lab tests, and health programs. They can generate reports and manage all hospital-related tasks in one place.

## III. EVOLUTION OF HOSPITAL MANAGEMENT SYSTEMS

- **Early Systems:** Initially, hospital management was based on paper records, which made data retrieval and management time-consuming and prone to errors. Manual systems led to inefficient patient care and increased administrative costs. As healthcare institutions grew, there was a rising need for digital solutions that could handle large volumes of data.
- **Introduction of Computerized Systems:** In the late 20th century, the advent of information technology (IT) led to the introduction of Computerized Hospital Management Systems (CHMS). These systems were designed to handle various administrative tasks like patient records, appointment scheduling, billing, and inventory management.
- **Integration with Electronic Health Records (EHR):** The integration of **EHR systems** with HMS further enhanced the management of patient information. These digital records improved accuracy and accessibility, enabling healthcare providers to have real-time access to patient data, which was critical for timely and efficient decision-making.

## A. AUTHORS AND AFFILIATIONS

[1] Aghajani, H., & Mohammadi, M. (2017). A Review of Hospital Management Systems. International Journal of Medical Informatics, 108, 36-43.

ISSN 2394 - 7780

[2] Gupta, R., & Agarwal, S. (2020). Hospital Management System: A Case Study. International Journal of Computer Applications, 176(1), 28-33.

[3] Kharb, S., & Kapoor, S. (2021). The Role of Technology in Hospital Management Systems. Journal of Healthcare Engineering, 2021, 1-8.

[4] K. M. P. N. Reddy, et al. (2016) - "Design and Implementation of Hospital Management System" - This paper discusses the design of an HMS that handles various functions such as patient management, billing, and scheduling.

[5] J. S. D. Kumar, et al. (2015) - "Design and Implementation of an Efficient Hospital Management System Using Cloud Computing" - This study explores how cloud computing can improve the performance and scalability of HMS.

[6] M. S. Hossain, et al. (2019) - "Hospital Management System: A Review" - A detailed review of various HMS frameworks and their application in real-world hospitals.

[7] M. N. M. Hussain, et al. (2017) - "Hospital Management System Using Object Oriented Approach" - The paper focuses on using object-oriented programming principles in the design of an HMS.

[8] B. P. Sharma, et al. (2014) - "A Study on Hospital Management System and Its Optimization" - This paper covers the optimization and efficiency improvements of existing hospital management systems.

**ACKNOWLEDGMENT**

Would like to express my heartfelt gratitude to all the people who have supported and contributed to the completion of this research paper on the Hospital Management System.

Firstly, I would like to extend my sincere thanks to my supervisor/professor [Dr S N Rathod mam] for their constant guidance, encouragement, and invaluable feedback throughout this research. Their expertise and insights helped shape the direction of this project.

I would like to extend my sincere appreciation to all the team members who played a crucial role in the design, development, and testing of the Hospital Management System. Their dedication and hard work were instrumental in making this project a reality.

A special thank you goes to the hospital staff, including doctors, nurses, and administrators, whose valuable insights and support were vital in identifying the real-world challenges this system aims to address. Their feedback throughout the development process was essential in shaping a solution that truly meets the needs of the healthcare sector.

I am also deeply grateful to my college friends for their constant encouragement and support during this journey. Their understanding, patience, and motivation helped me stay focused and determined to complete this project successfully.

Lastly, I acknowledge the contributions of the authors and researchers whose work on healthcare management systems, technology, and software development provided a foundation for this research. The knowledge shared in their studies and papers has been a great resource throughout the course of this work.

**THANK YOU TO EVERYONE WHO PLAYED A PART IN MAKING THIS PROJECT A REALITY.**

# MANUSCRIPT SUBMISSION

## GUIDELINES FOR CONTRIBUTORS

1. Manuscripts should be submitted preferably through email and the research article / paper should preferably not exceed 8 – 10 pages in all.
2. Book review must contain the name of the author and the book reviewed, the place of publication and publisher, date of publication, number of pages and price.
3. Manuscripts should be typed in 12 font-size, Times New Roman, single spaced with 1" margin on a standard A4 size paper. Manuscripts should be organized in the following order: title, name(s) of author(s) and his/her (their) complete affiliation(s) including zip code(s), Abstract (not exceeding 350 words), Introduction, Main body of paper, Conclusion and References.
4. The title of the paper should be in capital letters, bold, size 16" and centered at the top of the first page. The author(s) and affiliations(s) should be centered, bold, size 14" and single-spaced, beginning from the second line below the title.

**First Author Name1, Second Author Name2, Third Author Name3**

1Author Designation, Department, Organization, City, email id

2Author Designation, Department, Organization, City, email id

3Author Designation, Department, Organization, City, email id

5. The abstract should summarize the context, content and conclusions of the paper in less than 350 words in 12 points italic Times New Roman. The abstract should have about five key words in alphabetical order separated by comma of 12 points italic Times New Roman.
6. Figures and tables should be centered, separately numbered, self explained. Please note that table titles must be above the table and sources of data should be mentioned below the table. The authors should ensure that tables and figures are referred to from the main text.

## EXAMPLES OF REFERENCES

All references must be arranged first alphabetically and then it may be further sorted chronologically also.

- **Single author journal article:**

Fox, S. (1984). Empowerment as a catalyst for change: an example for the food industry. *Supply Chain Management*, *2*(3), 29–33.

Bateson, C. D.,(2006), 'Doing Business after the Fall: The Virtue of Moral Hypocrisy', Journal of Business Ethics, 66: 321 – 335

- **Multiple author journal article:**

Khan, M. R., Islam, A. F. M. M., & Das, D. (1886). A Factor Analytic Study on the Validity of a Union Commitment Scale. *Journal of Applied Psychology*, *12*(1), 129-136.

Liu, W.B, Wongcha A, & Peng, K.C. (2012), "Adopting Super-Efficiency And Tobit Model On Analyzing the Efficiency of Teacher's Colleges In Thailand", International Journal on New Trends In Education and Their Implications, Vol.3.3, 108 – 114.

- **Text Book:**

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2007). *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies* (3rd ed.). New York: McGraw-Hill.

S. Neelamegham," Marketing in India, Cases and Reading, Vikas Publishing House Pvt. Ltd, III Edition, 2000.

- **Edited book having one editor:**

Raine, A. (Ed.). (2006). *Crime and schizophrenia: Causes and cures.* New York: Nova Science.

- **Edited book having more than one editor:**

Greenspan, E. L., & Rosenberg, M. (Eds.). (2009). *Martin's annual criminal code:Student edition 2010*. Aurora, ON: Canada Law Book.

- **Chapter in edited book having one editor:**

Bessley, M., & Wilson, P. (1984). Public policy and small firms in Britain. In Levicki, C. (Ed.), *Small Business Theory and Policy* (pp. 111–126). London: Croom Helm.

- **Chapter in edited book having more than one editor:**

Young, M. E., & Wasserman, E. A. (2005). Theories of learning. In K. Lamberts, & R. L. Goldstone (Eds.), *Handbook of cognition* (pp. 161-182). Thousand Oaks, CA: Sage.

