S1#1 2023-24





SSSS College of Commerce for Women

The Mall, Amritsar

THE SSSS FAMILY



Celebrating SSSS Foundation Day at Sri Darbar Sahib



Launch of Moral Education Forum Booklet (Revised Edition) on Annual Awards Day

Foreword

Great achievers generally embody simplicity. Their lives reflect humility, clarity, and a commitment to fundamental values. With simple yet profound words, they convey the essence of life's most important truths. Through well-crafted, realistic stories, they distill complex concepts into lessons that are easy to understand, remember, and apply to life's challenges. This simplicity allows them to communicate deep insights that resonate across cultures, languages, and contexts. Every moment of their lives becomes powerful and relatable.

I commend all our budding writers who have contributed their insightful write ups and shown unwavering dedication to this craft. The topics you have chosen are highly relevant, addressing contemporary issues that resonate with today's audience. Your work is both timely and engaging. May you find deep fulfillment and pride in your creative endeavors.

I extend my congratulations to Principal Dr. Navdeep Kaur and the editorial team for their relentless efforts in facilitating and empowering young scholars to express their thoughts with clarity and beauty.



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Principal's Message

Dear Readers

In the rapidly evolving fields of Commerce, Business Administration, Economics, and Computer Applications, staying current with the latest developments is essential. However, it is equally crucial to delve deeper into understanding the core principles that govern these disciplines. This dual approach not only enhances technical proficiency but also transforms skills and tools into powerful assets.

This issue of our college magazine focuses on the theme of continuous learning and the application of knowledge in our areas of specialization. It is our mission to emphasize to all stakeholders in education that while external tools are vital, the development of innate intelligence, awareness, and emotional intelligence is what truly sets leaders apart. The ability to make informed decisions, navigate complex situations, and lead with impact requires a balance of both acquired knowledge and internal wisdom.

As you explore the updates and insights presented in this issue, we hope it inspires you to not only sharpen your professional skills but also cultivate the inner qualities that will empower you to lead with vision and integrity in a world that increasingly demands both competence and character.

Happy Reading!

Dr. Navdeep Kaur

Principal

The Editors' Desk

Dear Readers

In today's rapidly evolving world, digital transformation is not merely reshaping industries—it's redefining our very thought processes and behaviors. Embracing digital technology is no longer a choice; it has become the norm. Today, the internet amplifies every aspect of life, it highlights both triumphs and challenges. As Bill Gates aptly noted, "Automation applied to an inefficient operation will magnify the inefficiency."

In this context, "SIFTI," our college magazine, offers a glimpse into the future, exploring how current technological trends might shape tomorrow through the insightful perspectives of our talented student writers. The different sections of "SIFTI" reveal both the constructive and destructive uses of technology, delivering a special message: "Technology is a useful servant but a dangerous master," reminding us that nothing is above the human mind.

The Commerce Section delves into various aspects of technology, with articles on topics like The Future of UPI ATM, Exploring the Impact of Digital Gold, Unveiling the Digital Arrest Scam, The Rise of Remote Work in India, and Cryptocurrency. Articles such as The Firebolt Brand Story and Shark Tank India's Impact on the Startup Ecosystem showcase the boundless potential of human innovation and ambition.

The Economics Section emphasizes the importance of nurturing human capital in our digital age, featuring articles on Learning Mathematics, Investing in Human Capital, and The Impact of Digital Rupee on Traditional Banking. This section also features an article celebrating SIR S. R. SRINIVASA VARADHAN, a distinguished Indian-origin mathematician honored with the Padma Bhushan in 2005 and the Padma Vibhushan in 2023.

The Computer Section explores emerging technologies such as Blue Eyes Technology, Multi-Cloud Solutions, Green IT, and Edge Computing, while also addressing pressing concerns like Cyber Bullying.

The insights from our Commerce, Economics, and Computer sections collectively highlight how technology impacts every facet of our lives. As we navigate these advancements, it becomes clear that realizing our dreams involves not just embracing innovation but also committing to sustained effort and application.

This journey of exploration and realization would not have been possible without the support of key individuals who have provided invaluable guidance and encouragement. We extend our sincere thanks to S. Jagdish Singh Ji, Hony. Secretary, for his visionary leadership, which has greatly enriched the creative spirit of our institution. Our deepest gratitude goes to our Principal, Dr. Navdeep Kaur, for her unwavering support and dedication to our college magazine. Her vision and encouragement have been instrumental in bringing this edition of "SIFTI" to life.

We hope you enjoy this issue of "SIFTI" as much as we enjoyed creating it. May it inspire you to pursue your dreams and explore the endless possibilities that lie ahead.

Dr. Tina Vohra (Asst. Prof.) Ravneet Arora (Asst. Prof.)



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EDITORIAL

"What lies behind us, and what lies before us, are tiny matters compared to what lies within us."

"Ralph Waldo Emerson"

Dear Readers

It won't be far- fetched to say that self confidence is the key to success and if not it is definitely the first step towards success. When a person has self confidence, they are half way through their battle. Self confidence is the foundation of personal empowerment shaping our perceptions, actions and achievements. It is not about being perfect or never falling, It's about embracing our strength while accepting our flaws. With self confidence we navigate life twists and turns with strengths, knowing that our worth isn't defined by setbacks.

Self confidence allows us to face our failure and stand up again in a positive light. On self confidence Mahatma Gandhi ji once said "everyone wants to be strong and self sufficient but few are willing to put in the work necessary to achieve their goals." Success only comes to those who are willing to work hard, persevere in the face of challenges and consistently strive to improve themselves and their circumstances. Always remember that "live as if you were to die tomorrow" and "Learn as if you were to live forever."

It's good to have self confidence in yourself but having overconfidence is bad. We can never reach a stage where we can say, "I know everything, and I have nothing more left to learn. So it is essential to have moderation which can let you attain just the right amount of self confidence and self love which will assure you happiness and success in life.

All in all, a person will gain self confidence from their own personal experiences and decisions. No one speech or conversation can bring overnight change. It is a gradual but constant process we must all participate in. It will take time but, once you achieve it, nothing can stop you from conquering every height in life.

Dilpreet Kaur Asst. Prof.

STUDENT EDITORIAL

"The future belongs to those who believe in the beauty of their Dreams."

"The only Person you should try to be better than is the person you were yesterday."

Eleanor Roosevelt

Dear Readers

Do you know about the word limitless in your life? "Limitless" often conjures images of boundless success. It means achieving your goals without any barriers holding you back. In this context, success means reaching your ambitions, whether they're personal, professional, or both. It's about overcoming obstacles, pushing boundaries, and tapping into your greatest potential. Anyone might define success differently; it could be financial stability, pursuing their artistic goals, or inspiring positive change in the lives of others. It's about unlocking opportunities, overcoming challenges, and evolving constantly.

So, being "limitless" in your success means constantly striving for your dreams, refusing to settle, and embracing a mindset where anything is achievable. As Franklin D. Roosevelt once said, "The only limit to your realization of tomorrow will be your doubts of today." Success is not final, and failure is not fatal.

In my life, being "limitless" involves constantly enhancing and broadening my skills to better support and engages with users like you. It involves pushing the boundaries of language understanding, providing helpful and insightful responses, and adapting to different contexts and needs.

"Life is an adventure; explore it with curiosity and courage."

Payal Thakur

B.Com (FS) Sem-VI

WOMEN ACADEMICIANS AND JOB SATISFACTION SUGGESTING WAYS TO MAKE WOMEN HAPPY AT WORKPLACE

INTRODUCTION

for higher education.

The increasing access of women to higher education is significant progress, but this number must be retained and transformed into academic workforce (www. feminisminindia.com)

In India, in recent years, there has been a tremendous surge and increased awareness for the need for the education through different campaigns like "Beti Bachao Beti Padhao" to go along with overall development in terms of nation building by way of doing vast improvement in infrastructure especially

The pillars who eventually lay foundation of success for the students pursuing higher education are none other than our "Academicians" who play significant role in shaping up the future of not just the students, but the nation as a whole.

In this respect, institutes imparting higher education play a vital role in not just harnessing the talent that the academicians possess, but at the same time allow room for their engagement with the respective institution to enhance a sense of belongingness, feeling valued, remaining aligned with their goals and in turn pave the way for increased job satisfaction in their minds and hearts (Aggarwal, 2006).

NEED TO MAKE WOMEN HAPPY AT WORKPLACE

Workplaces thrive when employees are happy and feel supported at work. If people are happy at work, then it will not only have a positive impact on their personal success but a much wider positive impact on the organisation's culture and ultimately its success.

Women at workplace strive hard to reach their full potential. But despite trying hard, the daily hurdles that women have, halts their career growth, consumes their energy, and damages their confidence. It is hard for them to come off when there are people to pull them down. Women confront multiple difficulties at workplace such as inequitable employment and salary possibilities, inadequate maternity benefits, and many more and so, there arises a need to make women happy at workplace.

According to a report by statista.com, 66.87% women worldwide were engaged in the teaching profession in 2023. Therefore, the present study proposes certain ways to make women, specifically women academicians, happy at workplace.

THE INCREASING ROLE OF WOMEN ACADEMICIANS

At the core of education is the premise of equal opportunity and accessibility. There is a rather interesting reshaping of the gender mix that has begun in academia. The gender ratio at universities and institutions of higher learning has been steadily improving, and this might just be further accelerated with the restructuring of the academic pathway under India's new National Education Policy (NEP). With the statement in the NEP document that "the policy additionally recognizes the special and critical role that women play in society", both education for women and by women would be encouraged (Varshney & Ahlawat, 2020).

SUGGESTING WAYS TO MAKE WOMEN ACADEMICIANS HAPPY AT WORKPLACE

Certain women academician engagement activities, once effected in higher education sector and gets translated deep down at all levels on realistic grounds, would yield to win-win results:

Launching "The Women Academician of the month Programmes"

The Primary cause of a particular women leaving her job is because of the lack of appreciation. Hard work and achievement at the institute increases academicians morale, encourage healthy competition, and creates a positive atmosphere. With higher motivation comes better engagement and sense of satisfaction.

Hence, "The Women Academician of The Month" programs is a great way to show women that you see their hard work and appreciate the efforts they are putting in and thus one of the best academicians engagement activities, once invested in, will definitely increase job satisfaction (www.linkedin.com).

Feedback

Research shows that women are 20% less likely to receive actionable feedback that can contribute to their performance and growth at workplace (Hocking, 2021)

Useful feedback is the key to improving communication and engaging women academicians. Regular feedback is the perfect way to keep academicians in the loop about their performance. It should apprise them about their performance. Feedback is a two-way street. Therefore, it is necessary to listen to what they have to say.

Jacob's Join

It is said that "With food, we can share and communicate our emotions. It's that mindset of sharing that is really what you're eating"

A Jacob's Join is essentially a food party where women academicians come up with a homemade dish and share among the fellow colleagues. It is an activity which bonds individuals over food and lends a much needed work — life balance. While eating together, one shares ideas, opinions and in turn it improves dynamics of not just team building but also productivity amongst women academicians (www.wikipedia.org). With so many positives, potlucks are one of the best ways to increase job satisfaction through continuous engagement among the academicians.

Celebration of Milestones

Celebration of Birthdays, Anniversaries and Personal Milestones are ways of instilling soul and emotion into the academicians which creates a sense of belongingness towards the institution, which in turn leads to happiness at work place (www.quora.com).

Mentorship Programme

A mentor is a more experienced person who guides and advises a less experienced one. Every new academician is bound to feel lost and unsure. Thus, a mentorship program becomes exceptionally vital. With this in mind, assigning an older and an experienced academician as a mentor is the need of the hour.

The right woman to woman mentoring relationship will benefit the mentor as much as the mentee. It will be not only personally gratifying, but also will give the mentor a new perspective of the organization and its culture (www.mentoringcomplete.com).

Offering One's Services for a Cause

When women participate in the art of giving back to society or needy in general, it inspires in them a feeling of peace, joy, and contentment. Spending a day at the nursing home where the women academicians can help other women with the day-to-day tasks, offering one's services at the animal shelter or taking the children from an orphanage to a picnic or a park are a few examples of the activities that women academicians can carry out.

Meditation

Motherhood remains more stressful than fatherhood and mothers in professional positions experience greater conflict between work and family than their male counterparts. (Duxbury & Higgins, 2005).

With work load management and multitasking, stress among women academicians is something which can creep in easily. Whereas, some feel pressure is the best motivator to work, while others can't cope with stress.

Meditation is about taking a moment to sit still, reflect upon your thoughts, and simply breathe. Even 10 minutes controls stress, decreases anxiety, improves cardiovascular health and achieves a higher capacity for relaxation.

At the start of the day, encouraging women to meditate for a minimum of 10 minutes before resuming any work, will in turn enable them to keep stress at bay, focus better, and perform better throughout the day.

Brainstorming Sessions

Brainstorming remains the greatest and the most effective way to generate new ideas, as also one of the best academician engagement activities.

Conducting brainstorming sessions is hugely profitable for the institution. Mainly because when structured correctly, brainstorming sessions give excellent results and encourages critical thinking and out-of-the-box ideas. It brings introverted women academicians out of their shells and encourages them to contribute (Thompson, 2003).

· Book Club

Implementing a book club is a great way to build trust and transparency among team members as it gives a broad appeal to an institute's culture. It presents many interactions, discussions and debates, making academicians feel closer to each other.

Academicians Swop Day

"Academicians Swop Day," allow academicians to temporarily swap their roles with colleagues from different teams and departments. This is the best chance for academicians to learn about different aspects of the institute by simultaneously promoting cross-functional understanding and teamwork. It can become a fun yet insightful way to take a break from a regular routine especially in case of women

and build stronger connections. This will make the women academicians feel that their input is valued (Al-Barghouthi, 2022).

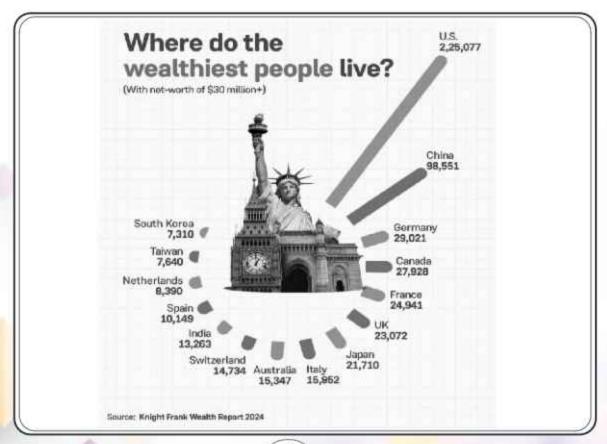
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> Dr. Tina Vohra Asst. Prof.



EMPOWERING CONSUMERS A COMPREHENSIVE STUDY OF CONSUMER PROTECTION (E-COMMERCE RULES), 2020

INTRODUCTION

Consumer protection makes markets work for both businesses and consumers.

(aseanconsumer.org)

The digital revolution has profoundly reshaped consumer behavior, particularly in the realm of shopping. With rampant internet access, online transactions and businesses have witnessed explosive growth. As e-commerce surges forward, the need for robust consumer protection measures within the digital marketplace intensifies.

Recognizing this shift, the Indian government enacted the Consumer Protection Act, 2019, superseding the outdated Consumer Protection Act of 1986. This progressive update expands its scope to encompass e-commerce transactions, safeguarding online consumers alongside their offline counterparts.

To further strengthen consumer protection in the dynamic world of online shopping, the Ministry of Consumer Affairs, Food, and Public Distribution formulated the Consumer Protection (E-Commerce) Rules, 2020. These regulations, notified on July 23, 2020, operate under the umbrella of the CPA 2019. Their primary objectives are to curb unfair trade practices in e-commerce and establish a mechanism for resolving disputes arising from online purchases.

OBJECTIVES OF THE STUDY

- To study the key provisions and implications of the Consumer Protection (E-Commerce) Rules, 2020 including proposed amendments in 2021.
- To make consumers aware of the consumer protection(E-Commerce) Rules, 2020

RESEARCH METHODOLOGY

The paper is purely based on the extensive study of secondary data sourced from research articles, regulations, and government reports.

REVIEW OF LITERATURE

Agasti (2023) studied how consumer protection (E-commerce Rules, 2020) under the new Act has put a great deal of pressure on e-commerce companies to improve system openness and public perception. Both primary and secondary data form the basis of the research. Data was collected from 24 respondents through the interview method by asking open-ended questions. According to the results, the majority of respondents supported the new act. The results also emphasized the new provisions for e-commerce included in the act and shed light on how crucial it is to protect consumer interests and stop unfair trade practices.

Chawla and Kumar (2021) analysed the current Indian legal framework, including the impact of newly elected laws, namely the Consumer Protection Act, 2019 and the Consumer Protection E-Commerce Rules 2020, on safeguarding online consumer rights. They also studied the key factors that affect consumer trust and loyalty in e-commerce in the Indian context. Using a standardized questionnaire, information was gathered from 290 online consumers. The results showed that a secure

and reliable system is essential for e-business firms to work successfully. The findings also disclosed that the newly elected laws are strong enough to protect and safeguard online consumer rights in India.

Ayilyath (2020) examined the Consumer Protection Act 2019 in relation to e-commerce transactions. The researcher compared the existing legal framework in the European Union for consumer protection in e-commerce. The paper is primarily based on secondary sources. The researcher identified certain gaps in the current framework under the Consumer Protection Act 2019, including the exclusion of electronic service providers from the definition of unfair contracts and the lack of an adequate framework for addressing issues related to the conformity of digital content and services. He suggested adopting additional pro-active regulatory measures to enhance consumer protection in commerce, like the SEBI Complaints Redress System (SCORES) model.

Ramesh (2023) highlighted the key provisions brought by the Consumer Protection Act of 2019 as against the old Act. Secondary sources form the basis of the research. The findings showed that the new act expanded its scope by covering online transactions and e-commerce under its purview. The updated act introduced panel provisions against misleading advertisements. The results also revealed that the new act created a fair and transparent environment, fostering trust and accountability for both consumers and businesses.

Sethi (2022) highlighted the key changes and improvements made by the Consumer Protection Act 2019 after comparing it with the previous act. The researcher relied on secondary sources for information and analysis. The findings showed that the new act eliminates the weaknesses of the old act and provides benefits like transparency for e-commerce companies, e-filing of complaints, regulations on misleading advertisements in e-commerce, etc.

COMPREHENSIVE STUDY OF CONSUMER PROTECTION (E-COMMERCE) RULES, 2020

The E-commerce Rules 2020 include detailed rules and guidelines regarding e-commerce businesses.

According to the Act, E-Commerce entity means "any person who owns, operates, or manages a digital or electronic facility or platform for electronic commerce, but does not include a seller offering his goods or services for sale on a marketplace e-commerce entity.(consumeraffairs.nic.in)

This definition has been extended by the Proposed Amendments of the Consumer Protection (E-Commerce) Rules, 2020, and also includes entities assisting in order fulfillment and related parties defined by the Companies Act, 2013.

SCOPE AND APPLICABILITY

These rules apply to nearly all e-commerce activities, with a few exceptions. They cover:

- All goods and services sold online, including digital products.
- All e-commerce models, like marketplaces and inventory-based businesses. (Basically, an inventory e-commerce entity acts as the seller, while a marketplace e-commerce entity creates the marketplace for others to buy and sell.)
- All e-commerce retail formats, including multi-channel and single-brand retailers. All forms of unfair trade practices in e-commerce.

They do not apply to: Individuals' personal activities that aren't part of a regular or systematic business.

DUTIES AND LIABILITIES OF E-COMMERCE ENTITIES

Here is a summary of the points listed:

- Display of information: E-commerce platforms are mandated to prominently showease their legal name, headquarters, branch addresses, website details, and comprehensive contact information, including that of a grievance officer.
- Prohibition of Unfair Trade Practices: E-commerce platforms are forbidden from engaging in unfair trade practices.
- Consumer Complaint Handling System: Each platform is required to establish a robust system for handling consumer complaints, ensuring effective redress of consumer concerns.
- iv. No Cancellation Charges: E-Commerce platforms are restricted from imposing cancellation charges on consumers unless similar charges are incurred by the platform when canceling a purchase order.
- Disclosure for Imported Goods: E-Commerce entities selling imported goods must disclose details about the importer, including name and information, ensuring transparency.
- vi. Prohibition of Price Manipulation: Manipulation of prices by e-commerce entities to gain unreasonable profits is strictly prohibited, promoting fair pricing for consumers.
- vii. Clear Terms and Conditions: E-Commerce platforms and sellers are obligated to provide clear terms and conditions, encompassing product information, delivery charges, cancellation and return policies, and accurate product descriptions and images.
- Prevention of Abuse of Dominant Position: E-Commerce platforms with a dominant position are barred from abusing their status, ensuring fair competition in the market.
- ix. Information Sharing with Government Agencies: E-Commerce entities must share information with government agencies within 72 hours for identity verification and preventing, detecting, investigating, or prosecuting offences, including cyber incidents.
- x. Prohibition of Fake Reviews: Inventory e-commerce entities and sellers selling their own products are prohibited from posting fake reviews or providing false information about their items.

PROPOSED AMENDMENTS OF THE CONSUMER PROTECTION (E-COMMERCE) RULES, 2020

The proposed amendments in the Draft Consumer Protection (E-commerce) Rules, 2021, are designed to tackle emerging challenges within the e-commerce sector, with a primary focus on enhancing consumer protection. The objective is to adjust regulations to the dynamic nature of the landscape and safeguard consumers in the digital marketplace. The proposed amendments are as follows:

I Fallback Liability:

Fallback liability in e-commerce protects consumers if sellers fail to deliver due to negligence.

Platforms may be held responsible if sellers don't resolve the issue adequately.

Implications: This provision encourages platforms to scrutinize and ensure the reliability of

hosted sellers, motivating them to maintain high service standards.

ii. Regulation On Back-To-Back Flash Sales:

E-commerce platforms allow traditional flash sales by third-party sellers. Yet, some engage in "back to back" or "flash" sales, where one seller lacks inventory, relying on another controlled by the platform. This disrupts fair competition, limits options, and may inflate prices.

Implications: The rules aim to foster fair competition by prohibiting only those back-to-back flash sales organized fraudulently to favor specific sellers, thereby preventing artificial scarcity. While the proposed rule has positive intentions, effective enforcement may face challenges. Robust monitoring and regulatory infrastructure are vital for ensuring the rule's successful implementation.

iii. No Indulgence in Misselling:

The rule prohibits e-commerce entities from engaging in misselling, defined as intentionally providing false information about goods or services to allure consumers, leading to harm or disadvantage.

Implications: This regulation aims to protect consumer interests by preventing e-commerce entities from displaying inaccurate or deceptive information and ensuring transparency and fairness in transactions.

iv. Registration of An E-Commerce Entity:

E-commerce entities operating in India are mandated to register with the Department for Promotion of Industry and Internal Trade (DPIIT) within a stipulated period, acquiring a unique registration number.

Implications: This provision aims to enhance transparency, ensure compliance with regulations, and potentially boost consumer trust in the e-commerce sector.

v. Regulation On Misleading Advertisements:

E-commerce entities are prohibited from displaying or promoting misleading advertisements on their platforms. Violating this rule may result in penalties under the CCPA, ranging up to 10 lakh rupees for manufacturers, advertisers, and endorsers. Subsequent offences could incur higher penalties, with the possibility of banning endorsers from making endorsements for up to 1 year, extending to 3 years for repeat contraventions.

Implications: This regulation not only increases accountability for misleading ads but also nurtures greater trust in online shopping environments. Consumers may gain enhanced confidence in the reliability of product information and the integrity of e-commerce platforms.

vi. Filter Mechanism:

E-commerce entities selling imported goods are mandated to implement a filter mechanism on their website to facilitate the search for goods by origin and Suggest similar domestic products to promote fair competition.

Implications: These measures aim to provide consumers with transparency, enabling them to make informed choices and actively opt for made-in-India goods.

vii. Appointment of Officers in E-commerce:

In compliance with regulations, e-commerce entities are required to appoint key officers, namely Chief Compliance Officer, Nodal Contact Persson and Resident Grievance Officer.

Implications: These appointments signify a proactive approach by e-commerce platforms to enhance efficiency and uphold legal standards, fostering trust and regulatory adherence.

viii. Regulation on Related Parties:

In compliance with regulations, e-commerce platforms are prohibited from favoring their own businesses by listing associated enterprises as sellers or sharing sensitive consumer data. Related parties, as defined by the Companies Act, 2013, encompass common directors, shared shareholders, and common ultimate beneficial ownership.

Implications: This regulatory framework eliminates preferential treatment for in-house businesses, creating opportunities for independent sellers and potentially offering consumers better deals. The emphasis on fairness and competition necessitates e-commerce platforms to enhance efforts in attracting and retaining diverse sellers in the marketplace.

CASES RELATED TO CONSUMER PROTECTION IN E-COMMERCE SECTOR

* Flipkart Internet Private Limited vs Gandhi Behera, Berhampur.

In a consumer dispute, the Berhampur District Consumer Disputes Redressal Commission ruled against Flipkart for canceling a customer's order due to a seller's "unforeseen error." Flipkart's failure to disclose seller information both upon inquiry and on their website constituted a key factor in the decision. This case highlights the potential liability of e-commerce platforms for seller-related issues, especially when transparency is lacking.(https://www-livelaw-in 15-08-2023)

* Paytm vs Advocate Baglekar Akash Kumar, Hyderabad

An Indian consumer bought a sewing machine on Paytm, but the platform failed to display the country of origin, violating consumer protection laws. The consumer forum fined both Paytm and the seller (Uni One India Pvt Ltd) for this oversight and awarded compensation of Rs.15,000 to the customer. This case emphasizes the need for clear product information online and protects consumer rights in e-commerce. (https://www.taxscan.in OCT 8, 2022)

CONCLUSION

The Consumer Protection (E-commerce) Rules, 2020, and their proposed amendments mark a significant turning point in India's e-commerce landscape. Thorough analysis of the key provisions and the implications of the new rules, highlighting the potential for a consumer-centric e-commerce ecosystem. The emphasis on registration, the appointment of compliance officers, and privacy protection measures signifies a proactive approach by e-commerce platforms to enhance efficiency and trust.

From holding platforms accountable to prohibiting deceptive practices, the rules empower consumers to navigate the digital maze with confidence. They foster transparency, promote fair competition, and safeguard privacy, laying the foundation for a thriving e-commerce ecosystem that benefits all.

Consumer cases cited above also reflect that e-commerce rules have made it difficult for ecommerce companies to deceive their online consumers.

However, the journey towards a truly responsible and trustworthy online marketplace is not yet

complete. Effective implementation, vigilant enforcement, and continuous adaptation will be crucial in closing the gaps and tackling emerging challenges.

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- https://pib.gov.in/PressReleasePage.aspx?PRID=1832906

Ms. Amrita Asst. Prof.

7 Ring - India's first contactless payment wearable ring

India's first contactless payment ring, the 7 Ring, has been launched in collaboration with NPCI by the Indian brand 7. The 7 Ring smart wearable has a Zirconia Ceramic build and comes with scratch resistance, which can make the case both durable and stylish. It also has an IP68 rating for water and dust resistance. There's support for NFC (near-field communication), which ensures stable connectivity without any reliance on Bluetooth. The main highlight is that it supports a convenient payment technology, which can help to initiate contactless payments with a single tap. There won't be a need for a wallet, phone, app, PIN, or OTP when the amount is lower than Rs 5,000. We can simply place the hand on the POS machine with the ring on and the payment will be done. This is a passive ring, which takes power from the POS machine and hence, doesn't have a battery of its own and doesn't require charging. There's also support for UPI, LivQuik, M2P, and more. It also includes a prepaid wallet, passbook, and more. It is environment-friendly and safe too as its design makes it less prone to fraud.

EMPOWERMENT THROUGH UNDERSTANDING EXPLORING THE MERA BILL MERA ADHIKAR GST REWARD SCHEME

It is rightly said that Knowledge is power. By staying well informed about the latest government schemes & taking suitable measures we can contribute to the economic growth of the nation and enhance our overall well-being.

The Government of India, in association with State Governments, launched an 'Invoice incentive Scheme' by the name 'Mera Bill Mera Adhikaar' on September 01, 2023 to encourage the culture of customers asking for invoices/bills while making purchases in order to develop a culture of financial accountability and responsibility. It is a step toward increasing financial transaction transparency and empowering consumers.

The scheme was initially launched as a pilot project in 3 states (Assam, Gujarat and Haryana) and 3 Union Territories (Puducherry, Dadra and Nagar Haveli and Daman and Diu). This scheme is being run as a pilot scheme for a period of 12 months.

Objective of the Scheme:

- The objective of this scheme is to bring a change in the buying behavior of the people, so that they start considering it as their right and entitlement to 'demand bills' from all the vendors.
- The another main objective of starting this scheme by the Government of India is to prevent tax evasion and contributes to the growth of the economy. Furthermore, the initiative strengthens the government's efforts to streamline GST processes and increase revenue collection.

