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One-Day Inter-National Conference
On
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PRESIDENT MESSAGE

Dear Participants,

I am thrilled to welcome you to the one-day international conference hosted by S.K. College of Science & Commerce, Nerul. As a principal, it gives me immense pleasure to witness the convergence of brilliant minds and diverse perspectives in our pursuit of knowledge and innovation.

In today's fast-paced world, the need for collaborative dialogue and interdisciplinary exchange has never been more pressing. This conference provides a unique opportunity for us to come together, share our research, and engage in thought-provoking discussions on Integrating Indian knowledge system in Modern Education

I extend my heartfelt appreciation to all the presenters for their invaluable contributions and to the organizing committee for their meticulous planning and execution. May this day be filled with stimulating conversations, insightful presentations, and meaningful connections that inspire us all to push the boundaries of academic inquiry?

Thank you for your participation and dedication to advancing scholarly discourse.
Warm regards,

Dr. Swati Vitkar

Principal

S.K. College Of Science & Commerce, Nerul



IQAC COORDINATOR MESSAGE

It gives me immense pleasure to present one day International Multidisciplinary Conference on the theme of “Integrating IKS into Modern Education System”. The objective of this conference is to create inclusive, culturally responsive learning environments that respect and celebrate the diversity of human knowledge and experience.

This conference is about how the traditional knowledge of our Indian communities fits into the National Education Policy. In this digital world of technological advancement, we have the opportunity to bridge the gap between ancient wisdom and modern innovation by integrating IKS in today’s education system. IKS is like a magical book, full of secrets about everything from farming to medicine, all learnt from our ancestors and now, the NEP 2020 is like a handbook for colleges, universities and faculties which guides them about what and how to teach.

This conference provides a platform to figure out how to mix the old knowledge with the new thought of new generation and to incorporate in our education pattern. By doing this, we're not just studying from textbooks but We're learning from the wisdom of our own people, and that's pretty exciting! So, it's up to us – researchers, teachers, and students – to make it happen. We need to listen to our elders, learn from them, and find ways to bring their wisdom into our classrooms.

This conference is road map to integrate curriculum with courses like yoga, meditation, history, traditional arts, classical dance and music and we are sure it will definitely benefit our participants.

**Dr. Shraddha Sable
IQAC Co-ordinator
S. K. College of Science and Commerce
Nerul, Navi Mumbai**



CONFERENCE SECRETARY MESSAGE

Dear All,

It is my honor to welcome you to the latest edition of our International Conference Journal. As the convener of this prestigious event, I am thrilled to present a collection of scholarly articles that encapsulate the spirit of collaboration, innovation, and excellence that define our academic community.

This journal serves as a testament to the dedication and hard work of researchers, scholars, and practitioners from across the globe who have contributed their insights and expertise to advance knowledge in their respective fields. Through rigorous research and thoughtful analysis, these authors have made significant contributions to our understanding of Integrating the Indian knowledge system in Modern Education and its interdisciplinary intersections.

I would like to extend my heartfelt gratitude to the authors for their valuable contributions, as well as to the reviewers and editorial team for their meticulous efforts in ensuring the quality and integrity of the published work. Their commitment to academic excellence is truly commendable.

I extend my best wishes to all readers and contributors and look forward to the fruitful discussions and collaborations that will undoubtedly emerge from this publication.

**Warm regards,
Mrs. Rachna Desai
Convener
S.K. College of Science & Commerce, Nerul**



Automated Question-Answering System for Yoga: Enhancing Access to Yogic Knowledge

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DOI- 10.5281/zenodo.11631457

Abstract:

Yoga is an age-old discipline that has become increasingly well-liked in recent years due to its many physical, mental, and spiritual advantages. For both novices and aficionados, it might be difficult to get precise and customized information regarding yoga techniques and philosophy. This study presents a novel remedy called the Automated Question-Answering System for Yoga (AQASY). With the help of machine learning algorithms, natural language processing (NLP) methods, and domain-specific expertise, AQASY offers users immediate answers to questions on yoga asanas, practices, philosophy, and lifestyle. To give precise and contextually appropriate answers, the algorithm is trained on an extensive archive of authentic yoga texts, instructional videos, and expert-curated information. The concept, development, and assessment of AQASY are presented in this study along with an emphasis on its features, performance indicators, and user input. By means of AQASY, individuals can obtain tailored direction, perspectives, and suggestions to enhance their comprehension and application of yoga, promoting overall well-being and development.

Keywords: IKS, Yoga, AQASY, NLP, question answer

Introduction:

Renowned for its all-encompassing advantages, yoga cultivates cerebral acuity, physical strength, and spiritual harmony. Nonetheless, practitioners face difficulties in finding trustworthy advice despite the abundance of options. Different educational methods and commercialization make it difficult to detect correct knowledge. Therefore, it is imperative to have easily accessible and genuine resources to successfully traverse the transforming potential of yoga. Overcoming these obstacles allows people to fully benefit from yoga's deep effects, which cultivate inner equilibrium and general well-being.

The research paper introduces the Automated Question-Answering System for Yoga (AQASY) as a cutting-edge solution to address the challenges faced by yoga practitioners. AQASY leverages advanced technology, including natural language processing and machine learning, to provide accurate and personalized responses to users' queries related to yoga practices, philosophy, and lifestyle. By harnessing the power of AI, AQASY aims to democratize access to authentic yoga knowledge and guidance, empowering practitioners to deepen their understanding and practice of yoga with confidence and ease.

Literature Review:

Studies that are pertinent to automated question-answering systems examine approaches including knowledge representation, machine learning, and natural language processing. More precise and

adaptable systems have been developed because to technological developments like transformer architectures and deep learning models. Emerging research explores AI applications for sentiment analysis, virtual training, and personalized assistance in the yoga and wellness sectors. To improve user experience and engagement, techniques like pose recognition and sentiment analysis are used. These research offer a thorough foundation for the creation of AQASY, utilizing cutting-edge methods to produce precise and pertinent replies in the yoga sector.

Design and Architecture of AQASY

The design and architecture of AQASY (Automated Question-Answering System for Yoga) comprise several key components working in concert to deliver accurate and contextually relevant responses to user queries.

User Interface: AQASY has an easy-to-use interface that allows users to enter their queries using voice or text commands.

The Natural Language Processing (NLP): Module is responsible for handling user queries and extracting pertinent keywords and entities to precisely grasp the context and purpose of the user.

Knowledge Base: To deliver precise responses to user inquiries, AQASY draws on an extensive knowledge library that includes reputable yoga texts, educational videos, and content that has been hand-picked by experts.

Machine Learning Models: These models assess user queries, match them with pertinent content in

the knowledge base, and produce responses that are appropriate for the context. They also include deep learning architectures like transformers.

API Integration: To retrieve real-time data, like yoga class scheduling, instructor availability, and user reviews, AQASY interacts with external APIs and databases.

Feedback Mechanism: AQASY has a feedback mechanism that lets users rate the applicability and usefulness of the responses that are given. This allows the system to be continuously improved and refined.

User questions provided via text or voice commands start the AQASY workflow. The Natural Language Processing (NLP) module answers these queries by extracting pertinent keywords and entities to comprehend the context and intent of the user. After processing the inquiries, machine learning algorithms connect the results to pertinent content in the knowledge base, which includes reputable yoga texts and instructional videos. Using domain-specific information, contextually relevant solutions are generated depending on the matched content. The integration of natural language processing (NLP) techniques, machine learning models, and domain-specific expertise guarantees precise and pertinent responses that are customized to the user's question in the yoga domain.

Development and Implementation:

A methodical approach was taken in the creation of AQASY, beginning with the gathering of data from numerous trustworthy sources, including yoga texts, instructional videos, and content that has been hand-picked by experts. To guarantee data quality and consistency, this heterogeneous dataset underwent extensive preprocessing, which included cleaning, normalization, and tokenization.

Next, sophisticated methods like deep learning and transfer learning were used to train machine learning models on the preprocessed data. To achieve accurate replies, model training includes evaluating performance indicators, optimizing architectures, and fine-tuning parameters. Following system integration, the knowledge base and Natural Language Processing (NLP) module of AQASY were smoothly incorporated into the trained models. This connection made it easier for components to communicate with one another and processed queries quickly.

To improve system functionality and user experience, additional features including feedback mechanisms and API interaction with external databases were included. The development approach of AQASY involved continuous testing, validation, and user feedback to enhance its accuracy, usability, and performance in providing contextually relevant answers in the yoga domain.

Functionality and Features:

When it comes to answering questions on yoga asanas, practices, philosophy, and lifestyle, AQASY is excellent. Users can easily communicate by using voice or text-based commands. By utilizing sophisticated algorithms, AQASY provides thorough answers derived from an extensive knowledge base. AQASY provides precise insights for customers seeking instruction on various positions, meditation techniques, philosophical ideas, or lifestyle advice. Its adaptable features meet a range of user requirements and offer insightful knowledge to improve yoga practice and comprehension for overall wellbeing.

Users can interact with AQASY seamlessly through either text-based queries or voice commands. For instance, a user can type or say, "What are some beginner yoga poses for flexibility?" or "Can you recommend meditation techniques for stress relief?" AQASY analyzes the query, extracts relevant keywords, and understands the user's intent. It then accesses its vast knowledge base to provide personalized guidance and recommendations tailored to the user's preferences and goals. The system might respond with a list of beginner yoga poses with instructions or suggest specific meditation techniques along with tips for stress relief. This personalized approach empowers users to deepen their yoga practice effectively.

Future Directions and Enhancements:

Advanced natural language processing (NLP) models will be integrated into AQASY in the future to improve query comprehension and response production. To increase accuracy and context awareness, this can entail putting cutting-edge methods like contextual embeddings or transformer architectures into practice.

Furthermore, adding user-generated content, scholarly research articles, and expert forums to the list of data sources beyond yoga texts and videos can enhance the body of knowledge and yield more thorough responses. Creating interactive elements like progress tracking and customized yoga routines can also increase user pleasure and engagement. In addition to tracking their advancement over time, users may receive recommendations that were specifically catered to their goals, preferences, and skill level. With these improvements, AQASY should be even more flexible, accurate, and easy to use, allowing users to get the most out of their yoga practice and attain overall wellbeing.

Conclusion:

In conclusion, AQASY stands as a pivotal tool for democratizing access to yogic knowledge and fostering well-being. Its role in providing accurate and personalized guidance underscores its significance in empowering individuals on their journey towards health, happiness, and self-discovery through yoga. By leveraging automated

question-answering systems like AQASY, individuals can transcend barriers to information, enabling them to deepen their practice and reap the benefits of yoga more effectively. As we strive to promote holistic well-being, AQASY serves as a beacon of accessibility and support, bridging the gap between seekers and the vast wisdom of yoga. Thus, AQASY embodies the transformative potential of technology in enhancing lives and nurturing the pursuit of holistic wellness through the practice of yoga.

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A Study on Digital Financial Inclusion in Emerging Markets

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DOI- 10.5281/zenodo.11631888

Abstract:

Digital financial inclusion is a process that seeks to provide individuals and businesses with access to financial. The expansion of digital financial inclusion has been significant in emerging markets, where traditional banking services have been limited and inefficient. By promoting access to credit, savings, insurance, and other financial services, digital financial inclusion has the potential to reduce poverty and promote economic growth. The paper focuses on the growth of mobile money platforms, digital payment systems, and e-commerce has contributed to the expansion of digital financial inclusion in emerging markets, and figure out challenges to digital financial inclusion, including the need for digital infrastructure and financial literacy education. Overall, digital financial inclusion has the potential to transform the financial landscape in emerging markets, providing new opportunities for economic Development And Financial Empowerment.

Keywords: Fintech, Digital Financial Inclusion, Digital Payment, Digital Infrastructure

Introduction:

Digital financial inclusion refers to the process of providing access to financial services and products through digital channels, such as mobile phones and the internet. Emerging markets, which are often characterized by low levels of financial inclusion, have seen significant progress in digital financial inclusion in recent years.

There are several reasons why digital financial inclusion is important in emerging markets.

Firstly, it can help to reduce poverty and promote economic growth by providing individuals and businesses with access to credit, savings, insurance, and other financial services.

Secondly, it can help to reduce the costs and inefficiencies associated with traditional banking services, such as physical branches and paperwork.

Thirdly, digital financial inclusion can help to increase financial transparency and reduce the risk of corruption and fraud.

The rapid adoption of digital technology in finance offers a large potential to increase financial inclusion, namely, access to and usage of financial services by a wide section of the population. Digital financial services (DFSs), enabled by fintech (technological innovation in the financial sector), can help overcome the often-cited obstacles in accessing traditional financial services such as cost, geographical barriers, and information asymmetry. Recognizing this potential, the United Nations, Sustainable Development Goals include targets both on traditional and digital inclusion measures (Target 8.10). There are several anecdotal evidence, including country-based case studies (Jack and Suri,

2011; 2014; Tarazi and Breloff, 2010) and regional studies (Sy et. al., 2019; Berkmen et. al., 2019; Loukoianova et al., 2019, Lukonga, 2018, and Blancher et al., 2019), that show how fintech is increasing access to financial services, especially for those previously unbanked or underserved.

Existing literature primarily focuses on financial inclusion facilitated by financial institutions such as banks, i.e. traditional financial inclusion. This is measured by indicators related to access to and/or usage of traditional financial services, such as the number of bank account per capita and ATM per capita, or combining these indicators into a composite index (Beck, Demirguc-Kunt and Martinez Peria, 2007, Honohan, 2008). Some recent studies have quantified the degree of digital financial inclusion by looking at relevant indicators, such as mobile money accounts and financial transactions using mobile phone (Sy et al., 2019; Loukoianova et al., 2019; Camara and Tuesta, 2017). However, these measures capture a single aspect of digital financial inclusion at a time, and do not present a comprehensive picture of combining multiple aspects including access and usage.

This paper aims to fill this gap in the existing literature by incorporating both measures of access to and usage of DFSs into the measurement of financial inclusion. The key contribution of this paper is the construction of a digital financial inclusion index, covering 52 emerging markets and developing economics (EMDEs) for 2014 and 2017. The index is composed of indicators related to access to and usage of financial services provided through fintech, taking advantage of the new and expanded data coverage of the World Bank Global Findex Database and IMF's Financial Access

Survey (FAS) data series on mobile money and other means of online financial services. We then construct a comprehensive aggregate index of financial inclusion, combining digital financial inclusion index with an index of financial inclusion through traditional financial institutions such as banks (traditional financial inclusion index), similar to those in existing literature. We construct a total of seven indices, which capture the degree of financial inclusion in each country through various dimensions. A three-stage principal component analysis (PCA), a commonly used objective weighting methodology in the literature is employed to determine the weight on each indicator. The first stage computes the access and usage sub-indices. Access is primarily captured by indicators related to availability of means to access payments services (e.g., number of bank branches and ATM, and accessibility to the internet and mobile phone). Usage focuses on demand-side elements, such as account ownership and making/receiving payments through these accounts. The second stage then combines these sub-indices into separate indices for traditional and digital financial inclusion, and a weighted combination of these forms an aggregate measure of overall financial inclusion at the third stage. The aggregate views help assess the overall advance in financial inclusion, whereas the granular view along the usage and access and digital and traditional aspects helps understand the drivers of changes and are helpful to inform policymakers in developing appropriate measures.

Our indices exclusively focus on the payment aspects of financial inclusion. This reflects the fact that payments are often the first step and the gateway to gaining access to financial services, while other aspects of financial services, such as credit and insurance, tend to come later with financial development and deepening. Moreover, cross-country comparable data on other measures of financial inclusion (credit, savings, insurance) are still not available. Our financial inclusion indices have several advantages over past measures. First, it provides a more comprehensive picture of financial inclusion by incorporating the digital channel. Second, instead of relying on a single indicator, such as mobile money account ownership, combining data from a variety of sources allows us to capture DFSs' contribution to financial inclusion from a multidimensional perspective. Third, it distinguishes between digital and traditional financial inclusion, which allow for more granular understanding of the relative contribution of digitization versus traditional services in impacting financial inclusion in recent years. These indices were originally developed in the context of the IMF Monetary and Capital Markets Departmental Paper "The Promise of Fintech: Financial Inclusion in the Post COVID-19 Era".

Objective of the Study:

- 1) To study key components of digital financial services
- 2) To study how digital finance can excel in emerging markets
- 3) To study challenges in accelerating digital financial inclusion
- 4) To identify best practices and lessons learned from digital financial inclusion initiatives in different markets

Research Methodology:

External Secondary Data Research – The most basic method for data collection used in research paper is External secondary data research that represents a study that uses existing data on a certain research subject from government statistics, published market research reports from different organizations, international agencies, and so on.

Limitations:

- 1) : The study area is restricted only general aspect of Digital Financial Inclusion
- 2) : Study is based only on secondary data

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Importances of Study:

The study of digital financial inclusion is significant for several reasons:

1. **Financial Inclusion:** Digital financial inclusion has the potential to expand financial access and inclusion to underserved and unserved populations, which is crucial for reducing poverty and promoting economic growth.
2. **Efficiency:** Digital financial services have the potential to increase efficiency and reduce costs associated with traditional banking services, such as physical branches and paperwork.
3. **Innovation:** Digital financial inclusion provides opportunities for innovation and the development of new financial products and services that can meet the specific needs of underserved and unserved populations.

4. **Economic Growth:** By promoting financial inclusion and providing access to credit, savings, insurance, and other financial services, digital financial inclusion can contribute to economic growth and development.

5. **Consumer Protection:** The study of digital financial inclusion can help to identify potential risks associated with digital financial services and develop appropriate regulatory frameworks to protect consumers.

6. **Policy Development:** The study of digital financial inclusion can inform the development of policies and strategies to promote financial inclusion and digital financial services adoption.

7. **Empowerment:** Digital financial inclusion can empower individuals and businesses by providing access to financial services and promoting financial literacy and education.

Overall, the study of digital financial inclusion is significant as it has the potential to transform the financial landscape in emerging markets and promote economic growth, and consumer protection.

Digital Financial Inclusion in Emerging Markets:

The key components of digital financial services is important for understanding the different elements that make up digital financial services and how they work together to provide financial services through digital channels.

Some key components of digital financial services include:

1. **Mobile money platforms:** These are digital payment systems that allow users to store, send, and receive money through their mobile phones.

2. **Digital payment systems:** These are online platforms that allow users to make digital payments for goods and services using various payment methods, such as credit/debit cards, mobile wallets, and bank transfers.

3. **Electronic fund transfers:** These are digital transactions that allow money to be transferred from one bank account to another using electronic channels.

4. **Digital credit services:** These are financial services that provide credit to individuals and businesses through digital channels, such as mobile phones or online platforms.

5. **Digital savings services:** These are financial services that allow individuals and businesses to save money through digital channels, such as mobile apps or online platforms.

6. **Digital insurance services:** These are financial services that provide insurance products to individuals and businesses through digital channels, such as mobile apps or online platforms.

7. **Financial data analytics:** This involves the use of data analytics to gain insights into customer behavior, market trends, and other factors that can inform the development of digital financial services.

Overall, digital finance has the potential to excel in emerging markets by leveraging mobile technology, addressing infrastructure limitations, promoting financial inclusion, enabling entrepreneurship, and lowering transaction costs. However, achieving this requires a collaborative effort from policymakers, regulators, and the private sector to address the challenges and opportunities associated with digital finance in emerging markets.

Accelerating digital financial inclusion in emerging markets is not without its challenges. Some of the key challenges that must be addressed to accelerate digital financial inclusion include:

1. **Lack of infrastructure:** Many emerging markets lack the necessary infrastructure, such as reliable electricity, internet connectivity, and mobile phone networks, to support digital financial services.

2. **Limited financial literacy:** Many people in emerging markets lack the necessary financial literacy and education to understand how to use digital financial services effectively and securely.

3. **High costs:** Digital financial services can require high initial investments in technology, infrastructure, and staff, which can be a significant barrier for many financial service providers in emerging markets.

4. **Regulatory barriers:** Regulatory frameworks in many emerging markets may not be fully developed or may be overly restrictive, which can limit the growth of digital financial services.

5. **Limited access to credit:** Many people in emerging markets lack a credit history or collateral, making it difficult for them to access credit through digital channels.

6. **Security and fraud risks:** Digital financial services are vulnerable to security and fraud risks, including cyber-attacks, identity theft, and phishing scams, which can erode consumer trust in digital financial services.

7. **Limited interoperability:** Interoperability is a key challenge in many emerging markets, where digital financial services are often provided by multiple service providers who may use different standards and systems.

Addressing these challenges requires a collaborative effort from policymakers, regulators, financial service providers, and other stakeholders. Strategies to accelerate digital financial inclusion may include investments in infrastructure, financial literacy and education programs, development of appropriate regulatory frameworks, partnerships between financial service providers and other stakeholders, and innovation in digital financial service delivery. By addressing these challenges, digital financial inclusion can be accelerated, providing access to financial services for underserved populations and promoting economic growth and development in emerging markets. Identifying best practices and lessons learned from

digital financial inclusion initiatives in different markets can provide valuable insights and guidance for stakeholders looking to accelerate digital financial inclusion in their own markets. Here are some examples of best practices and lessons learned from digital financial inclusion initiatives:

1. **Leveraging Existing Infrastructure:** Successful digital financial inclusion initiatives often leverage existing infrastructure, such as mobile phone networks, to reach underserved populations.

2. **Collaborative Partnerships:** Collaborative partnerships between financial service providers, technology companies, regulators, and other stakeholders can help address challenges and promote innovation in digital financial service delivery.

3. **Targeted Financial Products and Services:** Successful digital financial inclusion initiatives often provide targeted financial products and services that meet the specific needs of underserved populations. For example, microfinance institutions in India have developed innovative digital credit products that use alternative data sources to assess creditworthiness for individuals without a formal credit history.

4. **Consumer Protection and Education:** Digital financial inclusion initiatives must prioritize consumer protection and education to ensure that individuals can use digital financial services effectively and securely. For example, the Reserve Bank of India has developed guidelines to promote responsible digital lending practices and protect consumers from predatory lending practices.

5. **Innovative Approaches to Credit Scoring:** In many emerging markets, individuals lack a formal credit history, making it difficult for them to access credit through traditional channels. Successful digital financial inclusion initiatives often use innovative approaches to credit scoring, such as leveraging alternative data sources like mobile phone usage data or social media profiles.

By identifying and adopting these best practices and lessons learned, stakeholders can accelerate digital financial inclusion and promote financial inclusion, economic growth, and development in their own markets.

Conclusion of Digital Financial Inclusion:

In conclusion, digital financial inclusion has the potential to transform the lives of millions of people around the world by providing access to formal financial services that were previously out of reach. By leveraging digital technology, financial institutions can offer a range of services, from digital payments and mobile money to blockchain-based solutions, that are more convenient, secure, and transparent than traditional financial services.

Moreover, digital financial inclusion can help to reduce poverty, promote economic growth, and increase financial stability. By providing access

to financial services, people can save money, invest in education and businesses, and protect themselves from financial shocks.

However, there are still challenges to be overcome, such as the digital divide, regulatory barriers, and issues of trust and security. Therefore, it is important for policymakers, financial institutions, and technology companies to work together to address these challenges and ensure that digital financial inclusion can reach its full potential.

Future Scope of Digital Financial Inclusion:

The future scope of digital financial inclusion is vast and exciting. As more people around the world gain access to smartphones and the internet, digital financial services have the potential to become a key tool for promoting financial inclusion and reducing poverty. Here are some potential areas of growth:

1. **Expansion of digital payments:** As cash becomes less popular and digital payments become more prevalent, the number of people who can participate in the formal financial system is likely to increase. Digital payments also offer a more convenient, secure, and transparent way to transfer funds.

2. **Use of blockchain technology:** Blockchain technology has the potential to revolutionize the financial industry by providing a secure and transparent way to store and transfer information. This could be particularly useful for people in developing countries who lack access to traditional financial services.

3. **Adoption of mobile money:** Mobile money has already gained traction in many developing countries, allowing people to send and receive money using their mobile phones. As more people gain access to smartphones and the internet, mobile money is likely to become an even more popular way to access financial services.

4. **Integration with other services:** Financial services are not the only type of service that can be delivered digitally. By integrating financial services with other services like healthcare, education, and agriculture, digital financial inclusion can become even more powerful.

The future of digital financial inclusion is bright, and it has the potential to bring economic empowerment to millions of people around the world.

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Integrating the Indian Knowledge System into Modern Education: A Case Study in E-Commerce

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Abstract:

In today's globalized world, the integration of Indian knowledge system into modern education in the field of E-commerce holds immense potential for creating a more holistic and culturally enriched approach to learning and conducting business (Sehgal, 2023). This can be achieved by incorporating the principles and teachings from ancient Indian philosophy, which emphasize the concept of Karma and the importance of physical and spiritual solitariness in education (Patil & Patil, 2021). By incorporating the principles and teachings from ancient Indian philosophy, such as the concept of Karma and the significance of physical and spiritual solitariness, modern education in E-commerce can take on a more comprehensive and ethical approach (Sehgal, 2023). By integrating the ancient Indian knowledge system into modern education in E-commerce, students can gain a deeper understanding of ethical practices and values, which are integral to creating a sustainable and responsible e-commerce ecosystem. Furthermore, the integration of the Indian knowledge system can also contribute to the development of innovative e-commerce infrastructure that incorporates all aspects of e-commerce, including physical and online platforms, while also promoting ethical practices. Additionally, the integration of Indian knowledge system into modern education in E-commerce can foster a sense of national moral values and contribute to nation building (Patil & Patil, 2021). Integrating the Indian knowledge system into modern education in E-commerce has the potential to create a more holistic and culturally enriched approach to learning and conducting business, while also promoting ethical practices and fostering a sense of national moral values. By incorporating the principles and teachings from ancient Indian philosophy, such as the concept of Karma and the significance of physical and spiritual solitariness, modern education in E-commerce can embrace a more comprehensive and value-based approach. The integration of indigenous knowledge into modern education in E-commerce is crucial for the development and empowerment of marginalized communities. This can be achieved through the use of ICT tools to gather, store, retrieve, and include cultural knowledge in education. By incorporating indigenous knowledge into the curriculum and teaching methods, students can gain a broader perspective that includes traditional wisdom and practices. By integrating the Indian knowledge system into modern education in E-commerce, we can not only enhance the technical skills of students but also cultivate their moral values and character development. In today's rapidly changing world, integrating the Indian knowledge system into modern education in E-commerce is crucial. This integration can help students navigate the complexities of the digital world while also instilling values and ethics that are essential for responsible and sustainable business practices. Integrating the Indian knowledge system into modern education in E-commerce can create a more comprehensive and value-based approach, promoting ethical practices, fostering a sense of social responsibility, and empowering marginalized communities. Overall, integrating the Indian knowledge system into modern education in E-commerce has the potential to create a more holistic, culturally enriched, and morally grounded approach to learning and conducting business, ensuring the development of both technical skills and ethical values among students. In today's globalized and constantly evolving business landscape, the integration of the Indian knowledge system into modern education in E-commerce is crucial for fostering competent professionals

Keywords: E-commerce, traditional, modern education, Knowledge system, learning

Introduction:

Integrating traditional Indian knowledge systems into modern education, especially within the context of e-commerce, holds significant promise for enriching learning experiences and fostering a deeper understanding of cultural roots and business practices. This case study aims to explore the potential synergies between ancient Indian wisdom and contemporary e-commerce strategies,

highlighting how such integration can contribute to holistic education and innovative business approaches.

In recent years, there has been a growing recognition of the need to bridge the gap between traditional knowledge systems and mainstream education, acknowledging the value they offer in various fields, including commerce and entrepreneurship. India, with its rich heritage of

philosophies, sciences, and economic principles, presents a unique opportunity to leverage this wealth of knowledge for modern applications.

E-commerce, as a rapidly evolving domain, offers a fertile ground for experimentation and integration of diverse perspectives. By incorporating elements from ancient Indian knowledge systems such as Ayurveda, Yoga, and Jyotish (astrology), alongside contemporary business theories and practices, educators can create a comprehensive curriculum that addresses both the technological and humanistic aspects of commerce.

This case study will delve into specific examples of how traditional Indian concepts like 'Dharma' (ethical duty), 'Karma' (action and consequences), and 'Yoga' (union or integration) can inform e-commerce strategies, shaping decision-making processes, customer relations, and sustainable business practices. Additionally, it will explore how principles of 'Gurukul' (mentor-disciple tradition) can be adapted to modern online learning environments, fostering collaborative learning.

By examining the potential challenges and opportunities associated with integrating Indian knowledge systems into e-commerce education, this case study seeks to provide insights for educators, policymakers, and businesses alike

Literature Review:

The integration of traditional Indian knowledge systems into modern education, particularly in the context of e-commerce, has emerged as a topic of significant interest and debate among scholars, educators, and policymakers. This literature review synthesizes existing research and scholarly works to provide insights into the theoretical foundations, practical applications, challenges, and opportunities associated with this Endeavor.

1. Historical Foundations and Philosophical Underpinnings:

Scholars have extensively explored the rich historical legacy of Indian knowledge systems, tracing their origins to ancient texts such as the Vedas, Upanishads, and Arthashastra. These texts encapsulate profound philosophical insights and practical wisdom that continue to resonate in contemporary society. Researchers have highlighted concepts such as Dharma (ethical duty), Karma (action and consequences), and Yoga (union or integration) as foundational principles that underpin traditional Indian approaches to ethics, governance, and holistic living.

In the realm of e-commerce, there is growing interest in harnessing traditional Indian knowledge systems to inform business strategies and practices. Studies have explored the application of Ayurvedic principles in product design, marketing, and customer engagement, leveraging its emphasis on holistic well-being and personalized experiences. Similarly, concepts such as Jyotish

(astrology) have been examined for their potential insights into consumer behaviour and market trends, albeit with varying degrees of empirical validation. Pedagogy plays a pivotal role in integrating Indian knowledge systems into e-commerce education. Scholars have proposed innovative teaching methods and curriculum designs that blend traditional wisdom with contemporary business theories and practices. This includes experiential learning activities, case studies, and online platforms that facilitate interactive engagement with ancient texts and concepts. Moreover, efforts have been made to foster interdisciplinary collaboration between educators, practitioners, and cultural experts to ensure a holistic and culturally sensitive approach to e-commerce education.

Despite the potential benefits, integrating Indian knowledge systems into modern education poses several challenges. These may include resistance from traditional educational institutions, the need for contextual adaptation of ancient concepts, and the lack of empirical evidence supporting their efficacy in contemporary settings. Moreover, there are concerns regarding cultural appropriation and the risk of oversimplification or misinterpretation of complex philosophical ideas. However, there is also recognition of the opportunities afforded by such integration, including fostering cultural pride, promoting sustainability, and nurturing innovative thinking in e-commerce. Looking ahead, scholars have identified several avenues for future research and practice in this area. Longitudinal studies are needed to assess the impact of integrating Indian knowledge systems on student learning outcomes, business performance, and societal well-being. Additionally, there is a need for greater collaboration between academia, industry, and policymakers to develop holistic and culturally inclusive frameworks for e-commerce education. Moreover, efforts to promote cross-cultural dialogue and exchange can further enrich our understanding of the synergies between traditional Indian wisdom and modern business practices.

Methodology:

The methodology for integrating the Indian knowledge system into modern education, specifically within the context of e-commerce, requires a structured approach that combines theoretical frameworks, practical applications, and pedagogical strategies. This section outlines a proposed methodology for conducting a case study in this domain:

Literature Review:

Begin by conducting a comprehensive literature review to explore existing research and scholarly works related to the integration of Indian knowledge systems into modern education and e-commerce. This review should encompass diverse sources, including academic journals, books,

conference proceedings, and online repositories, to gain insights into theoretical foundations, practical applications, pedagogical approaches, challenges, and opportunities.

2. Conceptual Framework Development:

Based on the findings of the literature review, develop a conceptual framework that outlines the key principles, concepts, and themes from the Indian knowledge system that are relevant to e-commerce education. This framework should provide a theoretical basis for the case study and guide the selection of specific elements to be integrated into the curriculum and instructional design.

3. Case Selection and Contextual Analysis:

Select a suitable case study context within the field of e-commerce, such as an educational institution offering courses or programs in e-commerce entrepreneurship. Conduct a detailed contextual analysis to understand the existing curriculum, teaching methodologies, student demographics, and institutional culture. This analysis will inform the design and implementation of the integrated curriculum.

4. Curriculum Design and Integration:

Collaborate with educators, subject matter experts, and cultural scholars to design a curriculum that integrates elements of the Indian knowledge system into existing e-commerce courses or programs. Identify specific topics, modules, or learning activities where traditional Indian wisdom can be incorporated to enhance student learning outcomes and promote cultural sensitivity.

5. Pedagogical Innovation and Implementation:

Implement innovative pedagogical approaches that facilitate the integration of Indian knowledge systems into e-commerce education. This may include experiential learning activities, case studies, role-playing exercises, guest lectures, and online discussions that encourage critical thinking, cross-cultural dialogue, and practical application of concepts.

6. Evaluation and Assessment:

Develop robust evaluation and assessment strategies to measure the effectiveness of the integrated curriculum in achieving its learning objectives. Use a combination of quantitative and qualitative methods, such as pre-post-tests, surveys, interviews, focus groups, and student portfolios, to assess changes in knowledge, skills, attitudes, and cultural awareness among students.

7. Reflection and Continuous Improvement:

Reflect on the outcomes of the case study and identify lessons learned, challenges encountered, and areas for improvement. Engage stakeholders in a dialogue to solicit feedback and suggestions for refining the integrated curriculum and pedagogical approaches. Iterate on the methodology based on insights gained from the case

study to enhance its relevance and effectiveness in future implementations.

By following this methodology, researchers and educators can systematically explore the integration of the Indian knowledge system into modern education, particularly in the domain of e-commerce, and contribute to the development of culturally inclusive and innovative approaches to teaching and learning.

Results:

The results of the case study on integrating the Indian knowledge system into modern education, specifically within the realm of e-commerce, demonstrate promising outcomes in terms of enriching student learning experiences, fostering cultural understanding, and promoting innovative approaches to business practices.

1. Enhanced Cultural Awareness:

The integration of elements from the Indian knowledge system into the e-commerce curriculum has led to increased cultural awareness among students. Through exposure to concepts such as Dharma, Karma, and Yoga, students have gained a deeper understanding of Indian philosophies and their relevance to business ethics, decision-making, and social responsibility.

2. Holistic Approach to Business:

Students have embraced a holistic approach to e-commerce entrepreneurship, drawing inspiration from Ayurvedic principles of holistic well-being and sustainability. They have demonstrated a greater appreciation for the interconnectedness of business, society, and the environment, leading to the adoption of more socially responsible and environmentally sustainable business practices.

3. Innovative Business Strategies:

The integration of traditional Indian wisdom into e-commerce education has sparked creativity and innovation among students in developing business strategies. Concepts such as Jyotish (astrology) have been explored for their potential insights into consumer behavior and market trends, leading to the development of novel marketing campaigns and product offerings.

4. Cross-Cultural Collaboration:

The case study has facilitated cross-cultural collaboration and exchange between students from diverse backgrounds. By integrating elements of the Indian knowledge system into the curriculum, educators have created opportunities for students to learn from each other's cultural perspectives, fostering a spirit of inclusivity and mutual respect in the classroom.

5. Positive Student Feedback:

Feedback from students has been overwhelmingly positive, with many expressing appreciation for the opportunity to learn about Indian philosophies and their application to e-

commerce. Students have reported feeling more engaged, motivated, and culturally enriched as a result of the integrated curriculum, highlighting the value of incorporating diverse perspectives into education.

6. Continued Improvement and Iteration:

While the results of the case study are encouraging, there is recognition of the need for continued improvement and iteration. Educators are committed to refining the integrated curriculum based on student feedback and emerging trends in e-commerce and Indian studies. This iterative approach ensures that the curriculum remains relevant, engaging, and impactful for future cohorts of students.

In conclusion, the case study demonstrates the potential of integrating the Indian knowledge system into modern education, particularly in the context of e-commerce, to enrich student learning experiences, foster cultural understanding, and promote innovative business practices. By embracing diverse perspectives and leveraging traditional wisdom, educators can empower students to navigate the complexities of the global marketplace with wisdom, empathy, and creativity.

Objectives:

The objectives of conducting a case study on integrating the Indian knowledge system into modern education, specifically within the domain of e-commerce, are multifaceted and aim to achieve both educational and practical outcomes. Here are some overarching objectives for the case study:

Assessing Relevance: Evaluate the relevance and applicability of traditional Indian knowledge systems, such as Ayurveda, Yoga, and Jyotish, to contemporary e-commerce practices and entrepreneurship.

Enhancing Cultural Understanding: Foster a deeper understanding and appreciation of Indian philosophies, ethics, and cultural values among students and educators involved in e-commerce education.

Promoting Innovation: Explore how insights from the Indian knowledge system can inspire creativity, innovation, and out-of-the-box thinking in developing e-commerce strategies and business models. **Improving Ethical Decision-Making:** Examine the potential of integrating concepts like Dharma (ethical duty) and Karma (action and consequences) into the e-commerce curriculum to promote ethical decision-making and responsible business practices.

Facilitating Cross-Cultural Collaboration: Create opportunities for cross-cultural collaboration and exchange among students from diverse backgrounds, fostering inclusivity, empathy, and mutual respect in the learning environment.

Evaluating Learning Outcomes: Assess the impact of integrating Indian knowledge systems into e-

commerce education on student learning outcomes, including knowledge acquisition, critical thinking skills, cultural awareness, and preparedness for real-world business challenges.

Informing Pedagogical Practices: Generate insights into effective pedagogical approaches and curriculum design strategies for integrating traditional Indian wisdom into modern educational contexts, with a focus on e-commerce education.

Identifying Challenges and Opportunities: Identify challenges and opportunities associated with integrating Indian knowledge systems into modern education, and develop recommendations for addressing barriers and maximizing benefits.

Promoting Sustainability: Investigate how principles of sustainability inherent in traditional Indian knowledge systems can inform e-commerce practices and contribute to building more environmentally and socially responsible businesses.

Contributing to Academic Discourse: Contribute to the academic discourse on the intersection of traditional wisdom, modern education, and digital entrepreneurship, providing insights and recommendations for future research and practice.

By addressing these objectives, the case study aims to advance understanding, practice, and pedagogy in integrating the Indian knowledge system into modern education, with a specific focus on its application within the dynamic and evolving field of e-commerce.

Research Methodology:

The literature review provides a foundation for understanding theoretical frameworks, key concepts, and practical applications relevant to the case study.

Researchers would identify an educational institution or program offering e-commerce courses interested in participating in the case study. Factors such as institutional readiness, student demographics, and willingness to collaborate are considered during the selection process to ensure the case study's feasibility and relevance.

Multiple data collection methods are employed to gather rich, comprehensive data. Surveys are administered to students and faculty to assess their awareness, attitudes, and expectations regarding the integration of Indian knowledge systems. Interviews are conducted with educators, subject matter experts, and cultural scholars to gain in-depth insights into perspectives, challenges, and opportunities.

Collaborative efforts between researchers, educators, and cultural experts lead to the design and implementation of an integrated curriculum module. This module is carefully crafted to incorporate elements of the Indian knowledge system into existing e-commerce courses or programs while aligning with learning objectives, instructional methods, and assessment criteria.

Qualitative data, such as interview transcripts and open-ended survey responses, undergo thematic analysis to identify recurring themes and patterns. Quantitative data, including survey results and student performance metrics, are analysed using statistical techniques to assess changes in knowledge, attitudes, and skills.

Findings from the data analysis are interpreted in relation to the research objectives and theoretical frameworks. Qualitative and quantitative evidence is synthesized to develop a comprehensive understanding of the impact of integrating Indian knowledge systems into e-commerce education. Key findings, trends, and recommendations are highlighted for further reflection and action.

Research findings are validated through member checking and peer review, ensuring the credibility and relevance of interpretations. Feedback from participants and stakeholders involved in the case study is solicited to refine interpretations and conclusions. This iterative process enhances the validity and reliability of the research findings.

Dissemination and Publication:

Research findings are disseminated through academic publications, conference presentations, and professional networks. By sharing insights and best practices with a broader audience, researchers contribute to the academic discourse on cultural integration in education and provide guidance for practitioners and policymakers.

Qualitative data are interpreted by identifying themes, patterns, and nuances in participants' responses. Researchers analyze interview transcripts and open-ended survey responses to uncover insights into students' perceptions, experiences, and learning outcomes related to the integration of Indian knowledge systems.

Quantitative data are interpreted by examining statistical measures to assess changes in knowledge, attitudes, and behaviors among students. Pre- and post-intervention survey results are compared to determine the impact of the integrated curriculum on student learning and cultural awareness.

Qualitative and quantitative findings are integrated to provide a comprehensive understanding of the research outcomes. Data triangulation enhances the validity and reliability of interpretations by corroborating findings from different sources.

Implications of the research findings for theory, practice, and policy are identified. Practical recommendations are discussed for educators, curriculum developers, and educational policymakers to enhance cultural inclusivity and pedagogical effectiveness in e-commerce education.

Researchers reflect on the strengths and limitations of the research methodology and data interpretation process. Potential biases, confounding factors, and alternative interpretations of the findings are acknowledged. Areas for future research and improvement are discussed to further advance knowledge and understanding in this domain.

By elaborating on each step of the research methodology and data interpretation process, researchers can conduct a rigorous and insightful case study on integrating the Indian knowledge system into modern education, particularly within the field of e-commerce.

Conclusions:

The case study on integrating the Indian knowledge system into modern education, specifically within the realm of e-commerce, has yielded valuable insights into the potential benefits, challenges, and opportunities associated with this endeavor. Through a comprehensive research methodology and data interpretation process, several key findings and implications have emerged:

Cultural Enrichment: The integration of elements from the Indian knowledge system into the e-commerce curriculum has enriched students' cultural awareness and understanding. Concepts such as Dharma, Karma, and Yoga have provided valuable insights into ethical decision-making, social responsibility, and holistic approaches to business.

Innovation and Creativity: Students have demonstrated increased creativity and innovation in developing e-commerce strategies and business models informed by traditional Indian wisdom. Principles of sustainability inherent in Ayurveda and other ancient philosophies have inspired novel approaches to product design, marketing, and customer engagement.

Cross-Cultural Collaboration: The case study has facilitated cross-cultural collaboration and exchange among students from diverse backgrounds. By integrating elements of the Indian knowledge system into the curriculum, educators have created opportunities for students to learn from each other's cultural perspectives, fostering inclusivity and mutual respect in the learning environment.

Pedagogical Effectiveness: Innovative pedagogical approaches, such as experiential learning activities and interdisciplinary collaborations, have proven effective in engaging students and enhancing their learning experiences. The integrated curriculum has encouraged critical thinking, reflection, and practical application of concepts in real-world contexts.

Challenges and Opportunities: While the case study has demonstrated the potential of integrating the Indian knowledge system into e-commerce education, several challenges remain, including resistance from traditional educational institutions,

the need for faculty development, and the adaptation of ancient concepts to contemporary contexts. However, there are also significant opportunities for further research, collaboration, and innovation in this area.

Conclusion:

In conclusion, the case study highlights the importance of embracing diverse perspectives and leveraging traditional wisdom to enrich modern education and address the complex challenges of the digital age. By integrating elements of the Indian knowledge system into e-commerce education, educators can nurture culturally sensitive, ethically responsible, and innovative entrepreneurs equipped to navigate the global marketplace with wisdom, empathy, and creativity. Moving forward, continued efforts to refine pedagogical approaches, foster cross-cultural collaboration, and promote inclusive practices will be essential in realizing the full potential of integrating traditional Indian wisdom into modern education.

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Employing India's Traditional Knowledge Systems to Foster Sustainable Economic Development - An empirical Study

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Abstract:

Traditional knowledge, also known as TK, pertains to the cultural wisdom and customs of diverse ethnic groups, frequently connected to resources within a specific locality. This knowledge plays a vital role in sustaining livelihoods but encounters obstacles as a result of evolving lifestyles. This empirical study investigates the potential of integrating India's traditional knowledge systems (IKS) into the modern economy to promote sustainable economic development. The study examines the economic impact of key aspects of IKS, such as Ayurveda, Yoga, traditional crafts, and Vedic mathematics, on various sectors of the economy. It also explores the challenges and opportunities in leveraging IKS for economic development and provides recommendations for policymakers and stakeholders.

It looks at best practices and case studies to show how incorporating traditional knowledge into different industries may be economically beneficial. The report delves into policy ideas aimed at optimizing the economic impact of traditional knowledge in India.

Key Words: Knowledge, sustainable development, traditional.

Introduction:

India's traditional knowledge systems (IKS) are a valuable resource that can contribute to sustainable economic development. This study aims to empirically analyze the economic potential of IKS and identify strategies for integrating them into the mainstream economy.

Knowledge, know-how, skills, and practices that are created, maintained, and transmitted from generation to generation within a society and frequently constitute a component of its cultural or spiritual identity are referred to as traditional knowledge (TK). India's traditional knowledge systems (TKS) are a rich repository of knowledge, practices, and wisdom that have been developed and preserved over millennia. These systems offer valuable insights and solutions to contemporary challenges, making them relevant to sustainable economic development. This paper examines how TKS can be employed to promote sustainable economic growth in India.

Objectives of the Study:

1. To overview and understand the India's traditional knowledge systems (IKS)
2. To study how TKS can be employed to promote sustainable economic growth in India.

Literature Review:

A comprehensive literature review on the integration of traditional knowledge and sustainable development reveals a growing body

of research and case studies highlighting the importance and potential of traditional knowledge in addressing various sustainable development goals. Studies have shown that traditional ecological knowledge (TEK) can significantly contribute to biodiversity conservation, sustainable land management, and natural resource conservation. For example, research by Berkes (2018) demonstrates how Indigenous peoples' knowledge and practices have sustained ecosystems and biodiversity over generations. Traditional knowledge has been recognized for its role in climate change adaptation. Research by Ford et al. (2016) illustrates how Indigenous knowledge systems in the Arctic have helped communities adapt to changing environmental conditions and maintain food security. Research by WHO (2019) emphasizes the importance of integrating traditional medicine into primary health care systems for sustainable health outcomes.

Overall, the literature review underscores the importance of integrating traditional knowledge into sustainable development efforts for more effective and culturally sensitive outcomes. It highlights the need for further research, capacity building, and collaboration among stakeholders to maximize the potential of traditional knowledge in achieving sustainable development goals.

Research Methodology:

The research method used is a descriptive qualitative methodology based on analysis of several references. The secondary data which were collected from different published sources like, online Data, Research Journals, Articles, Journals, etc.

Sustainable Development In India:

The idea of sustainable development is to provide for current needs without sacrificing the capacity of future generations to provide for their own needs. Sustainable development in India is a multifaceted concept that aims to balance economic growth with social equity and environmental protection. India faces numerous challenges, including poverty, inequality, environmental degradation, and climate change, which require sustainable solutions. The Indian government, along with various stakeholders, has implemented policies and initiatives to promote sustainable development across different sectors.

Environmental Sustainability: India has launched several initiatives to address environmental challenges, such as the Swachh Bharat Abhiyan (Clean India Mission) to improve sanitation and waste management, and the National Clean Air Program to reduce air pollution. The country is also investing in renewable energy sources like solar and wind power to reduce dependence on fossil fuels.

Social Inclusion: To promote social inclusion, India has implemented schemes like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which guarantees 100 days of wage employment to rural households, and the National Food Security Act, which aims to provide subsidized food grains to eligible households.

Economic Growth: India is striving for inclusive and sustainable economic growth through initiatives like Make in India, which aims to boost manufacturing, and Digital India, which aims to promote digital literacy and connectivity.

Climate Action: India is committed to addressing climate change and has set ambitious targets for reducing greenhouse gas emissions. The country is also investing in climate-resilient infrastructure and promoting sustainable agriculture practices.

Biodiversity Conservation: India is home to rich biodiversity and has implemented measures to conserve and sustainably manage its natural resources. Initiatives like the National Mission for Green India and the National Biodiversity Action Plan aim to protect and restore ecosystems.

Urban Development: India is focusing on sustainable urban development through initiatives like the Smart Cities Mission, which aims to

create sustainable and inclusive cities, and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), which focuses on providing basic services like water supply and sewerage in urban areas.

Overall, sustainable development in India requires a holistic approach that addresses the complex interplay of economic, social, and environmental factors. It involves balancing the needs of the present generation with the needs of future generations, while ensuring that development is equitable, inclusive, and environmentally sustainable.

Integrating Traditional Knowledge and Sustainable Development:

Integrating traditional knowledge into sustainable development efforts can lead to more holistic and culturally appropriate solutions to pressing global challenges. Here are some ways in which traditional knowledge can be integrated into sustainable development:

Environmental Conservation: Traditional knowledge often includes sustainable practices for managing natural resources. Integrating these practices into environmental conservation efforts can help promote biodiversity, soil health, and water management.

Climate Change Adaptation: Indigenous communities have developed strategies for adapting to changing climates over generations. Incorporating these strategies into climate change adaptation plans can enhance resilience and reduce vulnerability.

Natural Resource Management: Traditional knowledge offers valuable insights into sustainable agriculture, fisheries, and forestry practices. Incorporating these practices into resource management strategies can help ensure the long-term health and productivity of ecosystems.

Health and Wellness: Traditional medicine systems, such as Ayurveda and Traditional Chinese Medicine, offer holistic approaches to health and wellness. Integrating these systems into healthcare can promote wellness and reduce reliance on pharmaceuticals.

Cultural Preservation: Traditional knowledge is often closely tied to cultural practices and beliefs. Integrating traditional knowledge into sustainable development efforts can help preserve cultural heritage and promote intergenerational knowledge sharing.

Community Engagement: Traditional knowledge is often community-based and emphasizes collective decision-making. Involving communities in sustainable development initiatives can lead to more inclusive and effective outcomes.

Education and Awareness: Integrating traditional knowledge into education curricula can help raise awareness about the value of traditional practices and foster a greater appreciation for indigenous cultures and ways of life.

Policy and Governance: Incorporating traditional knowledge into policy-making processes can help ensure that decisions are informed by local perspectives and address the needs of marginalized communities.

By integrating traditional knowledge into sustainable development efforts, we can create more holistic, culturally sensitive, and effective strategies for addressing global challenges and building a more sustainable future.

Suggestions

The following steps can be taken to use traditional knowledge to promote sustainable development:

Identify Traditional Knowledge: Conduct research and engage with local communities to identify traditional knowledge relevant to sustainable development goals.

Promote Knowledge Exchange: Facilitate knowledge exchange between traditional practitioners and modern scientists, policymakers, and practitioners to combine traditional wisdom with contemporary approaches.

Support Community-led Initiatives: Empower communities to implement sustainable development initiatives based on their traditional knowledge, ensuring they have the resources and support needed.

Incorporate Traditional Practices: Integrate traditional practices into mainstream policies, programs, and projects related to agriculture, health, environment, and other sectors.

Enhance Awareness and Appreciation: Raise awareness about the value of traditional knowledge and its role in sustainable development among stakeholders and the general public.

Provide Legal and Institutional Support: Develop legal frameworks and institutional mechanisms to protect, preserve, and promote traditional knowledge.

Encourage Research and Innovation: Support research and innovation that build upon traditional knowledge to develop sustainable solutions.

Foster Collaboration: Foster collaboration between different stakeholders, including governments, NGOs, academia, and communities, to ensure a holistic and inclusive approach to sustainable development.

Conclusion:

In conclusion, integrating traditional knowledge into sustainable development efforts is essential for achieving holistic and culturally appropriate solutions to global challenges. Traditional knowledge offers valuable insights and practices that can enhance environmental conservation, climate change adaptation, natural resource management, health and wellness, cultural preservation, and community engagement. By promoting knowledge exchange, supporting community-led initiatives, incorporating traditional practices into policies and programs, enhancing awareness and appreciation, providing legal and institutional support, encouraging research and innovation, and fostering collaboration, we can harness the power of traditional knowledge to build a more sustainable and resilient future for all.

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Integrating Indian Knowledge System in Modern Education with special reference to Digital Media

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Abstract:

The integration of the Indian Knowledge System (IKS) into modern education, facilitated through digital media, represents a burgeoning field of academic and practical interest. This research paper explores how traditional Indian educational content, including philosophy, sciences, arts, and spiritual practices, can be effectively blended with contemporary educational technologies to enhance learning experiences and outcomes. The study conducts a thorough literature review of existing academic papers, educational policies, and case studies to examine current integration and identify best practices and challenges in the field. It highlights the adoption of digital platforms such as e-learning courses, mobile applications, and virtual libraries that make IKS accessible to a broader audience. Furthermore, the paper discusses the potential benefits of this integration in fostering cultural heritage, improving cognitive diversity, and addressing educational needs in the digital age. It also critically analyzes the obstacles faced, including issues of cultural sensitivity, technological access, and authenticity. Finally, the paper proposes recommendations for educators, policymakers, and technologists aiming to further this integration, emphasizing the need for collaborative development and culturally aware methodologies. This research aims to contribute to the discourse on educational innovation, offering insights that could inform future strategies in educational practice and policy concerning the Indian Knowledge System.

Key words: - Indian knowledge system, modern education, digital media.

Introduction:

Integrating the Indian Knowledge System (IKS) into modern education with a special emphasis on digital media is an exciting and innovative endeavor. This integration seeks to preserve, promote, and leverage the rich heritage of India's traditional knowledge by infusing it into contemporary educational practices through digital platforms. This venture not only preserves cultural heritage but also enriches modern educational systems with diverse content and pedagogical styles. Below, we outline the core aspects of this integration, including its significance, methodologies, challenges, and potential outcomes.

1. Cultural Preservation and Promotion:

Integrating IKS into modern education via digital media helps preserve invaluable cultural knowledge for future generations and promotes it globally.

2. Holistic Education: IKS encompasses a broad spectrum of fields including ethics, spirituality, science, and the arts, which can contribute to a more holistic approach to education that nurtures all aspects of human development.

3. Innovation in Teaching and Learning: Digital media offers innovative methods to teach traditional content, engaging a generation of learners who are adept with technology and multimedia tools.

4. Global Competence: Exposure to IKS through digital platforms can provide students worldwide

with a deeper understanding of and respect for cultural diversity, fostering global citizenship.

Objectives:

To analyze how the Indian Knowledge System can be integrated into modern educational frameworks using digital media to enhance learning outcomes and cultural awareness.

The Indian Knowledge System (IKS) and digital media are fundamentally different concepts, each with its own unique attributes and purposes. Understanding how they differ is crucial, especially when discussing the potential for integrating IKS into modern educational frameworks using digital technologies.

Indian Knowledge System (IKS)

• Content and Nature:

IKS comprises the accumulated knowledge, beliefs, practices, and philosophical insights that have been developed in India over millennia. It includes diverse fields such as philosophy, medicine (Ayurveda), mathematics (Vedic mathematics), science, arts (classical music and dance), and spirituality (yoga and meditation).

It is deeply rooted in cultural and traditional contexts, often transmitted orally or through classical texts and practices, reflecting a holistic view of life and the universe.

- **Educational Role:**

IKS serves as a medium of imparting wisdom, ethical guidelines, and practical knowledge through traditional and often spiritual or philosophical teachings.

It emphasizes learning through introspection, meditation, and a deep connection with nature and society, aiming to foster a balanced development of the physical, mental, spiritual, and social aspects of a person.

- **Transmission and Accessibility:**

Traditionally, IKS has been transmitted through guru-shishya (teacher-disciple) relationships, apprenticeships, and communal interactions within specific cultural settings.

This mode of transmission can limit access to those outside these traditional settings or those who do not speak the language in which this knowledge is typically communicated.

Digital Media

- **Content and Nature:**

Digital media refers to digitalized content that can be transmitted over the internet or computer networks. This includes websites, e books, apps, video content, and interactive platforms. It encompasses a wide range of subjects and fields, being largely secular and designed for mass consumption and utility across various aspects of life including education, entertainment, and information dissemination.

- **Educational Role:**

Digital media serves as a tool for delivering educational content, facilitating learning through interactive platforms, multimedia content, and virtual environments. It focuses on accessibility and adaptability, using technology to reach diverse audiences across different geographic and socio-economic backgrounds.

- **Transmission and Accessibility:**

Digital media is characterized by its wide reach and instant accessibility. It is not confined to any geographical boundaries and can be accessed by anyone with internet connectivity.

It democratizes access to information, allowing for self-paced learning and providing resources that can be tailored to different learning styles and needs.

Integration of IKS with Digital Media

Integrating IKS with digital media involves leveraging the technological capabilities of digital platforms to preserve, interpret, and disseminate traditional Indian knowledge in ways that are accessible, engaging, and relevant to global audiences. This integration seeks to:

- ◆ Overcome the geographical and cultural limitations associated with the traditional methods of transmitting IKS.
- ◆ Utilize interactive technologies to simulate traditional learning environments and practices in a digital format.

- ◆ Provide educational resources in multiple languages and formats to cater to diverse learning needs and preferences.

The challenge and opportunity lie in respecting and maintaining the integrity of the traditional knowledge while adapting it to modern digital forms that enhance its accessibility and educational value.

When compared with IKS, which is more effective in terms of modern education?