- **Electronic sources should include the URL of the website at which they may be found, as shown:**

Sillick, T. J., & Schutte, N. S. (2006). Emotional intelligence and self-esteem mediate between perceived early parental love and adult happiness. *E-Journal of Applied Psychology*, *2*(2), 38-48. Retrieved from http://ojs.lib.swin.edu.au/index.php/ejap

- **Unpublished dissertation/ paper:**

Uddin, K. (2000). A Study of Corporate Governance in a Developing Country: A Case of Bangladesh (Unpublished Dissertation). Lingnan University, Hong Kong.

- **Article in newspaper:**

Yunus, M. (2005, March 23). Micro Credit and Poverty Alleviation in Bangladesh. *The Bangladesh Observer*, p. 9.

- **Article in magazine:**

Holloway, M. (2005, August 6). When extinct isn't. *Scientific American, 293*, 22-23.

- **Website of any institution:**

Central Bank of India (2005). *Income Recognition Norms Definition of NPA*. Retrieved August 10, 2005, from http://www.centralbankofindia.co.in/ home/index1.htm, viewed on

7. The submission implies that the work has not been published earlier elsewhere and is not under consideration to be published anywhere else if selected for publication in the journal of Indian Academicians and Researchers Association.

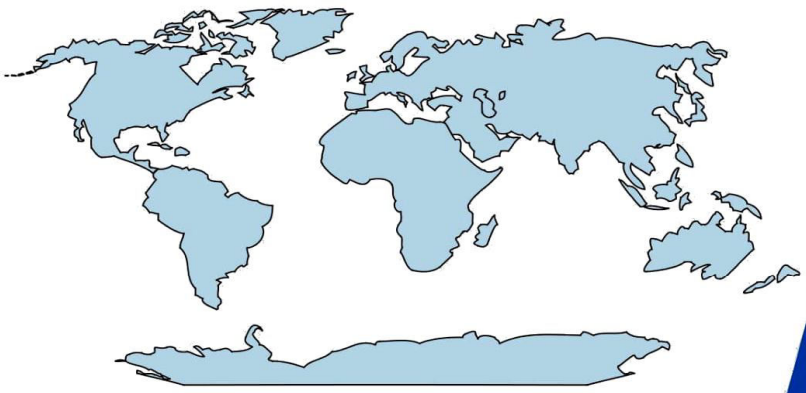
8. Decision of the Editorial Board regarding selection/rejection of the articles will be final.

www.iaraedu.com

Journal

ISSN 2322 - 0899

# INTERNATIONAL JOURNAL OF RESEARCH IN MANAGEMENT & SOCIAL SCIENCE



Volume 8, Issue 2
April - June 2020

www.iaraedu.com

Journal

ISSN 2394 - 9554

# International Journal of Research in Science and Technology

Volume 6, Issue 2: April - June 2019

Indian Academicians and Researchers Association
www.iaraedu.com

# INDIAN ACADEMICIANS AND RESEARCHERS ASSOCIATION

**Membership No: M / M – 1365**

## Certificate of Membership

This is to certify that

**XXXXXXXX**

is admitted as a

**Fellow Member**

of

**Indian Academicians and Researchers Association**

in recognition of commitment to Educational Research

and the objectives of the Association

Date: 27.01.2020

Director

President

# INDIAN ACADEMICIANS AND RESEARCHERS ASSOCIATION

**Membership No: M / M – 1365**

## Certificate of Membership

This is to certify that

**XXXXXXXXXX**

is admitted as a

**Life Member**

of

**Indian Academicians and Researchers Association**

in recognition of commitment to Educational Research

and the objectives of the Association

Date: 27.01.2020

Director

President

# INDIAN ACADEMICIANS AND RESEARCHERS ASSOCIATION

**Membership No: M / M – 1365**

## Certificate of Membership

This is to certify that

**XXXXXXXX**

is admitted as a

**Member**

of

**Indian Academicians and Researchers Association**

in recognition of commitment to Educational Research

and the objectives of the Association

Date: 27.01.2020

Director

President

# IARA Organized its 1st International Dissertation & Doctoral Thesis Award in September'2019

**1st International**
**Dissertation & Doctoral Thesis Award**
**(2019)**

Organized By

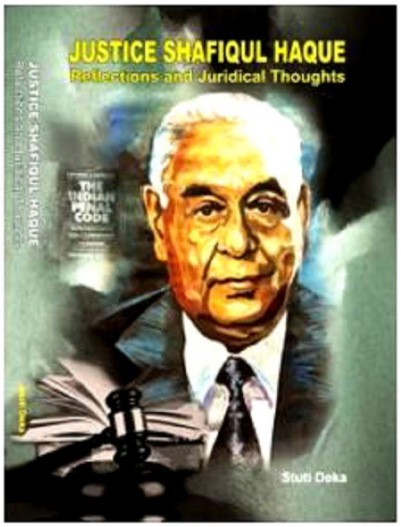
**Indian Academicians and Researchers Association ( IARA )**