Operation of the scheme:-

- The 'Mera Bill Mera Adhikar' scheme extends its eligibility to all invoices issued by GSTregistered suppliers to customers and customers must upload all their Business-to-Consumer (B2C) invoices from the previous month by the 5th of each month.
- For an invoice to qualify for the lucky draw, it must have a minimum purchase value of 200.
- Participants have the opportunity to upload a maximum of 25 invoices per month.
- Invoices can be uploaded on Mobile Application 'Mera Bill Mera Adhikaar' available on IOS and Android as well as on web portal 'web.merabill.gst.gov.in' The Mobile application & Portal used for uploading invoices are developed by GSTN (Goods & Services Tax Network).
- In order to be considered for the lottery, the invoice uploaded should include essential details such as the seller's GSTIN, invoice number, paid amount, and tax value.
- The system will reject inactive or fraudulent GSTINs and GST fake invoices uploaded.
- A Unique reference numbers (ARN) will be generated for each uploaded invoice, which will be used for the draws.
- 8. Under this initiative, a combination of monthly and quarterly lotteries will be conducted, offering cash reward prizes ranging from ₹10,000 to an impressive ₹1 crore. Winning invoices will be picked by a method of random draw at regular intervals.

Periodicity of draw and prize structure:

Frequency	No. of Prizes	Prize Money in Rs
Monthly	800	10,000
	10	10,00,000
Quarterly (Bumper Draw)	2	1,00,00,000

- Alert/Notification to the winners will be made through SMS/push Notification on the app/web portal only.
- 10. Winning person will be requested to provide some additional information like PAN number, Aadhar Card, Bank Account Details, etc, through the app/web portal, within a period of 30 days from such date of informing them (date of SMS/App/Web Portal Notification), for enabling transfer of the winning prize to them through the said bank account.

Conclusion

Educating consumers about the importance of requesting GST invoice and encouraging business to maintain proper invoicing practices is the main goal of this scheme. Overall, the scheme pushes for a fresh and positive shift in Indian consumer behaviour and favours the growth of a formal economy. Before you participate, be sure to follow the official links by the government for mobile apps and web portals to avail the benefits of the scheme and safeguard yourself from scamsters.

Payal B.Com FS Sem-VI



INNOVATIVE FINTECH UNVEILING THE FUTURE WITH UPLATM

The World of finance is undergoing a rapid transformation, driven by innovative technologies like the Unified Payments Interface (UPI) in India. The emergence of UPI ATMs is one of the most exciting recent developments promising a future of seamless, secure and cardless cash withdrawals.

India's first UPI-ATM, a White Label ATM (WLA) by Hitachi Payment Services in collaboration with the National Payments Corporation of India (NPCI) was introduced on September 05, 2024 in Mumbai to enable seamless cash withdrawals. White-label ATMs are those that are owned and operated by non-bank entities. The UPI-ATM also known as Interoperable Cardless Cash Withdrawal (ICCW), offers a simple process for users of participating banks who use UPI to withdraw cash from compatible ATMs.

Key features of the UPI-ATM service:

- It provides an interoperable, cardless transaction facility.
- The withdrawal limit is Rs 10,000 per transaction as a part of existing daily UPI limit.
- There is no need to carry a card for ATM cash withdrawals, even from multiple accounts using the UPI app.
- The UPI-ATM offers the same ease of transaction as cardless cash withdrawals provided by several banks.
- Cardless cash withdrawals are based on mobile and OTP, while the UPI-ATM is based on QR codes for cash withdrawals.

Process for cash withdrawal:

Unlike traditional ATMs, UPI ATMs eliminate the need for physical cards. Instead, users can withdraw cash using their smartphones and the UPI platform. Diagram 1 shows the steps involved in the working of UPI ATM:

Step 1

Step 2

Step 3

Step 4

Step 5

Step 5

Step 6

Step 6

Step 6

Step 7

Step 7

Step 7

Step 8

Diagram 1: Working of UPI ATM

Source: npci.org.in

- Authentication: Selecting their bank on the ATM screen and entering their UPI PIN.
- Select Withdrawal Amount: Customers choose the desired withdrawal amount when selecting the 'UPI cash withdrawal' option at the ATM.
- Generate QR Code: The ATM screen displays a unique and secure dynamic QR code linked to the selected withdrawal amount.
- Scan QR Code: Users scan this QR code using any UPI app installed on their Android or iOS smartphones.
- Authorize Transaction: To complete the transaction, users input their UPI PIN on their mobile device, authorizing the cash withdrawal.
- Cash Dispense: Upon successful authorization, the ATM dispenses the requested amount.

Significance

- The launch of the UPI-ATM is a significant development in the Indian payments landscape.
- It is a sign of the growing popularity of UPI, which is now the most popular way to make payments in India.
- It would seamlessly integrate the convenience and security of UPI into traditional ATMs.
- It is consumer-centric as opposed to corporate-centric approach.
- It can contribute to the fast digitization of financial services in India.

The Future of UPI ATMs: A Glimpse into a cashless Utopia

UPI ATMs with their cardless cash withdrawals system have emerged as a game changer in India's financial landscape. But their impact is projected to extend far beyond, revolutionizing cash access and shaping the future of fintech.

Enhanced Convenience and Security:

- Widespread Adoption: With UPI, physical wallets become obsolete, replaced by the ubiquitous smartphone. UPI ATMs accessible across diverse locations will cater to cash needs with just a few taps and PINs, eliminating the dependence on cards and their associated risks like skimming and theft.
- Seamless Integration: Loyalty programs and micro ATM networks will be seamlessly integrated with UPI ATMs. This interconnected ecosystem will offer a plethora of financial services from cash withdrawals and deposits to bill payments and instant loan disbursements all within a single platform.

Technological Advancements:

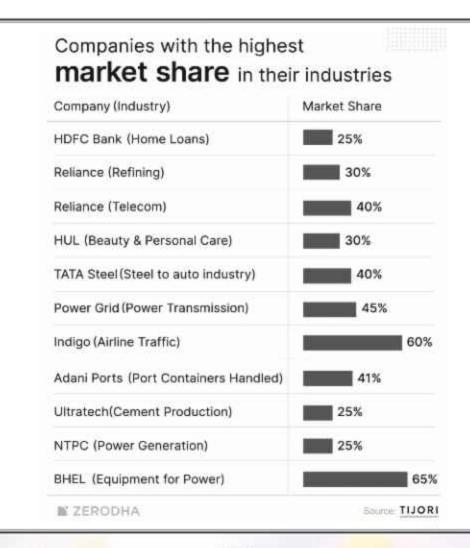
- Biometric Authentication: With UPI, fingerprint or facial recognition will replace PINs for added security and convenience. Biometric authentication will not only enhance security but also cater to visually impaired individuals promoting financial inclusivity.
- Wearable Integration: Cash withdrawals with a simple tap over smartwatch or fitness band will become possible. UPI ATMs will integrate with wearable devices, making transactions even more effortless.

Beyond Cash Withdrawals:

- Cash Deposits: The future holds promise for UPI ATMs to transform into two way cash machines. Users will be able to deposit cash seamlessly, further bridging the gap between physical and digital transactions.
- Micro-ATMs: Solar powered UPI ATMs will reach remote areas with limited banking infrastructure. This will expand financial inclusion and empower rural communities.

The UPI ATM is a game-changer in the world of banking, these UPI ATM cash withdrawals are easier, faster, and more convenient than ever before. With its cardless functionality, interoperability, and secure QR code-based transactions, it's a step towards a more advanced and user-friendly banking experience. It represents a significant leap forward in financial technology, offering a glimpse into a future where cash access is secure, convenient and accessible to all.

Kamalpreet Kaur Damanpreet Kaur B.Com FS Sem-VI



SHAPING STARTUPS: ANALYZING SHARK TANK INDIA'S INFLUENCE ON INNOVATION

Introduction

Starting a new business is exciting and quite a piece of work as well, especially when you are setting a completely new thing and following your passion by being a small entrepreneur. Initiating it not only takes talent, skill, desire, and passion but also requires something that will keep it going on and that is investment. Without investment no business can survive both in the long run and short run. But then a question arises that who will make this investment? Because starting a business takes huge expenses which are to be made for its healthy start. Imagine having a reality show that helps the budding entrepreneurs to showcase their business models in front of some most successful business executives who are keen to invest in these models to convert them from just a mere dream to reality.

These types of shows do exist, one of which is 'Shark Tank India'. The show is a-franchise of its American counterpart. The emergence of this show traces long back to the year 2009 when it was first premiered. Actually it is an international franchise of 'Dragons Den', a show which originated in Japan in the year 2001. The panel of investors or the sharks invested in the startup which appealed to them and helped the pitchers by consulting with them if there was any flaw in their product, service, or business models.

IMPACT OF THE SHOW-

Changing the face of the Indian business world-

Before the show came into picture each person who was asked about investment used terms like fixed deposits and mutual funds. Terms like equity, bull market, and gross margin were usually not mentioned anywhere. However when the show came into picture it without any doubt promoted a startup flow in India, particularly among the middle class Indian entrepreneurs. Most importantly the show appears to have gathered enthusiasm about entrepreneurship as a viable career option amongst students of all ages. This change in mindset from aspiring to be a doctor, lawyer, engineer to considering becoming entrepreneurs is truly significant. To sumup let's take an example of Anoushka Jolly, a student of class 8th to win funding on the show for her brilliant idea. She pitched her anti- bullying app called 'KAVACH' for which she received a funding of 50 lakhs. So now it can be very well understood how greatly the show has instilled the spirit of entrepreneurship in the blood of young Indians too.

Impact on the businesses of judges-

Shark Tank India has likely had a significant impact on the businesses of the judges. 'The meteoric rise in the popularity of the T.V show didn't just spotlight the judges but also their businesses'. The significant increase in Instagram followers for the judges since their participation in "Shark Tank India" further highlights the show's impact on their personal brands and public profiles.

Increasing the visibility and popularity of startup's-

One of the greatest positive impacts of the show is that it has increased media visibility and popularity of the startup's that have appeared on the show leading to increased demand, revenue growth, and customer loyalty. In addition to this it has helped them increase the crucial industry relations and partnerships with sharks and other stakeholders. According to a report by Startup Talky, the startup's that

have pitched on Shark Tank India have seen an average increase of 300% in their website traffic, social media followers and app downloads. By building strong relationships with sharks they have leveraged the expertise, network and resources of the sharks to grow and scale their ventures.

Democratizing access to funding and mentorship-

The show has also democratized the access to funding and mentorship for the entrepreneurs, especially those from tier 2, and tier 3 cities who usually may not have the resources or networks to pitch their ideas to traditional investors. It has also introduced the nation to the real heroes- the sharks who have achieved success with their unique ideas and are now investing in good causes. By sharing their stories and insights, the sharks have inspired and influenced many people to follow in their footsteps and make a positive difference in the world.

Job creation

Successful startups featured on Shark Tank India often experience rapid growth, leading to the creation of jobs across various sectors. These new employment opportunities contribute to economic development and reduce unemployment rates.

Impact on the Indian Startup Ecosystem-

The Indian startup ecosystem has experienced significant growth, driven by a surge in entrepreneurial activities, increased access to venture capital and a flourishing culture of innovation. In addition to this it has also boosted the spirit of people to take initiative and start something new.

Regional development

The show has helped in spreading entrepreneurial activities beyond metropolitan areas to smaller towns and rural regions. This decentralisation of startup activity promotes balanced regional development and economic inclusivity.

Empowerment of women entrepreneurs

Shark Tank India has provided a platform for women entrepreneurs to showcase their innovative ideas and secure funding. This has led to an increase in the participation of women in the startup ecosystem, promoting gender diversity and empowerment.

Inspiring the youth

The show has become a source of inspiration for the younger generation, encouraging them to think creatively, take risks, and pursue entrepreneurship as a viable career path. This shift in mindset towards entrepreneurship from a young age bodes well for India's future innovation and economic growth.

Promotion of social entrepreneurship

The emphasis on solving real-world problems showcased on Shark Tank India has encouraged the rise of social entrepreneurship ventures. These startups focus on creating positive social impact alongside financial sustainability, addressing pressing issues such as healthcare, education, and environmental conservation.

Amrit Kaal' or Golden period for young entrepreneurs-

The stories of sharks and the entrepreneurs who made an appearance on the show and pitched their service or product cite a wonderful example for the decades to come and upcoming generations, who will be witnessing 'Amrit Kaal' an auspicious period of 25 years between India's 75th and 100th independence anniversaries.

Insights from the previous season

Season	Total Pitches	Pitches that got the offer	Total Investment	Emerging Sectors
1	121	67.13%	40 Cr.	Food, Beauty & Fashion
2	165	64.24%	81.16 Cr.	Health & Wellness, Beauty
3	157	58.6%	78.36 Cr.	Tech & AI, Environment and Sustainability

Brands that flourished due to the show-

- 1. Skippi ice pops- It is India's first food and beverage brand that sells flavoured ice popsicles. They bagged an all shark deal for their pitch on the show and went home with an investment of INR 1 crores at 15% equity. Skippi now makes a sale of 70 lakh every month, additionally they have started shipping their ice pops to Nepal, Hong Kong, Kuwait, and Uganda.
- 2. Hammer lifestyle- Hammer is an electronics brands that sells a stylish and extraordinary range of audio and fitness devices for promoting healthy lifestyle, firstly they made Aman Gupta fall in love with the model and he offered to buy whole company but when they refuted to do so, he settled the deal at an investment of INR 1 crore for 40% stake in the company. Their revenue increased from 70 lakhs to 2 crores, also the business has begun to sell at offline mode.
- Quirky Nari- It is India's first denim hand painted denim line and showed off some outrageously unique clothing and shoes. It bagged a deal for INR 35 lakhs against 15% ownership. It's online sale has increased from 3 lakh to 5 lakh.
- 4. The Sass Bar- This brand came with a new initiative of selling handmade soaps in fun shapes like ice cream and cupcakes, etc. It bagged a deal for INR 50 lakhs against 35% equity. after appearing on the show their monthly sales increased from 6 lakhs to 10-20 lakhs.
- 5. Get a Whey- It is a brand selling sugar free, low calorie, protein rich ice creams. Their monthly sale boosted from 20 lakhs to 1 crore since its appearance on the show.

Future Prospects: A Dynamic Landscape

The long-term impact of Shark Tank India on the startup ecosystem depends on various factors, including the success stories that emerge, post-investment strategies employed by entrepreneurs, market policies, and the overall economic climate. As India boasts the world's third-largest startup ecosystem, the anticipated year-on-year growth further underlines the positive direction.

Shark Tank India continues to shape the entrepreneurial landscape in India with season 3, fostering a culture of innovation, investment, and business development. The show's influence extends beyond the screen, contributing to the nation's economic growth and positioning India as a dynamic player in the global startup arena.

Conclusion

Overall Shark Tank India has had a positive impact on entrepreneurship and startup culture by providing a platform for entrepreneurs to access funding and mentorship increasing awareness of entrepreneurship and its inspiring new generations of entrepreneurs. It has sparked a lot of discussions and important matters and it will be interesting to see how long its influence will last.

Gurleen Kaur BBA Sem-II

DECODING POLICYBAZAAR A SWOT ANALYSIS

Policybazaar is an Indian insurance aggregator and a global financial technology startup. It was founded in 2008 by Yashish Dahiya, Alok Bansal and Avaneesh Nirjar. Initially, it was started as an insurance policy comparison website with an objective of bringing transparency and accountability in the Indian insurance policy segment because at that point of time the insurance policies were mainly sold through agents. The purpose was not only to facilitate the purchase of insurance but also play a vital role in educating consumers about the various insurance policies benefiting them.

To facilitate the user's understanding of the products, there are special segments like "knowledge.policybazaar" and "ask.policybazaar". Under these segments, customer queries are answered and information about new insurance products and trends are shared with the users. Policybazaar has revolutionized the insurance sector in India by making insurance comparison accessible online. At present, it has become India's leading digital insurance marketplace by selling over 9 million policies since inception.

Products of PolicyBazaar

PolicyBazaar has evolved from a policy comparison website to an insurance sales operation (www.policybazaar.com). Its products includes:

- Life insurance
- Health insurance
- Auto insurance
- Travel insurance
- Group plans
- Retirement Plans

Competitors of PolicyBazaar

- BankBazaar
- Coverfox
- Easy policy
- Acko
- Greenlife Insurance
- CreditMantri

SWOT Analysis of Policybazaar

A SWOT analysis determines the strengths, weaknesses, opportunities, and threats of a company. It is a proven management paradigm that allows PolicyBazaar to benchmark its business and performance against that of its competitors and the industry as a whole.

This is a great tool for identifying where the business is doing well, where it is failing, developing countermeasures, and determining how the business can grow.

1. STRENGTHS

- Brand Recognition: Policybazaar has established a strong brand recognition in the insurance industry fostering trust among consumers.
- Customer Support: It provides services including helpline and online chats to enhance the overall customer experience and address queries promptly.
- User Friendly Interface: User interface of Policybazaar is highly intuitive, making it easy for users to compare and purchase insurance policies.
- Market Leader: It is a prominent player in the online insurance comparison market enjoying a strong market share of 93.7% as of now.
- Educating Consumers: It also provides informative content on insurance topics, educating consumers about various insurance policies.

2. WEAKNESSES

- Dependance on Digital Channel: Reliance on digital platforms may limit access for potential customers who prefer traditional channels.
- Partnerships And Collaborations: Forming alliances with insurance providers and other financial institutions can create new avenues for growth.
- Economic Downturn: Economic uncertainties and downturns can affect consumer spending on insurance products impacting Policybazaar's revenue.
- Comparison And Price Sensitivity: Intense competition in the online insurance space makes it challenging to maintain pricing strategies and profitability.

3. OPPORTUNITIES

- Increased Awareness: The Covid-19 Pandemic has highlighted the importance of financial planning therefore, the company is well positioned to benefit from this rising awareness of insurance policies.
- Building Offline Presence: Even today India's insurance industry is only 10% digital and 90% offline. To grow further it needs to capture the offline segment by setting up retail outlets in the country.
- Pursuing International Expansion: Policybazaar has invested approximately 36 crore in its subsidiary in Dubai, PB FINTECH FZ LLC. Currently this venture has sold about \$100 million worth of term insurance plans and policybazaar plans to up this tally to \$1 billion.
- Technology: The insurance sector is highly driven by technological advancement. Each innovation such as Artificial Intelligence, Machine learning will help in the growth of this sector.
- Market Expansion: The Policybazaar can expand its operations geographically, tapping into new markets and demographics. On February 17, 2024 IRDA upgraded the licence of policy bazaar from 'direct insurance broker' to 'composite insurance broker' enabling it to enter the reinsurance business.

4. THREATS

Increasing Competition: Competition has increased in the industry because many new competitors have entered the market and policybazaar is at risk of losing its market share.

- Government Regulation: Government regulations are a threat to insurance companies as their growth and future are dependent on government regulations which keep on changing.
- Cyber Attacks: Cyber attacks can lead to the loss of confidential data, business and reputation. Reputation damage is difficult to recover since trust is important in this sector so insurance companies must use methods like encryption etc to protect itself from cyber attacks.
- Low Current Ratio: The company's current solvency ratio which measures the company's ability to meet short-term financial commitments is below industry average. This means that the company can face liquidity problems in future.
- Partners Leaving the Platform: Today, Policybazaar has 51 insurance partners that it works with and the company does not have any contracts with these partners. At any point of time these partners may choose to leave the platform.

CONCLUSION

Policybazaar with its market leadership and diverse product portfolio, has established a strong presence in the insurance comparison industry. However, it needs to navigate challenges such as dependance on partners and potential regulatory changes. Opportunities lie in untapped markets and innovative product offerings. Policybazaar's strategic focus on innovation, digitalisation and risk management will play a pivotal role in shaping its future in the dynamic insurance landscape.

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Vibhuti Arora B.Com (FS) Sem-II

Two rules for a peaceful life:

Depression in failure
should never go to heart,
and
ego in success
should never go to the brain.

APJ Abdul Kalam

SIBLING SUCCESS THE FIREBOLT BRAND STORY

INTRODUCTION

Firebolt is India's number one smart watch brand and fourth largest smart watch brand globally. It is a leading smartwatch brand that combines innovative technology with sleek designs to provide users with a comprehensive fitness and lifestyle experience. In 2015, it was started by brother and sister, Arnay Kishore and Aayushi Kishore. Coming from the family of entrepreneurs, the siblings have leveraged their flair and inclination towards business for something bigger and more impactful than business as usual. It aims to make smartwatches accessible to everyone, offering high-quality products at affordable prices. With a strong online presence and partnerships with leading e-commerce platforms, it has become a go-to brand for smartwatch enthusiasts and fitness enthusiasts alike. Firebolt serves in B2C space in the High Tech, Retail, Health Tech market segments. It is associated with two legal entities, Savex Technologies Private Limited and Bolt Games Private Limited. It has its headquarter in Mumbai, Maharashtra, India. Firebolt makes premium Fitness and Fashion products for men and women combined with cutting edge technology. Its major product lines include Bluetooth speakers, Smart Wearable, Lifestyle shoes and software to stay connected. It is a brand that prioritizes innovation, style, and customer satisfaction, making it a popular choice in the smart watch market.

Source: https://business.linkden.com

JOURNEY

Their journey began by collaborating with Chinese manufacturers to sell smart bands at an affordable price of ₹1999. The brand got backing from Savex Technologies, India's third largest IT and telecom distributor which secured them massive retail network advantages. Bolt has bagged many prestigious awards including the Frost and Sullivan companies to Action award 2017 in the wearable technology category and has been featured in top media and press publications. When India was in the midst of a pandemic, Kishore thought it was the right time to take a leap of faith. He launched smart watches in October 2020 with the starting range ₹2999. In 2021, he rolled out the Ninja series of smartwatches at a price of ₹1699. Other than that firebolt is associated with some of the most renowned names in India like Nikki Keshav, Virat Kohli, Shubman Gill, Kiara Advani, Vijay Devarakonda, Vicky Kaushal and MS Dhoni. Within 15 months the brand scaled and became the biggest name in the smart watches category with a market share of 27%.



Source: https://mad-over-marketing.com

STRUGGLE

Fire-Boltt, a popular smartwatch brand, has faced various struggles despite its success. The brand has encountered intense competition in the market, particularly from established players like Apple, Samsung, Xiaomi, Noise and Fitbit. Ensuring consistent quality and reliability across products has been a challenge, especially in the early stages of growth. Building a strong brand identity and creating awareness among consumers has also been an ongoing struggle. Additionally, Fire-Bolt has had to navigate the challenges of providing efficient customer support, continuously innovating products to keep pace with evolving technology and consumer preferences, managing the supply chain, maintaining competitive pricing, protecting its brand from counterfeiting and imitation, ensuring regulatory compliance, and scaling the business while maintaining quality and efficiency. Despite these struggles, Fire-Bolt has continued to innovate, adapt, and grow, solidifying its position as a leading smartwatch brand.

REWARDS AND RECOGNITION

Bolt has bagged many prestigious awards including the Frost and Sullivan companies to Action award 2017 in the wearable technology category and has been featured in top media and press publications. Following the remarkable success of Fire-Boltt in India and across the globe, Arnav Kishore, Founder and CEO at Fire-Boltt has been featured in the most prestigious 'Forbes 30 Under 30 Asia' List in 2022. It has also showcased and won awards for its solution across reputed tech platforms like TechCrunch and CES. In 2023, it won best D2C game changer brand for the year at the e4m D2C Awards 2023. Recently, in 2024, Fire-Boltt won an award at the Awards 2024 powered by One Show.

AVAILABILITY

Firebolt is available on both offline as well as online market Talking about the Offline market, Firebolt currently has over 20,000 points of sales in the market. It is present in 300 cities in top Metros and tier 2 and 3 towns. As for the online market, the brand has almost 50% combined share on E-Commerce platform like Amazon, Flipkart and Myntra. It also has its website that is www.firebolt.com where it promises delivery within 48 hours.

CURRENT SCENARIO

Firebolt started selling 100 watches units on Amazon. Today, they have a selling rate of more than 30000 units a day. Firebolt has grabbed the first spot in the Indian smart watches market with the market share of 28.6% as per the latest International Data Corporation report. While the company got the second spot in wearable category, it secured growth of 238.8% year over year from 6.6% to 12.4% in Q1 2023. Their product range featuring 60 + smart watches model, caters to diverse customer segments ensuring there is something for everyone. Globally, Firebolt ranked alongside Apple and realme as the fastest growing smartwatch player. Currently MS Dhoni is brand ambassador of Firebolt. Recently Firebolt has also entered in UAE and South Asian markets. It has newly launched a display smart watch Ninja Call Pro Max 2.01

Table 1 shows the growth of firebolt along side other smart watch brands for the year 2022-23.

Company	1Q22 Share	1Q23 Share	1Q22 vs 1Q23 Growth
Fire - Boltt	24.6%	28.6%	224.6%
Nexxbase (Noise)	23.4%	21.6%	157.6%
Imagine Marketing (Boat)	15.1%	17.5%	222.2%
Titan	2.3%	3.3%	291.1%
Boult Audio	±5	3.2%	- A - A - A - A - A - A - A - A - A - A
Others	34.6%	25.8%	108.6%
Total	100%	100%	178.9%

Source: https://devicenext.com/

FUTURE STRATEGIES

The future motive of Firebolt is to start exporting from India. In one of the interview with economics times, Arnav Kishore said that Firebolt is manufacturing almost 100% in India like semi-knockdown route where the major parts are being imported but then the entire assembly is happening in India. Now they will also be working with some local semiconductor players and will be indigenizing the entire watch from the PCB(Printed Circuit Board) to the chip set to the entire schematics of the products all in India. No other brand has been able to do this. Firebolt is also trying to open up more categories which are right now not existing. For example: all the smart watches more or less look like with some straps and display and now they are trying to get into fashion in a long way. If there is a special woman customer who likes to wear ornaments, they come up with a collection for that.

CONCLUSION

It is rightly said that "There can be no better companion than a brother. There can be no better friend than a sister." The sibling duo has exemplified the strength of such companionship, turning shared dreams into thriving businesses that leave an indelible mark on the Indian startup landscape. Their story inspires, reminding us that when siblings unite their aspirations, there are no limits to what they can achieve together.

Gurpreet Kaur Nikhar Sharma B.Com FS Sem-IV

Terms Related to Startups

Decacorn: A startup with a current valuation of over USD 10 billion.

Unicorns: Start-ups founded after the year 2000 with a valuation of USD 1 billion.

Gazelles: Start-ups that are most likely to go Unicorn in the next three years.

Cheetahs: Start-ups that could go Unicorn in the next five years.

INVESTMENT EVOLUTION EXPLORING DIGITAL GOLD IMPACT

'A fetish for gold is deeply embedded in the human psyche' - John Kay.

Gold in India is culturally, religiously and economically significant. It is integral to religious ceremonies, a cherished family heirloom, a symbol of wealth and power and a popular investment due to its perceived safety and ability to provide protection against inflation and economic uncertainty.

Despite being one of the expensive metals, India is a significant importer of gold, and its import value has been increasing over the years. In fiscal year 2023, India imported more than 2.8 trillion Indian rupees worth of gold. In 2021, India imported \$58.4 billion in gold, making it the second-largest importer of gold in the world.

Due to the changing environment and rapidly changing technology, greater access to banking facilities, explosion of the digital economy, and increasing awareness about financial investment avenues, consumer preference is slowly moving away from physical gold to digital avenues.

Digital gold is an online alternative to physical gold. It is the equivalent amount of gold that we would get if we purchased it offline. Digital gold is securely stored in an insured vault and we always have the flexibility to sell any portion of it at market rates.

One of the advantages that make digital gold popular is that we can start investing in it for as low as ₹1. Moreover, all the digital gold is 24K and government certified. Hence, it ensures purity and minimises the risk of fraud.

Digital gold was introduced in India by the way of SOVEREIGN GOLD BONDS in 2015 under Gold Monetisation Scheme with an objective to reduce the demand for physical gold and shift a part of the domestic savings, used for the purchase of gold, into financial savings.

DIFFERENT AVENUES OF INVESTING IN DIGITAL GOLD

Gold Exchange Traded Funds (ETFs)

Exchange traded funds have emerged as a very simple way to invest in gold. Gold ETFs are simply those funds that invest in gold and can be bought and sold on stock exchanges like common stock. Investors are required to purchase a minimum of one unit that is equivalent to one gram of gold to begin trading in gold ETFs.

Some of the popular gold ETFs in India include Axis Gold ETF, Birla Sun Life ETF, HDFC Gold Exchange Traded Fund, UTI Gold Exchange Traded Fund, Reliance Gold Exchange Traded Fund etc.

Gold Mutual Funds

Investors can add gold to their portfolios by purchasing shares in mutual funds. Certain mutual funds base their holdings on stocks of international gold mining companies and other assets exposed to the gold market, like gold ETFs. These mutual funds track the price of gold as the assets they own rise and fall in value.

Invesco India Gold Fund, SBI Gold, Nippon India Gold Savings Fund, DSP World Gold Fund

Quantum Gold Savings, IDBI Gold Fund and Kotak Gold count are among the popular gold mutual funds in India.