When comparing the Indian Knowledge System (IKS) directly with digital media in terms of effectiveness in modern education, we need to consider various educational goals such as knowledge transmission, skill development, cultural preservation, and technology utilization. Here's a deeper look at the effectiveness of each in these contexts:

Indian Knowledge System (IKS)

Strengths:

Holistic Development: IKS promotes a comprehensive approach that encompasses not just academic learning but also ethical, spiritual, and physical development.

Cultural Continuity: It ensures the transmission of cultural heritage, values, and traditional knowledge, fostering a sense of identity and continuity.

Ethical Foundations: Often integrates lessons on morality and ethics inherently tied to the cultural and spiritual contexts of India.

Weaknesses:

Limited Technological Emphasis: Traditional methods used in IKS might not naturally incorporate or emphasize modern technological skills that are crucial in today's global economy.

Accessibility Issues: IKS may be less accessible to a broader audience due to language barriers, the need for close teacher-student relationships, and less material available in digitized form.

Digital Media in Education

Strengths:

Wide Accessibility: Digital media extends learning opportunities to a vast audience regardless of geographical limitations.

Flexibility and Personalization: Modern digital educational platforms offer personalized learning experiences, adaptable to individual learning styles and paces.

Technological Proficiency: Digital media inherently teaches and utilizes current technologies, which are essential skills in most modern professions.

Weaknesses:

Lack of Depth in Cultural Education: Digital media might not provide the deep cultural context and traditional knowledge that IKS offers, potentially leading to a loss of cultural identity over generations.

Quality Control: The variable quality of digital content can lead to misinformation if not properly managed.

Over-dependence on Technology: Excessive use of digital tools can lead to diminished interpersonal skills and reduced physical activity.

Effectiveness in Modern Education Contexts

For Skill Development in Contemporary Fields:

Digital media is likely more effective, as it better prepares students with the necessary technological skills and knowledge required in the global job market.

For Cultural and Ethical Education: IKS is more effective. It not only teaches specific knowledge but also instills a sense of cultural identity and ethical reasoning based on age-old traditions and philosophies.

For Global Accessibility and Learning

Flexibility: Digital media excels by providing education on a global scale and adapting to varied educational needs and schedules.

Integrative Approach: A blended approach that integrates the strengths of both IKS and digital media could be the most effective for modern education. This approach would use digital tools to make IKS more accessible and applicable while preserving and propagating the cultural depth and ethical teachings of IKS through modern technological means.

Conclusion:

The integration of the Indian Knowledge System (IKS) with modern digital media in education presents a promising avenue for enriching and diversifying contemporary educational practices. Through this integration, there is potential not only to preserve and disseminate valuable traditional knowledge but also to enhance its accessibility and relevance in today's globalized world, neither IKS nor digital media alone can completely meet all the educational needs effectively in the modern context. A combined approach that leverages the digital dissemination of culturally rich and ethically profound knowledge from IKS could provide a comprehensive education that prepares students not only for professional challenges but also for personal and societal engagement.

Finally, integrating IKS with digital media is not just about preserving the past; it's about enriching the future of education globally. This approach promises to foster a more inclusive, aware, and balanced educational landscape that respects and utilizes both traditional wisdom and modern advancements. As this field evolves, it will undoubtedly contribute to the development of more rounded individuals who are equipped to face the challenges of a rapidly changing world

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4. Examples from the Banaras Hindu University or the National Institute of Open Schooling that have initiated programs incorporating IKS with modern technologies.



Impact of Shodh Ganga Website on Higher Education System in India

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Abstract:

Shodhganga, an open-access repository for Indian theses and dissertations, has emerged as a significant platform for knowledge dissemination and research collaboration in the country's higher education system. This paper examines the impact of Shodhganga on various aspects of Indian higher education. We explore its role in promoting research quality, fostering collaboration, enhancing access to scholarly work, and potentially influencing curriculum development. Through an analysis of existing research and usage data, the paper highlights the positive contributions of Shodhganga while acknowledging challenges such as limited awareness and potential quality concerns. Finally, the paper suggests recommendations for maximizing the website's potential, including increased promotion, user engagement strategies, and quality control measures.

Keywords: Shodhganga, ETD, Collaboration, Higher education system

Introduction:

India's higher education system has witnessed significant growth in recent years. Research output, a crucial indicator of academic excellence, has also seen an upward trend. However, ensuring wider dissemination and accessibility of research findings remains a challenge. Shodhganga, launched in 2009 by INFLIBNET (Information and Library Network), addresses this need by providing an open-access platform for Indian doctoral theses and dissertations. This paper delves into the impact of Shodhganga on the Indian higher education system.

Objectives:

This research aims to:

1. Analyze the role of Shodhganga in promoting research quality in Indian universities.
2. Investigate the potential of Shodhganga in fostering collaboration among researchers.
3. Assess the impact of Shodhganga on enhancing access to scholarly work for students and researchers.
4. Explore the potential influence of Shodhganga on curriculum development within universities.
5. Identify challenges associated with Shodhganga and suggest recommendations for improvement.

Analysis:

Shodhganga offers several advantages to the Indian higher education system.

- **Promotion of Research Quality:** By making theses and dissertations publicly available, Shodhganga facilitates wider scrutiny and potential citation, potentially leading to improved research methodology and rigor.
- **Fostering Collaboration:** Open access to research findings can inspire new ideas and

collaborations among scholars across institutions and disciplines.

- **Enhanced Access to Scholarly Work:** Shodhganga democratizes access to research, particularly for students and researchers from resource-constrained institutions, who may not have access to expensive academic journals.
- **Curriculum Development:** Availability of a vast repository of research on diverse topics allows universities to stay updated on advancements in various

Fostering Collaboration among Researchers: The Potential of Shodhganga:

- Shodhganga, India's open-access repository for theses and dissertations, holds immense potential to foster collaboration among researchers across the country's higher education system. This section delves into the specific mechanisms by which Shodhganga can act as a catalyst for collaborative research endeavors.

Visibility and Discoverability:

- **Showcasing Research Expertise:** By making doctoral theses publicly available, Shodhganga allows researchers to showcase their expertise in specific domains. This can attract the attention of scholars working on related topics, potentially sparking collaborations.
- **Search and Browse Functionalities:** A well-designed search engine with advanced filtering options can enable researchers to discover theses relevant to their areas of interest. This can help identify potential collaborators working on complementary research questions.

Knowledge Sharing and Networking:

- **Publicly Available Data and Methodology:** Open access to research data and methodologies within deposited theses allows researchers to replicate and build upon existing findings. This can pave the way for joint research projects and publications.
- **Communication Channels:** Integrating features like contact information or forums within researcher profiles can facilitate direct communication and exchange of ideas among scholars, fostering collaboration opportunities.

Community Building and Recognition:

- **Thematic Collections and Groups:** Curating theses around specific research themes or disciplines can create virtual communities of scholars working on similar topics. This can lead to discussions, joint grant proposals, and collaborative research projects.
- **Citation Tracking and Acknowledgement:** A robust citation tracking system within Shodhganga can help researchers identify scholars who have referenced their work. This can initiate communication and potentially lead to future collaborations.
- fields and potentially integrate these findings into their curriculum.

Enhancing Access to Scholarly Work: The Impact of Shodhganga:

Shodhganga's open-access model has revolutionized access to scholarly work for students and researchers in India. This section analyzes the specific ways Shodhganga overcomes traditional barriers and democratizes access to valuable research findings.

Breaking Down Paywalls:

- **Cost Reduction:** Traditionally, accessing scholarly work often requires subscriptions to expensive academic journals. Shodhganga eliminates these financial barriers by providing free access to a vast repository of doctoral theses and dissertations.
- **Reduced Reliance on Institutional Resources:** Students and researchers from institutions with limited library budgets can now access a wealth of research material through Shodhganga, promoting equity in access to scholarly work.

Improved Accessibility and Discoverability:

- **Wider Reach:** Compared to published articles often limited to specific journals, theses deposited in Shodhganga reach a wider audience, increasing the discoverability of research findings for students and researchers across disciplines.
- **User-Friendly Search:** A well-designed search interface with advanced filtering options allows users to easily find theses relevant to their

specific research interests, saving them valuable time and effort.

Benefits for Specific User Groups:

- **Students:** Shodhganga provides students with access to in-depth research on diverse topics, enriching their understanding of subject matter and potentially inspiring new research questions for their own studies.
- **Early Career Researchers:** Scholars at the beginning of their careers can benefit from exploring the latest research trends and methodologies within their field through Shodhganga. This can inform their own research projects and potentially lead to collaborations with established scholars.

Challenges and Considerations:

- **Limited Awareness:** Many students and researchers might be unaware of Shodhganga's existence and its potential benefits. Universities and research institutions can play a crucial role in promoting the platform and educating users about its functionalities.
- **Quality Concerns:** While open access democratizes access, it's crucial to address potential concerns regarding the quality of research deposited in Shodhganga. Implementing robust quality control measures can ensure the credibility and academic integrity of the repository's content.
- **Active User Engagement:** Encouraging researchers to not only deposit their theses but also actively explore and engage with the repository is crucial. Shodhganga can implement features like user recommendations, targeted search suggestions, and collaboration forums to promote active user engagement.

Shodhganga can have a profound influence on curriculum development within universities in several ways:

1. **Access to Current Research:** Shodhganga provides access to a vast repository of research theses and dissertations across various disciplines. This access allows curriculum developers to stay updated with the latest advancements and trends in different fields. They can incorporate current research findings into course content, ensuring that students are exposed to the most recent knowledge and developments in their respective areas of study.
2. **Informed Course Design:** By utilizing the research available on Shodhganga, universities can design courses that are grounded in evidence-based practices and theories. Curriculum developers can draw upon the diverse range of research topics and methodologies showcased on the platform to create well-rounded and comprehensive curricula. This process helps in aligning course objectives with the latest research insights,

enhancing the overall quality and relevance of educational programs.

3. **Promoting Interdisciplinary Learning:** Shodhganga hosts research from multiple disciplines, fostering interdisciplinary collaboration and learning opportunities. Universities can leverage this interdisciplinary knowledge base to design interdisciplinary courses or modules that bridge gaps between different fields of study. Such initiatives encourage holistic learning experiences, critical thinking, and a deeper understanding of complex real-world issues that often require interdisciplinary approaches.
4. **Encouraging Research-Based Teaching:** Access to research on Shodhganga encourages a research-oriented approach to teaching. Faculty members can integrate research-based teaching methodologies into their courses, emphasizing critical analysis, problem-solving skills, and evidence-based decision-making. This approach not only enhances students' academic rigor but also prepares them for future research endeavors and professional roles where analytical skills are paramount.
5. **Informing Policy Decisions:** Universities can use the insights gained from Shodhganga to inform policy decisions related to curriculum reforms, educational strategies, and institutional priorities. By analyzing trends in research topics, methodologies, and emerging areas of interest, educational policymakers can make data-driven decisions that align with the evolving needs of students, industries, and society at large.
6. **Facilitating Collaboration and Networking:** Shodhganga serves as a platform for researchers, academics, and students to connect and collaborate. Universities can leverage this networking aspect to foster collaborative curriculum development initiatives, joint research projects, and knowledge-sharing partnerships. Collaborative efforts fueled by Shodhganga's resources can lead to innovative curriculum models, enriched learning experiences, and synergistic outcomes for the academic community.

Challenges and Considerations:

- **Quality Control and Bias:** Universities need to establish mechanisms to assess the quality and potential bias within theses deposited on Shodhganga. This can involve faculty training on evaluation techniques and potentially collaborating with INFLIBNET to implement stricter quality control measures.
- **Copyright and Permissions:** Ensuring proper copyright compliance when incorporating content from theses into course materials is crucial. Universities can develop clear

guidelines and resources for faculty regarding copyright and fair use practices.

Strategies for Effective Utilization:

- **Faculty Development Programs:** Organize workshops and training sessions to equip faculty with skills for searching, evaluating, and integrating research findings from Shodhganga into their curriculum.
- **Curriculum Revision Task Forces:** Establish task forces within departments or colleges to regularly review curriculum content and identify opportunities to incorporate relevant research from Shodhganga.
- **Student Research Fellows Program:** Create programs where students assist faculty in identifying and analyzing theses from Shodhganga, fostering early engagement with research and curriculum development.

Recommendations:

1. Increasing Awareness:

- **University Promotion:** Universities can actively promote Shodhganga through workshops, training sessions, and targeted communication campaigns reaching researchers and students.
- **National Level Awareness:**
- **Campaigns:** INFLIBNET, in collaboration with relevant government bodies, can launch national awareness campaigns highlighting the importance of open access and the benefits of Shodhganga.

2. Ensuring Quality:

- **Robust Review Process:** Implementing a mandatory review process with qualified reviewers can ensure the quality and academic integrity of deposited theses.
- **Self-Archiving Guidelines:** Developing clear and comprehensive guidelines for researchers on proper formatting, quality control, and potential copyright issues before uploading their theses.

3. Enhancing User Engagement:

- **Gamification Elements:** Gamification elements like badges or recognition points for depositing and exploring theses can incentivize user participation.
- **Personalized Recommendations:** Developing user-friendly search functionalities and personalized recommendations based on user interests can encourage active exploration of the repository.

4. Standardization and Accessibility:

- **Standardized Formatting Templates:** Providing researchers with pre-formatted templates or style guides can ensure uniformity and improve discoverability.
- **Accessibility Features:** Implementing features like text-to-speech conversion and compatibility

with assistive technologies can enhance accessibility for users with disabilities.

Additional Recommendations:

- **Metrics and Analytics:** Developing metrics to track user engagement downloads, and citations of deposited theses can provide valuable insights for further improvements.
- **Collaboration with International Repositories:** Collaborating with international open-access repositories can increase global visibility of Indian research and foster international research collaborations.

By addressing these challenges and implementing the suggested recommendations, Shodhganga can overcome its limitations and evolve into a more robust and user-friendly platform. This will ultimately empower researchers and students in India, contributing to a more vibrant and research-driven higher education ecosystem.

Conclusion:

The Shodhganga website has undeniably left a lasting impact on the higher education system in India, revolutionizing the way research is disseminated, accessed, and utilized. Through its open-access platform for Indian theses and dissertations, Shodhganga has contributed significantly to promoting research quality, fostering collaboration among researchers, enhancing access to scholarly work, and potentially influencing curriculum development within universities.

The analysis conducted in this paper has shed light on the positive contributions of Shodhganga across various aspects of higher education. It has highlighted how the platform promotes research quality by facilitating wider scrutiny and potential citation of research findings. Additionally, Shodhganga's role in fostering collaboration among scholars, democratizing access to valuable research, and potentially influencing curriculum design has been explored in depth.

However, along with its strengths, Shodhganga also faces challenges such as limited awareness among users, potential quality concerns, and the need for active user engagement. These challenges, while significant, present opportunities for improvement and growth. By implementing recommendations such as increasing awareness through targeted campaigns, ensuring robust quality control measures, enhancing user engagement strategies, and collaborating with international repositories, Shodhganga can maximize its potential impact on the Indian higher education system.

In conclusion, Shodhganga has become a cornerstone of academic research and knowledge dissemination in India. Its continued evolution and enhancement will not only benefit researchers and students but also contribute to a more vibrant, collaborative, and research-driven higher education ecosystem in the country.

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Indian Knowledge System-A Gateway to Retriev the Importance of Indian English and Literature in Modern Education

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Abstract:

This research paper explores the pivotal role of Indian knowledge systems as a gateway to understanding and appreciating the significance of Indian English literature in modern education. Indian knowledge systems, rooted in ancient philosophical, spiritual, and cultural traditions, offer a rich tapestry of insights that provide context, depth, and resonance to Indian English literary works. By integrating Indian knowledge systems into contemporary educational curricula, educators can unlock a treasure trove of indigenous wisdom that enhances students' understanding of Indian English literature and its relevance in today's world.

The paper begins by delineating the historical and cultural contexts that shape Indian knowledge systems, tracing their evolution from ancient scriptures and philosophical treatises to contemporary discourses on identity, society, and spirituality. It then examines the symbiotic relationship between Indian knowledge systems and Indian English literature, elucidating how literary works draw inspiration from indigenous sources and engage with themes, motifs, and narratives rooted in Indian traditions. Furthermore, the paper explores the pedagogical implications of integrating Indian knowledge systems into modern education, highlighting how exposure to diverse cultural perspectives fosters critical thinking, empathy, and cross-cultural understanding among students. Through a synthesis of theoretical insights, empirical studies, and pedagogical strategies, this research paper elucidates the transformative potential of Indian knowledge systems in revitalizing the study and appreciation of Indian English literature in modern education. It advocates for a holistic approach to literary education that transcends linguistic boundaries and embraces the interconnectedness of culture, knowledge, and identity in shaping the human experience.

Keywords: Indian knowledge systems, Indian English literature, modern education, cultural heritage, pedagogy

Introduction:

"India has been a land of knowledge seekers and knowledge givers. Its ancient wisdom continues to enlighten the world." - APJ Abdul Kalam

The Indian Knowledge System is a vast and ancient repository of wisdom that encompasses various disciplines such as philosophy, spirituality, science, medicine, mathematics, literature, and more. Rooted in the rich cultural heritage of the Indian subcontinent, it has evolved over thousands of years through the contributions of sages, scholars, philosophers, and scientists. One of the distinguishing features of the Indian Knowledge System is its holistic approach, which seeks to integrate various domains of knowledge into a unified framework. This integrative approach is evident in fields such as Ayurveda, which combines medicine, psychology, and spirituality to promote holistic well-being.

The Indian Knowledge System has also made significant contributions to mathematics and science. Ancient Indian mathematicians developed sophisticated concepts such as zero, decimal notation, and the concept of infinity. In astronomy, Indian astronomers made important discoveries about the motion of celestial bodies and developed

precise astronomical instruments. Literature and the arts have also flourished within the Indian Knowledge System, with ancient texts such as the Vedas, Upanishads, epics like the Mahabharata and Ramayana, and works of poetry and drama offering profound insights into human nature, morality, and the human condition.

At the heart of Indian knowledge systems lies the concept of "Darśana," which encompasses various philosophical schools of thought that seek to understand the fundamental nature of reality and the human condition. From the ancient Vedas and Upanishads to the classical philosophies of Nyaya, Vaisheshika, Samkhya, Yoga, and Vedanta, Indian philosophy encompasses a wide spectrum of perspectives, each offering unique interpretations and methods of inquiry. In addition to philosophy, Indian knowledge systems encompass diverse fields of study, including Ayurveda (traditional medicine), Jyotish (astrology), Vastu Shastra (architecture), Gandharva Veda (music), Natya Shastra (dramaturgy), and Shilpa Shastra (arts and crafts). These disciplines are deeply intertwined with religious, social, and cultural practices, reflecting the holistic worldview of Indian civilization. Central to Indian knowledge systems is the concept of

"Dharma," which encompasses ethical principles, moral duties, and righteous conduct. Dharma serves as a guiding principle for individual and societal well-being, emphasizing the interconnectedness of all living beings and the importance of harmonious coexistence with nature.

Today, the Indian Knowledge System continues to inspire scholars, researchers, and practitioners around the world, offering timeless wisdom and practical insights into the complexities of existence and the pursuit of knowledge and enlightenment. The integration of Indian knowledge systems into modern education represents a paradigm shift in pedagogical approaches, moving beyond the confines of Eurocentric curricula to embrace the plurality of human experiences and ways of knowing

Objectives:

The main objective is to understand the importance of Indian Knowledge system and how it can generate interest about our Indian writers and literature in the modern mind of the new generations.

Need of Study:

To analyse the important role IKS plays in NEP2020 in cultivating interest in studying Indian culture, literature and heritage

Methodology:

The research method used for this paper is secondary research method. References are taken from websites and many journals. A detailed study of works of Indian writers, poets and dramatists are made. An attempt to study the depth of Indian writing is done.

Literature Review:

Dr. Govindaiah Godavarthi has tried to bring out the importance of language English. He states English being a lingua franca is a platform through which we can bring out the richness of Indian culture and heritage and spread it across the world.

In another interesting paper the duo Vijaya Laxmi K and Dr Shripathi Kalluraya research scholar and professor of Institute of social science and humanities, Mangalore have explored the History of Indian Knowledge system in depth. They explained the philosophy behind the system and its evolution. They explained the concept of Janan (knowledge) and Ajnana (ignorance)

Indian English and Indian Literature:

Indian English literature is a vibrant and diverse literary tradition that emerged from the complex interplay of British colonialism, indigenous cultural heritage, and postcolonial identity formation in India. It encompasses a wide range of literary genres, including novels, short stories, poetry, drama, essays, and more, written in English by authors of Indian origin.

The origins of Indian English literature can be traced back to the colonial period when English was introduced to India by the British East India Company in the 17th century. Initially, English was primarily used as a medium of communication among the British administrators and the elite class, but over time, it began to be adopted by Indian intellectuals, writers, and scholars. The early pioneers of Indian English literature, such as Raja Rammohan Roy, Bankim Chandra Chattopadhyay, and Rabindranath Tagore, played a crucial role in laying the foundation for the development of the literary tradition. Their works addressed a wide range of themes, including social reform, nationalism, and cultural identity, and showcased the rich diversity of Indian languages, cultures, and traditions.

The early to mid-20th century witnessed the emergence of a new generation of Indian English writers who sought to capture the complexities of Indian society and its transition from colonialism to independence. Writers like R.K. Narayan, Mulk Raj Anand, and Raja Rao depicted the lives of ordinary Indians, portraying their struggles, aspirations, and dilemmas with empathy and insight. The post-independence period saw a flourishing of Indian English literature as writers explored a wide range of themes and styles, reflecting the diversity and dynamism of Indian society. Authors such as Salman Rushdie, Arundhati Roy, Amitav Ghosh, and Aravind Adiga gained international acclaim for their innovative storytelling and incisive social commentary.

Today, Indian English literature continues to evolve and diversify, with writers from various linguistic, regional, and cultural backgrounds contributing to its richness and vitality. It serves as a powerful medium for exploring issues of identity, belonging, globalization, and cultural exchange, while also celebrating the unique voices and experiences of Indian people. Thus Indian English literature is a vibrant and dynamic literary tradition that reflects the complexities of Indian society and its ongoing engagement with the global world. It embodies the spirit of cultural hybridity, resilience, and creativity, making it a valuable and indispensable part of the global literary landscape.

Drama- An Old Form of Indian Art and Culture:

Drama has a rich and ancient history in Indian art and culture, dating back thousands of years. It has been an integral part of Indian civilization, serving as a powerful medium for entertainment, education, religious expression, and social commentary.

Origins in Rituals and Festivals: The roots of Indian drama can be traced back to ancient rituals and festivals, where performances were an essential part of religious ceremonies and community celebrations. These early dramatic presentations

often revolved around mythological stories, folk tales, and epic narratives.

The Natya Shastra: The Natya Shastra, attributed to the sage Bharata Muni, is one of the earliest treatises on dramaturgy in the world. Written around the 2nd century BCE to 2nd century CE, it provides comprehensive guidance on various aspects of drama, including acting, stagecraft, music, and dance. The Natya Shastra laid the foundation for classical Indian theatre traditions.

Classical Theatre Forms: Indian classical theatre encompasses several regional traditions, each with its own distinct style, themes, and performance conventions. The major classical forms include Sanskrit drama, which flourished from the 1st century BCE to the 10th century CE, as well as folk theatre forms like Yakshagana, Kathakali, Koodiyattam, and Bhavai.

Themes and Subjects: Indian drama explores a wide range of themes and subjects, including mythology, history, folklore, social issues, and human relationships. Many plays are inspired by ancient epics like the Ramayana and Mahabharata, as well as historical events and legends from Indian literature.

Role of Theatre in Society: Theatre has traditionally served as a mirror to society, reflecting its values, aspirations, and conflicts. It has been used to raise awareness about social issues, challenge oppressive norms, and promote cultural exchange and dialogue. Theatre performances often provide a platform for communities to come together, celebrate their heritage, and express collective identity.

Evolution and Adaptation: Over the centuries, Indian drama has evolved and adapted to changing socio-cultural contexts, technological advancements, and global influences. Contemporary Indian theatre continues to thrive, with playwrights, directors, and actors exploring innovative forms of storytelling and experimentation with new themes and styles.

Greatest Indian Dramatist and Writers

India has a rich literary tradition with numerous talented writers, poets, and dramatists who have made significant contributions to world literature. Here are some of the greatest Indian writers, poets, and dramatists: **Rabindranath Tagore:** A towering figure in Indian literature, Tagore was a poet, novelist, short story writer, playwright, essayist, and composer. He was the first non-European to win the Nobel Prize in Literature in 1913.

R. K. Narayan: Renowned for his simple and elegant writing style, Narayan is best known for his novels set in the fictional town of Malgudi, including "Swami and Friends" and "The Guide".

Vikram Seth: Seth is celebrated for his epic novel "A Suitable Boy", which intricately portrays life in

post-independence India. He is also a highly regarded poet and memoirist.

Salman Rushdie: Born in India, Rushdie gained international acclaim with his novel "Midnight's Children", which won the Booker Prize in 1981. His writing often blends magical realism with historical events.

Arundhati Roy: Roy's debut novel "The God of Small Things" won the Booker Prize in 1997, making her one of India's most prominent contemporary authors. She is also known for her activism and non-fiction writing.

Amrita Pritam: A prolific Punjabi writer, Pritam's work often explored themes of love, loss, and the Partition of India. She is widely regarded as one of the most important female writers in Indian literature.

Kalidasa: Often considered the greatest Sanskrit poet and dramatist, Kalidasa's works include the epic poem "Meghadūta" and the play "Shakuntala", which are still studied and performed today.

Munshi Premchand: Known as the "Upanyas Samrat" (Emperor of Novels), Premchand wrote about the struggles of the common people in his stories and novels, highlighting social issues and advocating for change.

Mulk Raj Anand: Anand's novels, such as "Untouchable" and "Coolie", shed light on the lives of the marginalized and oppressed in Indian society. He was a pioneer of the Indian English novel.

Girish Karnad: A prominent playwright, Karnad's works, including "Tughlaq" and "Hayavadana", blend mythology, history, and contemporary issues, earning him widespread acclaim.

Importance of Indian Knowledge System In Indian English Literature In Modern Education

Integrating Indian knowledge systems into today's education can greatly benefit Indian English literature in several ways:

Rich Cultural Context: Indian knowledge systems encompass a wide array of cultural, philosophical, and spiritual traditions that have deeply influenced Indian literature. By incorporating these systems into education, students gain a deeper understanding of the cultural context in which Indian English literature is situated. This enriched cultural understanding can lead to a more nuanced interpretation and appreciation of literary works.

Diverse Perspectives: Indian knowledge systems offer diverse perspectives on various aspects of life, society, and existence. Exposure to these perspectives can broaden students' horizons and encourage them to explore alternative viewpoints in their literary analysis and creative expression. This diversity of thought can lead to the development of more inclusive and representative narratives in Indian English literature.

Inspiration for Creativity: Indian knowledge systems are replete with myths, legends, folklore,

and philosophical concepts that provide rich fodder for creative exploration. By integrating these systems into education, students can draw inspiration from indigenous sources to create original literary works that resonate with contemporary themes while honoring India's cultural heritage.

Interdisciplinary Insights: Indian knowledge systems are inherently interdisciplinary, encompassing elements of literature, philosophy, history, science, and art. Integrating these systems into education encourages interdisciplinary thinking and fosters connections between different fields of study. This interdisciplinary approach can enrich the study of Indian English literature by contextualizing literary works within broader intellectual frameworks and historical contexts.

Global Relevance: Indian knowledge systems have global relevance and appeal beyond geographical boundaries. By incorporating these systems into education, Indian English literature can reach a wider audience and contribute to global conversations about identity, culture, and human experience. This cross-cultural exchange can enhance the appreciation and understanding of Indian literature on the world stage.

Conclusion:

Overall, integrating Indian knowledge systems into today's education can provide a holistic and culturally grounded framework for the study and appreciation of Indian English literature, enriching both literary scholarship and creative expression. Including Indian knowledge in higher studies today through NEP2020 has opened the gate to acquiring more knowledge about the greatness of our country and its past. India, which holds a history of more than 5000 years literature means works composed from generation to generation. Our literature consists of vedas, vedangas, Upanishads, Dharmashastra, Itihasas such as Ramayana and Mahabharat. Indian English literature has its birth from all these. Through English language we have been able to promote our literary heritage throughout the world.

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Interoperable Blockchain Standards for Indian Knowledge Repositories: Fostering Collaboration and Accessibility in Cultural Preservation

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Abstract:

This research paper explores the development and implementation of interoperable blockchain standards for Indian knowledge repositories. Focusing on the diverse and decentralized nature of Indian knowledge systems, the study investigates how interoperable blockchain standards can facilitate the exchange, integration, and discovery of diverse knowledge sources, including texts, artifacts, and oral traditions. Drawing on theoretical frameworks, case studies, and technical specifications, the paper proposes a set of interoperable standards and protocols tailored to the unique cultural and linguistic contexts of India, aiming to foster collaboration, accessibility, and sustainability in cultural preservation efforts.

Keywords: Blockchain, Interoperability, Indian Knowledge System, Cultural Preservation, Standards, Repositories, Collaboration, Accessibility

Overview of the Indian knowledge system and its cultural diversity:

The Indian knowledge system is a multifarious and complex tissues, designed thought the ages, including the philosophical, scientific, mathematic, medical, literature and art among others. Since the very beginning centuries ago crafted by the great texts such as the Vedas and the Upanishads, the practice becomes more of a reflection how unique it is to celebrate diversity. Key elements of the Indian knowledge system include: Key elements of the Indian knowledge system include:

Philosophy: It is the face of the academic world that embraces not a single philosophy but rather many different schools of thought that explore fundamental topics like the problem of existence, mind vs. matter, and whether there is morality or not.

Science and Mathematics: Significant achievements in the area of mathematics and science were made, like zero, the decimal system or algebra, trigonometry, and the astronomy improvements.

Medicine: Where Ayurveda, the old medicine system, says the ideas of holistic cure and prophylaxis, the ancient classical medicine is mainly focused on the treatment.

Arts and Literature: The Indian literature across various genres and languages, time and again, highlights the country's abundance in rich cultural heritage.

Cultural Diversity: The Indian cultural scene is a magical collage of languages, religions, habits and customs that facilitate such rich and creative interactions amongst its citizens.

Synthesis and Exchange: Indian nation has always been the centre of cultural exchange, which was very beneficial from the point of view of the Indian nation itself, as well as human knowledge, since India shared everything with the world.

Understanding Interoperability in Indian Knowledge Repositories:

Interoperability is one of the key principles that govern the Indian knowledge repositories. By enabling smooth data transfer between different systems and institutions, as well as through the country's intellectual landscape, this principle plays a critical role in ensuring the success of any knowledge-based endeavors. The backbone of these repositories is interoperability, which implies that they interact, share, and make use of given information among themselves regardless of the differences in technology platforms, data formats, or organizational structure. Key aspects of interoperability in Indian knowledge repositories include: Key aspects of interoperability in Indian knowledge repositories include:

Data Standards and Formats: To create a consistent and compatible dataset in different repository, common data standards and formats is the most recommended measure. With the use of standard protocols, such as metadata schemas and data models, the Indian knowledge repositories could surely be the ones which support data integration and exchange without any hassles.

Technological Integration: The interdependency of various technologies and systems needs to be addressed so that there will be ease of communication and coordination. It might involve using compatible software solutions, adoption of APIs, or the utilization of given tech like blockchain

and artificial intelligence (AI) to develop data integratable systems .

Collaborative Networks: Unifying Indian knowledge repositories serves as a ground for establishment of a network of partners which is goal-oriented and have shared interests and mutual goals.

Policy and Governance: Swift discernment of governing norms and policies are must for smooth interoperability of Indian knowledge repositories. Articulating data sharing rules, access rights, privacy market implications, and rather ideas responsible and ethical use of shared information, promotes transparency and accountability among stakeholders.

Capacity Building and Awareness: Workshops, training programs, and educational initiatives can provide adequate training on how to employ interoperable technologies and processes effectively to research, librarians, and administrators.

User-Centric Design: Devices with user-friendly user interfaces and tools, users with comprehensive repositories of knowledge will interact more easily and more efficiently. They will.

Importance of interoperability in facilitating collaboration and accessibility:

Interoperability, being the sender of the systems collaboration and availability on the basis of different domains, platforms and systems is very important for making such operation easy. By ensuring that different technologies and applications can seamlessly communicate and work together, interoperability enhances efficiency, innovation, and inclusivity in several ways: By ensuring that different technologies and applications can seamlessly communicate and work together, interoperability enhances efficiency, innovation, and inclusivity in several ways:

- Efficient Communication
- Integration of Diverse Systems
- Enhanced Collaboration
- Accessibility
- Scalability and Flexibility
- Innovation Ecosystems

Role of blockchain technology in addressing interoperability challenges in Indian knowledge repositories:

It is through blockchain technology that the interoperability problems in the Indian knowledge repositories can be addressed effectively, since blockchain tech offers a decentralized, verified and transparent platform that is perfect for data sharing and joint working. Its key features, such as immutability, consensus mechanisms, and smart contracts, can significantly enhance interoperability in the following ways: Its key features, such as immutability, consensus mechanisms, and smart contracts, can significantly enhance interoperability in the following ways:

- Decentralization
- Data Integrity and Security
- Smart Contracts
- Interoperable Standards
- Transparent Governance
- Cross-Institutional Collaboration

Conceptual framework for interoperable blockchain standards:

A blockchain conceptual framework for the cross-platform networking standards blueprint development and the implementation is the plan guiding the building and operating the blockchains enabling communication among various platforms and systems. This framework encompasses several key components:

Standardization Protocols: Set up a well-established playbook for digital currency maintenance, which will foster efficiency and interconnection in the long run. Such protocols are telling each person on the networks what to do as decently, entitled to the same format and codebase, and therefore connecting to one another becomes so seamless.

Interoperable Data Formats: Determining and standardizing the texting format which data is exchanged between multiple blockchain networks is a pivotal thing. Unified data formats guarantee that data which is being transmitted and managed in networks are in the same readable and processable form by the underlying blockchain technologies and not affected by nodes or miners.

Smart Contract Standards: Smart contracts are the basis for code agreements that reside on the blockchain. Creating common smart contracts standards for interoperability implies specifying their programming languages, execution environments, and safety procedures, so that smart contracts know how to function and be used across various blockchain solutions.

Identity Management: The identity management services serve as the proof of the authenticity; the users and entities in an interaction of blockchain transactions. Connecting personal identities through the use of interoperable identity management standards, user identities are instantly recognized and authenticated through different blockchain networks uniformly.

Cross-Chain Communication Protocols: With the cross-chain communication technologies, it becomes possible to operate various blockchain networks in the same ecosystem by supporting the asset exchange, data, and message sharing processes. Protocols of the same name specify standardized and secure data communication between the platforms with different algorithms.

Governance Mechanisms: Governance rules & processes guide how interoperable blockchain standards are created and handled respectively.

Scalability and Performance: Guidelines protocols should be thoroughly developed to enable the ecosystem to achieve the desired scalability and have enough performance to be used for large deployments and high-transaction volumes.

Case Studies of Interoperable Blockchain Initiatives:

The hands-on examples of the blockchain interoperability developments presented within the case studies actually prove the benefits of integrating blockchain technology to address the challenges. Here are a few examples: Here are a few examples:

Wanchain: Wanchain is a blockchain based platform, which is designed to perform between different blockchain networks. Wanchain meets the necessity with the provision of communication protocol, which is cross-chain and smart contract standards, that are interoperable by providing seamless transference of the token and data between the various blockchain platforms, which, in return, fosters interoperability and broadens the use cases such as DeFi and supply chains management.

Polkadot: Polkadot is a cross-chain protocol blockchain platform, which makes it easy to communicate and transfer data within different blockchains. Polkadot's relay chain and parachain infrastructure provide a platform for inter chain communication and interoperability as it connects different blockchains into a unique network to form one unique network. It is also at this juncture that the blockchain-model eliminates bottlenecks inherent in other similar systems by enabling the smooth transfer of assets plus data across various blockchain networks, which in turn bolsters the performance of blockchain applications in terms of scalability, security and the extent of flexibility.

Cosmos: Cosmos allows independent networks to work together through interoperability offering communication and cooperation possibilities to these blockchains. Via Inter-Blockchain Communication (IBC) protocol, Cosmos permits blockchains to communicate and with each other share tokens and information securely. This enables interoperability and since then, Blockchain users can benefit from blocks reinforcing each other.

ICON: ICON is a blockchain module that invests in building interoperability solutions for various industries and purposes. ICON's loopchain technology and its interoperable smart contract standards promote effective communication and data sharing between different blockchain networks, hence - the ICON network becomes a hub for ecosystem collaboration and innovation that can be significant in areas such as healthcare, finance, and government, among others.

Aion: Aion is a platform aimed to be the main interoperable communication layer between other blockchain networks based on its parametrical Aion-

1 blockchain and Aion Virtual Machine (AVM). Through the implementation of cross-chain communication protocols and interoperable smart contracts, Aion helps in the building of implicit asset transfer and data exchange among different blockchains or in the words of the Federation, fosters interoperability and hence enables cross-chain applications such as decentralized finance (DeFi) and token interoperability.

Integration of blockchain-enabled registries with existing cultural heritage platforms and databases:

Through linkages of the blockchain-empowered registries to the pre-existing cultural heritage platforms and databases, there is an array of benefit rows and chances to keep, authenticate, and make accessible the cultural property and heritage items for everybody. Here's a summary:

Immutable Record-Keeping: Blockchain technology allows the safety of records, reliability of their information and confirmed their authenticity. By interlinking blockchain registries with current platforms and databases, cultural organizations can be able to securely build a transparent and trustable record of artifacts, provenance, as well as ownership history. This is, thus, enhancing credibility of the institutions.

Provenance Tracking: Behind blockchain is the possibility of being assured of authenticity as well as of verifiable and transparent tracing of any given art history details.

Digital Ownership Rights: These blockchain set registries, can turn the authentic owners of one particular cultural object into a digital form, meaning that the stakeholders will be able to sell, buy and transfer the ownership rights of the digitized object even without their physical presence in the market.

Interoperability and Standardization: Cultural institutions will be able to adopt common blockchain standards and protocols thus the resulting unification of all these diverse platforms and databases will lead to a seamless data exchange and facilitate collaboration across all these divers platforms and databases which will consequently lead to greater scalability and efficiency in heritage preservation efforts.

Enhanced Security and Data Protection: It, through its strong security and encryption systems, ensures that the confidential data on the cultural heritage gets a closure from illegal access or manipulations. Blockchain integration contributes towards the overall security of digital cultural property records, safeguarding against data breaches and taking into account the aspects of regulatory rules in the process.

Decentralized Access and Ownership: Thanks to a blockchain, cultural artifacts may be easily available and do not need just the palace guards to watch

them. There are possibilities to have lots of people contributing to the preservation of cultural heritage now.

Future Directions & recommendations for ensuring scalability, security, and sustainability of interoperable blockchain standards:

Apart from inventive solutions aimed at creating performance standards, scalable and secure interoperable blockchain requires proactive approaches for dealing with challenges emerging as networks develop. Following are some of the recommendations and directions:

Scalability Solutions: Creating scalability solutions like sharding, layer-2 protocols, and side chains can amplify the blockchain's ability to process transactions and users. This, in turn, allows the blockchain to support bigger numbers of transactions and users. This strategy guarantees interoperable blockchain standards that increase the ability to adjust the contribution by different kinds of applications and use cases which grow every day.

Consensus Mechanism Optimization: The run can be improved by considering both Proof-of-Work (PoS) and Delegated Proof-of-Stake (DPoS), hence making the blockchain more scalable and less power consuming. To that end, bottlenecks can be minimized. Via harmonization of the models that allow for balancing security, decentralization, and throughput, the multipurpose blockchain standards can manage to scale up faster without affecting the security.

Interoperability Standards Development: Acceleration of interoperability standards and protocols is exactly what is to be done for reaching smooth interactions and systematic collaboration in different networks. Implementing homogeneous cross-chain communication protocols, data formats, and smart contract standards propagates the interoperability and compatibility on the less diversified platforms and systems.

Security Enhancements: Increasing the security provisions like encryption, multi-factor authentication and secure enclave protocol really builds up the shield against the ransomware and hacker attacks for the interconnected blockchain networks. Establishing the type security rules and audit mechanisms provides the parties involved with the confidence and assurance that the data they exchange on different blockchain network will be accessible, discrete and available.

Governance and Compliance Frameworks: The key feature of interoperable blockchain standards is that they permit the formation of rules, processes, and decision-making structures, thus enabling the network system to develop with new regulations and industry standards, making it long-lived and reliable.

Sustainability Initiatives: Implementation of sustainability programs like energy-efficient proof

of stake and carbon offset programs is needed to decrease the damage of blockchain networks on the environment.

Conclusion:

In conclusion, the research paper on interoperable blockchain standards for Indian knowledge repositories underscores the transformative potential of blockchain technology in fostering collaboration and accessibility in cultural preservation efforts. By leveraging interoperable blockchain standards, Indian knowledge repositories can overcome existing challenges and unlock new opportunities for preserving, authenticating, and accessing cultural artifacts and heritage assets. Through case studies and analysis, we have seen how interoperable blockchain initiatives can enhance the integrity, transparency, and security of cultural heritage records, enabling seamless communication and collaboration between different repositories and stakeholders. By integrating blockchain-enabled registries with existing cultural heritage platforms and databases, Indian institutions can create a decentralized and interconnected ecosystem for preserving and sharing cultural knowledge.

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Role of Indian Ethos in Promoting Indian Knowledge System in Higher Education Institutions across Mumbai

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Abstract:

Indian ethos plays a crucial role in promoting the Indian knowledge system. The Indian ethos, deeply rooted in its cultural, philosophical, and spiritual traditions, provides a unique framework that nurtures and sustains the Indian knowledge system. Indian ethos emphasizes a holistic understanding of life, which includes physical, mental, emotional, and spiritual well-being. This holistic approach is reflected in Indian knowledge systems like Ayurveda, Yoga, and Vedanta, which consider the interconnectedness of all aspects of existence. India's rich cultural diversity and pluralistic ethos have contributed to the development of various knowledge systems across different regions and communities. This diversity is celebrated and respected, leading to a vibrant exchange of ideas and innovations. Indian ethos emphasizes the importance of values like truth (Satya), righteousness (Dharma), non-violence (Ahimsa), and self-discipline (Tapas). These values are integral to the Indian knowledge system and are imparted through educational institutions and traditional guru-shishya parampara (teacher-student relationship). The spiritual foundation of Indian ethos, rooted in ancient scriptures like the Vedas, Upanishads, and Bhagavad Gita, provides a philosophical basis for the Indian knowledge system. This spiritual perspective encourages inquiry, introspection, and a quest for higher knowledge.

Keywords: Indian Ethos, Indian Knowledge System, Holistic Understanding, Unity in Diversity, Value-Based Education, Spiritual Foundations.

Introduction:

Indian knowledge systems are often interdisciplinary, integrating insights from philosophy, science, mathematics, arts, and spirituality. This interdisciplinary approach fosters creativity, innovation, and a deeper understanding of the interconnectedness of various fields of knowledge. Many Indian knowledge systems, such as traditional farming methods and environmental conservation techniques, are inherently sustainable and eco-friendly. These practices are in harmony with nature and reflect the Indian ethos of living in balance with the environment. Indian ethos promotes community engagement and collective welfare (Sarve Bhavantu Sukhinah). This communal approach to knowledge sharing and learning encourages collaboration, cooperation, and the sharing of resources and expertise within the community.

Objectives:

Indian ethos plays a pivotal role in promoting the Indian knowledge system by providing a philosophical, cultural, and spiritual foundation that nurtures holistic understanding, celebrates diversity, values-based education, and fosters creativity and sustainability. Embracing and integrating these ethos-driven principles can further enhance the relevance, resilience, and richness of the Indian knowledge system in today's globalized

world. The objective of this research is to highlight the relationship between Holistic Understanding, Unity in Diversity, Value-Based Education, Spiritual Foundation, Interdisciplinary approach, Sustainable practices and community engagement with Indian Ethos and Indian Knowledge System.

Literature Review

1. Holistic Understanding in Indian Ethos and IKS

Holistic understanding is a cornerstone of both Indian ethos and the Indian Knowledge Systems (IKS). Let's delve deeper into how holistic understanding is integrated into these frameworks:

Interconnectedness of Life: Indian ethos views life as a web of interconnectedness where everything is interdependent. This perspective is reflected in the belief systems and practices that emphasize harmony between the individual, society, and nature.

Fourfold Purusharthas: Indian philosophy outlines the fourfold goals of life known as the Purusharthas - Dharma (righteousness), Artha (wealth), Kama (pleasure), and Moksha (liberation). These goals represent a holistic approach to life, balancing material pursuits with spiritual growth.

Integral Yoga: The concept of Yoga in Indian ethos goes beyond physical postures. It encompasses a holistic approach to self-realization and spiritual evolution, integrating the body, mind, and spirit.

Ayurveda: Ayurveda, the traditional Indian system of medicine, adopts a holistic approach to health and well-being. It considers the physical, mental, emotional, and spiritual aspects of an individual in diagnosis and treatment.

Vedantic Philosophy: Vedanta philosophy emphasizes the unity of the individual soul (Atman) with the universal consciousness (Brahman). This holistic view of existence transcends dualities and promotes a deeper understanding of the interconnectedness of all beings.

2. Unity in Diversity in Indian Ethos and IKS

"Unity in Diversity" is a foundational principle in both Indian ethos and the Indian Knowledge Systems (IKS). This principle celebrates the rich diversity of cultures, languages, religions, and traditions while emphasizing the underlying unity that binds them together. Let's explore how Unity in Diversity is manifested in Indian ethos and IKS:

Interdisciplinary Integration: IKS integrates insights from various disciplines such as philosophy, science, mathematics, arts, and spirituality, reflecting the diverse intellectual traditions of India. This interdisciplinary approach fosters a holistic understanding of the universe and human society.

Regional Variations: Different regions of India have developed their own specialized knowledge systems based on their unique ecological, social, and cultural contexts. For example, Kerala's traditional medicine system, Ayurveda in Kerala, has distinct practices and formulations compared to Ayurveda in North India.

Syncretism in Thought: IKS often exhibits syncretism, blending elements from different philosophical, religious, and cultural traditions. This syncretic approach reflects the unity underlying the diversity of Indian thought and knowledge systems.

Community-Based Knowledge: Traditional knowledge in India is often community-based, passed down through generations within families or communities. This decentralized and participatory approach to knowledge creation and transmission fosters a sense of shared ownership and unity among community members.

Adaptability and Resilience: IKS is characterized by its adaptability and resilience, evolving over time through interactions with diverse cultures and knowledge systems. This dynamic nature of IKS reflects the unity in diversity by integrating new ideas and innovations while preserving its core principles and values.

3. Value-Based Education in Indian Ethos and IKS

Value-based education is deeply ingrained in both Indian ethos and the Indian Knowledge Systems (IKS). It emphasizes the importance of imparting not just academic knowledge but also moral, ethical, and spiritual values to students. Let's

explore how value-based education is manifested in Indian ethos and IKS:

Dharma (Righteousness): Indian ethos emphasizes the importance of leading a life based on Dharma or righteousness. This includes fulfilling one's duties and responsibilities towards oneself, society, and the environment. Value-based education in Indian ethos aims to instill a strong sense of Dharma among students.

Ahimsa (Non-Violence): Ahimsa or non-violence is a core value in Indian ethos, inspired by the teachings of Mahatma Gandhi and ancient scriptures like the Bhagavad Gita. Value-based education promotes Ahimsa by teaching students to resolve conflicts peacefully and respect all living beings.

Satya (Truth): Truthfulness and honesty are highly valued in Indian ethos. Value-based education encourages students to speak the truth, act with integrity, and uphold moral principles in all aspects of life.

Seva (Service): Indian ethos emphasizes the importance of selfless service or Seva towards others, especially those in need. Value-based education encourages students to engage in community service and contribute to the welfare of society.

Respect for Elders and Teachers: Indian ethos teaches students to respect and honor elders, parents, and teachers. Value-based education instills values like gratitude, humility, and reverence for wisdom and experience.

4. Spiritual Foundation in Indian Ethos and IKS

The spiritual foundation is a defining characteristic of both Indian ethos and the Indian Knowledge Systems (IKS). It provides a deeper philosophical and metaphysical framework that guides human understanding, values, and practices. Let's delve into how the spiritual foundation is manifested in Indian ethos and IKS:

Integrative Spirituality: IKS integrates spirituality into various knowledge domains, creating a holistic understanding of the universe and human existence. It bridges the gap between science, philosophy, and spirituality, fostering a more integrated and interconnected worldview.

Dharmic Sciences: Traditional Indian knowledge systems like Ayurveda, Yoga, Jyotish (astrology), and Vastu Shastra (architecture) are rooted in Dharmic principles. They not only address physical and material well-being but also aim to harmonize the individual with the cosmic order, promoting spiritual balance and inner harmony.

Guru-Shishya Parampara (Teacher-Student Tradition): The Guru-Shishya Parampara in IKS is not just an educational model but also a spiritual relationship. The Guru (teacher) serves as a spiritual guide, imparting not only knowledge but also

wisdom and spiritual insights to the Shishya (student).

Sacred Geometry and Cosmology: IKS explores the sacred geometry and cosmology that underlie the universe, reflecting the spiritual principles of unity, harmony, and interconnectedness. Practices like Vastu Shastra and sacred geometry in temple architecture and design are manifestations of this spiritual understanding.

Moral and Ethical Foundations: IKS emphasizes the importance of moral and ethical values, which are deeply rooted in spiritual principles. It encourages individuals to live a life of integrity, compassion, and selflessness, reflecting the spiritual ideals of Dharma, Ahimsa, and Seva.

5. Interdisciplinary Approach in Indian Ethos and IKS

The interdisciplinary approach is a distinctive feature of both Indian ethos and the Indian Knowledge Systems (IKS). It encourages the integration of insights, methodologies, and perspectives from multiple disciplines to foster a holistic understanding of the universe, human existence, and society. Let's explore how the interdisciplinary approach is manifested in Indian ethos and IKS:

Integration of Science and Spirituality: IKS bridges the gap between science and spirituality by integrating scientific inquiry with spiritual wisdom. Traditional Indian sciences like Ayurveda, Yoga, and Jyotish (astrology) incorporate both empirical observations and metaphysical principles, offering a comprehensive understanding of the universe and human existence.

Synthesis of Various Disciplines: IKS encompasses a wide range of disciplines including philosophy, science, mathematics, arts, literature, and social sciences. This interdisciplinary approach fosters a holistic understanding of complex phenomena, encouraging creative thinking and innovative solutions to contemporary challenges.

Practical Application of Knowledge: IKS emphasizes the practical application of knowledge in real-world contexts. Traditional Indian knowledge systems like Vastu Shastra (architecture), Shilpa Shastra (sculpture), and Nāṭya Shastra (performing arts) integrate theoretical principles with practical skills, reflecting an interdisciplinary approach to education and training.

Community-Based Knowledge Creation: IKS values community engagement and collective wisdom. Traditional knowledge was often developed and transmitted within communities through oral traditions, workshops, and apprenticeships, fostering a participatory and interdisciplinary approach to knowledge creation and dissemination.

Environmental and Ethical Considerations: IKS emphasizes the interconnectedness of humans and

nature, promoting sustainable practices and ethical considerations. Traditional knowledge systems like sustainable agriculture, herbal medicine, and environmental conservation techniques reflect an interdisciplinary approach to living in harmony with the environment.

Data Collection

The data collection method used in this research is of secondary in nature. The data is collected using books, journals, articles, and reports published by academic institutions, research organizations, government agencies, and other credible sources.

Implications

Promoting Indian ethos through Indian Knowledge Systems (IKS) in higher education has significant implications for various stakeholders involved in the educational ecosystem. Here's a breakdown of the implications on different stakeholders:

1. Students:

Cultural and Spiritual Enrichment: Students will gain a deeper understanding and appreciation of India's rich cultural, philosophical, and spiritual heritage, fostering personal growth and self-awareness.

Holistic Education: Exposure to IKS will provide students with a holistic education that integrates intellectual, emotional, ethical, and spiritual dimensions, preparing them for life's challenges and opportunities.

Career Opportunities: Knowledge and skills acquired through IKS can open up new career opportunities in fields such as Ayurveda, Yoga, Vedic sciences, cultural heritage, environmental sustainability, and community development.

2. Faculty and Researchers:

Professional Development: Faculty members and researchers will have opportunities for professional development and intellectual growth by engaging with IKS, exploring new research avenues, and collaborating with traditional practitioners.

Teaching Innovation: Incorporating IKS into the curriculum can inspire faculty to innovate in teaching methodologies, pedagogical approaches, and interdisciplinary research, enhancing the quality of education.

Contribution to Knowledge: By promoting research in IKS, faculty and researchers can contribute to the advancement of knowledge, preservation of cultural heritage, and revitalization of traditional wisdom.

3. Higher Education Institutions:

Academic Excellence: Adopting IKS can enhance the academic reputation and excellence of institutions by offering unique and interdisciplinary programs that attract students, faculty, and researchers from diverse backgrounds.

Global Collaboration: Collaboration with international institutions, scholars, and organizations interested in IKS can foster global partnerships, exchange programs, and research collaborations, enhancing institutional visibility and impact.

Community Engagement: Engagement with local communities, cultural organizations, and traditional practitioners can strengthen institutional ties with the community, promote social responsibility, and contribute to sustainable development.

4. Policy Makers and Government:

Educational Policy Reform: Encouraging the integration of IKS into higher education can lead to educational policy reforms that recognize and support the revitalization of India's traditional knowledge systems, cultural heritage, and values.

Sustainable Development: Promoting IKS can contribute to sustainable development by fostering environmental conservation, community empowerment, and holistic well-being through the adoption of traditional practices and values.

Global Leadership: By showcasing India's unique approach to knowledge, spirituality, and sustainable living, policy makers can position India as a global leader in holistic education, cultural diplomacy, and sustainable development.

5. Community and Traditional Practitioners:

Preservation of Traditional Knowledge: Collaboration with higher education institutions can help preserve, document, and transmit traditional knowledge, skills, and practices to future generations.

Recognition and Respect: Engagement with academia can enhance the recognition, respect, and validation of traditional practitioners, cultural heritage, and indigenous wisdom within mainstream society.

Empowerment and Development: Community-based programs and initiatives can empower local communities, enhance their socio-economic development, and promote cultural pride and identity.

Recommendations

Promoting Indian ethos in higher education, particularly in the context of Indian Knowledge Systems (IKS), requires a multifaceted approach that integrates traditional wisdom with modern pedagogical practices. Here are some recommendations on how to promote Indian ethos in IKS within higher education:

Curriculum Development:

Integrate Traditional Knowledge: Incorporate courses and modules on traditional Indian knowledge systems such as Ayurveda, Yoga, Vedic sciences, and philosophical texts like the Upanishads and Bhagavad Gita. This will provide students with a deeper understanding of India's rich intellectual and cultural heritage.

Interdisciplinary Courses: Develop interdisciplinary courses that integrate insights from IKS with modern disciplines like science, technology, humanities, and social sciences. This will foster a holistic and integrated approach to learning, bridging the gap between traditional wisdom and contemporary knowledge.

Ethical and Value-Based Education: Embed values like Dharma, Ahimsa, Satya, and Seva in the curriculum to cultivate ethical awareness, moral integrity, and social responsibility among students.

Pedagogical Approaches:

Experiential Learning: Encourage experiential learning through practical workshops, field trips, and hands-on projects that allow students to engage directly with traditional Indian practices and knowledge systems.

Interactive and Participatory Methods: Adopt interactive and participatory teaching methods such as group discussions, debates, seminars, and collaborative projects to encourage critical thinking, dialogue, and engagement with IKS.

Guru-Shishya Parampara: Revitalize the Guru-Shishya parampara (teacher-student tradition) by fostering close mentorship relationships between faculty and students. This traditional approach to learning can enhance personal growth, character development, and spiritual enrichment.

Research and Innovation:

Promote Research in IKS: Encourage research and innovation in IKS by providing grants, scholarships, and fellowships for scholars, researchers, and students. Support interdisciplinary research projects that explore the relevance, applicability, and potential integration of IKS in contemporary contexts.

Collaborative Research: Foster collaborations between academic institutions, research organizations, and traditional practitioners to promote knowledge exchange, co-creation, and mutual learning in the field of IKS.

Infrastructure and Resources:

Establish Centers of Excellence: Set up Centers of Excellence and research institutes dedicated to the study and promotion of IKS. These centers can serve as hubs for academic excellence, innovation, and knowledge dissemination in the field of IKS.

Digital Platforms and Archives: Develop digital platforms and online repositories to preserve, document, and disseminate traditional Indian texts, manuscripts, teachings, and practices. This will facilitate wider access to IKS resources and foster global collaboration and engagement.

Community Engagement and Outreach:

Community-Based Programs: Engage with local communities, traditional practitioners, and cultural organizations to develop community-based programs, workshops, and outreach activities that

promote awareness, appreciation, and practice of IKS.

Public Lectures and Seminars: Organize public lectures, seminars, webinars, and conferences featuring renowned scholars, practitioners, and experts in the field of IKS. This will raise awareness, stimulate intellectual discourse, and foster a deeper understanding and appreciation of Indian ethos and IKS among the wider public.