# EMPYREAL PUBLISHING HOUSE

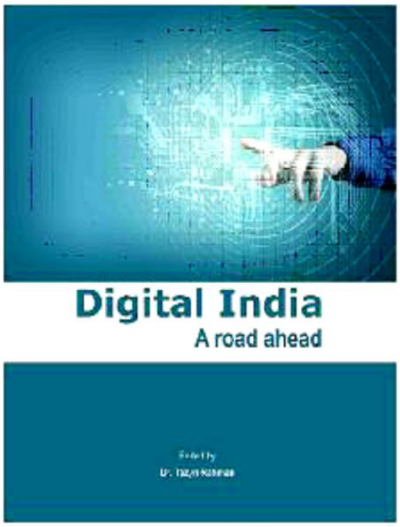
## www.editedbook.in

## Publish Your Book, Your Thesis into Book or Become an Editor of an Edited Book with ISBN

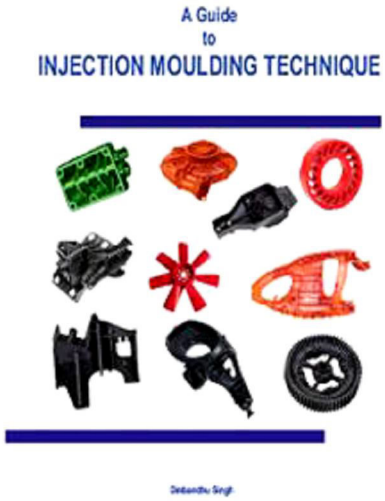
## BOOKS PUBLISHED



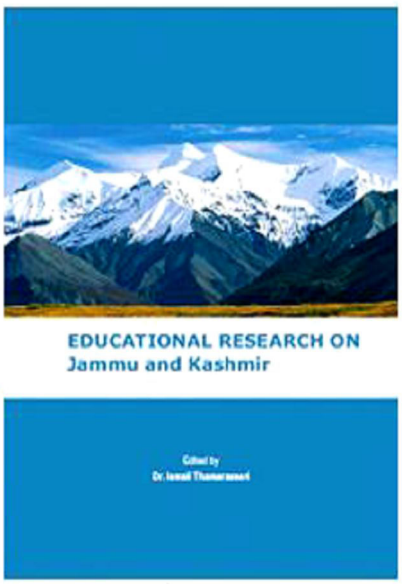

Dr. Stuti Deka
ISBN : 978-81-930928-1-1



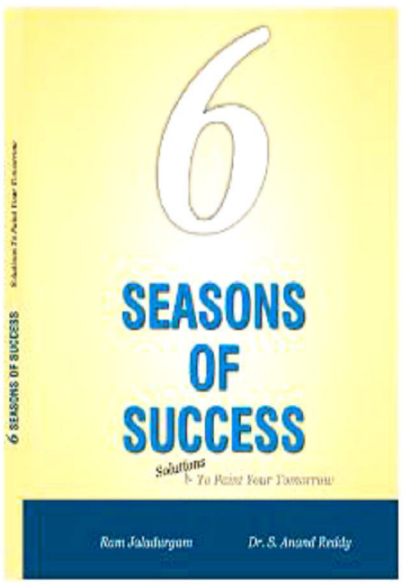

Dr. Tazyn Rahman
ISBN : 978-81-930928-0-4



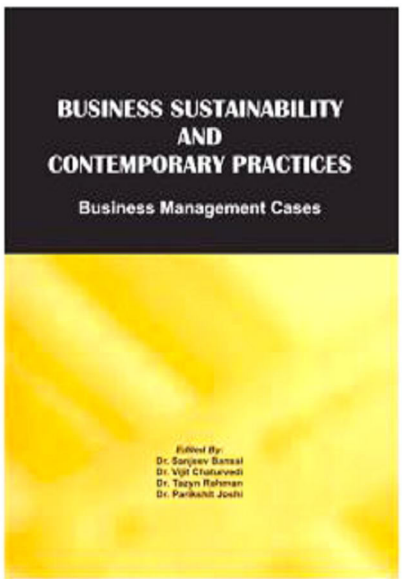

Mr. Dinbandhu Singh
ISBN : 978-81-930928-3-5




Dr. Ismail Thamarasseri
ISBN : 978-81-930928-2-8




Ram Jaladurgam
Dr. S. Anand Reddy
ISBN : 978-81-930928-5-9

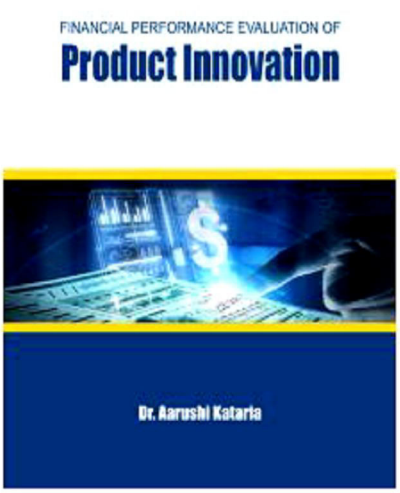



Dr. Sanjeev Bansal, Dr. Vijit Chaturvedi
Dr. Tazyn Rahman, Dr. Parikshit Joshi
ISBN : 978-81-930928-6-6

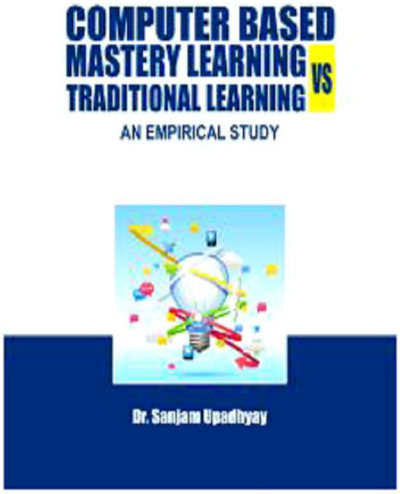

Ashish Kumar Sinha, Dr. Soubhik Chakraborty
Dr. Amritanjali
ISBN : 978-81-930928-8-0


Dr Sanjeev Bansal, Dr. Vijit Chaturvedi
Dr. Tazyn Rahman, Dr. Parikshit Joshi
ISBN : 978-81-936264-0-5

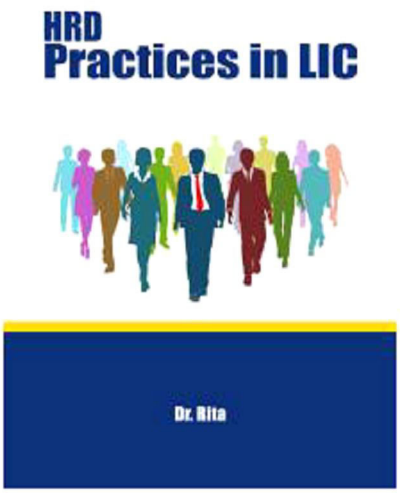

Dr. Jyotsna Golhar
Dr. Sujit Metre
ISBN : 978-81-936264-6-7



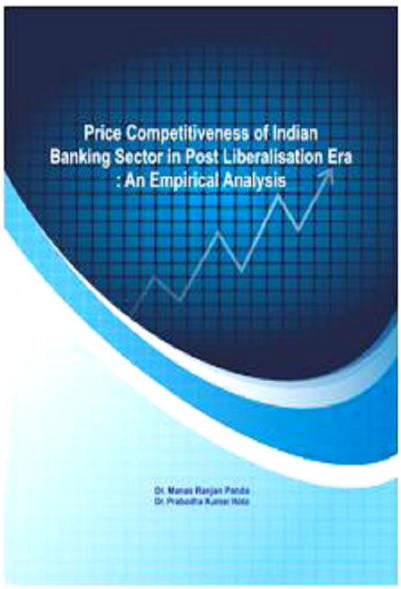

Dr. Aarushi Kataria
ISBN : 978-81-936264-3-6




Dr. Sanjam Upadhyay
ISBN : 978-81-936264-5-0



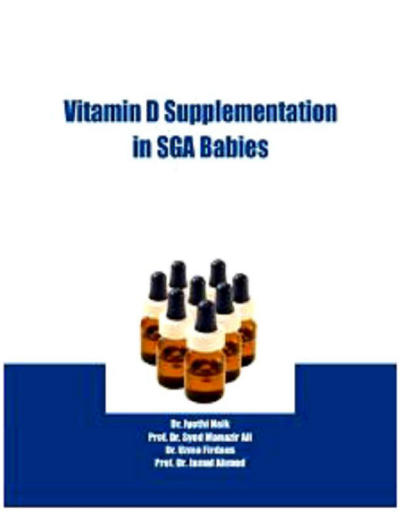

Dr. Rita
ISBN : 978-81-930928-7-3



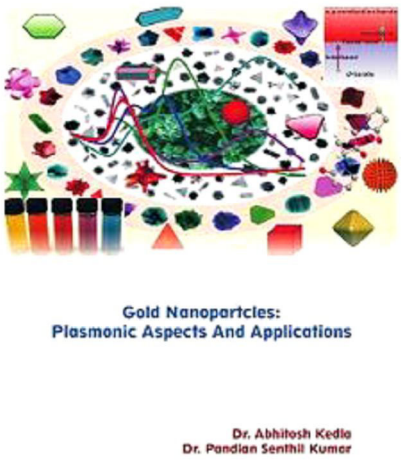

Dr. Manas Ranjan Panda, Dr. Prabodha Kr. Hota
ISBN : 978-81-930928-4-2


Poornima University
ISBN : 978-8193-6264-74


Institute of Public Enterprise
ISBN : 978-8193-6264-4-3




Dr. Jyothi Naik, Prof. Dr. Syed Manazir Ali
Dr. Uzma Firdaus, Prof. Dr. Jamal Ahmed
ISBN : 978-81-936264-9-8