These mutual funds charge investors an expense ratio, a charge for managing the fund as well as a charge of buying the underlying assets. That means one will be paying fees to own gold mutual funds.

Gold Futures Contracts

Gold futures are standardized contracts that trade on organized exchanges. In India, Multi Commodity Exchange or the MCX and NCDEX are popular exchanges for gold futures trading.

The way a gold futures contract works is that the investor makes a commitment to buy or sell a specific quantity of gold at an agreed price in the future. These gold futures contracts must be honored by investors by either purchase or sale in anticipation of a profit or loss. In any case, the settlement of the contract happens at an expiry date and the investor is free to buy, sell or hold the contract till expiry.

Gold option

A gold option is a contract option with the underlying asset being gold. A Gold Call Option would give the holder the option to buy bullion at a fixed price at a future date, but not the obligation. While a put option would offer the holder the right to sell at a predetermined price point. Traders of options have to be right about the timing and the scale of market movements to make money on a deal traders of option could find.

Sovereign Gold Bonds (SGBs)

The Government of India offers sovereign gold bonds via the Reserve Bank of India. These bonds, which were launched in 2015, aren't the most popular among Indian masses yet. Though they are considered lucrative given their sustained return on investment.

A sovereign gold bond gives investor two advantages: price appreciation plus a 2.5% yield.

STATISTICS ABOUT THE IMPACT OF DIGITAL GOLD AS AN INVESTMENT OPTION IN INDIA

Digital gold investments are gaining attraction across different age groups: -

- The survey by Axis My India, a consumer data intelligence company showed an increase in investment with age, with 67% of 25-34 year-olds and 76% of 35-44 year olds investing in digital gold.
- The report also revealed an increasing popularity with the young population as 15% of them in the age group of 18-24 years, showed a strong intent to invest into digital gold. Of those who invest in digital gold – 55% are males and 45% are females, 48% belong to 25-34 years, and 56% are married with children.
- 11% in Metros, 11% in Tier-I, and 8% in Tier-II have already invested in digital gold, demonstrating its growing reach across different population strata.

Source: https://www.livemint.com/money/personal-finance/gold-investment-popular-in-metro-cities-digital-gold-awareness-on-rise-report-11665649090947.html

RISKS-REWARDS ASSOCIATED WITH INVESTING IN DIGITAL GOLD REWARDS

- Accessibility and Convenience: Digital gold platforms allow investors to buy and sell gold online, eliminating the need for physical storage or security concerns. This accessibility ensures that individuals from any part of India can invest in gold with just a few clicks.
- Affordability: Investing in physical gold typically involves significant upfront costs. Digital gold, on the other hand, allows investors to buy small quantities, starting from as low as 0.1 grams. This affordability factor makes it accessible to a wider range of investors, including those with limited financial resources.
- Transparency and Security: Digital gold platforms operate on a transparent framework, providing real-time pricing and secure transactions, safeguarding investors' interests.
- Liquidity: One of the significant advantages of digital gold is its high liquidity. Investors can easily sell their gold holdings and convert them into cash whenever needed.
- Fixed Annual Interest Rate: Sovereign Gold Bonds (SGBs) offer a fixed annual interest rate of 2.5%, making them an attractive low-risk investment option backed by the government.

RISKS

- Market Volatility: The price of digital gold is subject to market fluctuations, and while gold has historically been a stable investment, its value can still experience short-term volatility. Investors must be prepared to ride out price fluctuations and have a long-term investment horizon.
- Counterparty Risks: Investors should be cautious about choosing a reliable and trustworthy digital platform. There have been instances of fraudulent schemes operating under the guise of digital gold, so it's crucial to conduct thorough research before investing.
- Storage and Security Risks: Although digital gold eliminates the need for physical storage, the security of digital assets is still a concern. Investors should choose platforms that employ robust security measures such as encryption, multi-factor authentication, and secure payment gateways to protect their investments
- Lack of Regulatory Bodies and Guidelines: The absence of proper regulatory bodies and guidelines for digital gold investments can make it challenging to navigate the investment landscape and may lead to potential risks.
- Cyber Risks: Digital gold ownership is subject to cyber risks such as hacking or fraud, which can compromise the security of the investment.

CONCLUSION

Due to the changing scenarios and technology digital gold is gaining popularity among people as an investment option due to its convenience, accessibility and lower transaction costs. Physical gold, on the other hand, is still considered a safe haven asset for long-term wealth preservation. The choice between investing in physical gold or digital gold depends on various factors, including investment goals, time horizon, risk tolerance and cost.

Dolly Bhatia B.Com Sem-VI

DIGITAL AWARENESS UNVEILING THE DIGITAL ARREST SCAM

Digital arrest involves the virtual restraint of individuals. In the era of digitisation where the technology is growing on an exponential phase, various existing loopholes are being utilized by the wrongdoers which has given rise to this trend of digital arrest scam. In this scam, scammers impersonate law enforcement officials like police, anti narcotic or custom officials to manipulate victims. The scammers employ tactics to create a sense of urgency, asserting that the recipient is implicated in illegal activities online. Fearful of legal repercussions, victims are coerced into immediate action. They demand personal information, payment, or access to sensitive data, playing on the victim's anxiety to comply swiftly. In reality, these demands have no legal basis, and falling prey to them can lead to severe consequences. However, with the convenience of technology comes the lurking threat of scams, and one such insidious scheme has emerged—the Digital Arrest Scam.

Scam Tactics

- ❖ Fake government agencies: Scammers pretend to be from government agencies like the FTC, Social Security Administration, and IRS or say they're calling about your Medicare benefits. They contact you and say that, if you don't pay or give them your personal information, something bad will happen. Or maybe you'll miss out on some government benefit. But it's a scam. Learn the signs and avoid the scam.
- Urgent threats:- Urgent call to action or threats Be suspicious of emails and Teams messages that claim you must click, call, or open an attachment immediately. Often, they'll claim you have to act now to claim a reward or avoid a penalty. Creating a false sense of urgency is a common trick of phishing attacks and scams.
- Impersonation of authorities: A government impersonation scam often starts with a call, email, text, or social media message from someone who says they're with a government agency. They might give you their "employee ID number" to sound official. And they might have information about you, like your name or home address.
- Unexpected calls and emails: Scammers try to copy email and text messages from legitimate companies to trick you into giving them your personal information and passwords. These signs can help you identify phishing emails: The sender's email address or phone number doesn't match the name of the company it claims to be from.
- Pressure to act quickly: Scammers pressure you to act immediately. Scammers want you to act before you have time to think. If you're on the phone, they might tell you not to hang up so you can't check out their story. They might threaten to arrest you, sue you, take away your driver's or business license, or deport you.
- Request for immediate payment:- Online Scammers are hacking into individuals' phones and sending fraudulent text messages, demanding immediate payment to avoid power disconnection or other essential services.

Preventive Measures

- Verify the Source: Only use the official websites and apps provided by legitimate electricity providers for making online bill payments.
- Verify Payment Requests: Always double-check the authenticity of payment requests and the sender's information before making any transactions. Be cautious of any suspicious or urgent payment demands.
- Use Secure Communication Channels: When seeking assistance or making inquiries about payments, only communicate through legitimate customer support channels provided by the electricity provider. Do not share personal or financial information with unknown or unauthorized sources.
- Use Official Apps: Download UPI (Unified Payments Interface) apps only from trusted and verified sources, such as official app stores.
 - In case you become a victim of this electricity bill payment scam, it is crucial to take immediate action to minimize potential damage and prevent further losses.
 - Unfortunately, the internet is full of people who will do anything to make a quick buck. Hackers and spammers all over the world want your private information and will make ruthless attempts to get it.
- Take time to verify information: Always be cautious while verifying any OTP or any financial information.
- 6. Confirm legitimacy before paying: To assess if a company asking for payment after selection is legitimate or fraudulent, consider conducting thorough online research to verify their reputation, checking contact details for authenticity, reviewing their policies, trusting your instincts about the request, and seeking advice from trustworthy sources.
- 7. Consult legal advice if needed: Any written or verbal advice addressing a legal matter that affects the obligations and rights of the person receiving it is considered legal advice. It frequently calls for legal expertise and cautious consideration.

Case study on Digital Arrest Scam

In a recent case, a 23-year-old woman from Faridabad fell victim to this scam, losing Rs 2.5 lakh to cybercriminals who posed as customs officers. In the mentioned case, the victim was coerced into believing she was involved in a passport trafficking case and may have to pay Rs 15 lakh to avoid a "digital arrest." She finally settled the issue for Rs 2.5 Lakhs. The fraudsters warned her not to log off Skype during the ordeal.

Conclusion

As we navigate the intricate web of the digital world, understanding and vigilance are our greatest allies. Unveiling the digital arrest scam is not just about exposing a specific threat but rather encouraging a broader understanding of the digital landscape. By promoting digital awareness, we fortify ourselves against the myriad scams that can compromise our security in an interconnected world. It is important to educate the public with regards to the non-existent nature of digital custodies in a clear and concise way.

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REMOTE WORK ON THE RISE IN INDIA SHAPING A NEW WORK CULTURE

Introduction

In today's fast-paced world, remote work has emerged as a game-changer, transforming the way businesses operate. The rise of technology and connectivity has paved the way for a flexible work environment, blurring the boundaries between the office and home. This article delves into the impact of remote work on business dynamics and explores the opportunities and challenges it presents. Remote work, also known as telecommuting or working from home, has become increasingly popular in recent years. With advancements in technology and the rise of digital connectivity, more and more companies are embracing remote work as a viable option for their employees. This shift in work dynamics has brought about several changes in the business world.

Remote work has had a significant impact on business dynamics. It has changed how companies operate and collaborate. With remote work, employees can work from anywhere, which increases flexibility and can lead to better work-life balance. It also allows businesses to tap into a global talent pool and reduce costs associated with office space. However, it can also present challenges in terms of communication, team cohesion, and maintaining work-life boundaries. Overall, remote work has reshaped the way businesses function and adapt to a changing world.

The rise of remote work:-

Remote work has been gaining popularity over the past decade or so. It started becoming more mainstream with advancements in technology and the increasing desire for work-life balance. Now, it's become even more prevalent due to the COVID-19 pandemic. The COVID-19 pandemic has also played a significant role in accelerating the adoption of remote work. With the need for social distancing and lockdown measures, companies had to quickly shift to remote work to ensure business continuity. This forced experiment has shown that remote work can be successful and productive, leading many organizations to consider it as a long-term option. The traditional 9-to-5 office setup is no longer the norm. Remote work has gained popularity, enabling employees to work from anywhere, be it their homes, co-working spaces, or even while travelling. This shift has opened up new possibilities for businesses, allowing them to tap into a global talent pool and overcome geographical limitations.

ADVANTAGES OF REMOTE WORK

1. Enhanced Productivity and Work-Life Balance:- Remote work has shown that productivity is not tied to a physical location. In fact, studies have revealed that remote workers often exhibit higher levels of productivity. The flexibility to create a personalized work environment and the elimination of commuting time can significantly improve work-life balance, leading to happier and more engaged employees. Remote work has had both positive and negative effects on organizations and their stakeholders. On the positive side, remote work has allowed organizations to expand their talent pool and access skilled individuals from different locations. This can lead to a more diverse and dynamic workforce. Additionally, remote work has the potential to increase employee satisfaction and retention.

Happier employees are often more productive and engaged. From a supplier's perspective, remote work can impact their position in various ways. Suppliers that offer remote collaboration tools or services may experience increased demand. Overall, the impact of remote work on organizations and suppliers can vary depending on the specific circumstances and how well they adapt to the remote work model.

- 2. Redefining Teamwork and Collaboration:- With remote work, teamwork has taken on a new form. Virtual collaboration tools and video conferencing platforms have bridged the gap between team members spread across different locations. However, effective communication and fostering a sense of camaraderie become crucial in ensuring successful remote work also on the other side encourages asynchronous collaboration.. With team members in different time zones or working flexible schedules, not everyone is available at the same time, therefore Asynchronous collaboration allows individuals to work on their own time and still contribute to the team's progress. This can be done through shared project management tools, document collaboration platforms and e mail.
- 3. Cost Savings and Sustainability:- For businesses, remote work can translate into significant cost savings. Reduced office space requirements, lower utility bills, and decreased transportation expenses all contribute to a more sustainable and economical approach. Embracing remote work can align with a company's sustainability goals while also benefiting the bottom line

CHALLENGES

- Communication and Collaboration- When working remotely, it can be challenging to maintain effective communication and collaboration among team members.
- Team Bonding and Culture-Building a strong team bond and maintaining company culture can be more challenging in a remote work setup.
- Productivity and work life balance- Remote work can blur the boundaries between work and personal life, leading to potential challenges in maintaining productivity and work-life balance.
- Performance Evaluation-Assessing remote employees' performance can be more challenging compared to in-person work.
- Technology and Infrastructure-Remote work heavily relies on technology and a stable internet connection.
- Technology adaptation-Businesses will need to keep up with ever-evolving technologies and tools to support remote work effectively.
- Communication barriers-Remote work can lead to communication gaps and misunderstandings due to reliance on digital communication channels.
- Collaboration difficulties- Collaborating on projects and tasks can be challenging when team members are not physically present, requiring effective coordination and virtual collaboration platforms.
- Team cohesion- Building and maintaining team cohesion and a sense of camaraderie can be more challenging when team members are dispersed geographically.
- Managing productivity- Ensuring consistent productivity and accountability among remote

- workers can be a challenge without proper monitoring and performance management systems.
- Isolation and disconnection- Remote workers may experience feelings of isolation and disconnection from colleagues, which can impact morale and teamwork.
- Time zone differences- Working across different time zones can make scheduling meetings and coordinating work more complex.
- Distractions and work-life balance- Remote workers may face distractions at home, making it crucial to establish boundaries and maintain a healthy work-life balance.
- Cybersecurity risks- Remote work introduces additional cybersecurity risks, such as data breaches and unauthorized access to sensitive information.
- Leadership and management challenges- Managing remote teams requires strong leadership skills, effective communication, and trust-building to ensure everyone is aligned and motivated.

Examples of companies providing remote work opportunities:

- Uplers
- Zigsaw
- Google
- LinkedIn
- Square
- Dell technologies
- Oracle India
- HCL technologies
- Accenture India
- Mindtree limited

Conclusion

Remote work is still a relatively new concept in the professional world. Remote work has revolutionized the way we work and has become an integral part of the future of business dynamics. By adapting to remote work, companies can access a global pool of talent, reduce overhead costs and increase Despite of many advantages there are many challenges in front of companies and it is not possible for all companies to follow remote work practices according to the nature of the work

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CRYPTOCURRENCY AN INNOVATION OR SPECULATIVE BUBBLE

Introduction

Cryptocurrencies are digital tokens. They are the type of digital currencies that allow people to make payments directly to each other through an online system. Cryptocurrencies have no legislated or intrinsic value. They are simply worth what people are willing to pay for them in the market. It is a digital currency secured by encryption, functioning independently of traditional banks. It operates on a decentralized system, utilizing blockchain technology and cryptography for secure peer-to-peer transactions. Cryptocurrencies are different from physical money because these only exist in digital form, and no central authority controls or regulates them. This makes them distinct from central bank digital currencies (CBDCs), which are digital versions of a country's official currency issued and regulated by the central bank. A blockchain is a secure and shared digital ledger that records transactions across multiple computers. Once a record is added, it can't be changed without agreement from the entire network. The decentralized control of cryptocurrencies, facilitated by distributed ledger technology like blockchain, establishes a transparent and public financial transaction database. In India, an investor can buy Bitcoin in Indian Rupees with a minimum capital of Rs. 100. This limit could vary between various crypto exchanges.

Origin of Cryptocurrency in India

The journey of cryptocurrency started with the publication of a paper titled "Bitcoin: A Peer to Peer Electronic Cash System" in 2008 by a pseudonymous developer by the name of Satoshi Nakamoto. The initial years, spanning from 2013 to 2017, saw uncertainties and warnings from the Reserve Bank of India (RBI). In 2018, discussions unfolded as a committee drafted a bill, signaling the government's interest.

The year 2020 witnessed a significant turning point when the Supreme Court lifted the RBI's ban on cryptocurrencies, paving the way for further developments in the crypto landscape. The subsequent years, particularly 2021 and 2022, featured ongoing discussions, proposed bills, and regulatory measures, shaping the trajectory of cryptocurrency in India. In the Union Budget for 2022-23, the Indian government announced a 30% tax on income generated from cryptocurrencies, marking a significant development in the regulatory landscape.

Types of Cryptocurrencies

Cryptocurrencies come in two primary forms:

- Coins
- Tokens

Coins, whether virtual, digital, or tangible, operate on their own blockchain, functioning much like traditional money. Notably, Bitcoin, the pioneering cryptocurrency, falls into this category, having its dedicated blockchain. On the other hand, tokens are digital assets existing on a blockchain but utilizing another blockchain's infrastructure. Tether, hosted on the Ethereum blockchain, exemplifies this category.

Beyond these giants, there are alternative cryptocurrencies, termed "altcoins," including

- Cardano
- Solana
- Dogecoin
- XRP

While it's challenging to determine the best, Bitcoin and major alteoins stand out due to their scalability, privacy features, and diverse functionalities, collectively shaping the landscape of digital currencies.

Cryptocurrency : An Innovation or Speculative Bubble

Cryptocurrency, like Bitcoin and Ether, is a new kind of digital money causing a stir. Cryptocurrency in India offers financial inclusion, protection against inflation, remittance benefits, fast transaction and decentralization. However it faces regulatory challenges, volatility, fraud, risk, power consumption and impact on traditional banking. That is why some say it's a big change while others think it is just a risky game.

Cryptocurrency as an Innovation

Cryptocurrency is considered an innovation because it introduces a new way of thinking about money and financial transactions. Here are a few key aspects of its innovation:

Financial Inclusion:

Cryptocurrencies enable financial inclusion by providing access to banking services for the unbanked and underbanked populations. For instance, in regions with limited banking infrastructure, individuals can participate in the global economy using cryptocurrencies. The M-Pesa mobile payment system in Kenya showcases how digital currencies can empower users who lack traditional banking access.

2. Enhanced Privacy

Cryptocurrencies, operating on a decentralized system facilitated by blockchain technology, offer enhanced privacy in financial transactions. The intrinsic cryptography ensures secure and transparent peer-to-peer transactions, eliminating the need for intermediaries.

3. Revolutionizing Industries

Cryptocurrencies, driven by decentralization and blockchain, are reshaping healthcare and supply-chain sectors. In healthcare, blockchain-enabled secure patient records streamline communication, reducing errors. In the supply chain, cryptocurrencies create transparent, traceable transactions, automating processes and enhancing efficiency. Their adoption in economic crises, as in Venezuela, showcases their role in societal changes, navigating challenges dynamically.

Cryptocurrency as a Speculative Bubble

Cryptocurrencies have sparked wild price swings and attracted investors eager for quick gains. This

fervor often resembles a speculative bubble, with prices driven more by speculation than intrinsic value, leading to market volatility and risks akin to historical bubbles.

Cryptocurrency as Speculative Assets: A Lack of Intrinsic Value

Unlike traditional commodities such as gold, which possess inherent worth and utility, the value of cryptocurrencies relies heavily on market perceptions and demand. The surge and subsequent crash of Bitcoin in 2017 illustrate the speculative nature of its value, driven by investor sentiment rather than concrete fundamentals. Cryptocurrencies lack tangible backing, contrasting with fiat currencies, leading to price volatility influenced by market dynamics and external factors.

Market volatility and price fluctuations:

Cryptocurrencies exhibit market volatility and price fluctuations primarily due to their speculative nature. The value of these digital assets is often driven by investor sentiment, with prices influenced by expectations, perceptions, and the "greater fool theory," where investors buy with the hope of selling to someone else at a higher price.

3. Regulatory Factors

The uncertainty in the cryptocurrency market stems from the fact that it lacks centralized regulation, and rules vary across different countries. For instance, in India, there was a banking ban on crypto in 2018, but the Supreme Court lifted it in 2020. Governments worry about the potential misuse of cryptocurrencies, as seen in cases like the Silk Road. Examples like PayPal allowing crypto transactions and JPMorgan's changing stance on Bitcoin, from calling it a fraud to facilitating transactions, show the evolving and sometimes contradictory nature of cryptocurrency regulations.

Challenges

Navigating the terrain of cryptocurrency in India has been marked by challenges and a continually evolving regulatory landscape. Understanding these intricacies is crucial to grasp the dynamics of this emerging financial sector.

1. Regulatory Ambiguity:

India faced challenges in providing clear regulatory frameworks for cryptocurrencies, leading to uncertainty among market participants. The absence of well-defined guidelines hindered the industry's growth and created an environment where scams and fraudulent activities could thrive.

Ponzi Schemes:

The regulatory vacuum contributed to the proliferation of scams, exemplified by the Solar Techno Alliance Ponzi scheme investigation. The Solar Techno Alliance (STA) was a ponzi scheme disguised as a cryptocurrency investment scheme in India that promised investors returns of up to 20% per month through investments in solar energy projects. The scheme was operated by several individuals who lured investors with the promise of high returns and referral bonuses. However, it turned out to be a fraud and many investors lost their money.

3. Market Volatility and Price Swings:

Cryptocurrency's inherent volatility led to apprehensions among potential investors. Dramatic price swings, while presenting opportunities for gains, also posed risks, making some investors wary.

Investor Insights and Future Prospects:

Large institutional players like BlackRock expressed optimism, and the potential approval of a Bitcoin ETF in 2024 could attract trillions of dollars in institutional capital, indicating a positive shift in the market. However, caution is advised as the regulatory landscape evolves.

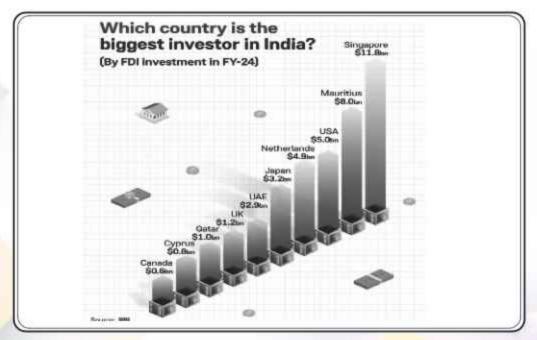
Conclusion

The evolving landscape of cryptocurrency in India reflects a dynamic interplay between disruptive innovation and speculative concerns. Cryptocurrency opens up new investment avenues for Indians. As discussed earlier, cryptocurrency don't need an intermediary to facilitate transactions and every transaction happens with the help of code which make this market more riskier. Investors and stakeholders must navigate this complex terrain with a keen awareness of the ongoing developments and a balanced approach towards the evolving regulatory landscape.

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Chanpreet Kaur Cavery Mahajan B.Com Sem-VI





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EDITORIAL

Dear Readers

In today's fast paced digital age, the relationship between economy and technology has never been more intertwined. The fusion of these two realms continues to shape our world in unprecedented ways, infusing industries, markets and societies at large.

Technological advancements have revolutionized the economic landscape, innovation, efficiency and productivity across various sectors. From artificial intelligence and big data analysis to block chain technology and the internet of things, the digital revolution has opened up new possibilities for economies to grow. As a result, the workforce is evolving, and individuals need to adapt to these changes to remain relevant in the job market. Hence, adopting the technology is must to remain updated.

At the same time there is no denying that hard work, rational thinking, and dedication remain crucial for achieving success. These factors will persist forever and will frame the success stories of person believing and practicing these values. And you would agree that the factors which are common in these stories are- setting clear goals, using resources wisely, analyzing challenges, planning strategies, managing time effectively and continuously learning for further improvement. By focusing on creative and complex tasks that promote critical thinking and problem-solving skills, the successful persons unlock their full potential and achieve great heights. Another factor that is important to consider is time, which is a valuable asset that can be invested or wasted. Allocating time wisely has a direct impact on personal and professional development. Investing time in education, skill development, and critical thinking activities yields personal growth and fulfillment. Hence, at this stage learning how to manage time effectively is important. Learning this skill is helpful for maximizing productivity, avoiding procrastination and meeting deadlines, making the most of the limited time we have, reducing stress and the most significant one is achieving a healthy work-life balance. So, stay focused, work hard, and think rationally to achieve success and make the most of the opportunities that technology has provided.

Enjoy Your Time Wisely!

Harpreet Kaur Uppal

Asst. Prof.

STUDENT EDITORIAL

'A quality education grants us the ability to fight the war on ignorance and poverty."

-Charles B. Rangel

A quality education is one that focuses on the whole child—the social, emotional, mental, physical, and cognitive development regardless of caste, colour, gender, ethnicity, socioeconomic status, or geographic location. It is based on the pillars of providing excellent teaching, utilizing and providing access to developmentally appropriate and effective learning tools, and establishing supportive learning environments. The outcomes of quality education enable individuals, communities, societies and nations to prosper.

India is among the traditionally rich countries in terms of imparting knowledge and education. India's education system has undergone significant transformations, from traditional Gurukuls to modern schools and now an online/hybrid teaching-learning process. This progression reflects the country's efforts to adapt to changing times, technologies, and societal needs. But, still the quality of India's education ranked 90th in the world, with skills such as critical thinking and problem-solving ranked among the lowest [Source: World Economic Forum (WEF), 2021]. This indicates that there is a need to bridge the gap between the policies and their implementation. This is possible provided each student right from the pre-primary level of education is engaged in meaningful art of dialogue through the art of posing questions. Integrating this art in classroom teaching would definitely facilitate the realization of the aim of the National Education Policy (2020) that focuses on Access, Equity, Quality, Affordability and Accountability for making education more holistic, multi-disciplinary and flexible.

Muskan Mahajan

B.Sc. (Eco.) Sem-VI

LEARNING MATHEMATICS WITH UNDERSTANDING

In the era of knowledge explosion, globalization, information & communication revolution and ever changing society, learning of the basic concepts needs to be based on conceptual understanding. Understanding enables the learner to transfer knowledge or skills acquired in one context in different or new context, to look at the problem from varied perspectives, and to explain it in an easy way to others. The most important feature of learning with understanding is that such learning is generative. When students acquire knowledge with understanding, they can and are able to apply that knowledge to learn new topics, solve new and unfamiliar problems. When students do not understand, they perceive each topic as an isolated one. For instance, in the subject like mathematics they not only find difficulty in applying their numeracy and literary skills to solve problems explicitly covered during the instruction but also are unable to extend their learning to new topics. Moreover, with the addition of knowledge and rapidly changing technologies, one cannot anticipate all the skills that one will need over the lifetime for solving the problems that will be encountered in the future. Hence, each student needs to learn new skills and pedagogies with understanding to solve novel problems. Otherwise, whatever knowledge is acquired, it will be of little use once the student is outside the school/college.

How mathematical understanding is developed?

Acquiring mathematical understanding plays an important and crucial role in mathematics learning. Mathematical understanding entails knowing, perceiving, comprehending, and making sense of the meaning and connotation of mathematical knowledge (Yang et al., 2021). Thomas P. Carpenter and Richard Lehrer (1999) propose five forms of mental activity from which mathematical understanding emerges. These are

- Constructing relationship
- Extending and applying mathematical knowledge
- Reflecting about experiences
- Articulating what one knows
- Making mathematical knowledge one's own.

How to study mathematics?

Thomas P. Carpenter and Richard Lehrer (1999) have suggested the following steps for studying the mathematics.

- Model with mathematics: This practice encourages learners to use the mathematics they know
 to solve problems from everyday life. For example, representing the problem like, "Ranjana has 7 apples
 and gives 2 away, how many apples does she have left?" in the form of an equation to represent a given
 situation and determining the solution.
- Make sense of problems and persevere in solving them: To make sense of problems students need to learn how to analyze the given information, the parameters and the relationships in a problem so that given situation can be understood and possible ways to solve it be identified. For instance, the problem "One fourth of a herd of camel was seen in forest. Twice the square root of the herd had gone to mountain and the remaining 15 camels were seen on the banks of a river. Find the total number of camels." can be first written in the form of an equation and then can be solved using the concept of quadratic equation or splitting the middle term.
- Reason abstractly and quantitatively: This practice involves students reasoning with quantities and their relationships in problem situations. For example, students comprehend and are able

to apply how to convert meters into centimeters or mathematical symbols and figures for representations of a situation symbolically.

- Construct viable arguments and critique the reasoning of others: This practice emphasizes
 the importance of students' using mathematical reasoning to justify their ideas and solutions, including
 being able to recognize and use counter examples.
- Use appropriate tools strategically: This encourages learners to be familiar with a variety of problem solving tools and to learn to choose which one is most appropriate for a given situation.
 - Attend to precision: This promotes learners in communicating ideas to others with reason.
- Look for and make use of structure: Students are made to look for and recognize a pattern or
 structure and experience a shift in their perspective or understanding. For example, helping students to
 notice that the order in which they multiply two numbers does not change the product-both 4 * 7 and 7 * 4
 equal 28. Once students recognize this pattern in other examples, they will have a new understanding and
 use of a powerful property of number system: the commutative property of multiplication that is
 x*y=y*x
- Look for and express regularity in repeated reasoning: This practice involves students to
 reflect on any regularity that occurs and helping them to understand and develop a general idea or
 formula. For example, helping them to use the principle of mathematical induction for having algebraic
 formulae.