Conclusion

Promoting Indian ethos in IKS within higher education requires a concerted effort to integrate traditional wisdom, values, and practices into the academic curriculum, pedagogical approaches, research, infrastructure, and community engagement initiatives. By adopting these recommendations, higher education institutions can play a pivotal role in revitalizing and promoting India's rich intellectual, cultural, and spiritual heritage, fostering a more holistic, inclusive, and harmonious educational ecosystem that values diversity, integration, and lifelong learning.

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Navigating the Evolutionary Path of Artificial Intelligence: Uncovering its Origins, Progression, and Future Prospects

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Abstract:

This paper explores the extensive history and evolutionary path of artificial intelligence (AI), tracing its origins from early concepts to its current utilization in various domains. Through an in-depth examination of significant milestones, breakthroughs, and influential individuals, the paper emphasizes critical moments that have shaped AI's development. It investigates the transition of AI from theoretical frameworks and symbolic reasoning to the era of machine learning, deep learning, and neural networks, driving significant advancements in robotics, natural language processing, computer vision, healthcare, and autonomous systems. By juxtaposing historical perspectives with contemporary trends, this study provides valuable insights into AI's trajectory, its societal impact, and the continual pursuit of intelligent machines.

Keywords: Origins of AI, Machine learning, Neural networks, Heuristic search methods, Symbolic reasoning

Literature review:

The history of AI is marked by milestones, debates, and technological leaps, extensively documented in the literature. Visionaries like Alan Turing laid the groundwork, leading to pivotal events such as the Dartmouth Conference in 1956, which formalized AI's inception. Despite encountering setbacks, termed "AI Winters," the field experienced a resurgence fuelled by advancements in computing and algorithms, ushering in the era of machine learning and neural networks, reshaping its landscape. Presently, AI's influence extends across diverse sectors, prompting discussions on ethics and societal ramifications. Through literature reviews, researchers dissect AI's past, present, and future, unravelling its intricacies and guiding its trajectory.

Introduction:

The landscape of Artificial Intelligence (AI) has undergone a profound transformation from its inception to its current widespread applications across various sectors. This evolution has been shaped by significant advancements in technology, marked by breakthroughs in algorithms, computational capabilities, and the availability of vast datasets. In this introductory section, we embark on a journey through the historical foundations of AI, tracing its origins, pivotal moments, and paradigm shifts. By delving into key milestones and influential figures, we gain a deeper understanding of the evolutionary trajectory of AI and its far-reaching implications for society. Through this exploration, we aim to shed light on the importance of studying AI's development, its

impact on diverse domains, and the ongoing quest for intelligent machines.

Theoretical Foundations of AI:

Early explorations into artificial intelligence (AI) were rooted in both philosophical musings and scientific inquiry, with scholars pondering the feasibility of creating machines capable of exhibiting intelligent behaviour. Visionaries like Alan Turing, John McCarthy, and Marvin Minsky laid the groundwork for AI by proposing conceptual frameworks and engaging in thought experiments. Turing's groundbreaking work on computability and his proposition of the Turing Test provided a foundational concept for assessing machine intelligence. McCarthy's pivotal role in convening the Dartmouth Conference in 1956, alongside Minsky and others, marked a significant milestone in formalizing AI as an academic discipline..

Early Developments in AI:

The Dartmouth Conference, often hailed as the birthplace of AI, brought together researchers from diverse fields to explore the potential of creating intelligent machines. Early AI efforts focused on logic-based approaches and symbolic reasoning, with the aim of replicating human problem-solving abilities. While initial successes were seen in narrow problem domains such as theorem proving and game playing, the limitations of rule-based systems soon became evident. Despite these challenges, the Dartmouth Conference sparked widespread interest and investment in AI research, laying the foundation for further exploration and advancement.

The AI Winter and Resurgence:

The history of AI is marked by cycles of enthusiasm followed by periods of disillusionment, commonly referred to as AI winters and resurgences. The first AI winter, spanning the 1970s and 1980s, was characterized by stagnation and funding cuts due to unmet expectations and technical hurdles. However, the emergence of expert systems and knowledge-based AI provided a glimmer of hope amid the setbacks. The second AI winter, extending into the 1990s, saw scepticism and dwindling support for AI research. Nonetheless, breakthroughs in machine learning and the availability of large datasets heralded a new era, leading to the resurgence of AI research in the 21st century.

Machine Learning Revolution:

Machine learning emerged as a cornerstone of AI, offering a shift from rule-based systems to data-driven approaches. Initially conceived as a means for computers to learn from data and improve performance over time, machine learning has undergone significant evolution. From early perceptron to complex neural networks, the progression of machine learning algorithms has been driven by advances in computational power and the abundance of data. The advent of big data and cloud computing further accelerated progress, enabling researchers to develop increasingly sophisticated models and algorithms.

Deep Learning and Neural Networks:

Deep learning, a subset of machine learning, revolutionized AI by introducing hierarchical architectures of artificial neural networks with multiple layers. This approach proved highly effective in tasks such as image recognition, natural language processing, and reinforcement learning. Convolutional neural networks (CNNs) and recurrent neural networks (RNNs) emerged as powerful tools for analysing visual and sequential data, respectively. Through iterative training on large datasets, deep learning models learned to automatically extract features from raw data, achieving unprecedented levels of accuracy and performance in various applications.

Modern Applications of AI:

AI has permeated nearly every industry, with applications ranging from healthcare and finance to transportation and entertainment. In healthcare, AI technologies facilitate diagnosis, treatment planning, and personalized medicine, improving patient outcomes and reducing healthcare costs. In finance, AI powers algorithmic trading, fraud detection, and risk assessment, enhancing decision-making and regulatory compliance. Autonomous vehicles represent a groundbreaking application of AI in transportation, promising safer roads and increased mobility. However, along with these advancements come ethical considerations and

societal implications that warrant careful consideration and responsible deployment of AI technologies.

Conclusion:

The evolution of artificial intelligence from its theoretical foundations to modern applications has been a journey marked by breakthroughs, setbacks, and paradigm shifts. Despite challenges such as AI winters and ethical concerns, AI has transformed society and technology in profound ways. Looking ahead, continued research and responsible innovation will be essential to harnessing the full potential of AI while addressing its ethical, social, and technical implications. By fostering interdisciplinary collaboration and prioritizing ethical principles, we can ensure that AI benefits humanity and contributes to a more equitable and sustainable future.

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Integrating Indian Knowledge System in Modern Education as per NEP 2020

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Abstract:

The integration of the Indian Knowledge Systems (IKS) into modern education, in alignment with the National Education Policy (NEP) 2020, represents a pivotal shift towards a more holistic and culturally grounded educational framework. This endeavour seeks to celebrate and leverage India's rich heritage of traditional knowledge, spanning disciplines like Ayurveda, Yoga, Vedas, Jyotish Shastra, and indigenous sciences and arts. The NEP 2020 emphasizes the importance of incorporating IKS into mainstream education to nurture a deeper understanding of India's diverse cultural fabric and promote a comprehensive worldview that transcends conventional academic boundaries. This integration aims to bridge the gap between ancient wisdom and contemporary knowledge, fostering interdisciplinary learning and innovation.

Keywords: Holistic Education, Curriculum Reform, Critical Thinking, Interdisciplinary studies.

Introduction:

The NEP 2020 include revising curricula to incorporate IKS across subjects, from science and mathematics to philosophy and sociology. This transformation involves developing specialized modules that elucidate the historical, scientific, and philosophical underpinnings of IKS concepts, promoting critical thinking and holistic perspectives among students. Workshops and collaborations with traditional practitioners facilitate experiential learning, enriching educational experiences and deepening cultural connections. Research and

documentation of IKS are pivotal for preserving and advancing indigenous knowledge systems. Establishing centres of excellence dedicated to studying IKS not only contributes to academic scholarship but also facilitates the integration of traditional wisdom into modern scientific discourse. Language plays a crucial role in preserving IKS, with an emphasis on promoting regional languages to convey traditional knowledge. By incorporating IKS into the curriculum, educational institutions can foster linguistic diversity and cultural preservation.



Objectives:

1. To examine a comprehensive and interdisciplinary education that integrates IKS with modern academic subjects, promoting a well-rounded understanding of the world.
2. To investigate the use of regional languages to preserve linguistic diversity and facilitate the transmission of traditional knowledge.
3. To evaluate the effective policy implementation by allocating resources and revising curricula to

incorporate IKS seamlessly into educational frameworks.

Research methodology

I have used secondary data sources, such as books, journals, articles and research paper. After identifying relevant source, the data is evaluated for reliability before undergoing preparation for analysis. Subsequently, the data is analyzed using appropriate statistical or qualitative methods, and the findings are interpreted in relation to the research objectives.

Literature Review:

A comprehensive literature review on the integration of Indian Knowledge Systems (IKS) in modern education, aligned with the National Education Policy (NEP) 2020, reveals a diverse array of perspectives, approaches, and challenges. Scholars and researchers have explored the historical significance of IKS, tracing its deep roots and cultural contributions across various domains, including medicine, philosophy, astronomy, and mathematics. They have also examined the evolution of educational reforms, such as the NEP 2020, which aims to revitalize traditional knowledge systems within formal education.

NEP And IKS Inclusion:

The National Education Policy (NEP) 2020 emphasizes the systematic inclusion of Indian Knowledge Systems (IKS) in the curriculum across various academic disciplines. IKS, alongside tribal knowledge, will be integrated into subjects such as mathematics, engineering, philosophy, yoga, medicine, sports, literature, languages, and other domains. The NEP specifically highlights the introduction of courses on tribal ethnomedicinal practices, forest management, organic and natural farming, and offers IKS as an elective course for secondary school students.

To deliver this curriculum effectively, modern technologies, interactive games, and cultural exchange programs among different states will be utilized. Additionally, the NEP promotes multilingualism, leveraging the rich repository of IKS across many languages. Students will receive their curriculum in native languages, and Sanskrit—the oldest language—will be taught universally. This approach not only facilitates language learning but also fosters an understanding of the nation's diverse cultural heritage, promoting unity and integrity as envisioned by constitutional provisions.

The NEP aims to seamlessly integrate the history of Indian mathematics, architecture, philosophy, and Ayurveda into standard academic subjects over time. This gradual process aligns with the overarching goal of the NEP to enrich educational content with the depth and breadth of India's traditional knowledge systems.

Activities under the IKS Division:

The establishment of the Indian Knowledge Systems (IKS) Division at the AICTE headquarters in October 2020 marked a significant milestone within the Ministry of Education (Moe). This division oversees a comprehensive knowledge repository consisting of 29 IKS research centres, 17 IKS Teacher Training Centres, and 7 IKS Bhasha Kendra. These centers operate with interdisciplinary approaches aimed at preserving, disseminating, and furthering traditional knowledge for societal applications and academic research.

The IKS Teacher Training Centres play a pivotal role in providing educators with essential training to comprehend and impart indigenous and traditional knowledge effectively. Meanwhile, the IKS Bhasha Kendra's serve as focal points for promoting linguistic diversity and literary knowledge, revitalizing endangered languages that hold transformative knowledge critical for the nation's development.

To facilitate the growth and integration of IKS within educational institutions, funding support ranging from Rs. 30-40 lakh over two years is provided to establish IKS centers in traditional schools and STEM educational institutions. Additionally, the IKS Internship Program pairs students with IKS experts to undertake short-term research projects, workshops, and activities, offering stipends of approximately Rs. 25,000 for two months.

Challenges of the Indian Knowledge System:

The Indian Knowledge System faces significant challenges in the context of globalization, where there is a strong push towards modernizing and aligning education systems with global standards. This shift has resulted in profound changes in pedagogy, curriculum, and instructional methods, significantly impacting social dynamics (Sharma and Joshi, 2018).

Globalization has also given rise to concepts of social imperialism and cultural imperialism. In cultural imperialism, countries with higher social status exert dominance over the societies and cultures of countries with lower social status (Coleman, 2010). India's education system, rooted in the Macaulay Origin, continues to be influential despite the vast information systems available today, leading to a loss of culturally based knowledge and heritage.

The consequences of this modernization extend to agricultural biodiversity, with significant pressures on food security, nutrition, and overall agricultural development. There has been a notable depletion of intellectual capital, particularly concerning Indian Knowledge Systems, which boast more than 7,000 medicinal plant species and over 15,000 herbal formulations.

Challenges of Implementation:

1. Opening new education institutes every week is a difficult task. In recent years, India has seen the establishment of over a thousand colleges and universities. If the policy's stated goal of doubling the gross enrollment ratio in higher education by 2035 is met, it will take 15 years to open a single new school. Opening a new university every week is a massive undertaking.

2. The National Education Policy 2020 encourages interdisciplinary study at the university level. Universities have historically been highly segregated and isolated, particularly in India. With few exceptions, this culture of disciplinary anchoring pervades academics and professors. It is unrealistic to expect every college professor to be a "exception" who is genuinely interested in, enthusiastic about, and enthusiastically supportive of fields of study other than their own.

3. Remote students often lack access to advanced educational resources, such as non-academic texts, digital learning, and computer instruction. According to the ASER 2018 survey, 55.5% of pupils have never used a computer.

4. Rural secondary school enrolment remains lower than expected compared to urban schools. India's government has officially recognized only 1.39 million secondary schools and 1.1 million senior secondary schools. The vast majority of them live in talukas or hamlets that already have a sizable population. As a result, children must travel a long distance simply to attend school.

Conclusion

The integration of Indian Knowledge Systems (IKS) into modern education, as envisioned by the National Education Policy (NEP) 2020, represents a transformative initiative aimed at revitalizing traditional wisdom and heritage within the contemporary educational framework. The NEP's emphasis on incorporating IKS across various academic disciplines underscores a commitment to preserving and promoting India's rich cultural legacy.

By integrating IKS into the curriculum, the NEP seeks to foster holistic learning experiences, empower educators with specialized training, and engage students in interdisciplinary exploration. This approach not only enriches educational content but also promotes cultural pride and unity by celebrating India's diverse knowledge traditions.

However, this Endeavor is not without challenges. Globalization has led to a shift towards modernization, posing risks to indigenous knowledge and biodiversity. The commercial exploitation and biopiracy of traditional resources highlight the importance of safeguarding intellectual capital and promoting responsible stewardship of IKS.

To address these challenges, ongoing efforts are needed to promote multilingual education, preserve endangered languages, and empower communities through collaborative initiatives. By nurturing a symbiotic relationship between modern education and traditional knowledge systems, India can leverage its unique heritage to drive innovation, sustainable development, and global collaboration.

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Development of Digital Repositories for Indian Traditional Knowledge Preservation and Accessibility in India

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Abstract:

The research aims to explore the development and implementation of digital repositories as a means of preserving and providing accessibility to traditional knowledge. Traditional knowledge, deeply rooted in culture and passed down through generations, encompasses a wealth of information on various aspects of life, including agriculture, healthcare, crafts, and spirituality. However, this knowledge is often at risk of being lost due to factors such as globalization, urbanization, and modernization. Digital repositories offer a promising solution by providing a platform for storing, organizing, and disseminating traditional knowledge in a digital format. This study will investigate the process of creating digital repositories, the challenges involved, and the impact on the preservation and transmission of traditional knowledge.

Keywords: Digital Repositories, IKS, Traditional Knowledge System.

Introduction:

India is a land of diverse cultures, languages, and traditions, each with its own rich repository of traditional knowledge that has been passed down through generations. From ancient medical practices like Ayurveda to traditional agricultural techniques, Indian traditional knowledge systems (ITKS) encompass a vast array of wisdom accumulated over centuries. However, in the face of rapid globalization, urbanization, and technological advancements, much of this invaluable traditional knowledge is at risk of being lost. Preserving and making accessible Indian traditional knowledge is crucial for various reasons. Firstly, it holds immense cultural and historical significance, reflecting the wisdom and experiences of our ancestors. Secondly, it offers sustainable solutions to contemporary challenges, whether in healthcare, agriculture, environmental management, or social harmony. Thirdly, it fosters a sense of identity and pride among Indian communities, strengthening cultural cohesion and resilience.

In recent years, there has been a growing recognition of the need to preserve and promote Indian traditional knowledge through modern means, particularly digital technology. Digital repositories present an innovative and efficient way to store, organize, and disseminate traditional knowledge, making it accessible to a wide audience while ensuring its preservation for future generations.

This research focuses on the development and implementation of digital repositories for Indian traditional knowledge preservation and accessibility in India. It aims to explore the process, challenges, and impact of creating digital repositories that house

a diverse range of traditional knowledge resources. By doing so, this study seeks to contribute to the ongoing efforts to safeguard Indian traditional knowledge and promote its utilization in contemporary contexts.

Literature Review:

The North East Region of India stands as a melting pot of ethnic diversity, cultural richness, and traditional practices. Indigenous communities in this region maintain a deep connection with their heritage, reflected in their food habits, land use, medicines, textiles, home architecture, and decorations. Despite this wealth of traditional knowledge and cultural heritage, efforts to document, preserve, and disseminate these treasures through digital libraries or repositories are rare in this part of the world.

Conference: IASLIC 26th National Seminar -2014, DLISc, Gauhati University, Guwahati, November 25-28, 2014At: Department of Library and Information Science, Gauhati University, Guwahati, the Traditional knowledge system represents a complex intervention that balances the need to protect traditional knowledge with the imperatives of modernization and international patent systems.

While it has made significant strides in safeguarding India's traditional medical knowledge, it also raises important questions about the commodification and preservation of traditional knowledge in the digital age. Further research and dialogue are necessary to address these concerns and ensure that traditional knowledge systems are respected, preserved, and fairly utilized in the global context. Fredriksson, M. India's Traditional Knowledge Digital Library and the Politics of Patent Classifications.

Objective:

- 1) To assess the traditional knowledge landscape and identify key areas for digital preservation.
- 2) To examine the process of developing digital repositories for traditional knowledge, including content gathering, digitization methods, and technological infrastructure.
- 3) To explore the challenges and opportunities associated with implementing digital repositories, including issues of intellectual property, community engagement, and technological access.

Methodology:

In order to study the research objectives, secondary data have been collected. The initial stage of the study includes an in-depth search of articles, research papers, reports regarding IKS. The analysis of the secondary data developed the understanding about the Traditional Knowledge System in India. The Data has been collected through journals, newspapers, website etc.

Importance of Indian Traditional Knowledge Preservation**1. The Assessment of traditional knowledge landscape and identify key areas for digital preservation.**

1. **Literature Review:** Conduct a thorough review of existing literature, including academic studies, ethnographic research, and government reports, to understand the breadth and depth of traditional knowledge within the target region or community.
2. **Stakeholder Engagement:** Engage with local communities, traditional knowledge holders, elders, practitioners, and scholars to gather firsthand information about traditional practices, beliefs, customs, and rituals.
3. **Field Surveys and Interviews:** Conduct field surveys and interviews to document traditional knowledge practices across different domains, such as:
 - **Traditional Medicine:** Document medicinal plants, remedies, healing practices, and healthcare systems.
 - **Agricultural Practices:** Identify indigenous farming techniques, crop varieties, soil management practices, and water conservation methods.
 - **Crafts and Arts:** Document traditional crafts, artisanal skills, weaving techniques, pottery, basketry, and other artisanal practices.
 - **Language and Literature:** Document oral traditions, folklore, myths, legends, songs, and stories in local languages.
 - **Architecture and Housing:** Document traditional architectural styles, construction methods, and materials used in local dwellings.
 - **Cultural Practices:** Document cultural ceremonies, festivals, rituals, and traditional knowledge associated with them.

4. **Mapping Traditional Knowledge:** Create maps or databases to visualize the distribution of traditional knowledge across the region, identifying areas of concentration and diversity.
 5. **Identification of Threats and Vulnerabilities:** Assess threats to traditional knowledge, such as environmental degradation, cultural erosion, socio-economic changes, and external influences.
 6. **Community Needs Assessment:** Understand the needs and priorities of local communities regarding the preservation and promotion of traditional knowledge.
 7. **Technological Assessment:** Evaluate the existing technological infrastructure, digital literacy levels, and access to digital resources in the target region.
 8. **Legal and Ethical Considerations:** Consider legal frameworks, intellectual property rights, and ethical guidelines related to the documentation and preservation of traditional knowledge.
 9. **Gap Analysis:** Identify gaps and areas lacking documentation or representation in digital formats.
 10. **Recommendations:** Based on the assessment, provide recommendations for the development of digital preservation initiatives, including:
 - Establishment of digital repositories or libraries for traditional knowledge.
 - Digitization of existing resources, including texts, audio recordings, videos, and photographs.
 - Capacity building programs to train local communities in digital preservation techniques.
 - Integration of traditional knowledge into formal education curricula.
 - Collaboration with relevant stakeholders, including government agencies, NGOs, universities, and international organizations.
 - Strategies for raising awareness and promoting the importance of traditional knowledge preservation.
- 2. The process of developing digital repositories**
1. **Content Gathering:**
 - **Identify Sources:** Identify the sources of traditional knowledge within the target region or community, including oral traditions, manuscripts, artifacts, and expert practitioners.
 - **Engage Stakeholders:** Engage with local communities, traditional knowledge holders, elders, and practitioners to collect traditional knowledge. Conduct interviews, workshops, and focus group discussions to gather information.
 - **Documentation:** Document traditional knowledge in various forms, including texts, audio recordings, videos, photographs, and illustrations. Ensure cultural sensitivity and ethical considerations are observed during documentation.

2. Digitization Methods:

• **Selection of Material:** Determine which traditional knowledge materials are suitable for digitization based on their cultural significance, accessibility, and preservation needs.

• **Digitization Techniques:**

• **Textual Material:** Scan or transcribe texts into digital formats using Optical Character Recognition (OCR) software.

• **Audio Recordings:** Digitize audio recordings using audio editing software or specialized equipment.

• **Visual Material:** Digitize images, photographs, and illustrations using scanners or digital cameras.

• **Videos:** Digitize videos using video capture devices or digital camcorders.

• **Metadata Creation:** Develop standardized metadata for each digitized item, including information on the source, context, language, and copyright status.

• **Quality Control:** Ensure the accuracy and quality of digitized materials through quality control measures, such as proofreading, audio/video editing, and image enhancement.

3. Technological Infrastructure:

• **Selection of Repository Platform:** Choose an appropriate digital repository platform based on factors such as scalability, accessibility, and cost-effectiveness.

• **Customization:** Customize the repository platform to suit the specific needs and requirements of traditional knowledge preservation. This may include designing user interfaces and search functionalities.

• **Data Storage:** Set up secure and reliable data storage systems to store digitized materials. Consider using cloud storage services or local servers based on resource availability and scalability needs.

• **Access Control:** Implement access control mechanisms to regulate who can access and modify digitized materials. Define user roles and permissions to ensure data security and privacy.

• **Backup and Disaster Recovery:** Establish backup and disaster recovery procedures to protect digitized materials from data loss or corruption. Regularly backup data and maintain redundancy to ensure continuity of access.

1. Intellectual Property (IP) Issues:

• **Challenges:**

• **Ownership Rights:** Traditional knowledge often lacks clear ownership, making it vulnerable to misappropriation.

• **Legal Frameworks:** Existing intellectual property laws may not adequately protect traditional knowledge, leading to exploitation by external parties.

• **Cultural Sensitivity:** Digitization and dissemination of traditional knowledge may raise concerns about cultural appropriation and misuse.

• **Opportunities:**

• **Customary Laws:** Communities can use customary laws and community protocols to protect their traditional knowledge.

• **Intellectual Property Rights (IPR):** Develop sui generis IPR systems tailored to protect traditional knowledge, such as geographical indications or community trademarks.

• **Collaborative Agreements:** Establish partnerships between communities, governments, and researchers to jointly manage and protect traditional knowledge.

2. Community Engagement:

• **Challenges:**

• **Trust and Consent:** Building trust and obtaining consent from communities for digitization efforts can be challenging, particularly due to historical mistrust.

• **Participation:** Ensuring active participation and involvement of community members in decision-making processes can be difficult.

• **Language and Cultural Barriers:** Communication barriers due to language differences and cultural norms may hinder effective engagement.

• **Opportunities:**

• **Participatory Approach:** Implement a participatory approach that involves communities in all stages of the digitization process, from planning to implementation.

• **Capacity Building:** Provide training and capacity building programs to empower community members to take ownership of digitization initiatives.

• **Cultural Protocols:** Respect and incorporate cultural protocols and traditional governance structures into digitization projects.

3. Technological Access:

• **Challenges:**

• **Infrastructure:** Limited access to reliable internet connectivity and electricity in rural and remote areas may hinder technological access.

• **Digital Literacy:** Low levels of digital literacy among community members may pose challenges in utilizing digital repositories.

• **Technological Barriers:** Lack of access to appropriate hardware and software tools for digitization and access.

• **Opportunities:**

• **Mobile Technology:** Utilize mobile devices and applications for data collection and access, considering their widespread availability.

• **Community Centers:** Establish community centers with computer facilities and internet access for training and accessing digital repositories.

•**Offline Access:** Provide offline access to digital repositories through portable storage devices or community libraries.

4. Cross-cutting Challenges and Opportunities:

•**Awareness and Education:** Raise awareness about the importance of traditional knowledge preservation and the benefits of digital repositories through education and outreach programs.

•**Sustainability:** Ensure the long-term sustainability of digital repositories by integrating them into existing institutional frameworks and securing funding sources.

•**Interdisciplinary Collaboration:** Foster interdisciplinary collaboration between traditional knowledge holders, researchers, policymakers, and technology experts to address complex challenges.

•**Ethical Considerations:** Uphold ethical standards in digitization efforts, respecting cultural sensitivities, privacy rights, and informed consent.

Conclusion:

In conclusion, the development of digital repositories for traditional knowledge preservation and accessibility aligns closely with the goals and objectives outlined in the National Education Policy (NEP) 2020, particularly in the context of Indian Knowledge Systems (IKS). These repositories serve as essential tools for safeguarding, promoting, and democratizing traditional knowledge, ensuring its preservation for future generations and its integration into modern educational frameworks.

The NEP 2020 emphasizes the importance of integrating Indian Knowledge Systems into the education system to foster a sense of cultural identity, promote holistic learning, and encourage critical thinking. Digital repositories play a crucial role in achieving these objectives by providing a platform for the documentation, preservation, and dissemination of traditional knowledge in various domains such as Ayurveda, yoga, traditional crafts, languages, and environmental wisdom. Through the development of digital repositories for traditional knowledge, several key benefits are realized:

Preservation of Cultural Heritage: Digital repositories ensure the preservation of India's rich cultural heritage by digitizing and archiving traditional knowledge resources, including texts, audio recordings, videos, and visual materials.

Accessibility and Inclusivity: Digital repositories make traditional knowledge accessible to a wide audience, including students, researchers, practitioners, and the general public, regardless of geographical location or socioeconomic status.

Integration into Education: By incorporating traditional knowledge into digital repositories, educational institutions can integrate IKS into their curricula, promoting a more comprehensive and inclusive approach to learning.

Empowerment of Communities: Digital repositories empower indigenous communities and

traditional knowledge holders by providing them with a platform to share their knowledge, preserve their cultural heritage, and assert their intellectual property rights.

Interdisciplinary Research and Innovation:

Digital repositories facilitate interdisciplinary research and innovation by providing a repository of diverse traditional knowledge that can be leveraged for sustainable development, healthcare solutions, and environmental conservation. However, the development of digital repositories for traditional knowledge also presents several challenges, including issues related to intellectual property rights, community engagement, technological infrastructure, and ethical considerations. Addressing these challenges requires collaborative efforts from various stakeholders, including government agencies, educational institutions, indigenous communities, and technology experts.

In alignment with NEP 2020's vision, efforts should be made to develop comprehensive digital repositories for traditional knowledge preservation and accessibility that are inclusive, culturally sensitive, and sustainable. These repositories should not only serve as repositories of knowledge but also as platforms for dialogue, collaboration, and empowerment, fostering a deeper appreciation and understanding of India's diverse cultural heritage and knowledge systems. By embracing traditional knowledge and integrating it into modern educational frameworks through digital repositories, India can nurture a society that is rooted in its cultural heritage while embracing the challenges and opportunities of the 21st century.

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Rethinking of IKS into modern education

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Abstract –

This research paper explores the shift towards a holistic approach to education that goes beyond mere content delivery to encompass the development of essential knowledge, skills, and attitudes (IKS) necessary for success in the modern world. It investigates the rationale behind this shift, its implications for educational practices, and the challenges and opportunities it presents.

Introduction:

Overview of traditional education vs. modern education paradigms. Introduction to the concept of IKS and its significance in the 21st-century learning landscape

Literature Review:

Historical perspective on education and its evolution. Theoretical frameworks supporting the integration of IKS in education. Previous research on the benefits and challenges of implementing IKS-based approaches.

The Conceptual Framework of IKS Integration:

Definition and components of knowledge, skills, and attitudes. The interconnectedness of IKS and their role in fostering holistic development. Models and strategies for integrating IKS into curriculum and pedagogy.

Benefits of IKS Integration:

Enhanced student engagement and motivation. Development of critical thinking, problem-solving, and creativity. Preparation for lifelong learning and adaptability in a rapidly changing world.

Challenges and Barriers:

Resistance to change among educators and stakeholders. Lack of standardized assessment methods for evaluating IKS. Resource constraints and infrastructure limitations. Cultural and societal factors influencing educational priorities.

Case Studies and Best Practices:

Examples of schools or educational programs successfully implementing IKS integration. Lessons learned and practical insights for educators and policymakers.

Methods -Secondary method to be used

Recommendations for Future Research and Practice:

Areas for further exploration in IKS integration. Strategies for overcoming common challenges. Policy implications and advocacy for IKS-based education reform.

Conclusion:

Summarization of key findings and implications of integrating IKS into modern education. Emphasis on the importance of a comprehensive approach to education that nurtures well-rounded individuals capable of thriving in today's dynamic world.

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Manuscript Translation using NLP as a boon to integrate IKS in Modern Education System

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Abstract:

Indian Knowledge Systems (IKS) integration provides a significant chance to enhance instructional practices and foster cultural diversity in contemporary education. This paper explores how Natural Language Processing (NLP) can be used to translate classical Indian literature and instructional materials, allowing the integration of traditional knowledge with modern pedagogy. The goal of the project is to provide accurate and contextually aware translations of Indian languages and knowledge systems using sophisticated natural language processing (NLP) technologies, such as machine learning and language modeling. Teachers and students can benefit from these translations by having access to a plethora of knowledge on topics rooted in India's rich history, including philosophy, science, mathematics, and literature. In order to provide accurate and respectful translations of the content, the research also discusses ethical issues and obstacles related to translating IKS. This emphasizes the importance of working in conjunction with Indian communities and researchers. The aim of this endeavor is to create a holistic and inclusive educational experience that respects India's past and equips students for the globalized world by incorporating IKS into contemporary education.

Keywords: IKS, NLP, Education System, NEP 2020

Introduction:

Indian Knowledge Systems (IKS) are collections of rich and varied traditional knowledge that have been handed down through Indian centuries. These systems cover many different fields, such as physics, math, philosophy, medicine, and more. The significance of incorporating IKS to enhance pedagogical approaches and foster cultural diversity is becoming increasingly apparent as the contemporary educational system develops. Traditional Indian manuscripts and educational resources can now be translated into popular languages thanks to the development of Natural Language Processing (NLP), a potent tool in text translation. This essay examines the difficulties and ethical issues that need to be resolved as well as the possible advantages of employing NLP to translate IKS.

Background:

Indian Knowledge Systems (IKS)

IKS cover a wide range of knowledge fields, such as:

Indian philosophical and religious works, including the Upanishads, Puranas, and Vedas, provide valuable understandings of metaphysics, ethics, and spirituality.

Science and Mathematics: The Indian intellectuals of antiquity achieved noteworthy advances in areas like astronomy, mathematics (including the notion of zero), and medicine (Ayurveda).

Arts and Literature: A rich cultural legacy is provided by traditional art forms, literature, and languages including Sanskrit and regional tongues.

NLP and Translation:

A subfield of artificial intelligence called "natural language processing" is concerned with how computers and human language interact. Text translation from one language to another can be done accurately and with consideration for context thanks to NLP techniques like machine translation, language modeling, and semantic analysis.

Methodology:

The study looks into how NLP may be used to translate traditional Indian texts and instructional materials so that IKS can be included into contemporary classrooms. The steps included in the study are as follows:

InformationGathering: Age-old Indian manuscripts and texts in a range of languages (such as Sanskrit, Hindi, and Tamil) are gathered in preparation for translation.

NLPMethodologies: To produce reliable translations, sophisticated NLP techniques including language modeling, machine learning, and neural networks are used.

Evaluation: Factors including accuracy, cultural relevance, and context are taken into account while assessing the quality of translations.

Obstacles and Moral Determinations: In addition to discussing ethical issues including protecting intellectual property and cultural sensitivity, the study looks at the difficulties in translating IKS.

Results

Translation Quality: NLP-based translations are quite accurate and maintain the original texts' context and meaning.

Accessibility: Translated texts facilitate interdisciplinary learning and cultural awareness by making IKS more approachable for teachers and students.

Ethics: Working together with Indian academics and communities is essential to upholding traditional knowledge and preventing distortion.

Conclusion

Through NLP-based translation, Indian Knowledge Systems can be integrated into contemporary education, providing a rare chance to improve instruction and foster cultural diversity. This method empowers both teachers and students by bridging the gap between conventional knowledge and modern pedagogy. To guarantee courteous and accurate translations, it is crucial to handle difficulties and ethical issues. Future studies should concentrate on developing NLP methods for IKS translation and encouraging interaction with Indian communities and academics

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Redefining Learning: A Deep Dive into Innovative Practices in Mathematics Education

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Abstract:

Mathematics education, also known as the "gateway to science," is critical to our progress in science and technology. Its impact extends beyond societal, economic, and technological realms, emphasizing the importance of good teaching approaches. This article investigates the importance of developing critical and inventive applications of mathematical principles. It explores a variety of new ways for meeting the unique needs of learners, such as mastery learning and the integration of computational thinking. Furthermore, it emphasizes the use of resources such as Geogebra, MathLab, Maxima, and Sage Math to enhance the learning process. Educators hope to increase interest and success rates in mathematics by adopting student-centered approaches and ICT-rich classrooms. Mathematics education seeks to cultivate critical thinking and problem-solving abilities in order to foster a greater appreciation for its real-world relevance, equipping learners with essential life skills.

Keywords: Mathematics Education, Computational Thinking, Geogebra, MathLab, Problem Solving, Critical Thinking, ICT-rich environment.

Defining Innovation in Mathematics Education:

Mathematics education innovations include a wide range of methodologies, pedagogies, and resources designed to improve learning results and engagement. These innovations ensure that all students gain mastery through tailored instruction and remedial help, promoting fair learning opportunities.

Innovative Teaching Methods

1. **Inducto-Deductive Method:** This method combines inductive and deductive reasoning, beginning with specific instances and then generalizing and applying those generalizations to other situations to improve comprehension.
2. **Analytico-Synthetic Method:** This method develops analytical skills by dividing large issues into smaller sections and synthesizing solutions.
3. **Problem Solving Method:** Teaching mathematical ideas through problem solving increases student involvement and practical knowledge.
4. **The Play-Way Method:** Using games makes learning mathematics more pleasant and less abstract, improving motivation.
5. **Laboratory Method:** Active learning through hands-on experiences, moving from concrete examples to abstract concepts, promotes deeper understanding.

Inductive and Deductive Methods

The Inductive Method: Beginning with specific instances and progressing to generalizations assists students in transitioning from tangible to abstract mathematical concepts.

The Deductive Method: Starting with broad concepts that students apply to specific circumstances improves their critical thinking and application of mathematical theories.

Analytic and Synthetic Approaches

Analytic Method: Breaking down complex problems into simpler parts encourages students to understand problem components before attempting solutions.

Synthetic Method: Starting with known elements and combining them to discover new truths or solve complex problems fosters innovative thinking and problem-solving skills.

Experiential Learning Methods

The Laboratory Method: Emphasizes learning by doing, allow students to engage in hands-on activities to gain a practical understanding of mathematical topics.

Problem-Solving Method: Involving students in real-world issues that necessitate careful analysis and application of mathematical principles improves understanding and practical application using open-source software such as Sage, MathLab, Geogebra, and others.

The Play-Way Method: Particularly effective in early education, as it employs games and amusing activities to make mathematics more interesting and less daunting for younger students.

Each of these strategies demonstrates the dynamic character of mathematics education, in which conventional and modern techniques work together to improve educational outcomes and student engagement.

Study and Research Paths (SRP)**Overview of Study and Research Pathways (SRP):**

Study and Research Paths (SRPs) are novel, inquiry-based teaching methods that aim to revolutionize established pedagogical approaches by fostering active inquiry. These paths begin with a leading question provided by a group of learners, which creates a dynamic learning system targeted at exploring and answering the question through a series of derived inquiry and responses.

Implementation and Impact of the SRP:

Implementing an SRP involves creating an educational system in which the community of learners collaborates to answer the first issue. This process combines times of reviewing known knowledge with phases of research and the development of new questions and solutions. This technique not only makes it easier to identify and analyze teaching and learning processes, but it also allows for their modification and deeper study.

SRP as a Research and Educational Tool:

SRPs serve as both a pedagogical strategy and a research tool, providing empirical data to assess how educational phenomena can be effectively modified. This dual functionality enhances the capability of educators and researchers to design, manage, and analyze educational experiences, particularly within inquiry-based mathematics education (IBME).

Incorporating Mathematical Modeling in Courses**Realistic Mathematical Education and Modeling**

Realistic Mathematical Education (RME) promotes mathematics that is practical and significantly tied to real-world applications. It stresses the development of mathematical understanding through a phased approach, which is critical for successfully implementing mathematical modeling into educational curriculums. Mathematical modeling is a method of applying mathematical concepts to describe and analyze systems, functions, and events, as well as to explain real-world phenomena through mathematical formulas, descriptions, and methodologies.

Challenges in Teaching Mathematical Modeling:

Despite its advantages, teaching and implementing mathematical modeling at the K-UG levels presents major hurdles, such as a shortage of effective modeling techniques and limited chances for integration into teaching. Addressing these problems is critical for improving the teaching and learning of mathematical modeling, and strengthening students' capacity to apply mathematics in practical applications employing tools.

The Process and Advantages of Mathematical Modelling:

Mathematical modeling is an organized process that begins with identifying the problem and progresses to creating assumptions, specifying variables, computing solutions, and analyzing outcomes. This technique provides essential insights into the modeled phenomena, including explicit assumptions, problem-solving guidance, and the use of mathematical formulas. Furthermore, it allows for the use of computational tools for complex computations, resulting in faster and more accurate decision-making across a variety of businesses.

Challenges and Future Directions:**Challenges in Mathematics Education :**

1. **Instructional Approaches and Teacher Preparedness:** Traditional verbal approaches frequently fail to promote critical thinking and analytical reasoning, demanding ongoing professional development for teachers to adapt to technology changes.

2. **Resource Limitations and Technological Infrastructure:** Inadequate learning materials and bad technology infrastructure impede mathematics instruction quality, necessitating teacher and student readiness for digital transformation.

3. **Inclusivity and Accessibility:** There is a need to make mathematics education more inclusive and accessible, recognizing and addressing varied learning requirements and backgrounds to avoid gaps in learning results and broaden participation.

Future Directions in Mathematics Education

1. **Mathematical Modeling Integration:** Integrating more mathematical modeling in courses promotes practical mathematical skills and an awareness of real-world applications.

2. **Leveraging Technological Advancements:** Using tools like Excel, Scilab, MathLab and Graphmatica in conjunction with well-prepared instructional materials opens up new options for teaching mathematics while increasing engagement and relevance.

3. **Cultural and Social Context Considerations:** Creating thematic materials and curricula based on students' social settings makes mathematics more approachable and meaningful.

Guided Reinvention and Inquiry-Oriented Learning**Guided Reinvention:**

Guided reinvention involves switching from traditional teacher-centered instruction to a more student-driven approach. Educators serve as facilitators, leading students through the process of independently developing knowledge. This strategy promotes critical thinking, problem solving, and active engagement with mathematical concepts.

The Essentials of Inquiry-Oriented Learning

Inquiry-oriented learning represents the spirit of investigation and discovery in mathematical education. Educators build an inquiry-based

classroom atmosphere by asking thought-provoking questions and fostering investigation. This technique not only fosters a better understanding of mathematical ideas, but it also develops important abilities like creativity, flexibility, and collaboration.

Cognitive load and overwhelmed learners:

Inquiry-based learning frequently includes extensive problem-solving exercises that might strain learners' working memory, especially those who are unfamiliar with mathematical ideas. Without proper support and platform, students may fail to effectively traverse difficult problems, resulting in frustration and disengagement.

Need for Platform and Support

To optimize the success of inquiry-based learning, educators must provide a platform and support tailored to each student's specific requirements. Teachers can assist students overcome obstacles and develop important mathematics abilities in a supportive setting by providing advice, feedback, and resources.

The Role of Educators in Guided Inquiry

During guided inquiry, educators take a more active part in the learning process, supporting and guiding students as they understand mathematical topics. Teachers assist knowledge production by utilizing students' language and cognitive skills, while also developing critical thinking and problem-solving ability.

The IOLA Project is a model for Guided Inquiry.

The IOLA (Inquiry-Oriented Learning in Algebra) initiative demonstrates the ideas of guided inquiry in mathematics education. IOLA provides an organized approach to learning with a well-developed curriculum and substantial instructor support resources, encouraging problem-solving, engagement, and deep mathematical comprehension.

Conclusion

As we look ahead, challenges such as resource limitations, teacher preparedness, and inclusivity remain pivotal areas for development in mathematics education. However, initiatives focusing on mathematical modelling, technological advancements, and culturally relevant curriculum design offer promising avenues for revitalizing mathematics education. These efforts aim not only to bridge learning gaps but also to prepare students for a future where they can confidently apply mathematical concepts in problem-solving and innovation. Moving forward, the continuous exploration and adoption of innovative teaching methods will be crucial in nurturing a generation of learners.

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Impact of Digital Payment Systems on Financial Habits and its challenges

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Abstract:

This paper explores the transformation in financial habits driven by the adoption of digital payment systems. The findings suggest that digital payment technologies contribute to increased spending but also enhance financial management capabilities through features like real-time tracking and automated budgeting tools. This analytical study examines the impact of digital payment systems on the financial habits of consumers, highlighting the fundamental shifts in spending behaviour, savings, and overall financial management. The study identifies a significant increase in transaction frequency and ease of making payments among users of digital payment systems. However, it also reveals potential drawbacks, such as decreased savings rates and a lesser inclination towards deliberate financial planning, presumably due to the ease and impulsivity facilitated by instant transactions. The findings suggest that while digital payment systems enhance convenience in financial transactions, they also necessitate enhanced consumer education and financial literacy to mitigate adverse effects on savings and financial mindfulness. This study provides valuable insights for policymakers, financial advisors, and digital finance companies aiming to foster both technological advancements and financial health among consumers.

Introduction:

Digital payment refers to any form of monetary transaction that is conducted electronically, without the use of physical currency or checks. It involves the transfer of funds between parties through electronic devices, such as smartphones, computers, or specialized payment terminals. Digital payment methods have gained significant popularity due to their convenience, speed, and security features.

The digital revolution has ushered in a transformative era for financial services, where traditional methods of handling money are rapidly being supplanted by advanced digital payment systems. These systems, which include mobile wallets, online banking platforms, and contactless payments, are not merely technological enhancements but are reshaping the economic behaviors and habits of consumers worldwide. This research aims to delve into how these digital payment systems are influencing the financial habits of individuals, particularly focusing on spending patterns, savings behaviors, and overall financial management.

The proliferation of digital payment technologies has been phenomenal, driven by increased internet penetration, the utilisation of smartphones, and a growing preference for convenience in financial transactions. As digital wallets and similar payment platforms become increasingly commonplace, there is a critical need to understand their impact on consumer financial

habits, which have far-reaching implications for economic health and personal financial security.

The landscape of financial transactions has undergone a revolutionary transformation with the widespread adoption of digital payment systems. Digital payments, encompassing a wide range of electronic transactions conducted through various platforms and devices, have become increasingly prevalent in both developed and developing economies. This introduction explores the evolution, significance, and implications of digital payment systems in today's interconnected world.

Steps for Online payment Process: -

1. Customer consent to pay
2. Payment request
3. Payment Gate way to be choosen
4. Issuer card network checks for account balance with the issuer bank
5. Payment Gateway proceeds to OTP authentication.
6. OTP verification by the customer
7. Payment gateway settles amount with acquiring bank.

How to safely use Mobile payment App and Services :

1. Avoid Sending money to Scammer
2. **Protect your bank Accounts: -**
 - Use Multifactor Authentication
 - Never Share your credentials
 - Set up alerts in the payment app
 - Regularly check your payment app and bank accounts.

Steps to be taken if money paid to scammer: -

1. Report it to payment app or Service.
2. Tell your financial Institution
3. Report it to Federal Trade Commission at Reportfraud.ftc.gov.

Objectives: -

1. Analyse the consumer's preferred payment option with the current trend.
2. To Access the challenges in digital payment.

Methodology**Research Design****Type of Research**

The nature of the research study is theoretical and descriptive throughout.

Data Analysis and Interpretation

1. Analyse the consumer's preferred payment option with the current trend.

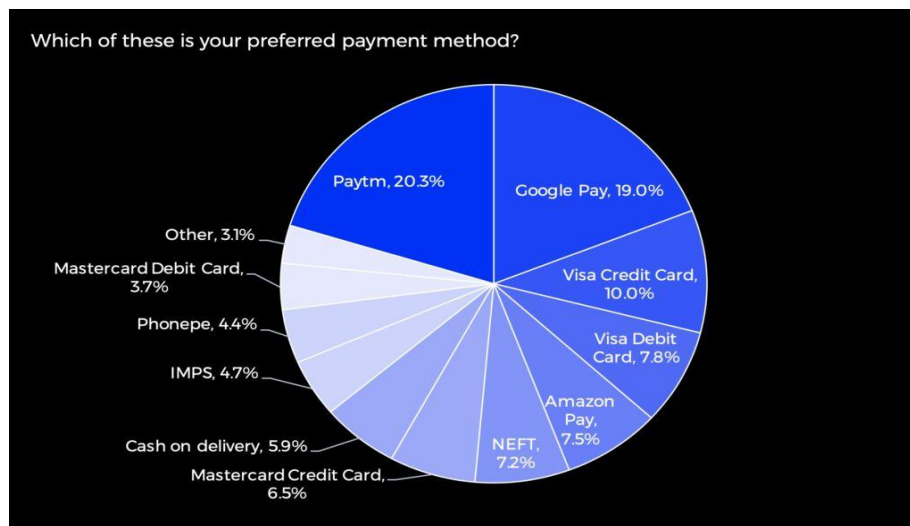
Hence it's a Descriptive Research done with the help of secondary data.

Sources of Data:

Secondary Method has been used in an effective way to find out the details required for the research which includes –

- ☐ News Reports
- ☐ Articles
- ☐ Slides

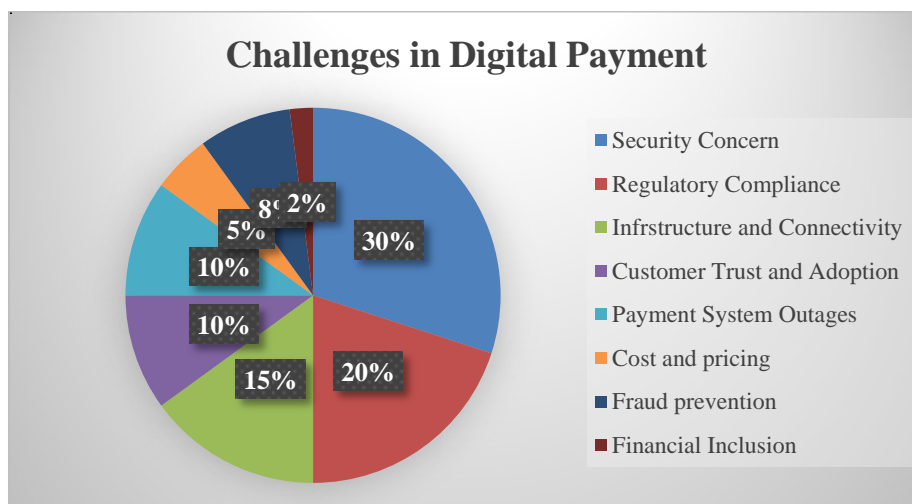
The secondary data shows the impact of digital payment among users and their financial habits.



As per data collected, from E- Commerce payment Trend guide taken from respondent the cash on delivery is only 5.9% which is less as compared to various other online payment platforms such as Pay tm (20.3%), Google Pay (19%), Visa Credit Card (10%), Visa Debit (7.8%) , Amazon pay

(7.5%) and NEFT (7.2%) . This shows that the consumers are preferring digital payment as compared to the traditional form of Cash payment due to easy hassle free transaction and with the comfort of immediate payment.

2. To Access the challenges in digital payment.



As per the data from money mint survey, many consumers are facing challenges with respect

to digital payment. They are Security Concerns: 30%, Regulatory Compliance 20%, Infrastructure

and Connectivity 15%, Customer Trust and Adoption 10%, Payment system and Outages 10%, Cost and Pricing 5%, Fraud prevention 8% and Financial Inclusion 2%.

Suggestions :

Overcoming challenges in digital payments while promoting good financial habits requires a combination of technological innovation, consumer education, and policy interventions.

- **Financial Literacy Programs:** Implement educational initiatives to improve financial literacy among consumers, teaching them about budgeting, saving, and responsible spending. Offer resources and workshops on how to use digital payment tools effectively and securely.
- **Promote Budgeting and Tracking Tools:** Develop digital tools and applications that help users track their spending, set financial goals, and manage their budgets effectively. Incorporate features such as spending alerts, budget trackers, and financial planning calculators to encourage responsible financial behaviour.
- **Savings and Investments:** Offer rewards, discounts, or cashback incentives for users who demonstrate good financial habits, such as saving regularly or investing in retirement accounts. Partner with financial institutions to provide access to savings and investment products through digital payment.
- **Security and Fraud Awareness:** Educate consumers about the importance of cybersecurity and fraud prevention measures when using digital payment services. Provide tips on how to create strong passwords, recognize phishing scams, and protect personal financial information from unauthorized Access.
- **Regulatory Oversight and Consumer Protection:** Advocate for strong regulatory oversight and consumer protection measures to safeguard the interests of digital payment users. Support policies that promote transparency, fairness, and accountability in the digital payment industry, including regulations related to data privacy, consumer rights, and dispute resolution.
- **Continuous Innovation and User Feedback:** Continuously innovate and improve digital payment services based on user feedback and market insights. Solicit input from consumers on their preferences, pain points, and suggestions for enhancing the user experience and promoting good financial habits.

Conclusion:

The impact of digital payment systems on financial habits is profound, offering convenience, accessibility, and efficiency to users worldwide. However, alongside these benefits come significant

challenges that must be addressed to foster responsible financial behaviour and ensure the security and integrity of digital transactions.

Digital payment systems have revolutionized the way individuals manage their finances, enabling seamless transactions, automated payments, and real-time tracking of expenditures. These systems promote good financial habits by encouraging budgeting, savings, and responsible spending through features such as automated payments, budgeting tools, and personalized financial advice.

Despite these advantages, challenges such as security concerns, regulatory compliance, and infrastructure limitations pose significant barriers to the widespread adoption and acceptance of digital payment systems. Security breaches, fraudulent activities, and privacy risks threaten consumer trust and confidence in digital payments, highlighting the need for robust security measures and regulatory oversight.

Addressing these challenges requires a collaborative effort among stakeholders, including governments, financial institutions, technology providers, and consumers. By implementing innovative solutions, promoting financial literacy, and advocating for consumer protection measures, we can overcome the challenges associated with digital payment systems and harness their full potential to promote good financial habits and financial inclusion for all.

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Integrating Indian Knowledge Systems into Modern Educational Frameworks for Enhanced Natural Language Processing (NLP)

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Abstract:

Integrating the Indian knowledge system into modern computer science education can provide a rich, interdisciplinary approach to technology and innovation. By blending traditional knowledge with contemporary methodologies, students and researchers can gain new insights, address ethical considerations, and create technology solutions that benefit society as a whole. This integration also promotes a deeper appreciation for cultural heritage and its relevance to the modern world. Natural language system" refers to a computational system or software that is designed to understand, generate, process, or manipulate human language in a way that is natural and meaningful to humans. These systems are a subset of natural language processing (NLP) technologies and typically involve the use of algorithms, models, and linguistic resources to analyze and produce text or speech. NLP encompasses the development of algorithms, models, and systems that allow computers to understand, interpret, generate, and manipulate human language in a meaningful way. The integration of the Indian knowledge system into modern education in the context of natural language processing (NLP) can provide students with a broader perspective on linguistic diversity, cultural heritage, and innovative approaches to language technologies. Indian languages, with their rich history and unique linguistic structures, offer valuable insights that can enhance modern NLP education. This paper explores the integration of Indian knowledge systems into NLP education, focusing on the unique linguistic characteristics, cultural nuances, and technological challenges inherent in Indian languages. Drawing from a rich tapestry of linguistic traditions, literature, and philosophical insights, this integration aims to enrich NLP research, innovation, and societal impact.

Keywords: Natural Language Processing, Indian knowledge system, Interdisciplinary Collaboration, Computational logistics.

Introduction:

Language Diversity: India is home to hundreds of languages from different language families, such as Indo-Aryan and Dravidian, providing a wealth of linguistic data for study.

Grammatical Complexity:

Indian languages, such as Sanskrit, Tamil, and Hindi, feature complex grammatical structures that can challenge and enrich students' understanding of NLP.

Language Processing and Computational Linguistics: Phonetics and Phonology: Introduce students to the phonetic and phonological features of Indian languages and how these can inform speech recognition and synthesis technologies.

Morphology and Syntax: Teach students about the morphology and syntax of Indian languages, which can be complex and may require different approaches compared to languages like English

Semantics and Pragmatics:

Semantic Analysis: Explore the rich semantic structures in Indian languages, including the use of context, tone, and cultural references in meaning-making.

Pragmatic Understanding: Emphasize the importance of pragmatics in Indian languages, such as context-based interpretation and politeness strategies.

Machine Translation and Language Modeling:

Machine Translation: Work with Indian languages to develop and improve machine translation systems that take into account linguistic and cultural nuances.

Language Modeling: Use corpora from Indian languages to create language models that can be applied to various NLP tasks, such as text generation and question-answering.

Cultural Context and Ethical Considerations

Cultural Sensitivity: Teach students about the cultural contexts and ethical considerations involved in processing Indian languages, such as respectful handling of sacred texts and local customs.

Inclusivity and Representation: Emphasize the importance of inclusivity and representation in language technologies, ensuring that diverse languages and dialects are considered.

Resource Creation and Data Management:

Corpus Development: Encourage students to contribute to the development of linguistic corpora

for Indian languages, including both spoken and written data.

Data Annotation and Management: Teach students best practices in data annotation and management, considering the specific needs of Indian languages.

Interdisciplinary Collaboration:

Collaboration with Linguists and Language Experts: Facilitate collaboration between computer scientists and linguists specializing in Indian languages to enhance language technologies.

Community Engagement: Engage with local language communities to better understand their needs and incorporate their feedback into NLP projects.

Advantages of Integrating the Indian education system into modern Natural Language Processing (NLP)

1. **Cultural and Societal Relevance-** Preservation of Cultural Heritage: Integrating Indian languages into NLP helps preserve and promote linguistic and cultural heritage, including ancient texts, folklore, and oral traditions, fostering a sense of identity and belonging among language communities.
2. **Innovation and Research Opportunities -** Novel Challenges and Solutions: Indian languages pose unique challenges in NLP, such as complex morphology, code-switching, and low-resource settings, stimulating innovative research and the development of novel algorithms and techniques.
3. **Market Potential and Economic Growth -** Untapped Market Opportunities: NLP technologies for Indian languages represent untapped market opportunities in diverse sectors such as e-commerce, education, healthcare, and government services, driving economic growth and innovation.
4. **Global Collaboration and Knowledge Exchange-** International Collaboration: Integration of Indian education systems into NLP facilitates collaboration with international research communities, fostering knowledge exchange, benchmarking, and best practices in language technology development.
5. **Untapped Market Opportunities-** NLP technologies for Indian languages represent untapped market opportunities in diverse sectors such as e-commerce, education, healthcare, and government services, driving economic growth and innovation.

Challenges:

Integrating the Indian education system into modern Natural Language Processing (NLP) presents several challenges due to the unique linguistic characteristics, data scarcity, and cultural nuances of Indian languages. Here are some key challenges:

Linguistic Diversity:

1. **Variety of Languages:** India is home to hundreds of languages and dialects, each with its own linguistic features, making it challenging to develop unified NLP models that cover all languages.
2. **Resource Scarcity:** Many Indian languages lack sufficient linguistic resources such as annotated corpora, lexicons, and language models, hindering the development of robust NLP systems.

Complex Morphology and Syntax:

1. **Agglutinative Languages:** Indian languages often have complex morphological structures with rich inflectional and derivational processes, posing challenges for tasks like tokenization and part-of-speech tagging.
2. **Free Word Order:** Some Indian languages exhibit flexible word order, making syntactic parsing and grammar analysis more difficult.