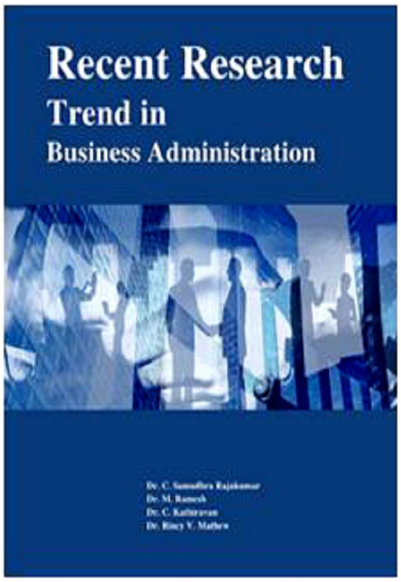

Dr. Abhitosh Kedia
Dr. Pandian Senthil Kumar
ISBN : 978-81-939070-0-9


Dr. Vinod
S. Chandwani
ISBN : 978-81-939070-2-3


Prof. Dr. Dhananjay
Awasarikar
ISBN : 978-81-939070-1-6

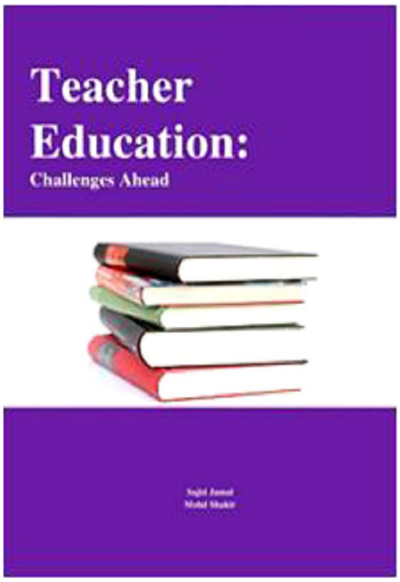

Dr. C. Samudhra Rajakumar, Dr. M. Ramesh
Dr. C. Kathiravan, Dr. Rincy V. Mathew
ISBN : 978-81-939070-4-7


Dr. C. Samudhra Rajakumar, Dr. M. Ramesh
Dr. C. Kathiravan, Dr. Rincy V. Mathew
ISBN : 978-81-939070-6-1



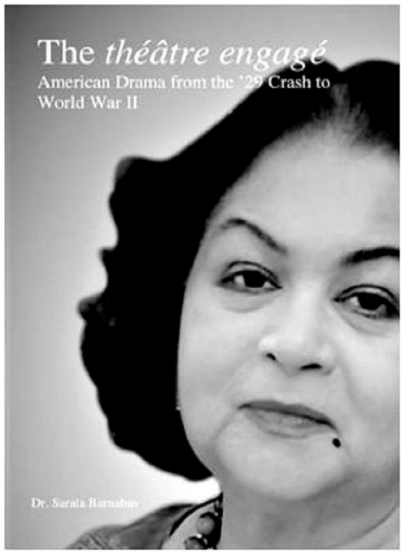

Dr. C. Samudhra Rajakumar, Dr. M. Ramesh
Dr. C. Kathiravan, Dr. Rincy V. Mathew
ISBN : 978-81-939070-7-8


Dr. V. I. Paul, Dr. M. Muthulingam
Dr. A. Elangovan, Dr. J. Nelson Samuel Jebastin
ISBN : 978-81-939070-9-2