Yang et al. (2021) in their research also suggest that for facilitating the formation of an interconnected network of new concepts in the minds of students, teachers should first present students with the definition and subsequently teach them how to create a specific example based on an example of a previously learned concept.

Best ways to study mathematics

There is no specific way to study mathematics. Rather learning mathematics depends on how one learns. One can follow following ways for acquiring proficiency in mathematic.

- Study mathematics every day
- Reading textbooks thoroughly
- Make lists of formulas, properties and theorems
- Review these lists every day
- Engage in mathematical tasks or activities that promote thinking
- Practice all problems until the ability to solve them is mastered
- · Take study break to relax, refresh
- Study with concentration

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Navneet Kaur Priyanka Bharti BSc (Eco.) Sem-IV

PROMOTING RENEWABLE ENERGY

The world is rapidly becoming a global village due to the increasing daily requirement of energy by all population across the world while the earth in its form cannot change. The need for energy and its related services to satisfy human social and economic development, welfare and health is increasing (Owusu, Sarkodie & Dubey, 2016). All societies call for the services of energy to meet basic human needs such as health, lighting, cooking, space comfort, mobility and communication and serve as generative processes (Edenhofer et al., 2011). Securing energy supply and curbing energy contribution to climate change are the two-over-riding challenges of energy sector on the road to a sustainable future (Abbasi & Abbasi, 2010; Kaygusuz, 2012).

It is evident from various studies that replacing fossil fuel-based energy sources with renewable energy sources, which include bio-energy, direct solar energy, geothermal energy, hydropower, wind and ocean energy (tide and wave), would gradually help the world achieve the idea of sustainability. Governments, intergovernmental agencies, interested parties and individuals in the world today look forward to achieving a sustainable future due to the opportunities created in recent decades to replace petroleum-derived materials from fossil fuel-based energy sources with alternatives in renewable energy sources.

Role of renewable energy sources in environmental protection

The most significant feature of renewable energy is its plentiful supply. It is infinite. Renewable energy sources are hygienic sources of energy that have a much lesser negative environmental impact than conventional fossil energy technologies. With technological advancements in mass communication, people have now become aware of the demerits of burning fossil fuels. Renewable energy is the need of the hour. Its clean and sustainable nature has compelled the human beings to think seriously about it. Scientists and Engineers, around the world, are continuously working and researching in this domain. They are finding new ways to use these sources of energy effectively. Global warming is a huge hazard which is being caused by burning of coal, oil and natural gas. It is very harmful for the planet and the living beings on it. Moreover, fossil fuels are a cause of many unfortunate mishaps in the past. To put an end to this apocalypse; we must resort to renewable sources.

Renewable energy sector is comparatively new in most countries and this sector can attract a lot of companies to invest in it. This can create a pool of new jobs for the unemployed. Therefore, renewable energy can play a very significant role in bringing the unemployment scale down in many countries, especially the developing ones. This, in turn, will make a substantial difference to their economies. Renewable energy can make the electricity prices stable as their cost is dependent only on the initial invested capital. This energy is free of the fluctuating costs of coal, oil and natural gas.

Renewable energy sources in India

India has the fourth largest installed capacity of renewable energy as per Renewable Energy Statistics 2023 released by the International Renewable Energy Agency (IRENA). India's total installed renewable energy capacity touched 168.96 GW mark by February 2023-end. Out of the total 168.96 GW, 64.38 GW is solar power capacity, 51.79 GW hydro, 42.02 GW wind and 10.77 GW bio power.

India's total power generation capacity was at 412.21 GW as on February 28, 2023. The government's aim is to achieve 500 GW of installed electricity capacity from non-fossil sources by 2030. The interim budget for 2024-25 has also given a fillip to the green economy to propel towards reliable, cleaner, greener, and sustainable energy and to achieve net-zero carbon emission by 2070. The government's commitment to providing free rooftop solar electricity to 10 million households also signifies a strategic move towards resource-efficient economic growth. This initiative not only ensures energy security but also stimulates entrepreneurship and employment in the evolving renewable energy landscape. For promoting renewable energy in letter and spirit following actions can be taken.

- Policy and Regulations: This includes formulating and setting targets and standards for renewable energy share, carbon emissions reduction, and energy efficiency. It can also involve providing subsidies, tax credits, feed-in tariffs, or net metering schemes that make renewable energy more affordable and competitive.
- Education and Awareness: Raising awareness and educating the public and the stakeholders
 about benefits and potential can promote renewable energy. For this accurate and reliable
 information, data, and examples of successful renewable energy projects and initiatives can be
 provided. It can also involve engaging and empowering the communities, consumers, and
 investors to participate in the energy transition and decision-making process. A culture of
 innovation and entrepreneurship that supports the development and dissemination of renewable
 energy technologies and solutions can further be fostered.
- Innovation and Research: New and advanced renewable energy technologies, such as
 offshore wind, floating solar, or concentrated solar power can be developed. This can involve
 enhancing the existing renewable energy technologies, such as improving the storage,
 transmission, and distribution of electricity from variable sources, and optimizing the use and
 management of renewable energy resources.
- Incentives and Rewards: Incentives and rewards can motivate and attract more users and
 producers of renewable energy. For this financial and non-financial benefit, such as grants, loans,
 prizes, or recognition can be provided. It can also involve creating and expanding the markets
 and opportunities for renewable energy products and services, such as green certificates, carbon
 credits, or green bonds. Further, the collaboration and partnership among the different
 stakeholders and sectors involved in the renewable energy value chain, such as governments,
 utilities, businesses, NGOs, or academia can be facilitated.

Conclusion

India's efforts in adopting renewable energy are laudable. It has immense potential to build on its strong track record and lead the clean energy revolution of the future. For that, we need to implement the policies, generate social cooperation and develop integrated responses linking mitigation and adaptation with other regional and national objectives. Moreover, stakeholders from across government and the private sector must unite to overcome the hurdles that sustain fossil fuel consumption, forming a virtuous circle which strengthens sectoral capabilities, drives up productivity, scales sustainable solutions and makes India an exemplar of a brighter energy future.

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Ritika

M.Com Sem-IV

Ideas4LiFE Portal

Ideas4LiFE portal has been recently launched at IIT Delhi for inviting ideas related to products and services, which induce behavioral changes related to environment-friendly lifestyles. This initiative aims to encourage and motivate students, faculty and research scholars to contribute their innovative ideas to the global initiative of Mission LiFE. It is a remarkable opportunity for inspired minds to participate in global movement dedicated to environmental sustainability.

UNDERSTANDING HOW MOTHERS HELP KIDS READ: A STUDY ON PARENTAL INVOLVEMENT

People become well informed and get proficiency in language by reading. Reading is the practice of learning from literary material such as books, articles, magazines, reports and novels. This learning is transferred through language and requires a person to read proficiently in order to fully comprehend written text. Reading plays an important role in getting information, developing understanding and making use of information. Knowledge and ideas related to any topic, subject, issue and problem are comprehended by reading and thinking. Reading increases cognitive activity of the person as well as helps in building moral characters. Reading becomes a habit once it is done on a regular basis which can be daily, weekly or monthly.

Reading is not an activity that is performed mechanically, but requires our full attention and involvement. This task requires high motivation and dedication. As it is not an innate activity in people, it is an exercise that with practice, effort, and the use of certain strategies, can help individuals to achieve a complete mastery of it. To achieve this, it is essential that the reader is motivated and attracted by this task (Jiménez et al., 2020). The family and school environment facilitate the practice of reading. Mothers are a valuable part of a family because they fulfill important responsibility of the family by looking after the children. Mothers are culturally more responsible than fathers to do household activities and childcare tasks. Mothers use warmth, praise, and emotional affection to deal with their children's behavior. Mothers provide protection, care, affection, help and forgiveness to their children. Child caring is special as it cannot be measured or seen. It is a challenging, time consuming and endless responsibility. Samman, Presler-Marshall, Jones (2016) emphasized that "too much of the responsibility for childcare falls on women". This responsibility is constant along as a variety of task, activities and performances need to be done. Child care involves children's physical, emotional, cognitive and social development. At different stages of childhood, different type of attention, actions and trainings are required for good child's development. In order to fulfill responsibilities mothers should have understanding and knowledge about dealing and treating with children. Therefore, mothers should have information about physical, mental and psychological behavior of children. Having timely and right information relating to child development helps mother in facing difficulties and solving problems.

Hence, if mothers have good reading habit, children are well informed and knowledgeable. Mothers can use their knowledge and information for looking after their school going children. Moreover, mothers can teach and guide children as per current trends as well as prepare them for the future.

Objectives of the Study

The main objectives of the study are

- To understand reading attitude of mothers of school going children
- To have mothers' suggestions for encouraging students to reading

Review of Literature

Jiménez et al. (2020) found that mothers who score highest in reading habits, their children also

have highest level of competence. The results point to the fact that the profile of the post-adolescents with the best score in reading competence also scores better in emotional intelligence and their mothers are those who score highest in reading habits. Thus, the author suggested that the role of the mother within the family is even more important than it appears in a society that seeks parity. Ahmad et al. (2021) found that excessive use of screens such as mobile, TV, and electronic games are the major problems which parents are facing in the promotion of reading habits among children. The study also revealed that limiting screen time, giving reading rewards, proper maintaining record of child's reading activities, associating reading with pleasure, daily asking the child to read certain words, visit of libraries, book exhibitions and literary places are the result-oriented strategies which can be used to promote reading habits among the school children. The scholastic parents' staff (2010) has conducted a research on how to develop reading habits of the child. In this research the authors have tracked reading frequency among children ages 6 to 17. The main objective of this research was to provide the list of different strategies followed by mothers to improve their reading habits as well as their children. The study has found that it is so important that children read every day, as this helps them build background knowledge, enhances vocabulary, exposes them to new cultures and concepts, and encourages them to make connections with characters experiencing a variety of emotions. The National Book Promotion Policy (2012) conducted a research on the Books for all improving availability, accessibility, quality and readership. The study has suggested measures for the promotion of books and the habit of book reading especially for mothers. The study found that there should be the promotion of wide variety of books for the purpose of creating an understanding of democratic citizenship for all segments of society and age groups keeping in mind the diversities of language, culture and tastes of readers.

Thus, there are few studies which have revealed that mothers reading habits and their attitude towards reading significantly influence their children academic and overall personality development. These studies emphasize that mothers can help in improving their children reading habits and polishing their reading skills. Hence, the present study has been conducted to have the information over the reading habits and attitude of mothers of school going children of Amritsar, in the state of Punjab, India.

Research Methodology

The objective of the study is to understand attitude of mothers of school going children towards reading. The quantitative method is used to conduct this study. Questionnaire is developed as a data collection tool. The questionnaire consisted of Multiple Choice Questions, close-ended and open-ended which is designed in two languages i.e. English and Punjabi while considering the convenience of all respondents. In few items the respondents selected more than one option also. Non-Probability convenience sampling technique is used to select the participants (mothers of school going children). The main aim is to collect the survey responses from mothers to study their attitude towards reading. In total 89 mothers responded. Data was analyzed and demonstrated through pie charts and bar graphs and in terms of percentages. In addition, responses of open-ended questions are also interpreted.

Attitude towards reading

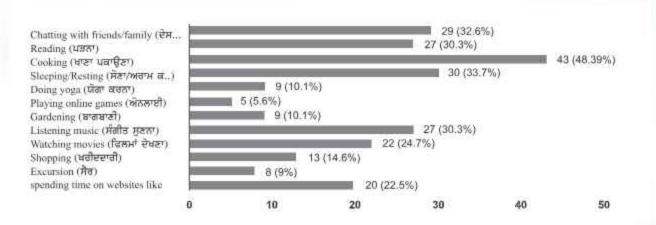
Attitude refers to a complex mental state involving beliefs, feelings, values and dispositions to act in certain ways. It has been observed through many studies that mothers' reading enjoyment is

significantly related to students' reading enjoyment. Briggs (1987) asserted that a positive reading attitude is a cognitive process which helps to motivate a person to learn. Contrariwise, a negative attitude would result towards hatred in reading. The author also insisted that success is likely achievable for those who have positive attitude in reading.

Analysis of results

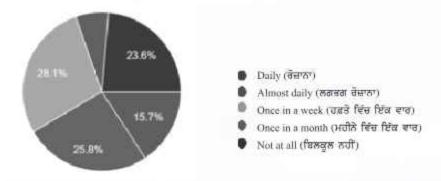
The data has been analyzed and displayed through pie charts and bar graphs and in terms of percentages as follows.

Figure 1. Activities that mothers preferred



The figure 1 represents the activities that mothers preferred. Out of total 89 respondents 48.3% of the mothers preferred to the cooking. Following this, sleeping/resting, chatting with friends and family are two such activities which are preferred by 33.7% and 32.6% respondents respectively. Reading and listening music are duo activities which about 30.3% mothers prefer to do. ¼ of the total respondents give preference to watching movie and slightly less respondents than from above activity spending time on websites is liked by mothers. 14.6% of the mothers prefer to shop during their leisure time whereas doing yoga and gardening are such activities which are preferred by 10.1% of respondents, even below than 10% mothers like to play online games and excursion.

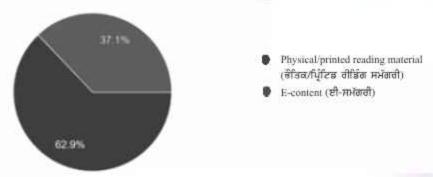
Figure 2. Frequency of reading



With regards to the frequency of reading, figure 2 shows that among 89 mothers, 28.1% of the respondents read once in a week. Following this 25.4%, 23.6% and 15.7% of respondents read almost

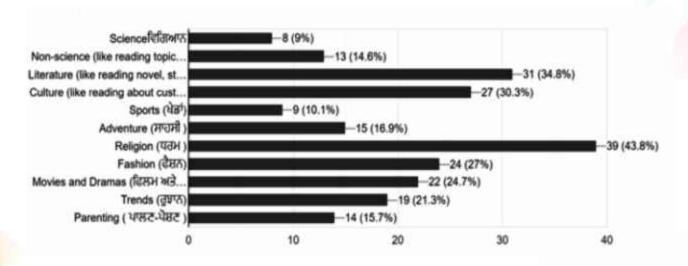
daily, not at all and daily respectively. A small portion of the respondents (7.2%) read once in month.

Figure 3. Type of material (Physical/printed content or e-content)



With respect to the type of material that mothers use as shown in figure 3, 62.9% of the total respondents preferred printed reading material whereas the remaining respondents liked E-content material.

Figure 4. Content mothers read



It is clear from figure 4 that religious content is widely liked to read by the mothers (43.8%). Following this, literature and culture based contents are preferred by 34.8% and 30.3% of respondents respectively. 20-30% of the respondents preferred fashion, movies, dramas and trends based content. However, less than 20% of the mothers liked science, non-science, sports, adventure and parenting reading content.

Mothers were also asked about the reasons for reading and avoiding reading. Regarding preferring reading, they cited different reasons like for obtaining information, relaxation, entertainment purposes, improving their language skills and due to having interest in topic, and as hobby. Mothers who avoided reading cited multiple reasons. The main reason is the household activities in which they are occupied. Other reasons for their non-reading behaviour include lack of interest, vision problem, involvement in family business, social life restrict them to read, being working women, expensive

books, non accessibility of books and engagement on social networking.

Data was also collected from the mothers regarding the reasons of discouragement towards reading among the children through the open-ended question. On the basis of the responses of mothers it can be said that increased use of the social media and technology devices such as mobile phones, T.V., computer and smart phones etc. is considered as the major reason of discouragement towards reading among the children. In addition, the busy routine of the children due to lengthy academic syllabus which restrict them to read in their spare time is considered as another major reason. As a result majority of the mothers feel that their children feel burden to read a lot. However, some family problems such as financial problems and carelessness on the part of parents to encourage their children to read from the beginning of the school life are other reasons of not developing the efficient reading skills among children. Apart from this, mothers said that during reading when children see unfamiliar words their interest deviate immediately due to which they try to ignore reading.

With respect of providing suggestions to the schools, mothers have shown their different opinions. On the one hand, there is highest proportion of the mothers who believe that school libraries must have wide variety of books as per the interest of the students because children always prefer to read the content according to their interest. In addition, significant number of mothers opined that visit to the library and reading of books should be mandatory for each and every student. Whereas, some mothers believe that it is the duty of teachers to explain the benefits of reading and organize competitions which will motivate them to read more. However, some mothers suggested that there should be separate period of reading where students get a topic to read regularly which will make a habit of reading on the part of children. Even, reduction in syllabus and daily homework are suggested by some mothers so that children can have extra time to read.

Limitations

The primary limitation of this study is that data is collected by using the non-probability convenience sampling technique. Moreover, there were only 89 respondents from single district of Amritsar, Punjab. Apart from this, data is analyzed in terms of percentage.

Conclusion

While understanding the mothers' attitude towards reading it has found that out of 89 respondents, about 30 percent liked to read. They also have provided information regarding the religious content which they primarily like to read along with the literature and culture. However, sports and science duo are their least preferred contents. In addition, e-content is considered as highly preferable because they can easily download it through internet. With regards to their frequency of reading, it can be said that once in a week mostly mothers liked to read. No doubt, there is also a highest proportion of mothers who don't like to read due the lack of interest. But wide portion of mothers are not able to read because they occupied in their household activities. It was found that mothers liked to read but reading is not their priority. Mothers have agreed that their reading habits and attitude towards reading positively influence their children which keep them enthusiastic to gain knowledge. But simultaneously, it was observed that with the advent of technology their children are becoming attracted towards electronic gadgets such as phones, computers and T.V. due to which they don't like to read. Mothers have suggested

that school teachers who are the second parents of their children should explain the benefits of reading to the students as well as try to influence them to make regular visit to the library and also try to make them engaged in reading and to polish their reading skills.

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Kamalpreet Kaur M.Com Sem-IV

American Economist Claudia Goldin Awarded Nobel Prize In Economic Sciences (2023)

American Professor Claudia Goldin has won the 2023 Nobel Economics Prize for her comprehensive research on women's contribution to the labor market. Her research revealed that female participation in the labour market did not have an upward trend over a 200 year period, but instead forms a U-shaped curve. The participation of married women decreased with the transition from an agrarian to an industrial society in the early nineteenth century, but then started to increase with the growth of the service sector in the early twentieth century. Goldin explained this pattern as the result of structural change and evolving social norms regarding women's responsibilities for home and family.

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EVALUATING UNDERGRADUATE STUDENTS' AWARENESS OF SWACHH BHARAT MISSION

Swachh Bharat Mission is a significant cleanliness and sanitation campaign launched by the Government of India on October 2, 2014 at Rajghat, New Delhi by Prime Minister Narendra Modi. The mission aims to make India a clean and open-defecation free country. It was initiated to address the urgent need for improving sanitation and hygiene practices in both rural and urban areas, promoting cleanliness as a mass movement, and achieving the goal of a Swachh Bharat (Clean India) by October 2. 2019, which marked the 150th birth anniversary of Mahatma Gandhi. The mission also aimed to achieve an "open-defecation free" (ODF) India through construction of toilets. An estimated 89.9 million toilets were built in the period. The objectives of the first phase of the mission also included eradication of manual scavenging, generating awareness and bringing about a behaviour change regarding sanitation practices, and augmentation of capacity at the local level. The campaign's Hindi official name Swachh Bharat Mission is 'Clean India Mission' in English. It is India's largest cleanliness drive to date with three million government employees and students from all parts of India participating in 4,043 cities, towns, and rural communities. At a rally in Champaran, the Prime Minister called the campaign Satyagrah Se Swatchhagrah in reference to Gandhi's Champaran Satyagraha launched on 10 April 1916. The mission was split into two categories: SBM - Gramin (for rural areas) and SBM - Urban (for urban areas). In rural areas it is financed and monitored through the Ministry of Drinking Water and Sanitation (since converted to the Department of Drinking Water and Sanitation under the Ministry of Jal Shakti) whereas in urban area it is under the Ministry of Housing and Urban Affairs. The rural division has a five-tier mechanism: central, state, district, block panchayat, and gram panchayat.

The Swachh Bharat Mission has brought about significant improvements in cleanliness and sanitation practices across the country. It has increased access to toilets, reduced open defecation, improved waste management, and created awareness about cleanliness and hygiene. While the initial target of achieving a Swachh Bharat by 2019 has not been fully realized, the mission continues to make progress, and its impact is visible in many parts of India. The campaign has garnered widespread public support and participation, making cleanliness a collective responsibility and contributing to a healthier and cleaner India. The second phase of the mission aims to sustain the open defecation free status and improve the management of solid and liquid waste, while also working to improve the lives of sanitation workers. By achieving the lowest open defecation-free status in 2019, India achieved its Sustainable Development Goal (SDG) 6.2 health target in record time, eleven years ahead of the UN SDG target of 31 December 2030. As part of the campaign, volunteers, known as Swatchhagrahis, or Ambassadors of cleanliness, promoted the construction of toilets using a popular method called Community-Led Total Sanitation at the village level. Other activities included national real-time monitoring and updates from non-governmental organizations such as The Ugly Indian, Waste Warriors, and SWACH Pune (Solid Waste Collection and Handling).

In 2020, the Indian government launched Phase II of the Swachh Bharat Mission. This phase focuses on maintaining current Open Defecation Free (ODF) status across the country, as well as improving waste management in villages. Villages that maintain the ODF status and also implement waste management systems are designated "ODF Plus", while villages that have partially implemented waste management systems (e.g. for only one of solid or liquid waste) are designated "ODF Plus Aspiring". In May 2023, the Indian government announced that 50% of villages in India had achieved the ODF Plus status, with the state of Telangana achieving a 100% ODF Plus rate

Objectives of the study

- To assess the knowledge of undergraduate students regarding Swachh Bharat Mission
- To study the contribution of students of SSSS College of Commerce for Women, Amritsar in promoting the campaign of cleanliness

Review of Literature

Tiwari (2014) studied the objectives of Swachh Bharat Mission. The study also focused on awareness level regarding this National Mission on Swachh Bharat-Swachh Vidyalaya of students of public and private school. Evne (2014) studied the objectives of Swachh Bharat Abhiyan. The study concluded that every citizen of the country should make efforts for clean and hygiene country and think of progress rather than waiting for government to make this plan successful. Badra and Sharma (2015) studied the managerial implication of Swachh Bharat Campaign. The study also suggested the measures to increase participation and effectiveness of Swachh Bharat drive. The study concluded that teamwork and patriotism are values which the government wishes to inculcate among students and citizens through this campaign. Rao and Subbarao (2015) studied the issues and concerns of Swachh Bharat Ahiyan. The study also focused on Gandhian concept of sanitation. The study concluded that it is the responsibility of the citizens, media, social media, civil society, organizations, professionals, youths, students, and teachers to declare their ownership of the campaign by simply reporting the instances of manual scavenging. Thakkar (2015) studied the objective, merits and importance of Swachh Bharat Mission. The study also focused on impact of Swachh Bharat Mission on health and education sectors. The study concluded that the mission of Clean India or Green India is an appreciable step of Government.

Research Design

The purpose of the study was to know college student's knowledge about Swachh Bharat Mission. The questionnaire consisting of closed and open ended questions was prepared in the form of Google Docs and the link was shared with the students of different colleges affiliated to Guru Nanak Dev University, Amritsar. The data so obtained was analysed using descriptive statistics and exhibited in terms of percentages.

Demographic Profile

Data was collected from 134 respondents of Women Colleges from March to June 2023. The respondents were studying in the Colleges affiliated to Guru Nanak Dev University, Amritsar.

Educational Qualification of the Respondents

With reference to educational qualification of the participants, it was found that 38.6 % of the respondents were from BCA course, 53% were from B.Com course and 8.4% were from BBA course.

Results and Discussion

Regarding Swachh Bharat Mission, 76.9% respondents said that it is Cleanliness Campaign, 1% responded that it is a political campaign whereas 21.6% did not know about it. When asked who launched this mission, 97.7% respondents said the Prime Minister Mr. Narendra Modi launched this campaign whereas rest of the respondents said it was launched by Prime Minister Dr. Manmohan Singh. 91.5% of respondents said the mission started on 2 October 2014 and 8.5% said it was initiated on 15 August 2017. These responses indicate that there is still need to create awareness among the students regarding this campaign. 59.2% of respondents said involving celebrities will lead to its success, 9.7% said no, whereas 26.2% said that they cannot say.

While answering the question "How many times are your surroundings cleaned by local authorities?" 45.1% of respondents answered every day, 24.1% answered rarely, 20.3% answered twice a week, 10.5% answered once a week. These responses show that efforts are made for improving sanitation and hygiene practices, but still a lot is to be done.

In an open ended question "What should be done to make this campaign more effective?" the respondents said that there is need to construct public toilets, ban on use of plastic and proper disposal of industrial waste for making this campaign effective.

Initiatives of SSSS College of Commerce for Women, Amritsar





The College takes initiatives for making students aware regarding Swachh Bharat Mission. The College celebrates Swachhta Pakhwada every year as per the guidelines of Ministry of Youth Affairs and Sports. For instance, every year students of SSSS Rotaract Club and NSS Unit carry out cleanliness drive within campus, and outside by cleaning the footpath of the College, nearby Company Bagh, and schools. The College has also collaborated with the Bengluru Based NGO 'Reap Benefit'. Other activities that are conducted round the year include short plays, Nukad Natak, lectures, cleanliness rally, plantation drive, seminars, workshops, presentations, projects. Students enthusiastically participate in these activities and spread the message of cleanliness through different slogans like Hum Sab Ka Ek Hi Nara, Saaf Suthra Ho Desh Humara; Clean India Green India, Clean and Healthy People Make a Prosperous Nation, We want Clean India Green India, Keep your surroundings Clean, Make the Earth Green, Cleanliness is next to Godliness, Conserve Water, Grow More Plants etc.

Limitations of the study

- Data was obtained from only 134 students of women colleges affiliated to GNDU, Amritsar.
- Data was collected from the colleges situated in Amritsar city.

Conclusion

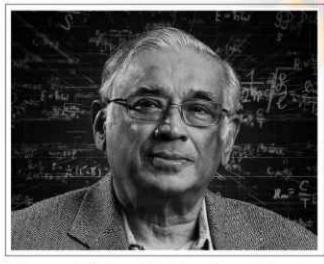
The present study aimed to conduct survey regarding Swachh Bharat Mission of undergraduate students of Women Colleges affiliated to GNDU, Amritsar. The results of the survey indicate that most of the students are aware of the campaign, whereas others still do not have much knowledge about this campaign like when it was launched and who launched this campaign. So, there is a need to create awareness about this campaign among the youth and its need. This mission cannot be successful without the support of each and every Indian. It is the responsibility of every citizen of India to make this mission successful.

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Gungun B.Com Sem-IV

SIR S.R. SRINIVASA VARADHAN



Sathamangalam Ranga Lyengar Srinivasa Varadhan is an Indian American mathematician. Srinivasa was born on January 2nd, 1940 into a Hindu Tamil Brahmin lyengar family in Chennai. His father, Ranga Iyengar, was a science teacher who became the Principal of the Board High School in Ponneri, a small town about 30 km from Chennai. In 1953, his family migrated to Kolkata. He grew up in Chennai and Kolkata. Varadhan received his undergraduate degree in 1959 and his postgraduate degree in 1960 from Presidency College, Chennai. He continued his studies at The Indian Institute in Kolkata studying statistical control, which left him "totally unsatisfied". He was one of the "famous four" (the others were Kalyanapuram Rangachari Parthasarathy, R. Ranga Rao, and V. S. Varadarajan) in Indian Statistical Institute (I.S.I.) Kolkata during 1956-1963, who taught each other modern mathematics and worked on a problem concerning probability distributions on groups. In 1963, Varadhan got his Ph.D. in mathematics with a thesis on "Convolution Properties on Distribution of Topological Groups". The well-known Russian mathematician Kolmogorov was one of the examiners of Varadhan's thesis. Kolmogorov was so impressed with Varadhan that he wrote, "This is not the work of a student, but of a mature master". Since 1963, Varadhan has worked at the Courant Institute of Mathematical Sciences at New York University. In 1964, Varadhan is married to Vasundra, a professor at New York University.

In his interview to Raussen and Skau, Sir Varadhan explained how he first became interested in mathematics while at high school: At high school I had an excellent mathematics teacher who asked some of his better students to come to his house during weekends, Saturday or Sunday, and gave them extra problems to work on. We thought of these problems just as intellectual games that we played, it was not like an exam; it was more for enjoyment. That gave me the idea that mathematics is something that you can enjoy doing like playing chess or solving puzzles. That attitude made mathematics a much more friendly subject, not something to be afraid of, and that played a role in why I got interested in

mathematics. (As cited in M Raussen and C Skau, Interview with Srinivasa Varadhan, Notices Amer. Math. Soc. 55 (2) (2008), 238-246)

Memberships

Srinivasa Varadhan has been elected as a member of the American Academy of Arts and Sciences (1988) and as a fellow of the Institute of Mathematical Statistics (1991). He is a member of the US National Academy of Sciences (1995), and the Norwegian Academy of Science and Letters (2009).