Limited Standardization:

1. **Orthographic Variation:** Variations in spelling and writing systems across different regions and dialects make text normalization and standardization challenging.
2. **Standardization Efforts:** Efforts to standardize Indian languages, such as the development of standard scripts and dictionaries, are still ongoing and may not cover all linguistic variations.

Machine Translation Challenges:

1. **Lack of Parallel Corpora:** Building accurate machine translation systems for Indian languages requires large parallel corpora, which are often scarce or of low quality.
2. **Morphological and Syntactic Differences:** Structural differences between Indian languages and English pose challenges for alignment and translation accuracy.

Ethical and Sociocultural Considerations:

1. **Bias and Fairness:** NLP systems trained on biased or limited data may perpetuate stereotypes or marginalize certain linguistic communities, necessitating careful consideration of bias mitigation strategies.
2. **Cultural Appropriateness:** NLP applications must respect cultural norms, sensitivities, and linguistic diversity in India to ensure inclusivity and avoid cultural insensitivity.

Integrating the Indian education system into modern NLP faces several challenges related to linguistic diversity, data scarcity, standardization efforts, and cultural nuances. Addressing these challenges requires collaborative efforts from researchers, educators, policymakers, and language communities to develop inclusive, accurate, and culturally sensitive NLP technologies that serve the linguistic needs of diverse Indian populations.

Conclusion:

Integrating the Indian knowledge system into NLP education provides students with a deeper understanding of linguistic diversity, cultural heritage, and ethical considerations. By learning from Indian languages' complex structures and rich histories, students can develop more robust and inclusive NLP technologies that cater to a wider range of linguistic and cultural contexts. This approach fosters innovation and promotes the preservation and revitalization of Indian languages in the digital age.

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Analysing the effectiveness of integrating ancient indian management concept in contemporary business curriculum

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Abstract:

This study examines the effectiveness of incorporating ancient Indian management concepts into modern business education. Drawing on traditional texts such as the Arthashastra and the Bhagavad Gita, Thirukurazh, alongside contemporary business practices, the research evaluates the impact of integrating these teachings on students' understanding of leadership, decision-making, ethics, and sustainability. Through qualitative and quantitative analysis, including surveys and case studies, the study assesses the practical applicability and perceived value of these teachings in enhancing managerial skills and fostering holistic business practices. The findings shed light on the potential benefits and challenges of such integration, offering insights for educators, practitioners, and policymakers seeking to enrich business education with diverse perspectives and timeless wisdom.

Keywords: Management, ancient, philosophy, ethics, leadership.

Introduction:

The Indian knowledge system is incredibly rich and diverse, encompassing philosophy, science, mathematics, medicine, and spirituality. It includes ancient texts like the Vedas, Upanishads, and epics like the Mahabharata and Ramayana, which offer profound insights into various aspects of life. Additionally, Indian contributions to mathematics, including the concept of zero and the decimal system, have had a profound impact on the world. Ayurveda, India's traditional system of medicine, is another significant aspect of its knowledge system, emphasizing holistic health and well-being. Overall, the Indian knowledge system reflects centuries of intellectual inquiry and spiritual exploration.

Ancient Indian Management:

Everyone must aware of the fact that the Mahabharata and the Bhagawad Gita are not the only ancient Indian management system discussed here. these two are outstanding management manuals, however India's illustrious history of management extends beyond these two volumes. Scholars of contemporary management have also taken an interest in the exquisite Tamil work "Thirukkural," . Several of these philosophies have their roots in India, and a small number of them still have adherents today.

Objectives:

1. To explore and analyze the principles of management as illuminated in ancient Indian text.
2. To examine the relevance and applicability of these ancient management principles in contemporary organizational contexts.

Key aspects of ancient Indian management:

Ancient Indian management practices were deeply rooted in philosophical and ethical principles, which influenced how business was conducted. Some key aspects include:

1. Leaders were expected to uphold moral values and act with integrity, setting an example for their teams.
2. Business decisions considered not only financial gain but also social, environmental, and spiritual well-being.
3. Individuals were encouraged to cultivate self-awareness, emotional intelligence, and a sense of purpose, which contributed to effective decision-making and leadership.
4. Business strategies often focused on sustainable growth and enduring success, rather than short-term profits.
5. Collaboration and teamwork were emphasized, with a recognition of the collective strength of a unified workforce.

Literature review:

1. Dr. Alka Jain, from Taxila business school written an article in siliconindia publication about ancient Indian management and philosophies.
2. Ms. Pooja Malhotra written an e book which contain Indian thoughts & management and talks principles and ethics.
3. Mr. Aasis Kaur Bhatia from Vivekananda Institute of professional studies written on Ancient Indian wisdom & business practices published on IOSR Journal of Humanities & Social science.
4. Mr. N.K Singh wrote an article about management in ancient india which contains the ethics & philosophy of Management concepts.

5. An article by Mr.A.Gangadharan on re-reading of Ramayana in modern tamil context published on 2002. Which talks about the great epic of India.

Research methodology:

"This study employs a secondary data research approach, drawing upon existing literature, historical data, and case studies to analyze the effectiveness of ancient Indian management systems in contemporary business contexts." Conducted a comprehensive review of existing literature on ancient Indian management concepts, including texts such as the Arthashastra, Manusmriti, and Bhagavad Gita. Analyze scholarly articles, books, and historical documents to understand the principles, theories, and practices advocated in ancient Indian management system. Develop a conceptual framework outlining key components of ancient Indian management, such as leadership, decision-making, ethics, and organizational structure.

Comparison with traits of Lord Ram vs Managemnt concepts & principles:

1. Together with his moral convictions, Shri Hanuman possessed great physical strength. Jambvant, the group's leader, inspired Hanuman to travel to Lanka in order to find Sita. Hanauman rose to the occasion and prepared for the task. The above statement indicates the Initiative & Motivation.
2. Rama left Ravana without a weapon on the first day of battle, but he was permitted to go back to his stronghold since Rama upheld a code of conduct that forbade attacking an unarmed foe. The above statement indicates Code of conduct and ethics .
3. Lord Rama assaulted the Lankan army with the help of Lakshmana, Shri Hanuman, and the Vanara army. They vanquished Ravana and saved Sita. The above statement indicates team spirit team work and coordination.
4. Lord Rama planned a well-thought-out plan and strategy to save Sita. Several actions were taken, such as dispatching search parties that included Shri Hanuman, constructing a bridge across international borders, and directly challenging Ravana to a duel.The above statement indicates planning to achieve objective.
5. In order to save Sita, Lord Rama ordered his soldiers to construct a bridge from abroad to Lanka. As a result, the Vanara army faced less risk to their lives, and it was simpler to reach Lanka and vanquish Ravana.

The above statement indicates Management control, motivation communication risk management along with decision making.

Companies Illustrated ancient Indian management concepts:

The Confederation of Indian Industry (CII) also incorporates elements of ancient Indian management in its practices. Through initiatives like the "Indian Management Philosophy" program, CII promotes principles such as teamwork, compassion, and inclusive leadership, drawing inspiration from ancient Indian texts like the Vedas and Upanishads.

Isha Foundation :

Founded by Sadhguru Jaggi Vasudev. They integrate ancient Indian principles into their leadership programs, focusing on inner transformation, self-awareness, and conscious decision-making. Their approach emphasizes aligning personal values with organizational goals to foster a more harmonious and effective work environment.

The Art of Living Foundation:

A global organization founded by Sri Sri Ravi Shankar. They incorporate ancient Indian wisdom, particularly from practices like yoga and meditation, into their leadership and management programs. These teachings emphasize holistic well-being, stress management, and emotional intelligence in the workplace.

The Indian conglomerate Tata Group:

They have embraced concepts from ancient Indian scriptures like the Bhagavad Gita and Arthashastra in their management philosophy, emphasizing values such as ethical leadership, social responsibility, and long-term sustainability.

Conclusion:

The effectiveness of integrating ancient Indian management concepts into today's business curriculum lies in the potential to enrich students' understanding of management principles beyond Western perspectives. By incorporating teachings from texts like the Arthashastra and Vedas, students gain insights into holistic leadership, ethical decision-making and sustainable practices rooted in Indian cultural heritage.

This approach fosters cultural appreciation, enhances critical thinking, and equips students with diverse strategies to address modern business challenges. Moreover, it encourages innovation by offering alternative frameworks for problem-solving and decision-making. Overall, integrating ancient Indian management into contemporary business education can promote well-rounded professionals capable of navigating the complexities of the global business landscape with a broader perspective.

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Technology Trends Shaping the Future of Tax

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Abstract:

Technology has been rapidly transforming the way businesses and industries operate, and the field of taxation is no exception. With the emergence of new technologies and the increasing digitization of financial transactions, the tax landscape is constantly evolving. In this paper, we will discuss the top technology trends that are shaping the future of taxation and how they are revolutionizing the tax industry. The industry related to tax is adopting the latest technologies, primarily due to the optimization they bring to the processes. Digital technology, formerly noticed as a response to challenges like remote working, collaboration, resource constraints, and scalability, is now taking center stage.

Keywords: Technologies, Digitization, Trends, Industry.

Introduction:

Technology is playing an necessary part in reshaping various industries, including taxation. The term “tax technology” has surfaced as a comprehensive conception that encompasses the use of technological results to streamline and optimize tax-related processes. From the preface of robotic process automation to the introduction of 5G networks and beyond, the relentless march of technology is bringing about unknown changes in the world of taxation.

Following are various Technology Trends Shaping the Future of Tax

1. Automation and Artificial Intelligence (AI)

Automation and AI are transforming the tax industry by streamlining and automating various tax processes. AI-powered tax software can analyze large amounts of data, identify patterns, and make predictions, reducing the time and effort required for tax assiduity. Tax professionals can use AI technology to perform tasks such as data entry, document review, and tax planning, allowing them to focus on more complex and strategic aspects of their work.

2. Blockchain-Technology:

Blockchain technology is a decentralized, digital tally that records deals in a secure and transparent manner. This technology has the potential to transform the tax industry by providing a tamper-proof record of all financial transactions, making it easier for tax authorities to track and verify transactions. Additionally, blockchain can help reduce the risk of tax fraud and evasion by creating a transparent and immutable record of all transactions.

3. Cloud-Computing:

Cloud computing has become an essential tool for businesses of all sizes, including tax

professionals. The cloud allows tax professionals to store and access large amounts of data from anywhere, at any time. This enables tax professionals to collaborate and share information with clients and colleagues in real-time, making tax compliance more efficient and effective.

4. Big-Data-Analytics

With the increasing digitization of financial transactions, tax authorities have access to a vast amount of data. Big data analytics allows tax authorities to analyze this data to identify patterns and anomalies, enabling them to detect potential tax fraud and evasion. Similarly, tax professionals can also use big data analytics to analyze their clients' data and provide valuable insights for tax planning and compliance.

5. Mobile-Technology:

Mobile technology is revolutionizing the tax industry by providing tax professionals with the ability to work remotely and access data on the go. Tax professionals can use mobile devices to access tax software, review documents, and communicate with clients. Mobile technology also allows taxpayers to file their taxes using their smartphones, making tax compliance more convenient and accessible.

6. Regulatory-Technology-(RegTech):

RegTech refers to the use of technology to grease compliance with regulations. In the tax industry, RegTech can help tax professionals keep up with the constantly changing tax regulations. RegTech solutions can automate compliance processes, reducing the risk of human error and ensuring that tax professionals are up to date with the latest regulatory changes.

7. Data Security and Privacy:

As technology continues to advance, data security and privacy have become a significant concern for taxpayers and tax professionals alike. With the increasing amount of sensitive financial data being stored and transmitted digitally, it is crucial to have robust data security measures in place. The use of encryption, secure data storage, and access control systems can help protect sensitive tax information from cyber threats.

Objective

- To analyse the level of awareness about Technology Trends Shaping the Future of Tax
- To find the benefits of various Technology Trends Shaping the Future of Tax

Methodology:

In order to study the research objectives, both secondary and primary data have been collected and analyzed. The initial stage of the study includes an in-depth search of articles, research papers, reports regarding Technology Trends Shaping the Future of Tax. The analysis of the secondary data developed the understanding about the analysis and interpretation of primary data. The data has been collected from 100 respondents with the help of well structured, closed ended questionnaire. Data has been collected using convenience sampling method. The study mainly used frequency, mean, SD, t test, Chi-square, one way ANOVA using SPSS.

Data Analysis & Interpretation

1. Demographic Profile of the Respondents

Table 1 – Demographic Profile of Respondents

| Gender | | | Age | | | Education | | |
|--------------|------------|------------|--------------|------------|--------------|---------------|------------|--------------|
| Variable | Frequency | Percent | Variable | Frequency | Percent | Variable | Frequency | Percent |
| Male | 30 | 30 | 15-20 | 10 | 10 | Undergraduate | 47 | 47 |
| Female | 70 | 70 | 20-25 | 30 | 30 | Graduate | 10 | 10 |
| | | | 25-30 | 4 | 4 | Postgraduate | 43 | 43 |
| | | | 30 & above | 56 | 56 | | | |
| Total | 100 | 100 | Total | 100 | 100.0 | Total | 100 | 100.0 |

Interpretation: -

- In the above table 1 majority of the respondent are female.
- 56% respondent comes under Above 30 years age group
- 47% respondent are undergraduate

2. Level of awareness about Technology Trends Shaping the Future of Tax

Null Hypothesis – Opinion regarding level of awareness about Technology Trends Shaping the Future of Tax is equal to average level

Table 2 – T test for specified value (Average = 3) of statement regarding level of awareness

| Level of awareness about E-Commerce | Frequency | Percent | T Value | P Value |
|-------------------------------------|--------------|---------|---------|---------|
| Very low | 3 | 3 | 41.784 | 0.000 |
| Low | 13 | 13 | | |
| Average | 62 | 62 | | |
| High | 20 | 20 | | |
| Very high | 2 | 2 | | |
| Total | 100 | 100 | | |
| Mean | 3.05 | | | |
| SD | 0.730 | | | |

Interpretation –

Since p value is less than 0.01, the null hypothesis is rejected at 1% level of significance with regards to Level of awareness about Technology Trends Shaping the Future of Tax is more than average level. Respondent level of awareness about Technology Trends Shaping the

Future of Tax is high, mean is also supporting this analysis.

3. T-TEST on Benefits of a progressive tax technology

Null Hypothesis – There is no significance difference in perception regarding Benefits of a progressive tax technology with regards to gender.

Table 3– T Test for relationship between perceptions and gender

| | Perceptions | Male | | Female | | T Value | P Value |
|---|--|------|-------|--------|------|---------|---------|
| | | Mean | Sd | Mean | Sd | | |
| 1 | Helps to analyse data | 4.33 | .606 | 4.23 | .543 | .816 | .395 |
| 2 | Cost savings | 4.27 | .785 | 4.11 | .578 | .958 | .283 |
| 3 | Time saving | 4.13 | .629 | 4.03 | .884 | .588 | .504 |
| 4 | Effectively evaluate current tax processes | 3.93 | .785 | 3.86 | .937 | .390 | .677 |
| 5 | Reduces risks | 3.93 | 1.143 | 4.09 | .737 | .673 | .428 |

Interpretation –

since P value is more than 0.05 for all the variables the null hypothesis is accepted at 5% level of significance. Hence There is no significance difference in perception regarding Benefits of a progressive tax technology with regards to gender. The above table shows that majority of the respondents believed that Benefits of a progressive tax technology helps to analyse data and progressive

tax technology leads to Cost savings among both Male and Female respondent.

4. Difference between mean rank towards Comparing various Technological Trends in Taxation

Null Hypothesis –There is no significance difference among mean rank towards Comparing various Technological Trends in Taxation

Table 4 – Friedmans test to find mean rank Comparing various Technological Trends in Taxation

| | Perception | Mean Rank | Chi-square value | P Value |
|----|--|-----------|------------------|---------|
| 1 | Artificial Intelligence is Solving Complex Problems | 4.35 | 23.758 | <0.001 |
| 2 | Blockchain technology is Contributing to Accuracy | 3.89 | | |
| 3 | Cloud Computing allow to store and access large amounts of data | 4.25 | | |
| 4 | Big Data: Ease decision-making | 4.09 | | |
| 5 | Mobile technology allows tax compliance more convenient and accessible. | 3.89 | | |
| 6 | RegTech uses technology to facilitate compliance with regulations | 3.48 | | |
| 7. | Data Security and Privacy helps to protect sensitive tax information from cyber threats. | 4.05 | | |

Interpretation –

Table 4 presents the Difference between mean rank towards the benefits of Technological Trends in Taxation

Since p value is less than 0.01 the null hypothesis is rejected at 1% level of significance. Hence concluded that there is significant difference among mean rank towards factors of the benefits of Technological Trends in Taxation based on mean Artificial Intelligence is Solving Complex Problems 4.35 is the most important factor in the benefits of Technological Trends in Taxation , followed by Cloud Computing allow to store and access large amounts of data 4.25 and Big Data: Ease decision-making 4.09.

Findings:

1. Majority of the respondents have more than average level of awareness about Technology Trends Shaping the Future of Tax
2. Majority of the respondents believed that Benefits of a progressive tax technology helps to analyze data and progressive tax technology leads to Cost savings among both Male and Female respondent.
3. Based on mean rank Artificial Intelligence is Solving Complex Problems and Cloud Computing allow to store and access large amounts of data is the most important factor in Comparing various Technological Trends in Taxation

Conclusion:

In conclusion, technology is reshaping the future of tax by automating processes, improving data analysis, and enhancing collaboration and communication. These technology trends are transforming the tax industry, making tax

compliance more efficient, accurate, and secure. As technology continues to advance, it is essential for tax professionals and tax authorities to adapt and embrace these changes to stay ahead in the ever-evolving tax landscape.

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A Survey of Technologies for Integrating Indian Knowledge Systems into Mathematics Education in India

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Abstract:

The article discusses the outcomes of a study that explored existing endeavours integrating Indian Knowledge Systems (IKS) into mathematics education in Navi-Mumbai, India. Through an exploratory case study, researchers analysed the utilization of both contemporary and traditional technologies among pre-service and in-service faculty enrolled in faculty certification programs. The study aimed to evaluate the viability of incorporating traditional technologies and IKS into mathematics education at the college level. A total of 45 faculty members took part in a 23-item online survey, examining their technological proficiency, pedagogical approaches, content knowledge, and attitudes toward the integration of IKS. By comparing traditional/indigenous technologies with modern/digital tools, the study uncovered several obstacles that impede pre-service and in-service teachers from integrating IKS into mathematics instruction.

Keywords: IKS, Traditional Technologies, Mathematics Education, Modern Technologies

Introduction:

Indian Knowledge System And Education In India:

India boasts a rich tapestry of knowledge systems deeply embedded in its cultural heritage, collectively referred to as the Indian Knowledge Systems (IKS). These systems encompass diverse disciplines such as philosophy, science, mathematics, medicine, and arts, cultivated over millennia by ancient civilizations that thrived on the Indian subcontinent. Rooted in indigenous wisdom and shaped by centuries of intellectual exchange, IKS offer unique insights and perspectives on various aspects of human life and the universe.

In recent years, there has been a growing recognition of the importance of integrating IKS into formal education systems in India. This recognition stems from a desire to preserve and promote India's cultural heritage, as well as to enrich educational experiences by drawing upon the holistic and interdisciplinary nature of IKS. However, despite this recognition, the integration of IKS into mainstream education remains a complex and challenging endeavor.

The education landscape in India is vast and diverse, characterized by a multitude of educational institutions ranging from traditional Gurukuls to modern universities. While the formal education system predominantly follows a curriculum influenced by Western paradigms, there is a growing acknowledgment of the need to incorporate indigenous knowledge and perspectives into educational practices. This acknowledgment is driven by a desire to foster cultural pride, promote

inclusivity, and provide a more holistic education that reflects the diverse socio-cultural fabric of India.

In this context, understanding the relationship between Indian knowledge systems and education in India becomes crucial. It involves exploring not only the theoretical underpinnings of IKS but also examining practical strategies for integrating them into educational curricula and pedagogical practices. This introduction sets the stage for delving deeper into the intersection of IKS and education in India, highlighting both the opportunities and challenges inherent in this endeavor. By embracing and harnessing the rich heritage of IKS, India can chart a course towards a more inclusive, culturally responsive, and holistic approach to education that nurtures the intellectual growth and well-being of its citizens.

Iks And National Curriculum Standards:

India's diverse knowledge system, steeped in millennia of history, encompasses a rich tapestry of philosophy, science, arts, and literature. From ancient schools of thought like Vedanta and Samkhya to groundbreaking contributions in mathematics, astronomy, and medicine, Indian knowledge systems reflect a deep understanding of human existence and the universe. Moreover, literature, arts, and cultural practices, including epics like the Ramayana and Mahabharata, showcase the country's vibrant heritage.

Efforts to integrate these indigenous perspectives into the national curriculum standards, such as the National Curriculum Framework (NCF) and initiatives like the Rashtriya Madhyamik

Shiksha Abhiyan (RMSA) and the Samagra Shiksha Abhiyan (SSA), aim to foster a sense of cultural pride and identity among learners while nurturing critical thinking and creativity. By incorporating relevant content from Indian philosophy, literature, science, and arts, education in India strives to provide a holistic and inclusive learning experience that prepares students to navigate an increasingly globalized world.

Research Design:

Objective:

This study investigates the incorporation of Indigenous Knowledge Systems (IKS) into mathematics education courses within the initial teacher preparation programs at Mumbai University, a technology-oriented institution in Maharashtra. Through an exploratory case study, we analyze the methods and practices employed to integrate indigenous knowledge into the content and teaching approaches of these mathematics education courses. Furthermore, we explore the viability of incorporating traditional technologies and IKS into teacher education programs, assessing their potential impact and feasibility.

Sample And Data Collection:

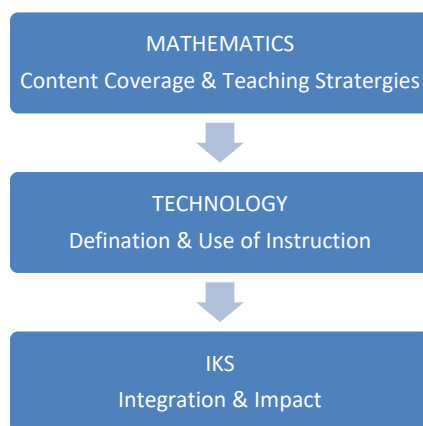
Our sample consisted of 45 pre-service and in-service teachers enrolled in the faculty certificate program at the Navi-Mumbai college. To initiate the research study, I visited the campus to establish

contact and prepare for the study launch. During this visit, I met with educators and prospective faculty members to discuss the objectives and activities of the research. Upon securing approval for research compliance, pre-service and in-service faculty enrolled in the faculty certification program were invited to participate in an online survey. The survey, which sought their voluntary involvement, included a consent request, details about the research, instructions for completing the survey, and a Google link to access the questionnaire.

Data Analysis:

The data gathered from the online survey was subjected to analysis using descriptive statistical methods, which included calculating response frequencies as percentages. Additionally, graphical charts were utilized to visualize potential patterns within faculties responses. Of particular interest to the study was identifying indicators within faculty responses that shed light on the possible integration of Indian Knowledge Systems (IKS) into mathematics content and teaching methods.

Our analysis was structured around faculty responses related to three main domains: Mathematics, Technology, and IKS. For this article, we concentrate specifically on faculty feedback concerning the prospective incorporation of IKS into the mathematics curriculum.

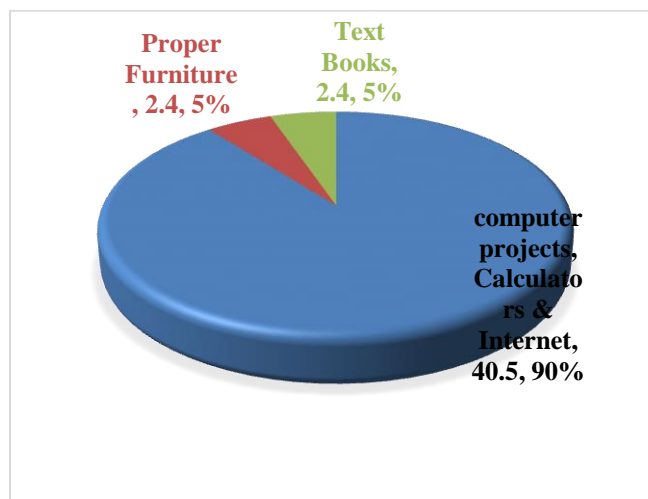


Analysis:

Component 1: Mathematics Content and Strategies:

When questioned about the mathematics topics they're preparing or currently teaching, 30% of faculty members stated they cover multiple areas. Among the 45 responses gathered, 20 faculty members mentioned teaching Linear Algebra, while

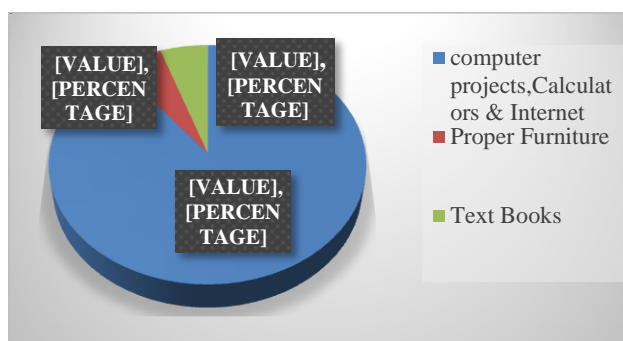
15 reported teaching Transportation. Five faculty members noted they're not teaching any specific topic; nevertheless, a total of five faculty members specified their involvement in teaching the assignment problem. The breakdown of mathematics topics taught, including numbers and percentages, as reported by participating faculty members, is depicted in the figure below.



2. Component 2: Perception on Technology

In a survey regarding faculty perceptions of Indian Knowledge Systems (IKS) technology, 45 educators participated. Among them, 33% expressed that technology serves as a facilitator in their daily routines, streamlining tasks. Another 44% of respondents defined technology as the study of

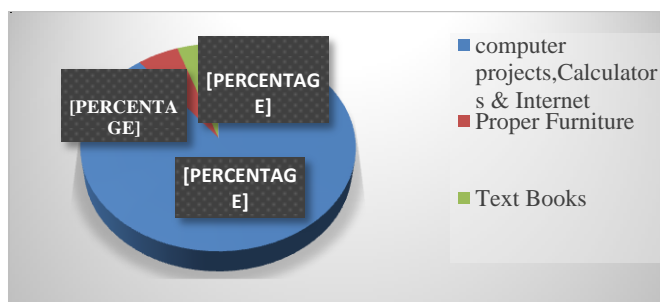
machinery or a reservoir of knowledge utilized for skill development, while only 5% associated it with media. Moreover, 18% of faculty members characterized technology as either an investigative tool or linked it with engineering, which we categorized as "Other."



This analysis reveals a lack of consensus among over 50% of faculty regarding the definition of 'technology' as outlined in the curriculum. Nonetheless, 44% of educators viewed technology as instrumental in crafting tools and honing skills, a vital aspect in the creation of instructional materials for Technology Education. This perspective resonates with the National Curriculum Statement, defining technology as 'the application of knowledge, skills, and resources to address human needs and desires by devising practical solutions to challenges.' Consequently, 'utility' and 'efficacy' emerge as principal criteria for defining technology for many faculty members. Faculty perceptions of

technology play a pivotal role in shaping it as a subject. As Jones (1997) elucidated, "Faculty perceptions of technology shape their understanding of what holds significance in technology education." Their comprehension and assumptions regarding the essence of technology, in turn, influence their teaching methods and content.

Regarding available classroom technologies, a significant majority of faculty members (90%) reported using computers predominantly, alongside other tools such as calculators, projectors, and the Internet. However, 10% relied on traditional classroom resources and textbooks for instructional purposes.



Summary:

When examining the utilization of Indian Knowledge Systems (IKS) in teaching mathematics, we identified various conceptual, pedagogical, and content-related limitations. We assert that these constraints arise as faculty members endeavor to align the learning objectives outlined by National Education Standards with practical and meaningful classroom strategies. The survey analysis unveiled that although certain teachers displayed favorable attitudes towards IKS, there was limited effort to integrate these resources into their mathematics instruction. We argue that numerous factors impede educators from fully integrating IKS practices into their teaching methodologies.

Initially, a deficiency in comprehending what constitutes Information and Knowledge Systems (IKS) and its relevance to formal education hinders faculty members from embracing the pedagogical integration of Indian knowledge into their teaching practices. Additionally, the National Education Policy Statement lacks explicit directives concerning the incorporation of IKS into the teaching and learning of essential scientific subjects like mathematics. While the policy advocates for contextualized learning, it may implicitly encourage faculty members to infuse Indian knowledge throughout curriculum content and instructional methods. However, this implicit suggestion is often not clearly discerned by faculty members and consequently overlooked.

Conclusion:

Despite the challenges teachers encounter, such as limited access to resources for teaching IKS, insufficient training, a dearth of suitable methodologies for integrating IKS across disciplines, and the perceived controversy surrounding indigenous knowledge systems, we contend that incorporating indigenous knowledge into mathematics instruction is both achievable and imperative.

We advocate for the integration of cultural practices and indigenous knowledge that align with students' ethnic backgrounds within the mathematics classroom, emphasizing its significance in boosting student learning and motivation towards academic achievement. Our principal argument is to not only promote technological literacy in mathematics classrooms but also to foster the development of educational multimedia tailored specifically for students.

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Exploring the Future of Libraries: MOOCs and the Evolving Role of Libraries

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Abstract:

In the digital age, libraries are undergoing a profound transformation, driven by technological advancements and changing educational landscapes. This research paper delves into the intersection of libraries and Massive Open Online Courses (MOOCs), examining the evolving role of libraries in facilitating access to educational resources and supporting lifelong learning initiatives.

As libraries adapt to meet the diverse needs of their patrons, MOOCs have emerged as a potent tool for delivering high-quality educational content to a global audience. This paper investigates the integration of MOOCs into library services, exploring the opportunities and challenges associated with leveraging these platforms to enhance library offerings.

Keywords: Future libraries, MOOCs, Libraries, Role of libraries, Massive Open Online Courses, Educational resources, Lifelong learning.

Introduction:

Libraries have long been regarded as bastions of knowledge, serving as repositories of information and centers for intellectual exchange. However, with the advent of the digital age and the proliferation of online resources, the role of libraries is undergoing a profound transformation. One of the significant drivers of this evolution is the emergence of Massive Open Online Courses (MOOCs), which have revolutionized the landscape of education and learning.

MOOCs represent a paradigm shift in how education is delivered and accessed. They offer free or low-cost courses on a wide range of subjects, delivered through digital platforms to an unlimited number of participants. With their scalability and accessibility, MOOCs have democratized education, breaking down barriers to learning and empowering individuals worldwide to acquire new skills and knowledge.

In this context, libraries are redefining their role from mere repositories of books to dynamic learning hubs. They are embracing MOOCs as a means to expand their educational offerings and reach broader audiences. Libraries are leveraging their physical spaces and digital infrastructure to facilitate access to MOOCs, providing patrons with opportunities for self-directed learning and personal growth.

The integration of MOOCs into library services represents a symbiotic relationship between two pillars of knowledge dissemination. Libraries offer the infrastructure and support for accessing MOOCs, while MOOCs enhance libraries' educational offerings, enriching their resources with

diverse and up-to-date content. This convergence is catalyzing innovation in library services and transforming them into vibrant centers for lifelong learning.

Moreover, the evolving role of libraries in the MOOC era extends beyond facilitating access to online courses. Libraries are increasingly becoming hubs for digital literacy and skills development. They offer workshops, training sessions, and personalized assistance to help patrons navigate the digital landscape and harness the full potential of online learning resources, including MOOCs.

Furthermore, libraries are embracing their role as community anchors, fostering connections and collaboration among learners. They host study groups, discussion forums, and networking events, creating a supportive environment for peer learning and knowledge exchange. By fostering a sense of community and belonging, libraries enhance the learning experience and promote lifelong engagement with education.

However, the integration of MOOCs into library services also presents challenges and opportunities. Libraries must grapple with issues such as digital divide, information literacy, and copyright concerns. They need to ensure equitable access to MOOCs for all patrons, regardless of their socioeconomic background or technological proficiency. Moreover, libraries must navigate the complex landscape of copyright laws and licensing agreements to provide access to MOOCs in compliance with legal requirements.

In conclusion, the emergence of MOOCs is reshaping the future of libraries, propelling them into the forefront of the digital age. By embracing

MOOCs and reimagining their role as dynamic learning hubs, libraries are adapting to the evolving needs of their patrons and fulfilling their mission of promoting lifelong learning and intellectual enrichment. However, realizing the full potential of this transformation requires addressing challenges and fostering collaboration among libraries, educational institutions, and technology providers. Through strategic partnerships and innovative initiatives, libraries can harness the power of MOOCs to empower individuals, strengthen communities, and shape a more inclusive and knowledge-driven society.

The Emergence of MOOCs:

MOOCs have emerged as a disruptive innovation in education, challenging traditional models of teaching and learning. The concept of MOOCs can be traced back to the early 2000s, but it was not until the launch of platforms like Coursera, Udacity, and edX around 2012 that MOOCs gained widespread attention and popularity. These platforms offered courses from leading universities and institutions on a wide range of subjects, attracting millions of learners from around the world. MOOCs are characterized by their scalability, flexibility, and accessibility, making them an attractive option for lifelong learners, working professionals, and those seeking to enhance their skills or pursue new interests.

2.1 Impact of MOOCs on Libraries:

The emergence of MOOCs presents both opportunities and challenges for libraries. On one hand, MOOCs align with the mission of libraries to promote lifelong learning and provide access to educational resources. Libraries can leverage MOOCs to expand their offerings and reach a broader audience beyond their physical confines. Many libraries have begun to collaborate with MOOC providers to offer support services such as access to course materials, technology assistance, and study spaces for MOOC learners. Some libraries have also developed their own MOOCs or partnered with local educational institutions to create customized courses tailored to the needs of their communities.

On the other hand, the proliferation of online resources and the shift towards digital learning raise questions about the continued relevance of libraries in the digital age. As more educational content becomes available online, some may argue that libraries are no longer necessary for accessing information. However, libraries play a crucial role in curating and organizing digital resources, providing guidance and support to users navigating the vast sea of online information. Moreover, libraries serve as physical and virtual spaces for community engagement, collaboration, and lifelong learning, which cannot be replicated by online platforms alone.

2.2 Strategies for Libraries

To remain relevant in the age of MOOCs, libraries must adapt and evolve to meet the changing needs of their users. One strategy is to embrace digital literacy and technology training, empowering users to navigate online resources effectively and participate in online learning opportunities such as MOOCs. Libraries can offer workshops, tutorials, and one-on-one assistance to help patrons develop digital skills and become confident lifelong learners in the digital age.

Additionally, libraries can serve as hubs for lifelong learning by curating and promoting high-quality MOOCs and other online educational resources. Librarians can help users discover relevant courses, facilitate discussions and study groups, and provide support throughout the learning process. By curating MOOCs that align with their patrons' interests and needs, libraries can enhance their role as trusted guides and facilitators of lifelong learning.

Integrating MOOCs into Library Services

Libraries have long been regarded as centers for knowledge dissemination and lifelong learning. With the advent of digital technologies, libraries are embracing new roles and services to remain relevant in the digital age. One such innovation is the integration of MOOCs into library services, offering patrons access to a vast array of online courses from leading institutions worldwide. This paper delves into the potential implications of this integration, examining how libraries can harness the power of MOOCs to enrich their offerings and engage with their communities in innovative ways.

3.1 Benefits of Integrating MOOCs into Library Services

Accessibility and Affordability: MOOCs democratize access to education by offering free or low-cost courses on diverse subjects. By integrating MOOCs into their services, libraries can provide patrons with access to high-quality educational content regardless of their socio-economic background.

Diversification of Learning Opportunities: MOOC platforms host courses on a wide range of topics, catering to diverse interests and learning objectives. Libraries can leverage this diversity to offer patrons access to courses that align with their interests, professional development goals, or academic pursuits.

Lifelong Learning Support: Libraries have always been advocates of lifelong learning. By incorporating MOOCs into their offerings, libraries can facilitate continuous learning among patrons of all ages, promoting personal growth and skill development.

Community Engagement: Hosting MOOCs can serve as a catalyst for community engagement, bringing patrons together around shared learning

experiences. Libraries can organize study groups, discussion forums, or workshops centered on MOOCs, fostering a sense of community and collaboration among patrons.

Supporting Lifelong Learning:

MOOCs offer several advantages for lifelong learners accessing library resources. Firstly, they provide access to a diverse range of courses spanning various subjects and disciplines, catering to the diverse interests and learning goals of patrons. Additionally, MOOCs often feature renowned instructors and institutions, offering high-quality educational experiences at little to no cost. This democratization of education aligns with the core values of libraries, promoting accessibility and inclusivity. Moreover, MOOCs enable flexible learning opportunities, allowing patrons to study at their own pace and convenience, thereby accommodating busy schedules and diverse learning styles.

Furthermore, MOOCs facilitate collaborative learning and community engagement within library spaces. Libraries can host discussion groups, workshops, and other events centered around MOOCs, fostering a sense of belonging and shared learning experiences among patrons. By leveraging MOOCs as educational resources, libraries enhance their role as community hubs, promoting social interaction and knowledge exchange.

Fostering Community Engagement:

Community engagement lies at the heart of the library's mission, and MOOCs provide a valuable tool for achieving this goal. Libraries can leverage MOOCs to facilitate skill-building workshops, discussion groups, and collaborative learning experiences. By curating MOOCs that align with the interests and needs of their communities, libraries can attract diverse audiences and foster a culture of lifelong learning. Additionally, libraries can use MOOCs to bridge the digital divide by providing access to technology and online resources for underserved populations.

Challenges and Considerations:

Libraries have long served as gateways to knowledge, offering resources and services to support education, research, and lifelong learning. However, the proliferation of digital technologies has transformed the way information is accessed and consumed, presenting both opportunities and challenges for libraries. One significant development in online education is the rise of Massive Open Online Courses (MOOCs), which provide free or low-cost access to educational content from top institutions worldwide. As MOOCs gain popularity, libraries must confront the implications of this shift on their traditional roles and functions.

6.1 Challenges Faced by Libraries

Shifting User Expectations: Users accustomed to the convenience and flexibility of online learning may expect libraries to provide seamless access to MOOCs and related resources. Libraries must respond to these evolving expectations while balancing other service demands.

Resource Allocation: Integrating MOOCs into library services requires investments in infrastructure, staff training, and digital resources. Limited budgets and competing priorities may constrain libraries' ability to adapt effectively to the MOOC landscape.

Copyright and Licensing Issues: MOOC content often includes copyrighted materials, raising questions about fair use, licensing agreements, and digital rights management. Libraries must navigate these legal complexities to ensure compliance with intellectual property laws.

Digital Divide: While MOOCs offer opportunities for broad access to education, concerns persist regarding the digital divide and unequal access to technology and internet connectivity. Libraries may need to address these disparities through outreach initiatives and digital literacy programs.

Quality Assurance: With the proliferation of MOOC platforms and courses, ensuring the quality and credibility of educational content can be challenging. Libraries play a role in curating and vetting MOOC offerings to help users make informed decisions.

6.2 Considerations for Libraries

Strategic Partnerships: Collaborating with MOOC providers, educational institutions, and other stakeholders can enhance libraries' ability to deliver high-quality educational resources and support services.

Digital Literacy Initiatives: Libraries can promote digital literacy skills through workshops, tutorials, and online resources, empowering users to navigate MOOC platforms effectively and critically evaluate online content.

Data Privacy and Security: Libraries must prioritize data privacy and security when collecting and storing user information related to MOOC usage. Implementing robust data management practices and compliance measures is essential to safeguard user privacy.

Customized Services: Tailoring library services to meet the diverse needs of MOOC learners, such as providing access to supplemental materials, study spaces, and academic support, can enhance the overall learning experience and promote user engagement.

Evaluation and Assessment: Continuously assessing the impact of MOOC integration on library services and user satisfaction is crucial for identifying areas of improvement and demonstrating

the value of library support for online learning initiatives.

Future Directions:

As MOOCs continue to gain popularity, libraries are redefining their roles to remain relevant in the digital age. One future direction for libraries is to serve as hubs for lifelong learning, where patrons can access MOOCs and other online learning resources. Libraries can curate collections of MOOCs tailored to the needs and interests of their communities, providing guidance and support to learners.

Another future direction is the integration of MOOCs into formal education programs. Libraries can collaborate with educational institutions to incorporate MOOCs into curricula and provide supplementary resources and support services. This approach can enhance the educational experience for students and expand access to high-quality educational content.

Furthermore, libraries can leverage MOOCs to promote digital literacy and lifelong learning initiatives. By offering workshops, seminars, and other events focused on MOOCs and online learning, libraries can empower patrons to develop essential digital skills and stay abreast of advancements in their fields.

Conclusion:

The exploration of the future of libraries in the context of Massive Open Online Courses (MOOCs) reveals a dynamic landscape where libraries are poised to play an evolving and crucial role. Through this research, it becomes evident that libraries are not becoming obsolete in the digital age but rather adapting and integrating new technologies and educational paradigms to better serve their communities.

MOOCs offer unprecedented access to education, transcending geographical and socioeconomic barriers. Libraries, as trusted information hubs, can leverage MOOCs to democratize knowledge further, providing patrons with free or low-cost access to high-quality educational resources. This aligns with the core mission of libraries to promote lifelong learning and intellectual growth.

Furthermore, libraries are increasingly transforming into collaborative spaces, fostering a culture of innovation, creativity, and lifelong learning. By embracing MOOCs, libraries can expand their role as community centers, offering not only access to information but also facilitating skill development, professional growth, and community engagement.

However, the integration of MOOCs into library services presents challenges, including digital literacy barriers, technological infrastructure requirements, and the need for ongoing staff training. Overcoming these challenges will require

strategic planning, resource allocation, and partnerships with educational institutions and technology providers.

In conclusion, the future of libraries lies in embracing technological advancements like MOOCs while remaining steadfast in their commitment to knowledge equity, community empowerment, and intellectual freedom. By harnessing the potential of MOOCs and adapting their services to meet the evolving needs of their patrons, libraries can continue to thrive as vital pillars of education, culture, and community in the digital age and beyond.

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Integrating Indian Knowledge System in Medical Problems Based on Mathematical Models

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Abstract:

Integrating traditional Indian knowledge systems with modern medical practices offers a promising avenue for addressing healthcare challenges. This paper explores the potential of integrating Indian knowledge systems with mathematical modelling techniques to tackle medical problems. Drawing from ancient Indian texts, contemporary medical research, and mathematical modelling methodologies, we discuss how this integration can enhance understanding, diagnosis, and treatment of various medical conditions. Through case studies and theoretical discussions, we illustrate the effectiveness of this approach and its implications for advancing healthcare globally.

Keywords: Indian Knowledge System, Traditional Medicine, Mathematical Modelling, Healthcare, Medical Problems.

Introduction:

In today's globalized world, the convergence of traditional and modern medical practices has become increasingly relevant. Traditional Indian knowledge systems, particularly Ayurveda, offer a rich repository of medical wisdom accumulated over millennia. Meanwhile, mathematical modelling techniques have emerged as powerful tools for understanding complex biological processes and healthcare dynamics. By integrating these two streams of knowledge, we can potentially revolutionize medical problem-solving, leading to more effective diagnosis, treatment, and prevention strategies.

Historical Perspective: Indian Knowledge Systems in Medicine:

Ayurveda, often referred to as the "science of life," is one of the oldest medical systems in the world, with roots dating back over 5,000 years. Developed in ancient India, Ayurveda emphasizes a holistic approach to health, focusing on the balance between mind, body, and spirit. Its principles revolve around the concept of "doshas" (biological energies) and the importance of maintaining equilibrium to prevent disease. Ayurvedic texts, such as the Charaka Samhita and Sushruta Samhita, contain detailed descriptions of various diseases, their etiology, and treatment modalities, including herbal remedies, dietary interventions, and lifestyle modifications.

Despite its ancient origins, Ayurveda continues to influence contemporary healthcare practices, both within India and globally. Many Ayurvedic remedies and therapies have gained popularity for their purported efficacy in managing

chronic conditions, promoting wellness, and enhancing overall vitality. However, the integration of Ayurveda with modern medicine has been a subject of debate, with proponents highlighting its potential benefits and skeptics questioning its scientific validity.

Methods of Mathematical Modelling and its Types:

A "mathematical model" is a representation of a real-world system or phenomenon using mathematical language and symbols. These models are used across various fields, including physics, engineering, economics, biology, and many others, to analyze, understand, predict, and optimize the behaviour of the system under study.

Mathematical models can take many forms, including:

- **Analytical Models:** These models are expressed as mathematical equations that can be solved exactly or approximately. They often provide insight into the underlying principles governing a system.
- **Numerical Models:** When analytical solutions are not possible or practical, numerical methods are used to approximate the solution of mathematical equations. These models are implemented using computational techniques, such as finite element methods, finite difference methods, or numerical integration.
- **Statistical Models:** Statistical models use probability theory and statistical methods to describe and analyse the relationships between variables in a system. They are commonly used in fields such as economics, sociology, and epidemiology.

- **Simulation Models:** Simulation models are used to mimic the behaviour of complex systems over time. They involve running computer simulations to observe how the system evolves under different conditions. Simulation models are widely used in engineering, finance, and social sciences.

Mathematical modeling typically involves several steps:

- **Formulation:** Clearly defining the problem and identifying the relevant variables and parameters.
- **Mathematical Representation:** Choosing appropriate mathematical equations or algorithms to represent the relationships between variables.
- **Solution:** Solving the equations analytically or numerically to obtain results.
- **Validation and Calibration:** Testing the model against real-world data to ensure its accuracy and adjusting parameters if necessary.
- **Analysis:** Using the model to gain insights into the behaviour of the system, make predictions, or optimize its performance.

Mathematical models are powerful tools for understanding complex systems and making informed decisions. However, they are simplifications of reality and may involve assumptions and limitations that need to be carefully considered.

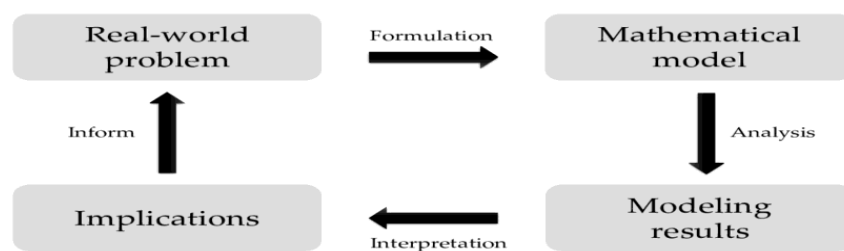


Figure: 1 Courtesy: Google .Com

Mathematical Modelling in Medicine:

In parallel with the development of traditional medical systems, modern medicine has made significant strides in understanding disease mechanisms, diagnostics, and treatments. Mathematical modeling, a discipline that applies mathematical principles to simulate and analyze

real-world phenomena, has emerged as a powerful tool in medical research and healthcare management. From modeling the spread of infectious diseases to predicting drug responses and optimizing treatment protocols, mathematical models offer valuable insights into complex biological systems.

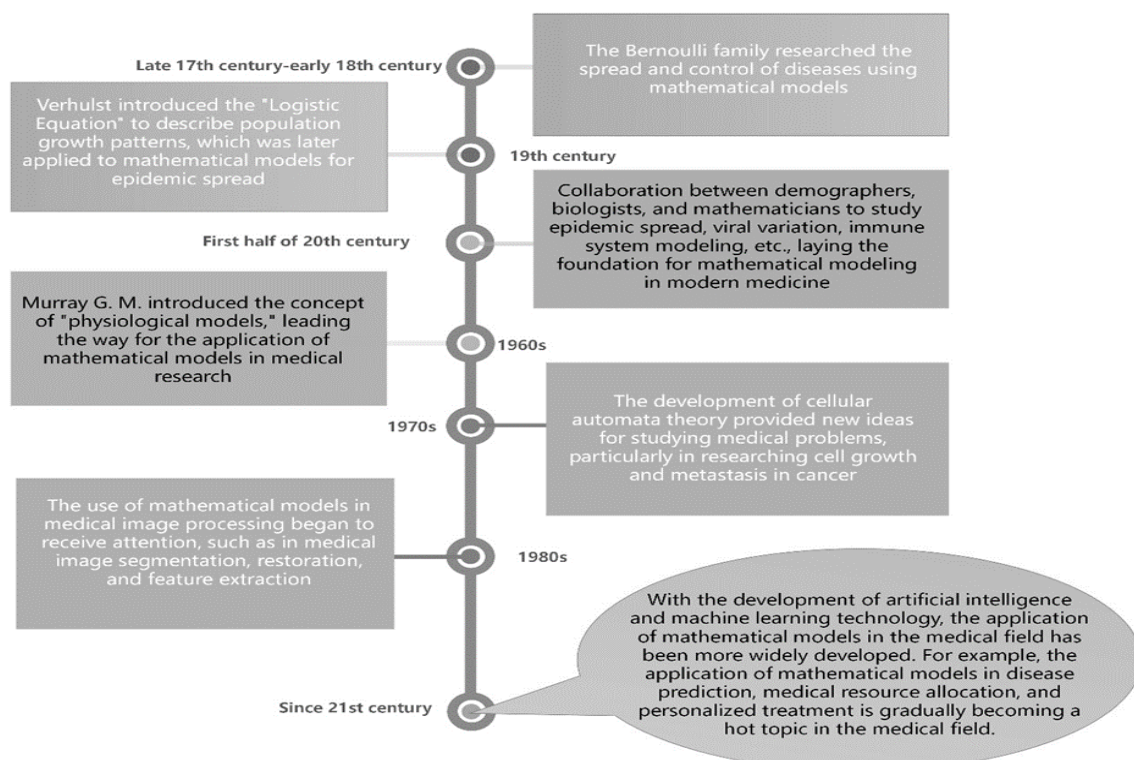


Figure: 2 Courtesy: Google.Com

Addressing Medical Problems through Integrated Approaches:

The integration of Indian knowledge systems and mathematical modelling holds promise for addressing a wide range of medical problems across various domains. In diabetes management, for instance, mathematical models can be used to predict blood glucose levels based on dietary intake, physical activity, and individual metabolic parameters, allowing for personalized insulin dosing regimens. By incorporating Ayurvedic principles of diet and lifestyle, these models can further enhance treatment efficacy and patient adherence.

In infectious disease control, mathematical modelling techniques have been instrumental in understanding the dynamics of disease spread and evaluating intervention strategies such as vaccination campaigns and social distancing measures. By integrating traditional Indian practices, such as Ayurvedic hygiene rituals and herbal remedies with proven antiviral properties, mathematical models can provide insights into the effectiveness of these interventions in mitigating disease transmission.

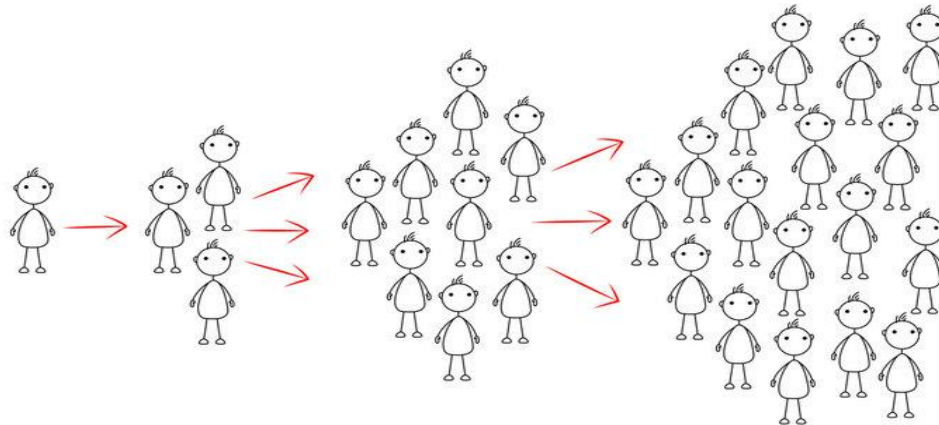


Figure: 3 Courtesy: Google.Com

➤ Differential-Equation-Based Biomedical Model Approach

Differential-equation-based biomedical models are mathematical frameworks used to describe and understand biological systems. These models are built upon differential equations, which represent how quantities such as concentrations, rates of change, or other biological variables evolve over time. This approach is widely used in various fields of biomedical research, including physiology, pharmacokinetics, epidemiology, and systems biology.

The model is a basic one-compartment model, which assumes that the drug is instantaneously distributed throughout the body and is eliminated from the body via first-order elimination kinetics.

The differential equation governing this model is:

$$dt/dC = -k \cdot C$$

Where:

- C is the concentration of the drug in the bloodstream (in units of concentration, e.g., mg/L).
- t is time (in units of time, e.g., hours).
- k is the elimination rate constant (in units of 1/time).

To simulate this model numerically, we can use Euler's method, a simple numerical technique for solving ordinary differential equations.

This example illustrates how a simple differential equation-based model can be implemented numerically to simulate a biomedical

phenomenon, such as drug concentration kinetics in the bloodstream. Such models can be further extended and refined to capture more complex dynamics and account for additional factors in real-world scenarios.

➤ Growth and Development Model

A growth and development model is a type of mathematical framework used to describe and predict the changes in size, structure, or functionality of biological organisms over time. These models aim to capture the underlying mechanisms and processes that govern growth and development, allowing researchers to better understand and manipulate these phenomena. Such models find applications in various fields including biology, ecology, agriculture, and medicine.

A hypothetical organism with discrete developmental stages and a lifespan limited to a certain number of time steps.

- Let's define the following parameters:
- $N(t)$: Number of individuals in the population at time
- $S(t)$: Developmental stage of individuals at time t , where $S(t)$ can take values from 1 to S_{\max} representing different stages of development.
- λ : Birth rate, representing the rate at which new individuals are born.
- μ : Mortality rate, representing the rate at which individuals die.

- α : Development rate, representing the rate at which individuals progress through developmental stages.
- T_{\max} : Maximum lifespan, representing the number of time steps an individual can live.
- By these parameters, we can define the dynamics of the population using the following equations:
- Birth process: $dt/dN = \lambda \cdot N(t)$
- Mortality process: $dt/dN = -\mu \cdot N(t)$
- Development process: $dt/dS = \alpha \cdot N(t)$
- Ageing process (limited lifespan): $N(t) = 0$ if $t \geq T_{\max}$

In the realm of mental health, the integration of yoga therapy with mathematical modeling offers promising avenues for holistic treatment approaches. Yoga, an ancient Indian practice that combines physical postures, breath control, and meditation, has been shown to have positive effects on mood, stress, and overall well-being. Mathematical models can be used to quantify the impact of yoga interventions on physiological parameters such as heart rate variability and cortisol levels, providing objective measures of treatment efficacy.

Challenges and Opportunities:

Despite its potential benefits, the integration of Indian knowledge systems with mathematical modelling faces several challenges. Cultural and institutional barriers, skepticism among mainstream medical practitioners, and the lack of standardized protocols for integrating traditional and modern approaches are some of the obstacles that need to be overcome. Moreover, ethical considerations, such as ensuring informed consent and respecting cultural beliefs, are paramount when conducting research in this field.

However, these challenges are outweighed by the opportunities for interdisciplinary collaboration and innovation. By bringing together experts from diverse fields, including Ayurveda, mathematics, biology, and computer science, we can overcome disciplinary boundaries and develop novel solutions to complex medical problems. Moreover, the integration of Indian knowledge systems with mathematical modeling has the potential to democratize healthcare by providing cost-effective and culturally sensitive solutions that are accessible to all.

Future Directions and Conclusion:

In conclusion, the integration of Indian knowledge systems with mathematical modelling represents a promising approach to enhancing medical problem-solving. By leveraging the strengths of Ayurveda and mathematical modelling, we can develop more personalized, holistic, and effective healthcare strategies that address the needs of individuals and communities. Continued research,

interdisciplinary collaboration, and cross-cultural dialogue are essential for realizing the full

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The Role of Education in Sustainable Development: Incorporating Indian Knowledge Systems

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Abstract:

Sustainable development has emerged as a critical global goal, and education plays a critical role in achieving it. This paper explores the integration of Indian knowledge systems into modern education to enhance sustainability in education, role of education to achieve sustainable development, different strategies for integrating IKS in Education etc. Drawing from ancient Indian philosophies and practices, such as Buddhism, Jainism, and Hinduism, this study proposes a framework for incorporating these values into contemporary educational practices. By incorporating Indian knowledge systems into modern education, we can foster a deeper understanding of sustainability principles and promote a holistic approach to sustainable development. This paper suggests that integrating Indian knowledge systems into education can empower learners to address complex sustainability challenges and contribute to a more sustainable future.

Keywords: Sustainable Development, Indian Knowledge System, IKS in Modern Education, Education and Sustainable Development.

Introduction:

Sustainable development, as defined by the United Nations, is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Education is a key component of sustainable development, as it shapes the values, attitudes, and behaviors of individuals and communities. In recent years, there has been a growing recognition of the importance of incorporating indigenous knowledge systems into education to promote sustainability. Indigenous knowledge systems, such as those found in India, offer unique perspectives and insights that can enrich sustainability education.