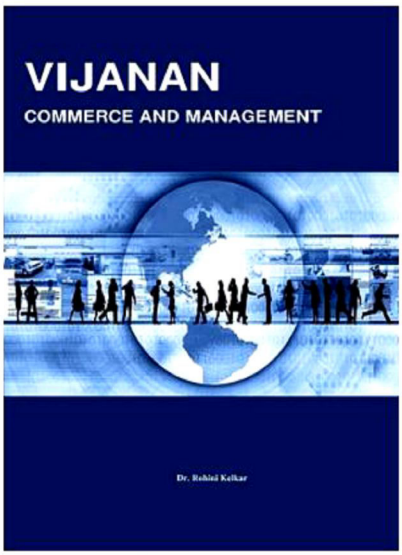

Sajid Jamal
Mohd Shakir
ISBN : 978-81-939070-8-5


Dr. R. Emmaniel
ISBN : 978-81-939070-3-0

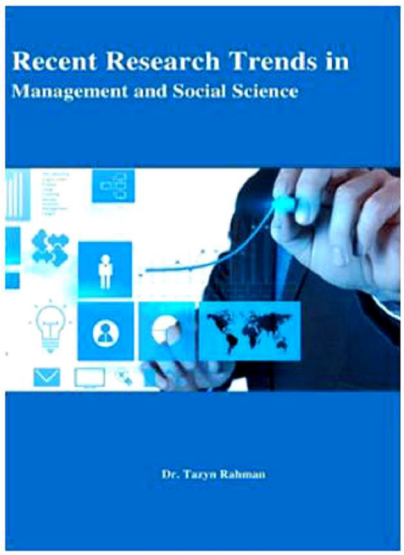



Dr. Sarala Barnabas
ISBN : 978-81-941253-3-4

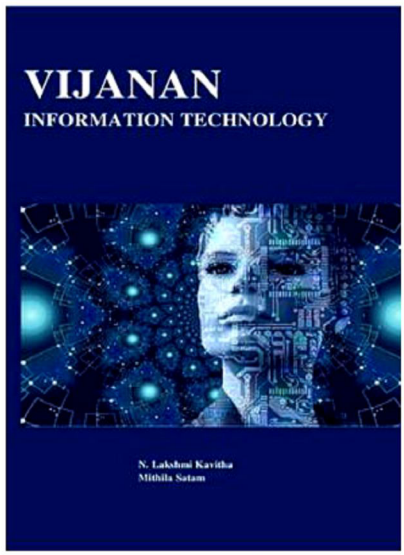

Dr. M. Banumathi
Dr. C. Samudhra Rajakumar
ISBN : 978-81-939070-5-4



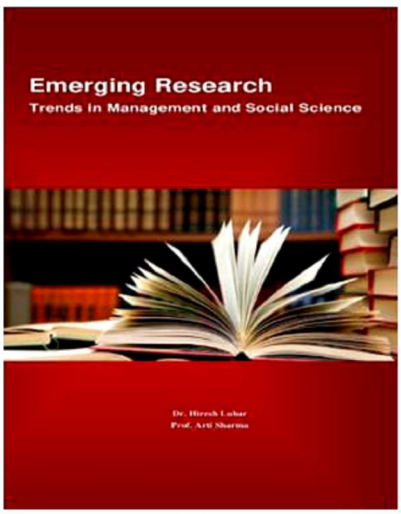

Dr. (Mrs.) Rohini Kelkar
ISBN : 978-81-941253-0-3



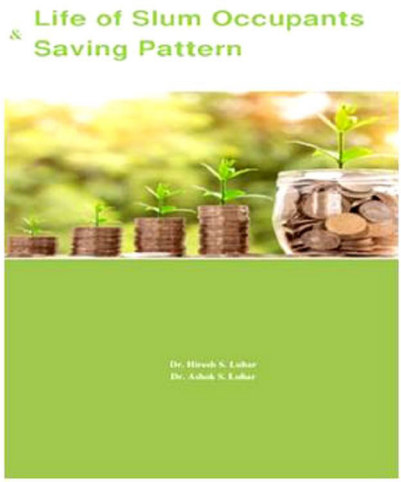

Dr. Tazyn Rahman
ISBN : 978-81-941253-2-7



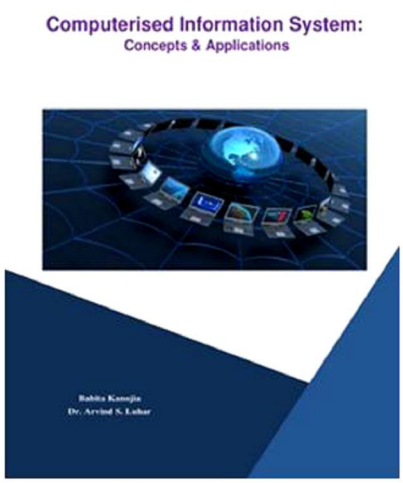

Dr. N. Lakshmi Kavitha
Mithila Satam
ISBN : 978-81-941253-1-0



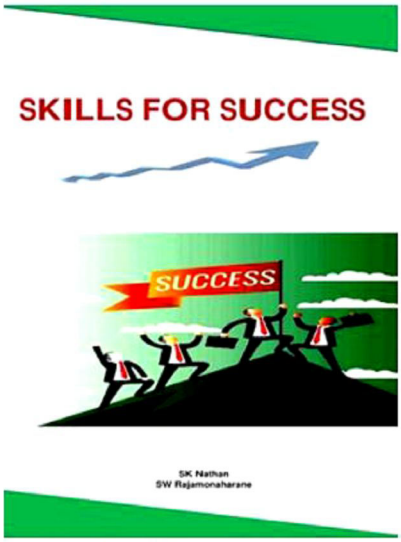

Dr. Hiresh Luhar
Prof. Arti Sharma
ISBN : 978-81-941253-4-1




Dr. Hiresh S. Luhar
Dr. Ashok S. Luhar
ISBN : 978-81-941253-5-8

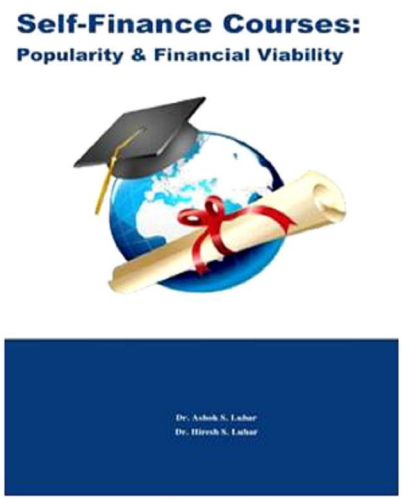



Dr. Babita Kanojia
Dr. Arvind S. Luhar
ISBN : 978-81-941253-7-2

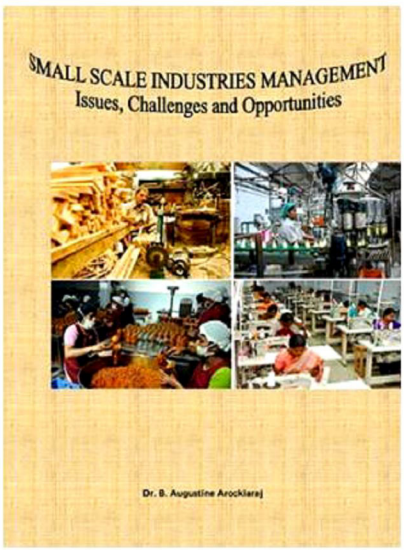



Dr. Sw Rajamonaharane
SK Nathan
ISBN : 978-81-942475-0-0

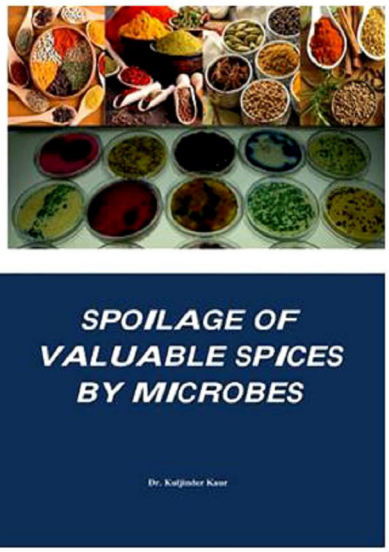

Aditi Sharma
ISBN : 978-81-941253-8-9



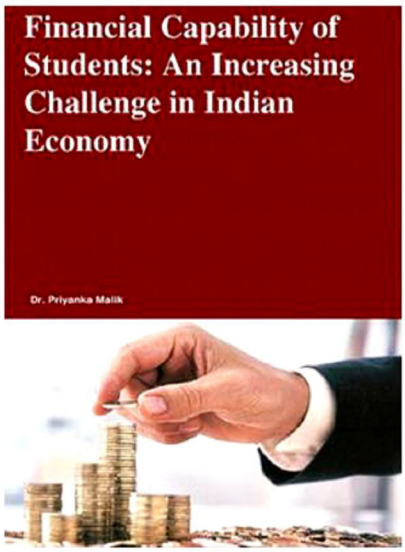

Dr. Ashok S. Luhar
Dr. Hiresh S. Luhar
ISBN : 978-81-941253-6-5



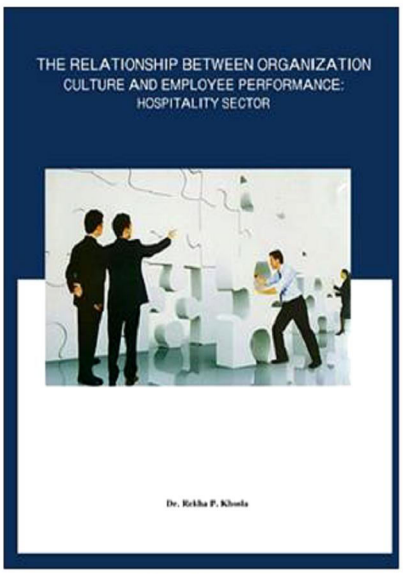

Dr. B. Augustine Arockiaraj
ISBN : 978-81-941253-9-6



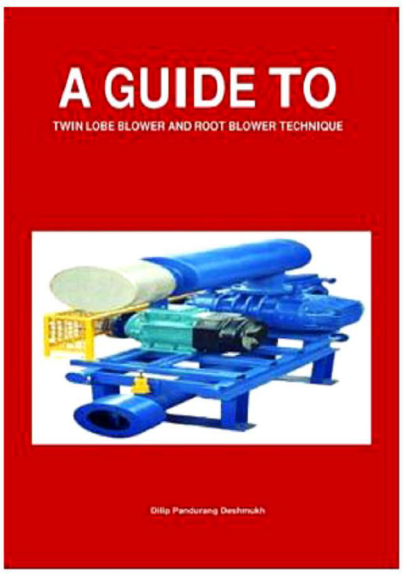

Dr. Kuljinder Kaur