Awards & Honours

The great achievement of Varadhan was the development of a powerful analytic and predictive probability theory capable of describing rare events. His work produced a new probabilistic model that provides both qualitative and quantitative insights, and his model has become a cornerstone of modern probability theory. The implications of his work cover diverse areas that range from quantum field theory and statistical mechanics to population dynamics and traffic control. Varadhan's awards and honours include the Birkhoff Prize (1994), the Margaret and Hermon Sokol Award of Faculty of Arts and Science (1995). He was awarded for his work with Daniel W Stroock on diffusion processes. He also has two honorary degrees from University Pierreet Marie Curie in Paris (2003) and from Indian Statistical Institute in Kolkata, India (2004). In 2007, he became the first Asian to win the Abel Prize by the Norwegian Academy of Sciences and Letters for his fundamental contributions to probability theory and in particular for creating a unified theory of large deviations. In 2008, the government of India awarded him the Padma Bhushna, in 2010 he received the National Medal of Science from President Barack Obama and in 2023, he was awarded India's second highest civilian honor Padma Vibhushan.

Publications

His publications include

- Convolution Properties of Distributions on Topological Groups. Dissertation, Indian Statistical Institute, 1963.
- Varadhan, SRS (1966): Asymptotic probabilities and differential equations.
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Muskan Mahajan

B.Sc (Eco.) Sem-VI

TOURISM SECTOR AND CIRCULAR ECONOMY A MUTUALLY BENEFICIAL PARTNERSHIP

In the global pursuit of sustainable development, the intersection of tourism and the circular economy presents a mutually beneficial relationship ripe with potential. This article explores how the principles of the circular economy can be harnessed to not only mitigate the environmental impact of tourism but also to enhance economic prosperity and social well-being in destination communities. Tourism, a cornerstone of many economies worldwide, has long been associated with environmental degradation, resource depletion, and cultural disruption. However, the circular economy offers a paradigm shift by promoting the efficient use of resources, minimizing waste, and fostering regeneration.

Circularity represents a strategic approach for the tourism sector, notably from the point of view of minimizing its environmental impacts, including waste and pollution as well as CO2 emissions, given the potential of a circular economy to decouple economic growth from resource use. The circular economy aims at separating the use of limited resources from economic growth. It creates a closed-loop system where resources are used as long as feasible by promoting the reuse, recycling, and restoration of materials. This translates into creative approaches for the tourism industry that put sustainability first at every stage of the trip lifecycle, from planning and lodging to transportation and local encounters.

Within the travel and tourist industry, the circular economy's tenets take on various forms. More and more lodging establishments are embracing environmentally friendly policies and procedures, like using renewable energy sources, conserving water, and cutting back on single-use plastics.

The transportation sector, which accounts for a substantial portion of carbon emissions in the tourism industry, is transitioning to greener modes. Travelling less has a negative influence on the environment while providing tourists with genuine local experiences promotes popularity of electric cars, cycling tours, and eco-friendly public transportation options. Additionally, by encouraging tourists to participate in community-building activities, fostering cultural immersion, and supporting local craftspeople, local communities are adopting circular economy models, expansion and safeguarding of cultural legacy. This change strengthens the destination's socioeconomic fabric in addition to improving the guest experience.

Adopting the Circular Economy presents a number of obstacles for the tourism sector. The production of excessive trash, transportation-related carbon emissions, and stress on regional ecosystems are urgent problems. But these difficulties also present chances for change and creativity. Adopting sustainable practices boosts community involvement, improves tourism appeal, and lowers negative effects while opening up new economic opportunities.

In order to promote a circular strategy, stakeholder participation is essential. Important roles are played by hotels implementing energy-saving practices, tour companies encouraging ethical travel, and governments supporting green projects. A sustainable tourist environment is greatly influenced by initiatives such as waste management programs, the use of renewable energy, the promotion of local sourcing, and the encouragement of circular design in infrastructure.

Numerous locations have achieved progress in incorporating the principles of the Circular Economy into their tourism operations. The "Circular City" effort in Amsterdam concentrates on waste reduction, but Bhutan's tourism policy adopts a high-value, low-impact method to highlight sustainability. These illustrations demonstrate the viability and advantages of fusing ideas from the Circular Economy with tourism. One notable case study in India showcasing a circular economy approach in the tourism sector is the "Spiti Green Initiative" in the Spiti Valley of Himachal Pradesh, India. This initiative focuses on sustainable tourism practices, environmental conservation, and community involvement. Local communities and organizations collaborate to minimize waste by promoting responsible tourism. Accommodations participate by adopting eco-friendly practices, such as composting organic waste and using solar energy. Additionally, they encourage tourists to bring back their non-biodegradable waste, fostering a 'leave no trace' mindset. The initiative also supports local artisans who create handicrafts from recycled materials, providing an economic boost to the community. This circular model not only preserves the pristine beauty of Spiti Valley but also enhances the livelihoods of the indigenous people through responsible and sustainable tourism practices.

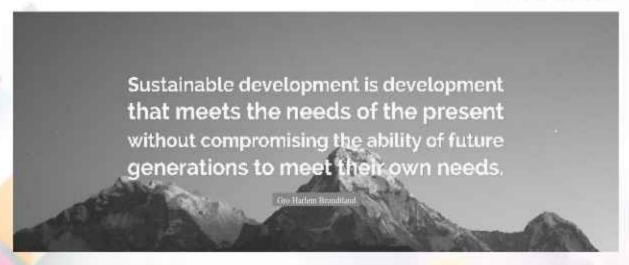
In the tourist industry, travelers themselves are essential to the advancement of the circular economy. Sustainable tourism practices are mostly the result of conscious decisions like choosing eco-friendly lodging, cutting back on single-use plastics, patronizing neighborhood businesses, and showing respect for the environments and cultures in which one is traveling.

In nutshell, the potential for driving sustainable development through the tourism industry and the Circular Economy is great. Travel can become a catalyst for positive change instead of a drain on resources if stakeholders rethink tourist practices, prioritize environmental conservation, and promote economic growth. It's not only a matter of choice for the tourism sector to embrace the Circular Economy; doing so is essential if we want to see a more dynamic and sustainable future for the world and the business.

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Janhavi Khosla B.Com (Hons) Sem-VI



THE ECONOMICS OF EDUCATION INVESTING IN HUMAN CAPITAL

The economics in education involves analysis of the economic and social determinants and consequences of education. Each person's education is an investment in human capital which allows the individual to contribute to society in a productive way.

Education becomes a crucial determinant of an economy's ability to achieve high growth with high wages, low unemployment and strong social cohesion. It is a significant investment in human capital- the skills, knowledge and experience which increases their productive capacities and brings clear benefit to the individual, the economy and society at large. There is a great deal of relationship between education and human capital which is stated by 'theory of human capital'. The accumulation of human capital in a country directly affects the level of competitiveness of its economy and economic growth.

Investments in education are recognised by the scientific community as the most common and studied among all types of investing in people. According to UNESCO about 60% of the difference in a person's income depends upon his level of education (Nezhnikova, 2020). People with higher education are able to fetch higher wages for their labour and abilities.

There is an understanding that investing in education will ultimately give a return, so employers are interested in educated employees. The success of any nation in terms of human development depends upon the physical and human capital stock. Thus, the state and society have a belief that investing in human capital will pay off and make profit in the long run.

The most important condition for the formation of human capital is the development of education system. In the Russian Federation, education is one of the leading branches of social sphere. An important degree of human capital formation is higher professional education aimed at training and retaining specialists of the appropriate level on the basis of secondary general and secondary vocational education. In the context of digitalization of education sector, the number of students receiving education using learning technologies is gradually growing.

One of the important conclusions of recent researches in the field of education is that the investment in education and training of people is both a growth factor, especially in the current climate of rapid technological changes and a basic tool to support social integration. This was confirmed by the analysis of PISA study (Mariana, 2015). The results show that developed countries have the lowest level of inequality between individuals because they provide necessary education and highly qualified training to the human resourses which is considered as a tool to reduce the gap between more developed and less developed regions.

The human element considers that investment in education brings first of all a benefit by the sense of credibility granted by holding a higher education degree, an idea amplified by the prestige of a certain educational institution and this often represents an advantage for the applicant in the labour market.

A social effect of education with significant impact on the decision to invest in training human resource is linked to the workforce market. Working conditions are usually more convenient for a

university graduate in the sense that the relationship with superiors is based on greater confidence as compared to the relationship of a person without education.

An OECD (2014) study shows that "attending a supplementary year of average education amplifies economic development with a percentage of 5% and with a percentage of 2.5% on a long term". An additional educational year also raises the level of average wages by about 6.5%. Records have also shown that unemployment rate decreases proportionally with the level of higher education. This also indicates that there is a link between education and economic growth. Systematic implementation of the scientific knowledge to production of goods has increased the importance of education, mainly technical education. It is obvious that there is a positive connection between the investments in education and technological progress having a considerable influence on all social and economic fields.

Hence, the investment in education especially in higher education is a profitable investment that assures positive long term effects in what concerns the individual and the socio economic progress of the society. The higher the level of education, the more the income of a person and it is almost always above the average.

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Saranpreet Kaur M.Com Sem-IV

PM-SURAJ Portal

Pradhan Mantri Samajik Utthan and Rozgar Adharit Jankalyan (PM-SURAJ) national portal was launched on March 13, 2024 for credit support to disadvantaged sections to prioritize the underprivileged and most marginalized segments of society. This transformative initiative aims to achieve the goal of Viksit Bharat by 2047 by ensuring the inclusion of entrepreneurs of disadvantaged sections in the nation's development process. The significance of this initiative is that it would provide financial assistance directly to beneficiaries, eliminating middlemen and commissions.

THE IMPACT OF DIGITAL RUPEE ON TRADITIONAL BANKING SYSTEM

In the era of digital transformation, the emergence of digital currencies like the digital rupee - a form of electronic currency issued by a central authority, typically a government or central bank, and designed to function as a medium of exchange in digital transactions - herald's significant shifts in the financial landscape. Unlike traditional physical currencies, digital rupees exist purely in electronic form, stored and transacted digitally through electronic wallets, online banking platforms, or other digital payment systems. This shift towards digital currencies represents a fundamental evolution in monetary systems, offering benefits such as increased transaction efficiency, reduced costs, and enhanced transparency. As digital currencies gain prominence, traditional banking institutions are confronted with the need to adapt their operations, services, and business models to accommodate this new digital paradigm.

This Digital rupee is run under legal framework in India. The Digital Rupee / E-Rupee is a tokenised digital version of the Indian Rupee, issued by the Reserve Bank of India (RBI) as a Central Bank Digital Currency (CBDC). The Digital Rupee was proposed in January 2017 and launched on December 1, 2022. It is a digital version of 100 rupee note in the pocket, means fully legal. Using crypto technology and quality of fiat money (currency) to create an "official crypto currency", it is stored in the digital wallet on the Smartphone instead of leather wallet. This wallet can be linked to the existing bank (saving/current) account. The wallet is a digital representation of the physical wallet and digital rupee can be withdrawn or deposited from this existing bank account into this wallet. To initiate transactions, download the Digital Rupee app and register for the Digital Rupee wallet.

Need of Digital Rupee

Digital rupee or e-rupee will help the government to achieve a cashless economy. For the people, a cashless economy means the convenience of digital transactions and freedom from the risk of carrying and storing cash. International currency transactions are very expensive. Individuals are charged high fees to move funds from one country to another, especially when it involves currency conversions. Digital assets could disrupt this market by making it faster and less costly. If digital cash is used to completely replace physical cash, this could allow interest rates to be lowered. Use of e-rupee is expected to make the inter-bank market more efficient. Payments can be completed much faster than current means, like wire transfers, which can take days for financial institutions to confirm a transaction. With the help of CBDC, unbanked individuals could access their money and pay their bills without extra charges. If the government developed a CBDC, it could send payments like tax refunds, child benefits and food stamps to people instantly, rather than trying to mail them a check or figure out prepaid debit cards.

Functioning of Digital Rupee

- Digital Rupee is transacted and stored using a Digital Wallet on Smartphone. Every transaction is recorded in real time to common ledger.
- UPI and other payments are made in real time are settled later between banks which work as
 intermediary but in case of CBDC, every penny transferred between two individuals will be
 settled immediately and do not require post transfer settlements, which usually takes time and
 money.
- The CBDC is real time as it is based on block chain/common ledger which is updated on both ends immediately with execution of transfer.

Impact of CBDC on Traditional Banking System

Digital Currencies impact greatly upon traditional banking system. This is an alternative to traditional banking systems. Digital currency can lead to decrease in need of traditional banks.

- Impact upon Business Models of Financial Institutions: Digital currencies mainly operate on
 decentralised systems, which do not rely on the intermediation of financial institutions and can
 be done through various digital payment apps. This could also lead to a reduction in revenue for
 traditional banks, as they would no longer be able to charge fees for services such as currency
 exchange and international money transfers.
- Challenges and Few Opportunities for Banks: Digital Currencies could lead to disintermediation and a reduction in revenue for banks. On the other hand, Banks have opportunities to integrate digital currencies into their existing business models such as offering crypto currency digital wallet solutions or facilitating the exchange of digital currencies.
- Effects on Consumer Behaviour and Transactions Processes: Digital currencies lead to
 changes in consumer behaviour and transaction processes. Digital Currencies allow for faster,
 cheaper and more secure transactions, which could lead to increased adoption by consumers.
 This also leads to changes in the way transactions are processed, as digital currencies operate on
 decentralised systems, which do not rely on the intermediation of financial institutions.
- Boosting Cross-Border Transactions: Digital currencies offer the possibility of faster, cheaper and more efficient domestic and cross border transactions. Cross border transactions are financial transactions where the payer and recipient are based on separate countries. For Example, by using digital currencies, people living in remote or rural areas, who may not have access to traditional banking services, can now easily transfer money to relatives or make payments for goods or services via digital banking. Digital currencies put impact upon traditional banking by providing an alternative to traditional banking systems, increasing financial inclusion, and changing the way we think about money and financial systems.
- Disruption of Traditional Banking System: Some experts argue that the introduction of CBDCs could lead to a significant disruption of the traditional banking system. This is because

CBDCs would allow consumers to hold digital currencies that are backed by central banks, which could reduce their reliance on traditional bank accounts. As a result, banks could see a decline in deposits and lending activity, which could ultimately impact their profitability. Additionally, some experts believe that CBDCs could lead to a scenario where the central bank becomes the dominant player in the financial system, which could lead to a loss of control for traditional banks.

- Reduction in Deposits: One of the most significant impacts of CBDCs on traditional banking is
 the reduction in deposits. CBDCs allow for direct transactions between individuals, reducing the
 need for intermediaries such as banks. This will significantly reduce the deposits in banks,
 leading to a decrease in their lending capacity. As a result, banks will have to find new ways to
 generate revenue
- Increased Competition: CBDCs will also increase competition in the banking industry. The
 introduction of CBDCs will allow new players to enter the market, such as fintech companies.
 These players will be able to provide financial services such as payments and lending without the
 need for traditional banking infrastructure. This will increase competition in the banking
 industry and force banks to adapt to remain relevant.
- Changes in Monetary Policy: The introduction of CBDCs will also impact monetary policy.
 Central banks will have greater control over the money supply, as CBDCs allow for direct
 transactions between individuals. This will enable central banks to implement policies such as
 negative interest rates more easily. However, it will also require central banks to adapt to the new
 monetary system and create new policies to regulate it.
- Cyber Security Risks: The adoption of CBDCs also poses significant cyber security risks.
 CBDCs rely on block chain technology, which is susceptible to cyber-attacks. If a CBDC system is hacked, it could lead to significant financial losses for individuals and institutions.

The Digital Rupee is highly promising to all dimensions of Indian society. Once the Digital Rupee becomes part of mainstream society, it is likely that existing digital and neo-banks would have an advantage since they already have the necessary digital infrastructure. Businesses that use fintech-powered solutions or digital banks would have an advantage over those who use purely physical forms of money.

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Manpreet Kaur B.Com. Sem-IV

ENVIRONMENTAL ECONOMICS POLICIES FOR A SUSTAINABLE FUTURE

The word Environmental Economics comprises two words—'Environment' and 'Economics'. Environment means sum total of all the living and non-living elements and their effect upon human life. Economics is the study of scarcity and its implications for the use of resources, production of goods and services, growth of production and welfare over time, and a great variety of other complex issues of vital concern to society. The field of environmental economics began to emerge after the publication of book 'silent spring' by Rachel Carson in 1960s who discussed the environmental damages by pesticides. Paul Davidson, one of the most influential post-Keynesian economists, insisted throughout his career that the purpose of economic policy is to help society become more humane and civilized and hence, focus should be on real-world problems. He made significant contribution to the modern day environmental economics.

Environmental economics deals with the application of economics to study how environmental and natural resources are developed and managed. It basically undertakes theoretical studies of economic effects of national or local environmental policies around the world. All the policies made by environmental economist mainly focus on its sustainability and moreover, these policies leads to the balanced development in the economy.

Relevance of Environmental Economics

Environmental economics is the future of the world as this leads to economic development without exploiting the natural resources but by using them in an efficient manner. Environmental economics basically means allocation of scarce resources to meet human needs while still preserving the environment. These policies have a long term impact and make a way for a sustainable future. It involves various kinds of issues involving costs and benefits of environmental policies to deal with air pollution, water quality, solid waste and global warming. It puts its main focus on preserving environmental goods which includes access to clean water, clean air, general climate etc. These entire cost high if lost, though it is hard to put a price tag on it. Destruction or its overuse can cause problems like pollution and environmental degradation. Any project taken by an entrepreneur puts its focus to earn profit without giving importance to the cost of environmental goods which will be exploiting due to their projects. Therefore, environmental economics studies the impact of the policies on the environment and helps to integrate environmental and ecological systems into economic models. This branch of economics helps policymakers implement sustainable policies and environmental solutions

Environmental Policy Instruments

Numerous instruments have been developed to influence the society to contribute to environmental problems. Public policy theories have focused on regulation, financial incentives and information as the tools of government. New policy instruments such as performance requirements & tradable permits have also been implemented.

- Regulations: Regulation is an effective means to prescribe and control behaviour. Detailed
 regulations have resulted in a considerable improvement in quality of air, water and land since
 early 1970s. It is used to impose minimum requirement for environmental quality. These aim to
 encourage or discourage specific activities and their effects. In numerous cases local and
 regional governments are the issuing and controlling authorities.
- Financial Incentives: Governments also stimulate behavioral change by giving positive or

- negative financial incentives, for examples tax discounts, levies, fines. These also help the professional actors to change. Such incentives play an important role in boosting innovations.
- Environmental Reporting and Eco-labeling: Eco labels & certificates applied to specific products & services inform consumers about their environmental performance. Sometimes, governments require these labels & certificates which certify that a product has met minimum requirements for consumer safety, health & environmental friendliness. For instance, The European Eco-label distinguishes products that meet high standards of both performance and environmental quality. Every product awarded the European Eco-label must pass rigorous environmental fitness trials, with results verified by an independent body. To push organizations to develop products & services that perform beyond those minimum requirements there are labels that specifically express friendliness of product to environment.
- Global Policy Agreements: From the early 1970s, the United Nations (UN) has provided the
 main forum for international negotiations and agreements on environmental policies &
 objectives. Various conferences & commissions have been established to deal with
 environmental issues. Those conferences & summits responded to global character of some of
 most challenging environmental problems, which requires international cooperation to solve.

Environment Policy in India

The Indian Constitution lays down the foundation for all environmental laws. Since the late 1980s and early 1990s, there has been a clear and undiminished trend of environmental policies being driven by the (activist) judiciary in India. The fundamental right to life enshrined in Article 21 of the Constitution has been expanded by judicial interpretation to include the right to a clean, healthy and pollution-free environment. Sustainable development concerns in the sense of enhancement of human well-being, broadly conceived, are a recurring theme in India's development philosophy, which is further strengthened by the National Environment Policy adopted in 2006 (unchanged since then).

The Ministry of Environment, Forest & Climate Change (MoEFCC), along with the Central Pollution Control Board (CPCB) and the State Pollution Control Boards (SPCBs) of each of the 28 States and 8 Union Territories in India administer and enforce environmental laws. There are separate regulatory bodies for various environmental laws, such as the State-level Environment Impact Assessment Authority, supervising Environmental Clearance applications and Environmental Impact Assessment (EIA) reports; the Ozone Cell, supervising compliance with the Ozone-Depleting Substances (Regulation and Control) Rules, 2000; the Forest Advisory Committee for forest diversions; and National and State-level Coastal Zone Management Authorities, supervising the Coastal Regulation Zone Notification, etc.

Companies in India Making Strides towards Sustainable Development Goals

Different companies take initiatives for sustainable development goals by formulating their environmental policies. For instance, Tata group has made its investments in renewable energy projects such as solar and wind power with a goal of increasing the proportion of renewable energy in its overall energy consumption. This initiative aims to reduce carbon emissions and promote clean energy alternatives. Reliance Industries limited has made substantial investment in renewable energy, especially solar and wind energy projects. The company aims to achieve the increase in percentage of renewable energy in its energy portfolio and decrease dependence on fossil fuels, supporting the objective of affordable and clean energy. ITC Limited promotes sustainable agriculture practices among farmers by offering training programs in techniques such as organic farming and crop diversification.

These efforts contribute to ensuring food security and sustainable agriculture. Mahindra group promotes sustainable mobility solutions, especially electric vehicles to accelerate the adoption of clean transportation alternatives, decrease reliance on fossil fuels and mitigate environmental impact of transportation. Infosys has made significant strides in using its carbon emissions. The company focuses on energy efficiency measures, utilizing renewable energy resources and implementing green building practices to minimize its Environmental footprint.

Conclusion

To conclude, environmental economics is the study of cost-effective allocation, use, and protection of natural resources. This helps the government to weigh the pros and cons of alternative measures and design appropriate environmental policies. Environmental economics is a vital component for a sustainable future that will lead to an overall development in the economy. Environmental economists are researching the economics of both sides of natural resources, their exploitation and use, and how the waste products are contributing to the ecosystem for sustainable development. However, environment economics face the challenges which include market failure, timing of policy adoption, environmental threats and international challenges. For solving the problems of environmental economics, impact must be estimated by regulator using cost-benefit analysis. New regulation must be made to impose new fine to those whose level of pollution crosses the threshold limit. Increasing the costs of fine will discourage polluting. Environmental economists must be provided with a transnational approach to deal with various issues. Modelling structure for policies must be made easier so that implementation of these policies will become effective. To make policies for sustainable future, other solutions include subsidies for green technologies, environmental regulations, conservation and land use policies, pollution taxes & charges.

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Manvi B.Com Sem-IV

ECONOMY INDICATORS

BANK RATE: 6.75%

REPO RATE: 6.50%

REVERSE REPO RATE: 3.35%

CASH RESERVE RATIO: 4.50%

STATUTORY LIQUIDITY RATIO: 18.00%

MARGINAL STANDING FACILITY RATE: 6.75%

STANDING DEPOSIT FACILITY RATE: 6.25%

(AS ON AUGUST 31, 2024)

THE SIGNIFICANCE OF MATHEMATICAL MODELS

Life without mathematics is not feasible as a person needs understanding of numbers and symbols, and numeracy skills for measurements and to answer the questions like what, how many, and how. For instance, a chef requires the knowledge of mathematics measurement and fractions to cook and bake, whereas a dietician needs the knowledge to count calories or nutrients a diet comprises. At what time a student or a manager should leave the house to arrive on time at school or office. How many meters of cloth does a tailor require for stitching a particular dress? How much quantity of the paint a painter needs to paint the walls of a room? And then the big one is money. Financial literacy is an incredibly important skill for adults to master. It helps in preparing budget, making efforts for saving and even for making big decisions like buying a house. Thus, behind every planning there is mathematics, however, only a few people recognize and think about the mathematics that made it possible. The reality is that all innovations and research happening in healthcare, farming, management, the environment and even the arts, production of films and video games are only made possible due to mathematics. For instance, Mathematical models are used to predict crop growth and yield based on a range of factors, such as weather patterns, soil quality, and nutrient availability. This allows farmers to make informed decisions about planting, fertilizing, and harvesting crops. Not only this, farmers use mathematical models for predicting the spread of pests and diseases, which allow them to develop effective control strategies. By monitoring the population density of pests and the efficacy of different control measures, farmers can optimize their pest management practices (Saranya, 2023). In the health sector also, mathematical models have been used to forecast disease outbreaks, avoid or cure these illnesses. During the Covid-19 crisis, researchers formulated and used mathematical models as a technique for gaining insight into the mode of spread of the pandemic, transmission, impact of the pandemic, prevention and control of the pandemic, the influence of preventive measure on the pandemic ranging from washing hands with a disinfectant such as a hand sanitizer, 2 to 5 meters social distance and use of face mask (Ahmed et al., 2021). Even the rise of video calling platforms such as Whatsapp, Zoom wouldn't have been possible without the mathematics underpinning the software. Mathematics and mathematical model help us to understand the varied processes happening in the world. Mathematical model is a quantitative description of a system. Mathematical modelings numerically and graphically describe the various phenomenons happening around us. For example, it is possible to describe how a cricket ball travels through the air after it has been thrown using the kinematic equations from physics. Equations are one form of mathematical modeling, and the physical kinematic equations relate velocity, distance traveled, acceleration, and time. Thus, mathematical models can be used to describe the motion of any moving object, and because they relate different quantities present in a single system to describe another aspect of the system.

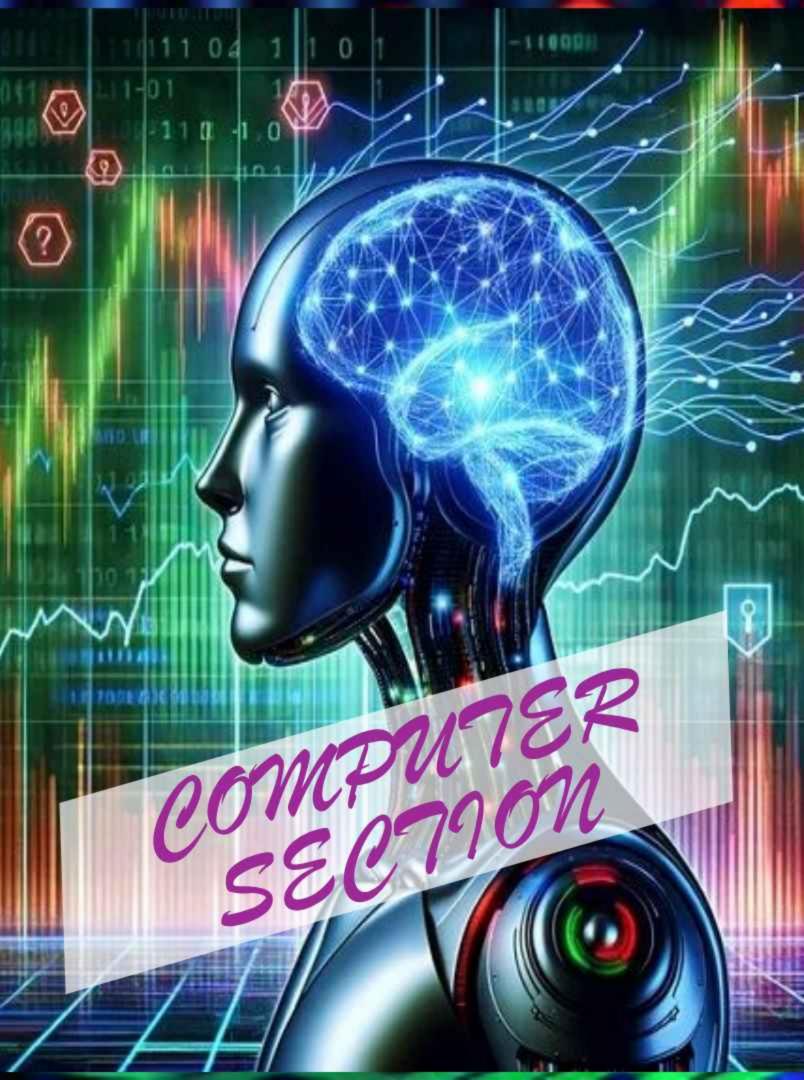
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Aishpreet Kaur B.Sc (Eco.) Sem-IV

Indian team ranks Fourth in International Mathematics Olympiad (IMO)

A six-member team of Indian students represented India at the International Mathematics Olympiad 2024. The team clocked four gold and one silver medal at the event which was held in Bath, United Kingdom between July 11 and July 22. The team was led by Professor Krishnan Sivasubramanian from IIT Bombay and Dr Rijul Saini from Homi Bhabha Centre for Science Education. The team rank is 4 out of 108 participating countries. The team India consisted of six boys all from different states across the country—Adhitya Mangudy Venkata Ganesh from Maharashtra, Ananda Bhaduri from Assam, Kanav Talwar from Uttar Pradesh, Rushil Mathur from Maharashtra, Arjun Gupta from Delhi, and Siddharth Choppara from Maharashtra.



