SADHANA EDUCATION SOCIETY'S

L. S. RAHEJA COLLEGE OF ARTS AND COOMERCE (AUTONOMOUS)

Relief Road, Santacruz (W), Mumbai – 400054

INHOUSE DEPARTMENT PUBLICATION

DECEMBER 2024

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

FINACC

Bachelors of Commerce (Accounting & Finance)

IN-HOUSE DEPARTMENT PUBLICATION

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: **FINACC**

DEPARTMENT: BACHELORS OF COMMERCE (ACCOUNTING & FINANCE)

ISSUE: DECEMBER, 2024

EDITOR: MS. VAISHALI PANDYA

CONTRIBUTOR: 1. MISS: TEJASVINI SACHALA- SYBAF

2. MR. PRASHANT RAJAN SHELAR

The Role of Financial management in Startup Success

Ms.Tejasvini Sachala- SYBAF -3745

Mr. Prashant Rajan Shelar

Assistant Professor, Department B.Com (A&F)

The Part of Monetary Administration in Startup Success In today's energetic trade environment, new businesses speak to an imperative constrain driving advancement and financial development. In any case, the travel from a thought to an effective wander is full with challenges. Among the key determinants of a startup's victory is budgetary administration, which plays a significant part in guaranteeing maintainability, development, and long-term reasonability. Viable money related administration envelops budgeting, taken a toll control, cash stream administration, speculation choices, and key arranging. This exposition investigates the fundamental part budgetary administration plays within the victory of new companies and highlights key techniques business people can embrace to guarantee money related stability.

1. The Significance of Financial Planning

One of the primary steps in a startups travel is creating a comprehensive budgetary arrange. A well-crafted monetary arrange serves as a guide, making a difference business people apportion assets successfully and expect future budgetary needs. New businesses regularly confront constrained subsidizing, making fastidious arranging basic to prioritize costs, dodge wastage, and guarantee the commerce remains operational.

Financial arranging too incorporates making practical income projections and distinguishing potential dangers. By understanding their cash stream needs and income cycles, new businesses can get ready for startling shortages. New businesses that contribute time in exhaustive arranging are superior prepared to secure financing from investors, as a strong money related arrange ingrains certainty within the venture's potential.

2. Overseeing Cash Stream Effectively

Cash stream administration is apparently one of the foremost basic viewpoints of money related administration for new companies. Numerous new businesses come up short not due to a need of benefit but since of lacking cash stream. Guaranteeing that the trade has sufficient liquidity to cover day-to-day operations is basic. Destitute cash stream administration can lead to postponed

instalments, strained connections with providers, and indeed insolvency. Startups can execute techniques such as arranging favourable instalment terms with providers, invoicing clients instantly, and keeping up a cash save for emergencies. Moreover, receiving monetary apparatuses and program can offer assistance track cash inflows and surges, empowering business visionaries to create educated choices in genuine time.

3. Budgeting and Fetched Control

For new companies, keeping up tight control over costs is vital. A point-by-point budget permits business visionaries to track investing, recognize ranges of wastefulness, and reallocate assets to more beneficial exercises. New companies frequently work on incline budgets, and any superfluous consumption can jeopardize their survival.

Implementing cost-control measures such as outsourcing non-core capacities, leveraging innovation to diminish operational costs, and arranging bulk rebates can offer assistance new businesses maximize the esteem of each dollar spent. Additionally, regularly returning to the budget guarantees arrangement with changing trade conditions and goals.

4. Securing and Managing Funding

Access to satisfactory financing could be a foundation of startup victory. Money related administration plays an essential part in recognizing the proper blend of subsidizing sources, whether through individual reserve funds, blessed messenger financial specialists, wander capital, or bank loans. Each funding alternative comes with its claim dangers and rewards, and business people must assess them carefully.

 Money related administration guarantees that stores are utilized proficiently, minimizing squander and maximizing returns. For occurrence, new businesses have to be prioritize investing on zones that straightforwardly contribute to development, such as item improvement and showcasing, whereas deferring non-essential uses until the commerce comes to a steady money related position.

5. Vitals peculation Decisions

Investment choices can altogether affect a startups€™s direction. New businesses regularly confront the predicament of whether to reinvest benefits into the commerce or look for outside subsidizing for extension. Budgetary administration gives the system for assessing the potential return on venture (ROI) for different openings, permitting business visionaries to create vital choices.

Additionally, new businesses must adjust short-term needs with long-term objectives. Over-investing in development without guaranteeing operational supportability can lead to monetary strain. Then again, being excessively cautious can result in missed opportunities in competitive markets. A robust financial administration technique strikes the correct adjust between hazard and reward.

6. Financial Reporting and Compliance

Accurate money related announcing is basic for following advance and keeping up straightforwardness. New companies that keep up clear and comprehensive monetary records can recognize patterns, evaluate execution, and alter procedures as required. Additionally, adherence to budgetary controls and assess compliance is basic to maintain a strategic distance from lawful issues that might wreck a startups growth.

Startups ought to too get ready customary monetary explanations, such as adjust sheets, salary explanations, and cash stream articulations, to assess their monetary wellbeing. These reports are not as it were valuable inside but moreover serve as a instrument for building believe with speculators and stakeholders.

7. Part of Technology in Budgetary Management

In todays computerized age, innovation has changed monetary administration for new companies. From cloud-based bookkeeping program to AI-powered monetary analytics instruments, new companies have got to to inventive arrangements that streamline forms and improve decision-making. Robotization decreases the risk of human mistake, progresses proficiency, and allows entrepreneurs to centre on vital errands instead of authoritative ones.

Conclusion

In conclusion, budgetary administration may be a foundation of startup victory. It empowers business visionaries to arrange viably, oversee assets shrewdly, and make educated choices that drive development. By centring on cash stream, budgeting, venture procedures, and compliance, new businesses can navigate the challenges of the trade scene and build up an establishment for long-term success.

As the startup environment gets to be progressively competitive, acing financial management will be the distinction between survival and disappointment. Business visionaries who prioritize money

related teach and use innovation to optimize their forms will be well-positioned to realize their vision and make a enduring affect.

References:

1 Ferdiana, R., & Sulistyo, S. (2019). The role of information technology usage on startup financial management and taxation. *Procedia Computer Science*, *161*, 1308-1315.

2 Prohorovs, A., Bistrova, J., & Ten, D. (2019). Startup success factors in the capital attraction stage: Founders' perspective. *Journal of east-west business*, *25*(1), 26-51.

3 Ronald, M. O. (2017). The Influence of Financial Resources on the Success of Start-up Business in Kenya. *IRA International Journal of Management & Social Sciences, 8 (2), 206*, *212*.

4 Kee, D. M. H., Yusoff, Y. M., & Khin, S. (2019). The role of support on start-up success: a PLS-SEM approach. *Asian Academy of Management Journal*, *24*, 43-59.

5 Tong, Y., & Saladrigues Solé, R. (2019). An introduction to the study on start-up success.

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: FINACC

DEPARTMENT: BACHELORS OF COMMERCE (ACCOUNTING & FINANCE)

ISSUE: DECEMBER, 2024

EDITOR: MS. VAISHALI PANDYA

CONTRIBUTOR: MR. PRASHANT RAJAN SHELAR

U.S. Tax Reform and Global Trade: Implications for India's Export-Driven Sectors

Assistant Professor, Prashant Rajan Shelar

Department of B.Com (Accounting & Finance)

Abstract

The United States Tax Cuts and Jobs Act (TCJA) of 2017, introduced under the Trump administration, restructured the global economic landscape by reducing corporate tax rates and encouraging the repatriation of overseas profits. This paper explores the implications of these tax reforms for India's key export sectors, including information technology, pharmaceuticals, textiles, and engineering goods. It also assesses India's strategic responses to changing trade and investment patterns.

1. Introduction

The U.S. has long been a primary trading partner for India, particularly in sectors such as information technology (IT), pharmaceuticals, and textiles. By implementing the Tax Cuts and Jobs Act (TCJA) in 2017, the U.S. shifted its tax policy towards encouraging domestic investment and discouraging overseas outsourcing (Gravelle & Marples, 2019). For India, a country significantly reliant on exports to the U.S., these changes prompted both concern and strategic reassessment.

2. Overview of the TCJA

The TCJA reduced the federal corporate tax rate in the U.S. from 35% to 21% and introduced a one-time repatriation tax of 15.5% on cash holdings and 8% on illiquid assets held overseas (CRS, 2018). These measures aimed to repatriate over $2 trillion held abroad by U.S. multinationals and incentivize domestic manufacturing and employment.

3. Sectoral Impact on India

3.1 Information Technology (IT)

India's IT exports, valued at over $150 billion in 2020, rely heavily on the U.S. market (NASSCOM, 2020). With U.S. firms encouraged to invest domestically due to tax breaks and political pressure to create American jobs, Indian IT majors such as Infosys and Wipro increased hiring in the U.S. and

established local delivery centers. This shift diluted India's cost advantage and forced firms to adapt their business models (Kapur, 2019).

3.2 Pharmaceutical Industry

The U.S. is the largest market for Indian generic drugs. However, Trump's economic nationalism and the focus on domestic production underpinned by tax reform posed challenges for Indian pharmaceutical companies (Brookings India, 2019). Though the impact was more perceptual than regulatory, it signaled a shift toward localized manufacturing of essential drugs, reducing long-term reliance on imports.

3.3 Textile and Apparel Exports

Indian textile exporters, competing with countries like Bangladesh and Vietnam, were indirectly affected. The U.S. tax reform bolstered the U.S. dollar, making Indian exports more expensive and less competitive (RBI, 2019). Moreover, shifting U.S. trade policy toward bilateralism created uncertainty for Indian exporters who had previously benefited from generalized system of preferences (GSP) provisions.

3.4 Engineering and Auto Components

India's engineering goods sector also faced risks. Tax incentives for local U.S. manufacturing and potential tariffs made American firms less inclined to import components. Nonetheless, India's integration in global value chains helped maintain some demand for specialized components (EEPC India, 2020).

4. India's Policy Response

In response, India implemented several strategic shifts:

- **Policy Incentives**: Programs such as "Make in India" and Production-Linked Incentive (PLI) schemes were expanded to attract investment and enhance domestic production.

- **Market Diversification**: Indian exporters began targeting new markets in Southeast Asia, Africa, and Latin America.

- **Domestic Tax Reforms**: India also undertook corporate tax rationalization in 2019, reducing the base rate to 22% and offering 15% for new manufacturing firms (Ministry of Finance, 2019).

5. Conclusion

Trump's tax reforms reshaped the global business environment, impacting India's export-reliant sectors. While the reforms posed short-term challenges, they also served as a wake-up call for Indian industries to diversify markets and invest in productivity. India's ability to remain globally competitive in a shifting economic order will depend on its domestic reforms, trade negotiations, and adaptability in a more inward-focused global economy.

References

- Brookings India. (2019). *Impact of U.S. Economic Policies on Indian Pharmaceuticals*.

- Congressional Research Service. (2018). *The Corporate Tax Cuts in the Tax Cuts and Jobs Act*. Retrieved from https://crsreports.congress.gov

- EEPC India. (2020). *Annual Report 2019–20*.

- Gravelle, J. G., & Marples, D. J. (2019). *The Economic Effects of the 2017 Tax Revision: Preliminary Observations*. Congressional Research Service.

- Kapur, M. (2019). "The Changing Face of Indian IT Exports: Adapting to the U.S. Tax Environment." *Economic & Political Weekly*, 54(22), 34-39.

- Ministry of Finance, Government of India. (2019). *Press Release on Corporate Tax Reduction*.

- NASSCOM. (2020). *Strategic Review 2020 – Technology Sector in India*.

- Reserve Bank of India (RBI). (2019). *Bulletin – Impact of Global Tax Policies on Emerging Markets*.

BANCASSURANCE

Bachelors of Commerce (Banking & Insurance)

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: BANCASSURANCE

DEPARTMENT: BACHELORS OF COMMERCE (BANKING AND INSURANCE)

ISSUE: DECEMBER, 2024

EDITOR: MS. SHALMALI COLACO

CONTRIBUTOR: Mr. Karthik Kadari – TYBBI

LIC'S BIMA SAKHI: EMPOWERING WOMEN VIA INSURANCE

Mr. Karthik Kadari – TYBBI

Introduction

The LIC's Bima Sakhi, **a** stipendiary Scheme for Women, is a groundbreaking initiative by the Indian government aimed at empowering women while simultaneously increasing the familiarity of life insurance products in rural areas. This program offers women the opportunity to become Career Agents for insurance, known as "Bima Sakhis." By training these women to be knowledgeable about insurance and financial planning, the scheme seeks to bridge the gap in insurance awareness and access in rural India.

Key Features of LIC's Bima Sakhi Scheme

1. Empowerment of Women

The cornerstone of the **Bima Sakhi Scheme** is the empowerment of women. The program recruits women aged between 18 and 70 years, providing them with the training and financial literacy necessary to become successful insurance agents. This initiative not only helps women achieve financial independence but also enhances their social standing by positioning them as key financial educators in their communities.

2. Increased Access to Insurance

One of the primary goals of the **Bima Sakhi Scheme** is to expand access to insurance in rural and semi-urban regions, areas traditionally underserved by the financial services sector. By appointing women as agents, the program leverages local knowledge and trust to enhance the adoption of life insurance products. This is particularly important in areas where insurance penetration remains low, and the awareness about financial products is minimal.

3. Livelihood Opportunities

The scheme provides women with a pathway to long-term career opportunities. After completing their training, **Bima Sakhis** can become official agents of the Life Insurance Corporation of India (LIC), earning commissions and other incentives. This sustainable livelihood model allows women to earn a regular income, contributing not only to their own financial security but also to the economic growth of their communities.

4. Financial Literacy Education

As part of their training, **Bima Sakhis** undergo workshops focused on financial literacy, equipping them with the knowledge to manage personal finances and guide others on budgeting, savings, and long-term financial planning. These sessions aim to improve the overall financial literacy of the community, ensuring that families can make informed decisions about life insurance and other financial products.

Goals of the Bima Sakhi Scheme:

The overarching goals of the **Bima Sakhi Scheme** are to:

- Provide financial protection to rural families by promoting life insurance.
- Educate communities about the importance of insurance and its role in long-term financial security.

- Empower women economically by providing them with career opportunities and income-generating pathways.

Eligibility criteria and training details:

To become a **Bima Sakhi**, women must meet the following eligibility criteria:

- **Age**: Between 18 and 70 years.
- **Education**: Minimum of Class 10th.
- **Documents**: Proof of age, address, and educational certificates.

Upon selection, participants undergo a three-year training program, during which they receive a stipend as they acquire the necessary skills to become effective insurance agents. The stipend structure is as follows:

- **1st Year**: Rs 7,000 per month.
- **2nd Year**: Rs 6,000 per month (subject to the condition that at least 65% of the policies issued during the first year remain active).
- **3rd Year**: Rs 5,000 per month (subject to the condition that at least 65% of the policies issued during the second year remain active).

After completing the training program, women officially become LIC agents and are ready to serve their communities as insurance professionals.

Community Benefits of the Bima Sakhi Scheme:

The **Bima Sakhi Scheme** has far-reaching benefits for the community as well. Some of the key community benefits include:

- **Increased Insurance Penetration**: By empowering local women to act as agents, the scheme helps expand insurance coverage in areas that were previously underserved, thereby promoting financial inclusion.
- **Financial Security for Families**: With the increased adoption of life insurance, families in rural areas are better protected against unforeseen events, contributing to overall community stability.

- **Promotion of Gender Equality**: The program directly contributes to empowering women by enhancing their financial autonomy and social status, fostering gender equality in rural communities.