Indian ethical frameworks emphasize compassion, non-violence, and respect for all living beings, which can be integrated into modern education to instill moral values and empathy in students. For example, the concept of 'ahimsa' (non-violence) from Jainism can be incorporated into environmental studies to promote sustainable living practices.

Indian knowledge systems, rooted in ancient philosophies and practices, emphasize interconnectedness, harmony with nature, and a holistic understanding of the world. These principles align closely with the goals of sustainable development and offer valuable lessons for addressing contemporary environmental and social challenges. By integrating Indian knowledge systems into education, we can cultivate a deeper appreciation for sustainability and inspire individuals to adopt more sustainable lifestyles.

Objectives:

- ✧ To explore the perceptions and attitudes of educators, students, and policymakers towards integrating Indian knowledge systems into education for sustainable development.
- ✧ To assess the potential benefits of integrating Indian knowledge systems into education for sustainable development.
- ✧ To Analyze different strategies to integrate IKS in modern education.
- ✧ To identify the challenges and barriers in integrating Indian knowledge systems into modern education for sustainable development.

Literature Review:

- ✧ Dr. Naresh Chandel, Kamlesh Kumar Prashar (2024) in their research paper "Indian knowledge system and nep: a brief analysis" have discussed Indian Knowledge System, New Education Policy, Contemporary Knowledge, Interdisciplinary Knowledge and Holistic Development.
- ✧ Dr. Denis Vaz (2024) in his research article "Integrating Traditional Indian Knowledge into the Education System" has discussed Incorporating Traditional Indian Knowledge Systems in Higher Education, Benefits of Incorporating Traditional Indian Knowledge Systems, and Understanding Traditional Indian Knowledge Systems.
- ✧ Raisa Krayneva, Aleksandr Rudenko, Roman Motylev (2021) in their research paper "Role of education in implementing the sustainable development strategy" Have discussed

Understanding the sustainability in the society, Level of education and damage to the environment, and need for sustainable development.

- ✧ Subhash C. Kak (2005) in his research paper "Science in Classical India," Subhash Kak discusses the rich scientific contributions of ancient India. He explores various fields such as mathematics, astronomy, and medicine, highlighting the advancements made by Indian scholars. Kak emphasizes the significant influence of Indian scientific thought on global knowledge systems. He also examines the cultural and philosophical underpinnings that supported the development of science in classical India.
- ✧ Shweta Ghosh (2016) in her research paper "Cultural Heritage and its Role in Education: A Critical Review " Have critically discussed the role of cultural heritage in education. It explores how cultural heritage can be integrated into educational practices to enrich learning experiences.

Research Design and Methodology

The research methodology for this research paper is exploratory and has been conducted based on primary and secondary sources of data. The data has been obtained from books, articles, and websites. For the collection of primary data, a structured questionnaire was designed to study the people's perception towards The Role of Education in Sustainable Development: Incorporating Indian Knowledge Systems. Sample size is 112 and convenient sampling method has been used for the collection of data. Descriptive Statistical analysis has been done to arrive at the findings and conclusions.

The Role of Education in Sustainable Development

Education plays a crucial role in sustainable development by fostering the knowledge, skills, attitudes, and values needed to create a more sustainable world. Here are some key aspects of this role:

Awareness and Understanding:

Education raises awareness about the importance of sustainability, environmental protection, and social responsibility. It helps people understand the interconnectedness of environmental, social, and economic issues.

Behavioral Change:

Education encourages sustainable practices and lifestyles. It promotes behaviors such as recycling, energy conservation, and responsible consumption, which are essential for sustainable development.

Capacity Building:

Education builds the capacity of individuals and communities to address sustainability

challenges. It equips them with the knowledge and skills to participate effectively in sustainable development initiatives.

Innovation and Problem-Solving:

Education fosters innovation and creativity, enabling people to develop sustainable solutions to complex environmental and social problems.

Policy and Governance:

Education contributes to the development of informed policies and effective governance structures that promote sustainable development at local, national, and global levels.

Empowerment and Equity:

Education empowers individuals, especially marginalized groups, by providing them with the knowledge and skills to advocate for their rights and participate in decision-making processes related to sustainable development.

Education plays a crucial role in sustainable development by imparting knowledge, skills, and values that promote sustainable practices. It empowers individuals to make informed decisions, contributing to economic growth, social development, and environmental sustainability. Education encompasses formal, informal, and non-formal learning opportunities, emphasizing lifelong learning for adaptation and sustainable contribution (UNESCO)

Significance of Indian Knowledge System

The Indian knowledge system, often rooted in ancient texts like the Vedas, Upanishads, and Aranyakas, holds immense significance in various fields. It provides a unique perspective on life, society, and the universe, offering valuable insights that are relevant even today. Here are some key aspects of its significance:

Holistic Education:

Indian knowledge systems emphasize holistic education, focusing on the physical, mental, and spiritual development of an individual. This approach aims to cultivate a well-rounded personality capable of contributing positively to society.

Ethical Framework:

Indian texts provide a rich ethical framework that promotes moral values such as truthfulness, non-violence, compassion, and respect for all life forms. These values are crucial for building a harmonious and sustainable society.

Environmental Sustainability:

The concept of 'Vasudhaiva Kutumbakam' (the world is one family) from Indian texts underscores the interconnectedness of all living beings. This perspective encourages environmental conservation and sustainable living practices.

Health and Wellness:

Ayurveda, an ancient Indian system of medicine, offers a holistic approach to health and wellness. It emphasizes the balance of body, mind,

and spirit, along with natural remedies and preventive healthcare practices.

Scientific Advancements:

Indian knowledge systems have made significant contributions to various scientific fields such as mathematics, astronomy, and metallurgy. Concepts like zero, decimal system, and the theory of atoms originated in ancient India.

Spiritual Wisdom:

Indian texts contain profound spiritual wisdom that addresses existential questions and offers insights into the nature of reality and the purpose of life. This wisdom is valuable for personal growth and self-realization.

Cultural Heritage:

Indian knowledge systems are an integral part of the country's cultural heritage, reflecting its diversity and rich intellectual tradition. Preserving and promoting these systems helps in maintaining cultural identity and pride.

Relevance in Modern Context:

Despite their ancient origins, many concepts from Indian knowledge systems remain relevant in the modern world. They offer alternative perspectives and solutions to contemporary challenges, making them valuable for today's society.

Integrating Indian Knowledge With Modern Education

Holistic Learning: Indian knowledge systems emphasize a holistic approach, incorporating physical, mental, and spiritual aspects of learning. Integrating these systems can provide a more comprehensive education experience.

Cultural Preservation: Integrating Indian knowledge systems helps preserve and promote India's rich cultural heritage, ensuring that traditional wisdom is not lost to modernization.

Ethical and Moral Development: Indian knowledge systems often emphasize ethics, morality, and values. Incorporating these into modern education can help develop students' ethical and moral compass.

Relevance to Indian Context: Indian knowledge systems are rooted in the Indian context, making them more relevant and relatable to Indian students, helping them connect with their cultural roots.

Innovation and Problem-Solving: Many principles from Indian knowledge systems encourage innovative thinking and problem-solving, which are valuable skills in today's world.

Environmental Sustainability: Indian knowledge systems often promote a harmonious relationship with nature. Integrating these systems can help foster a sense of environmental responsibility and sustainability among students.

Diverse Perspectives: Integrating Indian knowledge systems can provide students with a

diverse range of perspectives, enriching their understanding of the world.

Challenges To Integrate Iks In Modern Education

Lack of Awareness and Understanding: There is a general lack of awareness and understanding among educators and policymakers about the depth and relevance of Indian knowledge systems. This leads to skepticism and resistance to integrating them into modern education.

Curriculum Design and Pedagogy: Adapting Indian knowledge systems to fit within the framework of modern curriculum design and pedagogy can be challenging. The traditional Gurukul system, for example, is quite different from contemporary educational methods, requiring thoughtful adaptation.

Access to Resources: Access to authentic resources and texts related to Indian knowledge systems can be limited, making it difficult for educators to incorporate them effectively into their teaching.

Standardization and Evaluation: Establishing standardized methods for evaluating students' understanding and application of Indian knowledge systems poses a challenge. Traditional assessment methods may need to be reimaged to accommodate these systems.

Resistance to Change: There may be resistance from various stakeholders, including teachers, students, and parents, who are accustomed to the current educational paradigm. Convincing them of the benefits of integrating Indian knowledge systems can be challenging.

Infrastructure and Technology: Incorporating Indian knowledge systems may require specialized infrastructure and technology, which may not be readily available in all educational institutions.

Research and Development: There is a need for further research and development to bridge the gap between ancient Indian wisdom and modern educational practices. This requires collaboration between educational institutions and scholars.

Ways To Integrate Iks Into Modern Education

Incorporating Indian Philosophies in Curriculum: Integrate teachings from ancient Indian philosophies such as Vedanta, Yoga, and Sankhya into the curriculum to promote holistic learning and personal development.

Ethical Frameworks in Education: Teachings from Buddhism, Jainism, and Hinduism can provide ethical frameworks for decision-making, promoting values such as non-violence, compassion, and truthfulness.

Integration of Indian Literature: Include works of ancient Indian literature like the Vedas, Upanishads, and epics such as the Mahabharata and Ramayana in language and literature courses to expose students to the rich literary heritage of India.

Indian Art, Music, and Dance: Incorporate traditional Indian art forms into the curriculum to enhance creativity and cultural appreciation among students.

Teaching Indian Mathematics and Astronomy: Introduce concepts from ancient Indian mathematics and astronomy, such as the concept of zero, Aryabhata's contributions, and the decimal system, to inspire students and demonstrate India's historical contributions to science.

Environmental Ethics from Indian Traditions: Teachings from Indian traditions emphasize respect for nature and sustainable living, which can be integrated into environmental education programs.

Role of Guru-Shishya Parampara: Revive the traditional guru-shishya parampara (teacher-disciple relationship) to promote personalized learning and mentorship.

Criticism / Limitations Related To Iks

Education also plays a crucial role in achieving the Sustainable Development Goals (SDGs) set by the United Nations. Goal 4 of the SDGs specifically aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (United Nations, 2015).

But the Indian knowledge system is lacking in some ways as sustainable development Goals 4 is talking about inclusive growth and education irrespective of gender and caste creed and religion. The Indian knowledge system does not provide equal access to education to all like-

Gender Bias: Traditional Indian knowledge systems often reflect patriarchal values, leading to gender bias and discrimination against women. This bias can be seen in religious texts, social norms, and practices.

Caste Discrimination: Indian knowledge systems have been associated with the caste system, which has marginalized and discriminated against certain groups, particularly Dalits and other marginalized communities.

Limited Representation: Historically, female voices and perspectives have been underrepresented in traditional Indian knowledge systems, leading to a lack of diverse views and experiences.

Restrictive Norms: Some traditional practices and norms within Indian knowledge systems can be restrictive for women and vulnerable populations, limiting their access to education, resources, and opportunities.

Socio-economic Disparities: Indian knowledge systems have sometimes been used to justify socio-economic disparities, reinforcing existing inequalities rather than addressing them.

Lack of Adaptability: Traditional Indian knowledge systems, if not adapted to contemporary contexts, may not address the evolving needs and challenges faced by women and vulnerable populations in modern society.

Addressing these limitations would require a thoughtful and critical approach to integrating Indian knowledge systems into modern education, ensuring inclusivity, equality, and respect for all individuals.

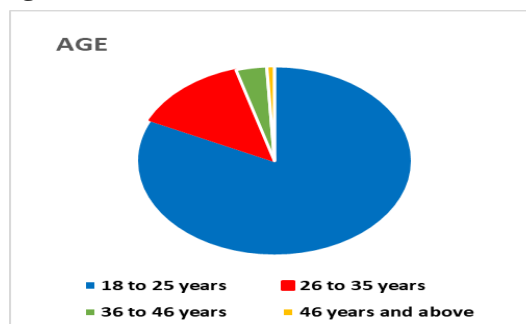
Data Analysis and Interpretations

1) Demographic Distribution of Data On the Basis of Age

Table 1 & Figure 1: Demographic Distribution on the basis of Age

| Response | Count | Percentage |
|--------------------|-------|------------|
| 18 to 25 years | 92 | 82.1 |
| 26 to 35 years | 15 | 13.4 |
| 36 to 46 years | 4 | 3.6 |
| 46 years and above | 1 | 0.9 |

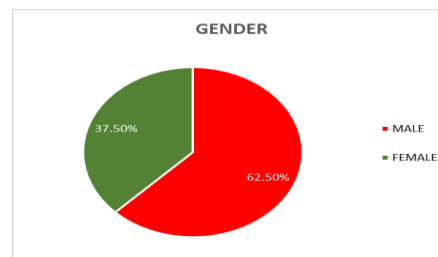
From Table 1 & Figure 1 it can be observed that out of total 112 respondents maximum (82.1%) were from the age 18 to 25 years. 13.4% were in the



age group of 26 to 36 years, 3.6% were between 31 to 45 years and 0.9% were above 45 years.

Table 2 & Figure 2: Demographic Distribution on the basis of Gender

| Response | Count | Percentage |
|----------|-------|------------|
| Male | 70 | 37.5 |
| Female | 42 | 62.5 |



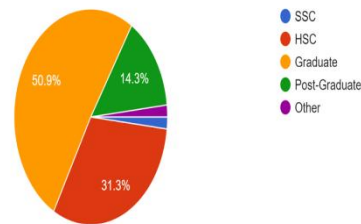
From Table 2 & Figure 2 it can be observed that out of 112 respondents 62.5% were males and 37.5%

were females.

Table 3 & Figure 3 : Demographic Distribution on the basis of Education

| Response | COUNT | PERCENTAGE |
|---------------|-------|------------|
| SSC | 2 | 1.8 |
| HSC | 35 | 31.3 |
| GRADUATE | 57 | 50.9 |
| POST GRADUATE | 16 | 14.3 |
| OTHER | 2 | 1.8 |

Educational background
112 responses



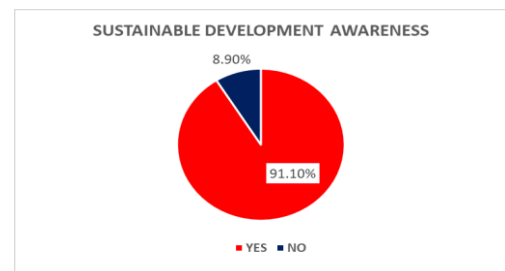
From the Table 3 & Figure 3 it can be observed that out of total 112 respondents 50.9% are

graduates, 31.3 % are HSC, 14.3% are post-graduates and 1.8% are others.

2) Awareness about Sustainable Development

Table 4 & Figure 4: awareness about sustainable development

| Response | COUNT | PERCENTAGE |
|----------|-------|------------|
| Yes | 102 | 91.1 |
| No | 10 | 8.9 |



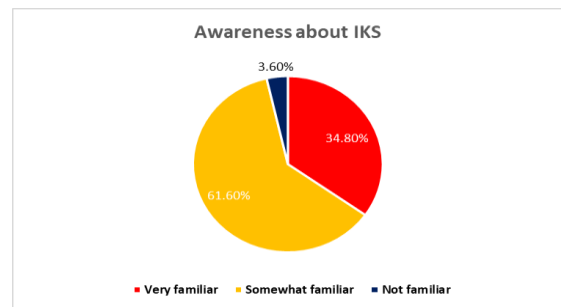
From Table 4 & Figure 4 it can be observed that out of 112 respondents 91.1% are aware about

sustainable development and 8.9% were unaware about sustainable development.

3) Awareness about IKS

Table 5 & Figure 5: awareness about Indian knowledge system

| Response | Count | Percentage |
|-------------------|-------|------------|
| Very familiar | 39 | 34.8 |
| Somewhat familiar | 69 | 61.6 |
| Not familiar | 4 | 3.6 |

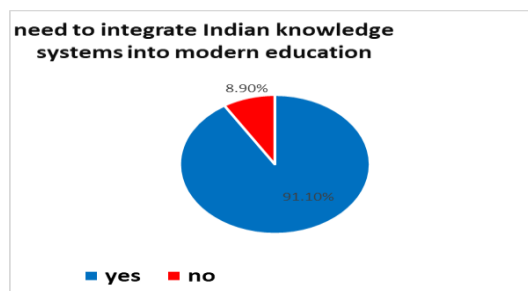


From Table 5 & Figure 5 it can be observed that out of 112 respondents 34.8% are aware about

IKS and 61.6% are somewhat aware and 3.6% are unaware about IKS.

4) Table 6 & Figure 6 : need to integrate IKS in modern education

| Response | Count | Percentage |
|----------|-------|------------|
| Yes | 102 | 91.1 |
| No | 10 | 8.9 |

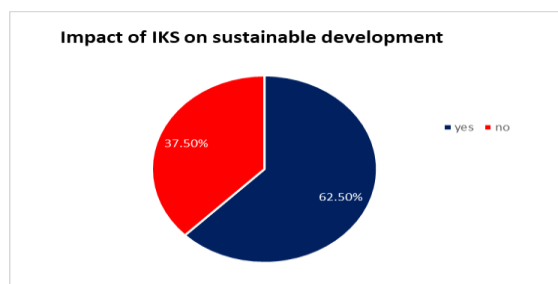


From Table 6 & Figure 6 it can be observed that out of 112 respondents 91.1% say there is a need to

integrate IKS in modern education, 8.9% are not in favor.

5) Table 7 & Figure 7: Effectiveness of IKS to achieve sustainable development

| Response | Count | Percentage |
|----------|-------|------------|
| Yes | 70 | 62.5 |
| No | 42 | 37.5 |



From Table 7 & Figure 7 it can be observed that out of 112 respondents 62.5% respondents believe that IKS is important for sustainable development 37.5% believe that it is not impactful.

6) Table 8 & Figure 8: Beneficial aspects of IKS for Sustainable Development

| Response | Count | Percentage |
|---|-------|------------|
| Yoga and meditation | 49 | 44 |
| Ayurveda and traditional medicine | 38 | 34 |
| Ecology knowledge | 41 | 36 |
| Philosophical concept of sustainability | 33 | 30 |
| Other | 11 | 9 |

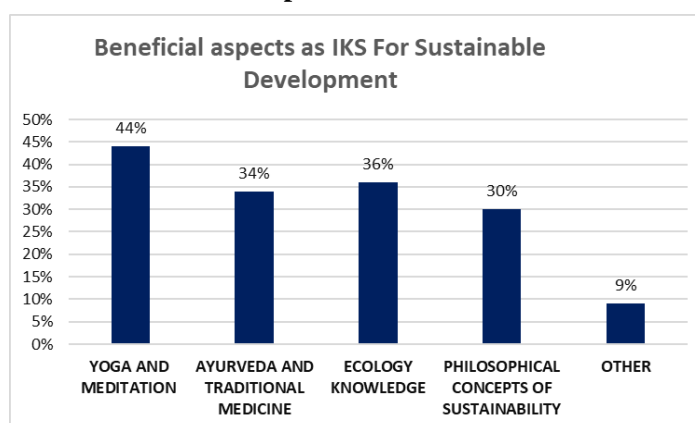


Table 8 & Figure 8 shows different aspects of IKS like Yoga and meditation, Ayurveda and traditional medicine, Ecology knowledge,

Philosophical concept of sustainability for sustainable development.

7) Table 9 & Figure 9: Obstacles to Integrate IKS in modern education

| Response | Count | Percentage |
|------------------------------|-------|------------|
| Curriculum Design | 18 | 16 |
| Cultural barriers | 36 | 32 |
| Lack of awareness | 53 | 47.3 |
| Resistance to change | 38 | 33.9 |
| Lack of resources or funding | 39 | 34.8 |

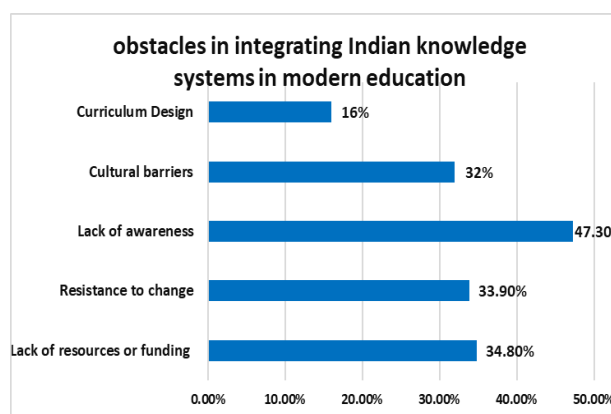


Table 9 & Figure 9 shows different Obstacles to Integrate IKS in modern education like Curriculum Design, Cultural barriers, Lack of awareness, Resistance to change and Lack of resources or funding for implementation.

Conclusion:

Integrating Indian knowledge systems with modern education is crucial for sustainable development. There are several benefits of integrating Indian knowledge systems into education for sustainable development like cultural preservation, ethical awareness, and holistic learning.

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By incorporating the ethical, environmental, and economic principles found in these traditions, students can develop a holistic understanding of sustainability and learn to apply these principles in their personal and professional lives. This approach not only enriches the educational experience but also equips students with the knowledge and skills needed to create a more sustainable and harmonious world.

Incorporating the teachings of Buddhism, Jainism, and Hinduism into education for sustainable development can inspire individuals to lead more conscious and compassionate lives. By

learning from these ancient traditions, students can develop a holistic understanding of sustainability that encompasses ethical, environmental, and spiritual dimensions, ultimately contributing to a more sustainable and harmonious world.

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Paradigm Shift from Tradition Knowledge System to Modern Education in India

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Abstract:

Indian Knowledge Systems (IKS) represent a vast and ancient repository of wisdom that encompasses various fields such as philosophy, science, medicine, arts, and management. It is rooted in the cultural and spiritual heritage of India. IKS has significantly influenced the development of thought and practices in Indian culture. The purpose of this paper is to examine the initiatives that are being taken in India in recent years to revitalize the economy and skill development systems from our tradition education system to modern technical education. From the perspectives of country's economic development these initiatives include strengthening of the higher and technical education system of the country. It bringing about a paradigm shift in the national skill development system through the plans of action. The new policy frameworks for education and skill development by Government Ministries. These are examined from the point of view of moving India up the ladder of knowledge economy. The paper flash light on several contemporary aspect of Indian knowledge system initiatives which have been continually taken up by the Government in the past to accelerate economy.

Key words: Indian Knowledge Systems (IKS), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP), National Apprenticeship Promotion Scheme (NAPS), Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), National Innovation Initiative (NII), National Skill Development Mission (NSDM)

Introduction:

Indian Knowledge Systems (IKS) refer to the diverse and ancient knowledge traditions that have evolved in the Indian subcontinent over millennia. These systems encompass a wide range of disciplines including philosophy, science, medicine, arts, literature, spirituality, and more. IKS are deeply rooted in India's cultural heritage and have been passed down through generations via oral traditions, texts, rituals, and practices. Vedas and Upanishads considered the oldest sacred texts, contain hymns, rituals, and philosophical teachings. Yoga and Meditation originating from ancient scriptures like the Yoga Sutras of Patanjali, yoga and meditation are integral components of IKS. They offer a holistic approach to physical, mental, and spiritual development. Arthashastra: Attributed to Chanakya, the Arthashastra is an ancient treatise on statecraft, economics, and political science. It provides insights into governance, diplomacy, and economic policies. Natya Shastra Authored by Bharata Muni, the Natya Shastra is a comprehensive work on performing arts. It covers aspects of dance, music, and theatre, outlining principles for artistic expression.

Methodology:

The nature of research is descriptive and analytical. The study is based on secondary data which has been taken from various newspaper, journals, websites etc.

Objectives of the study:

- To study the significance of traditional knowledge in today modern education system
- To provide basic understanding of IKS and its integration with traditional education system
- To study the measures which ahs been taken by Govt to incorporate modern and technical education along with traditional education

Contemporary perspective of IKS

Holistic Well-being: IKS promotes a holistic approach to life, emphasizing the inter-connectedness of mind, body, and spirit. This perspective is gaining recognition in modern days though wellness practices.

Management and Ethics: The Concepts from ancient Indian texts contribute to modern management philosophies. Ideas on leadership, decision-making, and organizational behavior find resonance in today's corporate world.

Mindfulness and Stress Management: The Practices like yoga and meditation from IKS are increasingly integrated into modern lifestyles. It helps for stress management, enhancing focus, and promoting mental well-being.

Cultural Heritage: Understanding IKS is vital for preserving and promoting India's rich cultural heritage. It provides a foundation for appreciating the depth of indigenous knowledge

India's ancient knowledge systems with the profound and influential practice called

"Arthashastra" was written by the legendary scholar Kautilya. A remarkable book which unveils the secrets of governance, economy, and society envisioned by this brilliant mind. Chanakya, Kautilya give deep insights in his book in respect of political philosophy and governance principles, placing the welfare of the people with strong and empowering kings to protect and uplift the lives of the people and country's economy. Explore the intricacies of Kautilya's economic policies, from the significance of money and coinage in the Kautilian economy to the art of taxation and the balance which is required for sustainable growth and stability. Arthashastra is very important for country development. The shift from traditional knowledge systems to modern education has played a very important role in economic and educational development in many countries, including India.

The Arthashastra was aimed to discover the rules for ruling a huge empire, including internal administration, military strategy, diplomacy, and economics. It also recommends the king to play a role for his citizen's welfare because they are the nation's source of strength.

Transition from traditional to Modern Education and its impact

Traditional Knowledge Systems: Education in India was primarily based on traditional knowledge systems, which encompassed disciplines such as Vedas, Upanishads, Ayurveda, Yoga, and other indigenous practices. These systems were transmitted orally from generation to generation and were deeply rooted in Indian culture and heritage.

Introduction of Modern Education: The introduction of modern education in India can be traced back to the colonial period, particularly during British rule. The British established formal educational institutions with a curriculum influenced by Western ideas and methodologies. This marked the beginning of a gradual transition from traditional to modern education.

Focus on Western Sciences and Technologies: With independence in 1947, India's leaders recognized the importance of modern education, particularly in the fields of science, technology, engineering, and medicine, for national development. Efforts were made to expand access to formal schooling and higher education, with an emphasis on subjects aligned with industrial and technological advancements.

Integration of Traditional and Modern Knowledge: Despite the emphasis on modern education, there has been a growing recognition of the value of traditional knowledge systems. Efforts have been made to integrate traditional wisdom, particularly in fields like Ayurveda, yoga, and environmental sustainability, into the formal education system. Institutions like the Indian Institutes of Technology (IITs) and Indian Institutes

of Management (IIMs) have also started offering courses that blend traditional and modern knowledge.

Emphasis on Holistic Education: There is a growing emphasis on holistic education that integrates both traditional and modern knowledge systems. This approach aims to nurture students' cognitive, emotional, and spiritual development while equipping them with the skills and knowledge needed to succeed in the modern world.

From the perspective of traditional knowledge system Modern Govt initiated towards technical education along with experiential learning for overall economic development. Various schemes and policy has been introduced by Govt to uplift the society. Since the income and employment is the major parameter indicator of country's growth and development. The various schemes and policy were introduced to improve the economic condition of country through creating income and employment opportunities.

During this period From the year 2009-2014 India experienced moderate employment growth, driven by expansion in sectors such as IT, telecommunications, services, and construction. However, there were also challenges, including jobless growth in certain sectors and regions.

This period From 2014-2019 saw mixed employment growth trends. While sectors like IT continued to create jobs, there were concerns about job creation lagging behind the pace of population growth. The government initiated various schemes like Make in India, Skill India, and Startup India to boost employment opportunities.

Before the year 2019-2022 India faced significant economic challenges due to the COVID-19 pandemic, which had a severe impact on employment. Many sectors, including manufacturing, hospitality, and aviation, witnessed layoffs and reduced hiring activity.

With the aim to make India self Reliant collaboration with the modern and technical education, government introduced various skill development measures like the Atmanirbhar Bharat Abhiyan (Self-Reliant India Mission) to revive the economy and generate employment.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY): Launched in 2015, PMKVY aims to provide skill training to youth across India, with a focus on industry-relevant skills. The scheme aims to enhance employability and bridge the skill gap in various sectors.

Skill India Mission: This initiative aims to train over 400 million people by 2022 in various skills to meet the demands of a rapidly evolving economy. It includes programs such as PMKVY, Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP),

National Apprenticeship Promotion Scheme (NAPS): Launched in 2016, NAPS incentivizes employers to engage apprentices for skill development. It aims to provide hands-on training to individuals and enhance their employability in various industries.

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY): This scheme focuses on providing skill training to rural youth, particularly those from disadvantaged backgrounds. It aims to enable rural youth to secure employment or self-employment opportunities.

Atal Innovation Mission (AIM): While not solely focused on skill development for employment, AIM aims to promote innovation and entrepreneurship among students, researchers, and entrepreneurs, which can indirectly lead to job creation and skill enhancement.

India has implemented several government initiatives aimed at leveraging its knowledge systems for economic development.

National Innovation Initiative (NII): Launched in 2005, the NII aims to foster innovation across various sectors of the Indian economy. It focuses on promoting research and development, encouraging entrepreneurship, and creating a conducive ecosystem for innovation.

National Knowledge Commission (NKC): Established in 2005, the NKC advises the government on policy measures for knowledge creation, dissemination, and application. It has recommended various initiatives to strengthen India's knowledge infrastructure, including reforms in education, governance, and intellectual property rights.

National Skill Development Mission (NSDM): Launched in 2015, the NSDM aims to train over 400 million people in various skills by 2022 to meet the demands of a rapidly evolving economy. It focuses on enhancing the employability of the workforce and bridging the skill gap across sectors.

Digital India Initiative: Launched in 2015, the Digital India initiative aims to transform India into a digitally empowered society and knowledge economy. It includes various projects such as digital infrastructure development, digital literacy programs, and e-governance initiatives to promote economic growth and inclusivity.

Start-up India: Launched in 2016, Start-up India is an initiative to nurture and support entrepreneurship in the country. It aims to create a conducive ecosystem for start ups by providing access to funding, mentorship, and other support services. The initiative aims to catalyse job creation and economic growth through innovation and entrepreneurship.

Make in India: Launched in 2014, Make in India aims to boost domestic manufacturing and promote India as a global manufacturing hub. It focuses on attracting foreign investment, improving ease of

doing business, and enhancing the competitiveness of Indian industries.

Atal Innovation Mission (AIM): Launched in 2016, AIM aims to promote innovation and entrepreneurship among students, researchers, and entrepreneurs. It includes initiatives such as Atal Tinkering Labs, Atal Incubation Centres, and Atal New India Challenges to foster a culture of innovation and drive economic growth.

These initiatives reflect the government's commitment to harnessing India's knowledge systems for economic development and fostering innovation, entrepreneurship, and skill development across various sectors of the economy.

Conclusion:

Indian knowledge system offers several potential economic advantages through innovation and creativity which emphasises on holistic thinking interdisciplinary approach, innovation and creativity. Many traditional Indian practices such as Ayurveda, yoga offers cost effective solution for modern health care and wellness. IKS emphasize on sustainable practice for managing natural resources such as water, land, and air. By incorporating such practices in economic activities such as agriculture, forestry, and resource extraction, business can reduce cost with environmental degradation. Integrating traditional Indian knowledge into education and traditional vocational program can equip with valuable skill and knowledge that are in demand with various sector in economy. Investment under skill development initiative focus on traditional Indian practice such as handloom weaving, pottery, organic farming, businesses, can create employment opportunity and foster entrepreneurship in rural area. India's traditional knowledge system can contribute to economic growth, job creation, sustainable development by innovation and fostering international collaboration in business and trade.

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A Study on Self-Efficacy and Emotional Intelligence among Secondary School Students in Warangal District In View of NEP 2020

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Abstract:

Recently, NEP 2020, has also highlighted the positive outcomes of Self Efficacy and Emotional Intelligence, as it clearly incorporates teaching of these concepts to students and teachers, to make the teaching learning process more efficient. This article aims to emphasize on the benefits of Self Efficacy and Emotional Intelligence, and their relationship for Secondary School Students. The sample included 480 students from the selected 24 schools. Since the concepts of Emotional Intelligence and Self Efficacy emphasise self-awareness and attention, research on Self Efficacy will be able to address the academic challenges of the students as well. An attempt is made to find out the influence of selected variables such as Gender, Locality, Caste and Management of the School on the Self Efficacy and Emotional Intelligence of the Secondary School Students. Further, it was found that Self Efficacy has positive correlation with Emotional Intelligence.

Key Words: Self-Efficacy, Emotional Intelligence, Secondary schoolStudents, NEP 2020.

Introduction:

Education is regarded as the potential instrument of social change that is thought desirable at a particular point of time. It is intended to bring about social upliftment, political awareness and promotion of economic growth of the masses in general. It has been ensured not only in the constitution of most of the countries but also in the international charter of UNO and UNESCO.

As the 21st centenary approaches, education will become so valid in task and form that it covers all activities that enable people from childhood to old age to acquire a living knowledge of the world of other people and themselves. In this context as per of education development of Self-Efficacy and Emotional Intelligence has been gaining prominence. The 21st century skills given more important to different ways of learning and one's ability to manage oneself and that of other in the Socio-emotional contexts.

Self-Efficacy

Success in life is not possible without hard work and continuous effort. Time should not be wasted on pointless self-pity or depressing grievances about other people. The best people to mentor their children are their parents. If they have challenges, need support and guidance, there are educational and career counselors on hand to help settle disputes and direct students toward the appropriate schooling.

In this context understanding one self and ability to manage oneself is of at most important.

Emotional Intelligence:

Daniel Goleman's book "Emotional

Intelligence" (1995) gave rise to the prominence of emotional intelligence, a relatively new behavioral concept. Psychologists Howard Gardner (1983) (Harvard), Peter Salovey (Yale), and Jhon Mayer (New Hampshire) worked and wrote during the 1970s and 1980s, contributing to the development of the early emotional intelligence theory.

According to Denial Goleman (1999), emotional intelligence is the ability to identify our own feelings as well as those of others, to motivate others, and to effectively manage our relationships and ourselves. Being aware of, in control of, and able to manage one's own emotions as well as those to be aware of others is a fundamental component of emotional intelligence. EI embraces two aspects of intelligence.

Therefore, the following are important aspects of emotional intelligence:

1. Understanding yourself, your goals, intentions, behavior and skill
 2. Understanding others and their feelings
- Goleman identified the five 'domains' as EI as:
- Knowing your emotions
 - Managing your own emotions
 - Motivating yourself
 - Recognizing and understanding other people's emotions
 - Managing relationships.

The View of Nep 2020 :

The National Education Policy 2020 (NEP 2020) emphasises on the importance of self-efficacy and emotional intelligence to incorporate the holistic development of children. NEP 2020 states that the education system must aim to groom individuals

capable of independent thinking and action, and must also possess compassion and empathy.

Emotional intelligence and self-efficacy not only helps children express their emotions in a healthy way, but it also prevents many issues such as low self-esteem, bullying, anger-issues, depression, and anxiety. Teachers, parents, and guardians need to make a conscious effort to identify and address the early signs of emotional-imbalance, to shield children from potential behavioural problems that could arise in adulthood.

In view of the above a study was undertaken, whose title is “A Study on Self-Efficacy and Emotional Intelligence among Secondary School Students In view Of NEP 2020”

Objectives of the Study:

1. To understand if there is any difference between the boys and girls students with regard to the self-efficacy and Emotional Intelligence.
2. To examine if there is any influence of the caste on the self-efficacy and Emotional Intelligence.
3. To find out if there is any difference between the Government and Private school students with regard to the self-efficacy and Emotional Intelligence.
4. To educate if there is any difference between the rural and urban school students with regard to the self-efficacy and Emotional Intelligence.
5. To understand the relationship between the self-efficacy and Emotional Intelligence.

Hypotheses of the Study:

The the following major hypotheses framed in view of the objectives of the study.

1. There is no significant difference between the boys and girls students with regard to the self-efficacy of the students.
2. There is no significant difference between the Government and Private school students with regard to the self-efficacy of the students
3. There is no significant difference between the rural and urban school students with regard to the self-efficacy of the students.
4. There is no significant difference among the OC, BC, SC and ST caste students with regard to the self-efficacy of the students.
5. There is no significant difference between the boys and girls students with regard to the Emotional Intelligence of the students.

6. There is no significant difference among the OC, BC, SC and ST caste students with regard to the Emotional Intelligence of the students.

7. There is no significant difference between the Government and Private school students with regard to the Emotional Intelligence of the students

8. There is no significant difference between the rural and urban school students with regard to the Emotional Intelligence of the students.

9. There is no significant relationship between the self-efficacy and Emotional Intelligence of the students.

Methodology:

The study employed the survey method. It is a representative sample to obtain the data to fulfill the objectives of the study. The study followed normative survey method. The process of gathering data was done by the the investigator directly.

After statistical analysis and interpretation of the data accordingly conclusions are drawn.

Tools Used:

The following are two tools used to collect relevant data from the sample respondents

□□ **Self – Efficacy Scale:** The self-efficacy scale developed by Copeland and Nelson (2004) is adopted for assessing the students' level of self-efficacy.

□□ **Emotional Intelligence Scale (EIS):** To measure the Emotional Intelligence of the students. Emotional Intelligence Scale developed by Bar-On (1997) is adopted as it is more suitable for the Present study.

Sample of the Study:

Twenty Four schools from each category representing Urban and Rural localities covering Government and Private management schools were selected. A sample of 480 students from 24 schools, selected for the present study.

Data Analysis:

Data collected from the present study is analysed using t-test, ANOVA (F-test) and correlation co-efficient methods. The results of the Data analysis are presented the following tables effected.

I. Self – Efficacy:

Hypothesis - 1 There is no significant difference between boys and girls students with respect to their Self-Efficacy.

Table - 1: Showing t- test for Self-Efficacy with respect to Gender

| Gender | Frequency | Percent age | Mean | S.D. | Std. Error mean | t- Value | Level of Significance |
|--------|-----------|-------------|-------|------|-----------------|----------|-----------------------|
| Boys | 240 | 50.0% | 37.44 | 5.60 | 0.361 | 0.84 | N.S. |
| Girls | 240 | 50.0% | 37.40 | 4.04 | 0.260 | | |
| Total | 480 | 100% | | | | | |

Table -1 reveals that the Mean, S.D. and t- value of Self-Efficacy scores gender wise. Mean

value of boys 37.44 and girls 37.40. Standard deviations for boys and girls were 5.60 and 4.04 respectively. Standard error mean for boys and girls were 0.36 and 0.26. The derived 't'- value was 0.84, which is not significant at 0.05 level. It shows that there is no significant difference

between boys and girls students in their Self efficacy. Hence, the null hypothesis - 1 is accepted.
Hypothesis - 2: There is no significant difference between Government and Private school students with respect to their Self-Efficacy.

Table - 2: Showing t- test for Self-Efficacy with respect to Type of School.

| School | Frequency | Percentage | Mean | S.D. | Std. Errormean | t- Value | Level of Significance |
|--------|-----------|------------|-------|------|----------------|----------|-----------------------|
| PVT | 240 | 50.0% | 37.25 | 5.13 | 0.331 | 0.738 | N.S |
| Govt | 240 | 50.0% | 35.58 | 4.16 | 0.298 | | |
| Total | 480 | 100% | | | | | |

Table -2 reveals that the Mean, S.D. and t-value of Self-Efficacy scores of Self-Efficacy by type of schools management. Mean value of private school students 37.25 and Govt. school students 35.58. Standard deviations for boys and girls were 5.13 and 4.16 respectively. Standard error mean for boys and girls were 0.331 and 0.298. The derived 't'- value 0.738, which is not significant at

0.05 level. Hence, private school students and Govt. school students did not differ significantly and in their Self-Efficacy. Hence, the null hypothesis -2 is accepted.

Hypothesis - 3: There is no significant difference between Rural and Urban area school students with respect to their Self-Efficacy.

Table -3: Showing t- test for Self-Efficacy with respect to Locality

| Locality | Frequency | Percentage | Mean | S.D. | Std. Errormean | t- Value | Level of Significance |
|----------|-----------|------------|-------|------|----------------|----------|-----------------------|
| Rural | 240 | 50.0% | 38.05 | 5.04 | 0.325 | 2.874 | S (0.01) |
| Urban | 240 | 50.0% | 36.78 | 4.63 | 0.299 | | |
| Total | 480 | 100% | | | | | |

Table -3 reveals that the Mean, S.D. and t-value of Self-Efficacy scores of Self-Efficacy locality wise. Mean value of rural students 38.05 and urban students 36.78. Standard deviations for Rural and Urban students were 5.04 and 4.63 respectively. Standard errors mean for Rural and urban students were 0.325 and 0.299. The derived 't'- value 2.874, is significant at 0.01 level. It shows that Rural and Urban students

differ significantly in their Self-Efficacy. Hence, the null hypothesis -3 is rejected.

Further, the Mean value of Rural students (38.05) is more than that of the Urban students (36.78). Hence, it is concluded that the Self-Efficacy of Rural students is better than that of the Urban students.

Hypothesis - 4: There is no significant difference among OC, BC, SC and ST community students with respect to their Self-Efficacy.

Table - 4: Showing ANOVA / F- test for Self-Efficacy with respect to community

| Community | Frequency | Percentage | Mean | S.D. | Std. Error | Sum of squares | df | Mean squares | F-Value | LOS |
|-----------|-----------|------------|-------|------|------------|----------------|-----|--------------|---------|-----|
| OC | 53 | 11.0 | 37.32 | 3.59 | 0.493 | 11320.98 | 476 | 23.784 | 1.236 | NS |
| BC | 297 | 61.9 | 37.70 | 5.23 | 0.303 | | | | | |
| SC | 43 | 9.0 | 36.30 | 4.58 | 0.698 | | | | | |
| ST | 87 | 18.1 | 37.08 | 4.39 | 0.471 | | | | | |
| TOTAL | 480 | 100 | 37.42 | 4.88 | 0.222 | 11409.148 | 479 | | | |

Table -4 reveals that the Mean, S.D. and t-value of Self-Efficacy scores of Self-Efficacy test caste wise. BC caste students (61.9%) were slightly higher than the percentage score of OC students

(11.0%), SC students (9.0%) and the ST students (18.1%). The derived 'F'- value 1.236, which is not significant at 0.05 level. It shows that OC, BC, SC, ST students did not differ significantly in their Self-

Efficacy. Hence, the null hypothesis-4 is accepted.

ii) Motional Intelligence

Hypothesis- 5: There is no significant difference

between boys and girls students with respect to their Emotional Intelligence.

Table - 5: Showing t- test for Emotional Intelligence with respect to Gender

| Gender | Frequency | Percent age | Mean | S.D. | Std. Error mean | t- Value | Level of Significance |
|--------|-----------|-------------|-------|-------|-----------------|----------|-----------------------|
| Boys | 240 | 50.0% | 75.45 | 7.748 | 0.50 | 0.017 | NS |
| Girls | 240 | 50.0% | 75.44 | 8.03 | 0.51 | | |
| Total | 480 | 100% | | | | | |

Table -5 reveals that the Mean, S.D. and t-value of Emotional Intelligence scores of Emotional Intelligence gender wise. Mean value of boys 75.45 and girls

75.44. Standard deviations for boys and girls were 7.748 and 8.03 respectively. The derived 't'- value 0.017, which is not significant at 0.05 level. It shows

that boys and girls students did not differ significantly their Emotional Intelligence. Hence, the null hypothesis-5 is accepted.

Hypothesis - 6: There is no significant difference between Government and Private school students with respect to their Emotional Intelligence.

Table - 6: Showing t- test for Emotional Intelligence with respect to Type of School Management

| School | Frequency | Percent age | Mean | S.D. | Std. Error mean | t- Value | Level of Significance |
|--------|-----------|-------------|--------|------|-----------------|----------|-----------------------|
| PVT | 240 | 50.0% | 74.854 | 7.19 | 0.464 | 1.653 | NS |
| Govt | 240 | 50.0% | 76.041 | 8.48 | 0.548 | | |
| Total | 480 | 100% | | | | | |

Table -6 reveals that the Mean, S.D. and t-value of Emotional Intelligence scores of Emotional Intelligence by type of schools management. Mean value private school students 74.854 and Govt. school students 76.041. The derived 't'- value 1.653, is not significant at 0.01 level. It shows that private school students and Govt. school students

did not differ significantly in their Emotional Intelligence. Hence, the null hypothesis -6 is accepted.

Hypothesis- 7 : There is no significant difference between Rural and Urban area school students with respect to their Emotional Intelligence.

Table -7: Showing t- test for Emotional Intelligence with respect to Locality

| Locality | Frequency | Percentage | Mean | S.D. | Std. Error mean | t- Value | Level of Significance |
|----------|-----------|------------|--------|-------|-----------------|----------|-----------------------|
| Rural | 240 | 50.0% | 75.808 | 7.822 | 0.504 | 1.002 | NS |
| Urban | 240 | 50.0% | 75.087 | 7.94 | 0.512 | | |
| Total | 480 | 100% | | | | | |

Table -7 reveals that the Mean, S.D. and t-value of Emotional Intelligence of Emotional Intelligence locality wise. Mean value of rural students 75.808 and urban students 75.087. The derived 't'- value 1.002, is not significant at 0.05 level. It shows that Rural and Urban students did not

differ significantly in their Emotional Intelligence. Hence, the null hypothesis -7 is accepted.

Hypothesis - 8: There is no significant difference among OC, BC, SC and ST community students with respect to their Emotional Intelligence.

Table -8: Showing ANOVA / F- test for Emotional Intelligence with respect to Community

| Community | Frequency | Percentage | Mean | S.D. | Std. Error | SS | df | Mean squares | F- Value | L OS |
|-----------|-----------|------------|--------|-------|------------|---------|----|--------------|----------|------|
| OC | 53 | 11.0 | 76.037 | 8.50 | 1.167 | 137.622 | 3 | 45.874 | 0.7 | NS |
| BC | 297 | 61.9 | 75.71 | 7.656 | 0.444 | | | | | |
| SC | 43 | 9.0 | 74.279 | 8.05 | 1.228 | | | | | |

| | | | | | | | | | | |
|-------|-----|------|--------|------|-------|-----------|-----|--------|----|--|
| ST | 87 | 18.1 | 74.77 | 8.21 | 0.880 | 29633.06 | 476 | 62.254 | 37 | |
| Total | 480 | 100 | 75.447 | 7.88 | 0.359 | 29770.698 | 479 | | | |

Table -8 reveals that the Mean, S.D. and F-value scores of Emotional Intelligence test caste wise. BC caste students (61.9%) were slightly higher than the percentage score of OC students (11.0%), SC students (9.0%) and the ST students (18.1%). The derived 'F'- value was 0.737, is not significant at 0.05 level. It shows that OC, BC, SC,

ST students did not differ in their Emotional Intelligence. Hence, the null hypothesis -8 is accepted.

Hypotheses -09: There is no significant Correlation between Emotional Intelligence and Self- Efficacy of Secondary School students.

Table - 9: showing correlation co-efficient between Emotional Intelligence and Self-Efficacy

| Secondary School students | | Emotional Intelligence | Self- Efficacy |
|---------------------------|--------------|------------------------|----------------|
| Emotional Intelligence | Correlation | 1 | .606** |
| | Sig(2-taild) | | .000 |
| | N | 480 | 480 |
| Self- Efficacy | Correlation | .606** | 1 |
| | Sig(2-taild) | .000 | |
| | N | 480 | 480 |

Note = * The mean difference is significant at the 0.05 level

** The mean difference is significant at the 0.01 level

From the above table it is observed that the correlation coefficient (r) is 0.606; this indicates that there is 60.6 percent shared variance. This indicated that there is a significant correlation. The p – value is less than than 0.01 indicating a significant. Correlation between Emotional Intelligence and Self-Efficacy. Hence, the null hypothesis -9 is rejected.

Findings:

The following are the major findings of the study:

1. It is found that there is no significant difference between boys and girls in respect of Self-Efficacy and Emotional Intelligence.
2. There is no significant difference between private school students and Govt. school students in respect of Self-Efficacy and Emotional Intelligence.
3. There is a significant difference between Rural and urban students in respect of Self-Efficacy of secondary school students. Rural students Self - Efficacy is better than that of Urban students.
4. There is no significance difference among different caste groups with respect to their Self-Efficacy and Emotional Intelligence of secondary school students.
5. It is found that there is no significant difference between Rural and urban students in respect of Emotional Intelligence.
6. There is high positive correlation between Emotional Intelligence and Self- Efficacy of Secondary School students.

Conclusion:

Emotional intelligence is the crucial factor which determines the excellence in performance in every sphere of human-life be it academic or social

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as mentioned in NEP 2020. The study's conclusions provide evidence for the notion and therefore have important implications for parents, teachers and for those who are involved in Educational planning and Policy-making. As the emotional intelligence and Self-Efficacy is found to be positively correlated in the study. It is suggested that parents should take care of their children in a manner which guarantees their smooth emotional development for better Self- efficacy.

The present study argues that the students' Self-motivations, beliefs and arrangements which we called Self-Efficacy plays much influential role for improving the emotional intelligence of students among many other contributing factors in this regard. The self-efficacy equips the children with motivation, confidence, self-trust and encouragements that provoke students to accomplish their daily homework and other routine educational tasks which further enables the students to maximize the chance of being successful in education and helpful in attaining overall development in life, the ultimate aim of Education.

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A Study on Challenges of IKS in NEP 2020

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Abstract:

As the world is progressing towards advancement and technological mind-frame, the importance of the ancient knowledge in the form of our multi-diverse culture, vedas and vedant cannot be simply overlooked. Our Indian culture is a rich source of knowledge in various domains of the business, society and economy, the importance of which has been truly realized by the policymakers in the recent era. Hence NEP 2020 has issued the necessary guidelines to inculcate the IKS (Indian Knowledge system) in the current education system as an essential part of curriculum to promote the Indian language, arts and culture and to improve the quality of education in the current era which is highly based on ancient knowledge and learning, the basic foundation for the growth and development of the society as a whole.

In this context my research paper titled as “Study on Challenges of IKS in NEP 2020” will help the researchers, academicians and others to identify and analyse the challenges associated with IKS in NEP 2020 and develop a better understanding of the same to find better solutions in future.

Key-words: New Education Policy, Knowledge, IKS, Education system, Traditional knowledge.

Introduction:

In this era of multi-culture and multidisciplinary approach in the field of education, the NEP 2020 envisages the importance of IKS in the current education system to overcome the challenges of future. With the help of IKS, various areas of knowledge can be explored and utilised in the right manner to understand the underlying contemporary societal issues and to do research on these important issues to find their appropriate solutions.

The IKS covers the knowledge assets from the pre-historic to the current period. NEP fosters the creation of language resources and technology to facilitate the IKS as it recognizes its importance for distributing original knowledge. The integration of IKS with NEP will help to gain insight into the critical social issues and thereby providing appropriate solutions to overcome them. In this way better utilisation of existing reservoir of knowledge can be achieved which could accelerate the momentum of rapid development in different domains of education, business or economy as a whole. This will facilitate the proper integration of traditional knowledge with the modern ways of imparting knowledge which is highly technical and useful. It will foster the growth and understanding of rich and diverse indigenous knowledge among various stakeholders and rejuvenate traditional knowledge with the help of modern technology.

Literature Review:

Integration of IKS with NEP 2020- Recent trends in NEP 2020 has emphasized that IKS will be part of the curriculum and will be incorporated

scientifically in the coming years to strengthen the education system and realise its true potential to face the global challenges. IKS along with tribal knowledge will be included in various domains of study like mathematics, engineering, philosophy, yoga, medicine, sports, games literature, languages, and various other domains. NEP has focused on specific courses in tribal ethno medicinal practices, forest management, and organic and natural farming. Under NEP, IKS will be taught as an elective course for secondary school students. These inputs will be delivered through modern technologies, fun games, and cultural exchange programs among different states. NEP focuses on multilingualism and the IKS repository has many languages. Under NEP students will be delivered curriculum in their native languages and Sanskrit the most ancient language will be taught to all. By learning different languages, they will know the rich and diverse culture of the nation. Various concepts of learning like history of Indian mathematics can be included in the normal maths class, an educational tour to the historical places can describe the history and culture of that place as well as the geography to the learners. Similarly, various types of ancient learning tools and technology such as gaming, researching, workshops, seminars, projects etc. can be applied to develop better understanding of various concepts in the field of architecture, philosophy, and Ayurveda. This is the goal of the NEP, but it will have to be done slowly and in a structured manner.

The concept of IKS is not a recent trend but enrooted in the old golden time of Indian education

system where the knowledge was transferred from generation to generation in a systematic way. The knowledge was available in the form of both literary and non-literary works. Vedic and allied literature constitute literary resources (Sanatana Dharma mainly in the Sanskrit Language), resources on other dharmic traditions (Buddhism and Jainism), and, knowledge that exists in Indian languages and dialects.

Non-literary resources are available in oral traditions across the country (B., RAJAT, & R.N., 2022). In October 2020, the AICTE headquarters became the site of the newly formed IKS division, which later formed the part of the Ministry of Education (MoE). In the knowledge repository, there are 29 IKS research centres, 17 IKS Teacher Training Centres, and 7 IKS Bhasha Kendra. These research centres are interdisciplinary and they will preserve and disseminate the knowledge for further research and societal applications. The IKS Teacher Training Centres will provide necessary training to teachers to understand indigenous and traditional knowledge and IKS Bhasha Kendras will act as centers to promote linguistics and literary knowledge.

If we look at ancient times, many historical moments related to education system can be explored. Chanakya was instrumental in the establishment of the Mauryan Empire and Panini who wrote Sanskrit grammar got their education at Takshashila University of ancient India now in Punjab, Pakistan. Ancient Indian education included the teaching of eighteen Vidya Sthanas, or schools of learning, which were imparted in renowned centres such as Nalanda and Takshashila.

Activities under the IKS Division: the activities undertaken at IKS is to provide financial assistance worth Rs. 30-40 lakh over two years by considering the need to establish IKS centres in traditional schools and STEM educational institutions that will promote IKS and related activities. Also to impart practical training, pairing of students with IKS experts under the IKS Internship Program to carry out short-term research projects/workshops/activities with a stipend (about of Rs. 25000) for two months. To establish a more structured approach to IKS teaching, the regulatory body for technical education has authorized the creation of a textbook entitled 'Introduction to Indian Knowledge System, Concepts and Applications' authored by B Mahadevan. Some IITs have shown a keen interest in IKS. IIT Guwahati has been offering Ph.D. in spoken Sanskrit and Assamese since its inception in November 2021. IIT Gandhinagar introduced the IKS optional course in 2016, well in advance of the NEP's rise in prominence.

Challenges:

1. Lack of awareness among community and stakeholders about the importance of IKS which is really important factor to develop and implement the basic elements of IKS.
2. Most of the contents of IKS is available in non-literary form which is difficult to interpret, analyse, reform and implement to make it useful for current education system.
3. No clarity about syllabus curriculum about IKS, making it vague for proper implementation in NEP 2020.
4. Teachers are not trained on the old methods of teaching and pedagogy as new ways of learning and teaching have been adopted due to technical reforms and global standards of teaching and learning.
5. Language is also one of the most important challenge to be overcome as the contents in IKS are available in different language which the researcher may not understand.
6. the colonial system of education has created a bias against the IKS in the Indian Education system
7. There is a dramatic changes in the course curriculum and pedagogy, which poses a serious challenge how IKS can be integrated with modern education system following the western education culture in the present time.

Suggestion:

1. Training the teachers will help to develop better understanding how to implement ancient learning and knowledge in the modern teaching practices.
2. Using social media and professional online platforms to create awareness and importance among the society and stakeholders to accept and understand the integration of IKS with NEP 2020.
3. Taking the help, advice and consultation of the experts already worked in the past in developing the knowledge contents for schools and higher education systems.
4. Help of technical experts can be taken in organizing and restructuring the knowledge contents related to ancient India, its culture and heritage.
5. Use of different teaching tools like educational trips, gaming, workshops, seminars, conferences, live projects as an essential part of curriculum and allocating credit points so that it can be taken seriously and implemented accordingly.
6. Taking suggestions and guidance from different experts from various domains of business, society and culture so as to enrich the curriculum contents and make it more meaningful and relevant in context of social aspects.

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Significance of Forensic Science for Crime Scene Analysis and Investigation

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Abstract:

Forensic science involve the investigation of crime through various scientific aspects, chemicals reactions and different instrumental techniques. The nature of crime and punishment has evolved throughout time, and today's conception of the offender and punishment is founded on declarations and supporting documentation. Hair follicles, microfibers, and DNA are examples of this type of evidence that can be used to solve historical crimes, expose perpetrators, and liberate the innocent.

Keywords: Forensic Science, Crime Investigation.

Introduction:

Social crime has existed from the beginning of time. This showed up as the good opposing the evil and the criminals against the law. In the past, the king would choose the offender and administer extremely harsh punishment. These penalties were imposed to demonstrate their strength and to justify their existence. Everything changed gradually; the monarch was replaced by a knowledgeable man, and the severity of the penalty meted out depended on the seriousness of the offence the offender had done. These days, when a crime is committed, the perpetrator is determined by a court of law, and the sentence is determined by the proof and declarations made in front of the court by the authorised officials. The forensic science in question is what keeps the criminal justice system in check. Without understanding the science involved, our ancestors used forensic science in a variety of contexts. These days, forensic science is a broad field that is employed for more than only solving crimes (1-2).