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EDITORIAL

"Everything that can be automated will be automated."

- Robert Cannon

We live in a rapidly evolving world, a society that is constantly changing, progressing, and advancing at an incredible pace. The influence of science, research, and technological advancements in our daily lives is all-encompassing and inevitable. Therefore, it is more crucial than ever to embrace these changes and be prepared for what lies ahead. Technology is a vital tool to promote effective educational system, improve communication and collaboration, provide resources, and enhance learning opportunities. Countless opportunities await us, but they also come with great responsibilities. In light of this, we have to steadfastly move towards our goal of nurturing responsible citizens who will actively contribute to nation-building.

The evolution of Artificial Intelligence has transformed the way we live and work, with its applications spanning from virtual personal assistants to autonomous vehicles. In this journey towards embracing technological changes to drive innovation and digital transformation, artificial intelligence holds immense promise for education, enabling personalized learning, enhancing collaboration, and improving overall learning outcomes. AI can help us make more informed decisions by analyzing vast amounts of data and identifying patterns and trends humans might miss with the use of Big data and tools like NoSQL and Apache Cassandra employing multicloud environment to deliver the flexibility to run workloads on any cloud. Additionally, AI enhances cyber security and defense capabilities by detecting and mitigating cyber threats in real-time.

With great power, comes great responsibility. It is imperative that the development and deployment of AI technologies are accompanied by the ethical considerations and regulatory frameworks to ensure their responsible and beneficial integration into the society. Artificial intelligence will be the future of the world. However, sophisticated AI tools like ChatGPT and Meta AI also pose challenges to traditional education and teaching, which can limit the development of students' own creativity and skills. By continuing to explore the potential of AI while prioritizing ethical principles and societal well-being, we can harness its transformative potential to shape a brighter and more equitable future for all.

Monika Shahi Asst. Prof.

STUDENT EDITORIAL

Technology. It's the ever-present buzz in our pockets, the glow illuminating our faces late at night, and the constant stream of information bombarding our brains. As students, we're at the forefront of this tech revolution, both reaping its benefits and facing its challenges.

This editorial delves into the double-edged sword that technology has become. On the one hand, it's a superpower for learning. We have access to an ocean of knowledge at our fingertips, from online lectures to interactive simulations. Collaborative tools like cloud platforms and video conferencing allow us to connect with classmates and professors across the globe. Imagine dissecting a virtual frog during biology class, or participating in a global debate on climate change – possibilities previously unimaginable.

However, this constant connectivity comes at a price. The distraction factor is real. A notification pops up, and suddenly that research paper takes a backseat to a scrolling black hole of social media. We need to develop strategies to manage our digital well-being, learning to switch off and focus on the task at hand.

Mental health is another concern. Cyberbullying and the pressure to maintain a curated online presence can take a toll. We need to promote responsible online behavior and create safe spaces for open communication about mental health struggles.

Technology also raises ethical dilemmas. Issues like data privacy, online manipulation, and the potential for AI misuse require our attention. We need to be digitally literate, understanding how technology works and the potential consequences of our actions online.

The future of technology is ours to shape. Let's be mindful users, not just passive consumers. Let's leverage its power to learn, collaborate, and make a difference. But most importantly, let's not forget the human connection that lies at the heart of education and a fulfilling life. Striking the right balance between the virtual and the real world is key to thriving in this tech-driven era.

Samridhi BCA Sem-VI

MULTIPLE TYPES OF INTELLIGENCES THAT AI NEEDS TO SLOT IN

As per the theory of multiple human intelligence proposed by the psychologist Howard Gardner in his book Frames of Mind (1983), intelligence is defined as the ability to solve a problem or create a product that is valued in a culture, and each of the multiple intelligences encompasses a different set of skills and talents. An individual's analytical capacity cannot be represented adequately in a single measurement, such as an IQ score. Rather, because each person manifests varying levels of separate intelligences, a unique analytical profile would be a better representation of individual strengths and weaknesses. The individuals have the potential to develop a combination of nine types of intelligences: linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical, interpersonal,



Source https://drameer.nealum.com/miltiple-intelligences-by-howard-gardner-dd8942592eaa

intrapersonal, and naturalistic. Each type of intelligence is associated with a different way of processing information and solving problems.

Nine Spheres of Intelligence

According to the Gardner's theory, the nine spheres of intelligence comprise:

Logical – Mathematical Intelligence

Logical-Mathematical Intelligence is the ability to think logically, reason deductively and understand complex mathematical concepts. Individuals with high logical-mathematical intelligence excel in activities such as problem-solving, pattern recognition, mathematical reasoning and scientific inquiry.

2. Linguistic intelligence

Linguistic Intelligence means the ability to use language and to be sensitive to words and languages. Linguistically Intelligent people want to understand and explore language, love words and can express that through language. Being able to express oneself verbally and use the written words to communicate is extremely important in making connections with others.

3. Interpersonal intelligence

Interpersonal Intelligence refers to a person's ability to bond and connect with other people and manage relationships. Improving your interpersonal intelligence skills can help you to quickly understand other people's emotions. It involves having self-awareness, being conscious of your own emotions and behaviours and then adjusting them to better communicate with those around you.

4. Intrapersonal intelligence

Intrapersonal Intelligence is the well-developed ability for one to be introspective and use that information about one's thoughts and feelings to guide decisions and actions. The qualities present in those with high levels of intrapersonal intelligence are desirable in all careers and personal relationships because the ability to understand oneself helps to communicate and make better decisions, even under stress.

5. Musical intelligence

Music is a part of our lives from the moment we are born. Musical-rhythmic intelligence is the ability to comprehend and produce musical skills such as rhythm, lyrics and patterns. People who demonstrate musical intelligence often think about music and rhythms and learn concepts easier when turned into a song.

Visual-Spatial intelligence

Spatial intelligence is the ability to visualise a space and imagine it from different angles, noting facts and fine details as well as recognising visual scenes without the presence of the physical stimulus. Vision is the primary way we understand, map and manipulate our environment.

Bodily-Kinesthetic intelligence

Bodily-Kinesthetic intelligence is a learning style often referred to as 'learning with the hands' or physical learning. People with bodily-kinesthetic intelligence can learn more easily by doing, exploring and discovering. This intelligence involves a sense of timing and the perfection of skills through mind-body union.

8. Naturalist intelligence

Naturalistic intelligence is the ability to identify observe categorise, understand and manipulate natural elements like plants, animals and the environment. People with high naturalistic intelligence are interested in nurturing exploring and learning about the environment and other species. They are also sensitive to even the most subtle changes in their environment which help them find patterns and relationships with nature.

Existential intelligence

Existential intelligence refers to deep sensitivity and ability to handle deep questions. People with existential intelligence are not only comfortable talking about serious questions, but also strive to find the answer and see the world from a philosophical perspective and enjoy helping others, self-care and promoting positive values like love and truth.

Relevance of Multiple Intelligences for AI

Artificial intelligence is the ability of a computer or computer-controlled robot to perform tasks that are commonly associated with the intellectual processes characteristic of humans, such as the ability to reason. Deep learning neural networks more and more resemble the human brain. All programmers do not write a complete program. Instead, they feed the All with an algorithm and input data. After learning from the data, the All can consider multiple conclusions and use each to inform the best possible outcome. If deep learning is similar to the human brain, the theory of multiple intelligences will undoubtedly have implications for Al.

Examples of AI employing these intelligences

- AI automated answering services employ Linguistic intelligence.
- AI playlists which emanate from our previous choices employ Musical intelligence.
- AI chess or other game software employ Logical-mathematical intelligence.
- AI GPS directions employ Spatial intelligence.

The likely recognition of these multiple intelligences in AI will unfold as neural networks become more advanced and human-like. The companies who are pioneers in the field of artificial intelligence (AI) and helping businesses optimize their business and IT processes through automation and are developing a more general-purpose AI, the construction and incorporation of these intelligences in the machines may be an important step.

Prachi Sharma Nandini Chopra BCA Sem-IV

IT EQUIPMENT RECYCLING FOR ENVIRONMENTAL CONSERVATION

As technology continues to advance, the massive production of electronic devices is leading to a growing amount of electronic waste or e-waste. E-waste is any electronic equipment that is no longer in use or has become obsolete, including computers, cell phones, televisions, and other electronic devices. Proper disposal of e-waste is important as it can have detrimental impact on the environment and human health.



E-waste can be toxic, is not biodegradable and accumulates in the environment, in the soil, air, water and living things. For example, open-air burning and acid baths being used to recover valuable materials from electronic components release toxic materials into the environment. These practices can also expose workers to high levels of contaminants such as lead, mercury, beryllium, thallium, cadmium and arsenic, which can lead to irreversible health effects, including cancers, miscarriages, neurological damage and diminished IQ levels.

IT equipment recycling or e-waste recycling, is a sequential process of dismantling computer hardware and electronic devices, separating out the pieces containing hazardous substances, then recovering valuable materials from their parts and circuitry. It involves the process of collecting, disassembling, and reusing or disposing of electronic devices and components in an environmentally responsible manner.

Key aspects of IT equipment recycling

With the goal to prevent electronic waste from ending up in landfills, where hazardous materials can percolate into the soil and water, posing risks to human health and the environment, some key aspects of IT equipment recycling need to be addressed:

1. Collection

The organizations and individuals can participate in e-waste collection programs or work with certified e-waste recycling facilities to properly dispose of their outdated or non-functional IT equipment. Some manufacturers and retailers also offer take-back programs, where they collect old devices for recycling when customers purchase new ones.

2. Data Security

Before recycling IT equipment, it is crucial to ensure that all sensitive data stored on the devices is securely wiped or destroyed to prevent unauthorized access using data destruction methods.

3. Certified Recycling Facilities

Certain certified e-waste recycling facilities that adhere to environmental and safety standards such as R2 (Responsible Recycling), e-Stewards and SIMS Lifecycle Services indicate compliance with best practices in e-waste management.

4. Component Separation

IT equipment typically contains various materials, including metals, plastics, and hazardous substances. Recycling facilities use specialized processes to separate and recover valuable components for reuse.

5. Reuse and Refurbishment

Functional components or entire devices may be refurbished and reused rather than being melted down for raw materials. This helps extend the life of electronic products and reduces the demand for new manufacturing.

6. Environmental Compliance

This need to be ensured that the recycling process complies with local and international environmental regulations with proper disposal of hazardous materials.

7. Awareness and Education

The awareness among employees, customers, and the general public about the importance of ewaste recycling and the environmental impact of improper disposal need to be aroused.

8. Legislation and Policies

The organizations need to comply with relevant legislation and policies related to e-waste recycling of their specific region and follow the regulations regarding the disposal and recycling of electronic waste.

Recycling Variety of IT Equipment

IT equipment recycling is crucial for environmental sustainability and responsible waste management. The methods employed for various types of IT equipment depends on the specific components and materials involved.

1. Computers, Laptops and Mobile Devices

Functional computers and laptops can be reused and donated to schools, or individuals in need. Non-functioning devices can be disassembled, and valuable components such as hard drives, memory, and processors can be recovered for reuse.

2. Servers and Data Center Equipment

Proper data destruction is crucial before recycling servers to ensure sensitive information is not compromised. The servers contain various metals and components that can be recycled,

including steel, aluminium, copper, and circuit boards.

3. Printers, Copiers, Monitors and Displays

Various materials such as plastic, glass and metals can be recycles and recovered from toner cartridges of printers, copiers, monitors and displays.

4. Networking Equipment

Networking equipment like routers and switches often contain circuit boards and electronic components and metals like aluminium and copper that can be recycled.

5. Batteries, Cables and Wiring

The copper and aluminium cables, insulation materials and rechargeable batteries can be recycled from laptops and mobile devices to recover valuable metals and prevent environmental contamination.

6. Electronic Waste Recycling Facilities

Some organizations specialize in recycling various types of electronic waste, including IT equipment. They use advanced processes to extract valuable materials while minimizing environmental impact.

IT Equipment recycling is an important process that helps to protect the environment and conserve natural resources. By properly disposing of e-waste, we can reduce the number of harmful chemicals released into the environment, prevent soil and water contamination, conserve natural resources and reduce energy consumption. Additionally, for many businesses, Corporate Social Responsibility (CSR) is an integral part that ensures that sustainable practices and environmental consciousness are a top priority for them.

Reference:

https://www.genevaenvironmentnetwork.org/resources/updates/the-growing-environmental-risks-of-e-waste/

Mamta Pal Nisha Bharti BCA Sem-IV

8 Indian Richest YouTubers

- Technical Guruji (Sunny Kaushal) ₹140 crores (\$20 million)
- 2. Ludacris (Lucas Jay Brown) ₹90 crores (\$12 million)
- Amit Bhadana (Amit Bhadani) ₹80 crores (\$10 million)
- Faisal Khan (Mr. Faisu) ₹70 crores (\$9 million)
- Harsh Beniwal ₹60 crores (\$8 million)
- BB Ki Vines (Viraj Khandelwal) ₹50 crores (\$6.5 million)
- Rohan Chaudhary ₹40 crores (\$5 million)
- Prince Narula ₹35 crores (\$4.5 million)

Source: https://www.linkedin.com/pulse/indias-8-richest-youtubers-how-achieved-success-flytant-qn8uc

ENRICH YOUR BROWSING EXPERIENCE WITH AI BASED SMART EDGE BROWSER

Microsoft Edge is an AI-powered smart browser, built with features that enhance your browsing experience, by providing smarter ways to browse, create, learn, shop, play games and even protect your information. It is a cross-platform browser developed by Microsoft that replaced Internet Explorer 11 as the default browser in Windows 10. Edge is also available for Android, iOS and macOS. The new Microsoft Edge is based on Chromium and is compatible with all the supported versions of Windows, macOS, etc. It provides features like speed, performance, best compatibility for websites, and built-in privacy and security.



How does Edge browser works?

Edge integrates with Microsoft's online platforms to provide voice control, search functionality, and dynamic information related to searches within the address bar. Users can make annotations to web pages that can be stored to and shared with OneDrive storage service, and can save HTML and MHTML pages to their computers.

Distinguishing characteristics of Microsoft Edge

Edge browser has certain distinguishing characteristics that makes it lead over other browsers. Many new features have been introduced to Microsoft Edge since its redesign. Some popular features include:

Vertical tabs

Using vertical tabs, users can reposition the browser's conventional tab row at the top into a leftside column. Because they allow users to slide from left to right rather than up and down. When switching tabs, vertical tabs are less cluttered and easier on the hands.

Support for inking

With Edge's annotation capability, users may annotate web pages with handwritten notes and doodles. Using a compatible device, like the Surface Pro tablet, users may annotate, write on web pages, take notes, crop photographs, and highlight text with a pen by using the Web Notes function.

Immersive reading

When users access particular information, like articles and blog entries, Microsoft Edge shows an Immersive Reader symbol on the side of the address bar. This is intended to make reading easier and offers a clearer, more straightforward picture.

Personalized content feed

When Edge first launches, My Feed is displayed which shows a compilation of news articles, videos, and other bits of information pertinent to the user's surfing history and private information, such as the location of the weather report.

Copilot feature

This feature is used to ask complex questions, get comprehensive answers, summarize the information on a page, dive deeper into citations, start writing drafts, and create images using text to image models like DALL·E 3, all side-by-side while you browse, with no need to flip between tabs or leave your browser.

Security Features

Various built-in security features, such as Password Monitor, SmartScreen, InPrivate search, and Kids Mode, are included with Edge browser. The SmartScreen feature shields consumers from the cyber threats. When a user visits an unsafe website or download location, it generates a warning. InPrivate tabs do not store your browsing data like cookies, history, autofill information, etc.

Browser extensions

Browser extensions are small applications that add functionality and personalization to an application. The Microsoft Edge Add-ons store allows users of Microsoft Edge to download their preferred extensions. For instance, you can install AdBlock for Edge as an extension on Microsoft Edge which is a well-known ad blocker that removes advertisements automatically.

Lightweight structure

Edge has dropped support for ActiveX controls, which lack portability and are notorious for security issues.

Save time and money

Microsoft Edge is the best browser for shopping, with built-in tools to help you save time and money. The coupons feature makes finding coupons faster and easier, helping you apply your order easily.

Microsoft Edge is an excellent Android browser that will soon prove a viable alternative to Chrome, Firefox, Opera and other browser giants as it is tailored to providing all the features you need from a high caliber browser. The browser is designed to be fast and resource-efficient, enhancing the overall browsing experience.

> Pooja Samridhi BCA Sem-II

Copilot

To try Copilot, sign into Microsoft Edge and select the Copilot icon in the browser. Microsoft Copilot is not just a tool, it's a game-changer in how user interacts with the technology.

- Real-Time Transcription and Summarization
- Intelligent Email Management
- Automated Content Generation
- Data Analysis and Visualization
- Idea Generation



Source: https://www.softwebsolutions.com/resources/microsoft-365-copilot.html

INTELLIGENT SENSING SYSTEMS WITH BLUE EYES TECHNOLOGY

Imagine yourself in a world where humans interact with computers and you are sitting in front of a PC that can listen, talk or even scream aloud. The Blue Eyes Technology is such an innovative computer vision technology that enables humans to interact with computers and other devices using just their eyes. It is a form of biometric technology that uses the human eye to identify and authenticate users. Blue Eyes Technology uses cameras, image processing algorithms, and software to recognize and track eye movements. It has a wide range of applications in biometrics, security, gaming, automotive, education, healthcare, and other sectors.

Aim of Blue Eyes Technology

Blue eyes technology is an amalgamation of both hardware and software technologies with the help of which we can build machines having human-like sensory abilities. In Blue eyes technology, Blue stands for Bluetooth which depicts a wireless and reliable mode of communication and helps in creating a PAN (Personal Area Network) for linking various components of the Blue Eyes devices, and Eyes help us perceive the world and obtain information. It aims at creating



computational machines that have perceptual and sensory ability like those of human beings. It uses senses by employing most modern video cameras and microphones to identify the user's actions through the use of imparted sensory abilities. The machine can understand what a user wants, where he is looking at and even realize his physical or emotional state using real time analysis.

Software used in Blue Eyes Technology

The software present in blue eye devices continuously monitors the condition of the surroundings. When the condition changes, the software performs real time analysis of incoming data and triggers several operations based on the captured data.

Hardware used in Blue Eyes Technology

The Blue Eyes technology has two main hardware components:

- Data acquisition unit (DAU) that acquires data with the help of numerous sensors and transfers all the data to central system unit with the help of Bluetooth.
- Central system unit (CSU) that analyzes and process the data sent by DAU. It also perform access verification and system maintenance.

Blue Eyes Devices

The devices used for collecting the information in this technology are as unique as technology itself. Some of the devices used in technology are:

1. Emotion mouse (for hand)

Emotion mouse is an input device that looks like a conventional mouse but it serves the purpose of evaluating the emotions of user. It has pressure, photo and temperature sensors that can classify user's emotions into different categories like fear, surprise, anger, disgust, etc. while the user is interacting with the computer.

Sentic mouse (for hand)

Sentic mouse is also an extension to computer mouse having directional pressure sensors giving conventional mouse the ability to measure emotional valence i.e., to sense attraction or avoidance for objects present on the computer screen.

Expression glass (for eyes)

Expression glasses are wearable devices that help students in determining what the user is interested in at a particular time by analyzing the interaction between user and computer. These glasses remember what the user is watching and also catch the facial expressions of the user at that time. Combining that visualization with the emotion of the user gives the level of interest a user has for that thing.

4. Artificial Intelligence Speech Identification (for voice)

The user asks the PC through the microphone which talk gets filtered and saved in Random Access Memory. The input words are scanned and matched against the internally stored words whether it is matching due to variations in loudness, pitch, frequency difference and time gap etc. The identification causes some action to be taken.

Real Life Applications of Blue eyes technology

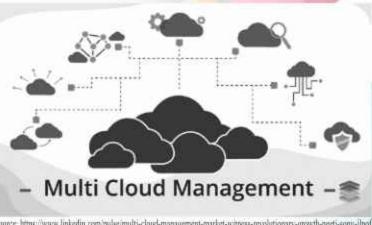
- Understanding users' emotions can be beneficial in marketing intelligence for banks and retailers.
- Blue Eyes can measure the pulse of the human while operating the system, which can be useful in Medical diagnosis.
- Blue Eyes can be used in education programs to enable computers to observe students' emotional state and adjust information delivery accordingly.
- It can be used as an aide in lie detector tests and in security systems that attempt to identify people
 by their faces.
- A car equipped with an effective computing system could identify when a driver is feeling sleepy and advise her to pull over, or it might sense when a stressed-out motorist is about to explode and warn him to slow down and cool off.

The Blue eyes technology ensures a convenient way of simplifying life by providing more delicate and user-friendly facilities in computing devices. Instead of using cumbersome modules to gather information about the user, it will be better to use smaller and less intrusive units. This technology driven by the advanced technology of studying facial expressions for judgment of the intensity of stress handled will push its way into your household and become a stress reliever.

Aastha BCA Sem-II

HARNESS THE POTENTIAL OF MULTIPLE CLOUD VENDORS WITH MULTI CLOUD TECHNOLOGY

In the span of a decade, innovations in the cloud computing have led to a new understanding of computing to be used as a utility. The cloud computing is the delivery of computing services including servers, storage, databases, networking, software, analytics, and intelligence over the cloud to offer faster innovation, flexible resources, and economies of scale. The majority of cloud service providers are making the service better and competitive



Source: https://www.linkedin.com/pulse/multi-cloud-management-market-witness-revolutionary-growth-neeti-sony-lipof

for the end-users. Aside from the number of services introduced by these providers, users are feeling uneasy and are unaware of consequences while switching from one service to another. Moreover, the internal architecture of the cloud makes it difficult for end-users to understand. To overcome this issue a new concept of multicloud has been introduced.

A Multicloud refers to using cloud computing services from more than one cloud provider at the same time. Instead of using a single cloud stack, multicloud environments typically include a combination of two or more public clouds, two or more private clouds, or some combination of both. The primary goal of a multicloud strategy is to give its users flexibility to operate with the best computing environment for each workload. By having the freedom to select multiple vendors without platform complexity, users can pick and choose the capabilities that best suit their specific business needs.

Multicloud Management

To maximize the multicloud architecture's benefits, it's important to be able to track, secure, and manage the workloads consistently across all the environments from a single interface, similar to as if users are running them on a single platform. The task of managing the multicloud environment becomes more complex as the number of cloud providers increase, as the most public cloud vendors have different features, and use varying tools, Service level agreements (SLAs), and Application Programming Interfaces (APIs) for managing cloud services.

Popular Multicloud Solution Providers

Some of the popular cloud providers of different nature are deploying multicloud, including Google Cloud Anthos, IBM Turbonomic, CloudBees CI, Microsoft Azure, Amazon EC2, Convox Multicloud, Amazon Web Services Hybrid Cloud, etc.

Google Cloud Anthos

Google Cloud Anthos is a hybrid, cloud-agnostic container environment that aims to design applications that can run seamlessly across any cloud provider. It is a software product that enables enterprises to use container clusters instead of cloud virtual machines to bridge gaps between legacy software and cloud hardware.

80

IBM Turbonomic

IBM Turbonomic is a performance and cost optimization platform for public, private, and hybrid clouds that provides full stack-visualization, intelligent automation, and AI-powered insights. With Turbonomic, user can proactively deliver the most efficient compute, storage, and network resources across your stacks.

Benefits of Multicloud

Best of Each Cloud

A Multicloud allows users to choose from many cloud vendors and provides the flexibility to match the specific features and capabilities to optimize their workloads in the cloud based on factors like speed, performance, reliability, geographical location, and security and compliance requirements.

Avoid vendor lock-in

With a multicloud approach, users are not tied to a single provider. They can choose whatever solution best suits their business needs while reducing data, interoperability, and cost issues that often arise when they become too dependent on one cloud.

Cost efficiency

Multicloud environments can be a good option for minimizing IT infrastructure spending. The public cloud comes with less overhead while allowing users to scale up or down according to their needs. They can lower total cost while taking the advantage of the best combination of pricing and performance across different providers.

Innovative technology

The cloud providers constantly invest in developing new products and services. A Multicloud enables its users to leverage new technologies as they emerge to improve their own offerings without being limited to the choice offered by a single cloud provider.

Increased reliability and redundancy

A multicloud reduces unplanned downtime or outages since it reduces the risk of a single point of failure. An outage in one cloud won't necessarily impact services in other clouds, and if one cloud does go down, the computing needs of users can be routed to another cloud.

Challenges in Multi Cloud implementation

A multicloud approach does come with potential roadblocks that some organizations find difficult to navigate. Some of the most common multicloud challenges include increased management complexity, maintaining consistent security, integrating software environments, and difficulty with achieving consistent performance and reliability across clouds. These challenges need to be addressed to utilize the best abilities of this technology.

A multicloud service abstracts functionality into one platform and reduces complexity compared to individually consuming the equivalent native services from multiple clouds. The multicloud infrastructure and operations deliver the flexibility to run workloads on any cloud that the business requires and it migrates, manages and secures applications consistently regardless of where they are deployed. With new solutions around multicloud strategy coming up every day, companies are getting the best capabilities across storage, networking, security, application deployment and management platforms.

Mehak Parveen BCA Sem-IV

ADOPTING GREEN IT TO REDUCE CARBON FOOTPRINT ON MOTHER EARTH

In the current era of e-business and e-commerce, the organizations are employing extensive computing resources to brighten their business, but with a very little attention to the impact they create on the environment. The computing resources employed to generate huge profits are using non-biodegradable materials and are contributing to carbon dioxide emissions that have detrimental impact on the environment causing climate and ecosystem changes. This has led to the conception of the terms Green IT and Green Computing.



Green IT is the process that aims to reduce the adverse was how the company of the control of th impact of Information Technology (IT) initiatives on the environment by minimizing the carbon footprint on the earth and by reducing the non-degradable waste of computing resources. It is a set of initiatives that are designed to ensure that the Information Technology is developed, delivered and used in an environmental friendly, sustainable and energy efficient way.

Scope of Green IT

The scope of green computing covers energy efficiency to the use of hazard-free systems. As the urge to acquire the latest technology is high, the organizations must get rid of unwanted computing and electronic devices. There is a crucial need to devise appropriate disposal and recycling procedures for these unwanted devices.

- Green IT covers all methods, processes, software, hardware, etc. that protects the environment through eco-friendly design of equipment, energy savings, waste management, etc.
- It focuses on reducing the hardware used in communication network infrastructure still supporting an internal environmental policy creating digital tools, minimizing travel through remote working, monitoring, reporting, evaluating employees' environmental performance, etc.

Green IT objectives

Green computing is a responsible use of computing resources and employing practices that include the deployment of appropriate green knowledge to employees, use of energy efficient computers, the use of energy harvesting technologies in data centers. Its main objectives are:

- Reducing energy consumption
- Disposing of the equipment in responsible and environmentally friendly ways
- Switching to renewable energy sources

Employing Green IT

It is estimated that out of \$250 billion per year spent on powering computers worldwide only about 15% of that power is spent computing, the rest is wasted idling. Therefore, adopting green computing is the need of hour for efficient utilization of power. Some of the initiatives that can be realized include:

- Production and adoption of environmental friendly products and services.
- Using virtual instances over a single machine to reduce the hardware needed and hence reduce the energy consumption.
- Using energy saving lighting and implementation of solar powered systems or any other renewable energy sources can help in energy efficiency and reduced energy consumption.
- Rather than throwing out the devices, it is better to recycle or reuse them or at least their parts
 which can help in reducing the e-waste that causes harm to the environment.

Benefits of Green IT

The organizations should follow the guidelines proposed under the green IT initiative as it offers great benefits to their business as well as overall ecosystem:

> Reduced Emissions

Reducing emissions can help the environment to heal itself by controlling climate changes and global warming. We need to reduce carbon emissions every day to reach the goal of India to achieve Zero emissions by 2070.

Reduced and more intelligent energy consumption

Green IT helps in less energy consumption through various ways including cloud computing, virtualization etc.

Reduced Waste

Green IT promotes the "Recycling" concept and it ultimately reduces the waste that is put into the environment. The valuable parts of the e-waste are extracted for potential second use and harmful materials are separated before disposing the rest to landfills.

Cost Benefit

Saving energy as well as resources will ultimately help you in saving money as it involves the use of modernized equipment with extended maintenance periods.

Business Benefits

The organizations will get benefited by employing Green IT as it leads to increase in their performance and productivity. It may also provide strong brand reputation with enhanced customer base and improved customer retention.

Challenges in Green IT

Though Green computing seems to be an outstanding way to contribute to the well-being of our environment, there are certain challenges in practical implementation.

- It is expensive and high maintenance is required.
- Starting the application of Green IT is a bit hard. High cooperation of employees is needed in adapting to Green IT.
- Technology changes frequently, so there will be a need to continuously evolve.