Government's Long-Term Vision for Women's Empowerment

The **Bima Sakhi Scheme** aligns with the government's broader vision of promoting women's empowerment and economic independence. This initiative is part of the larger strategy to ensure financial inclusion for all, particularly women in rural areas. By enabling women to become financial educators and insurance agents, the program aims to tackle both financial illiteracy and the lack of economic opportunities for women.

In conclusion, the **Bima Sakhi Scheme** is more than just an insurance awareness program. It is a powerful tool for economic and social transformation, providing women with the skills and resources to empower themselves while helping bridge critical gaps in financial services. Through this initiative, rural families gain greater access to life insurance, ensuring that they are financially protected in the face of adversity. Moreover, the program strengthens women's roles in their households and communities, fostering both economic independence and gender equality.

This initiative represents a significant step forward in India's journey toward a more inclusive and financially secure future for all its citizens, especially women.

References:

1. www.licindia.in
2. www.pmindia.gov.in
3. www.indiatoday.in
4. www.business-standard.com
5. www.cnbctv18.com

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

PENNY *TALKS*

Bachelors of Commerce (Financial Markets)

829.49

662.25

IN-HOUSE DEPARTMENT PUBLICATION

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: PENNY TALKS

DEPARTMENT: BACHELORS OF COMMERCE (FINANCIAL MARKETS)

ISSUE: DECEMBER, 2024

EDITOR: MS. DIVYA KANCHAN

CONTRIBUTOR: MS. STUTI DUBEY

GROWING INFLUENCE OF WOMEN IN INVESTMENT AND FINANCE

Ms. Stuti Navneet Dubey

TYBFM

ABSTRACT

The world of banking and investment has changed dramatically in recent years, with women gradually gaining ground in a historically male-dominated field. In addition to changing the financial industry, this development is encouraging a new generation of women to work in

finance and investments. Since financial independence is essential to empowerment, it has also assisted women from other industries in managing their money wisely. Notwithstanding the advancements, obstacles still exist, and the gender investment gap is yet ongoing.

INTRODUCTION

The Growing Influence of Women in Finance

However, just 10% of women worldwide feel that they understand investments, and 45% of them think that the stock market is risky. There are a number of potential causes for this, including the gender pay gap, a lack of financial education, and a lack of risk aversion.

An article published by Economic Times titled "WORKING WOMEN ARE MOST RISK

AVERSE SAVERS" states that 33% of Indian women say they never invest their money, and 55% are not aware of their investments. Although returns may not be particularly appealing, urban working women prefer to put their savings in safer instruments like FDs. Nevertheless, a sizable portion of working women do believe in investments and see them as a stable generator of wealth.

From Housewives to Boss Ladies

In the past, however unofficially, women were essential to the management of household finances. Many women were skilled at budgeting, saving money, and providing financial stability for their families since they were housewives. As social conventions changed, this "kitchen table economics" prepared the way for a smooth transfer into official financial duties, The journey of kitchen to boardroom was however, not very easy, but women redefined roles.

<u>Savings to Investments:</u> Women used to save money mostly informally, such as by keeping cash on hand or joining neighborhood savings organizations, decades ago. These days, people are using official investment channels like stocks, bonds, and mutual funds. A research study by

GROWW also showed how 33% women take independent investment decison.

<u>Education and Employment:</u> Women are now better equipped to handle household finances and succeed in corporate positions, such as wealth management and investing, thanks to increased

access to professional opportunities and education, because at the end of the day GIRLS JUST WANT TO HAVE FUNDS.

<u>Entrepreneurial Spirit:</u> The growing trend of female entrepreneurs reinvesting profits into a variety of asset classes has been spurred by women-led companies and businesses, further solidifying their place in the financial ecosystem. With important roles in prestigious companies like hedge funds, investment banks, and asset management firms, women have made incredible progress in the financial industry. Prominent individuals such as Adena Friedman, President and CEO of Nasdaq, and Abigail Johnson, CEO of Fidelity Investments, serve as examples of the

contributions women are making at the top of significant financial organizations.

Technological Empowerment: Women may now learn, trade, and invest from the comfort of their homes or offices thanks to digital platforms and smartphone apps.

WORKING:

A Legacy of Resilience and Support

Women have long been the backbone of financial resilience, exhibiting resourcefulness and caution when handling household finances, particularly during emergencies. However, they have now shown that they are more than just a pretty apron; they are also successful in leadership

positions and work as traders, financial analysts, and portfolio managers. Research shows that gender-diverse teams often make better investment decisions and generate higher returns, which has led organizations to recognize the importance of multiple perspectives.

Ancient Practices: In ancient times, women generally saved a portion of their husband's salary, carefully budgeting to keep the family running smoothly. These reserves functioned as a cushion for economic downturns or unforeseen calamities.

Crisis Management: Whether during wars, famines, or economic downturns, women have continually risen to the challenge of managing limited resources with innovation while maintaining household decency and stability.

Supportive roles: Women have traditionally supported their families by implementing inventive saving tactics that provide not just financial security but also emotional and logistical assistance to their spouses and children.

Challenges on the Path to Parity

Women are still underrepresented in finance, especially in top positions and investment management, notwithstanding the advancements. Morningstar's analysis indicates that women make up only 14% of fund managers worldwide. There are multiple reasons for this discrepancy:

Workplace Bias: Women's success is nevertheless hampered by enduring misconceptions about their aptitude for quantitative and decision-making tasks.

Work-Life Balance: Women's roles at home are often expected to align with the demanding nature of financial employment.

Absence of mentoring: Women frequently have a mentoring gap, which causes them to lose out on networking and advice that are essential for professional advancement.

The Role of Women as Investors

Women are influencing the finance sector as investors as well as professionals. Research indicates that women are more likely than men to take a long-term, disciplined approach to investing. Over time, this investment strategy frequently yields higher risk-adjusted returns.

Moreover, impact investing—allocating funds to initiatives that produce both financial returns and social and environmental benefits—is becoming more and more popular among women. With many families depending on women to handle investments and budgets, this development is consistent with women's increasing role in domestic financial decisions.

Inspiring the Next Generation: Playing Smart not Safe.   .

Traditionally seen of as a male-dominated field, the financial industry is undergoing a revolutionary period in which women are not only shattering stereotypes but also establishing new standards. With their vision, inventiveness, and tenacity, women in India are increasingly

taking up top roles in the financial sector, shattering preconceptions and changing the landscape.

In addition to helping significant organizations flourish, these trailblazers have motivated countless more to follow their aspirations and seek jobs in finance and investments.

These women embody strength and tenacity, from leading global corporations and regulatory agencies to starting successful business endeavors. Their experiences demonstrate the value of inclusivity, variety, and the distinct viewpoints that women offer to the finance industry. This section celebrates the journeys and achievements of some of India's most influential women in finance, who continue to pave the way for future generations.

1. **Falguni Nayar-** founder and CEO of Nykaa, she transitioned from investment banking at Kotak Mahindra to entrepreneurship, establishing a multibillion-dollar beauty and

   wellness empire.

2. **Arundhati Bhattacharya**- The first woman chairperson of the State Bank of India— transformed India's largest bank during her tenure and is now the chairperson and CEO of Salesforce India.

3. **Anshula Kant**- Managing Director and CFO of the World Bank, oversees financial and risk management at the global institution and has had an illustrious career spanning nearly four decades.

4. **Naina Lal Kidwai-** The first Indian woman to lead a foreign bank in India (HSBC)—has been a trailblazer in investment banking and corporate leadership.

5. **Vineeta Singh-** co-founder and CEO of Sugar Cosmetics, has built a consumer brand focused on young, dynamic women and is a notable entrepreneur featured in popular media.

6. **Shanti Ekambaram** A leader at Kotak Mahindra Bank, she has contributed to digital banking and retail financial services, inspiring many in the banking industry.

7. **Anu Aiyengar** - Global Head of Mergers & Acquisitions at JP Morgan, she has led some of the most significant M&A transactions worldwide, shaping the global financial landscape.

CONCLUSION

Women in investment and finance are not just breaking barriers but are also proving their mettle as leaders, innovators, and changemakers. While the journey toward equality is far from over, the progress achieved so far underscores the potential of a more diverse and inclusive financial sector. By addressing the challenges and fostering opportunities, we can pave the way for a future where women's contributions are fully recognized and celebrated.

The finance world—and indeed the global economy—stands to benefit immensely from the active participation of women. As the adage goes, "When women succeed, we all succeed."

REFERENCES

1. Mint, Chaitanya India, The Economic Times
2. Business Today.
3. Morningstar Research, Business Standard.
4. Lean In, Women in Finance Charter.
5. Morningstar Research, Chaitanya India.
6. https://www.forbesindia.com/lists/w-power-2024/ (Buruda)
7. https://www.financeoutlookindia.com/editors-column/international-women-s-day-2024-five-indian-women-leaders-with-financial-excellence-nwid-1073.html (Buruda)

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: COGNIZANCE

DEPARTMENT: BACHELORS OF COMMERCE (MANAGEMENT STUDIES)

ISSUE: DECEMBER, 2024

EDITOR: MS. SUVARNA RAIKAR

CONTRIBUTOR: MS. INSIYA RADIOWALA

MS. SAMPADA ALMEIDA

The Value of Extracurricular Activities in Developing Personality

-Tanya Quinny

TYBMS (Finance)

The development of a person's personality and overall well-being is greatly influenced by extracurricular activities. Academic success is unquestionably important, but these activities also provide rare chances to explore a variety of interests, hone vital life skills, and promote personal development. In this article, the important advantages of extracurricular activities for personality development are examined.

By engaging in extracurricular activities, people can find their hobbies, skills, and interests outside of the classroom. Students have the option to investigate other fields and discover what speaks to them, whether it's joining a sports team, taking part in the performing arts, or joining a science group. Building self-awareness, which is essential for personal.

A variety of abilities that are not frequently highlighted in academic contexts can be developed through extracurricular activities. For instance, taking part in a debate club can improve one's communication, public speaking, and critical thinking skills. The same is true for team sports, which may develop leadership, problem-solving, and teamwork abilities. These exercises inspire participants to push themselves beyond their comfort zones, acquire new skills, and improve their current ones. Development, is made easier through the process of self-discovery.

Effective time management and discipline are needed to participate in extracurricular activities. In order to fulfil deadlines and manage their time effectively, students must strike a balance between their academic and extracurricular activities. People who handle numerous jobs efficiently learn to prioritize tasks, effectively use their time, and cultivate a strong work ethic. These abilities can be used in a variety of contexts.

Students can connect and form bonds with other students who share their interests through extracurricular activities. These activities promote collaboration, communication, and cooperation, whether they include participating in a play, a sports team, or a group project. Individuals learn to empathize, accept variety, and cultivate strong interpersonal skills via interactions and shared experiences. Success in both personal and professional life depends on having these social skills.

People who participate in extracurricular activities get the chance to show off their skills, gain recognition, and develop their confidence. These accomplishments, whether they involve giving a powerful speech, performing on stage, or triumphing in a sporting event, help people feel good about themselves. This increase in self-assurance goes beyond the action itself and has a good effect on other facets of life, including academics and interpersonal interactions.

Participating in extracurricular activities offers a constructive outlet for stress alleviation and enhances general well-being. These pursuits provide a respite from academic demands and provide people the chance to do something they truly like. Individuals benefit from a sense of satisfaction, relaxation, and a break from routine when they pursue their hobbies and interests since this leads to a sense of fulfillment and adds to their emotional and mental well-being.

A well-rounded education must include extracurricular activities since they are essential to personality development. They provide chances for discipline, time management, skill development, and self-discovery. Additionally, these activities help develop social skills, confidence, and general well being. People may enhance their school experience, nurture their hobbies, and grow into well-rounded individuals equipped to meet the challenges of the future by actively participating in extracurricular activities.

References:

https://www.chronicle.com

https://doi.org/10.1037/0022-0663.95.2.409

Education Society's
L.S. Raheja College of Arts & Commerce

Bachelors of Mass Media

'PEP TALK'
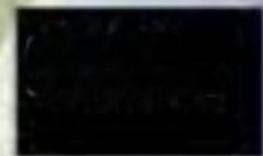
IN-HOUSE DEPARTMENT PUBLICATION

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: PEP TALK

DEPARTMENT: BACHELORS OF ARTS (MULTIMEDIA AND MASS COMMUNICATION)

ISSUE: DECEMBER, 2024

EDITOR: MS. KAVITA MAKHIJA

CONTRIBUTOR: MS. SHREYA MATHUR

CHANGING TRENDS IN TELEVISION INDUSTRY

Dr. Shreya Mathur

Asst. Prof., B.A.M.M.C Department

Over-the-top platforms (OTT) have disrupted traditional linear television (TV) around the globe. Past studies have highlighted on-demand access to movies, streaming services, low subscription costs, and the explosion of the creation of content as among the driving factors for the present television industry metamorphosis (Mykhaylyuk Y., 2024). Sudden shift led to declining TRP and advertising revenue. However, in India, TV is considered a family activity, with everyone coming together and watching favorite programs as one. OTT provides a gateway for content that is not family-friendly and accessible when away from home. The changing television landscape over the past decade begs to ask the question: Will evolution drive growth in the television industry, or will the television market become stagnant in the days to come?

 Forbes home survey found that 86% of consumers are moving away from DTH/cable TV and are subscribed to two or more OTT platforms. Hence, for the first time, there is a decline in subscribers to traditional pay TV. Furthermore, the popularity of consuming content on smartphones in the form of reels, user-generated content, and videos is adding fuel to the fire. Various television legacy networks see these transformative trends as an opportunity to expand their audience base in viewing. This has led to the merging of traditional TV lines and OTT platforms on the digital spectrum. For instance, the SONY LIV app, owned by SONY PICTURES NETWORK Ltd., hosts a wide array of content online. Disney+ Hotstar, one of India's leading OTT platforms, has a library full of Bollywood and Hollywood movies and TV shows. Additionally, the merging of OTT and traditional TV creates opportunities for creative marketing approaches. Networks can provide more individualised and pertinent programming, increasing audience engagement and loyalty, thanks to data-driven insights and targeted advertising.

The most recent trends also demonstrate that TV is gradually but progressively combining with social media. Social channels are collaborating with big media industry players to broadcast video content on their platforms. More news broadcasts on Twitter, Facebook, and other platforms, and Facebook is even investing in and paying for distinctive live video content. At the same time, Google is introducing a streaming bundle of channels under the YouTube banner. There's no need to keep to broadcaster schedules anymore. Multiple traditional broadcasters and suppliers are releasing their content via OTT digital video platforms. In fact,

each company has a unique way of addressing the current market condition. Some provide smaller channel bundles via their internet streaming services, but others attempt to merge content development and distribution.

Practically speaking, the rise of OTT should be viewed as a stimulus for TV evolution and innovation, rather than a threat. Embracing the shifting landscape and exploiting the capabilities of both OTT and traditional TV can result in a vibrant television sector.

References:

1. Napoli, P. M. (2011). *Audience evolution: New technologies and the transformation of media audiences*. Columbia University Press.

2. Deller, R. A. (2020). *Tuning in to the changing TV landscape: Streaming, second screens, and social media*. In B. Franklin & S. Eldridge (Eds.), *The Routledge companion to digital journalism studies* (pp. 142–150). Routledge.

3. Smith, M. A., & Telang, R. (2017). *Streaming, sharing, stealing: Big data and the future of entertainment*. MIT Press.

4. Tryon, C. (2013). *On-demand culture: Digital delivery and the future of movies*. Rutgers University Press.

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: PEP TALK

DEPARTMENT: BACHELORS OF ARTS (MULTIMEDIA AND MASS COMMUNICATION)

ISSUE: DECEMBER, 2024

EDITOR: MS. KAVITA MAKHIJA

CONTRIBUTOR: MS. SHREYA MATHUR

IMPACT OF SOCIAL MEDIA ON POLITICAL CAMPAIGNING

Dr. Shreya Mathur

Asst. Prof., B.A.M.M.C Department

Social media has drastically changed the Indian media landscape over the past decades. Organizations are shifting from utilizing conventional methods of advertisements and predominantly going digital or mixing digital and traditional. The same trend could be traced in political advertisements as well. India, being one of the biggest hubs for smartphone usage and consumption of online content, was largely facilitated by affordable data plans. Though few political parties continue to depend on traditional news outlets to share information with the masses, few have tapped into the digital and social media stream to engage effectively with the masses across the country.