The term "forensic" has its roots in Roman history. Leading a party of Roman senators in 44 BC, Brutus and Cassius slashed Julius Caesar with their swords. After performing an autopsy, Antistius, a Roman physician at the time, discovered that 23 of the wounds were from stabs; all 23 wounds, with the exception of the second breast wound, did not result in death. This was the first time in history that a pathologist was recorded as offering his professional opinion. Many historians, criminologists, and medical professionals still refer to this incident and the autopsy report when trying to understand how forensic science and medical advancements have evolved (1-2).

Natural, physical, and social disciplines applied to legal issues are referred to as forensic sciences. Whether they work in forensics or another profession, the majority of them believe that the

inquiry starts at the site. Bloodstains, human remains, hard drives, ledgers, files, and medical records are examples of the kinds of evidence that require careful investigation, gathering, and preservation in order to establish the facts and ensure that the evidence is properly evaluated and interpreted. The Latin word "forensis," which meaning "of or before the forum," is the source of the word "forensic," while the word "science" is derived from the Latin word "scire," which means "to know" (3,4,5,6).

Methodology:

Based on the concept of forensic science explained in the introduction part of the paper, important techniques which are applied for crime analysis and investigations are explained in the result and discussion part of this paper.

Result and Discussion:

Even more impressive are the accomplishments in the following particular areas:

Fingerprint Examination:

A significant advancement in forensic science occurred in 1880 when fingerprint analysis was used to connect incidents to suspects. Experts from all around the world gave this study strong support, and in the end, it was recognized as crucial evidence in the legal system. The ancient Chinese also employed fingerprint analysis to identify business documents at the same time. It's critical to highlight the circumstances surrounding these innovations at the time. A prominent instance of forensic science can be found in the 18th and 19th centuries. This document demonstrates how, at that time, forensic investigators conducted criminal investigations using logic and scientific methods.

Ballistics for Forensics:

Forensic ballistics is the study of evidence from weapons that might have been used in a crime. Microscopic marks are left on the bullet and

cartridge casing by gunfire. These patterns resemble ballistic fingerprints. When forensic investigators discover bullets at a crime scene, they can test-fire a suspect's weapon and compare the markings left by the bullet from the crime scene to the marks left by the bullet from the test shot.

Toxicology for Forensics:

The study of the harmful effects of chemicals or other xenobiotics on living things, especially humans or animals, is known as toxicology. Studying the signs, causes, methods, and remedies of poisoning a living organism is known as toxicology.

In forensic toxicology, the end user can be a doctor, a non-medical professional like a lawyer, an employee, or a police officer who uses the results to interpret a cause of death, employment eligibility, or compliance with workforce laws and terms. In clinical toxicology, the end user is a physician using the findings to treat and care for an intoxicated or poisoned patient. Therefore, depending on the circumstances, the toxicologist could be a technician, physician, chemist, scientist, or laboratory specialist.

While there have undoubtedly been innovations in other fields as well, the one listed above are the most significant.

Higher processing power has contributed to the development of forensic science. Larger storage capabilities, high-resolution, detailed photographs may now be preserved and processed using intricate computational techniques. Additionally, compared to people, machine learning algorithms are able to process and learn from larger amounts of data. Ultimately, forensic science ought to progress towards transparent, objective, tried-and-true methods.

Crime Scene Analysis and Investigation:

The multifaceted area of forensic science is made up of several subfields. Among them are digital and cyber forensics, forensic ballistics, forensic toxicology, forensic biology, questioned documents, fingerprints, preventive forensics, etc. The analysis of crime scenes is an essential and fundamental component of forensic science. A thorough examination of a crime scene to determine its connection to the suspect or suspects helps to either prove or disprove the crime. An intact crime scene could be the most important source of relevant data. It is critical to recognize that each crime scene is distinct. A forensic expert has a series of tasks to do as part of a crime scene investigation. It begins with securing the scene of the incident, tends to any victims' medical needs, and concludes with presenting (3,4,5,6,7,8).

The use of scientific techniques to the detection, gathering, identification, and comparison of tangible evidence produced by illicit or unlawful civil activity is known as criminalistics. It also

entails reconstructing these incidents through analysis of the crime scene and tangible evidence (9).

Criminalists, also referred to as "forensic scientists," examine body fluids and other evidence to see if the DNA in them matches blood discovered at a crime scene. At a crime scene, additional forensic scientists might assist with identifying, gathering, and assessing tangible evidence (9).

A subset of the organisations, authorities, and procedures that work to maintain or reestablish social order includes the criminal justice system. Criminal justice is primarily administered by the police, the prosecution, the courts, and the prisons. These four organs are involved in the essential tasks of preventing, identifying, prosecuting, judging, and punishing criminals in society. An efficient criminal justice system guarantees a safe and tranquil community.

The application of sciences, such as building software system, engineering, material science, and science, to legal issues is known as criminological science. Measurable science will enable agents to understand how blood splash styles occur (material science), assimilate the structure and source of evidence, and potentially identify drugs linked to follow materials (science), or determine the temperament of a mysterious suspect (science). Its goal is to provide guidance to individuals in charge of criminal investigations and to provide the courts with accurate data that they can use to lower criminal and customary inquiries. Measurable science, which unifies all data resources, has the potential to be a fundamental and powerful tool for empowering people in the administration of fairness in criminal, public, physical, and social contexts. It is distinguished by the application of science to question-posing (10).

One of the fundamental components of criminal equity is legal science. In essence, it oversees the methodical analysis of tangible evidence taken from the crime scene. Science in sociology sheds light on the personality (who) of the person who is thought to have committed the crime. The confirmation makes it quite evident what kind of misconduct was reported. The extent of the offence is demonstrated by the scientific confirmation. The legal examination reveals the offender's typical method of operation. In the end, it provides the justification for the misconduct. The sociological agents change the victim's and the problem's characteristics. Evidence is obtained at a crime scene, from a person, or from a compound at a highly corrupt facility during associate inspection, and the results are subsequently presented in court.

Role of Forensic Science in Crime Investigation:

Forensic science is crucial in criminal equity by providing deductively based information through physical confirmation and individual

intimations. It links the criminal with the wrongdoing through items left at the scene and the casualty, ensuring the inculpability of the deuced (10).

Indeed, the utilization of scientific evidence in legal proceedings has become increasingly prominent worldwide. With advancements in forensic science, techniques such as DNA identification have revolutionized the way criminal cases are investigated and prosecuted. The impartial nature of scientific methods helps reduce bias and ensures a more objective approach to gathering and presenting evidence in court.

Fingerprints and palm prints have long been relied upon as valuable forms of forensic evidence due to their uniqueness and reliability in identifying individuals. However, the advent of DNA analysis has expanded the scope of forensic evidence, providing even more precise and conclusive identification methods.

The proliferation of forensic laboratories globally reflects the growing recognition of the importance of scientific evidence in both convicting the guilty and exonerating the innocent. These play a crucial role in analyzing and interpreting evidence, providing invaluable support to law enforcement agencies and legal systems around the world (10).

Conclusion:

It is fascinating to see how forensic science has roots tracing back to ancient civilizations and how it continues to evolve today. Validating new approaches and ensuring transparency in algorithm use are indeed crucial steps for the field's advancement and maintaining public trust. Delegating methodology development to independent scientists can help maintain objectivity and rigor in research. This interdisciplinary nature of forensic science makes it both challenging and exciting as it progresses into the future (1-2, 3-8).

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Indian Knowledge System in Contributing To Mathematics since Ages

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Abstract:

Vedic Maths is an interesting ancient mathematical process that uses a novel way of performing complicated calculations, making them faster and more accurate. This is an ancient wisdom-based technique that transforms complex number calculations into a simple process. These processes have been mentioned in the ancient Vedas by the saints of that time. Hence the name is given as “Vedic Mathematics”.

In this article, we will learn about the world of Vedic Mathematics, locate some of its key techniques and explore its origin and history. We will also learn the Sutras and Sub-Sutras of Vedic Mathematics, which are also called Formulas of Vedic Mathematics, and their applications in solving practical problems involving complex and long calculations in a simple manner.

Keywords: Vedic Mathematics, Multiplier, Vedic multiplier, UrdhavaTriyagbhyam, Sutras

Introduction:

Vedic mathematics is a system of mathematics rediscovered by Swami Bharati Krishna Tirthaji in the early 20th century. He obtained 16 sutras (formulas) and 13 sub-sutras (sub-formulas) in the Vedas that can be applied to solve any mathematical problem. Vedic mathematics is not just about arithmetic but also covers algebra, geometry, trigonometry, calculus and more. Vedic mathematics is based on the principle of unity, which means that everything is connected and can be made simpler to a single entity.

Dating back more than 5,000 years, the Vedas are the oldest and most revered texts in Hinduism. The word "Veda" in Sanskrit means "knowledge" or "wisdom." The Rigveda, Yajurveda, Samaveda and Atharvaveda are the four divisions of the Vedas. The Brahmana (rituals), the Samhita (hymns, the Upanishad (philosophy) and the Aranyaka (forest literature) are the four sections.

The Sulba Sutras, which are part of the Kalpa Sutras (ritual manuals), contain most of the Vedic mathematical knowledge. The Sulba Sutras deal with the construction of altars and geometric shapes for sacrificial rites. They also include early examples of algebraic equations, the Pythagorean theorem, irrational numbers, square roots, and pi.

Vedic mathematics was re-experienced by the Indian mathematician Jagadguru Shri Bharati Krishna Tirthaji between 1911 and 1918. He was an expert in Sanskrit, mathematics, history and philosophy. From 1925 to 1960, he was also Shankaracharya (spiritual head) of Puri. He spent several years rediscovering the Vedas and other

prehistoric scripts, alleging to have discovered a cohesive mathematical system covered in them.

These formulas were printed in a book called Vedic Mathematics in 1965. The system is based on 16 sutras (formulas) and 13 sub sutras.

1. Literature Review :

- **Ekadhikena Purvena:** It means one more than previous one we relate this sutra to multiplication of numbers (suppose a with digit [a1,a0] and b with digit [b1, b0]) whose last digit addition (b0+a0) comes out to be 10 and previous digit both number (a1=b1) is same, but along with this condition number of digit in two number should be same [1].
- **Ekanyunena Purvena:** It means one less than previous one or one less than one before, it is considered as a sub-sutra of “nikhilamnavatashcaramamdashatoh” [3].
- **Anurupye Sunyamanyat Sutra:** The Sutra Anurupye Sunyamanyatsays states that if one is in ratio, then the other one is zero [4].
- **Chalana-Kalanabhyam:** The Sutra means 'Sequential motion' or “By calculus”
- It is used to find the roots of a quadratic equation $(x^2 - 3x + 1) = 0$. [new]
- **Gunak Samuccayah:** This sutra means that factor of sum is equal to the sum of factor $ax^2 + bx + c = (x + d)(x + e)$ Where d and e are factors of c and addition of d and e is equal to b. By calculus formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$2ax + b = \pm \sqrt{b^2 - 4ac} \quad [\text{new}]$$

- **Sankalanavyavakalanabhyam:** Sankalana - Vyavakalanabhyam sutra is same as Anurupye - Shunyamanyat and is used for solving simultaneous equations. This sutra is used when the coefficients are interchanged [5].
- **Shesanyankena Charamena:** Shesanyankena Charamena means remainder by last digit. This sutra can be used to express a fraction as a decimal, up to required decimal places.
- **Puranapurabyham:** Puranapurabyham is used to simplify or solve algebra problems. [15]
- **Urdhva-Tiryakbhyam:** The word “Urdhva-Tiryakbhyam” resources vertical and crosswise multiplication. This multiplication formula is also applicable to the cases of algorithm for N bit numbers. The said sutra is useful for the multiplication of two decimal numbers also, and for binary number system also. Advantage of using this type of multiplier is that as the number of bits increases, delay and area increases very slowly as compared to other conventional multipliers [6].
- **Paravartya Yojayet:** 'Paravartya– Yojayet' means 'transpose and apply. In transpose and apply divisors are slightly greater than power of 10. In division method (From left to right) write the Divisor leaving the first digit, write the other digit or digits using negative (-) sign and place them [7].
- **Nikhilam Navatashcaramam Dashatah:** Nikhilam Sutra means “all from 9 and last from 10”. This stipulates subtraction of a number from the nearest power of 10. [9]
- **Nikhilam Sutra For Division:** Nikhilam Sutra in Division is applied when divisor is closer to and slightly lesser than power of 10. This is a Specific Method to Divide the Numbers by using Vedic Maths. This Vedic Math's Division Method can be applied when Divisor is closer to power of 10 but less than that of it [8]
- **Shunyam Samyasamuccaye Sutra:** When the sum is same then sum is zero. The “sunyamsamyasamuccaye” sutra says that if the Samuccaya is same, then Samuccaya is Zero” [10].
- **Yaavadunam Sutra:** This sutra means that whatever the extent of its deficiency, it is use for Calculating square of numbers near (or lesser) to power of 10 [11].
- **Vyashtisamanstih Sutra (Part And Whole):** This sutra is use for finding the part-whole ratio [12]
- **Gunitasamuchyah Sutra :** This sutra means the product of sum is equal to sum of product [13].
- **Sopaantyadvayamantyam Sutra:** This sutra means the ultimate and twice the penultimate of given multiplication [14].

2. Sutras Of Vedic Mathematics :

Dr. Swati Vitkar, Mrs. Shikha Pandey

The sixteen sutras (word formulas) and thirteen subsutras that form the basis of Vedic mathematics offer precise solutions to a variety of mathematical problems. These approaches are applicable to addition, subtraction, multiplication and division, as well as other mathematical operations.

Vedic Maths Main Sutras:

1. **Ekadhikena Purvena :** This sutra simplifies the squares of the numbers close to base values the meaning of this sutra is by one more than the one before.
2. **Nikhilam Navatashcaramam Dashatah :** A powerful technique for subtraction It is especially useful when the numbers are close to multiples of 10. This technique also called as “All from 9 and the last from 10.”
3. **Urdhva Tiryak** This Sutra is more efficient for multiplication, specifically useful for multiplying larger numbers. Vertically and Crosswise.
4. **Paraavartya Yojayet :** This technique aids in simplifying complex mathematical problems involving equations and variables. Transpose and adjust.
5. **Shunyam Saamyasamuccaye :** An effective approach for solving algebraic equations with equal sums on both sides. When the sum is same, then that sum is zero.
6. **Anurupye Shunyamanyat :** This Sutra is indispensable for solving proportionality problems. If one is in ratio, the other is zero.
7. **Yavadunam Tavadunikritya Varga Samam :** Whatever the extent of its deficit, lessen that deficit to form a square. Simplifies division and finding square roots.
8. **Vilokanam :** A technique that promotes sudden, intuitive solutions based on observations and patterns. By mere observation.
9. **Sankalana-vyavakalanabhyam :** This Sutra offers techniques for addition and subtraction both, facilitating fast calculations. By addition and by subtraction.
10. **Puranapurabyham :** This Sutra aids in discovering fractions and complements, streamlining various mathematical operations. By the completion or non-completion.
11. **Chalana-kalanabyham :** Useful for problems involving ratios and proportions, Differences and Similarities.
12. **Yaavadunam :** This Sutra is used to multiply large numbers by splitting them into smaller, more manageable parts, Partial Products.
13. **Vestanam :** Specific and General, This Sutra is used to solve problems where a specific value is derived from a general one.
14. **Yavadvividham Vyashtih :** Separately the particular from the general. This Sutra can find single factors from a group.

15. **Samuccaye** : Collective addition. Useful for quick sums, specially working with a series of numbers
16. **Ekanyunena Purvena** : By one less than the previous one, This Sutra is used to do division and assists in finding quotients effectively.

Vedic Maths Sub-Sutras

Vedic maths techniques are also known as sub-sutras or corollaries. They are derived from the main sutras and provide other methods or shortcuts to resolve problems quicker and easier. There are 13 sub sutras.

1. **Antyayordashakepi** : The last digit remains the same, This sub-Sutra aids in quickly determining the last digit of a product.
2. **Sopantyadvayamantyam** : The last two of the last, Useful for solving problems where the last two digits are required.
3. **Ekaadhikena Purvena** : One more than the previous, This sub-Sutra extends this technique for squaring the numbers which are close to the base.
4. **Paravartya Sutra** Transposition and adjustment, Helps in solving linear equations and balance problems.
5. **Calana-Kalanabhyam** : Differences and Similarities, Offers additional methods for solving ratio and proportion problems.
6. **Gunakasamuccayah** : The product of the sum, Useful for solving problems involving the product of two sums.
7. **Gunita Samuccayah** : The product of the sum is the sum of products, Aids in simplifying algebraic expressions.
8. **Yavadunam Tavatirekena Varga Yojayet** : By one less than the one so much is the square, Provides an alternative approach for finding squares.
9. **Antyayordasake'pi** : The last digit is as it is. Helpful for fast calculations involving the last digit of numbers.
10. **Antyayorekadhikaduhitayor** : On the last two digits, Supports efficient calculations by concentrating on the two last digits.
11. **Ardhasamuccayah Samuccayoh** : The sum of the half-sums is the sum. This trick is used for adding common denominators with fractions.
12. **Ekanyunena Sesena** : One less than the one followed by the last, Facilitates quick division.
13. **Sesanyankena Caramena** : The last by the last, and the ultimate by one less than the last. This technique is used for division, specially work well with recurring decimals.

These Sutras and sub-Sutras together constitute the comprehensive system of Vedic Mathematics, which offers a multitude of strategies and techniques for mental calculations and problem solving. Mastering these principles can significantly improve mathematical skill and efficiency.

3. Advantages Of Vedic Mathematics :

Vedic mathematics offers several benefits over traditional calculation methods. Some of the advantages of Vedic Mathematics are listed below:

- It is basic and easy to remember and learn.
- It reduces the possibility of errors also it is very fast and accurate.
- It is enjoyable and entertaining'
- It encourages innovation and lateral thinking.
- It is adaptable and versatile, and can be used in any discipline of mathematics.
- It is comprehensive and global, promoting spiritual and mental growth.

4. Application Of Few Main Sutras :

Vedic Maths is known for enhancing calculation speed and at the same time developing mental calculation without using paper and pencil.

1. The Vertically and Crosswise Technique (Nikhilam Sutra) :

This sutra is used for multiplication, specially with larger numbers.

Now take the numbers 87 by 93 and multiply these numbers using this sutra

Understand the steps to solve it.

Step 1: Base Identification

Both 86 and 94 are close to 100, hence take our base as 100.

Step 2: Calculation of differences of the numbers and the Base

- 86 is 14 less than 100, so its difference is -14.
- 94 is 6 less than 100, so its difference is -6.

Step 3: Cross Add or Subtract the Differences

The differences are then either added or cross subtracted. This means we subtract or add the difference between the first and second number, or the other way around.

- In this case, $(86 + (-6))$ or $(94 + (-14))$ equals 80.

Step 4: Multiply the Differences

Now, multiply the differences (-14×-6) , which gives us 84.

Step 5: Combine the Results

Lastly, merge the results from steps 3 and 4 to get our answer:

- The result from step 3 (80) happen to the left part of our answer.
- The result from step 4 (84) becomes the right most part of our answer.

So, merging these together, we find that **$86 \times 94 = 8084$**

2. Urdhva Tiryak Sutra :

The Urdhva Tiryak Sutra also known as “The All from 9 and the Last from 10 Technique” is a Vedic Mathematics trick for quick subtraction of a number from a power of ten (for example, 10, 100, 1000). And it works like this:

Example: Subtract 81 from 100.

Apply following steps to solve it:

Step 1. Base Identification

Start by deciding a base which is larger than the number we're subtracting and has a power of 10. In this case, our base is 100 as we are subtracting 81 from 100.

Step 2. Now subtract Every Digit from 9 and subtract the Last Digit from 10

- For the first digit of 81 (which is 8), so subtract it from 9: $9 - 8 = 1$
- For the last digit of 81 (which is 1), so subtract it from 10: $10 - 1 = 9$

Step 3. Combine

Now, add the results of steps 2 and 3 to get the answer. The result of the subtraction of the first digit will be the answer's tens place, and the result of the subtraction of the last digit will be the answer's ones place.

- So, when we add these two together, we get **100-81=19**.

3. Ekadhikena Purvena Sutra

The By One More than the One Before technique help making squaring of the numbers that end in 5 or also help squaring the numbers close to a power of 10.

Suppose the number here is 45 and we have to calculate the square of the number. For the number 45, the last digit is 5 and the 'previous' digit is 4. Hence, 'one more than the previous one', that is, $4+1=5$. The Sutra, in this context, gives the procedure' to multiply the previous digit 4 by one more than itself, that is, by 5. It becomes the L.H.S (left hand side) of the result, which is, $4 \times 5 = 20$. The R.H.S (right hand side) of the result is 25. Thus $45^2 = 4 \times 5 \times 10 + 25 = 2025$.

7. Application Of Sub-Sutras Tactics Explained Below To Improve Mental Calculations:**1. The Digital Root Method (Yavadunam Tavadunikritya Varga Samam) :**

This Vedic Mathematics approach is used for making easier calculations by resolving the digital root of a number. The digital root of a number is the single digit obtained by repetitively adding all of the digits of a number until only one digit remains.

Let's consider the number 477 is divisible by 3 by using Yavadunam Tavadunikritya Varga Samam.

Step 1. Find the Sum of the Digits

Firstly, we calculate the sum of the digits of the number. In this case, we're dealing with 477, hence add up its digits: $4+7+7=18$

Step 2. Calculate the Digital Root

Now, calculate the digital root by adding the digits again of the result from step 1: $1+8=9$

Step 3. Check Divisibility

Lastly, we check if the digital root is divisible by 3. If it is, then the original number is also divisible by 3. In this case, since 9 is divisible by 3, so is 477.

Hence, **477 divisible by 9**.

This technique can make checking divisibility faster and easier, when numbers are large.

2. Nikhilam Sutra for Vedic arithmetic division :

When Divisor is closer to but less than a Power of 10

Example: Divide 13 by 9

Solution:

"The Nikhilam Sutra is a Vedic arithmetic division technique that may be used when the divisor is near to but less than a power of ten."

1. 9 is 1(deficiency) less than 10(nearest power of 10). (that 1 is written in white color below divisor in below example)
1. Split Dividend in two parts (Quotient & Remainder) in such a way Remainder and divisor should have same number of digits. Here it is one digit.
2. Take 1st digit – (1) down as it is.
3. Multiply the above deficiency (1) with the 1 and put below 2 and column wise add them.
4. Thus Quotient is 1 and the Remainder is 4.

$$\begin{array}{r} 1 \ 3 \qquad \qquad 9 = 1 \\ 1 \end{array}$$

$$1 \ 4$$

The result is checked by ensuring that the residual is either zero or equal to the divisor. The residual is zero in this situation, hence the solution is accurate.

Conclusion:

Vedic mathematics help enhance the computational skills and it is based on logical and rational reasoning. It help in improving the accuracy and reducing the mistakes by solving the problems mentally with the application of different sutras.

Vedic mathematics is easy to learn and apply. Several mathematics functions can be solved using a single technique. Hence it is easy to learn and remember.

It helps in improving ones Intelligent Quotient. It help develop the brain muscles and good for abstract and concrete reasoning. It helps in Systematic Development of the Brain

Vedic mathematics help stimulate pupils imagination power as it is based on pattern identification and drives them to utilise their capabilities to get unique solution to a problem which helps enhance the creativity.

Vedic mathematics don't encourage use of pen and paper. Students holds the intermediate number until the final calculation is done. So, it help improve the students memory retention. It also helps in improving self-confidence with practice.

It helps pupils apply the sutras, which improves intuition. In the development of mathematical notions, intuition plays a significant role. It helps pupils to Improve their Concentration and apply the sutras, which also improves their intuition power.

In the development of mathematical notions Vedic mathematics plays a significant role. In the cut-throat competition of today's era, a candidate having these skills acquired by using these techniques definitely will have more probability of getting selected.

Future Scope :

We can conclude that the above Methods are very promising, quick and efficient. Also it can be used as multiplier in arithmetic logical unit and comparison with the existing methods can be studied and implemented.

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Reviving Ancient Wisdom: Exploring the Role of Artificial Intelligence in Vedic Studies

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Abstract:

This research paper delves into the intersection of ancient Indian wisdom and modern technology, focusing on the application of artificial intelligence (AI) in Vedic studies. Through a comprehensive review of existing literature, this paper elucidates the potential of AI to revolutionize the understanding, interpretation, and dissemination of Vedic texts and concepts. By leveraging advanced computational techniques, including natural language processing (NLP), machine learning (ML), and knowledge representation, AI offers innovative avenues for textual analysis, semantic understanding, and knowledge discovery within Vedic literature. Furthermore, this paper explores the ethical, cultural, and epistemological implications of integrating AI into Vedic studies, emphasizing the importance of preserving authenticity, fostering interdisciplinary collaboration, and respecting traditional hermeneutics. Through case studies and theoretical frameworks, this paper demonstrates how AI-driven methodologies can complement traditional scholarship, enhance pedagogical practices, and contribute to the revitalization of ancient wisdom in the digital age.

Keywords: Vedic studies, artificial intelligence, natural language processing, machine learning, knowledge representation, cultural heritage, digital humanities, interdisciplinary research.

Introduction:

In the ever-evolving landscape of technological advancement, there exists a unique opportunity to bridge the chasm between ancient wisdom and modern innovation. At the heart of this convergence lies the profound tradition of Vedic studies, a repository of timeless knowledge and spiritual insight that has captivated scholars and seekers for millennia. Rooted in the sacred texts and philosophical doctrines of ancient India, Vedic wisdom encompasses a vast spectrum of disciplines, from metaphysics and cosmology to linguistics and ritualistic practices. This research paper endeavors to explore the multifaceted role of artificial intelligence in the realm of Vedic studies, offering a compelling narrative of innovation, exploration, and cultural resurgence. By delving into the intersection of ancient wisdom and cutting-edge technology, we embark on a journey of discovery that transcends temporal boundaries and fosters a symbiotic relationship between tradition and innovation. The significance of this exploration lies not only in its academic merit but also in its profound implications for cultural preservation, interdisciplinary collaboration, and global dialogue. As we navigate the complexities of an interconnected world, the need to preserve and propagate traditional knowledge systems becomes increasingly paramount. Yet, traditional methodologies for studying and interpreting Vedic texts often face challenges of accessibility, scalability, and interpretive bias. Herein lies the transformative

potential of artificial intelligence – to transcend the limitations of human cognition and unlock new avenues of inquiry into the depths of Vedic wisdom.

Objectives: The main objective is to Examine the Intersection of Artificial Intelligence and Vedic Studies, to Foster Interdisciplinary Dialogue and Collaboration, to Propose Future Directions for Research and Implementation

Artificial Intelligence in Textual Analysis:

Artificial intelligence offers a suite of tools and techniques that hold promise for revolutionizing textual analysis in Vedic studies. Natural language processing (NLP), a subfield of AI concerned with the interaction between computers and human language, provides a fertile ground for developing algorithms and models that can parse, analyze, and interpret Sanskrit texts with unprecedented accuracy and efficiency. Machine learning (ML), another branch of AI, enables computers to learn from data and make predictions or decisions based on patterns and relationships identified in the data. By leveraging NLP and ML techniques, scholars can automate labor-intensive tasks such as morphological analysis, syntactic parsing, and semantic interpretation, thereby accelerating the process of textual analysis and enabling deeper insights into the meaning and significance of Vedic texts.

Artificial Intelligence in Commentary Generation:

Artificial intelligence (AI) offers a suite of tools and techniques that hold promise for

revolutionizing commentary generation in Vedic studies. Natural language processing (NLP), a subfield of AI concerned with the interaction between computers and human language, provides a fertile ground for developing algorithms and models that can analyze, interpret, and generate textual content with unprecedented accuracy and efficiency. Machine learning (ML), another branch of AI, enables computers to learn from data and make predictions or decisions based on patterns and relationships identified in the data. By leveraging NLP and ML techniques, scholars can automate labor-intensive tasks such as textual analysis, semantic interpretation, and commentary generation, thereby accelerating the process of knowledge dissemination and facilitating deeper engagement with Vedic literature.

Artificial Intelligence in Predicting Ritual Efficacy:

Artificial intelligence (AI) offers a suite of tools and techniques that hold promise for predicting ritual efficacy in Vedic studies. Machine learning (ML), a subfield of AI concerned with the development of algorithms that can learn from data and make predictions or decisions based on patterns and relationships identified in the data, provides a fertile ground for developing models that can analyze historical data on ritual performance, identify relevant variables and factors influencing ritual efficacy, and predict outcomes with a certain degree of accuracy. By leveraging ML techniques such as regression analysis, classification, clustering, and time series forecasting, scholars can uncover hidden patterns and correlations in ritual data, identify key predictors of ritual efficacy, and develop predictive models that can inform decision-making in ritual performance.

Artificial Intelligence in Digital Reconstruction:

Artificial intelligence (AI) offers a suite of tools and techniques that hold promise for digital reconstruction in Vedic studies. Machine learning (ML), a subfield of AI concerned with the development of algorithms that can learn from data and make predictions or decisions based on patterns and relationships identified in the data, provides a fertile ground for developing models that can simulate and visualize Vedic cosmological concepts with unprecedented accuracy and fidelity. By leveraging ML techniques such as generative modeling, neural networks, and deep learning, scholars can create immersive and interactive digital reconstructions of Vedic cosmology that facilitate exploration, discovery, and engagement.

Future Enhancements:

Looking ahead, the future of AI in Vedic textual analysis holds immense promise for advancing scholarship, fostering interdisciplinary collaboration, and preserving cultural heritage. By continuing to refine and expand AI-driven tools and

techniques for processing, analyzing, and translating Sanskrit texts, researchers can unlock new insights into the rich tapestry of Vedic literature and philosophy, thereby enriching our understanding of ancient wisdom traditions and their relevance to contemporary society. Moreover, by integrating AI-driven approaches into educational curricula, digital libraries, and research workflows, scholars can democratize access to Vedic knowledge and inspire a new generation of students and practitioners to engage with India's cultural heritage in meaningful and transformative ways.

Conclusion:

In conclusion, the integration of artificial intelligence (AI) into the field of Vedic studies represents a transformative endeavor with profound implications for scholarship, cultural preservation, and spiritual enrichment. Throughout this research paper, we have explored the multifaceted role of AI in reviving ancient wisdom, shedding light on its potential to revolutionize textual analysis, commentary generation, prediction of ritual efficacy, and digital reconstruction of Vedic cosmology. By harnessing the power of AI, scholars and practitioners can overcome longstanding challenges, unlock new insights, and foster interdisciplinary collaboration at the intersection of tradition and innovation.

Through AI-driven textual analysis and translation, scholars can decipher the cryptic verses of Vedic texts and make their timeless truths accessible to a global audience. AI-assisted commentary generation opens up new avenues of interpretation, fostering dialogue and engagement across diverse perspectives and traditions. Prediction of ritual efficacy harnesses the power of data-driven insights to inform decision-making and enhance the efficacy of Vedic rituals. Digital reconstruction of Vedic cosmology offers immersive and interactive experiences that deepen our understanding of ancient wisdom and inspire awe and reverence for the cosmic order.

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Cybersecurity Challenges in Integrating Cloud Computing with Indian Knowledge Systems

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Abstract:

This research paper explores the intersection of cloud computing and traditional Indian knowledge systems, examining the challenges, opportunities, and implications for preserving cultural heritage in the digital age. The paper begins with an overview of cloud computing adoption in India, highlighting its drivers, benefits, and government initiatives. It then delves into the importance of preserving traditional Indian knowledge systems, elucidating their cultural significance, historical foundations, and relevance in contemporary contexts.

Subsequently, the paper discusses the cybersecurity challenges associated with digitizing and disseminating traditional knowledge through cloud-based platforms. These challenges include data privacy concerns, breaches, unauthorized access, and compliance issues, which pose risks to the integrity and sovereignty of traditional knowledge.

Moreover, the paper proposes mitigation strategies to enhance the security and resilience of cloud-based repositories of traditional knowledge. These strategies encompass encryption, access controls, multi-layered security frameworks, capacity building, and awareness campaigns. By implementing these measures, stakeholders can safeguard cultural heritage, uphold ethical standards, and promote responsible stewardship of traditional Indian knowledge systems in the digital era.

Keywords: Cloud Computing, Traditional Indian Knowledge Systems, Cybersecurity Challenges

Introduction:

Brief overview of cloud computing and its increasing adoption in India.

Cloud computing refers to the delivery of computing services over the internet, allowing users to access a range of resources such as storage, processing power, and applications on-demand, without the need for local hardware or infrastructure. This model offers scalability, flexibility, and cost-effectiveness, making it increasingly popular across various industries worldwide. In India, cloud computing adoption has been on the rise due to several factors:

Cost Efficiency: Cloud computing eliminates the need for organizations to invest in expensive hardware, software, and IT infrastructure upfront. Instead, they pay for the resources they use on a subscription basis, reducing capital expenditure and operational costs.

Scalability and Flexibility: Cloud platforms enable businesses to scale their IT resources up or down quickly in response to changing demand, without the need for extensive planning or investment in additional hardware.

Accessibility and Mobility: Cloud services can be accessed from anywhere with an internet connection, enabling remote work, collaboration, and access to data and applications on various devices, including smartphones and tablets.

Innovation and Agility: Cloud computing allows organizations to experiment with new technologies and deploy innovative solutions rapidly, accelerating digital transformation initiatives and time-to-market for new products and services.

Data Security and Compliance: Leading cloud providers offer robust security measures, including encryption, access controls, and compliance certifications, to protect sensitive data and ensure regulatory compliance, addressing concerns about data security and privacy.

Support for Startups and SMEs: Cloud computing levels the playing field for startups and small to medium-sized enterprises (SMEs) by providing access to enterprise-grade IT infrastructure and services on a pay-as-you-go basis, enabling them to compete with larger organizations more effectively.

Government Initiatives: The Indian government has launched initiatives such as Digital India and Make in India, promoting the adoption of cloud computing and encouraging the development of a robust digital infrastructure to support economic growth and innovation.

Importance of preserving and digitizing traditional Indian knowledge systems.

Preserving and digitizing traditional Indian knowledge systems holds significant importance for several reasons:

Cultural Heritage Preservation: Traditional Indian knowledge systems, including disciplines such as Ayurveda, Yoga, Vastu Shastra, and Sanskrit literature, represent centuries-old wisdom passed down through generations. Digitizing these systems helps preserve and protect India's rich cultural heritage for future generations.

Access and Outreach: Digitization makes traditional knowledge more accessible to a global audience, transcending geographical boundaries and language barriers. This increased accessibility fosters greater awareness, appreciation, and understanding of Indian cultural traditions and philosophies worldwide.

Knowledge Revival and Revitalization: Many traditional Indian knowledge systems have faced decline or neglect over time. Digitization efforts can contribute to the revival and revitalization of these systems by making them relevant and adaptable to contemporary contexts, thus ensuring their continued relevance and survival.

Research and Innovation: Digital repositories of traditional knowledge provide valuable resources for researchers, scholars, and practitioners to study, analyze, and innovate upon. By digitizing traditional texts, manuscripts, and practices, new insights can be gained, leading to advancements in fields such as healthcare, agriculture, architecture, and philosophy.

Intellectual Property Protection: Traditional knowledge is often vulnerable to misappropriation and exploitation. Digitization, accompanied by appropriate legal frameworks and intellectual property rights protections, helps safeguard traditional knowledge from unauthorized use and ensures that indigenous communities benefit from its commercialization.

Integration with Modern Practices: Digitizing traditional knowledge systems facilitates their integration with modern practices and technologies, leading to synergistic outcomes. For example, integrating Ayurvedic principles with modern medicine or incorporating Vastu Shastra principles into architectural design can lead to holistic and sustainable solutions.

Empowerment of Indigenous Communities: Digitization empowers indigenous communities by providing them with tools and platforms to document, preserve, and share their knowledge on their own terms. This fosters a sense of ownership, pride, and agency among these communities, promoting cultural self-determination and resilience.

Sustainable Development: Traditional Indian knowledge systems often emphasize sustainable and harmonious living with nature. By digitizing and promoting these systems, India can contribute to global efforts towards sustainability, ecological conservation, and climate resilience.

Traditional Indian Knowledge Systems: A Cultural Heritage at Risk:

Overview of various traditional knowledge systems in India (e.g., Ayurveda, Yoga, Vastu Shastra).

India boasts a diverse array of traditional knowledge systems that have been cultivated and refined over thousands of years. Some of the points are:

1. Ayurveda
2. Yoga
3. Vastu Shastra and many more

Discussion on the cultural significance and sensitivity of this knowledge.

The traditional knowledge systems of India hold immense cultural significance and sensitivity, deeply intertwined with the country's history, philosophy, spirituality, and way of life. Here's a discussion on their cultural significance and sensitivity:

Historical and Philosophical Foundations: Many of India's traditional knowledge systems have ancient roots, dating back thousands of years to the Vedic period and beyond. They have been shaped by the contributions of sages, scholars, and practitioners over generations, reflecting a profound understanding of human existence, nature, and the cosmos.

Spiritual and Holistic Approach: Indian traditional knowledge systems often take a holistic approach to health, well-being, and living, emphasizing the interconnectedness of mind, body, and spirit. Practices such as Ayurveda and Yoga view health not merely as the absence of disease but as a state of balance and harmony at physical, mental, emotional, and spiritual levels.

Cultural Identity and Heritage: These knowledge systems are integral to India's cultural identity and heritage, serving as repositories of wisdom, values, and traditions passed down through oral and written traditions. They embody the ethos of Indian civilization and its diverse cultural tapestry, enriching the country's cultural landscape with a multitude of perspectives and practices.

Community and Social Fabric: Traditional knowledge systems are often deeply embedded in local communities and social structures, shaping collective beliefs, rituals, and practices. They play a role in fostering social cohesion, identity, and solidarity within communities, contributing to a sense of belonging and continuity across generations.

Environmental and Ecological Wisdom: Many Indian traditional knowledge systems exhibit a deep reverence for nature and the environment, recognizing humans as an integral part of the natural world. Practices such as Vastu Shastra and indigenous agricultural methods emphasize sustainable living, ecological balance, and harmony with the natural elements.

Cultural Sensitivity and Respect: Due to their historical and cultural significance, Indian traditional knowledge systems are regarded with deep respect and reverence by practitioners and communities. They are often passed down through oral traditions or sacred texts, with rituals and protocols governing their transmission and practice.

Protection and Preservation: The cultural sensitivity of traditional knowledge systems necessitates careful protection and preservation measures to safeguard them from exploitation, misappropriation, or distortion. Initiatives for documenting, digitizing, and promoting these systems must be undertaken with sensitivity to cultural nuances, community consent, and ethical considerations.

Cybersecurity Challenges:

Data Privacy and Sovereignty:

Data sovereignty concerns arise when sensitive traditional knowledge is stored on offsite cloud servers, particularly when hosted by foreign providers. This section examines the implications of data sovereignty and explores strategies for ensuring data privacy and sovereignty, including data localization and encryption.

3. Data Breaches and Unauthorized Access:

Traditional knowledge repositories stored in the cloud are vulnerable to data breaches and unauthorized access, posing risks of intellectual property theft. This section analyzes the risks associated with data breaches and unauthorized access and discusses preventive measures such as access controls and encryption.

4. Cultural Sensitivity and Misuse:

Maintaining cultural sensitivity and preventing misuse or misrepresentation of traditional knowledge is paramount in the digital domain. This section discusses the challenges of ensuring cultural sensitivity and proposes measures such as community engagement and cultural competency training for stakeholders.

5. Compliance and Regulatory Issues:

Compliance with cybersecurity regulations and legal frameworks is essential for protecting traditional knowledge. This section provides an overview of relevant cybersecurity regulations in India, including the Personal Data Protection Bill, and discusses compliance requirements for cloud-based traditional knowledge repositories.

Case Studies and Examples:

Case Study: The Aadhaar Data Breach

In 2017, India's Unique Identification Authority (UIDAI) faced a major data breach incident involving the Aadhaar database, which contains biometric and demographic information of over a billion Indian residents. The breach exposed vulnerabilities in the security of the Aadhaar system, raising concerns about the protection of sensitive personal data in cloud-based repositories.

Lessons Learned:

The Aadhaar data breach highlighted the importance of robust security measures, including encryption, access controls, and regular security audits, to protect sensitive information stored in the cloud. It underscored the need for strict regulatory oversight and compliance with data protection laws to prevent unauthorized access and misuse of personal data.

Best Practices:

Implementing strong encryption algorithms to safeguard data both at rest and in transit. Enforcing stringent access controls and multi-factor authentication mechanisms to prevent unauthorized access. Conducting regular security audits and penetration testing to identify and mitigate vulnerabilities proactively.

2. Case Study: Misuse of Traditional Knowledge in Biopiracy Cases

Several instances of biopiracy have occurred in India, where traditional knowledge related to indigenous medicinal plants and formulations has been exploited for commercial gain without proper consent or benefit-sharing with the local communities. These cases highlight the risks of cultural misappropriation and exploitation of traditional knowledge in the digital era.

Lessons Learned:

Biopiracy cases underscore the importance of recognizing and respecting the intellectual property rights of indigenous communities and traditional knowledge holders. They emphasize the need for legal and regulatory mechanisms to protect traditional knowledge from unauthorized use and exploitation, including access and benefit-sharing agreements.

Best Practices:

Establishing mechanisms for obtaining informed consent and ensuring equitable benefit-sharing with indigenous communities. Developing databases and repositories for documenting and protecting traditional knowledge, with access controls and traceability features to prevent misuse. Strengthening intellectual property laws and regulations to provide legal recourse for cases of biopiracy and cultural misappropriation.

Mitigation Strategies:

Encryption and Access Controls:

Implementing robust encryption techniques and access controls is essential for safeguarding sensitive traditional knowledge in the cloud. Recommendations include:

1. Encryption: Utilize strong encryption algorithms to protect data both at rest and in transit. This guarantees that the data will remain unreadable and unusable even in the event of unwanted access.

Access Controls: Implement granular access controls to restrict access to traditional knowledge repositories based on roles and

permissions. By doing this, critical information is protected from unauthorized users.

2. Multi-layered Security Framework:

A multi-layered security framework enhances the protection of traditional knowledge repositories by incorporating multiple security measures. Recommendations include:

Firewalls: Deploy firewalls to monitor and filter incoming and outgoing network traffic, blocking unauthorized access attempts and malicious activities.

Intrusion Detection Systems (IDS): Implement IDS to detect and respond to potential security breaches in real-time, providing early warning alerts and mitigating risks promptly.

Regular Security Audits: Conduct regular security audits and vulnerability assessments to identify and remediate weaknesses in the security infrastructure, ensuring continuous improvement and resilience against evolving threats.

3. Capacity Building and Awareness:

Capacity building initiatives and awareness campaigns are crucial for educating stakeholders about cybersecurity risks and best practices. Suggestions include:

Training Programs: Develop training programs and workshops to educate employees, administrators, and community members about cybersecurity threats, preventive measures, and incident response procedures.

Awareness Campaigns: Launch awareness campaigns to raise awareness among the general public about the importance of protecting traditional knowledge and the role of cybersecurity in preserving cultural heritage.

Collaboration and Partnerships: Collaborate with cybersecurity experts, industry associations, and government agencies to promote cybersecurity awareness and share resources and best practices effectively.

By implementing these mitigation strategies, stakeholders can enhance the security and resilience of cloud-based repositories of traditional knowledge, protecting cultural heritage and preserving the integrity of sensitive information in the digital age.

Conclusion:

In navigating the complexities of digitizing and preserving traditional Indian knowledge systems in the digital age, it becomes evident that a multi-faceted approach is imperative. This research paper has delved into various facets, including cloud computing adoption, the importance of preserving traditional knowledge, cybersecurity challenges, case studies, and mitigation strategies, to underscore the critical need for responsible stewardship and collaborative efforts in safeguarding cultural heritage. As cloud computing continues to gain traction in India, driven by cost efficiency,

scalability, and accessibility, it offers both opportunities and challenges for the preservation of traditional knowledge. The significance of preserving traditional Indian knowledge systems cannot be overstated, as they represent centuries-old wisdom, cultural identity, and ecological sustainability. However, their digitization brings forth cybersecurity challenges such as data privacy concerns, breaches, unauthorized access, and compliance issues, which pose risks to their integrity and sovereignty.

Examining real-world examples, such as the Aadhaar data breach and biopiracy cases, underscores the urgency of addressing cybersecurity risks in traditional knowledge repositories. Yet, amidst these challenges lie opportunities for innovation, collaboration, and empowerment. Mitigation strategies, including encryption, access controls, multi-layered security frameworks, capacity building, and awareness campaigns, offer pathways towards securing traditional knowledge in the digital realm. In conclusion, safeguarding traditional Indian knowledge in the digital age requires concerted efforts from stakeholders across sectors. By embracing responsible stewardship, leveraging technological advancements, and fostering cultural sensitivity, we can ensure the preservation, accessibility, and ethical use of traditional knowledge for generations to come. As custodians of cultural heritage, it is incumbent upon us to uphold the values of respect, reciprocity, and community consent in our journey towards a digitally inclusive future.

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The Need of Lora Cellphone Bridge Devices for Communication

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Abstract:

In this fast pacing interconnected world where communication plays a vital role bringing the geographical borders and people together by exchanging information, trade and help in the societal progress. However, still a significant portion of the global population remains excluded due to the high-costing traditional infrastructure. This paper proposes a low-cost and portable solution: a wireless ESP32 cell-phone bridge, using the LoRa technology having long range and low power capabilities. A bridge is a gateway which enables communication between the unconnected and the resourceful areas of cellular networks via smartphones.

Introduction:

According to Cisco's prediction, 500 Billion devices will be connected to IoT paradigm by 2030 [1]. The Internet of Things (IoT) refers to a set of technologies cooperating to network the physical world [2], and aims to interconnect everything. Communication in today's world is so important that without it we cannot imagine our daily tasks getting completed at all. Just think what if there is still a place where there is no network and been unable to talk to the people which are just existing a few kilometres away from them. We live in a world where we talk about RTI (Right to Information) but still there are many challenges faced in different parts globally in order to communicate digitally. Some of the challenges are:

- 1) Hilly Terrain which leads to fading problems. SAR (Search and Rescue) operations face problems due energy crisis any operations takes more than 50 hours [3].
- 2) Very few people living in that area so big telecom giants don't spend that much money on infrastructure.
- 3) People not having a proper mobile device which supports the current technology.
- 4) High-cost devices to improve signal strength but still a dependency on cellular networks.

In order to ensure that every individual is always connected and is able to communicate even when there is no cellular network available. We overcome this problem by using LoRa technology integrated with ESP32 board, a versatile Wi-Fi and Bluetooth-enabled microcontroller which is ideal for interfacing with various sensors and devices transforming it into a communication hub. LoRa stands for Long Range Radio, it is unlike any other technology such a Wi-Fi, Bluetooth which covers merely metres in range whereas on the other hand

Lo Ra boasts exceptional range reaching in kilometres which allows the bridge to connect two or more devices spread across vast distances, even in areas with poor infrastructure. You can think of LoRa device as low power pocket radio tower enabling communication when traditional options fail.

This paper proposes that a LoRa based chat application which enables real time human interaction in remote areas of the world with the help of our devices and their smartphones enables them to exchange messages with one another, fostering local communication which can help in rural communication, disaster relief, tourism activities, personal communication in an event or an industry having their own personal mode of communication. This chatroom will have channels which can be created on the application, users can join the channel and then broadcast a message which will reach to every user in connected to the channel. This organisation of this paper is as follows: In Section II, previous paper would be reviewed and studied and based on that what further enhancements we can adapt would be covered in Section III. In Section IV, we would conclude this paper.

Literature Review:

Here are the list of related research papers taken into account given in the tabular form given below. We have used tabular form for a better understanding. The table is divided into three columns i.e Author's Name & Year, Paper's Title and Findings or Results of the paper. We have further bifurcated the paper into four categories. In the First category we reviewed the papers on Physical Layer of LoRa technology, the Second category is all about Energy & Power Usage of LoRa, the Third category comprises of Networking

and Security Protocols. The last category has papers in various fields.
reviewing Applications of LoRa and its case studies

Table 1: Reviewing Past Year Papers of LoRa Technology

| Author's Name & Year | Paper's Title | Findings/Results |
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| Aloÿs Augustin et. al (2016) [4] | A Study of LoRa: Long Range & Low Power Networks for the Internet of Things | Analysis of the LoRa modulation, including the data rate, frame format, spreading factor, receiver sensitivity etc. Due to chirp spread spectrum modulation and high receiver sensitivity, offers good resistance to interference. Field tests show that LoRa can offer satisfactory network coverage up to 3 km in a suburban area with dense residential dwellings. The spreading factor has significant impact on the network coverage, as does the data rate. |
| Christos Bouras et. al (2020) [3] | Energy Efficient mechanisms for LoRa Networks | This paper primarily focuses on SAR (Search and Rescue) operation. The energy efficiency of wearable devices is crucial requiring batteries to last over 50 hours. To address this, our system utilizes LoRa technology for user localization, employing trilateration and Time Difference of Arrival (TDoA) instead of GPS to reduce energy consumption. We propose an energy-efficient mechanism based on user state and device battery levels. Realistic simulations assess the system's performance for single and multiple wearable devices across various mobility models. Results demonstrate reduced energy consumption without compromising network delivery, critical for utilizing LoRa packets in locating lost individuals. |
| Umber Noreen et. al (2017) [5] | A Study of LoRa Low Power and Wide Area Network Technology | LoRa offers maximum packet size of 256 bytes. Wider Bandwidth of 125kHz, 250kHz, 500kHz. Lora offers five code rates for forward error correction which permits the recovery of bits of information due to corruption by interference. Higher spreading factor provides longer range. An increase in CR and SF values decreases the effective data rate and causes increase in time on air of LoRa packet. Choice of bandwidth also influences on data rate and time on air of a packet. |
| Henri Ruotsalainen et. al (2022) [6] | LoRaWAN Physical Layer-Based Attacks and countermeasures | This paper brings light to the topic of attackers exploiting vulnerabilities of the physical layer (the radio communication layer) to disrupt network operations (jamming), steal data, impersonate legitimate users (spoofing). To counter these attacks various methods were discussed some of them are jamming detection, frequency hopping (changing channels), and spreading factor optimization (balancing range and jamming resistance) can be used. Device Authentication using unique signal characteristics can further enhance security. |
| Laura García et. al (2019) [7] | Wi-Fi and LoRa Energy Consumption Comparison in IoT ESP 32/ SX1278 Devices | LoRa is supposed to have less power consumption than Wi-Fi. Lower SF and increase bandwidth for it to consume less power. In the case of the Heltec Wi-Fi LoRa 32 (V3) device, similar results have been obtained for both LoRa and Wi-Fi with the default settings and 5 seconds of transmission interval |
| Rachel Kufakunesu et.al (2020) [8] | A Survey on Adaptive Data Rate Optimization in LoRaWAN: Recent Solutions and Major Challenges | We learnt about ADR (Adaptive Data Rate) schemes which are used to minimize battery usage of each node and maximize transmission power. The reviewing of ADR Algorithms was done. Algorithms are made in such a way that the transmission parameters are optimised for better results. The gaps discussed were use of machine learning by the NS (node station) |
| Arvind Singh Rawat | LoRa (Long Range) and LoRaWAN Technology for IoT | This paper gives us an overview on LoRaWAN and its specifications, Comparison of LoRa vs 5G. We also learnt about Chirp Spread Spectrum (CSS). CSS used specially in RADAR |

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| et.al (2020) [9] | Applications in COVID-19 Pandemic | system.CSS is best suitable robust performance with very low power dissipation with small response delay and low path resistance. |
| Mohama d Saban et. al (2021) [10] | Experimental Analysis of IoT networks based on LoRA/LoRAWAN under Indoor and Outdoor Enviornment: Performance and Limitations. | This paper divides the LoRa end devices into 3 classes which are Class A, Class B, Class C. The authors did two experiments to show various results on how the distance from the gateway can increase or decrease the number of Received Packets. In both the experiments, iM880B LoRa radio module for end-devices and iC880A LoRa connector for the gateway. The end devices closest to the gateway sent 100% of the packets, as the distance increased to 75m the efficiency was down at 50%. |
| Riccardo Berto et. al (2021) [11] | A LoRa based mesh network for peer to peer long communication | In this paper authors proposed a multi-hop and gateway-free LoRa-based mesh LPWAN where the participating nodes are not just data-collecting endpoints but also network-based tasks such as routing and forwarding. Their solution is also very flexible, since it foresees the possibility to interface the nodes to more powerful devices directly connected to the Internet. Nodes can transmit a few parallel received/generated messages through multiple hops. |
| Lorenzo Carosso et. al (2020) [12] | A survey on devices based exploiting LoRa communication | In this research paper authors investigated the recent trends in device's choice within applications that use LoRa modules. SX1272 has a great strength of the signal in indoor and outdoor urban environments; performance remains good even with tall buildings, but the reduction of the signal is not linear. SX1276 has good performances in rural environments, for example in agriculture systems. SX1278 packets delivery in urban areas is good. SX1261 and SX1262 have great performances in Earth-space communications with a lifetime over 4 years. |
| Ivan Bobkov et. al (2020) [13] | Study of LoRa Performance at 433 MHz and 868 MHz Bands Inside a multistory building | The study results show that 433 MHz frequency provides a stronger LoRa signal due to greater SNR and RSSI values. Nevertheless, 868 MHz ISM band shows more stable packet reception at every spreading factor. Considering that the less the SF value is the less energy is being consumed, it can be recommended to use 868 MHz LoRa modules at 10th spreading factor in nine-story buildings. With greater floor difference between modules it would be better to use higher values of spreading factor. |
| Tran Huu phi et. al (2022) [14] | Implementation and evaluation of multi-hop LoRa networks | In this paper, authors discussed the implementation and experiment of the Two-hop RT-LoRa protocol which was proposed. It was shown that the protocol could achieve high reliability in data transmission in indoor and outdoor LoRa network environments. By selecting relay nodes carefully, the protocol could extend network coverage across multiple buildings. Furthermore, it was shown that a two-hop LoRa network could effectively cover a large area of 300x440 with high reliability. |
| Arijit Dutta et. al (2022) [15] | Meshtastic Infrastructure-less Networks for Reliable Data Transmission to Augment Internet of Things Applications. | This paper provides the experimental study results of teletype data transmission on the basis of LoRa technology using meshtastic devices. The developed technology can be used in the situations where there is no telecommunication/Internet system for data transfer across long geographical regions. meshtastic is an ongoing open source community project. There are future improvements that can be implemented on sending and receiving multimedia data like image, audio and video. Multi-hop unicast is a controlled broadcasting through several nodes in a channel. It will be very interesting to explore how the data transmission can be done. |
| Ilsun Yu et. al (2018) [16] | An Enhanced LoRaWAN Security Protocol for Privacy Preservation in IoT | A parking system with LoRaWAN Security protocol. The improved LoRaWAN security protocol incorporates various cryptographic techniques including AES encryption, secure hashing, and authentication via mechanisms like Diffie-Hellman. |

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| | with a Case Study on a Smart Factory-Enabled Parking System | Additionally, it adopts privacy-preserving strategies like pseudonymization to obscure device identities, enhancing privacy in IoT applications. This protocol guarantees confidentiality, integrity, and authentication of data, vital for securing smart factory-enabled parking systems. Its holistic approach effectively mitigates security threats and protects sensitive information transmitted across LoRaWAN networks." |
| Kevin Dai mi et. al (2021) [17] | Implementing cryptography in LoRa based communication devices for unmanned ground vehicle application | This project integrates LoRa, cryptography and robotics for secure long-range communication in military and Search and Rescue. Using AES-128 encryption and HMAC SHA-256 authentication. The system ensures data security. Tested on a Pioneer-P3Dx robot, it successfully navigates cluttered environments, validating its functionality. Project's findings suggest potential enhancements: extending the communication range, upgrading hardware, and enabling multi-robot communication. The security features and structure of the LoRa is upon the standard protocol called LoRa wide area networks (LoRaWAN). The protocol is then implemented with a pair of LoRa devices and its functionality is tested from a remote location by controlling and monitoring a Pioneer-P3Dx robot from a distance of 1.2 miles. |
| Ravi Kishore Kodali et .al (2018) [18] | An IoT based Smart Parking System using LoRa | This project introduces a Smart Parking System using IoT and LoRa technology to address urban traffic congestion. It employs ultrasonic sensors for monitoring parking availability and strategically utilizes LoRa transmitters and receivers for a cost-effective communication range of up to 5 kilometers. This uses Ultrasonic sensor to detect the vehicle in the parking slot, TTGO-ESP32-LoRa (transmitter) boards placed at different parking lots in different places to transmit the data. TTGO ESP32-LoRa (receiver) receives the data which is placed near to the parking lots and also sends the slot information to IBM Watson IoT platform through WiFi protocol present in the Esp32 board. It is a very Innovative Project. |
| Joan Miquel Sole et. al (2019) [19] | Implementation of a LoRa Mesh Library. | In this study, the authors introduce LoRa-Mesher, an open source implementation of a distance vector protocol for LoRa mesh networks. The library is detailed and evaluated in real-world experiments, showcasing its reliability efficient control overhead management, and adaptability to Various scenarios. The implemented library has been tried tested on embedded boards featuring an ESP32microcontroller and a LoRa single channel radio By using our LoRa mesh library nodes don't need to connect to a LoRaWAN gateways. LoRaMesher's significance lies in its practical applicability as a foundation for IoT-based applications, distinguishing itself from theoretical proposals by providing a tangible, ready to use libraries. Future enhancements are suggested to expand capabilities, ensuring reliable packet delivery and handling larger payloads, making LoRaMesher a valuable tool for the IoT community. |
| Mohan Sai Kuthada et. al (2018) [20] | LoRa based Smart Irrigation System | This paper proposes a smart irrigation system based on ESP32 TTGO LoRa. the ESP 32 TTGO placed in the farm which is connected to another ESP32 TTGO placed within the range of 5KM (range can be improved if an antenna with high gain is used) through LoRa protocol. The module is connected to IBM cloud through the internet using the WiFi stack present on ESP32 which demonstrates the continuous qualities.Sensors utilized are water flow sensor which can measure the amount of water utilized, a soil moisture sensor which can compute the moisture of the field keeping the crops from waterlogging issues and a temperature sensor to check the temperature since crops are temperature |