ISBN : 978-81-942475-4-8



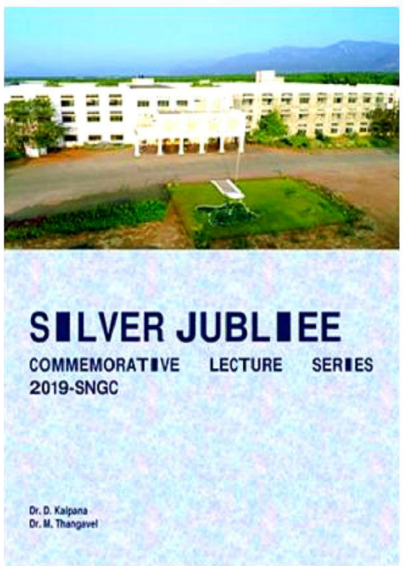

Dr. Priyanka Malik
ISBN : 978-81-942475-1-7




Dr. Rekha P. Khosla
ISBN : 978-81-942475-2-4




Dilip Pandurang Deshmukh
ISBN : 978-81-942475-3-1




Dr. D. Kalpana, Dr. M. Thangavel
ISBN : 978-81-942475-5-5

**Indian Commodity**
**Futures and Spot Markets**

Dr. Aloysius Edward J

Dr. Aloysius Edward J.
ISBN : 978-81-942475-7-9

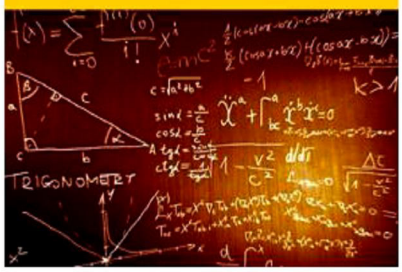
Correlates of Burnout Syndrome Among Servicemen

Dr. Rosemary Obiageri Ekechukwu

Dr. R. O. Ekechukwu
ISBN : 978-81-942475-8-6

**Advances in**
**Mathematical Sciences**
(A Collection of Survey Research Articles)

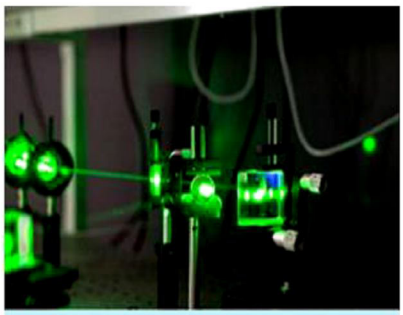
Edited By
Dr. Zakir Ahmed



Dr. Zakir Ahmed
ISBN : 978-81-942475-9-3

**Fair Value Measurement**
Challenges and Perceptions

Dr. (CA) Ajit S. Joshi
Dr. Arvind S. Luhar
ISBN : 978-81-942475-6-2



NONLINEAR OPTICAL CRYSTALS FOR LASER
Growth and Analysis Techniques

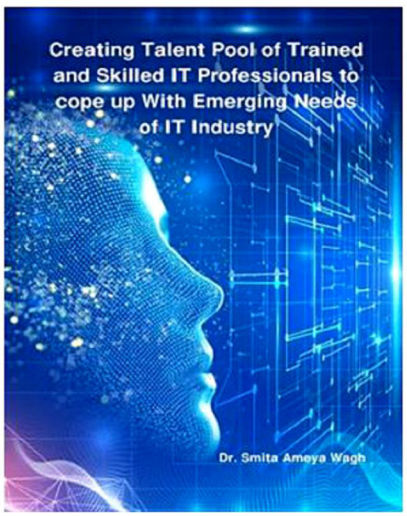
Madhav N Rode
Dilipkumar V Mehsram

Madhav N Rode
Dilip Kumar V Mehsram
ISBN : 978-81-943209-6-8

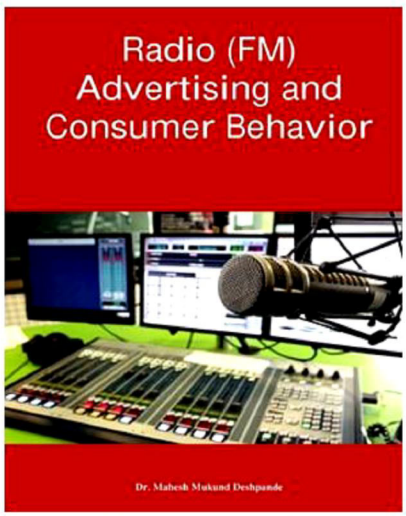
**Remote Sensing of River Pollution And Agricultural Soils**

Dr. Saif Said
Mr. Shadab Ali Khan

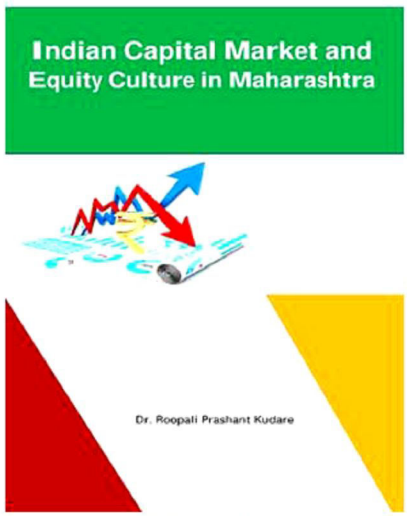
Dr. Saif Said
Shadab Ali Khan
ISBN : 978-81-943209-1-3