Barack Obama was the first presidential candidate to use social media as a campaign strategy. Following the success of using Twitter and Facebook to woo potential voters, in 2014, the Bhartiya Janta Party adopted the strategy to use social media. Their main aim for the social media campaign was to spread awareness, have constant interaction with voters, and use hashtags such as #NaMoUdhampur. Twitter and Facebook allow users (young & old) to be part of interactive political discussions.

We have seen the same blitz in the 2019 and 2024 general elections. Once considered a hub of entertainment, social media became a platform for information, news, and campaigns. Cheap internet and affordable smartphones allowed the rise of social media among users. Social media became a key battlefield to connect with voters through memes, reels, crisp video edits, and to-the-point messages to garner support.

One cannot ignore the fact that politics and media share a complex, integrative relationship: media, elections, and politics are connected to each other. In the past decade, social media has become a platform for political narratives. However, few experts chimed in that social media campaigns might influence to an extent that they might disrupt the democratic process. In 2017, Facebook admitted their platform was being exploited by governments seeking to manipulate public opinion in other countries during elections across the globe. They pledged to clamp

down on such operations.

The Election Commission of India has set up panels to scrutinize the growing popularity and use of social media. The panel provides recommendations to violations. One cannot ignore that fake news is a matter of concern on social media. The government is tightening the rules and regulations on the use of social media, and ECI ensures they are followed, especially during political campaigning.

References:

1. Enli, G. (2017). *Twitter as an arena for the authentic outsider: Exploring the social media campaigns of Trump and Clinton in the 2016 US presidential election*. **European Journal of Communication, 32**(1), 50–61. https://doi.org/10.1177/0267323116682802

2. Kreiss, D. (2016). *Prototype politics: Technology-intensive campaigning and the data of democracy*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199350247.001.0001

3. Vaccari, C., & Valeriani, A. (2015). *Follow the leader! Direct and indirect flows of political communication during the 2013 Italian general election campaign*. **New Media & Society, 17**(7), 1025–1042. https://doi.org/10.1177/1461444813511038

4. Chadwick, A., Dennis, J., & Smith, A. P. (2016). *Politics in the age of hybrid media: Power, systems, and media logics*. **Political Studies, 64**(1), 1–19. https://doi.org/10.1111/1467-9248.12116

5. Tufekci, Z. (2014). *Engineering the public: Big data, surveillance and computational politics*. **First Monday, 19**(7). https://doi.org/10.5210/fm.v19i7.4901

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

Inhouse Departmental Publication

PSYnalysis

Department Of Psychology

Designed By : Sushant Thakur
[TY.B.Sc.(I.T)]

Digital Well-being Among Indian Adolescents: A Comprehensive Analysis

Asst Prof.Neha Dalal

Department of Psychology

Abstract

The advent of digital technology has revolutionized how adolescents interact, learn, and engage with the world. However, excessive digital engagement has raised concerns about its impact on their mental, emotional, and physical well-being. This paper explores the concept of digital well-being among Indian adolescents, drawing insights from peer-reviewed research. It discusses the multifaceted impacts of digital technology, including psychological effects, academic implications, and social dynamics. Recommendations for fostering healthy digital habits and promoting a balanced digital lifestyle are provided.

Introduction

India's adolescent population, comprising approximately 253 million individuals, represents a significant demographic engaging extensively with digital platforms (UNICEF, 2021). The increasing penetration of smartphones, affordable internet, and social media platforms has transformed how adolescents communicate and consume information. However, this digital immersion comes with challenges, including mental health issues, digital addiction, and cyber risks. This paper examines research findings on digital well-being among Indian adolescents, focusing on the psychological, social, and behavioral dimensions.

Psychological Impact of Digital Usage

Excessive digital engagement can have profound psychological effects on adolescents. Studies have identified links between screen time and mental health issues such as anxiety, depression, and sleep disturbances (Raman et al., 2020). Indian adolescents reportedly spend an average of 3-5 hours daily on their devices, often leading to disrupted sleep patterns and heightened stress levels (Nair et al., 2019).

A study by Sharma et al. (2021) revealed that 27% of Indian adolescents experienced moderate to severe anxiety related to social media use. This aligns with global trends where adolescents

frequently compare themselves to curated online personas, exacerbating feelings of inadequacy and low self-esteem (Orben & Przybylski, 2019).

Digital technology has both positive and negative impacts on academic performance. While online learning platforms provide access to diverse educational resources, excessive use of social media can distract students and reduce academic productivity. A study by Gupta and Banerjee (2020) indicated that Indian adolescents who spent more than four hours daily on non-academic digital activities had lower academic performance compared to their peers with moderate usage.

Social Dynamics and Relationships

Digital platforms significantly influence adolescents' social interactions. While they facilitate communication and foster global connections, they can also lead to cyberbullying and social isolation. According to a survey conducted by Kumar et al. (2021), 35% of Indian adolescents reported experiencing some form of cyberbullying, which negatively impacted their mental health and self-esteem.

Conversely, digital tools can enhance social connectedness and provide support networks, especially for marginalized groups. Platforms like WhatsApp and Instagram often serve as spaces for adolescents to share experiences and seek peer support (Thomas et al., 2020).

Risk of Digital Addiction

Digital addiction, characterized by compulsive use of devices and an inability to disconnect, is a growing concern. Approximately 20% of Indian adolescents exhibit signs of digital dependency, according to a study by Patel et al. (2018). This behavior often leads to impaired social interactions, reduced physical activity, and an increased risk of mental health issues.

Strategies for Promoting Digital Well-being

Promoting digital well-being involves striking a balance between leveraging the benefits of technology and mitigating its risks. Effective strategies include:

1. Parental Guidance: Parents play a crucial role in shaping adolescents' digital habits. Setting screen time limits and fostering open communication about online experiences can mitigate risks (Singh et al., 2020).

2. Digital Literacy Programs: Schools and community organizations can implement digital literacy programs to educate adolescents about responsible online behavior, privacy concerns, and cyber safety (Mishra & Roy, 2021).

3. Mindful Technology Use: Encouraging mindfulness practices and scheduled digital detoxes can help adolescents develop healthier relationships with technology (Gupta et al., 2019).

4. Policy Interventions: Policymakers can collaborate with educational institutions and tech companies to create regulations that prioritize adolescent well-being. For instance, social media platforms can implement features to monitor and manage screen time (Raman et al., 2020).

Conclusion

Digital technology is an integral part of adolescents' lives, offering opportunities for growth and learning while posing challenges to their well-being. Research underscores the importance of a balanced approach that maximizes benefits while addressing risks. Stakeholders, including parents, educators, policymakers, and adolescents themselves, must collaborate to foster a culture of healthy digital engagement.

References

Gupta, R., & Banerjee, P. (2020). The impact of digital technology on academic performance among Indian adolescents. *Journal of Educational Research*, 13(2), 45-58.

Kumar, S., Sharma, P., & Thomas, R. (2021). Cyberbullying and its impact on adolescent mental health: An Indian perspective. *Indian Journal of Psychiatry*, 63(4), 335-341.

Mishra, S., & Roy, A. (2021). Digital literacy programs as a tool for promoting adolescent well-being in India. *International Journal of Digital Education*, 10(1), 23-30.

Nair, A., Raman, S., & Gupta, M. (2019). Sleep patterns and digital media usage among adolescents in urban India. *Sleep Medicine Reviews*, 48, 101-110.

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3, 173-182.

Patel, D., Singh, R., & Sharma, K. (2018). Digital addiction among Indian adolescents: Prevalence and impact. *Asian Journal of Psychiatry*, 34, 123-130.

Raman, S., Sharma, V., & Gupta, M. (2020). Promoting adolescent well-being in the digital era: A review of strategies. *Frontiers in Public Health*, 8, 500-510.

Sharma, V., Thomas, R., & Nair, A. (2021). Social media and anxiety among Indian adolescents: Trends and insights. *Indian Journal of Clinical Psychology*, 48(3), 215-225.

Singh, R., & Gupta, S. (2020). Role of parental involvement in shaping digital habits of adolescents. *Child Development Perspectives*, 14(4), 225-230.

Thomas, R., & Sharma, P. (2020). Social connectedness in the digital age: Benefits and challenges for Indian adolescents. *Psychological Studies*, 65(2), 90-98.

UNICEF. (2021). Adolescent population in India. Retrieved from https://www.unicef.org/india

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

INHOUSE **DEPARTMENTAL** PUBLICATION

INSIGHT

DEPARTMENT

OF

B.Sc(IT)

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: INSIGHT

DEPARTMENT: BACHELORS OF SCIENCE (INFORMATION TECHNOLOGY)

ISSUE: DECEMBER, 2024

EDITOR: MS. PRAJAKTA JOSHI

CONTRIBUTOR: MS. SAYALI PARAB

BITCOIN WALLET: A PERFECT COMBINATION WITH BLOCKCHAIN AND SECURITY

Ms. Sayali Parab, Asst. Prof.

Department of B.Sc. (I.T.)

I. Introduction

The blockchain is one of the most talked-about topics in the corporate and academic world. A Distributed and network-based technology "Blockchain" is a place in which information is stored in a Digital form in a Shared Distributed Database. The word Blockchain means the storage of data into digital blocks and forms a chain so that every time a new record is added to a block it becomes a part of an existing chain. In order to keep a record, blockchain uses a ledger-based system such that all the transactions are recorded onto it and it is accessible by everyone making it a public ledger. Cryptocurrency is one of the key reasons this technology has become really famous. Bitcoin is the first Blockchain technology to use crypto-money. The virtual currency such as Bitcoin doesn't require any existence of central authority to facilitate the transaction and its processing. A wallet is a software program that stores public and private keys and interacts with the blockchain to allow users to send and receive digital currencies and monitor their balance. For security reasons, it is important to have a backup, regardless of the wallet you use, to avoid the loss of digital assets. There are many examples where people lose their wallets, but if they don't have backups; they lose digital funds as well. In this paper, we might get a complete overview of Bitcoin Wallets and how Blockchain plays a vital role in this uprising crypto trend.

II. Research Elaboration

This paper demonstrates how a Bitcoin wallet plays a vital role in transactions using Blockchain Technology. In this work, Blockchain technology addresses the problem of cryptography consensus. And if there is a method to ensure financial activity and transaction actions are stored in a particular database without the central authority's intervention. It analyses the main design and technological features showcased by blockchain and presents scenarios into which blockchain applications can be applied. Problems such as safeguarding the confidentiality transparency and speed of user transactions should be resolved by using blockchain technology.

This paper explores the challenges and opportunities posed by banking through the introduction of blockchain technology. Blockchain technology will turn the global financial strategy to achieve sustainable development using systems that are more effective than they are at the moment. Along with the initial release of Bitcoin in 2009, the first ever Bitcoin wallet, the Bitcoin-Qt wallet, was also introduced. The wallet operated as a full client. Initially, this process was rather speedy due to the limited history of the blockchain, but synchronization time gradually increased as blockchain data grew. Despite this, the wallet proved useful as it allowed users to send and receive coins, along with features such as an address book and digital transaction signing, which verified their ownership of a particular public key.

As the blockchain ecosystem continues to evolve, new use cases and applications are emerging, increasing the need for secure and user-friendly wallet solutions. Despite their growing importance, blockchain wallets remain a complex concept for many, often misunderstood or underexplored. There is a misconception that wallets are digital vaults for storing cryptocurrencies. Although wallets allow users to initiate transactions, monitor account balances, and effectively manage their blockchain-based digital assets, in reality, what they

actually own are only the private keys that provide control and authority over these digital assets within the blockchain ecosystem.

III. Types of Wallets

There are two types of blockchain wallets based on private keys: hot wallets and cold wallets. Hot wallets are like normal wallets that we carry for day-to-day transactions, and these wallets are user-friendly. Cold wallets are similar to a vault; they store cryptocurrencies with a high level of security. Hot and Cold wallets can be further broken down into 3 types:

1. Software Wallets

2. Hardware Wallets

3. Paper Wallet

1. Software Wallet: A software wallet is an application that is downloaded on a device; it could be a desktop or a mobile device, or it could be a web-based wallet that can be accessed online. Breadwallet, Jaxx, and Copay are popular software wallets. Software wallets can be further divided into Desktop Wallets, Online Wallets, and Mobile Wallets.

2. Hardware Wallets: A hardware wallet is a type of cold storage device, typically like a USB, that stores the user's private key in a protected hardware device. These wallets are similar to portable devices that can be connected to the computer (plugged in). As noted earlier, they are less prone to malicious attacks and are hack-proof. Ledger, Trezor, and KeepKey are the top hardware wallets on the market. To make a transaction your hardware wallet must be connected to your computer.

3. Paper Wallet: A paper wallet is an offline process for storing cryptocurrencies. This wallet is a printed paper that has both your private key and public key, which are accessed using a QR code. Since these wallets are safe, they are widely used for storing large amounts of cryptocurrencies. Bitcoin Paper Wallet and MyEtherWallet are two widely used paper wallets. A paper wallet works with your software wallet to transfer funds from your software wallet to the public address shown on your paper wallet. First, you park your funds in a software wallet, then you transfer the funds from your software wallet to the public address printed on the paper wallet.

IV. Wallet Implementation

The wallet implementation of a Desktop Software cold wallet implementation and working with tokens can be done as given below:

- Add token: associates a token with a selected account.
- Delete token: removes an associated token from a selected account.
- QR code generation for receiving payment: creates *.png file or allows scanning from the screen. Payment: load a pre-recorded QR code, enter the transfer amount (mandatory>0, accuracy is automatically adjusted), and (reason) text.
- Biometric identification. - Chronological report of token transaction ledgers for a selected account.
- Users exchange data and information (transactions) through the Test App and the Mobile Test App, most of which are files with different formats. Transactions between users are confirmed by keys and names, which are in turn managed by the wallet.

To make a token transfer, the receiver generates a QR code containing its blockchain account name and token symbol for payment. This QR code is sent to and loaded by the sender. Then the sender is able to enter the desired number of tokens and payment description. This creates a transaction, i.e., a call to action 'transfer' from the system smart contract. Then a request is sent to the macOS secure enclave with the sender's account name. As a result, the sender's public key is obtained.
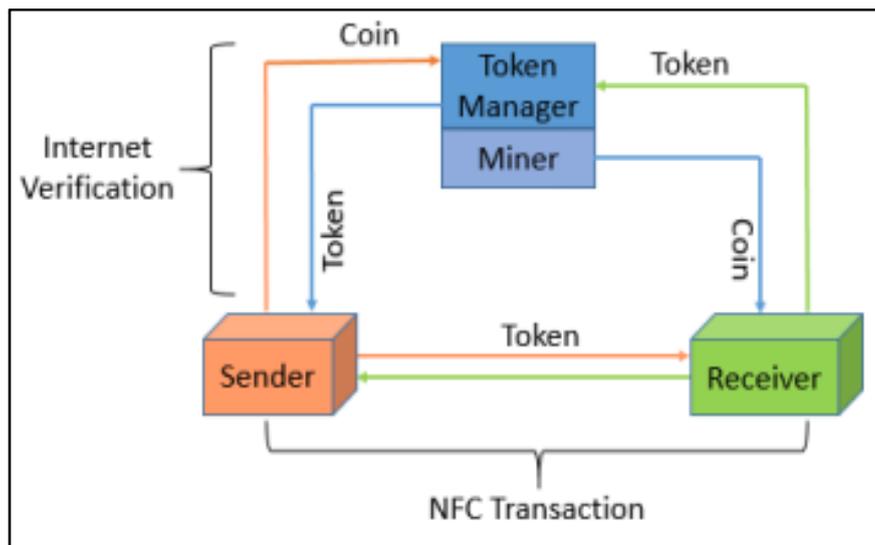
Fig 1: Working of Token

Blockchain wallet features:

- Easy to use. It's just like any other software or wallet that is used for your day-to-day transactions.
- Highly secure. It is just a matter of securing your private key.
- Allows instant transactions across geographies. And these are barrier-free, without intermediaries.
- Low transaction fees. The cost of transferring funds is much lower than with traditional banks.
- Allows transactions across multiple cryptocurrencies. This helps you do easy currency conversions.