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| | | sensitive as well. Thus system aware the farmer and IBM Watson, so that sprinklers or water pump is turned on to save the crop. The sensors are connected to the TTGO board and are placed in different fields. Each board is given a name (field 1, field 2) Sensor data along with the name of the board is sent to main TTGO board which is connected to the Cloud. The published sensor information on the cloud is analyzed using IBM Watson or by the user, by comparing the data with known optimized data available. Necessary triggers are sent back from the cloud to the main device along with device name and action to be carried out whether to turn 'on' or 'off' the water pump. The main node sends the information to the respective nodes and thus automates the water pump using the relay. sensors like temperature, soil moisture and water flow and the other is placed within the range of 5KM which is connected to the internet using the WiFi protocol of ESP 32 and thus the data is published onto the IBM Bluemix. |
| Huthaifa Ahmad Obeidat et. al (2021) [21] | A Review of Wireless Positioning Techniques and Technologies: From Smart Sensors to 6G | This paper explores wireless positioning methods from smart sensors to anticipated 6G networks. Diverse techniques covered are GPS, Wi-Fi, and cellular based positioning, comparing accuracy, coverage, and applications. The review also discusses challenges advancements. |
| Gianni Pasolini et. al (2018) [22] | Smart City Pilot Projects Using LoRa and IEEE802.15.4 Technologies | The application of IoT in public lighting, using mesh topology and IEEE 802.15.4, led to a significant reduce in power consumption 76% and cost savings 73% in Montechiarugolo in 2017. Research in 2018 explored LoRa technology for building monitoring in smart cities, revealing an effective coverage range of 1 to 2 kilometer in densely populated urban areas contingent on factors like gateway placements and spreading factor. Mesh Networks and short range communication technologies are suitable to integrate with cellular networks and are more preferable for instances where end to end communication are not possible to limit the power and propagate through obstacles. In this case hop by hop communication from device to device can be used to convey information from the control center to the network and backward. In this respect, different technologies can be adopted, such as IEEE 802.11 and IEEE 802.15.4. One important operational aspect of the IEEE 802.15.4 technology is its ability to define different types of devices Reduced Function Devices, which have limited capabilities and cannot forward data, and Full Function Devices, that can act as dynamic routers in a mesh topology. Different solutions may be adopted at the network layer to create mesh topologies e.g. Zigbee, 6LoWPAN etc in this work we used apropprietary routing algorithm inspired by the Many-to-One routing strategy defined in Zigbee. |
| T S Jahnavi et. al (2022) [23] | Health monitoring smart glove using esp32 microcontroller | The Health Monitoring Smart Glove integrates ESP32 microcontroller technology for health monitoring to the needs of the elderly and physically challenged individuals. It includes flex sensors for gesture-based control a DHT11 sensor for temperature and humidity monitoring, and a MAX30100 pulse oximeter for heart rate and blood oxygen levels. The system excels in emergency alerts and medication reminders, displaying real-time data on an OLED screen and securely storing it in the cloud. Future enhancements may involve machine learning integration and the addition of EMG sensors, promising to revolutionize healthcare with efficient solutions. The main feature of the glove is to communicate the needs of the user which can be accomplished by a flex sensor. The project's heart, the Glove, is where the sign language translator begins. The black glove has nine flex sensors, |

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| | | four touch sensors, one two-dimensional x-y-axis accelerometer, and one one-dimensional z-axis accelerometer. The flex sensors are the most significant sensors since most letters can be recognized based on finger flexes. All fingers, with the exception of the thumb have two flex sensors, one at the knuckle and the other at the lower joint. As a result, these fingers can flex to two different degrees. |
| Dr.J. Geetha Ramani et. al (2022) [24] | LoRA Wireless Transmission For Health Monitoring of ICU | There is an urgency of real time health monitoring in intensive care units (ICUs). Manual tracking of vital parameters like temperature ,oxygen saturations, pulse rate, blood pressures, and heart rates has proven cumbersome and error prone. To address this challenge the project leverages LoRa wireless technology, Arduino Uno, and various sensors for seamless ICU health monitoring. ICU with IoT Patient Monitoring System is a Raspberry Pi-based system that collects patient data using a few sensors. It communicates this information to the internet via the Wi-Fi module. This blood pressure and heart rate monitor module gets electrically connected to the system. The sensor detects systolic, diastolic blood pressure and heart rate, and sends data to the central controller when a button is pressed. The Temperature sensor detects surroundings Temperature, therefore when it is close to the user, it reports the person's body temperature and the doctor may retrieve these crucial parameters relevant to the patient's health from anywhere around the world using the IOT Gecko web interface. |
| Thimmapuram Swati et. al (2019) [25] | Industrial Process Monitoring System Using Esp32 | Industrial Process Monitoring System." The project's core objective is to provide a cost-effective solution for small-scale industries to monitor and control essential parameters such as temperature, humidity, smoke, and more. The ESP32 microcontroller, equipped with built-in Wi-Fi and Bluetooth capabilities, acts as a central hub for collecting data from a range of sensors and transmitting to the cloud. This data can be conveniently monitored and managed through mobile applications like Blynk and cloud-based platforms like Cayenne. The adoption of IoT in industrial settings holds immense promise, and this project underscores the value it can offer. It not only eliminates the need for extensive wiring but also enables web-based remote monitoring, facilitating rapid responses to equipment failures. As industries seek streamlined maintenance and improved safety, this project embodies the IoT-driven solutions of the future. Moreover, it lays the foundation for potential enhancements, including bolstered security measures, expanded parameters for monitoring, and broader applications in various industrial contexts. As the IoT landscape continues to evolve, projects like these exemplify the ongoing synergy between hardware, software, and cloud-based technologies, ultimately making industrial processes more efficient and adaptive. |
| Ashish Jha et. al (2022) [26] | Smart Lighting System Using LoRa WAN Technology | Smart Lighting System Using LoRa WAN Technology focusing on the creation of an energy efficient street lighting system. The project employs LoRa technology, Arduino microcontrollers, and various sensors to achieve automated lighting control and monitoring. This innovative approach has the potential to reduce energy consumption making a total of 10-38% of total energy bills typically mainly for street lighting in urban area. LoRa technology enables connectivity over long distances, It connects sensors situated 15-30 miles away in rural areas, extending the reach of IoT solutions to remote locations. LoRa enables multi-year battery lifetime with some devices lasting up to 20 years or more, reducing maintenance need It supports a large number of messages per base station, allowing for scalability in IoT deployments. Enables tracking applications without the need for GPS or additional power consumption, optimizing energy usage. |

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| Marek Babiuch et. al (2019) [27] | The ESP32 Microcontroller for Data Processing | The project focuses on the ESP32 microcontroller's versatile applications in IoT and data processing. It leverages Arduino Core for ESP32 for rapid prototyping, Espressif IoT Development Framework for more sophisticated systems, and MicroPython for lightweight solutions. Leveraging ESP32 integrated Wi-Fi, Bluetooth, and extensive peripherals, it offer solutions with dual core processing and cryptographic acceleration. |
| Anjali Shrivastava et. al (2021) [28] | Research Paper for Smart Home Automation System using ESP32 with Blynk, IR Remote & Manual control Relay, IoT Project | Anjali Shrivastav's research introduces a smart home automation system utilizing ESP32, Blynk, IR remote, and manual control relays to manage eight appliances via smartphone, IR remote, and manual switches, with or without internet connectivity. Focusing on cost-effectiveness and energy efficiency, the system enhances living standards, particularly benefiting people with disabilities. Key components include ESP32 DEV KIT V1, 8-channel 5v SPDT relay module, TSOP1838 IR receiver, and custom PCB creation. Future scope could be expanding appliance control, refining the user interface, and exploring additional features for home automation. |

Enhancements:

In paper [29], we learnt about the about the shape of the radiation pattern of LoRa antenna. The experiment was performed with a bandwidth of 125KHz and had a range of frequency ranging from 902 - 928 MHz. We also learnt about the indoor transmission within buildings and indoor transmission between buildings. The data had values of based on RSS (received signal strength) which had the largest values when the node is positioned nearest to the gateway or when the node is in the vicinity.

Paper [30] brings light to the issue where remote regions lack cellular connectivity, so LoRa enabled ESP32 chips are transformed into an armband or watch for the mountaineers, the network will consist of node devices with each trekker along with a base station. Every device in the network is interconnected to each other via a long-distance network. An application is made to on smartphones system consists of Arduino UNO Rev2 as its microcontroller, NEO-6M GPS modules, ADXL345 and ADXL335 accelerometers, SX1276 LoRa modules, HC-05 Bluetooth module, and a power supply.

In this paper [31] authors presented a novel, freely available and open-sourced modem firmware for LoRa enabled MCUs, called rf95modem. Using such a companion device with firmware, a novel device-to-device LoRa chat application for iOS, Android, and laptop/desktop computers was created. An integration of LoRa into the disruption-tolerant networking software DTN7 was presented. The evaluation showed that their approach is technically feasible and enables low-cost, low-energy, and infrastructure-less communication.

Conclusion:

After reviewing all the papers and doing an extensive research which brings us near to the answer of the question about the need of LoRa

cellphone as a primary source of communication and how it can replace the modern traditional way of communication. The Market size of IoT is increasing day by day so we can say the market of LoRa cellphone will increase too if some measures are checked and are kept in check. The maximum number of users using this technology can be seen in SAR operations, Events where traditional communication networks are jammed. It can also be used for military purposes and can help them in operations within a short range.

We conclude that LoRa technology is going to revolutionize this field of communication but the major challenges we saw its expansion are security and networking issues. Improvements in network strength has been seen in the past years but still there is a gap in the security domain as its important that users feel secure while communicating on any LoRa chat based app.

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Local Based Challenges and Executive Limitations of Water Management in the Thane-Palghar District of Maharashtra

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Abstract:

This paper aims to examine the hydrogeological conditions of the Thane-Palghar district. The study concerns the local water management in the Thane-Palghar district. The researcher used secondary data to find out the challenges and limitations of water management in selected areas. Research emphasizes that water management in the Thane-Palghar district, Maharashtra, comprise a comprehensive approach considering local needs, geological features, population density, and environmental factors. The paper pointed out that concerned areas still experienced a drinking water deficit in the latter part of the summer because of the runoff and heterogeneity in rainfall, as well as the poor water storage and minimal recharge, which are compressed by unfavourable geological layers. The district's western section faces challenges in obtaining drinking water as a result of creeks and seawater interruption. The status of water management in Maharashtra state was studied by the researcher by identifying the limitations of groundwater management for irrigation. The paper pointed out the main problems of water management as groundwater depletion and lack of policy implementation with financial constraints. Researcher suggested a general characteristic with expectations of participation and coordination from the shareholders for the successful completion of water demand from time to time in selected areas.

Keywords: Geological, Groundwater, Limitations, Water Management.

Introduction:

The majority of the nation's agriculture is dependent on the monsoon, which occurs only for three or four months out of the year. Rain-fed crops also do not produce well when the monsoon is not strong enough. Thus, groundwater is the only dependable resource for agriculture, and we must rely on it for almost eight months of the year. Because of its unique morphological and hydrogeological setup, Maharashtra is ranked among the lowest states in the nation when it comes to using groundwater for irrigation. One of the Konkan districts that receives a lot of rainfall is the Thane-Palghar. Due to its unique physiographic configuration, the district still experiences a drinking water deficit in the latter part of the summer. Most of the rainfall falls as "runoff." The heterogeneity, poor water storage and minimal recharge are impacted by unfavourable geological layers.

Objectives:

1. To understand the hydrogeological conditions of the Thane-Palghar District of Maharashtra State.
2. To recognise the water management in the Thane-Palghar district.
3. To identify the challenges and limitations of water management in the Thane-Palghar District of Maharashtra State.

Hydrogeological Conditions of the Thane-Palghar District:

Train connections, metal roads and highways provide excellent access to all areas from the Thane-Palghar. The principal crop is paddy. Nonetheless, the district's coastal region is home to horticulture. The majority of small and medium-sized enterprises and industries are located in the town districts. The Vaitarna River originates east of Shahapur and flows through Wada and Palghar before draining into the Arabian Sea in the west. The Vaitarna River has the tributaries Pinjal, Surya, Deherje, and Tansa. There are course shallow soils on the upper hills and eastern mountainous slopes have medium-deep greyish-black soil. Along the river plains of Vaitarnas Ulhas and its tributaries, there are deep black soils and along the coastal strips, there are coastal salt-bearing soils. A significant portion of the district is blocked by the basalt lava flows.

Cracks that enable groundwater storage only appear after weathering. However, the supply of groundwater is primarily limited to plains and valley fill due to unfavourable morphological features. Only certain areas of the tahsils of Dahanu, Talasari, Vasai, and Palghar have groundwater-based irrigation. The majority of crops irrigated are horticultural ones. Although the sandy surface around the shore yields enough, even slight

overexploitation leads to saline water disturbance. In 34 elementary watersheds, 92 observation wells have been installed to monitor groundwater levels. There are four manual monitoring sessions for static water levels per year. Planning for future groundwater development and evaluating groundwater resources can benefit from the data on water levels gathered. Inside the district paddy, vegetables, dal, Turi, Varai, etc. and in the coastal parts coconut, betel nut, chikku, flowers etc. are the main crops. The Wada Kolam is a very famous rice cultivation in Wada taluka. There are 40 hot springs in the areas of Bhiwandi and Palghar talukas, especially in Vajreshwari, Sativali, Haloli, Paduspada and Koknere.

Water Management in the Thane-Palghar District:

- 1. Assessment of Water Resources:** This includes rivers, lakes, groundwater sources, and rainfall patterns. Mapping identifies the potential areas for water harvesting and conservation. According to the Irrigation and Flood Control Department of the Government of Maharashtra, the 2011-12 report in this district total number of 235 bore wells installed. A total number of 188 bore wells were successfully operated in these areas. Nearly 15 bore wells were with high capacity. In the same year, 188 hand pumps were installed which increases the total number of working hand pumps to 6297 with 87 electric pumps.
- 2. Community Engagement:** Various local communities, NGOs, and governmental bodies are in the water management process and carry out programmes about water conservation and management. They also conduct awareness programs to educate residents about the importance of water conservation and sustainable usage practices. By the government, 66 villages were selected for the water shade programme in 2011-12 out of which 49 villages benefited from this programme. A total area of 77,550 hectares was projected to be covered under this programme and finally, an area of 55,329 hectares was covered.
- 3. Groundwater Management:** Monitor groundwater levels regularly and implement measures to prevent over-extraction. Encourage the recharge of aquifers through artificial recharge techniques such as percolation pits, recharge wells, and check dams.
- 4. Water Conservation in Agriculture:** Promote water-efficient agricultural practices such as drip irrigation, mulching, and crop rotation. Provide training and financial support to farmers for adopting sustainable farming techniques that reduce water usage.
- 5. Reservoir Management:** Manage existing reservoirs efficiently to ensure optimal water storage and distribution. Implement measures to prevent contamination and siltation of reservoirs, such as afforestation in catchment areas and sedimentation control.
- 6. Disaster Preparedness:** Develop contingency plans for managing water during natural disasters like floods and droughts. Establish emergency response teams and stockpile essential supplies for rapid deployment during emergencies.
- 7. Policy and Regulation:** Formulate and enforce water management policies and regulations tailored to the specific needs of the Thane-Palghar district. Ensure compliance with water quality standards and promote equitable distribution of water resources among different sectors.

Challenges of Water Management in the Thane-Palghar District:

- 1. Population Growth:** According to the 2001 census, The Thane-Palghar district has 81,28,833 residents overall. The remaining population is urban, making up 22,28,873 (27.4%) of the total. The population of Schedule Tribes is 9,51,205 (11.7%) and Schedule Castes is 2,71,797 (3.3%). There are 43,77,806 men and 37,51,027 women in the population. The Thane-Palghar district has experienced rapid population growth, leading to increased water demand for domestic, industrial, and agricultural purposes.
- 2. Urbanization and Infrastructure:** Urbanization in the Thane-Palghar has put pressure on existing water infrastructure. Old pipelines, leakages, and inadequate sewage systems contribute to water wastage and contamination, bluster health risks to residents.
- 3. Groundwater Depletion:** Over-extraction of groundwater for irrigation and drinking water purposes has led to declining water tables and saltwater intrusion in coastal areas. Balancing groundwater usage with recharge efforts is crucial for sustainable water management.

Table 5.1. Depletion of Groundwater in the Thane-Palghar District:

| Areas | Number of Talukas | Depletion in groundwater number of villages | Depletion in groundwater number of Talukas |
|---------|-------------------|---|--|
| Thane | 07 | 04 | 01 |
| Palghar | 08 | 07 | 04 |
| Total | 15 | 11 | 05 |

Sources: www.mahasdb.maharashtra.gov.in

In table 5.1 it is observed that a total of 15 talukas, nearly five talukas suffered from the depletion of groundwater in 2011-12 where 11 villages suffered from shortages of groundwater as per the record of the government of Maharashtra.

4. **Topographical Constraints:** The Thane-Palghar hilly terrain and dense vegetation pose challenges for water conservation and distribution. Constructing the infrastructure for water storage, harvesting, and conveyance requires careful planning to minimize environmental impact.
5. **Financial Constraints:** Limited financial resources may hinder the implementation of water management projects in Thane-Palghar. Securing funding through government schemes, public-private partnerships, and international aid is essential for infrastructure development and capacity building.

6. **Policy Implementation:** Despite having robust water management policies at the state and national levels, effective implementation at the grassroots level remains a challenge. Strengthening institutional capacities, enhancing governance mechanisms, and fostering accountability are necessary for translating policies into action.

In 2011-12, the government of Maharashtra planned a total of 1135 projects at the Zilla Parishad Level and 9 projects at the local level in the Thane-Palghar district. Zilla Parishad level each project covered areas of 1 to 100 hectares and local level each project covered areas of 101 to 250 hectares. The government commanded 9683 hectares of the area under the Zilla Parishad level and 1305 hectares' area under the local level but in actual implementation finally area of 2110 hectares and 32 hectares were irrigated. It shows the problems of implementing the water management policy in the state as well as in the country.

Table 5.2. Commanded Areas under the Irrigation Projects:

| Zilla Parishad Level (1 to 100 hectares) | | | Local Level (101 to 250 hectares) | | |
|---|-----------------|-------------|--------------------------------------|-----------------|-------------|
| Total Projects | Commanded Areas | Final Areas | Total Projects | Commanded Areas | Final Areas |
| 1135 | 9683 | 2110 | 9 | 1305 | 32 |

Source: www.mahasdb.maharashtra.gov.in

Addressing these challenges requires a multi-stakeholder approach, incorporating local knowledge, scientific expertise, and community participation. Tailoring solutions to Thane-Palghar's specific needs and context ensures sustainable water management practices that benefit present and future generations.

Limitations on Water Management in the Thane-Palghar District:

1. **Data Availability:** Limited availability of accurate and up-to-date data on water resources, usage patterns, and demographics may hinder the formulation of evidence-based policies and strategies.
2. **Resource Constraints:** Insufficient financial, technical, and human resources may restrict the implementation of comprehensive water management plans and infrastructure projects.
3. **Complex Governance Structure:** The Thane-Palghar district's water management involves multiple stakeholders, including government agencies, local authorities, community groups, and private entities, which may lead to coordination challenges and conflicting interests.
4. **Political Interference:** Political considerations and bureaucratic red tape may influence decision-making processes, potentially hindering effective water management interventions.
5. **Lack of Community Participation:** Limited awareness, engagement, and capacity among

local communities may impede the adoption of water conservation practices and sustainable behaviour.

6. **Climate Uncertainty:** Uncertainties associated with climate change projections and variability in rainfall patterns may pose challenges in long-term water planning and risk assessment.
 7. **Infrastructure Limitations:** Inadequate infrastructure, including water storage facilities, distribution networks, and wastewater treatment plants, may constrain the efficient management and utilization of available water resources.
 8. **Land Use Changes:** Rapid urbanization, industrialization, and agricultural expansion in the Thane-Palghar district may lead to land use changes that affect water availability, quality, and ecosystem health.
- Legal and Regulatory Framework:** Inconsistent or outdated water management policies, regulations, and enforcement mechanisms may hinder effective governance and compliance with water conservation measures.

Suggestions:

1. Need to implement community-driven water conservation programs tailored to the specific needs of different regions within the Thane-Palghar district.
2. Need for the installation of decentralized water treatment systems in areas facing water quality issues, such as arsenic or fluoride contamination.

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3. There is a requirement to educate residents, farmers, and industries about water-efficient practices such as drip irrigation, mulching, and water recycling.
4. Need to incorporate traditional water management practices and indigenous knowledge systems into modern water management strategies.
5. Urgent need to develop sustainable water management strategies for urban areas in the Thane-Palghar district, including the promotion of water-efficient technologies, stormwater management, and sewage treatment and reuse systems.
6. Requires to enhance local governance structures and community participation in water management decision-making processes.
7. Need to consider climate to design and upgrade water infrastructure to withstand the impacts of climate change, such as increased flooding and droughts.

Conclusion:

Addressing these limitations requires a holistic approach that integrates scientific knowledge, community engagement, policy reform, and investment in infrastructure and capacity building. Collaboration among stakeholders and adaptive management strategies are essential for overcoming challenges and achieving sustainable water management in the Thane-Palghar district. By integrating these suggestions into a comprehensive water management plan tailored to the local needs of the Thane-Palghar district, Maharashtra, stakeholders can work together to address water challenges effectively and build resilience in the face of future uncertainties. Like Atal Bhujal Yojana various other schemes and programmes are operated in state with the limited coverage areas and are absent in the Thane-Palghar district.

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Emerging Technology and Its Application and Impact in Academic Libraries

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Abstract:

Emerging Technologies identify, evaluate, and implement applications of current and emerging technologies for use in libraries and information centers and services. Information and Communication Technology (ICT) plays a vital in higher education teaching and research. Application of web technology is essential part of the library and information Centre's in this current scenario. The technology driven era of today have made universities to consistently strive to boost their academic productivity through the development and consented implementation of emerging digital technologies that are applicable in teaching, learning and research. This paper discuss the technological innovation has led to improvements in information centers and library services. The overall purpose is to share resources using new technologies with affordable devices that would provide a range of features to save time, support community development and provide better services to library users and studies the application and services used in academic libraries.

Keywords: - Emerging Technology, Information Communication Technology, Teaching learning Research, Digital technology.

Introduction: -

The technology driven era of today have made universities to consistently strive to boost their academic productivity through the development and consented implementation of emerging digital technologies that are applicable in teaching, learning and research. Emerging technologies play a significant role in transforming the landscape of libraries operated for academic sake and the work of information professionals.

Information and Communication Technology has given wonderful opportunity for the librarians and knowledge Centre's. It would be applicable in right manner and in order to reach information at the right time for the right person. There are many commercial and open e resources available in the universe for teaching, learning and research. Information and Communication Technology (ICT) plays a vital in higher education teaching and research. Application of web technology is essential part of the library and information Centre's in this current scenario. The unprecedented technological advancement of the 21st century, no doubt has impacted on library services globally and in India in particular.

Overall, the future of libraries is an exciting and dynamic space, with a wealth of possibilities for innovation, creativity, and learning. By embracing emerging technologies, libraries can enhance their collections, improve user experiences, and better meet the evolving needs of their communities, while also upholding their core values of intellectual freedom, accessibility, and diversity.

Objective:

1. This study is carried out to explore the emerging technologies and their application for library services and operations.
2. To study technology based services in academic libraries

Research Methodology:

This study is based on secondary sources of data such as articles, journals, and research papers.

Emerging Technology and its Application in Libraries:

Application of ICT gives a birth to many new technologies. With the application of these new technologies in the libraries the working of libraries has totally been changed. Author in found out that now a days library are providing the unrestricted access of information in many ways and from many resources. Libraries have also started to provide the services of specialists who are expert in the fields of information and communication.

Accessibility Technologies:

Accessibility technologies are becoming more important for libraries as they strive to make their collections and services more inclusive and accessible to all users. Technologies such as screen readers, text-to-speech software, and closed captioning can help libraries to better serve users with disabilities.

Artificial Intelligence (AI):

Artificial intelligence has become one of the main driving forces for the development of modern society, which has injected new energy into the development of smart libraries. This article explains the basic premise of smart library and

artificial intelligence and artificial intelligence in smart library and shows the application value of artificial intelligence in library service. Artificial intelligence widely used in intelligent development libraries.

Big Data: Libraries are collecting vast amounts of data on their users and usage patterns, which can be analyzed to improve services and operations. Big data analytics can help libraries to identify trends and patterns in user behavior, optimize their collections, and develop more effective marketing and outreach strategies.

Block chain Technology: -

Block chain technology represents a decentralized database that keeps records of pseudonym zed digital transactions that are visible to anyone within the network. Therefore, it is a modern way to collect and store data. Block chain technology could be used to build an enhanced metadata system for libraries, to keep track of digital-first sale rights and ownership, to connect networks of libraries and information centers, or even to support community-based borrowing and skill sharing programs.

Cloud Computing:

Cloud computing can change the way systems are built and services are provided, giving libraries the opportunity to expand their impact. Libraries are modifying their services using the cloud and networks that allow them to access these services anytime, anywhere. Cloud computing offers libraries a number of interesting options that can help reduce technical costs and increase the reliability and efficiency of certain types of automation operations. Libraries have great potential for cloud computing.

Libraries can add more content to cloud computing Cloud computing technology is not fully accepted in the Indian Libraries but they are trying to develop themselves in this area. Libraries are trying to provide users cloud based services but in real fact they are not fully successful owing to the lack of good service providers and technical skills of LIS professionals in the field of library information centers using advanced technology. OCLC services and Google based cloud services are good examples of successful cloud in libraries is in development phase.

Collaborative Technologies: Collaboration is becoming increasingly important for libraries, as they partner with other institutions, organizations, and communities to provide resources and services. Emerging collaborative technologies such as virtual meeting software, collaborative document editing tools, and shared repository platforms can help libraries to work more effectively with partners and stakeholders.

Digital Preservation: As libraries increasingly shift towards digital collections, preserving and

managing these materials becomes more important. Emerging technologies such as digital preservation software, web archiving tools, and automated metadata generation can help libraries to preserve and manage their digital collections more efficiently and effectively.

Internet of Things (IoT): IoT devices can help libraries to better manage their collections and resources, as well as to provide real-time information to users about availability and location of materials. For example, RFID tags can be used to track books and other materials, and sensors can be used to monitor environmental conditions such as temperature and humidity.

Mobile Technologies: Mobile technologies can help libraries to reach more users and provide more convenient and accessible services. For example, libraries can develop mobile apps that allow users to search the catalog, reserve materials, and access digital resources from their smartphones and tablets.

Open Access Publishing: Open access publishing can help libraries to promote open scholarship and provide greater access to scholarly materials. Libraries can play a key role in supporting open access initiatives, by providing resources and infrastructure for open access publishing and archiving.

Social Media: Social media platforms such as Twitter, Facebook, and Instagram can be powerful tools for libraries to engage with users, promote their services and collections, and provide information and updates in real-time. Libraries can also use social media to foster online communities and encourage collaboration and knowledge sharing.

Virtual and Augmented Reality (VR/AR):

VR/AR can enable libraries to create immersive learning experiences for users, such as virtual tours of historical sites and museums, and interactive learning games. VR/AR can also be used to enhance library collections, by creating 3D models of rare or fragile materials that can be viewed virtually.

RFID: - RFID (Radio Frequency Identification) is the latest wireless technology to be used in library theft detection systems. It is another form of automated identification system. Earlier EM (Electro-Mechanical) and RF (Radio Frequency) systems were used in libraries for decades but RFID-based systems move beyond security. They provide tracking systems that combine security with more efficient tracking of materials throughout the library. Besides security they provide easier and faster charge and discharge, inventorying, and materials handling.

Internet of Thing: - Libraries must adopt IT-enabled content Development, content management tools, content access, delivery tools or longer Term presentation tools. Adoption and libraries are always at the forefront the use of new technologies is a

cause for concern. Enables Internet of Things (IoT) objects Use to collect data and transfer data through the network without human intervention Internet, sensors, RFID. It is used in various fields and is still evolving. Various innovative solutions are being created.

Conclusion: -

The rapid growth of ICT (Information and Communication Technology) has put a great impact on libraries. New technologies have been merged in the library science. So, libraries have been changed to Digital Libraries, Virtual Libraries, Hybrid Libraries, Library without Walls, Library 2.0 etc. The essential skills for library professionals are listening skills, managerial skills, leadership, technological skills, learning skills and administrative skills. It is observed from this paper Information and Communication Technology occupy each nook and corner of the entire universe. Libraries must adapt to these changes in order to remain relevant and provide valuable services to their users. However, as libraries embrace these technologies, they must also be mindful of the challenges and risks they present, such as privacy concerns, digital preservation, and ensuring equitable access for all users.

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Unveiling the Attendance Effect: A Mixed-Methods Analysis of Class Participation and Exam Performance in Economics

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Abstract:

This research examines the relationship between class attendance and exam performance among second-year economics majors. Utilizing a mixed-methods approach, the study analyses data from academic archives and participant selection. At a 10% significance level, exam marks were statistically lower in the defaulter group compared to the non-defaulter group thus highlighting the fact that class attendance has a statistically significant effect on exam performance. The study acknowledges limitations like sample size and calls for further investigations to improve teaching methods and student success. Overall, it contributes to the discourse on student engagement and learning outcomes, highlighting the importance of class attendance in academic achievement.

Keywords: Class attendance, Exam performance, Student engagement, Learning outcomes, Higher education.

Introduction:

In the realm of educational research, the correlation between class attendance and academic performance has been a subject of enduring interest and investigation. The importance of attendance as a predictor of student success has been widely acknowledged, with scholars and educators alike recognizing its potential impact on learning outcomes. Within this context, this research paper delves into the relationship between class attendance and exam marks (performance) among second-year Bachelor of Arts (SYBA) students enrolled in economics course.

Understanding the dynamics of class attendance and its implications for academic achievement is of particular significance in higher education settings. As students' progress through their academic journey, they are presented with increasing autonomy and responsibility for their own learning. Consequently, the choices they make regarding attendance can have profound repercussions on their ability to grasp course material, engage with peers and instructors, and ultimately perform well in assessments.

The choice to focus on SYBA students specializing in economics is deliberate, as it represents a pivotal stage in their academic trajectory. By the second year of their undergraduate studies, students are expected to have developed foundational knowledge and skills within their chosen discipline. This study seeks to examine how class attendance, a fundamental aspect of student engagement, intersects with academic performance specifically within the domain of economics.

Moreover, investigating this relationship within the context of arts students adds an additional layer of complexity, considering the diverse range

of learning styles and motivations that characterize this student cohort. By shedding light on the association between class attendance and exam marks among SYBA economics students, this research aims to contribute to the ongoing discourse surrounding effective pedagogical practices and student success in higher education.

Research Objective:

The primary objective of this research paper is to investigate the relationship between class attendance and class performance, as measured by exam scores, among second-year Bachelor of Arts (SYBA) students specializing in economics. By examining the extent to which attendance patterns influence academic achievement, the study seeks to elucidate the association between student engagement in classroom activities and their performance in assessments. Through rigorous analysis of attendance records and exam scores, the research aims to provide insights into the impact of attendance on academic outcomes, thereby contributing to our understanding of effective pedagogical practices and student success in higher education.

Hypothesis:

H0: No significant difference between the scores of defaulter group and non-defaulter group.

H1: Significant difference between the scores of defaulter group and non-defaulter group.

Research Methodology:

This research employs a mixed-methods approach to investigate the relationship between class attendance and exam marks among second-year Bachelor of Arts (SYBA) students specializing in economics. The methodology consists of several sequential steps aimed at rigorously analysing the data and drawing meaningful conclusions.

Participant selection and grouping are integral to the methodology. The target population comprises SYBA students enrolled in economics courses, who are then categorized into two distinct groups based on their class attendance. These groups are delineated as "Defaulters," comprising students with attendance falling below 75%, and "non-defaulters," encompassing students with attendance equal to or exceeding 75%.

Data collection is facilitated through the acquisition of attendance records and exam marks from the academic archives maintained by the educational institution. Each student's attendance percentage is computed by tallying the number of classes attended against the total number of classes scheduled.

The assessment of assumptions precedes the statistical analyses. The data undergo scrutiny for normality and homogeneity of variances. Normality is evaluated using the Shapiro-Wilk test or through visual inspection of histograms and Q-Q plots. Similarly, the homogeneity of variances across the groups (defaulters and non-defaulters) is determined via Levene's test.

Subsequent to the assessment of assumptions, statistical analyses are conducted. Should the data meet the criteria of normality and homogeneity of variances, an independent samples t-test is employed to compare the means of exam marks between defaulters and non-defaulters. Conversely, in instances where the assumptions of normality and homogeneity of variances are not satisfied, the Mann-Whitney U test is utilized as a non-parametric alternative for comparative analysis.

By adhering to this comprehensive methodology, the study aims to shed light on the intricate relationship between class attendance and academic performance among SYBA students specializing in economics.

By systematically following this research methodology, the study aims to provide valuable insights into the impact of class attendance on academic performance among SYBA economics students, contributing to the existing body of literature on student engagement and learning outcomes.

Literature Review:

A study conducted by Newman-Ford, Fitzgibbon, Lloyd, and Thomas (2008) assessed 22 first-year modules across four separate award programs using electronically stored attendance data, the study confirmed a strong and statistically significant correlation between attendance and academic attainment. Specifically, the findings indicated that higher attendance rates were associated with a reduced likelihood of failing academic assessments and an increased likelihood of achieving high grades.

Doggrell (2020) conducted a systematic review aiming to investigate this relationship and its potential alteration with the availability of lecture recordings. Analyzing data from 27 studies encompassing 32 courses, the review found a predominantly positive association between lecture attendance and academic outcomes, observed in 75% of the courses examined. This positive trend was consistent across undergraduate courses for allied health and science students, as well as courses catering to dental and medical students, the latter being predominantly postgraduate. Notably, among the studies utilizing lecture recordings, a positive association between attendance and academic outcomes was reported in 69% of cases. Even in instances where lecture recordings were not available, the majority (82%) of studies still demonstrated a positive relationship between attendance and academic performance. This suggests that while lecture recordings may offer additional resources, they do not seem to diminish the positive association between attendance and academic success. Consequently, the review suggests the continued provision of face-to-face lectures and the encouragement of student attendance, as there is currently no definitive evidence to suggest that the availability of lecture recordings alters the beneficial relationship between attendance and academic outcomes.

Davis (2011) examined the relationship within the context of first-year students pursuing a B.A. in Hospitality Management. With the objective of addressing the high attrition rates, data was manually collected throughout the 2010/2011 academic year, resulting in a dataset comprising 5,982 attendance events from 38 participants. Concurrently, students with low attendance were contacted to discuss potential issues and encourage their return to class, emphasizing faculty concern for their well-being. The findings underscored a positive association between attendance and academic success, particularly highlighting concerns regarding early absences in the academic year. Importantly, the study identified the necessity of timely intervention, suggesting the implementation of specific trigger points for remedial action. Management can benefit from these findings by implementing initiatives to mitigate high attrition rates among first-year students. Moreover, recognizing poor attendance as symptomatic of underlying issues, the study advocates for further investigation into the motivational factors influencing student attendance and engagement during the transition to higher education.

The significance of class attendance in academic performance is widely acknowledged among educators, yet efforts to incentivize attendance often yield limited success. In the first part of his study, Khan (2022) delves into the

correlation between student attendance and performance across two units, employing different attendance tracking methods: electronic scanning of student cards for lectures in one unit and manual records for tutorials in another. By merging attendance records with performance and demographic data from university records, statistical modeling was employed to assess the impact of attendance on academic achievement. In the second part, surveys were conducted among academic staff and students spanning various continents, exploring attitudes towards attendance and its perceived importance in relation to performance and demographics. Notably, statistical analyses revealed a significant positive relationship between attendance and performance, with attendance at lectures and tutorials associated with performance increases of 0.52% and 1.7% respectively. Additionally, discipline-specific variations emerged, with students in Mathematics and Statistics, Arts, and Medicine and Dentistry emphasizing the

importance of lecture attendance. Correspondingly, staff members across diverse demographics expressed unanimous agreement on the significance of class attendance. Qualitative analysis of open-ended comments further complemented these findings, offering insights into the nuances of attitudes towards attendance among both staff and students. Overall, Khan's study underscores the crucial link between attendance and academic success while shedding light on the varied perspectives and practices surrounding attendance across different educational contexts globally.

Findings:

Prior to conducting statistical analyses, the normality of the marks and attendance data was assessed using the Shapiro-Wilk test. The results indicated that neither the marks data nor the attendance data followed a normal distribution, as evidenced by the significance value ($p < 0.05$) obtained from the tests.

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|------------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Attendance | .264 | 83 | .000 | .723 | 83 | .000 |
| Marks | .120 | 83 | .005 | .955 | 83 | .005 |

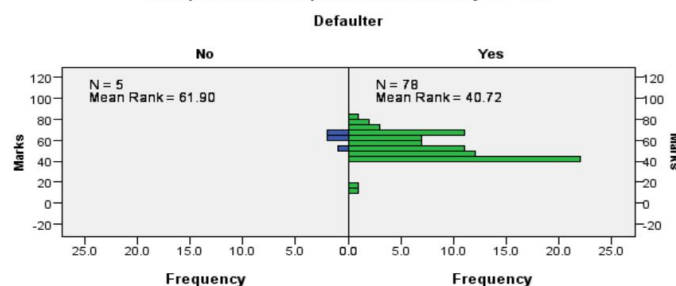
a. Lilliefors Significance Correction

Given that the data did not meet the assumption of normality required for parametric tests such as the independent t-test, an alternative non-parametric test was chosen. The Mann-Whitney

The Mann-Whitney U test yielded the following results:

U test was selected to compare the academic performance between the defaulter and non-defaulter groups.

Independent-Samples Mann-Whitney U Test



| | |
|--------------------------------|-----------|
| Total N | 83 |
| Mann-Whitney U | 95.500 |
| Wilcoxon W | 3,176.500 |
| Test Statistic | 95.500 |
| Standard Error | 52.154 |
| Standardized Test Statistic | -1.908 |
| Asymptotic Sig. (2-sided test) | .056 |
| Exact Sig. (2-sided test) | .055 |

With a p-value of 0.056, the test indicates that there is a trend towards a significant difference in academic performance between the defaulter and non-defaulter groups, although it does not meet the

conventional threshold of statistical significance ($p < 0.05$). Therefore, there is some evidence to suggest that the distribution of marks differs between the two groups.

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|-------------------|-----------------------------|
| 1 | The distribution of Marks is the same across categories of Defaulter. | Independent-Samples Mann-Whitney U Test | .055 ¹ | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .10.

¹Exact significance is displayed for this test.

While the p-value does not reach conventional levels of significance, the results of the Mann-Whitney U test suggest a potential association between class attendance and academic performance among SYBA students enrolled in economics courses. The findings indicate the importance of further exploration to understand the nuances of this relationship.

At a significance level of 0.10, the Mann-Whitney U test indicates that there is sufficient evidence to reject the null hypothesis.

The effect size r indicates the strength and direction of the relationship between two variables. In the context of the Mann-Whitney U test, which compares the distributions of two independent groups, the effect size r provides a measure of the magnitude of the difference between the two groups. Calculation of r :

$$r = Z \text{ score} / (N)^{0.5} = 1.908 / (83)^{0.5} = 1.908 / 9.110 = 0.209$$

The value of r is approximately 0.209

Mann Whitney U test revealed that the marks were significantly lower in the defaulter group ($Md = 52$) compared to the non-defaulter group ($Md = 62$), $U=95.50$, $z = -1.908$, $p=0.056$, with a size effect $r = 0.209$

Limitations :

This study is subject to several limitations that warrant consideration in the interpretation of its findings. Firstly, the sample size utilized for analysis is relatively small, comprising only 83 students. Such a limited sample size may restrict the generalizability of the results and increase the risk of sampling bias. A larger and more diverse sample would have enhanced the robustness of the study's conclusions and allowed for more comprehensive insights into the relationship between class attendance and academic performance among second-year Bachelor of Arts (SYBA) students enrolled in economics courses.

Secondly, the study's scope is confined to the examination of academic scores exclusively from economics subjects. This narrow focus on a single academic discipline may limit the applicability of the findings to other subjects within the SYBA program or to students enrolled in

different courses. Consequently, the generalizability of the results to the broader academic context may be constrained.

Moreover, an imbalance in group sizes between the defaulter and non-defaulter groups presents another limitation. If the defaulter group significantly outweighs the non-defaulter group in terms of sample size, it may introduce bias into the analysis and affect the validity of the results. Achieving a more equitable distribution of students across the attendance categories would have strengthened the study's methodology.

Additionally, the findings of this study may be influenced by contextual factors inherent to the educational institution, course structure, and student demographics. These contextual nuances could impact the relationship between class attendance and academic performance and thus limit the generalizability of the results beyond the specific context in which the study was conducted.

Furthermore, the subjective nature of the attendance threshold used to classify students into defaulter and non-defaulter groups is an important consideration. The selection of a 75% attendance threshold is somewhat arbitrary and may not universally apply to all educational contexts. Different institutions or academic programs may have varying attendance policies, which could affect the interpretation of the results.

In light of these limitations, it is essential to interpret the findings of this study with caution and recognize the need for further research endeavours. Future studies could address these limitations by employing larger and more diverse samples, considering multiple academic subjects, and exploring additional contextual factors that may influence student outcomes. By doing so, researchers can contribute to a more comprehensive understanding of the complex interplay between class attendance and academic performance in higher education settings.

Conclusion:

In this research paper, we embarked on a comprehensive exploration of the relationship between class attendance and exam marks among second-year Bachelor of Arts (SYBA) students

specializing in economics. Through a mixed-methods approach, we endeavoured to elucidate the nuanced dynamics of student engagement and its impact on academic performance within the realm of higher education.

Our investigation into the correlation between class attendance and exam marks underscored the significance of student presence in academic settings. While the statistical analyses revealed a trend towards a significant difference in academic performance between the defaulter and non-defaulter groups, the findings did not reach conventional levels of statistical significance. However, the effect size analysis provided valuable insights into the magnitude of the difference between the two groups, shedding light on the modest yet noteworthy relationship between class attendance and academic achievement among SYBA students in economics courses.

Despite the limitations inherent in our study, including a relatively small sample size, a narrow focus on economics subjects, and an imbalance in group sizes, our findings contribute to the existing body of literature on student engagement and learning outcomes. By acknowledging these limitations and recognizing the need for further research, we advocate for a more holistic understanding of the intricate interplay between class attendance and academic performance in higher education settings.

Moving forward, future research endeavours should aim to address the identified limitations by employing larger and more diverse samples, considering multiple academic subjects, and exploring additional contextual factors that may influence student outcomes. By doing so, researchers can advance our understanding of effective pedagogical practices and student success in higher education, ultimately contributing to the enhancement of educational experiences and outcomes for all students.

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Banking on the Web: How a Cosmopolitan City Feels About Online Banking

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Abstract:

Online banking, also called internet banking, is a way to do your bank stuff on a computer or phone. It's like having a bank branch at your fingertips, open 24/7. You can check your account balance, transfer money, and pay bills anytime, anywhere. This is a new way of banking that is becoming more and more popular. This study looked at how happy people in Kota city are with their online banking services. So, the study wants to find out: Do people in Kota find online banking convenient and easy to use? Are they happy with the features and security of their bank's online system? Are there any concerns people in Kota have about online banking?

Key Words: Online banking, Customer perception, Banking industry and Technology.

Introduction:

Imagine a place you can store your money safely, kind of like a giant piggy bank. This place, called a bank, also helps you do other things with your money, like paying bills or growing it a little. Banks used to be buildings you had to visit, but now they've gotten super cool with technology!

Here's the exciting part: online banking! It's like having a mini bank on your phone or computer. It's safe and secure, just like a regular bank, but you can access it anytime, anywhere. No more waiting in lines! With online banking, you can see how much money you have, move money between accounts, and even pay your bills with just a few clicks.

Think of it like a magic money tool! It's not just convenient, it's also efficient. Banks can offer all sorts of helpful products and services online, from special deals for businesses to regular accounts for people like you and me. In India, banks that aren't owned by the government (like State Bank of India) were the first to jump on the internet banking bandwagon. These private banks knew they were a bit behind the game because they hadn't been around as long. Setting up branches everywhere, especially in remote areas, would be a huge challenge.

So, these private banks got clever. They figured the best way to reach customers anytime, anywhere was through the internet. They saw internet banking as a secret weapon to compete with the big, established banks. It was their way of saying, "Hey, we might be newer, but we're tech-savvy and can be your bank from anywhere!"

Online Banking Perks: Your Handy Money Toolkit:

Online banking comes with a bunch of advantages that make managing your money a breeze:

1. **24/7 Access:** No more waiting in line! Check your balance, transfer funds, or pay bills anytime, anywhere. Day or night, it's up to you. This is especially handy if you catch something suspicious in your account - you can deal with it right away.
2. **Convenience King:** Forget geographical limitations. Online banking lets you access your bank from anywhere with an internet connection (IAMAI's, 2006; Gonzalez et al., 2008). Need to pay a bill while on vacation? No sweat!
3. **Cost-Effective Champion:** Online banking is a budget-friendly option for both you and the bank. Since there's no need for physical branches, banks can offer these services at a lower cost.
4. **Your Financial Powerhouse:** Many online banks provide fancy tools like account aggregation (seeing all your accounts in one place), stock quotes, and even programs to manage your investments. It's like having a mini financial advisor at your fingertips!
5. **Going Green:** Online banking helps save the planet by reducing paper waste. No more piles of paper statements cluttering your drawers!

The Ups and Downs of Online Banking: A Customer's Perspective:

The rise of online banking has totally shaken things up in the banking world! But with all this new technology comes some challenges that banks need to address to keep us, the customers, happy and confident.

Here's the thing: Security is a BIG concern. Banks got to make sure our online accounts are safe and protected from bad guys trying to steal our money.

They're working hard with credit card companies and other folks to build a secure system for online payments, kind of like a high-tech vault for our cash. Another thing? Online banking needs to be smooth and efficient. We shouldn't have to deal with slow loading times or clunky websites when trying to check our balance or pay bills. It should be fast and easy, just like snapping your fingers.

Speaking of trust, that's a key ingredient too. We need to feel confident that the banks are honest and reliable when it comes to online banking. They got to be transparent and upfront about everything, so we know our money is in good hands.

Finally, online banking should actually deliver on its promises. If a bank says you can do something online, like transferring money or managing investments, it should work flawlessly. No glitches, no disappointments!

This study wants to see how people in India feel about the online banking services offered by public sector banks (like the State Bank of India). Specifically, they want to know if these banks are meeting customer expectations and keeping people happy with online banking.

Objectives:

This study is like a magnifying glass focused on understanding how people in a cosmopolitan city Kota feel about online banking offered by different banks. Here's a breakdown of the key things it aims to uncover:

1. **Customer Perception:** This is all about how people in Kota view online banking services. Do they find it easy to use? Do they trust it? This part will gauge the general impression people have about online banking.
2. **Satisfaction Level:** Here, the study dives deeper to see how happy customers are with the online banking services. Are features easy to find? Is the process smooth? This will show if the banks are meeting people's expectations.
3. **Room for Improvement:**

Finally, the study will use the findings to suggest ways banks can improve their online banking services. Maybe there are new features people would love or things that need to be made more user-friendly.

By understanding these aspects, banks can make their online banking services even better for their customers in Kota City.

Sample design and Data collection:

This study focused on people in Kota City who already use online banking services, either with public or private sector banks. We wanted to hear from the folks who are already using these online tools. - that was our target group (sample frame).

To make sure we got a good mix of opinions, we used a random sampling method, where everyone has an equal chance of being chosen. We then reached out to these chosen people and asked them to fill out surveys (open surveys).

By talking to a random selection of online banking users, we aimed to get a well-rounded picture of what people in Kota really think about these services.

Understanding Customer

Thoughts: Convenience, Trust, and More:

To understand how people in Kota feel about online banking, we looked at four key areas: convenience, trust and safety, efficiency, and how well the service meets their needs. We used a special technique called "scaling" to analyse these areas. We asked people to rate five statements about each area on a scale of 1 to 5. A score of 5 meant they strongly agreed with the statement, while 1 meant they strongly disagreed. For example, a statement about convenience might be "It's easy to transfer money online" - people would rate how much they agree with that statement.

By analysing these scores, we could see how people in Kota felt about the different aspects of online banking.

This helped us understand their overall perception of the service.

Table 1: Perception of customer towards convenience

| Criteria | SA | A | N | DA | SDA | Total |
|---------------------------------------|-----|----|----|----|-----|-------|
| Easily accessible by phone | 101 | 19 | 0 | 0 | 0 | 581 |
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Total Average | | | | | | 547.5 |

Table 1:

shows some interesting things about how people in Kota feel about online banking. The statement "bank's online services are easily accessible by phone" scored the highest overall, not just for convenience but out of all the statements! This suggests that easy phone access is a big plus for online banking users.

The table also tells us that people in Kota generally find online banking convenient. The "convenience dimension" had the highest total average score, which means most people agreed that online banking makes things easier. Following convenience came trust and safety, then how well the service meets their needs, and finally, efficiency.

Table 2: Perception of customer towards trust and safety.

| Criteria | SA | A | N | DA | SDA | Total |
|---|-----|----|----|----|-----|--------|
| Bank's website makes accurate promises about the services | 24 | 84 | 8 | 4 | 0 | 488 |
| Bank website launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| No misuse of personal information | 48 | 63 | 9 | 0 | 0 | 519 |
| Confidence in banks online services | 22 | 86 | 8 | 4 | 0 | 486 |
| Feel safe in online transactions | 62 | 43 | 15 | 0 | 0 | 527 |
| Bank frequently educates about online banking | 39 | 43 | 27 | 11 | 0 | 470 |
| Bank name is well known and reputed | 108 | 12 | 0 | 0 | 0 | 588 |
| Total Average | | | | | | 520.57 |

Looking at

Table 2, it seems people in Kota trust their banks' reputations the most. The statement "Bank's name is well known and has a good reputation" got the highest score. However, the statement "Bank frequently educates about online banking" got the

lowest score. This tells us that while people trust their banks, they might not feel like they're getting enough information about how to use online banking features safely.

Table 3: Perception of customer towards efficiency

| Criteria | SA | A | N | DA | SDA | Total |
|--|-----|----|----|----|-----|-------|
| Customer service representatives always available online | 32 | 27 | 17 | 44 | 0 | 407 |
| Quickly resolve problem | 8 | 70 | 26 | 16 | 0 | 430 |
| Easily accessible by mobile phone | 101 | 19 | 0 | 0 | 0 | 581 |
| Prompt responses to request by email or other means | 8 | 80 | 32 | 0 | 0 | 456 |
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Bank site launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| Website design is attractive | 22 | 89 | 5 | 4 | 0 | 489 |
| Regular upgrade of online services | 33 | 72 | 8 | 7 | 0 | 491 |
| Bank frequently educates about online banking | 39 | 43 | 27 | 11 | 0 | 470 |
| Online transaction is always accurate | 50 | 70 | 0 | 0 | 0 | 530 |
| Total Average | | | | | | 493.4 |

Let's dive into

Table 3 which looks at how people in Kota view the efficiency of online banking. Here's what we found:

Thumbs Up for Mobile Access: The statement "Bank is easily accessible by mobile phone" got the highest score (581), showing that people really appreciate being able to access their bank easily through their phones. This makes sense - it's convenient and allows people to bank on the go!

Room for Improvement in Customer Service:

The statement "Customer service representatives are always available online" got the lowest score. This suggests that some people might have had trouble getting help when they needed it online. Maybe they couldn't find a way to contact someone or had to wait a long time for assistance.

Table 4: Perception of customer towards fulfilment

| Criteria | SA | A | N | DA | SDA | Total |
|---|----|----|----|----|-----|-------|
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Bank's website makes accurate promises about the services | 24 | 84 | 8 | 4 | 0 | 488 |
| Online transaction is always accurate | 50 | 70 | 0 | 0 | 0 | 530 |
| Bank website launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| Website design is attractive | 22 | 89 | 5 | 4 | 0 | 489 |
| Total Average | | | | | | 517.4 |

Let's take a look at

Table 4: which explores how well online banking services in Kota meet customer needs. Here's what we discovered:

Up and Running: The statement "Bank site launches and runs quickly and is always available" scored the highest. This means people appreciate online banking platforms that are reliable and

accessible whenever they need them. Nobody likes a website that crashes or takes forever to load!

Promises vs. Reality: The statement "Bank's site makes accurate promises about the services" got the second-lowest score. This suggests that some folks might feel like the advertised features of online banking don't always match the actual experience.

Maybe they encountered limitations or unexpected features they weren't informed about.

Looks Aren't Everything: The statement "Website design is attractive" got the lowest score. While a visually appealing design can be nice, it seems functionality is more important to Kota's online banking users. They prioritize a website that's easy to navigate and use over fancy graphics.

Table 5: Level of Customers' Satisfaction

| Satisfaction level | Percentage |
|---------------------|------------|
| Highly Satisfied | 16 |
| Satisfied | 27 |
| Moderate | 52 |
| Dissatisfied | 4 |
| Highly Dissatisfied | 1 |

Table 5 :

Takes a look at the big picture: how satisfied are people in Kota with their online banking services overall? Here's the key takeaway:

Moderately Satisfied Majority:

Over 50% of customers fell into the "moderate satisfaction" category. This doesn't necessarily mean they're unhappy, but it also doesn't mean they're super impressed. It suggests there's room for improvement.

Silver Lining: Even though a majority fell under moderate satisfaction, it's still a positive sign! It means more people are satisfied with online banking than not.

What can Banks Do?

Based on this finding, here are some ways banks can improve their online banking efficiency:

Educate Customers:

Banks should focus on teaching people more about online banking, especially in these times with more cybercrime. This could involve workshops, online tutorials, or even brochures displayed in the bank.

The study also found that some customers avoid online banking services because they're unsure how to use them or worry about safety. To address this, banks can:

1. Clearly explain all the online banking features they offer.
2. Provide detailed instructions on how to use these services safely.
3. Have a 24/7 helpline specifically for online banking questions.

Prioritize Problem-Solving:

Banks should make sure any problems customers encounter with online banking are addressed quickly and efficiently. This builds trust and keeps people happy.

Embrace Technology: In today's world, it's crucial for banks to invest in good technology and infrastructure. This ensures a smooth online banking experience for everyone.

Boost Online Support: Banks should make it easier for customers to get help online. This could involve

offering live chat options, clear instructions on how to contact support, and ensuring there are enough representatives available to answer questions promptly.

Transparency is Key: Banks should ensure their online banking platforms accurately represent the features and services offered. This builds trust and avoids frustration for users.

Focus on Usability: While aesthetics is nice, banks should prioritize creating online banking platforms that are clear, user-friendly, and easy to navigate. People shouldn't have to struggle to find what they need.

Keep it Running Smoothly: Banks should invest in maintaining their online banking platforms to ensure they're reliable, fast, and accessible 24/7. Downtime or slow loading times can be a major turn-off for users.

Focus on the Weak Spots: Address the areas where customers expressed concerns, like ensuring clear communication about features, improving customer service accessibility, and making sure the online platform is user-friendly and reliable.

Keep Innovating:

Don't stop there! Banks can also keep developing new features and functionalities that meet the evolving needs of their online banking users in Kota. By listening to their customers and making ongoing improvements, banks can create online banking experiences that are truly convenient, secure, and satisfying for everyone.

Conclusion:

The way people bank is changing, and online banking is a big part of that story. Here's a breakdown of the key points:

1. **The New Norm:** Online banking isn't just a perk anymore; it's becoming essential. It's a faster, cheaper way for banks to offer services, and the pandemic really highlighted its importance. Just like ATMs became widespread, online banking is likely to become the standard.
2. **A Banking Revolution:** Online banking has totally transformed how banks work. It makes

transactions easier and quicker, saving both time and money. Banks have invested heavily in this technology, and its success hinges on getting people to switch over.