Dr. Smita Ameya Wagh
ISBN : 978-81-943209-9-9

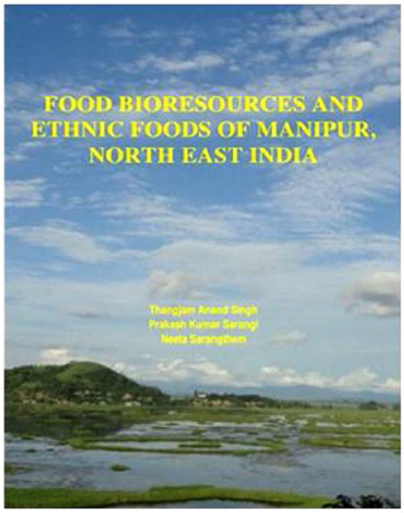



Dr. Mahesh Mukund Deshpande
ISBN : 978-81-943209-7-5

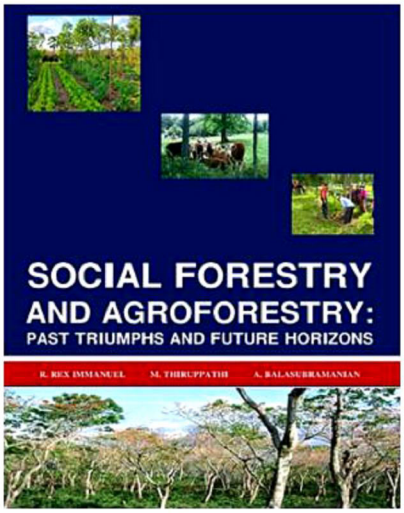



Dr. Roopali Prashant Kudare
ISBN : 978-81-943209-3-7

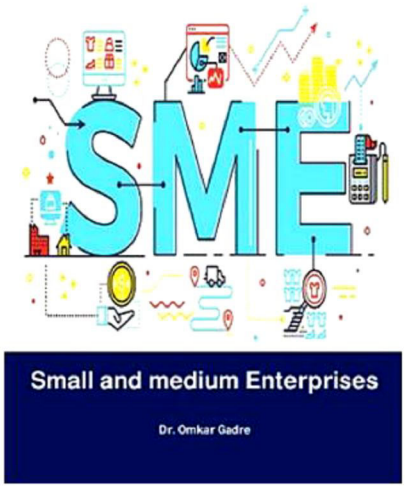

M. Thiruppathi
R. Rex Immanuel
K. Arivukkarasu
ISBN : 978-81-930928-9-7



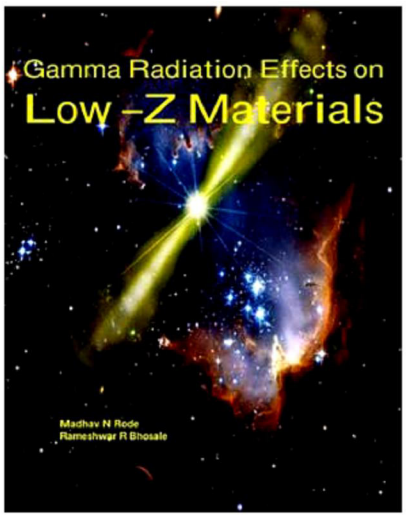

Dr. Th. Anand Singh
Dr. Prakash K. Sarangi
Dr. Neeta Sarangthem
ISBN : 978-81-944069-0-7