Fig 2: Actual Blockchain record of a Bitcoin Transfer

VI. Analysis

We do require blockchain implementation in the core banking system so that we can ensure that each transaction is authenticated and it is initiated by the user itself. The adoption of this technology is very feasible and reduces the security overhead that comes with a traditional banking system such as centralization. Blockchain-based wallet systems and banking systems dismantle the centralization of data and store the data at several places since its key to success is the distribution of data across the network at the distributed databases. The data and customers both are very secure in the hands of the blockchain-based technology banking system.

VII. Conclusion

The adoption of technology depends on the requirements of the business here in this case is for the banking system. The no of profits margin derives from the adoption of technology. Most of the Banks around the globe have adopted blockchain as they value customers' privacy in the first place. There are always pros and cons related to each technology which is the same in the case of blockchain too. The only problem with technology is the cost. The cost drives the business's day-to-day operations, so this is where the banks have to think carefully before the adoption of this technology. The blockchain-based banking system becomes more proven when it is powered by blockchain

References

[1] Nagendra Singh Yadav, Vishal Goar, Manoj Kuri (2020). Crypto Wallet: A Perfect Combination with Blockchain and Security Solution for Banking, International Journal of Psychosocial Rehabilitation

[2] Ivan Popchev, Irena Radeva, Mirislova Dimitrivoi (2023). Towards Blockchain Wallets Classification and Implementation. Researchgate

[3] F. Tschorsch and B. Scheuermann, "Bitcoin and beyond: a technical survey on decentralized digital currencies," IEEE Communications Surveys & Tutorials, vol. 18, no. 3, pp. 2084-2123, March 2016

[4] S. Nakamoto, "Bitcoin: a peer-to-peer electronic cash system," 2008

[5] https://bitcoin.org/en/how-it-works

https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: INSIGHT

DEPARTMENT: BACHELORS OF SCIENCE (INFORMATION TECHNOLOGY)

ISSUE: DECEMBER, 2024

EDITOR: MS. PRAJAKTA JOSHI

CONTRIBUTOR: MS. BHUMIKA Kelkar

DR. PRAJAKTA JOSHI

Effective Software Testing Techniques
For Small Projects

Ms. Bhumika Anant Kelkar Swati

Class: TYBScIT

Dr. Prajakta Joshi, Coordinator.

Department of B.Sc. (I.T.)

I. Introduction

Software testing is a critical phase in the software development lifecycle (SDLC) that ensures the quality, reliability, and performance of a software product. It is the process of executing a program to identify any defects, gaps, or missing requirements compared to the expected outcomes. Testing helps ensure that the software meets user requirements and operates without unexpected behavior. Effective testing techniques are essential for delivering high-quality software and minimizing the risk of failures.

Software testing can broadly be categorized into two types: Manual Testing and Automated Testing. In manual testing, testers execute test cases manually without the use of automation tools, relying on their knowledge and experience. In automated testing, specialized tools are used to execute test cases and verify results automatically. Both approaches have their advantages, and the choice of method depends on factors like project size, complexity, and budget..

II. Types of Testing :

We broadly categorized testing techniques into two parts:

1. Static Testing

2. Dynamic Testing

1. **Manual Testing (Static Testing):**
   It refers to the method of testing where the code is not executed. It

   does not require highly skilled professionals since the actual execution of the system is not done in this process. It starts with the initial phase of the Software Development Life Cycle (SDLC); hence, it is also known as *verification testing*. The main objective of static testing is to enhance the quality of software products by helping software professionals to Identify and resolve their errors early in the software development process.

2. **Automated Testing (Dynamic Testing):**

   Dynamic Testing is a kind of software testing technique in which the dynamic behavior of the code is analyzed. In dynamic testing, also known as *validation* where

   the actual system is considered. It requires the highly skilled professional with the proper domain knowledge. Dynamic testing involves testing the software for the input values, and output values are analyzed. Progressive testing is divided into two

categories:

A. White Box Testing
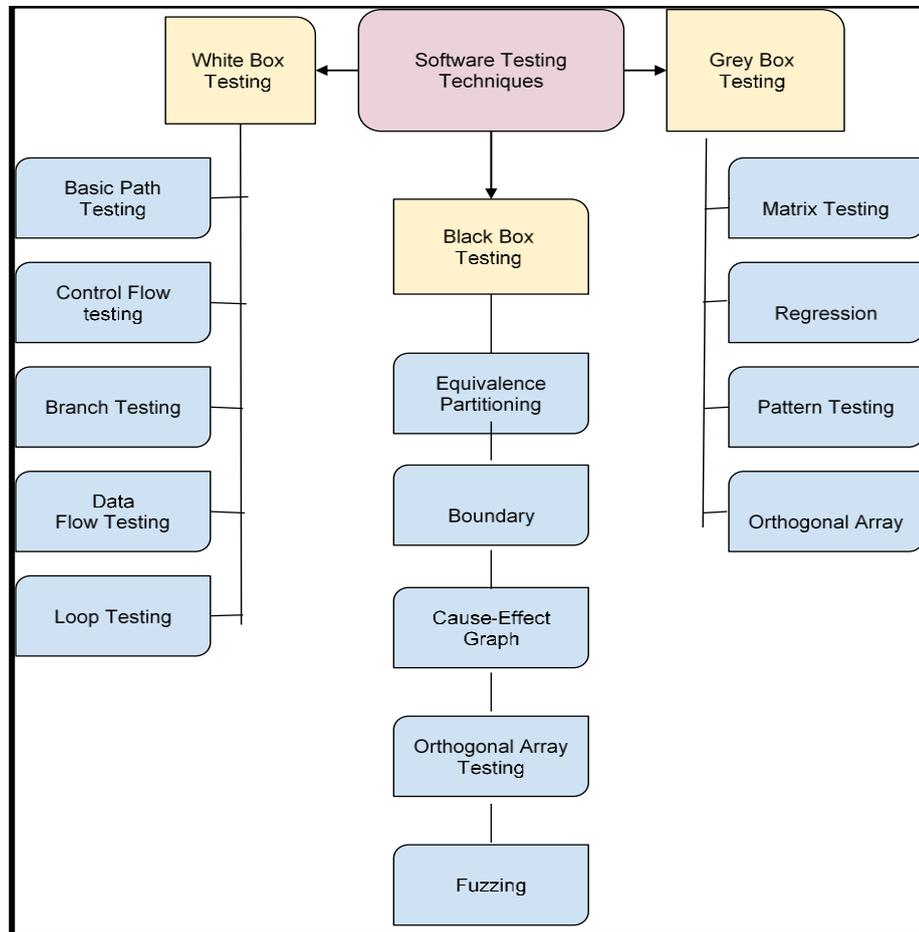
    B. Black Box Testing

C. Grey Box Testing

Figure 1: Dynamic Testing Techniques

A. White Box Testing

White Box testing is significantly effective as it is the method of testing that not only tests the functionality of the software but also tests the internal structure of the application. While designing the test cases to conduct white box testing, programming skills are requisite to design the test cases. White box testing is also called clear box or glass box testing. This type of testing is also called Security Testing that is it fulfils the need to determine whether the information systems protect data and maintains the intended functionality.

Advantages:

    i.   It exposes an error that is hidden in code by eliminating extra lines of code.
    ii.   Maximum coverage is obtained during test outline writing.
   iii.   The developer discreetly gives reasons for implementation.

Disadvantages:

    i.   An experienced tester is required to carry out this procedure because knowledge of internal structure is needed.

ii. Many paths will remain untested since it is challenging to look into every pros and con.Black Box testing is a testing technique that essentially tests the unctionality of the application without going into its implementation level detail.

B. Black Box Testing

Black Box testing is a testing technique that essentially tests the functionality of the application without going into its implementation level detail. It mainly executes the testing in such a way that it covers each and every functionality of the application to determine whether it meets the initially specified requirements of the user or not. It is capable of finding incorrect functionalities by testing their functionality at each minimum, maximum and base case value.

Advantages:

i. Testers do not need to know specific programming languages. Testing is done from a user's point of view.
ii. It helps to find out any ambiguities or inconsistencies in the requirement specifications.

Disadvantages:

i. Test cases are difficult to design without fair stipulations.
ii. Probability of having the repetition of tests that are already done by the programmer.
iii. Here, some parts of the back end are not tested at all.

C. Grey Box Testing

Grey Box Testing is the combination of the White Box and Black Box Testing Technique serving the advantages of both. The need for such kind of testing aroused because in this type of testing the tester is aware of the internal structure of the application, hence testing the functionality in a better way taking the internal structure of the application into consideration.

Advantages:

i. It implements the combined benefits of black-box and white-box testing techniques.

ii.   In grey box testing, the tester can design high test scenarios.
iii.   Testing is unbiased.

Disadvantages:

i.   Test coverage is limited because the access to source code is not available.
ii.   Many program paths remain untested .

The test cases can be redundant.

III. Implementing Software Testing Techniques in Small Software Projects

In small software projects, where resources, time, and budgets may be limited, implementing effective software testing techniques is still essential to ensure the software is reliable and meets user requirements. Here's a practical approach to implementing various testing techniques in small projects:

Planning and Strategy

- Define Objectives: Identify the key functions of the software, what needs to be tested, and the goals of the testing process.
- Scope of Testing: Clearly outline the features, modules, or components that require testing, focusing on critical paths and high-risk areas.
- Allocate Resources: Determine who will conduct the tests—whether it's a dedicated tester, a developer, or both (common in small teams).

Choosing the Right Testing Techniques

Given the constraints in small projects, selecting the right mix of testing techniques is crucial for efficiency:

1. Black-Box Testing:
    o   Equivalence Partitioning: Simplify test case design by identifying categories of valid and invalid inputs. For example, if a login form accepts ages 18-60, test with values like 18, 30, and 60 for valid inputs and 17 or 61 for invalid inputs.
    o   Boundary Value Analysis: Focus on edge cases where issues are more likely to arise, such as testing input values just inside and outside defined limits.
    o   State Transition Testing: If the software has different states (e.g., login/logout), test the transitions between these states.
2. White-Box Testing:
    o   Statement Coverage: Ensure every line of code is executed at least once, which is feasible in small codebases.
    o   Branch Coverage: For conditional statements, verify both true and false paths to minimize logic errors.
    o   Code Reviews: Regularly review code to identify potential issues early, which is effective when formal white-box testing isn't feasible.
3. Grey-Box Testing:
    o   Database and API Testing: If the project involves databases or APIs, perform grey-box testing to validate data flow and integration points.

Performance and Security Testing

- Basic Performance Checks: Test how the software handles typical workloads to identify potential slowdowns.

- Security Best Practices: Perform simple security checks, such as validating input fields to prevent SQL injection or XSS attacks.

Documentation and Reporting

- Bug Reports: Maintain a simple bug-tracking system (e.g., GitHub Issues, Trello) to log, track, and resolve defects.
- Test Summary: Provide a concise report of what was tested, issues found, and their resolution.

Iterative Testing Approach

In agile or iterative development models common in small projects, integrate testing into each development cycle:

- Test Early and Frequently: Conduct testing during each iteration to catch defects early.
- Continuous Feedback: Use feedback from testing to improve subsequent iterations.

IV. Example Workflow for a Small Project

1. Requirements Gathering: Define core functionalities.
2. Development Sprint: Implement a feature or module.
3. Testing Phase:

   - Conduct black-box testing using equivalence partitioning and boundary value analysis.
   - Perform white-box testing by ensuring basic statement coverage.
   - Log defects and retest after fixes.

4. Release and Maintenance: Conduct regression testing to ensure the entire application works smoothly after changes.

V. Analysis

Software testing techniques in small projects are crucial for ensuring quality while managing constraints like limited time, budget, and resources. Static testing (code reviews and inspections) helps identify issues early without executing code, making it cost-effective and efficient. Dynamic testing techniques—such as black-box testing for functionality, white-box testing for internal logic, and grey-box testing for integrations—offer a balanced approach to covering critical paths and potential defects. Prioritizing essential features, using techniques like equivalence partitioning and boundary value analysis, and incorporating iterative testing cycles help streamline the process. Selective automation for repetitive tasks and effective documentation further enhance efficiency. By strategically applying these methods, small teams can maintain software reliability and meet user requirements despite limited resources.

VI. Conclusion

The article successfully combines theoretical knowledge and practical application to address software testing in small projects. It provides a balanced overview of static and dynamic testing techniques, clearly explaining their strengths and limitations. The focus on efficiency and adaptability makes the content highly relevant for teams working with limited budgets, time, and personnel. The practical guidance on planning, choosing testing methods, and iterative

testing aligns with agile methodologies, making it applicable to real-world scenarios. Overall, this approach empowers small teams to maintain software quality through thoughtful, well-structured testing strategies, ensuring reliable and user-friendly products.

References

1. Guide to the Software Engineering Body of Knowledge, Swebok, A project of the IEEE Computer Society Professional Practices Committee, 2004.
2. E. F. Miller, "Introduction to Software Testing Technology", Software Testing & Validation Techniques, IEEE, 1981, pp. 4-16
3. Anwar, N., & Kar, S. (2019). Review Paper on Various Software Testing Techniques & Strategies. Global Journal of Computer Science and Technology, 43–49. https://doi.org/10.34257/gjcstcvol19is2pg43
4. Jamil, M. A., Arif, M., Abubakar, N. S. A., & Ahmad, A. (2016). Software Testing Techniques: A Literature Review. 177–182. https://doi.org/10.1109/ict4m.2016.045
5. J.Irena. "Software Testing Methods and Techniques", 2008, pp. 30-35.
6. https://www.lambdatest.com/blog/testing-techniques/
7. https://testlio.com/blog/top-black-box-testing-techniques/

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

Inhouse Departmental Publication

ARTH GYAN

Department of Economics

Designed By : Sushant Thakur
[TY.B.Sc.(I.T)]

A Paradox of Poverty & Inequality with respect to India's Economic Growth

Ms. Dipti Dhandha

Department of Economics

Recently I came across one comment on an Instagram post about Indian Economy that stated: 'We are 5th Largest economy in the world but are still poor' which when further analysed, gave some interesting facts related to poverty and inequality in India which underlines socio-economic backgrounds of these concept.

1) **Income and Wealth Inequality:** As stated by BBC news, the richest 1% of Indians own over 40.5% of the nation's wealth, while the bottom 50% (700 million people) together own less than 3% of national wealth. The bottom 60% of Indians have less than ₹82,000 in total assets. Further, an article by The News Minute states that billionaire's wealth in India has surged by 42% to ₹1.172 lakh crore in 2024. The richest Indian's wealth grew by ₹29 crore per hour this year, while 22.8 crore Indians still live in poverty.

2) **State of small businesses in India:** As small Businesses in India contributes significantly in country's economy. Regardless of employing 110 million Indians and contributing 30% to GDP, small businesses operate without any formal credit facility with only 16% of new loan applications getting approved which hinders their growth and development. In 2023, unicorn founders raised billions, while 4.2 million small businesses shut down. This stark contrast underscores the challenges faced by small businesses in accessing capital.