Finally, it is our responsibility to heal this world in whatever ways we can. A large number of initiatives have been launched to promote Green Computing by the governments, industry and environmental NGOs. The IT industry is also putting efforts in all its sectors to achieve Green Computing. Equipment recycling, reduction of paper usage, virtualization, cloud computing, power management, green manufacturing are the key initiatives adopted towards Green Computing.

Sneha

BCA Sem-IV

OF EDGE COMPUTING

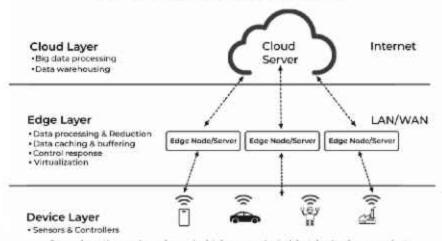
In the dynamic landscape of digital era where the data reigns are supreme, the concept of Edge Computing has emerged as transformative force, reshaping the way we process and utilize the information. This paradigm change is more than just an evolution of technology. It is bringing us closer to a future where efficiency, speed, and real-time responsiveness are critical.

Edge computing is an emerging computing paradigm which refers to a range of networks and devices at or near the user. Edge is about processing data closer to where it's being generated, enabling processing at greater speeds and volumes, leading to greater action-led results in real time. At its core, the edge computing represents the departure from the traditional centralized cloud model. Instead of relying solely on the distinct data centers, edge computing brings computational power closer to the source of data generation. Edge computing has emerged as one of the most effective solutions to network problems associated with moving huge volumes of data generated in today's world.

Components of Edge Computing

Edge computing is comprised of several key components that work together to enable its decentralized and effective processing model. These components include Edge devices, Edge server, Connectivity, Edge data centers, Cloud Integration, Edge analytics, Security mechanism, APIs and protocols and are encompassed in different layers of its architecture.

EDGE COMPUTING ARCHITECTURE



Source: https://www.spiceworks.com/tech/edge-computing/articles/what-is-edge-computing/

- Edge devices: The devices that are located at the edge of a network and are responsible for collecting and processing data. These are the everyday devices like smart speakers, watches and phones which are locally collecting and processing data while touching the physical world. Internet of Things (IoT) devices, sensors, cameras, point of sales (POS) systems, robots, vehicles and industrial machinery can all be considered edge devices if they compute locally and talk to the cloud.
- Edge gateways: These are devices that sit between edge devices and the central network. They are responsible for filtering, aggregating, and forwarding data to the central network.

Edge servers: These are servers that are located at the edge of a network and are responsible for processing data. They are typically smaller and less powerful than central servers, but they are able to process data more quickly due to their proximity to the data source.

Practical Examples of edge computing include:

- Self-driving cars: These vehicles generate a large amount of data from sensors and cameras, which must be processed in real-time to make decisions about navigation and safety. Edge computing allows this data to be processed on the vehicle itself, rather than being sent to a central location for processing.
- Industrial Internet of Things (HoT): Industrial devices such as sensors and machinery generate a large amount of data, which must be processed quickly in order to optimize operations and prevent downtime. Edge computing allows this data to be processed at the edge of the network, rather than being sent to a central location for processing.
- Oil mining and gas industry: Mining industry require continuous monitoring of various parameters to prevent dangerous events. Edge computing allows real-time analytics processing and delivery of data in an optimized manner, thereby reducing reliance on the cloud. Data gathered from the edge can optimize operations, enhance productivity, look after worker safety, and reduce energy consumption to a great extent.
- Gaming: Online as well as cloud gaming requires high-speed functioning. These often struggle
 with high latency issues causing major delays in gamer's actions. Edge computing can benefit
 gaming by creating edge servers closer to the gamers, thereby reducing latency and providing a
 rich gaming experience.
- Smart Cities: Smart cities are dependent on enormous amounts of data. Edge computing can
 power all the elements of a smart city, including autonomous cars, smart street lighting, smart
 factories, smart power grids, and public transport to be monitored for greater efficiency.

Benefits of edge computing

Redefining the speed and responsiveness

One of the primary advantage of edge computing lies in its ability to deliver unparalleled speed and responsiveness. By minimizing the physical distance data must travel, edge computing drastically reduces latency, ensuring quicker responses.

Empowers IoT and smart devices

The interconnecting devices of IoT generate vast amount of data that require instant processing and analysis which can be provided by edge servers as it reduces the burden on centralized server and optimizes the resource utilization.

Enhances the security and privacy

Edge Computing also brings about improvement in security and privacy as data processing is done locally rather than transmitting it to distinct data centers. Risk of unauthorized access, and data breaches is significantly mitigated.

Improved User Experience

Edge computing elevates the user experience by ensuring that the data-intensive operations are

executed speedily on the device or at the network edge thus reducing frustrating delays.

Overcoming bandwidth bottleneck

For the regions, struggling with bandwidth constraints, edge computing emerges as a solution by reducing network traffic as data is processed near to user.

These real world applications showcase the versatility of edge computing, illustrating its ability to transform industries by bringing computational power closer to where it's needed most, enabling faster decision making and enhancing overall efficiency.

Best practices for edge computing include:

- Ensuring that edge devices and servers have the sufficient processing power and bandwidth to handle the data they are responsible for.
- Implementing security measures to protect data as it is transmitted from the edge to the central network.
- Carefully planning the placement of edge devices and servers to ensure that data can be processed as close to the source as possible.
- Monitoring and maintaining edge devices and servers to ensure they are functioning properly and can handle the data they are responsible for.

Edge computing will become increasingly important as the world moves towards an increasingly connected and digital future. More devices are connected to networks daily, leading to an increased need for faster data processing and analysis. Edge computing provides a way for businesses to cut down on their bandwidth and storage needs while providing high-quality data processing capabilities.

Khushboo

BCA Sem-VI

e-Pramaan - National Single Sign-on platform



e-Pramaan is a standards based National Single Sign-on (SSO) platform, which facilitates authentication and security of users accessing various government services on mobile and fixed platforms.

- Offers multi-factor authentication using (password, OTP, digital certificate and biometrics), for web-site authentication, Aadhaar-based user identity verification and PAN-based identity verification.
- The Single Sign-On feature provides registered users a single window access to all government services minimizing their efforts in maintaining multiple usernames and credentials.

Source: https://epramaan.gov.in

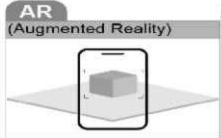
EXTENDED REALITY MERGING THE REAL AND VIRTUAL WORLD

As more and more technological improvements are getting registered, especially in smartphone devices, such as in camera performance and features, the possibility of creating a tangible interaction between the real and the virtual domain that could be perceived as a "window on the real world" is increasing. For this reason, many companies are significantly involving virtual and augmented reality in their efforts to support their commercial ventures. Extended Reality is an outcome of these strategies.

Extended Reality is the combination of human & computer-generated graphics interaction, which is in reality as well as the virtual environment. It is a superset of Augmented Reality, Virtual Reality and Mixed Reality that came into the picture when these technologies were being used by developers and tech-companies all across the globe. XR technologies can be used for workplace collaboration. Science-fiction movies, training, education, therapeutic treatment, data exploration and analysis.

XR (Extended Reality)

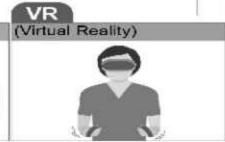
Collective term applied to immersive experiences incorporating varying degrees of digital and real information



User views static digital information or visual elements integrated into the real environment



User interacts with responsive virtual elements integrated into the real environment



User is immersed in an interactive, digitally-generated onvironment

Source: https://tarunias.com/mains-articles/virtual-reality-augmented-reality-and-mixed-reality-upsc/

How Does Extended Reality Work?

XR is a canopy that encompasses three different approaches - virtual reality, augmented reality, and mixed reality. To understand the technical aspect of Extended Reality, we need to understand these technologies:

- Virtual Reality (VR): In virtual reality, the users are put into a fully virtual environment, where
 they can interact only in the virtual world. The graphics generated are mostly computer based
 and artificial objects are designed to give a feel of being real. Special VR devices are needed to
 put users into this environment which gives them a 360-degree view of the virtual world.
- Augmented Reality (AR): The augmented reality put up the virtual objects and imaginations in the real world. Augmented reality does not put us into any virtual or computer-generated graphics, rather it just creates a sense of illusion in digital gadgets. The users still have access to the real world and they can fully interact in both dimensions. The most common example is

- Pokémon-GO which used augmented reality so that the users can interact with the real as well as a virtual world with the help of digital gadgets. Other examples of augmented reality are the filters that we see in many apps, these just create an illusion of being there, but they are not.
- Mixed Reality (MR): Mixed reality is a combination of both AR and VR, where one can interact
 with the digital as well as the real world simultaneously. Users can visualize their surroundings
 in special MR devices. You can do whatever you want, throw a ball, close the windows, etc.
 which will be digitally in your MR headset, but in actual reality, things will remain as they are.

Applications of Extended Reality (XR)

The applications of XR continue expanding as the technology develops.

- Entertainment and Gaming Industry: The entertainment industry can find new and amazing ways to utilize this technology and earn profits. The customers can virtually experience live music and sporting events while wearing XR headsets. The gamers can get a sense of what their chosen scenes would look like in real life and can explore fantastic futuristic worlds.
- Sales and Marketing: The companies can advertise their product via XR and can give their users a hands-on experience about their product or service. The companies will have to spend less on their advertisement, rather they can directly give their customers the experience of using the product.
- Housing and Real Estate: One can easily find the suitable house via a brief walkthrough using XR. The owners can also find potential buyers from various other locations, as there will be no need to go to a site physically. The role of brokers would be eradicated in such a scenario.
- Education and Training: The students all across the globe can find and choose the right colleges & study there from their location. Anyone could use this technology to study in any institution around the globe. Also, the training of employees and workers can be done remotely using XR.
- Work from Home for Remote Areas: The employees and staff can visualize a live environment of their office or workplace & can attend meetings from their homes, and also instruct others on how to work, from their homes. Especially, when the area is remote and difficult to work, XR can be used so that the work can be done from home.

Major Challenges Faced by Companies Developing Extended Reality (XR)

Many Sci-fiction movies have used the concept of Extended Reality. But operating it in the real world is very different than in the reel world. Some of the challenges faces include:

- Cost: Cost is the most prominent challenge that is faced by companies developing XR since many technologies are working together and a lot of hardware goes into the making of XR devices. Due to high cost, common masses may not be able to use these products and the companies developing these may not able to increase their sales. All this may demotivate the investors to invest their money into XR.
- Hardware: Developing the hardware of XR devices is also a challenge for companies in this
 field. Since a lot of technologies, software & components are being used, making hardware is a
 difficult task. The hardware should just not be robust but also be compact and able to process a lot
 of information very quickly and swiftly, and on top of that, the hardware should be cheaper.
- Privacy: Privacy is a challenge faced both by the users as well as the companies. Since XR devices are required to create an environment based on the user requirements, a lot of private

- details might be needed to create a user-rich environment.
- Cyber Security: XR will require more diverse and complex data, offering new targets for cyberattacks and exploitation.

The Future of Extended Reality

The Extended reality can shape the future of human interaction and innovation. XR technologies can be used for a range of experiences, from recreation to training simulations, online meetings, healthcare, and architectural design. However some challenges related to privacy, security, and some ethical considerations are also surrounding XR, such as the potential for addiction and disconnection from the real world, also require attention. Keeping all these concerns in view, many companies are investing a huge amount of money for deeper research in this field of reality.

Charu Sharma BCA Sem-VI

Trending Social Media Platforms

Ranking	Social Media Network	Number of Global users	Launch Year
1	Facebook	3.06 billion	2004
2	YouTube	2.70 billion	2005
3	WhatsApp	2.40 billion	2009
4	Instagram	2.35 billion	2010
5	LinkedIn	1 billion	2003
6	Telegram	900 million	2013
7	Snapehat	800 million	2011
8	Spotify	602 million	2008
9	X (Twitter)	600 million	2006
10	Threads	190 million	2023

Source: https://explodingtopics.com/blog/top-social-media-platforms

UNCOVER PATTERNS AND TRENDS IN ORGANIZATIONAL DATA WITH BIG DATA ANALYTICS

In the light of economic slowdown, making the right business decisions is more critical than ever. The businesses have been backing their decisions on statistics for years. The organizations need to make data-driven decisions that can improve their business-related outcomes such as effective marketing, new revenue opportunities, personalized customer experiences and improved operational efficiency. With an effective strategy to discover patterns from large volumes of data, enterprises can make effective decisions and optimize business development processes that drive growth and provide competitive benefit over competitors.

Data analytics is a technology that drive better decision-making based on insights and behavior patterns rather than beliefs or outdated data. It uses Big Data and Machine Learning technologies to discover patterns and trends from large volumes of data and thus help organizations move faster towards their business goals.

Before delving into data analytics, let us understand that the data generated by enterprises contains extremely large and diverse collections of structured, unstructured, and semi-structured data referred to as Big Data that continues to grow exponentially over time. The amount and availability of data is growing rapidly, due to digital technology advancements, such as connectivity, mobility, the Internet of Things (IoT), and artificial intelligence. These datasets are so huge and complex in volume, velocity, and variety, that traditional data management systems cannot store, process, and analyse them. Therefore, new big data tools are emerging to help companies collect, process, and analyse data at the speed needed to gain the most value from it.

Big Data Analytics

Big data analytics processes use familiar statistical analysis techniques like clustering and regression and apply them to more extensive datasets with the help of various tools to analyze trends, patterns, and correlations in large amounts of raw data to help make data-informed decisions.

Many new technologies have contributed to the substantial amount



Source: https://www.clearrisk.com/risk-management-blog/challenges-of-data-analytics-0

of data available to organizations. With this explosion of data, early innovation projects like Hadoop, Spark, and NoSQL databases were created for the storage and processing of big data. This field continues to evolve as data engineers look for ways to integrate the vast amounts of complex information created by sensors, networks, transactions, smart devices, web usage, and more. To acquire valuable insight into data as a whole, it is necessary to analyze data and derive particular information that can be

used to improve specific parts of a market or the business as a whole. For this, data has to go through several life stages, including creation, testing, processing, consumption, and reuse.

Big Data Analytics Life Cycle

The Big Data Analytics Life Cycle is a step-by-step methodology to address the specific demands for conducting analysis on Big Data, and to plan various tasks associated with the acquisition, processing, analysis, and recycling of data. The Big Data Analytics Life cycle is divided into nine phases as:

Phase I - Business Problem Definition

In this stage, the problem is identified, and assumptions are made regarding how much potential gain a company will make after carrying out the analysis. It includes framing the business problem as an analytics challenge that can be addressed in subsequent phases. It helps the decision-makers understand the business resources that will be required to be utilized thereby determining the underlying budget required to carry out the project.

Phase II - Data Definition

In this stage, analysis is done to see what other companies have done for the same problem. Depending on the business case and the scope of analysis of the project being addressed, the sources of datasets can be either external or internal to the company. In the case of internal datasets, the datasets can include data collected from internal sources, such as feedback forms, from existing software. On the other hand, for external datasets, the list includes datasets from third-party providers.

Phase III - Data Acquisition and filtration

Once the source of data is identified, now it is time to gather the data from such sources. This kind of data is mostly unstructured. Then it is subjected to filtration, such as removal of the corrupt data or irrelevant data, which is of no use to the analysis objective. After filtration, a copy of the filtered data is stored.

Phase IV - Data Extraction

After filtration, some of the entries of the data might be incompatible. To rectify this issue, the data, which don't match with the underlying scope of the analysis, are extracted and transformed in a usable form.

Phase V - Data Munging

There might be a possibility, that the data might have constraints that are unsuitable, which can lead to false results. So data needs cleaning and validation. It includes removing any invalid data and establishing complex validation rules.

Phase VI - Data Aggregation & Representation

This phase calls for intensive operation since the amount of data can be very large. Automation can be brought into consideration, so that these things are executed, without any human intervention.

Phase VII - Exploratory Data Analysis

Depending on the nature of the big data problem, analysis is carried out. Data analysis can be classified as Confirmatory analysis and Exploratory analysis. In confirmatory analysis, the cause of a phenomenon is analysed before. The assumption is called the hypothesis. In an exploratory analysis, the data is explored to obtain information, why a phenomenon occurred.

Phase VIII - Data Visualization

Various tools are used to visualize the data in graphic form, which can easily be interpreted by business users. Visualization influences the interpretation of the results and allows the users to discover answers to questions that are yet to be formulated.

Phase IX - Utilization of analysis results

After the analysis is done and the results are visualized, the business users make decisions to utilize the results. The results can be used for optimization, to refine the business process. It can also be used as an input for the systems to enhance performance.

Big Data Analytics Benefits

- Analysis of large volumes of data from disparate sources in a variety of forms and kinds in a timely manner
- Quickly making well-informed judgments for successful strategizing to enhance the supply chain, logistics, and other tactical decision-making sectors
- Savings due to the increased efficiency and optimization of business processes
- More informed risk management techniques based on large data sample sizes
- Greater knowledge of consumer behaviour, demands, and sentiment can result in better product development data and strategic management processes

With a zeal to improve customer satisfaction and motivate strategic initiatives, many firms are using Big Data Analytics. A slight change in efficiency or the smallest savings can lead to a huge profit, which is why most organizations are moving towards data analytics.

Samridhi BCA Sem-VI



Sundar Pichai, the CEO of Google, was recently awarded the Doctor of Science (Honoris Causa) Award by his alma mater IIT Kharagpur. The honorary degree acknowledges the ones who made significant contributions to the field of science, academia, or the professional world.

Source: https://www.abplive.com/business/google-ceo-sundar-pichai-is-now-doctor-his-wife-anjali-pichai-also-recieved-top-honours-from-iit-kharagpur-2746356

APACHE CASSANDRA A NoSQL DATABASE

In today's information age with billions of connected devices, smartphones, laptops, smart appliances, infrastructure controls and sensors, the digital environments continually stream and store data. Every bit of generated data created, is to be collected, stored, refined, queried, analyzed and operationalized for the purpose of continuous improvement providing better, safer and more efficient products, processes and services. The traditional relational database management systems are not able to handle this voluminous data. To store and manage this data which is of variegated nature, NoSQL databases were introduced by Carlo Strozzi in 1998.

NoSQL Database is a non-relational, open source Data Management System that does not require a fixed schema and specially used for distributed data stores with huge data storage needs. It is used for Big data and real-time web applications. The companies like Twitter, Facebook and Google that handle terabytes of user data every single day can employ NoSQL databases to store structured, semi-structured, unstructured and polymorphic data.

Benefits of NoSQL

- NoSQL can be used as Primary or Analytical Data Source for online applications.
- It supports Big Data which manages data velocity, variety, volume, and veracity.
- It can handle structured, semi-structured, and unstructured data.
- It offers a flexible schema design which can easily be altered without downtime or service disruption.
- There is no single point of failure and the replication of data is easy.
- It provides fast performance and horizontal scalability.
- The databases don't need a dedicated high-performance server.
- It supports various developer languages and platforms.
- It is mainly useful for distributed databases and multi-data center operations.

NoSQL Database Examples

- Redis: Redis works as a data structure server that stores data in-memory allowing high performance and flexibility. This means that Redis reads and modifies data from the main memory, but it also has built-in persistence. This feature allows saving data to disk so it can be reconstructed if the system restarts.
- Riak: Riak stores key-value pairs in data objects called "buckets." It supports a wide range of data formats and emphasizes data stability and predictable performance. Data can be stored inmemory, on disks, or both. Multi-datacenter replication allows to back up your data to data centers in different locations.
- MongoDB: MongoDB is an open-source, agile database that a wide range of companies use across different industries. It stores documents as JSON objects that can quickly change schemas according to your needs. It provides high performance and high reliability due to replication and load balancing features.
- Neo4J: Neo4J is an open-source graph-based database built in Java, with additional features available as a part of their Graph Data Platform. It offers access to a wider range of queries than

- other database types while maintaining high performance. It is useful for solving problems that require repeated network probing.
- Apache Cassandra: Apache Cassandra is a free, open-source database solution built to handle large data loads with minimal impact on performance. Twitter, Netflix, and Reddit all use Cassandra due to its high speed and availability.

Elaborating on Apache Cassandra

Apache Cassandra is a free and open source, massively scalable distributed NoSQL database management system designed to handle large amounts of data across many commodity servers, while providing highly available service and no single point of failure.

Apache Cassandra offers capabilities like continuous availability, linear scale performance, operational simplicity and easy data distribution across multiple data centres and cloud availability zones.



Source: https://en.wiktyemity.org/wiki/Big_Data/Castandra

- Apache Cassandra was originally developed by Avinash Lakshman (one of the authors of Amazon's Dynamo) and Prashant Malik at Facebook for inbox search. Cassandra was published as an open source project in Google Code in July 2008. It was accepted into Apache Incubator in March 2009. Since February 2010, Cassandra has been an 'Apache top-level project'. Apache Cassandra is a prime level Apache project born at Facebook and designed on Amazon's generator and Google's huge Table, for managing giant amounts of structured knowledge across several goods servers, whereas providing extremely offered service and no single purpose of failure.
- Apache Cassandra can serve as both an operational datastore for online/ transactional applications, and as a read-intensive database for business intelligence systems. Cassandra is able to manage the distribution of data across multiple data centers and offers incremental scalability with no single points of failure. It is a NoSQL database that is decentralized (No single point of failure), elastic (Linear Scalability), fault Tolerant (Replication) and optimized for writes and reads.
- It is a structured storage system over a peer to peer network. Cassandra uses a synthesis of well-known techniques to achieve scalability and availability. Cassandra is a distributed storage system for managing structured data that is designed to scale to a very large size across many commodity servers, with no single point of failure.
- The idea is to run on top of an infrastructure of hundreds of nodes, where small and large components in the data centers fail continuously. Many modern businesses have outgrown the typical RDBMS use case and are in need of data management software that offers more.

Unique capabilities of Cassandra:

- Scalability: Cassandra is capable of handling various data types at petabyte scale. There are no limitations on volume and velocity as it's partitioned over a distributed architecture.
- Speed: The read-write performance of Cassandra is unmatched. It can operate across multiple instances called "nodes" and data centers that takes throughput to the next level. Decentralization means that every node can deal with any request, read, or write.
- Availability: Theoretically, organizations can achieve 100% uptime due to data replication, decentralization, and a topology-aware placement strategy that replicates to multiple data

centers, eliminating the waste associated with the traditional practice of maintaining duplicative infrastructure for disaster recovery.

- Geographically distributed: Multi-data center deployments provide exceptional disaster tolerance while keeping data close to clients around the globe, reducing latency.
- Platform and vendor agnostic: Cassandra is not bound to any platform or service provider, which enables organizations to build hybrid and multi-cloud solutions. It also does not belong to any commercial vendor as it is open-source.

Applications of Cassandra

Cassandra has a vast area of applications and is used by various organizations worldwide. Some of the Cassandra applications are listed below:

- Cassandra Storage: Cassandra enables the users to store any kind of data which is stored in various nodes that Cassandra provides. Cisco WebEx, InWorldz, Formspring, OpenX are some companies using Cassandra for storage.
- Back-end development applications: Cassandra provides a wide platform for the development of the back-end. Talentica software is using Cassandra for this purpose.
- Cassandra Monitoring: Cassandra can be used to monitor user activity required by some applications based on the different parameters like media, art, music etc. CERN, Cloudkick and many such companies use Cassandra monitoring.
- Time-series-based applications: Cassandra is best suitable for Time-series-based applications
 that are real time applications working such as hits on the internet browser, traffic light data, GPS
 location tracking data etc.
- Cassandra Analytics: Cassandra provides a platform to analyse data collected from various sources by the developers that includes social media, product feedback catalogues, retail inputs and lookups. Ooyala company, focusing on video content workflow management system, is using Cassandra Analytics applications.
- Cassandra Messaging: As numerous people use messaging services all the time, there is a need for a platform to manage these messaging data. Cassandra can act as a platform for the message providers for their database management.

Although Apache Cassandra is entirely suited to large-scale applications that need to access huge volumes of unstructured data, it is still a good choice for smaller applications also, as it delivers a high level of data protection. Developing for Cassandra is very simple, as most of the truly clever aspects of this technology are handled transparently, so developers have no need to develop platform specific code. Many modern applications like online banking services, airline booking systems, and popular retail apps which operate at huge, distributed scale should never go down. Cassandra's seamless and consistent ability to scale to hundreds of terabytes, along with its exceptional performance under heavy loads, has made it a key part of the data infrastructures of companies that operate these kinds of applications.

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Chahat BCA Sem-VI

AUTONOMOUS VEHICLES STAGES OF VEHICLE AUTOMATION, THEIR CHALLENGES AND CONCERNS

In the era of artificial intelligence and smart machines, autonomous vehicles are getting closer and closer to become a reality. As time goes by and in parallel to technological advances, research on automated vehicles is bringing to light, the huge impacts that they might imply for different fields. An autonomous vehicle is a driverless vehicle that is able to operate itself and perform necessary functions without any human intervention, through its ability to sense its surroundings. It utilizes a fully automated driving system in order to allow the vehicle to respond to external conditions that a human driver would manage. These vehicles that include self-driving cars, trucks, and drones represent a revolutionary leap in the transportation technology reshaping the way we travel and commute.

Evolution of Autonomous Vehicles

The development of the autonomous vehicles can be traced back to the 1980's, with the introduction of basic cruise control systems. Over the decades, advancement in artificial intelligence, sensor technology, and machine learning have propelled autonomous vehicles from basic driver assistance features to fully self-driving capabilities.

Today, companies like Tesla, Waymo, and Uber are at the forefront of the autonomous vehicles race, testing and developing vehicles with varying levels of autonomy. The Society of Automotive Engineers (SAE) has established a classification system ranging from level 0 (no automation) to level 5 (full automation), with most current autonomous vehicles operating at level 2 and 3.

Stages of Automation

- Stage 0: No automation. The vehicle is fully operated by the driver. Driver assistance is provided in the form of warnings; for example, blind spot or lane departure warnings.
- Stage 1: The driver is fully in command of the vehicle with assistance from one automated feature. An example of this may be automated acceleration and braking, as in the case of adaptive cruise control, in which the speed of the car adjusts automatically to keep up with the speed of traffic at a safe distance.
- Stage 2: Similar to stage 1 automation, the driver is fully in command of operating the vehicle. However, automation at stage 2 includes assistance from two automated features, for example, acceleration and braking, and automated steering, in which the driver is assisted by features such as lane centering.
- Stage 3: Under specific conditions, automation at stage 3 enables a vehicle to operate autonomously, but a human driver must actively monitor conditions and immediately take control of the vehicle when the system alerts them.
- Stage 4: In stage 4, a vehicle is fully self-operational within set boundaries, requiring no attention or assistance from a human driver, and indeed may not include features such as pedals or a steering wheel. Examples of stage 4 self-driving vehicles include local driverless taxis operating within geo-fenced boundaries.

Stage 5: These include fully self-driving vehicles that require no driver assistance or monitoring and operate without boundaries or conditions. While some work is being done on this technology, the predictions of the timing of their implementation and availability by the experts vary widely.

Challenges and concerns

- Technological Limitations: Achieving full autonomy in all driving conditions remains a significant challenge. Adverse weather, complex urban environments, and unpredictable human behavior pose difficulties for the current autonomous systems.
- Ethical dilemmas: Autonomous vehicles raise ethical questions about decision making in emergency situations. For example, if a collision is inevitable, how should the vehicle prioritize the safety of its occupants versus pedestrians or other drivers.
- Regulatory and legal frameworks: Developing comprehensive regulations and legal frameworks for autonomous vehicles is an ongoing challenge. Issues surrounding liabilities, insurance, and standardization need to be addressed to ensure the safe integration of autonomous vehicles into existing transportation systems.
- Public trust: Building public trust in autonomous technology is crucial for widespread adoption. High-profile incidents involving autonomous vehicles occasionally led to skepticism and fear among the general public.

Autonomous vehicles represent a transformative force in the world of transportation. The carmakers, researchers and administrations have been working on autonomous driving for years and significant progress has been made. However, the doubts and challenges to overcome are still huge, as the implementation of an autonomous driving environment encompasses not only complex automotive technology, but also human behavior, ethics, traffic management strategies, policies, liability, etc. As technology advances, addressing the challenges will be crucial to unlock the full potential of autonomous vehicles and usher in a new era of safer, more efficient and accessibility mobility.

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Tanveen BCA Sem-VI

Academic Bank of Credits (ABC)



Source: https://www.abc.gov.in/

Academic Bank of Credits is a virtual/digital storehouse that contains the information of the credits earned by individual students throughout their learning journey. It will enable students to open their Academic bank account to which all academic credits earned by the student from course(s) of study are deposited, recognized, maintained, accumulated, transferred, validated or redeemed for the purposes of the award of degree / diploma / certificate etc. by an awarding institution.