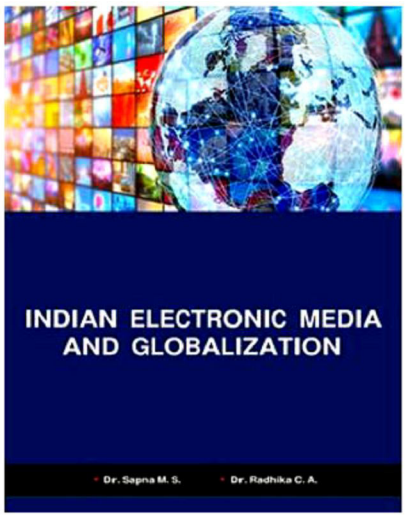

R. Rex Immanuel
M. Thiruppathi
A. Balasubramanian
ISBN : 978-81-943209-4-4




Dr. Omkar V. Gadre
ISBN : 978-81-943209-8-2

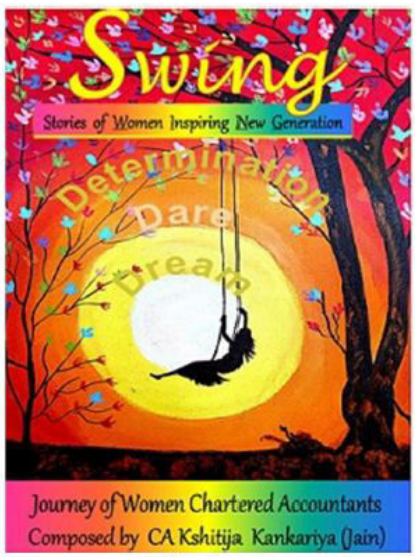



Madhav N Rode
Rameshwar R. Bhosale
ISBN : 978-81-943209-5-1

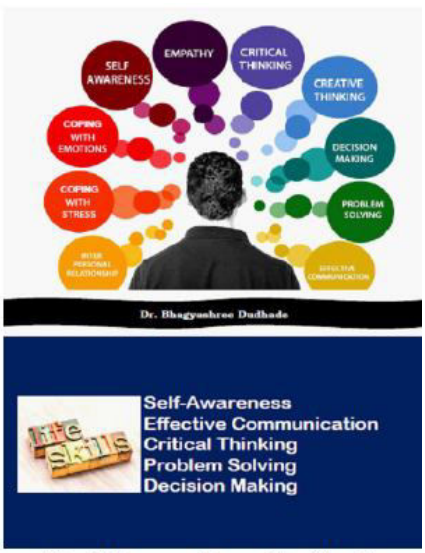



Dr. Sapna M S
Dr. Radhika C A
ISBN : 978-81-943209-0-6

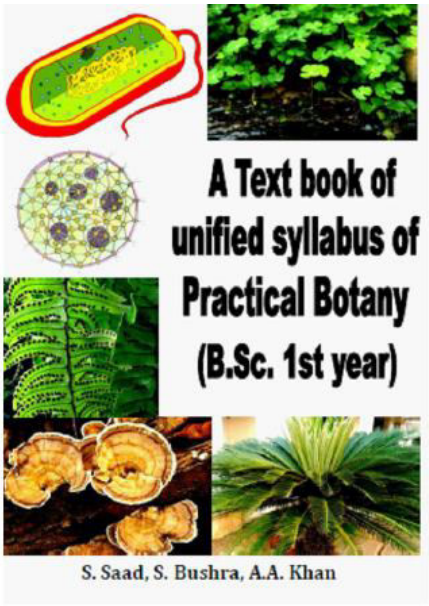

**Hindusthan College**
ISBN : 978-81-944813-8-6



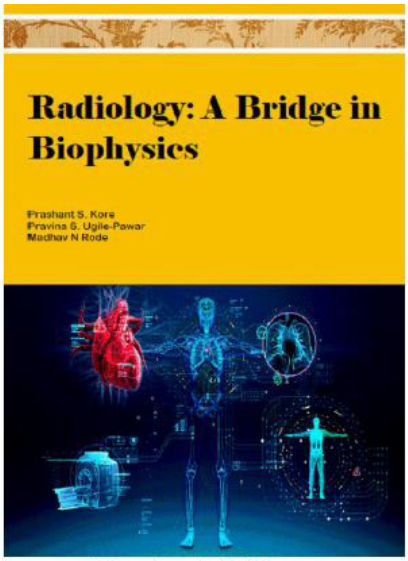

**Swing**
ISSN: 978-81-944813-9-3



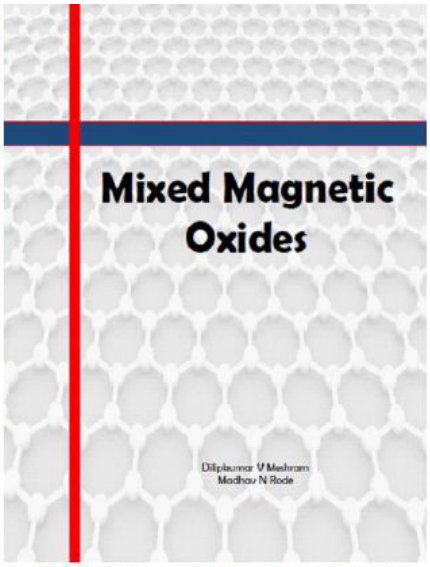

**Dr. Bhagyashree Dudhade**
ISBN : 978-81-944069-5-2



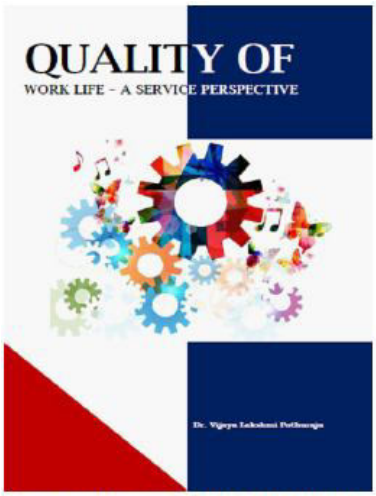

**S. Saad, S. Bushra, A. A. Khan**
ISBN: 978-81-944069-9-0




**Prashant S. Kore**
**Pravina S. Ugile-Pawar**
**Madhav N Rode**
ISSN: 978-81-944069-7-6



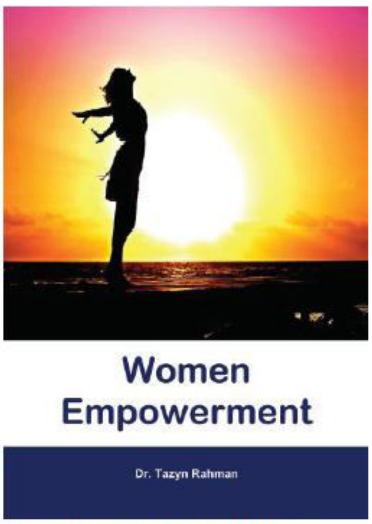

**Dilipkumar V Meshram and**
**Madhav N Rode**
ISSN: 978-81-944069-6-9



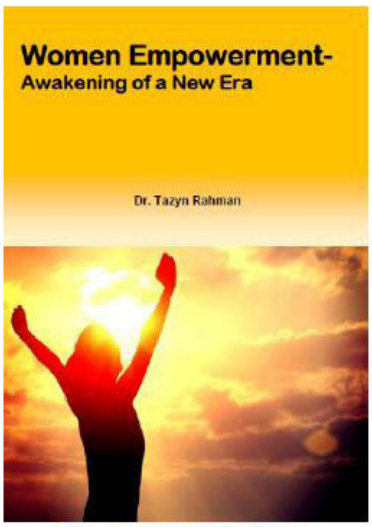

**Dr. Vijaya Lakshmi Pothuraju**
ISBN : 978-81-943209-2-0


**Pratibha College**
ISBN : 978-81-944813-2-4

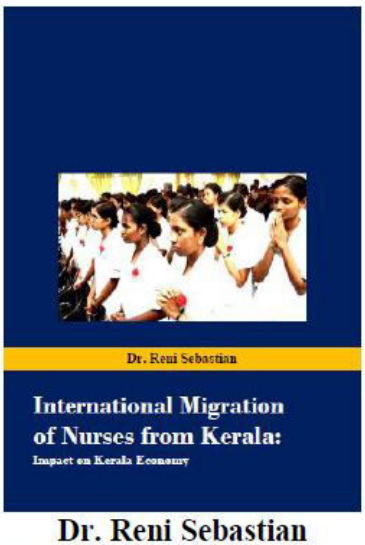

**Pratibha College**
ISBN : 978-81-944813-3-1



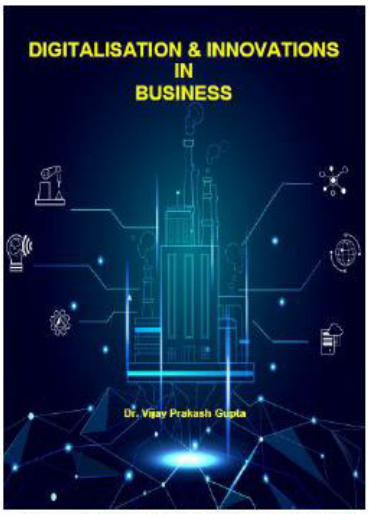

**Dr. Tazyn Rahman**
ISBN : 978-81-936264-1-2



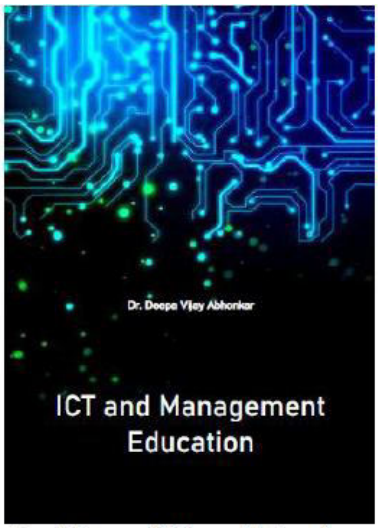

**Dr. Tazyn Rahman**
ISBN : 978-81-944813-5-5



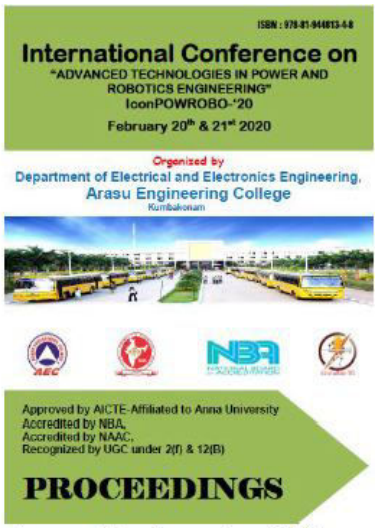

**Dr. Reni Sebastian**
ISBN : 978-81-944069-2-1



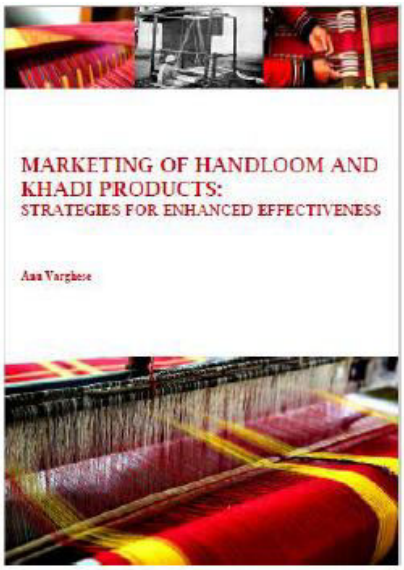

**Dr. Vijay Prakash Gupta**
ISBN : 978-81-944813-1-7



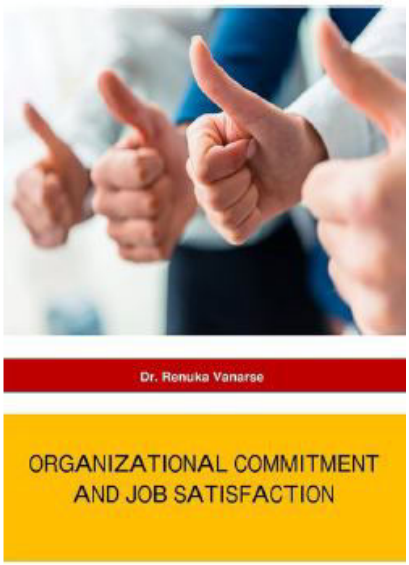

**Dr. Deepa Vijay Abhonkar**
ISBN : 978-81-944813-6-2




**Arasu Engineering College**
ISSN: 978-81-944813-4-8




**Dr. Anu Varghese**
ISBN : 978-81-944069-4-5




**Dr. Renuka Vanarse**
ISBN : 978-81-944069-1-4

Indian Academicians and Researchers Association
www.iaraedu.com