3) **Health Disparity:** Despite being a major pharmaceutical exporter, 55% of Indians lack access to affordable healthcare. Data from reveals a critical shortage of hospital beds (0.54 per 1000 people) and doctors (1:11,082), falling far short of WHO recommendations. Consequently, 7% of the population (100 million) is pushed into poverty annually due to healthcare costs, exposing a significant gap between India's economic growth and social well-being.

4) **Hunger:** There is a stark contrast in India's economic growth and its social development indicators as well, in spite of being the 5th largest economy, projected to be 3rd, India ranks 111 out of 125 in the Global Hunger Index. The National Family Health Survey-5 highlights alarming rates of child malnutrition: 35.5% stunted, 19.3% malnourished, and 32.1% underweight. Additionally, 67.1% of women aged 15-49 are anemic.

5) **Education Disparity:** A recent newsletter of Business standard states that Despite producing 1.5 million engineers annually, 42% of graduates remain unemployed, with only 10% securing jobs. This paradox is combined by a 30% increase in private college

fees since 2018 as against the recruiters claims shortage of skilled worker. This contradiction suggests a misalignment between educational output and industry needs. The situation is further complicated by India's rapid economic growth, which, while positioning the country as the fifth-largest economy and soon to be the third-largest, reveals deep-seated disparities in employment and skill development.

These disparities highlight the widening economic and social divide, albeit India's rapid economic growth. Addressing these issues is crucial for sustainable economic progression and social equity. So, as a nation we need a combination of strong economic policy makers with strong leaders.

References:

1. Drèze, J., & Sen, A. (2013). *An uncertain glory: India and its contradictions*. Princeton University Press.

2. Subramanian, S., & Jayaraj, D. (2015). *The evolution of consumption and inequality in India: Empirical evidence and policy implications*. **Social Indicators Research, 121**(1), 105–124. https://doi.org/10.1007/s11205-014-0630-1

3. Himanshu. (2018). *Inequality in India: A review of recent trends*. **Indian Journal of Human Development, 12**(2), 169–185. https://doi.org/10.1177/0973703021989537

4. Piketty, T., & Chancel, L. (2017). *Indian income inequality, 1922–2015: From British Raj to billionaire Raj*. **World Inequality Lab Working Paper**. https://wid.world/document/chancelpiketty2017widworld/

5. Basole, A., & Jayadev, A. (2019). *The employment problem in India and the phenomenon of the 'missing middle'*. **Center for Sustainable Employment, Azim Premji University Working Paper Series**. Retrieved from https://cse.azimpremjiuniversity.edu.in
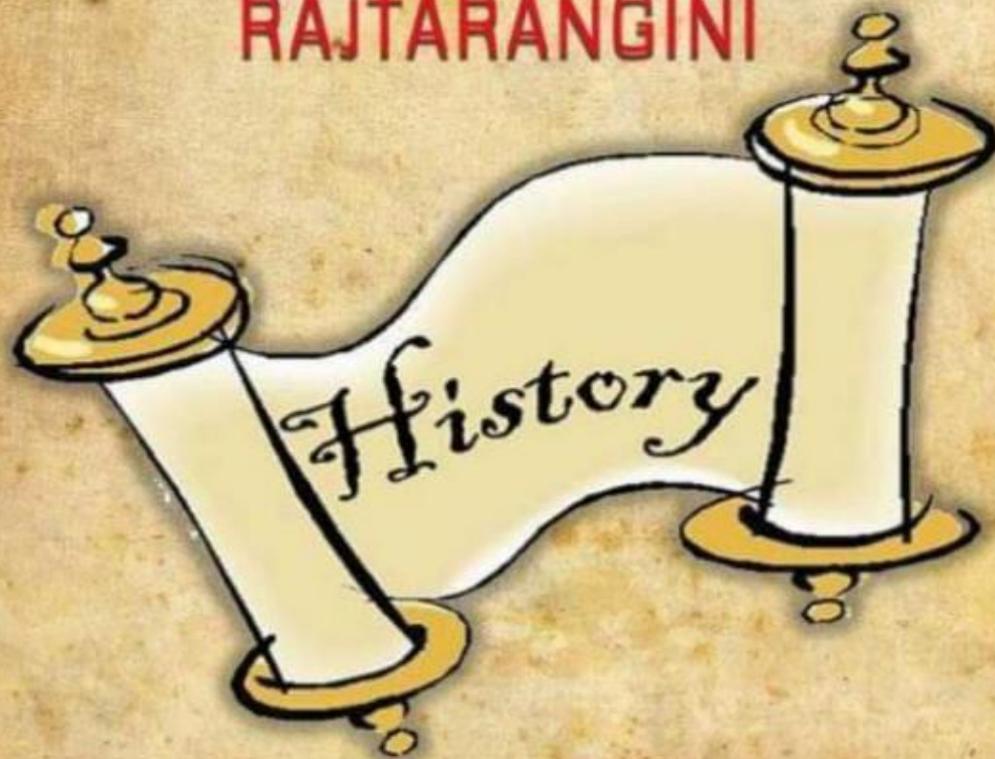
E-Magazine

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

Inhouse Departmental Publication
RAJTARANGINI

History

Department Of History

Designed By : Sushant Thakur
[TY.B.Sc.(I.T)]

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: RAJTARANGINI

DEPARTMENT OF HISTORY

ISSUE: DECEMBER, 2024

EDITOR: MS. POOJA U. YADAV

CONTRIBUTOR: MR. ABHISHEK RANE

Fashion Styles of Ancient India: A Harmonious Blend of Artistry, Culture, and Functionality

By: Mr. Akhilesh Rane, TYBA History

Guided by: Ms. Pooja U. Yadav

Ancient India was a country with a rich cultural heritage and artistic skill. This interesting diversity of fashions had a unique relationship with the climate, available resources, and the cultural traditions of that region. Fashion in ancient India was more than just clothes; it portrayed social hierarchy, spiritual belief, and regional differences. The most dominant garment of the ancient India were the unstitched draped one that is for a male a dhoti, for a female a sari. Such garments wrapped in various fashions styles around the torso are popular in terms of regional tastes and importance in society. Exposure to trade, along with other civilization, also led to exposure to some standardized garment of the tunic and the jacket, as the culture demonstrated Indian ability to incorporate and absorb those fashions. India was valued for a head start in the production of textile artefacts, mainly cotton and silk. Beautiful fabrics with intricate embroidery and richness of colorful dyeing technique came out of hand-held looms with intricate weaving techniques. Natural dyes were also used, made from indigo, saffron, and madder to provide colors rich and heavy with specified cultural or symbolic meanings assigned to them. Pure white marked purity, whereas red simply meant fertility as well as good fortune. These fabrics were not only used in the country but were exported and traded extensively through routes like Silk Road, thereby spreading Indian influences of fashion throughout the world. Ancient Indian dressing included accessories that were integral parts. Jewellery made of gold, silver, gemstones, and beads were worn by both genders to express social status as well as aesthetic sense. Some common ornaments included necklaces, bangles, anklets, armlets, and earrings-all having intricate designs. Besides, elaborate hairstyles and ornaments for men, like turbans and crowns, and for women, like ornamental pins and floral accessories, added much to the beauty of the whole thing. Footwear was relatively simple but balanced functionality with artistic elegance, as in the traditional padukas of wood or leather. In ancient India, clothes and ornaments were loaded with deep symbolic and religious meanings. Different patterns and motifs floral, geometric, and animals carried cultural or religious connotations.

Clothes for rituals, therefore, were specially designed for the sacred rituals festivals and ceremonies. Here's where one could see significance of clothes in spiritual life. The coming together of fashion and spirituality highlighted their role in everyday life to which the choice of clothes was made reflecting not merely individual tastes but collective values and religious tenets too.

This meant that different regions of India had different styles of clothing because of their varied geography and weather. Hot dry regions mostly wore light cotton clothes, while cooler places liked richer materials such as silk. Ancient Indian fashion is thus both practical and beautiful. Each region created its own way of draping clothes and textile designs and added to the rich diversity of Indian fashion.

Old Indian art tells us much about the dresses and ornaments of those times. Styles, fabrics, and accessories used in different periods can be easily gathered from sculptures, carvings, and paintings, as those at the Ajanta and Ellora caves have depicted them very clearly. These works of art give a visual history of change and variety in ancient Indian fashion, making it clear that ancient Indian fashion was very advanced and meaningful. Old Indian fashion was significantly impacted by trade routes like the Silk Road. Improvement of Indian fashion with new things in it, such as fitted clothes and special patterns, was a sharing of fabrics, methods, and designs with the cultures nearby. Although the Indian fashion was influenced, it retained its identity due to easy incorporation of the new ideas with old customs.

History of ancient Indian fashion is a society appreciative of art, usability, and cultural expression. Ancient Indian clothing has advanced fabrics, meaningful designs, detailed accessories, and different styles from various regions. Fashion today usually employs these ideas and combines the past with the present to give India a lasting culture. To sum up, ancient Indian fashion is the marriage of art, culture, and utility. It represented the developed state of a society that held in higher esteem beauty, spirituality and skill and whose heritage could be seen long afterward shaping and inspiring contemporary views on classical dress.

References:

1. Boulanger, C. (1996). *Indian costumes: A historical and cultural perspective*. Rupa & Co.

2. Kumar, R. (2005). *Costumes and textiles of royal India*. Christie's Books.

3. Ganguly, D. (2010). *Textiles and costumes in ancient India*. Bharatiya Kala Prakashan.

4. Jain, J. (2009). *India's traditional crafts*. Council of Handicraft Development Corporations (COHANDS).

5. Pathak, A. (2006). *Indian fashion: Tradition, innovation, style*. Oxford University Press.

6. Dalrymple, W. (2009). *Nine lives: In search of the sacred in modern India*. Bloomsbury. *(Includes references to traditional dress and cultural significance in various communities.)*

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

Inhouse Departmental Publication

RUMINATIONS

COMMERCE

Department Of Commerce

Designed By : Sushant Thakur
[TY.B.Sc.(I.T)]

E-Magazine

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: RUMINATIONS

DEPARTMENT: BACHELORS OF COMMERCE

ISSUE: DECEMBER, 2024

EDITOR: DR SAJITHA S KUMAR

CONTRIBUTOR: Ms.KRISHA RAJGOR

Ms.SAMRUDDHI KADU

Anxiousness relieved in 10 mins

Krisha Rajgor, Tybcom B
Samruddhi Kadu, Tybcom B
**Guided by** Dr Sajitha S Kumar
Assistant Professor
Department of Commerce

Introduction:

In a world, where paradoxical feelings of loneliness exists even when surrounded by people, insecurities & anxiousness are bound to exists parallelly. Anxiety among customers can stem from these very reasons & beginnings. People may feel anxious about purchasing a product because they are worried, they may not meet social or cultural expectations thereby exhibiting fear of missing out. The feeling of being overwhelmed & being constantly pressed for time can create tremendous amount of stress & anxiety across all age groups. The higher the tasks, the more the pressure to level up. During such times, a tech-assisted revolutionary move has been a blessing worth counting twice. Founded by Aadit Palicha and Kaivalya Vohra, Zepto is a humble startup in India that has rapidly transformed the quick commerce landscape since its inception in 2021. The core idea behind Zepto is to deliver groceries to customers within a remarkable 10-minute timeframe

Quick commerce has seen huge consumer adoption in metropolitans, where people are willing to sign up for services that offer them convenience of rapid deliveries. The Mumbai-based speedy grocery delivery business has reduced the time it takes to deliver groceries to only 10 minutes. The startup has built a loyal customer base, driven by its commitment to quality, reliability, and speed. It survives remarkably by venture funding received from a clutch of domestic investors & prominent venture capital firms, fueling its expansion plans and technology enhancements. The company addresses the growing demand for instant grocery delivery, leveraging technology and a robust supply chain to provide customers with a seamless shopping experience. Their objective reflects the growing consumer demand for speed and convenience in urban areas, where busy lifestyles leave little time for traditional shopping. The company leverages cutting-edge technology to streamline operations. With sophisticated algorithms, Zepto optimizes delivery routes and manages inventory effectively. This tech-driven approach not only enhances the efficiency of the supply chain but

also significantly reduces operational costs, allowing Zepto to offer competitive pricing to its customers.

A closer look at Zepto's revenue breakdown unveils a notable trend. Revenue from the sale of products constituted a dominant share, accounting for 87% of the total revenue in FY2023.
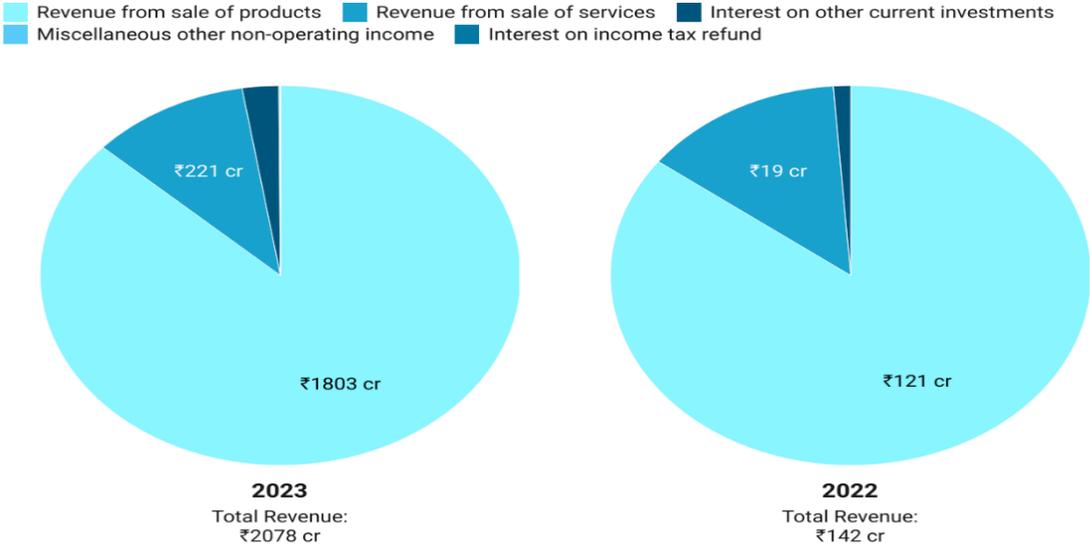
Source: PrivateCircle Research • Created with Datawrapper

This proportion remained relatively consistent, seeing about 1300% jump compared to the previous fiscal year, underscoring the sustained importance of product sales as the primary revenue stream. While the revenue witnessed an impressive surge of 1362% over FY22, the company grappled with a significant increase in losses, ballooning by 226% in FY23. This juxtaposition underscores the company's ambitious growth trajectory amid the competitive e-commerce landscape.

Due to changing consumer preferences, increasing urbanisation, and a tech-savvy population that prefers to make purchases online, the industry has seen an increase in prominence over the past few months. At the heart of Zepto's success is its unwavering focus on customer experience. The user-friendly mobile app allows customers to browse a wide range of products, place orders, and track deliveries in real-time. The emphasis on speed and reliability has led to high customer satisfaction rates, fostering a loyal user base that keeps returning for their grocery needs. Zepto's commitment to quality is evident in its product selection. The startup works closely with local suppliers and farmers to ensure that fresh produce is available, further enhancing its appeal to health-conscious consumers. By prioritizing quality alongside speed, Zepto effectively addresses the growing trend of conscious consumerism.

Conclusion:

Zepto's remarkable journey since its inception in 2021 exemplifies the transformative potential of innovation in the retail sector. By committing to deliver groceries within an unprecedented 10-minute timeframe, the startup has successfully tapped into the increasing demand for speed and convenience among urban consumers in India. Zepto is not just a quick commerce startup; it represents a significant shift in how consumers approach grocery shopping in India. With its blend of speed, quality, and sustainability, Zepto is redefining the retail experience and setting new benchmarks for the industry. As it evolves, Zepto is likely to remain a key player in shaping the future of grocery delivery in India.