- 30.37+ erore students have registered already
- 2078+ universities are registered on ABC portal

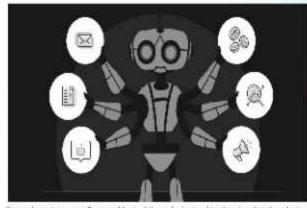
USE OF MACHINE LEARNING IN DIGITAL MARKETING

In the fast-paced world of digital marketing, staying ahead of the competition requires adopting cutting-edge technologies. One such technology that has reshaped the landscape is the machine learning. Machine learning is a branch of artificial intelligence (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy. Marketers use machine learning to find patterns in user activities on a website or on a mobile application. This helps them predict the further behaviour of users and quickly optimize advertising offers. Machine learning algorithms enable digital marketers to analyse vast amounts of data, identify patterns, and make data-driven decisions, leading to more effective and personalized marketing strategies.

Areas of Digital Marketing encompassed by Machine Learning

Customer Segmentation and Targeting

The algorithms of machine learning are highly proficient in analyzing client data and detecting trends and actions. By employing these algorithms, the digital marketers can generate more precise client segments based on online behavior, preferences, and demographics. This makes it possible to create highly customized and targeted marketing programs, guaranteeing that the appropriate message is delivered to the right people at the right moment.



Source: https://www.appsflyer.com/blog/mobile-marketing/machine-learning-digital-marketing/

Predictive Analytics

In digital marketing, the predictive analytics powered by machine learning is providing facility to forecast future trends and customer behaviors by analyzing historical data. The marketers may better predict what client wants, suggest products, and create campaigns that are more likely to be aligned with their target market.

Dynamic Pricing

Machine learning algorithms enable dynamic pricing strategies by analysing market demand, competitor pricing, and customer behaviour. Digital marketers can use ML to adjust prices in real-time, maximizing revenue and ensuring competitiveness. This dynamic approach allows businesses to optimize pricing based on various factors, such as demand fluctuations and seasonal trends.

Chatbots and Virtual Assistants

The chatbots powered by machine learning have become integral in providing instant and personalized customer support. These intelligent bots can engage with customers, answer queries, and even make product recommendations based on user interactions. This enhances customer experience and also frees up human resources for more complex tasks.

> Content Personalization

ML algorithms play a crucial role in content personalization, tailoring marketing messages and

recommendations to individual preferences. By analysing user behaviour, ML can predict what content a user is likely to engage with, leading to higher conversion rates. This personalization improves customer satisfaction and increases the chances of customer loyalty.

Fraud Detection and Prevention

In the digital sphere, frauds are a persistent worry. ML algorithms can analyse transactions and user behaviour to identify patterns which indicate fraudulent activity. The digital marketers can use ML-powered fraud detection systems to safeguard their platforms, ensuring a secure and trustworthy environment for customers.

Optimized Ad Campaigns

Machine learning enhances the efficiency of digital advertising by optimizing ad campaigns. ML algorithms analyse user behaviour and engagement data to determine the most effective add placements, ad copies, and targeting strategies. This results in higher conversion rates and a better return on investment for digital marketing campaigns.

The machine learning has altered the traditional way of marketing. As digital marketing continues to evolve, the integration of machine learning technologies offers unprecedented opportunities for businesses to thrive in the competitive online landscape. It improves nearly every aspect of digital marketing activities. From personalized customer experiences to data-driven decision-making, machine learning is proving to be a game-changer for digital marketers. Embracing these technologies is not just a trend; it's a strategic imperative for businesses looking to stay relevant and maximize their impact in the digital space.

Diya BCA Sem-VI



PROGRESSIVE WEB APPS DUAL ADVANTAGE OF WEB AND MOBILE APPS

In current digital era, the digital landscape has witnessed a revolutionary change in the way users interact with the web applications. The global users using mobile devices have eclipsed the desktop users over the years. In such a changing scenario, the Progressive Web Apps (PWAs) have emerged as a technology that bridges the gap between traditional websites and native mobile applications. This is the reason, many companies like Twitter, Pinterest, Uber, Spotify, Facebook, etc. have shifted into the Progressive web apps.

Technically, a Progressive Web Application (PWA) is a web app developed using specific web technologies (like JavaScript, CSS, HTML and Web Assembly) that allows it to take advantage of both website and native app features, providing greater flexibility to businesses and better experiences to users. A PWA can run like a website on multiple platforms and devices from a single codebase and also like a platform-specific app, it can be installed on the device and can operate while offline. They combine the best of both worlds: the responsiveness and interactivity of a native mobile app and the flexibility and accessibility of a website.

Key benefits of Progressive Web Apps

PWA can operate both as a web page and mobile app on any device. These look and behave just like regular web pages searchable in internet browsers. However, they also deliver functionalities identical to those provided by mobile apps. These are fast, can work offline, send push notifications, and use the features of user devices. It is a great solution for web apps with poor mobile user experience and low conversion rates. Using standard technologies, it is aimed at delivering native-like user experience, with speedier conversion and cleaner browsing.

Web-related advantages

PWAs can run in web browsers, just like websites offering advantages such as:

- They can be indexed by search engines.
- They can be shared and launched from a standard web link.
- They are safe for users because they use secure HTTPS endpoints and other user safeguards.
- They adapt to the user's screen size or orientation, and input method.
- They can use advanced web APIs such as Web Bluetooth, Web USB, Web Payment, Web Assembly, etc.

Native-like experiences

When installed on a device, PWAs function just like other apps.

- They have their own application icons that can be added to a device's home screen or task bar.
- They can be launched automatically when an associated file type is opened.
- They can be uploaded to popular app market places like Google Play Store, Microsoft Store, etc.

Advanced capabilities

PWAs also have access to advanced capabilities.

- They can continue working when the device is offline.
- They support push notifications.
- They can perform periodic updates even when the application is not running.
- They can access hardware features.

Popular Progressive Web App Examples

Numerous businesses have adopted PWAs and reaped the benefits of this innovative technology. Some of the most notable examples include:

Uber

Uber App that makes it easier for you to travel within the city or even outstation is the most used app in the market. After succeeding with the mobile app, they developed Progressive Web App that makes it easier to access the ride-sharing service from a web browser without even downloading.

Starbucks

Starbucks, which launched its mobile ordering app in 2015 was unsuitable for developing markets, such as rural areas, where internet connections can be slow and unreliable. It later developed its PWA to offer its customers the ability to order ahead, access loyalty rewards, and find nearby stores, creating a seamless coffee-buying experience.

Pinterest

Pinterest, a unique social media platform designed to help people share creative ideas, find recipes, plan projects. Pinterest users want quick, convenient access to visual content in an easy-to-digest format. The company completely overhauled its app by rebuilding it with PWA technology that offered a seamless user experience and encouraged users to spend more time on the site.

Weather

Weather.com is one of the best examples of a PWA. This site loads extremely quickly, even on poor internet connections, and it is responsive, making it easy for you to use, regardless of the device or browser you are using. The app also offers some features specifically designed for use in offline mode, such as the ability to store forecasts for later viewing in case the weather changes.

Facebook

Facebook is also among the earliest adopters of progressive web application technology that relaunched its PWA to provide users with an alternative to its native mobile app. Facebook quit developing its mobile web app in 2020 as it was not user-friendly enough. So, they switched to PWA, which offers an agile experience and takes up a minimal amount of space on users' devices. These attributes make it appealing to casual users and avid users with limited storage capacity.

Progressive Web Apps have emerged as a pioneering solution that combines the best features of websites and native apps. Their ability to provide an app-like experience, offline access, and enhanced performance has made them a preferred choice for businesses seeking to enhance user engagement and expand their reach.

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Navneet Kaur PGDWD Sem-II

IMPLICATIONS OF CYBER BULLYING MENACE AND GUIDELINES AND LEGAL WEAPONS TO CURB

Cyberbullying involves the use of information and communication technologies to support deliberate, repeated, and hostile behavior by an individual or a group that is intended to harm others. It has become increasingly common, especially among teenagers and adolescents, due to the excessive use of digital platforms and social media. Harmful bullying behavior can include posting rumors, threats, sexual remarks and leaking personal information. Not only common people but celebrities also have been facing online trolls and bullying. It is one of the biggest reasons for increasing suicide cases.

A recent study by CHILD RIGHT and YOU (CRY) shows that around 9.2 percent of 630 people surveyed that in Delhi-National capital of India has registered that half of the cyber bullying case has not been reported to the teachers, guardians and that social media companies concerned. According to the research conduct by Symantec Corporation (now Gen Digital Inc.), nearly 8 out of 10 individuals are the victims of cyber bullying in India. Nowadays India is facing the highest cyber bullying in the Asian pacific region. The pandemic has seen a significant increase in cyberbullying cases in India, especially involving women.

Effects of Cyber Bullying

Exposure to cyber bullying can have many adverse effects on children and youth. The issues related to concentration, behavior and emotionality can occur among victims of cyber bullying. They experience trust issues and get caught in the wrong habits like alcohol, drugs, or smoking at a very early age. The long-term effects of cyber bullying can also be life threatening.

Ill effects of Cyber Bullying on victims:

- Feeling unsafe, exposed and humiliated.
- Tendency to withdraw from people around and reluctance to allow family members use their mobiles.
- Changes in appearance and sleeping patterns.
- Changes in personality, with increased bouts of anger, depression and crying spells.
- Decline in performance in academics, sports, and extra-curricular activities

Relevant Cyber bullying cases in India:

Ritu Kohli's Case:

While discussing cyber stalking and Cyber bullying, Ritu Kohli's Case was the first cyber stalking case reported in India. A girl named Ritu Kohli filed a complaint in 2001 that someone else is using her identity in social media and she was deliberately getting calls from different numbers from India and abroad. A case was also filed under Section 509 of Indian penal code against stalker Manish Kathuria.

V M Athira's Case:

A 26-year-old woman has ended her life in Kerala's Kottayam district due to alleged cyber bullying by her former friend. She lodged a complaint against her friend named Arun Vidyadharan before committing suicide. Despite Athira snapping her friendship with Arun, he continued to trouble her by sharing their past chat history and her photos on social media, especially when Athira was getting marriage proposals.

Weapons to fight against cyber bullying

Campaigns, legislation, school administrative programs, and other movements to recognize and stop cyberbullying can tackle the problem. Parents, children and administrators can take steps to stop cyber bullying before it starts or becomes worse.

General Guidelines to follow

Few guidelines and suggestions are given to prevent cyber bullying:

- Do not share your personal information name, address, phone number, pictures, e-mail address and password with anyone.
- Do not open any messages from unknown sources.
- Avoid responding to bullying messages online.
- Do not delete bullying messages, save them for evidence.
- Parents should discuss the serious issue of cyber bullying with their children before it occurs and
 urge children to come to them if they receive any messages that make them feel uncomfortable.

Several software programs and online services are available that can help parents detect and address bullying for a monthly fee. Some helpline numbers are also available, such as, Helpline 1098, a National 24 Hour emergency toll free service for children in need of care and protection and Women helpline 181 for women.

Legal Weapons to Curb Cyber Bullying

One of the major weapons to fight against cyber bullying is to create tough and strong law against it. In India there is no specific legislation that has provision against cyber bullying. Cyber laws are contained in the Information Technology Act, 2000 ("IT Act") which came into force on October 17, 2000. The main purpose of the Act is to provide legal recognition to electronic commerce and to facilitate filing of electronic records with the Government. The key provisions of the Information Technology Act are:

- Section 66A Punishment for sending offensive messages through communication services.
- Section 66D Punishment for cheating by personation by using computer resource.
- Section 66E Punishment for violation of privacy.
- Section 67- Punishment for publishing or transmitting obscene material in electronic form.
- Section 67B Punishment for publishing or transmitting of material depicting children in any sexually explicit act, etc. in electronic form.
- Section 72 Penalty for breach of confidentiality and privacy.

Cyber bullying affects all facets of society. It is evident that cyberbullying on social media among undergraduate college students is a major concern that needs immediate attention. These occurrences can cause a student to lose perspective of who they are and can lead to suicide, violence, and school dropout. Law enforcement officers can play an essential role in preventing cyberbullying. They can speak to students about cyberbullying and online safety issues to discourage them from engaging in risky or unacceptable actions and interactions.

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Sneha BCA Sem-II

DEEPFAKE TECHNOLOGY A BOON OR A BANE

In the current virtual world we all are living in, the novel digital technologies are making it increasingly difficult to distinguish between real and fake media. One of the most recent developments contributing to the problem is the emergence of Deepfakes. Deepfake is a term derived from the

combination of "deep learning" and "fake". Deepfakes are computer-generated fake videos. Deepfakes are hyper-realistic videos digitally manipulated to depict people saying and doing things that never actually happened.

Creation of Deepfake

Deepfakes rely on neural networks that analyze large sets of data samples to learn how to mimic a person's facial expressions, mannerisms, voice, and inflections. The Source: https://www.outlookindia.com/national/how-to-identify-deepfiske-videos-a-quick-guide-news-332775



process involves feeding footage of two people into a deep learning algorithm to train it to swap faces. Deepfakes use facial mapping technology and AI that swaps the face of a person on a video with the face of another person. Deepfakes are difficult to detect, as they use real footage, can have authenticsounding audio, and are optimized to spread on social media quickly. Deepfakes target social media platforms, where conspiracies, rumors, and misinformation spread easily, as the users tend to go with the crowd.

As for technology used, deepfakes are the product of Generative Adversarial Networks (GANs), namely two artificial neural networks working together to create real-looking media. These two networks called 'the generator' and 'the discriminator' are trained on the same dataset of images, videos, or sounds. The first generator network tries to create new samples that are good enough to trick the discriminator network, which works to determine whether the new media it sees is real. That way, they drive each other to improve.

A GAN can look at thousands of photos of a person, and produce a new portrait that approximates those photos without being an exact copy of any one of them. In the near future, GANs will be trained on less information and be able to swap heads, whole bodies, and voices. Although deepfakes usually require a large number of images to create a realistic forgery, researchers have already developed a technique to generate a fake video by feeding it only one photo such as a selfie.

Benefits of Deepfake Technology

Deepfake technology, despite its controversial nature, has various benefits for businesses. This Al-based technology is now being used to reshape various industries, from marketing to education and entertainment. Some of the potential benefits of Deepfake Technology include:

Entertainment: Deepfake technology can be used to create realistic special effects in movies and TV shows. It can also be used to create personalized entertainment experiences, such as virtual reality simulations that allow users to interact with their favourite celebrities. Disney has improved their visual effects using high-resolution deepfake face swapping technology. Disney improved their technology through progressive training programmed to identify facial expressions, implementing a face-swapping feature, and iterating in order to stabilize and refine the output.

- Education: Deepfake technology can be used to create more engaging and interactive
 educational experiences. For example, it could be used to create simulations of historical events or to
 allow students to interact with virtual characters.
- Activism: Deepfake technology can be used to raise awareness of social issues. For example, it
 could be used to create videos that show the impact of climate change or to give a voice to marginalized
 groups.
- Low-Cost Video Campaigns: With deepfake technology, marketers can create video campaigns without needing an in-person actor. Instead, they can purchase an actor's identity license and use previous digital recordings of the actor to create a new video. This can save time and money and also allow for easy edits to be made without the need for reshooting.
- Autonomy & Expression: Deepfake can also be used to mask the identity of people's voices and
 faces to protect their privacy. Individuals can use deepfakes to create avatar experiences for selfexpression on the internet. Individuals can gain autonomy and expand their purpose, ideas, and beliefs
 by using a personal digital avatar. Synthetic avatars of people with physical or mental disabilities will
 help express themselves online.

Risks Associated with Deepfake Technology

There are also potential risks associated with Deepfake Technology:

- Misinformation: Deepfake technology can be used to spread false or misleading information. For example, it could be used to create videos that make it appear as if a politician is saying something they never said.
- Reputation damage: Deepfake technology can be used to damage someone's reputation. For example, it could be used to create videos that make it appear as if a celebrity is doing something that they would never do.
- Identity theft: This technology could be used to steal someone's identity. For example, it could be used to create a fake passport or driver's license.

In a way, the deepfake technology pose a serious threat to businesses, society, and the political system and raise concerns about cyber security for individuals and groups as deepfake technology is increasingly being utilized for illicit activities such as financial fraud, identity theft, social engineering, celebrity defaming, automated disinformation campaigns, and scams.

Despite the efforts of technology companies and policymakers to combat the spread of deepfakes, the technological race between deepfake creators and deepfake detectors continues. Therefore, it is necessary to remain vigilant and skeptical of media, particularly if it appears too good to be true. Although, the legislation can provide legal route for deepfake victims, it may not effectively combat the ever-evolving advancements in deepfake technology. As technology advances, it is crucial to keep developing more effective methods of detecting deepfakes. These improved methods are necessary to identify and prevent the harmful effects of deepfakes from persisting.

Divya Gupta Asst. Prof.

DIGITAL LIBRARY ENLIGHTENING GEN X

Today's technology has changed the working of the traditional library system. In Early 70s most of the electronic media was in the form of Magnetic disks and tapes but now it has taken the form of CDs, DVDs, Blue—ray etc. It is now called "Digital Library", means a hub of digital objects. It is the need of the 21st century and comprises of textual, numeric data, scanned images, graphics, audios, newsletters, journals, government documents so that they can be accessed by anyone, anytime and anywhere across the globe via the internet.

A digital library also includes the main functions of a traditional library i.e. cataloging, longterm archiving and access. It is based on documents in digital form, handled like traditional library documents (collecting, cataloging, and providing access) and is made available online for users via catalog records.

Library is at the disposal of users that facilitate access to information by just push of a button, information sources are digitized, compressed and stored in textual/ numeric, audio, video, graphic form. It is a time saving device for user community due to the computer assisted search. Digital libraries are geographically distributed thus, creating the concept of world as a global village.

Digital Library Resources

Digital content is any content created, used, shared, accessed and preserved in a digital format. Digital libraries are seen as the new format for the old libraries. It give extended access to the user as the content is displayed online. Various types of Electronic resources offered in digital libraries:

- Collection in which complete contents and documents are created or converted in machinereadable form for online access
- Scientific datasets
- Scanned images, images of photographic or printed text, etc
- Computer storage devices such as optical disk, CD-ROMs/DVDROMs
- Databases accessible through internet and other networks
- Online databases and CD-ROM information products particularly those with multimedia and interactive video components
- Digital audio video clips or full-length movie.



Source: https://www.peoplesuniversity.edu.in/Management/

Benefits of Digital libraries

Digital libraries offers several advantages such as usability, affordability and accessibility.

They can increase speed and ease to access and the amount of information available. They can

save library space and staff time. They are not yet, however, the solution to libraries financial, space, access and service problems. Most libraries continue to operate in a dual environment – print and electronic resources, whether physically located within a library or accessed via a network.

- Due to the increase in the information generation, the task of collection, organization and retrieval of information has become very difficult. That is why most of the libraries prefer electronic resources to print collection for optimum use. The other reasons like physical space, escalation in journals prices, digital literacy has forced the libraries to opt for electronic resources in order to meet information needs of large community of users.
- Digital library can store a large volume of digital information in archival form. A digital library may refer only to electronic resources or a combination of electronic resources and services that support using those resources via a network. It provides the users with fast search tools, immediate access to the rapidly growing information in multimedia form quickly on the screen in an interactive mode.
- Digital library is a comprehensive basic library. It empowers students in conveying a richer message through the use of multimedia and hypermedia technologies.
- The other main objective of Digital Library is to provide search engine that does not need the help of a librarian. It provides a user friendly interface. Digital Library promotes efficient delivery of information economically to all users and it encourages co-operative efforts in research resource, computing, and communication networks. It gives access to content management systems.
- The major function of digital libraries is to facilitate systematic and efficient access to and sharing of information that is considered important by the users. The data in digital library is saved in a format that computer can store, organize, transmit without any conversion.
- The digital resources are being available today on various digital media such as CD Rom, DVDS, floppies, online databases, digital archives, etc. The user of a digital library need not to go to the library physically. People from worldwide can gain access to the same information, as long as an internet connection is available.
- Digital library plays distinct roles in the education sector also
 - As an Environment for learning (student experience)
 - As an Authoring space (student experience)
 - As a Resource for teaching (teacher's experience)



Source: https://www.sangbadpratidin.in/lifestyle/teclv/e-libray-is-so-near-to-you-that-you-can-enjoy-reading-even-during-lockdown/

Building digital collections

One of the largest issues in creating digital libraries will be the building of digital collections. For any digital library to be viable, it must eventually have a digital collection with the critical mass to make it truly useful. Digitization is the process of converting paper and other media in existing collections to digital form. It is the conversion of any fixed or analogue media such as books, journal articles, photos, and paintings, etc. into electronic form through scanning, sampling, or in fact even re-keying. An obvious obstacle to digitization is that it is very expensive.

There are many reasons why building digital collections is a good candidate for a coordinated activity. First, acquiring digital works and doing in-house digitization are expensive, especially to undertake alone. By working together, institutions with common goals can gain greater efficiencies and reduce the overall costs involved in these activities. Second, it also reduces the redundancy and waste of acquiring or converting materials more than once. Third, coordinated digital collection building enhances resource sharing and increases the richness of collections to which users have access.

Architecture of Digital Library System includes:

- User interfaces: Both the pilot and the prototype have two user interfaces: one for the users of the library, the other for the librarians and system administrators who manage the collections. Each user interface is in two parts. A standard Internet browser is used for the actual interactions with the user. The browser connects to client services, which provide intermediary functions between the browser and the other parts of the system. The client services allow the user to decide where to search and what to retrieve.
- Repository: Repositories store and manage digital objects and other information. A large digital library may have many repositories of various types, including modern, and Web servers.
- Search system: The design of the digital library system assumes that there will be many indexes and catalogues that can be searched to discover information before retrieving it from a repository. These indexes may be independently managed and support a wide range of protocols.

Digital libraries represent a transformative advancement in the way information is accessed, preserved, and disseminated. Through their digitized collections, they offer unparalleled accessibility to a wealth of resources, breaking down barriers of time, distance, and physical limitations. Digital libraries enhance learning, research, and cultural exchange on a global scale, fostering collaboration and innovation across disciplines. However, challenges such as digital preservation, copyright issues, and ensuring equitable access remain pertinent. Despite these challenges, the potential of digital libraries to democratize knowledge and empower individuals and communities is undeniable. As technology continues to evolve, digital libraries will undoubtedly play an increasingly vital role in shaping the future of information dissemination and scholarly communication.

Anshi Kapoor Asst. Prof.

TIPS TO USE DIGITAL CHANNELS FOR TRANSACTIONS CAUTIOUSLY AND WISELY

Online banking and UPI transactions have made managing money more convenient than ever before, but they also come with certain risks. Hackers and cybercriminals are always looking for ways to access personal information and steal money from unsuspecting victims.

To protect your online banking and financial information, it is important to take some precautions:-

- Keep your password strong and periodically change it.
- Continually monitor your accounts for any suspicious activity and use two-factor authentication whenever possible.
- Avoid using internet banking on public network (Wi-Fi).
- Keep your credentials updated like mobile number, email address etc.
- Don't open any phishing mails or sites, always use official site for transaction.
- Never share your personal details to anyone.
- Use a unique username.
- 8. Don't save your bank card number, or password, on a publicly accessed computer.
- When you're finished using Online Banking, make sure to logout, clear your cache and close the browser.
- Use licensed antivirus protection software.
- 11. Register yourself for account notification through SMS and email.
- If you notice that some money is missing in your internet bank account, notify the bank immediately

Precautions for ensuring safe and secure UPI transactions:-

- Download official UPI app.
- Use strong and unique password.
- 3. Always use a screen biometric lock to protect your device.
- 4. Don't share UPI pin with anyone.
- Try not to use multiple payment apps.
- 6. Beware of phishing scams, suspicious links and fraudulent communication.
- Regularly monitor your account and transaction history.
- 8. Always check the beneficiary name in the UPI PIN page before any UPI transaction.
- 9. Remember, you don't need PIN to receive money in UPI account.
- 10. Educate yourself about UPI security.
- 11. Disable screen sharing and recording.

Ensuring the security of digital transactions is paramount in today's digital age. By implementing these security practices, user can enhance the security of UPI transactions, confidently embrace the convenience and efficiency of UPI, protect financial information, and minimize the risk of fraud.

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I, Dr. Navdeep Kaur, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dr. Navdeep Kaur

(Signature of Publisher)

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CELEBRATING GURPURAB WITH RELIGIOUS FERVOR AND ENTHUSIASM



Seeking Blessings from the Almighty



Chanting Hymns from Gurbani



Students and Faculty Preparing Langar for the Sangat



Sangat in Pangat Relishing the Langar



Langar Seva Volunteers

STUDENTS INVOLVED IN DIVERSE LEARNING ACTIVITIES



Yoga for Self and Society



National Voters Day Celebration under the SVEEP Project



Combating Global Warming: A Call for Unity



Honoring the Martyrdom of Shaheed-E-Azam Sardar Bhagat Singh Ji, Shaheed Sukhdev Ji, Shaheed Rajguru Ji



Phulkari NGO: Empowering Young Warriors Against Cervical Cancer



SSSS-NSS Unit Celebrates World Red Cross Day

ENLIGHTENING THE SELF



Enhancing Economics Knowledge through Quiz



An Enlightening Session on Sign Language



Investing in Excellence: 7-Day FDP on Emerging Trends in Research Methods & Teaching Pedagogies



Seminar on Cyber Security and Workplace Safety



Career Conclave 2024: Building Foundations for Future Opportunities

LEARNING BEYOND CLASSROOM TEACHING



Lecture on Environmental Conservation



Expert Talk on Entrepreneurship Skills



Expressionist and Employability Skills Program



Session on Preparation Strategy for Competitive Exams: Career Guidance Lecture



Preparing for Future Career Challenges: A Counseling Session

PREPARING STUDENTS FOR A BETTER FUTURE



Timeless Treasures: Display of Hand-Knitted Crochet Items by Sardarni Swarn Kaur Ji



Winter Carnival: Showcasing Students' Business Acumen and Leadership Skills



Book-Bank Fair: Saugaat Project's Books Exchange Program



Lohri Celebration: Fostering Solidarity and Cultural Values



Diwali Celebration: Upholding the True Values of Life

ENGAGING IN CO-CURRICULAR ACTIVITIES





SSSSian Fiesta: Reflecting and Bidding Farewell to Outgoing Students





Sanjh: Alumni Meet Strengthening the Bond of Belongingness





Dance Performance on Fusion Music Beats

SSSS ROTARACT CLUB'S INITIATIVES FOR COMMUNITY ENGAGEMENT



Installation Ceremony: Office Bearers of SSSS Rotaract Club



Blood Donation Camp: Students Volunteering for a Noble Cause



Project Warmth: The Power of Generosity in Creating Change



Maha Shivratri Celebration: Gratitude to the Supreme Power



Felicitation Ceremony: Honoring SSSS Rotaract Club Members



Children's Day Celebration: Empowering Children with Love, Education, and Opportunities

HONORING EXPERTS FROM DIVERSE FIELDS



Ms. Sonia Chadha, Deputy Vice President, HDFC: National Seminar on Women in Corporate Decision-Making Roles



Dr. Parminder Kaur, Head of Computer Science Department, GNDU: Career Counseling Session



S. Taranjeet Singh Sandhu, Former Indian Ambassador to the US: Interactive Session



Prof. Dr. Saroj Bala, Dean, College Development Council, GNDU: Career Carnival



Prof. Dr. Mandeep Kaur, University School of Financial Studies, GNDU: FDP Program



Mr. Nagesh Kumar C.S. & Mrs. Anita Saini, SEBI Certified Trainers: Financial Literacy & Career Awareness Program



Ms. S. Khushbu Kumari: Seminar on Empowering Future Professionals



Dr. Rajan Sharma, Project Manager, Pahal NGO: Workshop on E-Waste Management

CELEBRATING TOGETHERNESS FOR POSITIVE CHANGE



Independence Day Celebration



Door-to-Door Cleanliness Campaign



Raising Cleanliness Awareness in Society



Cleaning and Sanitizing Surroundings



Environmental Preservation Efforts



NSS Volunteers Promoting Cleanliness for a Healthy Life

SSSS ACHIEVERS: OUR PRIDE



Lit-Festival 2024: Inter-College Competition by Khalsa College and Mulk Raj Anand Literary Society



District Level Competition by Red Ribbon Club at DAV College of Education for Women, Amritsar



SSSS Merit Holders, GNDU Examination 2024



SSSS Merit Holders, GNDU Examination 2023



Reap Benefit, Bengaluru



Brainstorming 2024: Inter-College Competition at KMV College, Jalandhar

LEARNING THROUGH EXCURSIONS



Trip to Sri Anandpur Sahib and Virasat-E-Khalsa



Trip to Dalhousie

13TH CONVOCATION CEREMONY



Graduate being Conferred the Degree by the Principal and Distinguised Members of the Managing Committee



Students Conferred with Degrees: Empowered to Transform Possibilities into Opportunities

SSSSian FIESTA: WISHING OUTGOING STUDENTS A BRIGHT FUTURE



Bestowing Special Titles to SSSSians



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