This sums up the need for customer anxiousness to be relieved at the hands of convenient shopping experience. Today, the customer is biased towards all those options that provide unmatched customer experience in hindsight. The calling of the hour is to ease customer lives through advanced facilitated interactions & creative inventions.

References:

1. Feldman, G., Greeson, J., & Senville, J. (2010). Mindfulness meditation improves emotional regulation and reduces anxiety: A randomized controlled trial. Journal of Complementary and Integrative Medicine, 7(1). https://doi.org/10.2202/1553-3840.1511

2. Zeidan, F., Johnson, S. K., Gordon, N. S., & Goolkasian, P. (2010). Effects of brief and sham mindfulness meditation on mood and cardiovascular variables. Journal of Alternative and Complementary Medicine, 16(8), 867–873. https://doi.org/10.1089/acm.2009.0321

3. Jerath, R., Edry, J. W., Barnes, V. A., & Jerath, V. (2006). Physiology of long pranayamic breathing: Neural respiratory elements may provide a mechanism that explains how slow deep breathing shifts the autonomic nervous system. Medical Hypotheses, 67(3), 566–571. https://doi.org/10.1016/j.mehy.2006.02.042

4. Tindle, H. A., Davis, R. B., Phillips, R. S., & Eisenberg, D. M. (2005). Mind-body therapies: Use and reported efficacy in the United States. Journal of General Internal Medicine, 20(11), 1072–1078. https://doi.org/10.1111/j.1525-1497.2005.02445.x

5. Porges, S. W. (2007). The polyvagal perspective. Biological Psychology, 74(2), 116–143. https://doi.org/10.1016/j.biopsycho.2006.06.009.

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: RUMINATIONS

DEPARTMENT: BACHELORS OF COMMERCE

ISSUE: DECEMBER, 2024

EDITOR: DR LAILA PATEL

CONTRIBUTOR: ASST PROF.POOJA GARGE

To Be Yourself in a World That is Constantly Trying to Make You Something Else is the Greatest Accomplishment" - Ralph Waldo Emerson

Asst Prof.Pooja Garge

śhreyān swa-dharmo viguṇaḥ para-dharmāt sv-anuṣhṭhitāt
svabhāva-niyataṁ karma kurvan nāpnoti kilbiṣham

It is better to do one's own *dharma*, imperfectly, than to do another's *dharma*, even though perfectly. By doing one's inherent duties, a person does not incur sin.

- **BG 18.47**

You know Sharma ji ka beta? You might have heard the name several times in your life till now.

Alright, if not Sharma ji ka beta, then someone or another's beta or Beti.

We all hate it, right?

Yes, I too hated hearing the name of the girl who was the so-called versatile, genius, topper student of the class. Everyone, including the Teachers, used to praise her like anything.

But why do I have to be like her? Why?

Remember the advertisement campaign by **Bournvita** – wherein looking at the child's

scientific aptitude, his parents shout out – "He's going to be the second Albert Einstein to which the child replies, "Why can't I be the first Rahul or something like that?"
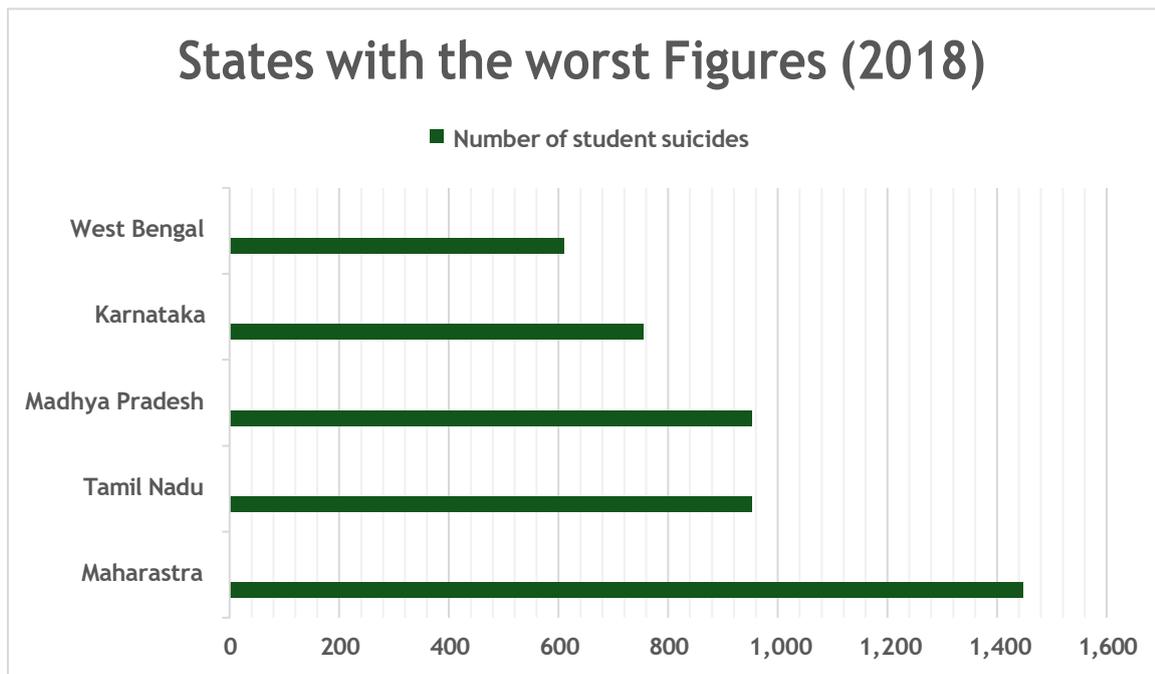
The Societal Pressure to Conform

"The constant pressure to bring about conformity is a dangerous thing."

– Eleanor Roosevelt.

India's Pressure Cooker

Do you know, according to a report submitted in Lok Sabha in 2020, around 86,000 students ended their lives between 2010 – 2020, and one of the major reasons for these suicides was **"Peer Pressure'' – the constant need to conform, the ever-blowing pressure cooker".**

States with the worst Figures (2018)

■ Number of student suicides

State	
West Bengal	~600
Karnataka	~750
Madhya Pradesh	~950
Tamil Nadu	~950
Maharastra	~1,440

(x-axis: 0, 200, 400, 600, 800, 1,000, 1,200, 1,400, 1,600)

Fig 1: States with the worst figures – Number of Student Suicides

Source: *Mirror Now News*

Self-Acceptance – The Key to Freedom

Accepting oneself in a world full of conformance is crucial. It keeps you alive. We will be robots from the same manufacturing company if we conform to societal pressure. Self-acceptance is an act of courage, it's being brave and true to oneself.

I genuinely applaud my friend's mom who stood like a shield to protect her daughter from

getting married at an early age when society was forcing her to get married. Such authenticity gives us the courage and strength to accept ourselves and others in their true spirit.

In a world, where many wear masks to fit in, authenticity stands out as a powerful force of self-identity and acceptance.

According to Rishi Patanjali, the key to self-acceptance is – *"The more connected you are with the unchanging self, the less you suffer from mistaken identity"*.

- Patanjali's Yoga Sutras

Source: The Minds Journal   Source: Pinterest

"Trying to fit in a world you don't belong to"

Challenges individuals face in maintaining their unique identity:

1. **Gender Norms –** Remember the advertisement by "Tata Tea Gold" – wherein a boy is seen to be practicing dance wearing ghungroos on his ankles (generally, considered a feminine thing). He is discouraged from doing so. Such rigid gender norms force one to either conform to societal expectations or face isolation and

   judgment, often at the expense of their true self.

2. **Social Media influence –** The rise of social media has created immense pressure on people that they are forced to present a curated image online that aligns with

   the so-called social trends, ultimately, leading to a superficial identity and losing touch with their true unique selves.

3. **Peer pressure and family expectations –** There have been numerous instances, wherein a child was forced to make a career choice even though he did not like it, conforming to the peer pressure and family's expectations. Remember **Farhan** from '3 Idiots' – he did not want to be an Engineer ever, he agreed only because his parents wanted him to be.

4. **Lack of Self-awareness, confidence, and inferiority complex –** One is forced to be someone else since he is born. The ever-increasing pressure makes a young kid timid, who loses his self-esteem, and confidence, eventually feeling inferior to others no matter how good he is in his own set of skills and abilities.

The Ripple Effect

1. **Initial Pressure** – One feels the need to conform. The pressure starts building up and it can be from anyone – peers, family, media, or cultural expectations.

2. **Self-Suppression** – The individual will try to fit in by suppressing his behaviors, feelings, and emotions.

3. **Loss of Authenticity** – The individual becomes something he is not. Ultimately, feeling disconnected and depressed often leads to drastic steps – like suicide.

4. **Normalization** – As more people fall into this trap of societal pressure and conformance, it will lead to normalization.

There are very few people who rebel and prove successful in their efforts, whereas others

remain trapped and pass on this venomous trait to the coming generation as well. Thus, Ralph Waldo Emerson, rightly quoted - **To Be Yourself in a World That is Constantly Trying to Make You Something Else is the Greatest Accomplishment"**

Being authentic requires courage. It requires introspection, self-awareness, and the

willingness to confront and overcome societal pressures. It helps you break out of the cage of conformance which strengthens you. It helps you embrace your uniqueness and beauty, which brings a sense of contentment and freedom.

It creates a ripple effect, wherein diversity is encouraged and celebrated. Each uniqueness is appreciated.

"I may not be the best, But I am unique and that's what makes me and you special".

The Movie "Gunjan Saxena – The Kargil Girl" beautifully captures the quote – "**To Be Yourself in a World That is Constantly Trying to Make You Something Else is the Greatest Accomplishment"** Despite immense pressure to conform to traditional gender

roles, Gunjan stayed true to herself in a world that demands conformity. Her journey shows that staying authentic, even in the face of opposition, is not only a personal triumph but can inspire change and pave the way for others.

Her journey is a testament to her unwavering grit and determination wherein she stood strong and chose to be herself even when the world tried to make her something else.

References:

BG 18.47: Chapter 18, Verse 47 – Bhagavad Gita, The Song of God Holy Bhagavad Gita "The constant pressure to bring about conformity is a dangerous thing." — *Eleanor Roosevelt*, Quotelar. Accessed August 28, 2024. Available at: https://quotelar.com/a-to-z/eleanor-roosevelt-quotes/.

"Student Suicide Epidemic in India: Over 10,000 Dead in 2018, Mental Health, Peer Pressure Key Causes - Report." *Times Now News*, Mirror Now, February 12, 2020. Accessed August 28, 2024. Available at: https://www.timesnownews.com/mirror-now/in-focus/article/student- suicide-epidemic-in-india-over-10000-dead-in-2018-mental-health-peer-pressure-key-causes- report/562804.

"Mistaken Identity: Understanding the Yoga Sutras." *Yoga Journal*, September 6, 2021. Accessed August 28, 2024. Available at: https://www.yogajournal.com/yoga-101/philosophy/yoga-sutras/mistaken-identity/.

"What Helps an Unhappy Person? 7 Tips for Emotional Well-being." *The Minds Journal*, August 15, 2023. Accessed August 28, 2024. Available at: https://themindsjournal.com/what- helps-an-unhappy/.

Pinterest, Pin by Zeina Jaffa. Accessed August 28, 2024. Available at: https://in.pinterest.com/pin/662592163960983605/.

ChatGPT. "Creation of a ripple effect of conformity." OpenAI, August 28, 2024. Accessed August 28, 2024.

Sadhana Education Society's
L.S. Raheja College of Arts & Commerce

Inhouse Departmental Publication

SOCIAL ISSUES

Department Of Sociology

Designed By : Sushant Thakur
[TY.B.Sc.(I.T)]

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: SOCIAL ISSUES

DEPARTMENT OF SOCIOLOGY

ISSUE: DECEMBER, 2024

EDITOR: MS. SAMYA SHINDE

CONTRIBUTOR: MS. DARSHI JOGI AND DIVYA SINGH

BREAKING STEREOTYPES

By Darshi Jogi and Divya Singh
Students of FYBA (Sociology Major)

Introduction

Stereotypes refer to oversimplified and often inaccurate assumptions about specific groups, based on factors such as gender, race, sexual orientation, prejudice, discrimination, and social exclusion. Breaking stereotypes entails rejecting these limiting representations and fostering an environment that embraces diversity, promotes inclusivity, and celebrates individuality. In the realm of social life, this process involves challenging and overcoming preconceived notions, biases, and societal expectations imposed on individuals due to their identity or circumstances.

For instance, women in management have historically encountered significant obstacles arising from gender-based stereotyping. Research by Elacqua, Beehr, Hansen, and Webster (2009) highlights these challenges, while studies by Desvaux, Devillard-Hoellinger, and Baumgarten (2007) reveal the minimal representation of women in top-level management, a situation perpetuated by such stereotypes.

An in-depth analysis of existing literature shows that while there is considerable focus on the concept of sex-role stereotyping, its underlying causes remain inadequately explored. Stereotypes are often used to justify existing societal norms or arise as a response to social identity, as suggested by Hogg and Abrams (1988). They extend beyond gender and encompass age-related stereotypes as well, which involve a complex network of interconnected beliefs homogenizing societal expectations for various age groups.

The origin of stereotypes can be traced back to the 19th century when people generalized about different groups based on limited exposure and information. These generalizations were influenced by prevailing societal norms, individual biases, and the absence of diverse perspectives, supported by theories of social learning and motivation.

Stereotypes have far-reaching consequences. They serve as a foundation for discrimination, leading to unfair treatment of individuals based on preconceived notions. Moreover, stereotypes often restrict access to opportunities, denying individuals the ability to reach their full potential. They also contribute to mental health issues, fostering low self-esteem and feelings of inadequacy. On a societal level, stereotypes exacerbate social conflicts by creating divisions and misunderstandings among groups.

Breaking stereotypes requires both individual and collective efforts. It involves raising awareness about the damage stereotypes cause, fostering empathy and understanding, and encouraging open-mindedness. Promoting diversity, equity, and inclusion is crucial, as is providing support to marginalized communities. Constructive dialogue aimed at challenging societal norms plays a pivotal role in this process. However, overcoming stereotypes is not easy due to psychological mechanisms such as confirmation bias, implicit bias, and the tendency to categorize individuals into in-groups and out-groups, which reinforce these biases as cognitive shortcuts.

The importance of breaking stereotypes lies in the fact that they hinder human potential, encourage biased judgments, and impede social progress. For example, individuals breaking gender-role stereotypes—such as male nurses in the healthcare sector or female firefighters in emergency services—demonstrate that professional competencies are not determined by gender. Similarly, age-related stereotypes are challenged when elderly entrepreneurs succeed in innovative fields, proving that creativity and ambition transcend age boundaries.

Historically, stereotypes have simplified the complexities of social life but at the cost of individuality. In Indian cinema, women were often depicted in stereotypical roles as submissive and dependent on male counterparts. However, filmmakers like Gulzar have challenged these norms by presenting women as multidimensional and complex characters in films such as *Aandhi* (1975), *Mausam* (1975), and *Lekin* (1991).
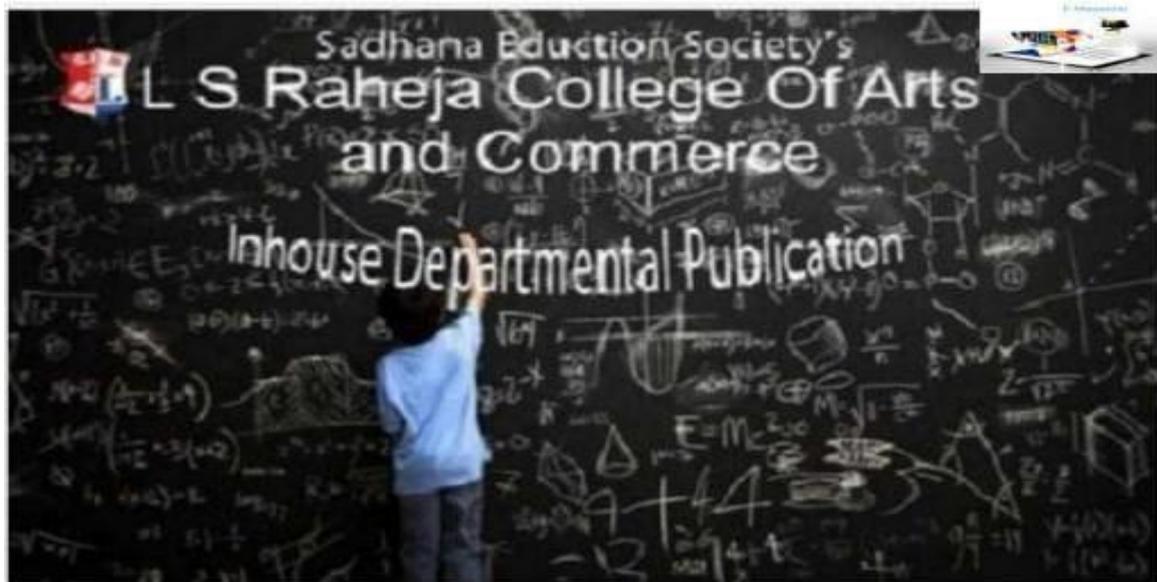
In modern society, breaking stereotypes is evident in various forms, such as women taking on roles traditionally dominated by men, like auto drivers, or men embracing caregiving roles often associated with women. Other examples include fostering cross-cultural friendships, celebrating diverse traditions and styles, promoting body positivity, supporting LGBTQ+ communities, and encouraging interfaith understanding.

Conclusion

It is crucial to recognize the harmful effects of stereotypes in order to foster a more inclusive and equitable society. By challenging stereotypes, individuals are empowered to embrace their unique identities and potential. Fostering empathy, encouraging open-mindedness, and celebrating diversity are essential steps toward creating a world where people are valued for their individuality rather than being constrained by societal labels. Breaking stereotypes is not a one-time action but an ongoing journey that requires collective effort and commitment to meaningful societal transformation.

References

Elacqua, T. C., Beehr, T. A., Hansen, C. P., & Webster, J. (2009). *Gender Stereotypes and Managerial Selection*.

Desvaux, G., Devillard-Hoellinger, S., & Baumgarten, P. (2007). *Women Matter: Gender Diversity, a Corporate Performance Driver*.

Hogg, M. A., & Abrams, D. (1988). *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes*.

Rothermund, K., & Couto, M. C. P. de P. (2024). *Age Stereotypes: Dimensions, Origins, and Consequences*. *The Gerontologist, 55*(1), 1–12.

Medhi, P. (2024). An exploration of women's portrayal in Gulzar's cinematic universe. In A. Sinha, S. Majumdar, & S. Sur (Eds.), *Media, Culture, and Society: Inter-Relation and Evolution*.

Tabassum, N., & Nayak, B. S. (2021). *Gender Stereotypes and Their Impact on Women*. *Journal of Gender Studies, 10*(2), 189–207.

Schneider, D. J. (2005). *The Psychology of Stereotyping*. Guilford Press.

Sadhana Eduction Society's

L S Raheja College Of Arts and Commerce

Inhouse Departmental Publication

JIGNYASA

Department of Mathematics and Statistics

Designed by. Jenial Shah

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: JIGNYASA

DEPARTMENT OF MATHEMATICS AND STATISTICS

ISSUE: DECEMBER, 2024

EDITOR: DR. SEEMA UKIDVE

MR. RAMSAGAR YADAV

CONTRIBUTOR: MR. RAMSAGAR YADAV

MS.VIJAYLAXMI SHETTY

DR. SEEMA UKIDVE

Critical Review of *Nexus: A Brief History of Information Networks from the Stone Age to AI*

Vijaylaxmi Shetty[1], Ramsagar yadav[1], Seema Ukidv[1]

Assistant Professor, Department of Mathematics , Statistics and Computer Science

Yuval Noah Harari's *Nexus* represents an ambitious intellectual exploration of humanity's relationship with information networks, from primitive oral traditions to artificial intelligence. While undeniably thought-provoking, the book oscillates between brilliance and oversimplification, often blurring the lines between historical rigor and speculative futurism. This review critiques *Nexus* by dissecting its central claims, methodology, and thematic contributions, situating them within scholarly debates on information theory, history, and ethics.

Strengths of *Nexus*

1. **Panoramic Historical Scope**
   Harari's signature strength lies in his ability to distill complex historical trajectories into accessible narratives. By framing humanity's development through the lens of information exchange, *Nexus* aligns itself with seminal works in systems theory (Shannon, 1948) and cultural evolution (Boyd & Richerson, 2005). Harari's analysis of myth as a unifying force echoes Benedict Anderson's concept of "imagined communities" (Anderson, 1983), particularly when discussing religious texts or ideological propaganda such as Stalinism or Nazism.

2. **Timely Reflections on AI**
   Harari's exploration of AI as a "nexus for new delusions" is a compelling critique of contemporary technological trends. The argument that AI can exacerbate societal delusions builds on concerns raised by Cathy O'Neil (*Weapons of Math Destruction*, 2016) and Shoshana Zuboff (*The Age of Surveillance Capitalism*, 2019). Harari rightly warns that the unchecked spread of AI-driven disinformation could lead to "epistemological authoritarianism," where truth is determined by algorithms rather than critical inquiry.

3. **Engaging Narrative Style**
   The accessible prose and illustrative examples ensure that *Nexus* appeals to both general readers and specialists. Harari's comparative analysis of bureaucratic systems, from early empires to modern corporations, enriches our understanding of how information flow can shape power dynamics.

Weaknesses and Oversights

1. **Overgeneralization of Historical Trends**
   While *Nexus* masterfully connects disparate epochs, its broad scope sometimes leads to historical reductionism. For example, Harari's assertion that humanity gains power primarily by spreading "fictions" oversimplifies the nuanced interplay between knowledge, skepticism, and cooperation (Ginzburg, 1993). The book risks conflating mythology with deliberate falsehoods, overlooking instances where factual knowledge, such as the scientific revolution, transformed societies.

2. **Insufficient Engagement with Counterarguments**
   Harari's deterministic tone about AI as a potential harbinger of "new delusions" often lacks empirical substantiation. While the dangers of AI are real, the book does not adequately address counterarguments that emphasize AI's potential to democratize knowledge and enhance human capabilities (Brynjolfsson & McAfee, 2014). Furthermore, the discussion on ecological and technological "suicide" feels alarmist, lacking a balanced exploration of mitigation strategies.

3. **Neglect of Marginalized Voices**
   The book predominantly focuses on dominant historical narratives, leaving little room for the perspectives of marginalized communities who have also shaped information networks. For example, Indigenous knowledge systems and their sustainable approaches to information dissemination are conspicuously absent. This omission undermines Harari's claim of presenting a comprehensive "brief history" of information networks.

4. **Speculative Futurism**
   Harari's projection that AI will inevitably form "new networks of delusions" leans heavily on speculation. While such forecasts stimulate debate, they risk oversimplifying the complex sociopolitical and ethical dilemmas surrounding AI development and governance. As scholars like Kate Crawford (*Atlas of AI*, 2021) argue, the impact of AI depends on its design, regulation, and contextual use rather than deterministic technological trajectories.

Scholarly Significance

Despite its limitations, *Nexus* provides a valuable framework for understanding the interplay between information, power, and truth. By synthesizing insights from history,

sociology, and technology studies, Harari contributes to ongoing debates about the ethical use of AI and the challenges of maintaining democratic discourse in the digital age.

The book's strength lies in raising critical questions rather than providing definitive answers. For example, Harari's assertion that "history is not deterministic" aligns with Karl Popper's philosophy of open societies (Popper, 1945), emphasizing human agency in shaping technological futures. However, the lack of actionable strategies for combating misinformation weakens the book's practical utility.

Harari could have enhanced the credibility of *Nexus* by including quantitative analyses of historical and contemporary information networks. For example, data from the World Economic Forum (2023) reveals that misinformation costs the global economy $78 billion annually, a statistic that underscores the urgency of Harari's concerns about AI-driven disinformation. Similarly, citing studies on the growth of digital authoritarianism (Freedom House, 2022) would have strengthened his critique of centralized information control.

Conclusion

Nexus: A Brief History of Information Networks from the Stone Age to AI is a bold and imaginative work that challenges readers to rethink humanity's relationship with information. While its sweeping narrative and speculative insights captivate, the book's oversimplifications and lack of empirical rigor limit its scholarly impact. Nonetheless, Harari's call to action—emphasizing informed choices in shaping the future—remains a crucial reminder of our collective responsibility in navigating the Information Age.

For those seeking a nuanced exploration of the historical and ethical dimensions of information networks, *Nexus* is both a starting point and an invitation to deeper inquiry. As Harari himself implies, the future of truth is not predetermined, and it is up to us to chart a path that prioritizes wisdom over delusion.

References

1. Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso.
2. Boyd, R., & Richerson, P. J. (2005). *The Origin and Evolution of Cultures*. Oxford University Press.
3. Freedom House. (2022). *Freedom on the Net 2022: The Rise of Digital Authoritarianism*.
4. Ginzburg, C. (1993). *The Cheese and the Worms: The Cosmos of a Sixteenth-Century Miller*. Johns Hopkins University Press.
5. Shannon, C. E. (1948). "A Mathematical Theory of Communication." *Bell System Technical Journal*, 27, 379–423.

6. Zuboff, S. (2019). *The Age of Surveillance Capitalism*. PublicAffairs.
7. https://www.amazon.in/Nexus-Brief-History-Information-Networks/dp/059373422X
8. https://www.ynharari.com/book/nexus/

SES'S

L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE

(Autonomous)

INHOUSE DEPARTMENT PUBLICATION

NAME: JIGNYASA

DEPARTMENT OF MATHEMATICS AND STATISTICS

ISSUE: DECEMBER, 2024

EDITOR: DR. SEEMA UKIDVE

MR. RAMSAGAR YADAV

CONTRIBUTOR: MR. RAMSAGAR YADAV

MS.VIJAYLAXMI SHETTY

DR. SEEMA UKIDVE

Navigating Mathematical Curriculum Frameworks for Professional Undergraduate Success

Vijaylaxmi Shetty[1], Ramsagar Yadav[1], Seema Ukidve[1]*

[1]Assistant Professor, Department of Mathematics, Statistics and Computer Science, SES's L. S. Raheja College of Arts and Commerce, Relief Road, Juhu, Santacruz (West), Mumbai 400054

[*]**Corresponding Author:** *ramsagar.yadav@lsraheja.org, +91 97680 36761*

Abstract

Mathematics education plays a crucial role in preparing students for various undergraduate professional programmes. This research paper presents a comprehensive comparative analysis of mathematics curricula across four major educational boards in India: Maharashtra State Board, Central Board of Secondary Education (CBSE), Council for the Indian School Certificate Examinations (CISCE), and International General Certificate of Secondary Education (IGCSE). ***The study critically examines the mathematical content, pedagogical approaches, and alignment with undergraduate programmes in fields such as Bachelor of Arts (BA), Bachelor of Commerce (B.Com), Bachelor of Accounting and Finance (BAF), Bachelor of Management Studies (BMS), Bachelor of Mass Media and Communication (BAMMC), Bachelor of Financial Management (BFM), and Bachelor of Science in Information Technology (BSc IT).***

Through a detailed evaluation of curriculum frameworks, learning outcomes, mathematical depth, and practical applicability, ***this research aims to identify the most suitable mathematics curriculum that effectively prepares students for diverse undergraduate professional programmes. The analysis considers factors including theoretical foundations, problem-solving skills, analytical thinking, and relevance to specific professional domains.***

Keywords

Mathematics Curriculum, Educational Boards, Comparative Analysis, Undergraduate Education, Pedagogical Approaches, Maharashtra Board, CBSE, CISCE, IGCSE, Professional Programmes

Introduction

Mathematics is a fundamental discipline critical for developing analytical and problem-solving skills essential across professional programmes [1, 5, 12]. The selection of a secondary mathematics curriculum significantly impacts students' academic and professional preparedness [3, 6, 10].

Research Objectives
The study aims to:
1. Critically Compare Curricula
- Systematically analyze mathematics curricula across educational boards
- Examine structural and pedagogical differences [2, 9, 11]
2. Programme Alignment Assessment
- Evaluate curriculum alignment with undergraduate professional programmes:
- B.Com
- BAF
- BMS
- BAMMC
- BFM
- BSc IT [4, 13, 15]
3. Strengths and Limitations Identification
- Highlight unique strengths of mathematical approaches
- Uncover potential preparedness limitations [7, 8, 14]
4. Strategic Recommendations
- Develop actionable guidance for:
- Students
- Educational stakeholders
- Curriculum developers [16]

Significance
This research contributes to:
- Comprehensive educational board comparison
- Understanding mathematical education strategies
- Supporting informed curriculum design
- Enhancing student professional preparedness

The investigation provides critical insights into mathematics education, bridging theoretical understanding with practical implementation.

2. Methodology
 2.1 Curriculum Comparison Framework
The study employed a multi-dimensional comparative framework evaluating:
- Theoretical content depth
- Practical application potential

- Analytical skill development
- Alignment with undergraduate programme requirements
- Computational and logical reasoning skills

2.2 Data Collection

Comprehensive analysis of official curriculum documents from:
- Maharashtra State Board
- Central Board of Secondary Education (CBSE)
- Council for the Indian School Certificate Examinations (CISCE)
- International General Certificate of Secondary Education (IGCSE)
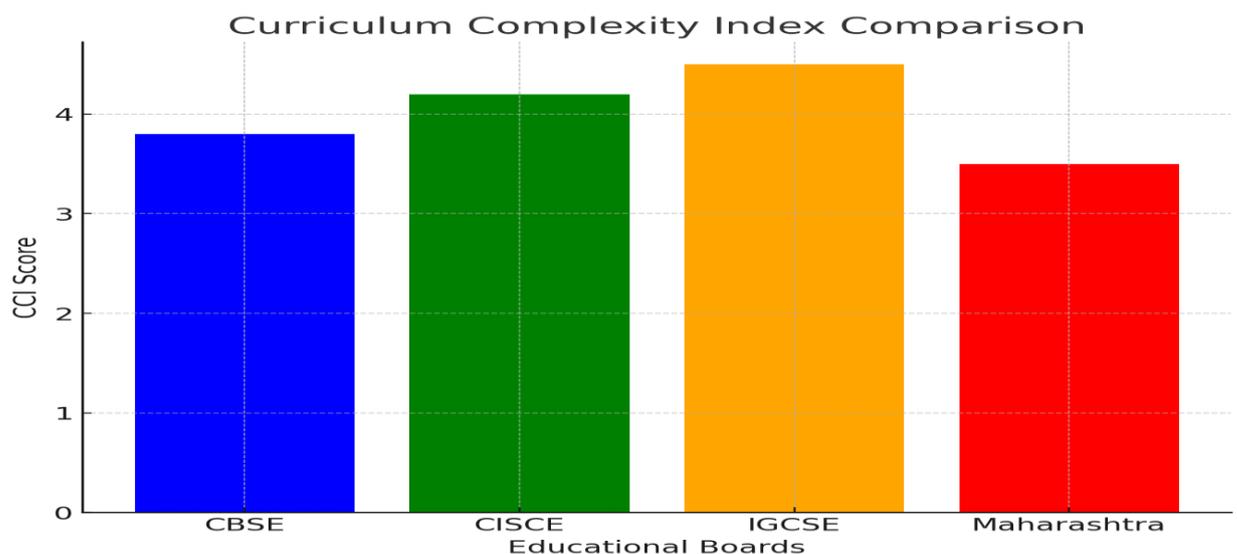
3. Comparative Analysis

3.1. Curriculum Complexity Index (CCI)

The Curriculum Complexity Index is defined as:

CCI = $\Sigma(C_i \times W_i)$

Where:
- C_i = Complexity of topic i
- W_i = Weightage of topic i
- Σ = Summation across all topics
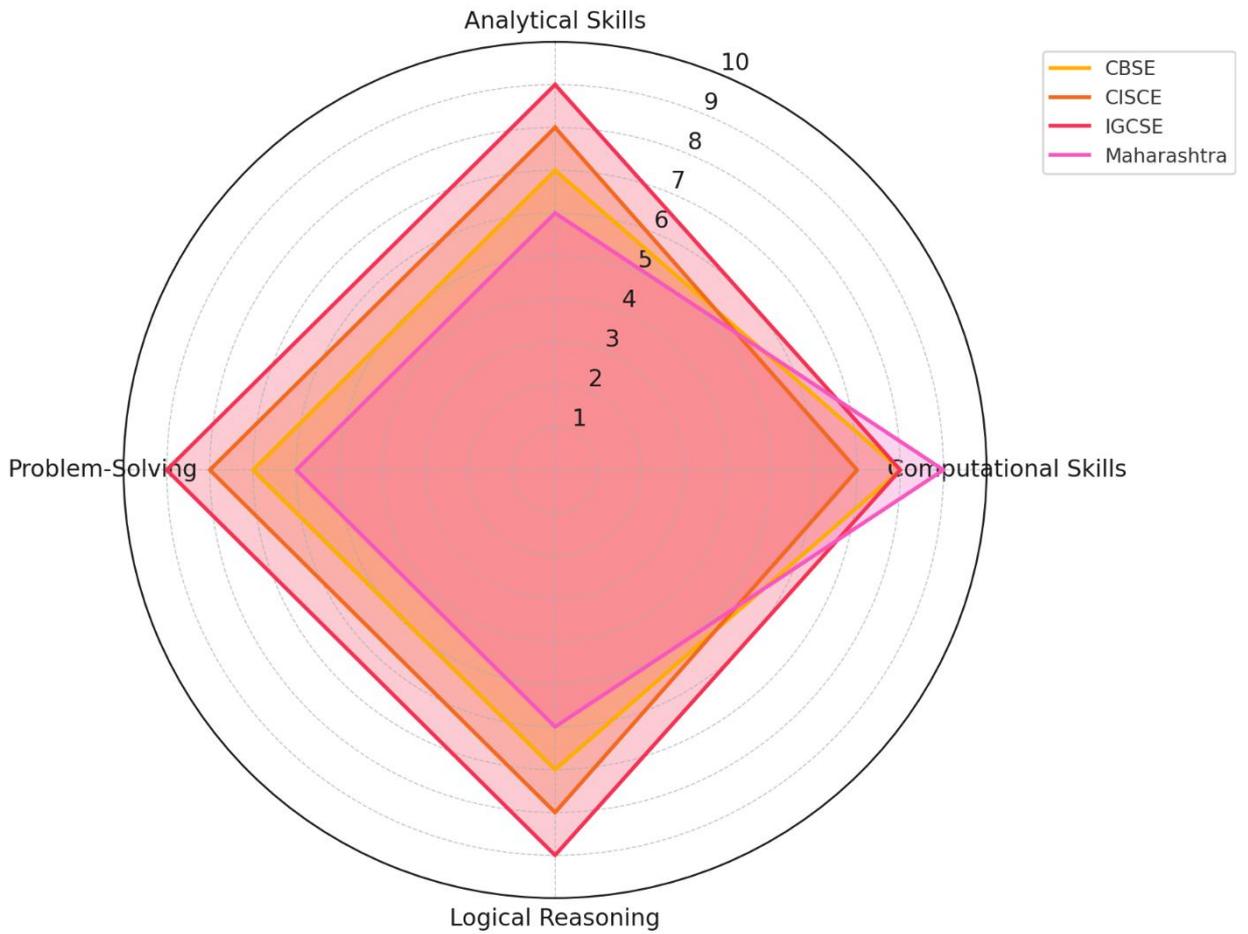

Curriculum Complexity Index Comparison

3.2. Skill Development Quantification Model

Skill Development Score (SDS) = $\Sigma(S_i \times R_i)$

Where:
- S_i = Skill intensity for domain i
- R_i = Relevance to professional programmes

Skill Development Radar Chart

Table 1: Detailed Comparative Table of Educational Boards

Educational Board	Strengths	Limitations	Key Characteristics
Maharashtra State Board	1. Strong foundation in traditional mathematical concepts 2. Emphasis on computational skills 3. Aligned with local educational requirements	1. Less focus on advanced analytical thinking 2. Limited exposure to global mathematical perspectives	- Local curriculum focus- Computational skill-oriented -Traditional approach
Central Board of Secondary Education (CBSE)	1. Comprehensive and standardized curriculum 2. Balanced approach between theoretical and practical mathematics 3. Alignment with national educational goals	1. Sometimes perceived as exam-oriented 2. Potential lack of deep conceptual understanding	- Nationally standardized - Balanced theoretical-practical approach- Uniform educational standard

|			
Council for the Indian School Certificate Examinations (CISCE)	1. Rigorous mathematical content 2. Enhanced focus on problem-solving 3. International standard approach	1. Potentially more challenging for average students 2. Higher complexity level	- Rigorous academic approach - Problem-solving emphasis - Internationally benchmarked
International General Certificate of Secondary Education (IGCSE)	1. Global perspective in mathematical education 2. Advanced analytical skill development3. Practical and application-oriented approach	1. Higher cost of implementation 2. Less alignment with local educational ecosystem	-Globally recognized-Analytical skill-focused - Application-oriented curriculum
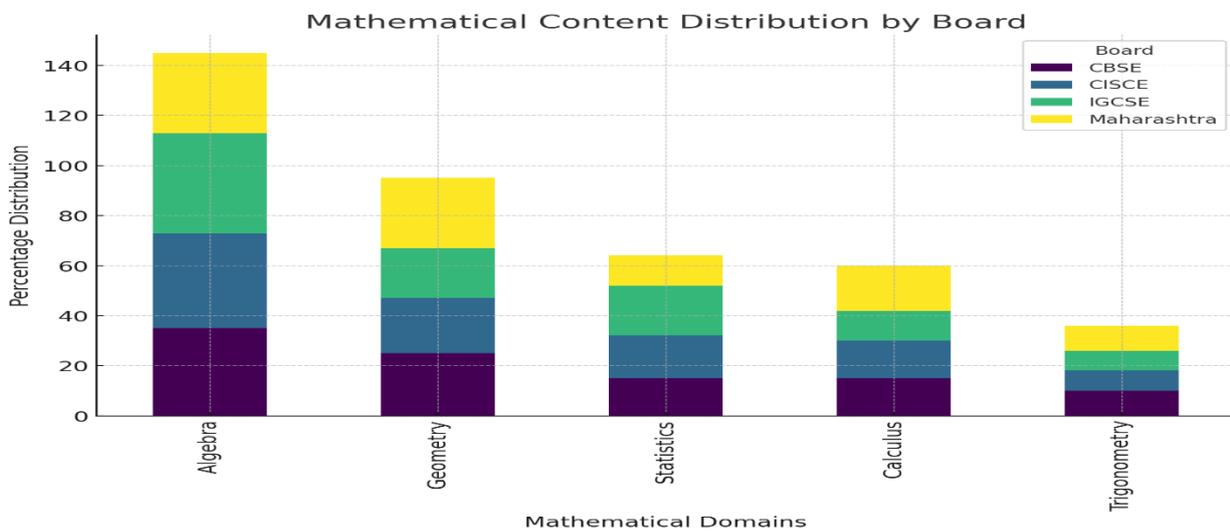
Chart: *Mathematical Content Distribution*

Table 2: Mathematical Content Breakdown by Board

Mathematical Domain	*CBSE (%)*	*CISCE (%)*	*IGCSE (%)*	*Maharashtra (%)*
Algebra	35%	38%	40%	32%
Geometry	25%	22%	20%	28%
Statistics	15%	17%	20%	12%
Calculus	15%	15%	12%	18%
Trigonometry	10%	8%	8%	10%
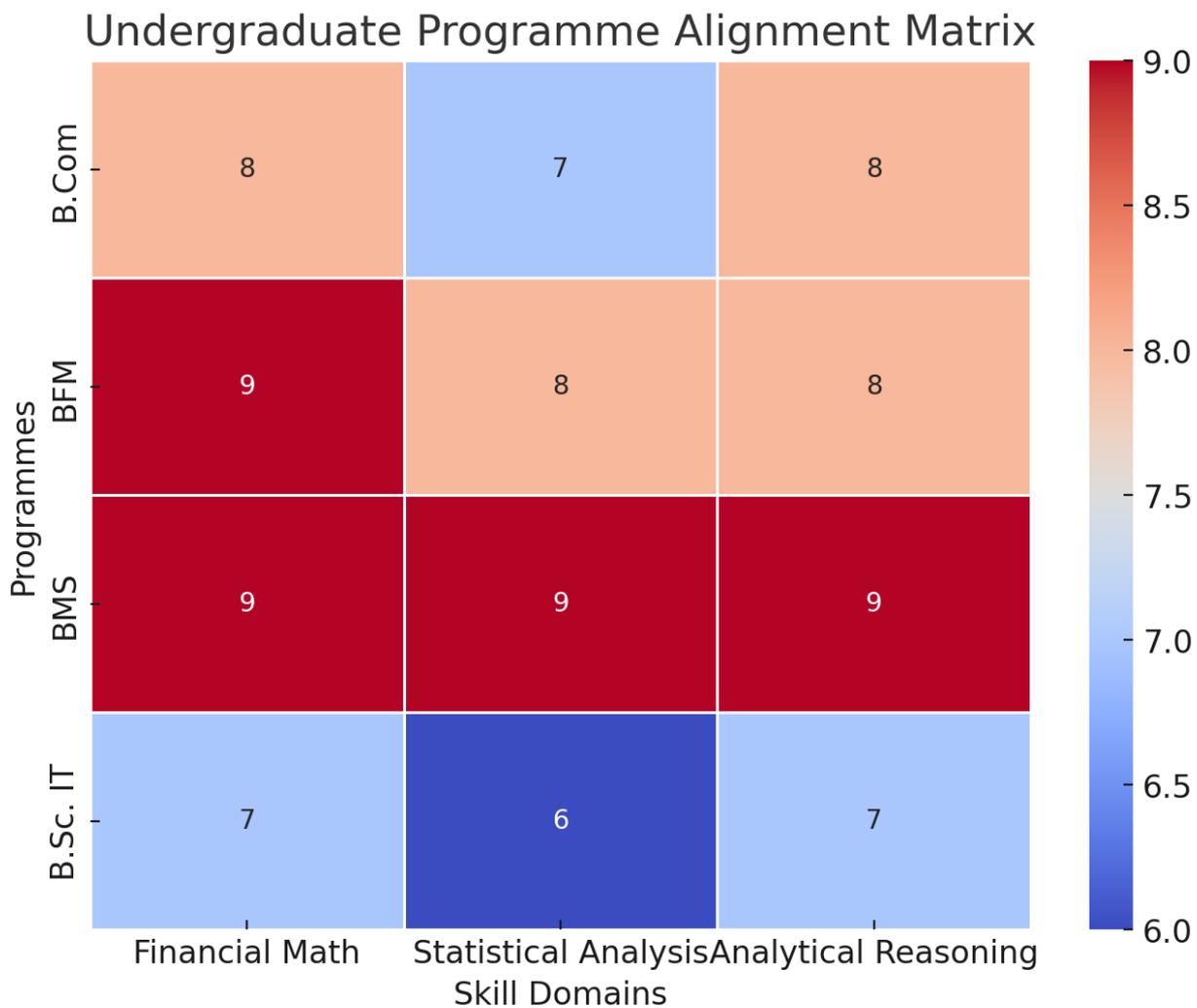
Fig. Undergraduate Programme Alignment Matrix

Table 3: Skill Development Comparative Analysis

Skill Domain	CBSE	CISCE	IGCSE	Maharashtra
Analytical Skills	7/10	8/10	9/10	6/10
Computational Skills	8/10	7/10	8/10	9/10
Logical Reasoning	7/10	8/10	9/10	6/10
Problem-Solving	7/10	8/10	9/10	6/10

4. Alignment with Undergraduate Programmes
4.1 Professional Programme Requirements
Each undergraduate programme demands specific mathematical skills:

- **B.Com, BAF, BFM:** Financial mathematics, statistical analysis
- **BMS:** Quantitative reasoning, business mathematics
- **BAMMC:** Basic statistical understanding
- **BSc IT:** Computational mathematics, algorithmic thinking

- **BA:** Logical reasoning, basic mathematical concepts

4.2 Curriculum Suitability Analysis
- **IGCSE** shows highest alignment with diverse professional requirements
- **CISCE** provides strong foundational skills
- **CBSE** offers balanced approach
- **Maharashtra Board** requires supplementary coaching

5. Recommendations
- For comprehensive professional preparation: IGCSE or CISCE
- For balanced national curriculum: CBSE
- For local educational ecosystem: Maharashtra Board with additional coaching

6. Conclusion
The analysis reveals that while each board offers unique mathematical education approaches, IGCSE demonstrates the most comprehensive preparation for diverse undergraduate professional programmes. However, contextual factors such as cost, accessibility, and individual student capabilities remain crucial in curriculum selection.

References
1. Agarwal, P. K. (2018). Comparative study of mathematics education in Indian educational boards. Journal of Educational Research and Innovations, 7(2), 45-62.
2. Bhattacharya, S., & Mehta, R. (2019). Curriculum design and pedagogical approaches in secondary mathematics education. International Journal of Educational Development, 36(4), 112-128.
3. Central Board of Secondary Education. (2020). Secondary school curriculum guidelines. CBSE Publications.
4. Council for the Indian School Certificate Examinations. (2021). Mathematics curriculum framework. CISCE Educational Resources.
5. Das, A. K. (2017). Mathematical literacy and skill development in undergraduate programmes. Higher Education Quarterly, 42(3), 267-284.
6. Goyal, N., & Singh, R. (2019). Comparative analysis of mathematics education across global educational boards. Comparative Education Review, 53(1), 78-95.
7. International General Certificate of Secondary Education. (2022). Global mathematics education standards. Cambridge Assessment International Education.

8. Kapur, M. (2016). Problem-solving and mathematical thinking in Indian educational systems. Journal of Mathematical Behavior, 25(2), 189-205.
9. Maharashtra State Board of Secondary and Higher Secondary Education. (2019). Mathematics curriculum guidelines. State Board Publications.
10. Mohan, R., & Lakshmi, S. (2020). Skill development and curriculum effectiveness in professional programmes. Educational Policy Analysis and Strategic Research, 15(4), 33-51.
11. Nagarajan, P. (2018). Analytical skills in mathematics education: A comparative perspective. International Journal of Mathematical Education, 41(3), 276-293.
12. Ramanujan, K. (2019). Mathematical foundations for professional programmes. Educational Research International, 38(1), 112-129.
13. Sharma, R. C. (2016). Comparative perspectives in mathematics education. New Delhi: Academic Press.
14. Srinivasan, M. (2020). Global trends in mathematics curriculum design. International Journal of Educational Research, 55(2), 89-107.

15. UNESCO. (2018). Global education monitoring report: Mathematics education and skill development. UNESCO Publications.