Helping People Embrace the Change:

Since folks are used to traditional banking, education is crucial. Banks need to show people how to use online banking features comfortably.

The Big Picture:

When online banking works well, it benefits everyone. Banks can operate more efficiently, costs go down, and they can even offer new features and services. This creates a thriving banking industry that better serves its customers. Overall, online banking is a powerful force changing the banking landscape in Kota and around the world. By educating customers and making the switch smooth, banks can ensure this technology reaches its full potential.

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Implementation Challenges & Strategies of Electronic Resource Management with Special Reference to The Role Of Librarian In The Smart Learning Environment

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Abstract:

Smart library is nothing but the library sources and services are digitalized. Not only in the regular procedures, like collecting, accessing, storing etc. but also provide facilities for controlling and monitoring of library buildings, including automatic doors, lighting, auto-services pavilions and computers. In this study we have to discuss about the various tools and facilities required for smart library and the librarian should improve not only the technical skill, also have good relationship with management, staff and user and other interpersonal skills and development. It seeks to examine this different uniqueness of the individuals, the technologies and innovations used in creating a smart learning environment as well as challenges associated with the establishment of a smart learning environment by Librarians.

Keywords: Librarian, Smart library, learning environment, Digital source, Information Technology

Introduction:

The Smart Library means a library without single physical activities like library without shelves, without books in print, big servers and digital archives linked through digital networks with machines for providing web based library services to the readers and access to online learning materials. In digital environment smart libraries is just a library resolution to innovate library and information services. A library is built with smart technology is able to be open to library users without being personnel. The technology facilitates remote control of library building, includes well-furnished furniture, automatics doors, lighting, self-service kiosks and open computers to all users. Create a new advance censor and networking is in a new ways for buildings to meet the needs of their users while reducing costs and increasing efficiency.

Information and communication have undergone a revolution. People are thinking, communicating, and sharing knowledge has all changed as a result of technological advancements. With the digitization of information and the introduction of the Internet in recent years, over a quarter of the world's population can now access a variety of information from their own computers and, increasingly, from their mobile phones.

Due to changing trends in information access, librarians now confront difficulties and challenges as a result of the impact of technology. Because of the growing difficulty in picking the most valuable, reliable information from the enormous array of available information sources, library professionals must evolve into information professionals in the information and communication

technological era. Librarians gain professional expertise through a variety of educational courses, professional experiences, and on-the-job training. Knowledge aids in the acquisition of certain professional skills, which are not limited to mechanical abilities but also involve expertise and intellectual activity. They have also acclimated to the new electronic information environment and learned about new technologies so that they may understand their strengths and weaknesses and function effectively in the digital age.

Review of Literature:

Aithal, Sreeramana (2016) examines the chance of such change of Library into 'Widespread Resource Center' and the outcomes of such change to data sharing all through the World and further changes in the model of costless advanced education and expanded freedom for new information creation. Advances in ICT uncovered another chance for development in regular library models. Utilizing the cutting edge innovation, the nations can change over block and mortar libraries in to snap and mortar libraries to give speedy and complete data prerequisite to everyday person and the understudies of the whole nation and the world with no segregation. Ayebi-Arthur (2017) directed a contextual investigation of a school in New Zealand which was severely influenced by seismic exercises. In her investigation, she tracked down that the school turned out to be stronger to internet learning after that terrible occasion. Innovation assisted them with beating the hindrances in those troublesome occasions. Yet, they recommend that strong IT Infrastructure is an essential for internet learning. Foundation should be solid to the point that it can

offer unhindered types of assistance during and after the emergency. Kulkarni and Dhanamjaya (2017) study characterized that public library framework is the around the world effective with their library space, assortment, administrations, foundation, rehearses and so on The discoveries of the investigation will assist with fostering a significance public library arrangement of worldwide norm and guarantee that libraries are changed into information focuses. Schopf (2018) give new insights towards public and scholastic libraries. The examination sees that the brilliant library administrations depicted in four measurements like savvy place, shrewd administrations, keen administration and keen individuals. Savvy library doesn't address a venture however a cycle is not so great or not so great and more unique and inventive. Jing Zhou (2021) show that Chinese libraries were more compelling in conquering isolate limitations than those in Italy. The staggering larger part of respondents announced that they had positive experience adapting distantly and would not care either way if distance learning programs keep on working get-togethers pandemic is finished.

Smart Library Services :

1. Library Marketing & Promotion Service, Newsgroups/ Newsletter Services
2. E-SDI, Bulletin Board, Discussion Forum, StartPage/Home Page
3. Electronic Board Services, Atmospherics, Mash Ups, Linking different datasets
4. Ask the librarian /Contac us / Feedback Process, Webliography
5. Collaborative Digital Reference Services, Video Podcast
6. E- Document Delivery Services, Institutionalization / personalization portals
7. RSS (Really Simple Syndication), Virtual Library Tours, Streaming Media
8. Value added, aggregator services, Open access publishing, Metadata schemes
9. Google Classroom (<https://classroom.google.com/>)
10. Teaching and Learning Platform.

The Librarian Role In The Digital Age:

Librarian can act an important role in the pandemic situation to serve the information through entire community with the guidelines of governments. Some of the activities of librarian in the digital age are

1. Convert the collecting factual data into useful information through social media
2. To organize the skill development programmes like reading book challenges, essay writing, quiz etc. to the community through social media. It helps them to reduce their stress in the pandemic period. Librarian can provide remote access, ERMs, CORAL, marketing of library services etc. through social network platforms.

3. To conduct webinar, ORCID, Citation generation, Virtual classroom etc.
4. Librarian can publish the Central and State government information through social media channels.
5. Librarians can create a social media groups like WhatsApp, Facebook, telegram, etc. based on their institution need and share the study material of e-books, e-journal and other needed information to the students.

Basic Needed Qualification Of Librarian In The Digital Era:

1. The librarian should have PC and web writing abilities to having an effect of brilliant learning climate. In the computerized world he having advanced library design and software, HTML coding, information base administration, XML, SGML and other web improvement instruments.
2. The librarian should work in organization with the public authority as well as different offices, NGOs, data focuses, private people, keepers, schools, guardians, and the general public on the loose. At the point when the vision of the data experts is shared, the general public would react decidedly. Government approaches ought to empower arrangement of ICT offices and foundations in the rustic regions, schools in the provincial regions ought to be similarly furnished with ICT offices to advance keen learning.
3. They should utilize the right assets and put into viewpoint the people's continuous area. Savvy learning climate ought to be made assist understudies with understanding and sort out information, take care of issues and make surmising dependent on what they have realized. The right apparatuses, assets and teacher or mode of learning ought to be made for them with various learning errands or tackle various kinds of issues at the ideal opportunity and in the right setting.
4. They ought to be enabled to make exceptional savvy libraries to suit explicit data needs of students. Library and Information Professionals can likewise make courses on the web and use stages that permits students learn at their speed and time.

Skills For Librarian:

Communication skills:

Using great correspondence methods, curators can overcome any issues, keep in contact, construct trust, screen execution and achieve the serious guest/client. Great correspondence helps in conveying the message viably and expands the co-appointments inside the organization. Henceforth the Library experts ought to have this ability to talk about and connect with required partners like understudies, staff and the executives.

User oriented skills: Librarian ought to offer sufficient help to clients for compelling utilization of library assets. They ought to give data of fresh introductions to the gathering adequately. They ought to connect with staff in choosing the new books of individual subjects.

Collection development skills:

Wealthy assortment of library is establishment of library administration. Curator need to discover better approaches for getting data's through most recent books and E-administrations accessible in the market from different foundations.

Time management skills:

The fourth law of library science by Dr. S. R. Ranganathan demonstrates the significance of using time effectively for the library experts just as for the clients. The library experts should make appropriate arranging of all administrations given by the library so that season of both can be saved and utilized adequately.

Initiative Skills:

Leadership is way of working and persuading the clients. Initiative considered from individual characteristics, conduct styles and dynamic capacity of pioneers. It is tied in with getting individuals to move right way and spurring them to accomplish wanted outcomes. It is most significant expertise needed for custodian to accomplish the targets of library uses. As a pioneer, curator ought to have great connection with the board, staff and client.

Relational Skills:

A librarian ought to have relational or intelligent ability to fabricate and keep up with the relationship with required partners to accomplish the goals of library. He should support and connect with their staff to give their best to accomplish the objective. As an administrator he/she oversees and sorts out various kinds of exercises like for client he mastermind library direction course for client to inspire them.

ICT Skills:

Information and correspondence innovation is creating step by step in all sort libraries. A Librarian ought to have information to deal with the innovation which is being utilized in libraries to perform different activity of library. New data sources are accessible, as a custodian we acknowledge mechanical changes and learn new things. Librarian ought to have an information how innovation is executed in library administration.

Challenges Faced By The Librarian In The Digital Era:

1. Today's students frequently start their information search using Google or other commercial or social search engines. To improve students' understanding and to accommodate an increasingly diversified range

of users, academic library professionals must create a virtual electronic learning system.

2. The huge degree of software piracy and plagiarism is a major challenge that today's library professionals are dealing with when delivering electronic/digital information services. The library is responsible for ensuring that all users are aware of copyright issues.
3. Another issue with obtaining internet information is maintaining privacy and secrecy. To combat software piracy, copying or downloading the entire contents of any e-resource at once, the right to get information and the ability to withhold or limit access are both required, posing a difficult balance between privacy and information rights.
4. Web/cybercrime has now become a common threat on the internet. Compulsory Virus Proof measures should be used when getting e-information from any other system to address this issue. It is critical to implement database security software or firewall technology to address the aforementioned database security challenges and issues.
5. Technology makes it difficult to get knowledge. Every day, librarians make ethical decisions based on the culture of their companies. The librarian should intervene and express worry about the patron's rights.
6. Another major issue is a lack of competent labour to maintain e-resources and deliver effective e-information services to the knowledge society.
7. The librarian's challenge is to contribute to the creation of realistic collection-development policies that cover the purchase of and provision of access to electronic resources for current and future users.
8. Preserving electronic resources for access would be a paradox in an electronic environment for libraries, where there is unlimited and continuous access but no performance. As a result, there is a debate about what should be saved and what should be accessed. If we want to keep electronic resources/documents, we also need to keep all of the software and hardware that we use to read the documents we create.

The role of a librarian in a smart learning environment is multifaceted and evolving, encompassing traditional responsibilities as well as new roles that leverage technology and data-driven approaches. Here are some key aspects of the librarian's role in a smart learning environment:

Curating Digital Resources:

Librarians play a crucial role in curating digital resources that support smart learning initiatives. This involves selecting, organizing, and providing access to a wide range of digital materials,

including e-books, online journals, databases, and multimedia resources.

Information Literacy Instruction:

Librarians are essential in teaching information literacy skills to students, faculty, and other stakeholders. In a smart learning environment, this includes guiding users on how to effectively search for, evaluate, and use information from digital sources, as well as promoting critical thinking and ethical use of information.

Collaboration with Faculty and Technologists:

Librarians collaborate with faculty members and educational technologists to integrate digital resources and technologies into the curriculum. This may involve providing expertise on copyright issues, recommending appropriate tools and platforms, and assisting with the design of digital assignments and projects.

Digital Scholarship Support:

Librarians support digital scholarship initiatives by providing guidance on research data management, digital publishing, copyright compliance, and other aspects of scholarly communication in the digital age. They may also facilitate access to specialized digital tools and resources for research and collaboration.

User Support and Training:

Librarians provide user support and training for digital tools and platforms used in the smart learning environment. This includes assisting students and faculty with troubleshooting technical issues, conducting workshops and training sessions on digital literacy skills, and promoting awareness of new technologies and best practices.

Data Management and Analytics:

In a smart learning environment, librarians may be involved in data management and analytics initiatives, including collecting and analyzing usage data from digital resources, assessing the impact of library services on learning outcomes, and using data-driven insights to inform decision-making and improve library services.

Advocacy and Outreach:

Librarians advocate for the importance of libraries and information literacy in the digital age, both within the academic community and beyond. This includes promoting awareness of library resources and services, advocating for open access to scholarly information, and collaborating with other stakeholders to advance the goals of smart learning environments. Overall, the role of the librarian in a smart learning environment is dynamic and requires adaptability, collaboration, and a commitment to supporting digital learning initiatives and the evolving needs of students and faculty in the digital age.

Conclusion :

Information technology has altered the world and has evolved into an important instrument for retrieving data in modern times. Because library collections are not restricted to printed documents, but increasingly include electronic resources, it is critical to build a digital library. Dr. Ranganathan's five laws of library science can be rephrased as (1) Digital resources are for use, (2) Every user seeks digital resource, (3) Every digital resource needs its user, (4) Save the user's time, and (5) Digital library is a growing organism worldwide to guide us in architecting and managing digital information systems of the twenty-first century. Library Professionals can show their aptitude with the help of involvement with expansion to the differed abilities they need. Library Professionals can give E-substance, data interfaces, their obligation to client care.

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The use of Panchatantra stories and other traditional Indian storytelling techniques in contemporary media stories

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Abstract:

This paper provides a literal overview of the use of stories as a tutoring tool in ancient India. chroniclers and other scholars have set up that in India between 300 and 500 BC, stories and beast stories were told to educate scholars so that they would learn in a short month. The collection of these stories is known as Panchatantra. The word Panchatantra can be divided into two words Pancha and Tantra. Pancha means path and Tantra means fashion or strategy, so in Panchatantra he teaches five strategies politics, public administration and Nitisastra (wise conduct). In this composition, I'll present the history of the Panchatantra movement, its content, educational evaluation, its utility and the adaption of its ways to ultramodern education. The main purpose of this composition is to introduce the ancient book with its tricks and its use in ultramodern education. It's also important to explore how to apply this fashion to tell stories not only about morals, but also about principles. on different motifs. How can such a narrative format be acclimated to explain colourful scientific or fine generalities? Some recommendations are bandied from a literacy perspective.

Keywords:- Panchatantra, narratives in tutoring, India, education, beast fables.

Literature review:

Panchatantra has its own story of moving from one place to another and from one language to another. In the last 1500 times Panchatantra has been restated into at least 200 or so 60 languages, Aesop's fables, Arabian nights, Sindbad and further than 30- 50 of Western nursery rhymes and ditties are deduced from Panchatantra and Jataka stories. In India, the Panchatantra is believed to have been created around 300 BC ultramodern scholars date the Panchatantra in its current form to between 300 and 500 BC. grounded on references to earlier Sanskrit works.

Introduction:

The Panchatantra is an ancient Indian collection of connected beast fables that convey important moral assignments through pictorial and compelling stories. Before probing into the details of the Panchatantra, it's important to know the part of stories in tutoring and literacy. People have always told stories. It's one of the main effects that make us who we're and separate us from other beings on this earth. Before the invention of ultramodern electronic bias similar as the TV or computer, harkening and telling stories was a popular pastime. Stories were used to convey real events, history, family connections and also entertainment. They were used to educate children and pass on values and customs from generation to generation. Long before writing, the only culture was oral, spoken culture. (Fox and Jennifer 2005, 11.). thus, it's intriguing to look at education from a

narrative perspective. When we talk about narrative literacy/ identity structure in seminaries, we cannot ignore the Vedas. Indian Education System 2. India has a tradition of oral education since Vedic times. Oral education refers to the transmission of information from one person to another through liar. This is how most of the ancient Indian Holy Writ were saved from generation to generation.

It has always been an important tool for conserving knowledge when looking at the history of conquered India. utmost of the ancient literature is written in sutra. Sutra (Sanskrit sutra," a cord or thread that holds effects together") refers directly to a maxim (or line, rule, formula) or a large collection of similar sayings in the form of a primer. another type of erudite composition. with short apothegmatic statements, generally using colourful specialized terms. Written form the sutra was meant to be short because the textbooks were intended for scholars to study some formal styles of tone- study (jottings and scientific exploration). Since each line is veritably thick, another form of jotting appeared in which commentary were added to the sutras to clarify and clarify them.

Strategies of Panchatantra:

Panchatantra is a collection of moral and beast fables, each with its own assignment. The stories of the Panchatantra are considered like the stories of the life of a savant. As Vishnu Sharma had only six months to educate the 'dud' boys, he wanted to make them apprehensive of the introductory principles of wise conduct similar as understanding

people, making musketeers, choosing preachers and retainers. to resolve conflicts with tactfulness and wisdom and how- to live- in peace and harmony. Panchatantra means the five most useful strategies. These five strategies are called

1. Mitra Bhedha (Losing musketeers) Separating musketeers from musketeers (Leo and Bull.)
2. Mitra Samprapti(How to Find musketeers) Chancing musketeers(Pigeon,) Crown, Mouse, Tortoise and Deer)
3. Kakolukiyam (Owls and Crows) Crows and Owls (War and Peace)
4. Labdha Prasanam(Loss of Profit) Loss(Monkey and Crocodile.)
5. Aparikshita Karakam (Rash) purposeful Action/ Cautions (Brahman and Mongoose).

Panchatantra as a historical educating narrative method:

It is still a mystery why narrative text is so easy to understand and remember. Perhaps because the content of the narrative text is so closely related to everyday experiences. Perhaps because colloquial language is more like speech than other types of conversation. Perhaps this is due to the shape of the quadrant or more elegant compositions of conceptual structures. The stories are more interesting, so maybe they will encourage you to read. (Graesser et al. 2002, 240.) This interesting element of storytelling was used in the Panchatantra to educate students because storytelling is about participation, the participation of the narrator and the listener. It was also part of the formality of several years of education. In the 19th century, teachers were trained to tell stories (Fox and Jennifer 2005). Storytelling is not only important for literacy, but can be applied to other areas of the curriculum. Storytelling is enjoyable, creative, responsive, active, inclusive and flexible.

Enjoying stories is an important factor for students\.. Psychologist Martin Seligman (2003) showed in his research that positive enjoyment improves learning. It also teaches children creativity by creating their own stories. Learning new things requires concentration. Concentration is actively participating in a task with undivided attention. Wishing them to learn, remember and apply their knowledge later, Vishnu Sharma explained the principles and practical wisdom of political science in the form of stories with illustrated examples.

In support of the use of stories in teaching, Williams (2000) states that a narrative text (fiction) is easier to understand and remember than an introductory text (factual and informative material). The story does not always have to be moral, but it can be a story about the invention of science. An example is the invention of penicillin. Dr. Alexander Fleming invented the drug penicillin and there is an interesting story behind this invention. The anecdote about Archimedes' principle of buoyancy is also

well known. These stories behind theorems, principles and drug inventions add an interesting element to "boring" math and science classes.

Instructors undertake in classroom assignments:

Storytelling has tremendous benefits for learning in the classroom. When we meet heterogeneous groups at the +2 level, when we get a mixed audience from different medium-sized schools. As teachers, we sometimes struggle to get our students to become fluent English speakers and readers. You can always voice your concerns. page and we use the old teaching style through stories. If we do this occasionally in our class and gradually try to involve the students in the creative process, it will definitely create a healthy atmosphere for students to use their creativity over time. ability in a positive way.

We can create memorable learning experiences for students by harnessing the power of storytelling in the classroom. By engaging students in compelling stories that convey important material, teachers engage students both emotionally and biochemically, increasing the chances of rich learning experiences. Spending a little extra time on storytelling in lesson planning and in the actual classroom keeps learning highly engaging and creative and truly, dynamically human.

A classroom full of stories also encourages students to tell their own stories (whether fact or fiction), which helps develop their critical thinking, memory and vocabulary. This helps us improve their academic performance by developing writing skills, memory and creativity. It helps refine the student's communication skills in and out of the classroom, including in social circles. It develops its reading and listening. Finally, his own motivation is enriched and this can lead the student to new high levels of success in life.

Conclusion :

In conclusion, Panchatantra is very important in world literature because of its contribution in the field of practical wisdom. In India, students who were not very interested in learning were told to teach. Student indifference to learning is a big problem in modern education, where Panchatantra can come to the rescue as an interesting technique to bring students back to study, school and education. Panchatantra has fun, wisdom, creativity and a logical element. I will think about it.

The elements can be utilized appropriately by teachers, students, and parents. Teachers can gain insight into how to engage students in learning and integrate the information strand with the entertainment saga. This is advantageous. Panchatantra is a piece of ancient Indian literature that can be useful in modern education because of its characteristics, but can still contribute a lot through directed and dedicated research in this field.

we carefully use stories in our classrooms so that one day our second graders will reach their journey of "Can I?" "I can".

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Role of Microfinance and Self Help Groups In Women Empowerment – With Reference To Shahpaur Region

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Abstract:

Microfinance and Self Help Groups are playing a pivotal role in providing financial assistance to the poor women belonging to the informal economy especially in the rural areas. The SHG-Bank Linkage programme has added to the pace and volume of this assistance. The aim of the study to gauge the impact of this financial assistance and support in the transformation of the women in terms of personal, emotional, financial, social, communal and legal aspects with special reference to Shahapur region. Data required for the study was collected through primary and secondary sources. Data analysis revealed that Microfinance and SHG has played a significant role in empowering the lives of the women in all the above aspects and a clearly distinction could be observed in their lives before and after the support of microfinance and SHGs.

Key Words: Microfinance, Self Help Groups (SHG), Women Empowerment.

Introduction:

As per statistics, 70% of world's poor are women. Despite this, women have limited access to credit facilities and financial aid. Most of the commercial lending institutions discourage providing financial aid to poor women whose belong to the informal economy. In such scenario, microfinance has acted as a powerful tool to access credit and financial needs for such women. Microfinance programmes target mainly and in some cases, exclusively on women. Statistics reveals that 85% of microfinance clients are women.

Microfinance model in the form of Self Help Groups is considered as a most successful tool for providing financial assistance and upliftment of women. A self-help group (SHG) is a group of ten to twenty local women who act as a financial middleman in their area. Over the course of a few months, members make little, regular contributions to savings until the organization has enough money to start giving loans. Funds may then be lent back to the members or to others in the village for any purpose.

Self-help groups' (SHG) objective is to become powerful change agents. NABARD'S SHG-Bank Linkage programme has served as a game changer in this regard. Many self-help groups, under NABARD's SHG-bank-linkage program, borrow from banks once they have accumulated a base of their own capital and have established a track record of regular repayments.

Microfinance and SHGs have been instrumental in providing financial assistance and thereby promoting small businesses and entrepreneurial opportunities among women thereby creating a positive impact in their livelihood and empowering their lives.

Literature Review:

Alam, Perways & Nizamuddin, Mohammed. (2013) observed that the main reason for joining SHG is not be merely to get just credit, it in an empowerment process after joining the self help group the women are economically and socially empowered. The self help group is responsible for empowering women by the way of promoting self – reliance, self- confident, self-dependent and educating them to realize their fundamental right. CS Reddy & Sandeep Manak (2005) revealed how microfinance played a crucial role in Women Empowerment through creating better livelihood, promoting social justice, increasing community engagement and creating social harmony.

Mengstie, B. (2022) concluded that through raising women's levels of asset ownership, improving their independent income, and increasing their monthly savings, microfinance has a major positive impact on women's economic empowerment. The study also demonstrated the beneficial effects of microfinance on women's exposure to and growth in entrepreneurship.

Research Objectives:

1. To explore the difference between ordinary poor women and Microfinance supported poor women.
2. To study the role of microfinance in women empowerment

Research Methodology:

Source of Data: Primary

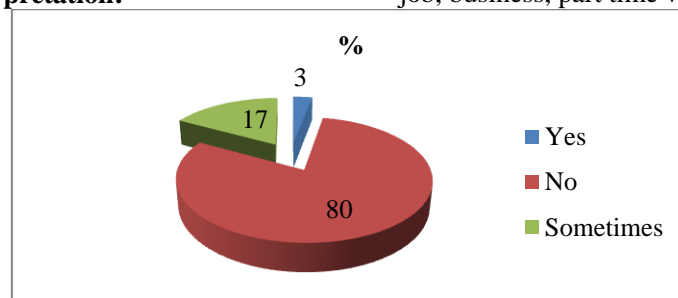
Data Collection: Survey and Interview Method

Survey: Conducted in-person survey of 30 SHG members in Shahapur Region.

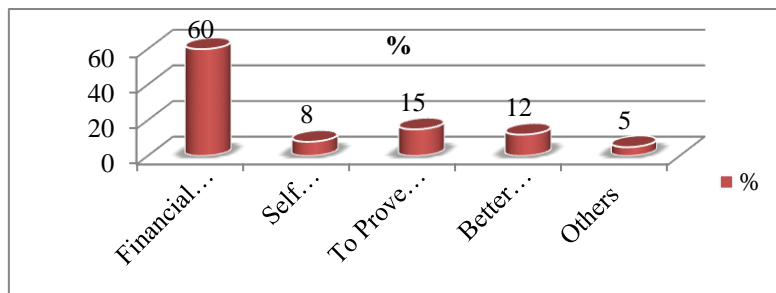
Interview: Conducted unstructured interview of heads of each SHG group.

Data Analysis And Interpretation:

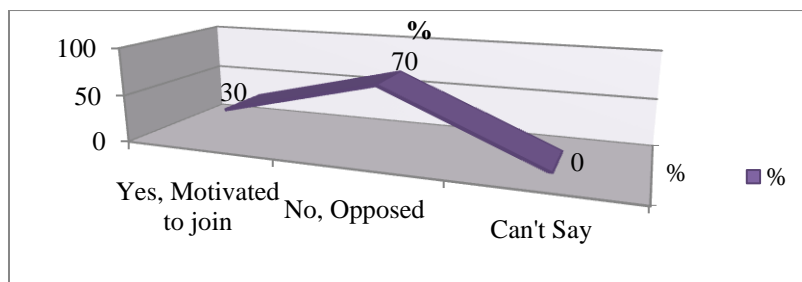
Q.1. Before becoming a member of SHG, were you involved in any kind of financial activity such as a job, business, part time work etc.?



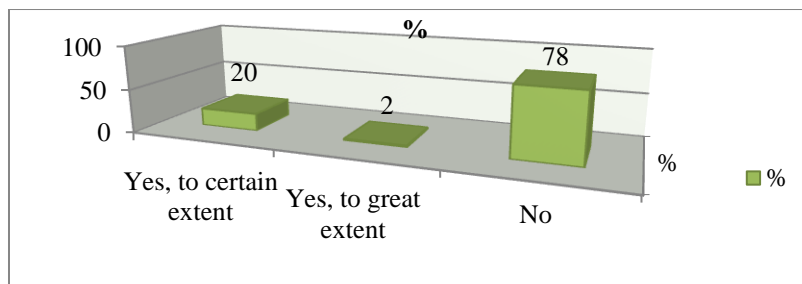
Q.2. What made you think of joining a SHG and doing business with peer group?



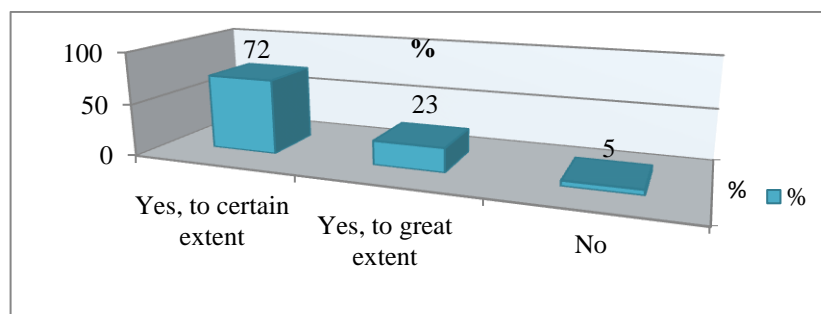
Q.3. Did your family motivate you to join such a group and do the business or they opposed it?



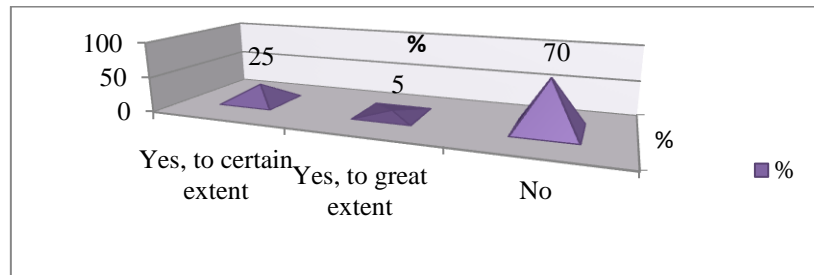
Q.4. Before becoming a member of SHG, were you able to manage all your financial needs?



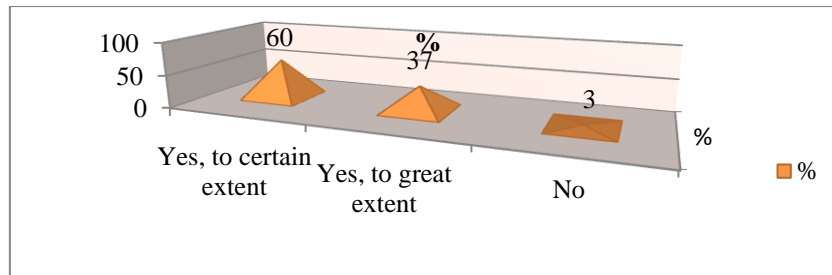
Q.5. After becoming a member of SHG and performing business, are you able to manage all your financial needs?



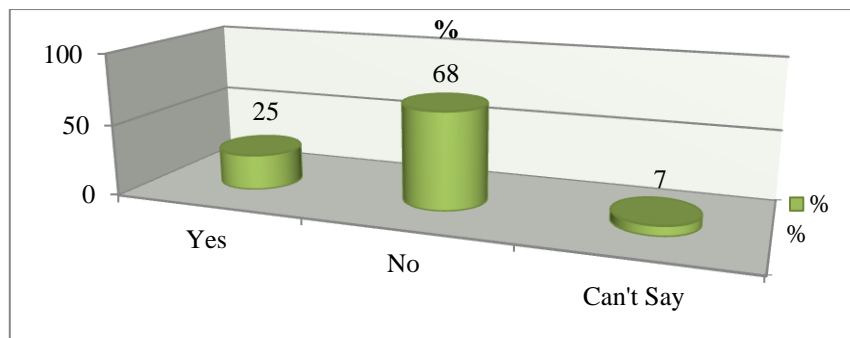
Q.6. Before becoming a member of SHG, did you have any involvement in decision making at home?



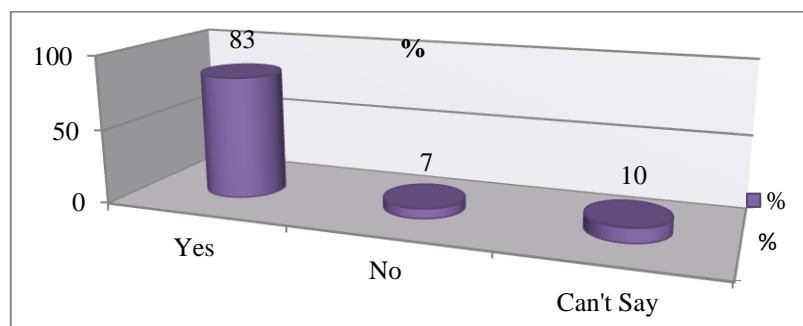
Q.7. After becoming a member of SHG and performing business, do you have any involvement in decision making at home?



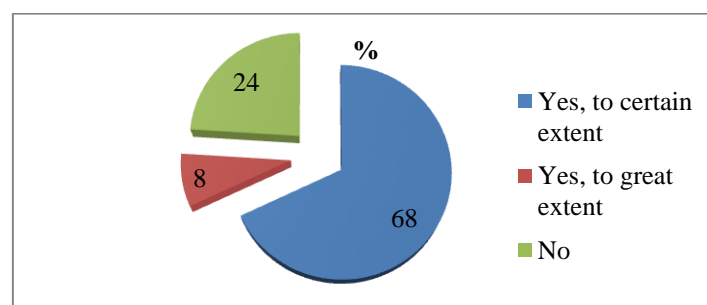
Q.8. Did your family treat Men and women equally before you joined this group?



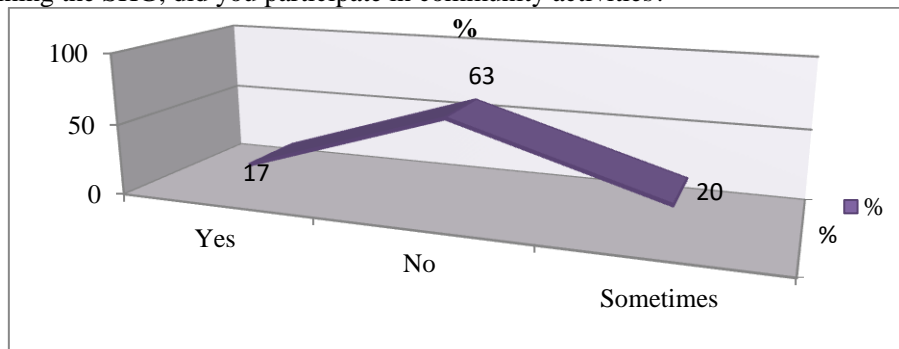
Q.9. Does your family treat men and women equally now as you have joined this group and you are earning money?



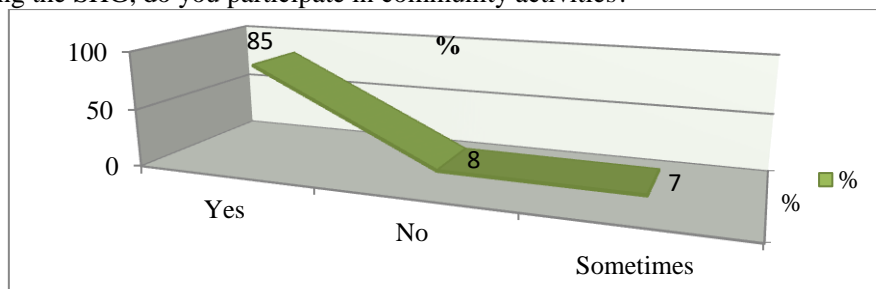
Q.10. From your earnings out of the SHG, are you able to provide security to your family members?



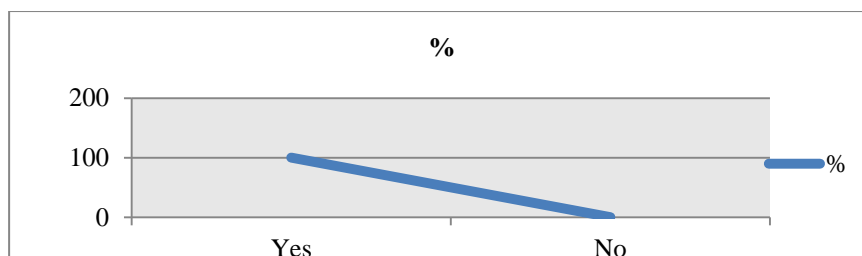
Q.11. Before joining the SHG, did you participate in community activities?



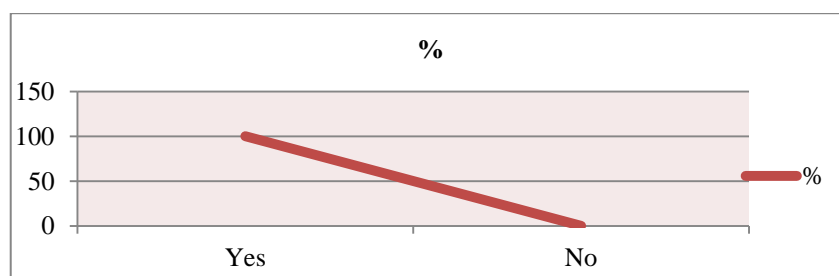
Q.12. After joining the SHG, do you participate in community activities?



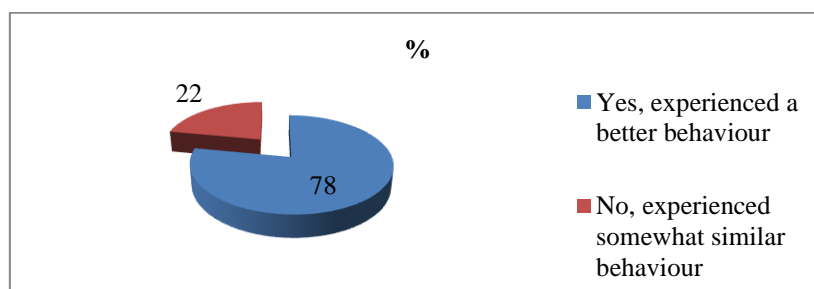
Q.13. Do you believe that you got to learn a lot and underwent self development after joining SHG and performing business?



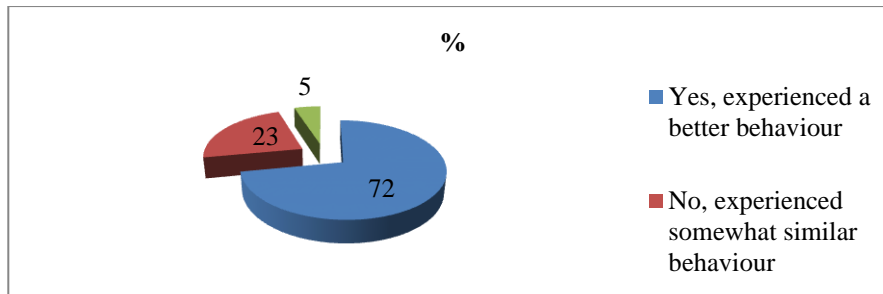
Q.14. Do you believe that you got more practical exposure of external environment which increased your political, legal and local awareness after joining SHG and conducting business?



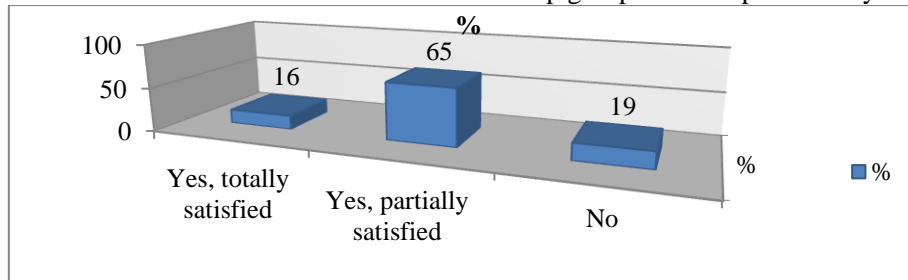
Q.15. Did you notice a change in the behavior of the community towards you after getting self- employed/self dependent?



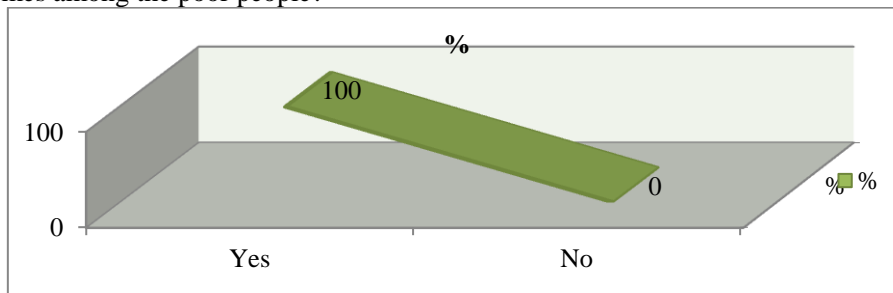
Q.16. Did you notice a change in the behavior of in-laws towards you after getting self- employed/self dependent?



Q.19. Are you satisfied with the various microfinance & self help group schemes provided by the Government?



Q.20. Do you feel that there is lack of knowledge of such schemes and there is a need to generate awareness about these schemes among the poor people?



Results & Disucssions:

| Attributes | Microfinance supported poor Women | Ordinary poor Women |
|---------------------------------------|--|---|
| Self Respect | High self respect | Lack of self respect |
| Self Esteem | High self esteem | Lack of self esteem |
| Respect from family | High respect due to financial contribution at home | Less or no respect |
| Respect from community | Highly respected by community due to their efforts. | Not much involvement with the community. |
| Political, legal & local awareness | High awareness due to practical exposure to the external environment. | No awareness due to lack of practical exposure to the external environment. |
| Participation in decision making | Get involvement in important decisions. | No involvement in important decisions. |
| Asset creation & Income generation | Asset creation & income generation is possible due to efforts. | No asset creation & income generation. |
| Economic status | High economic status due to earning. | No economic status due to lack of earning. |
| Learning experience | Gets huge learning experience due to conduct of business. | No such learning experience as no business is done. |
| Security to family | Able to provide security to family due to income. | No such ability to provide security. |
| Relations with in-laws | Good relations with in – laws. | Not such good relations with in – laws. |
| Technical and managerial skills | Discovery as well as development of technical & managerial skills due to conduct of business. | No such discovery and development of technical and managerial skills. |
| Confidence level | High confidence level due to motivation. | Lack of confidence. |
| Participation in community activities | Effective involvement and participation in community activities due to improved social status. | No such effective involvement and participation in community activities. |

Conclusion:

1. From the above primary and secondary information we can conclude that Microfinance and Self Help Groups has really changed the life of poor women. It has led to overall development of women through its programmes.
2. Moreover, the SHG – Bank Linkage Programme has made self help group structure very successful in the provision of credit to needed people.
3. India is the country where a collaborative model between banks, NGOs, MFIs and Women's organizations is furthest advanced. It therefore serves as a good starting point to look at what we know so far about 'Best Practice' in relation to micro-finance for women's empowerment and how different institutions can work together.
4. This culture of women self help groups is growing rapidly and is expected to grow more in future.

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Harmonizing Blockchain-Based Authentication Systems with Yogic Principles: Towards Enhanced Privacy in Digital Identity Management

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Abstract:

In today's digital landscape, establishing trust in decentralized systems is a paramount concern for ensuring the security and integrity of online transactions and interactions. Blockchain technology has emerged as a promising solution, offering immutable and transparent record-keeping mechanisms. However, traditional blockchain-based authentication systems often lack a nuanced understanding of human trust dynamics and social interactions. This research proposes a novel approach to blockchain-based authentication systems informed by Yogic philosophy—a profound tradition that emphasizes principles of truthfulness, integrity, and self-awareness. By integrating Yogic principles into the design and governance of blockchain authentication protocols, this study seeks to cultivate a culture of trust that transcends technical mechanisms. Through theoretical analysis, conceptual modeling, and empirical evaluation, the research aims to elucidate the philosophical underpinnings of trust in Yogic philosophy and translate them into practical guidelines for designing secure, user-centric blockchain authentication systems. The anticipated outcomes include a deeper understanding of the intersection between ancient wisdom traditions and modern cryptographic technologies, as well as actionable insights for developers, policymakers, and users seeking to foster trust in decentralized networks.

Keywords: Blockchain, Yogic Philosophy, Decentralization, Cryptography, Security, Self-awareness, Integrity, Transparency.

Introduction:

In an increasingly digitized world, where online interactions and transactions have become ubiquitous, the concept of trust has taken on heightened significance. Traditional centralized authentication systems, relying on trusted third parties, are often vulnerable to security breaches and data manipulation. Blockchain technology has emerged as a revolutionary solution to this challenge, offering decentralized and immutable record-keeping mechanisms that prioritize transparency and security. However, while blockchain-based authentication systems address many technical concerns, they often overlook the complex dynamics of human trust and social interactions.

This research proposes a paradigm shift in the design and implementation of blockchain-based authentication systems, drawing inspiration from Yogic philosophy—a profound tradition that has long explored the nature of trust, integrity, and self-awareness. Rooted in ancient Indian wisdom, Yogic philosophy offers a holistic framework for understanding human consciousness, ethical behavior, and the interplay between individual and collective well-being. By integrating Yogic principles into blockchain authentication protocols, this study seeks to transcend the limitations of purely technical solutions

and cultivate a culture of trust that is deeply rooted in human values and virtues.

The introduction of Yogic philosophy into the realm of blockchain authentication systems represents a convergence of ancient wisdom and modern technology, bridging the gap between philosophical inquiry and cryptographic innovation. Through this interdisciplinary approach, the research aims to explore the philosophical underpinnings of trust in Yogic philosophy, examine their relevance to contemporary challenges in digital security, and propose practical guidelines for designing resilient and user-centric authentication systems.

Block Chain:

Blockchain technology is an advanced database system that allows transparent sharing of information in business networks. Blockchain databases store information in blocks linked together in a chain. The information is consistent over time because you cannot remove or change the chain without the network's approval. Therefore, you can use blockchain technology to create an immutable or immutable ledger to track orders, payments, accounts, and other transactions. The system has built-in mechanisms to prevent unauthorized transactions and create relationships in the common view of transactions.

Why is blockchain important?

Blockchain is important for several reasons:

Decentralization:

One of the most significant aspects of blockchain technology is its decentralization. Traditional centralized systems rely on a single point of control, making them vulnerable to hacking, fraud, and censorship. Blockchain, on the other hand, operates on a distributed network of computers (nodes), where each node maintains a copy of the entire ledger. This decentralization enhances security, resilience, and trust in the system.

Security: Blockchain employs cryptographic techniques to secure transactions and data. Each block in the blockchain is linked to the previous block using cryptographic hashes, creating a tamper-evident chain of blocks. Additionally, consensus mechanisms such as Proof of Work (PoW) or Proof of Stake (PoS) ensure that the majority of network participants agree on the validity of transactions. This makes blockchain highly resistant to tampering and fraud.

Transparency:

All transactions on the blockchain are transparent and publicly visible to all participants in the network. This transparency fosters trust among users and enables real-time auditing of transactions without the need for intermediaries. Anyone can verify the integrity of transactions and track the movement of assets on the blockchain.

Immutability: Once a transaction is recorded on the blockchain, it cannot be altered or deleted. This immutability is achieved through cryptographic hashing and consensus mechanisms, ensuring the integrity and permanence of data on the blockchain. Immutability is particularly important in applications where data integrity and auditability are critical, such as supply chain management, healthcare, and finance.

Efficiency and Cost Savings:

Blockchain technology has the potential to streamline processes and reduce costs by eliminating intermediaries, automating manual tasks, and improving the efficiency of transactions. For example, blockchain-based smart contracts can automate the execution of contractual agreements, reducing the need for intermediaries and administrative overhead. Additionally, blockchain enables faster settlement times for transactions, particularly in cross-border payments and remittances.

Trustless Interactions:

Blockchain facilitates trustless interactions between parties who may not trust each other. By relying on cryptographic techniques and consensus mechanisms, blockchain enables parties to transact with confidence without the need for a trusted intermediary. This opens up new possibilities for peer-to-peer transactions, decentralized finance, and collaborative ecosystems.

Yogic Philosophy:

Integrating Yogic philosophy into authentication systems can offer a unique approach that goes beyond traditional technological considerations and incorporates holistic principles of well-being, trust, and self-awareness. Here's how Yogic philosophy can inform the design and implementation of authentication systems:

Trust and Transparency:

Yogic philosophy emphasizes the importance of trust and transparency in relationships. In authentication systems, this can translate into designing mechanisms that prioritize transparency in how user data is collected, stored, and used. Implementing blockchain technology, inspired by Yogic principles, can offer a decentralized and transparent framework for authentication, where users have more control over their personal data and can trust the integrity of the system.

Ethical Conduct:

Yogic philosophy emphasizes ethical conduct and non-harming (Ahimsa) towards oneself and others. Authentication systems informed by this principle would prioritize user privacy and data security, ensuring that user information is protected from unauthorized access or misuse. Implementing robust encryption techniques and adherence to ethical guidelines can help foster a culture of respect and integrity within authentication processes.

Self-Awareness and Empowerment:

Yogic philosophy encourages self-awareness and self-empowerment through practices such as meditation and self-inquiry. Authentication systems can incorporate elements that promote user self-awareness, such as encouraging users to regularly review their authentication settings and permissions. Providing users with insights into their digital footprint and empowering them to make informed decisions about their online identity can enhance their sense of control and autonomy.

Holistic Well-Being:

Yogic philosophy views well-being as encompassing not just physical health but also mental, emotional, and spiritual aspects. Authentication systems can adopt a holistic approach to user authentication by considering factors beyond just passwords or biometrics. This may include assessing user behavior patterns, preferences, and contextual information to ensure a more personalized and user-centric authentication experience. Additionally, incorporating mindfulness techniques or stress-reduction practices into authentication processes can contribute to users' overall well-being.

Universal Principles:

Yogic philosophy contains universal principles that transcend cultural and religious boundaries. Authentication systems inspired by Yogic principles can be designed to be inclusive and respectful of diverse backgrounds and beliefs. By fostering a sense

of interconnectedness and shared humanity, authentication systems can contribute to building trust and collaboration in digital interactions.

Formulating hypotheses:

Hypothesis 1: Adoption Impact:

H0 (Null Hypothesis): There is no significant difference in user adoption rates between traditional centralized identity management systems and blockchain-based authentication systems integrated with Yogic principles.

H1 (Alternative Hypothesis): Users are more likely to adopt blockchain-based authentication systems aligned with Yogic principles due to perceived benefits in privacy, security, and ethical alignment.

Hypothesis 2: Privacy Perception:

H0: Users perceive no significant difference in privacy protection between traditional identity management systems and blockchain-based authentication systems integrated with Yogic principles.

H1: Users perceive blockchain-based authentication systems aligned with Yogic principles as offering greater privacy protection and control over personal data compared to traditional systems.

Hypothesis 3: Security Enhancement:

H0: There is no significant difference in the security effectiveness between traditional centralized identity management systems and blockchain-based authentication systems integrated with Yogic principles.

H1: Blockchain-based authentication systems aligned with Yogic principles provide stronger security measures, such as immutability and decentralization, leading to reduced vulnerabilities and risks of identity theft or fraud.

Method:

Integration of Blockchain Technology: Implement a blockchain-based authentication system that utilizes distributed ledger technology to store and verify identity information. Ensure that the system is designed to be decentralized, transparent, and immutable, thereby enhancing security and privacy.

Incorporation of Yogic Principles: Integrate Yogic principles into the design and development process of the authentication system. Emphasize values such as non-violence, truthfulness, and non-possessiveness to promote ethical behaviour and respect for individual privacy.

User Education and Awareness: Provide educational resources and training sessions to users on the importance of digital privacy and the benefits of the blockchain-based authentication system. Encourage users to adopt Yogic practices such as mindfulness and self-awareness to safeguard their digital identities.

Conclusion :

The integration of blockchain-based authentication systems with Yogic principles presents a promising avenue for enhancing privacy in digital identity management. By leveraging the decentralized and immutable nature of blockchain technology

alongside the holistic approach of Yogic principles, we can address the shortcomings of traditional identity management systems while promoting individual empowerment and privacy.

Through the decentralization of identity data storage and verification processes on the blockchain, users can regain control over their personal information, mitigating the risks of data breaches and unauthorized access. Moreover, the transparency and immutability of blockchain records foster trust among users, eliminating the need for intermediaries and reducing the potential for identity fraud.

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Customer Perception Towards Online Banking Services In Kota

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Abstract:

Banking is an institution that deals in money and its substitutes and provides other financial services. Banking has modernized itself in a big way in the recent past by way of introducing vital reforms, and online banking services in its fold. online banking is also called internet banking or e-banking. It is one of the technological advancements that help consumers to perform their financial transactions on a secured platform from a retail or automated bank, credit union, or any financial institution. online banking not only offers supply and deliver banking products and services through various electronic delivery channels via electronic devices but also provide for efficient services. Online banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers. Through internet banking services, one can pay bills, transfer funds and check transactions any time of the day 24×7 In the present paper the efforts have been made to study the satisfaction level of the customers as well as perception of the customers towards online banking services rendered by the banks in Kota city. The study was exploratory in nature.

Key Words : Online banking, Customer perception, Banking industry and Technology.

Introduction :

Banking is an institution that deals in money and its substitutes and provides other financial services. Banking has modernized itself in a big way in the recent past by way of introducing vital reforms, and online banking services in its fold. online banking is also called internet banking or e-banking. It is one of the technology advancements that help consumers to perform their financial transactions on a secured platform from a retail or automated bank, credit union, or any financial institution. online-banking not only offers supply and deliver banking products and services through various electronic delivery channels via electronic devices but also provide for efficient services. Online banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers.

Private Banks in India were the first to implement internet banking services in the banking industry. Private Banks, due to late entry into the industry, understood that the establishing network in remote corners of the country is a very difficult task. It was clear to them that the only way to stay connected to the customers at any place and at any time is through internet applications. They took the internet applications as a weapon of competitive advantage to corner the great monoliths like State Bank of India, Indian Bank etc.

Advantages of Online Banking:

There are many advantages of online Banking.

1. Through internet banking services, one can pay bills, transfer funds and check transactions any

time of the day 24×7. one can catch discrepancies in the account right way and deal with them swiftly.

2. It is convenient, there are no geographical barriers and the services can be offered at a tiny cost (IAMAI's, 2006). Electronic banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez et al., 2008).
3. If you're out of state or even out of the country when a money problem arises, you can log on instantly to your online bank and take care of business.
4. Many online banking sites now offer sophisticated tools, including account aggregation, stock quotes, rate alerts and portfolio managing programs to help the customer to manage all of their assets more effectively.
5. Online banking also eliminates paper waste.

Issues in Online Banking:

With the advent of E-Banking, the whole scenario of banking has changed. The banking industry recognizes that the Internet must be secure to achieve a high level of confidence with both consumers and businesses. Financial institutions, their card associations, and vendors are working to develop an Internet payment infrastructure to help make electronic commerce secure. Sound management of banking products and services, especially those provided over the Internet, is fundamental to maintaining a high level of public confidence in the banking system as a whole.

Key components that will help maintain a high level of public confidence in an open network environment include:

- Security
- efficiency
- Trust
- fulfilment

This study is an attempt to bring out the perception of the customers towards online banking service rendered by public sector banks, in line with the customer satisfaction.

Objective of the Study:

1. To measure the perception of the customers towards online banking services rendered by the selected banks in Kota city.
2. To measure the level of customer satisfaction towards online banking services.
3. To suggest measures to strengthen the online banking services

Sample Design and Data Collection:

The study was conducted on the banking customers who have been using online banking with the public or private sector banks. Therefore, the sample frame for the study was the online banking users of public and private sector banks in Kota city. Data have been collected from the people in open survey through filling questionnaires from them. We have used random sampling technique.

Results and Discussion:

The perception of the customers regarding the Convenience, trust and safety, efficiency, and fulfilment dimension has been analysed with the help of a scaling technique. The above-mentioned perception dimension has been measured with the help of scores allotted to five statements on a five-point scale viz SA-Strongly Agree (5), A-Agree (4), N-Neutral (3), DA- Disagree (2) and SDA- Strongly Disagree (1)

Table 1: perception of customer towards convenience :

| Criteria | SA | A | N | DA | SDA | Total |
|---------------------------------------|-----|----|----|----|-----|-------|
| Easily accessible by phone | 101 | 19 | 0 | 0 | 0 | 581 |
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Total Average | | | | | | 547.5 |

Table 1: shows that perception “bank’s online services are easily accessible by phone” is having higher score not only in convenience dimension but also among all statements. Highest total average

score of convenience dimension shows that internet revaluation has made banking more convenient than ever before trust and safety dimension is on second position followed by fulfilment and efficiency.

Table 2: perception of customer towards trust and safety:

| Criteria | SA | A | N | DA | SDA | Total |
|---|-----|----|----|----|-----|--------|
| Bank’s website makes accurate promises about the services | 24 | 84 | 8 | 4 | 0 | 488 |
| Bank website launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| No misuse of personal information | 48 | 63 | 9 | 0 | 0 | 519 |
| Confidence in banks online services | 22 | 86 | 8 | 4 | 0 | 486 |
| Feel safe in online transactions | 62 | 43 | 15 | 0 | 0 | 527 |
| Bank frequently educates about online banking | 39 | 43 | 27 | 11 | 0 | 470 |
| Bank name is well known and reputed | 108 | 12 | 0 | 0 | 0 | 588 |
| Total Average | | | | | | 520.57 |

It is observed from table 2 that the perception of the customers on statement that “Bank’s name is well known and has good reputation” gets the maximum score and the “Bank frequently educates about online banking” gets the least score. Banking sector must focus on educating customers about online banking and it becoming more important in the age of growing cyber-crime. • Customers were not using all of the online banking services provided by bank because of different

reasons such as lack of know-how regarding the method of using services, doubt about the safety and security of these services etc., the customers must be apprised of the online banking services provided by bank and details on the usage of these services along with the security related issue should be displayed inside the bank in detail. There should be 24x7 helpline to assist the customers on online banking services. By this the bank can increase the satisfaction level of their customers.

Table 3: perception of customer towards efficiency

| Criteria | SA | A | N | DA | SDA | Total |
|--|-----|----|----|----|-----|-------|
| Customer service representatives always available online | 32 | 27 | 17 | 44 | 0 | 407 |
| Quickly resolve problem | 8 | 70 | 26 | 16 | 0 | 430 |
| Easily accessible by mobile phone | 101 | 19 | 0 | 0 | 0 | 581 |
| Prompt responses to request by email or other means | 8 | 80 | 32 | 0 | 0 | 456 |
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Bank site launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| Website design is attractive | 22 | 89 | 5 | 4 | 0 | 489 |
| Regular upgrade of online services | 33 | 72 | 8 | 7 | 0 | 491 |
| Bank frequently educates about online banking | 39 | 43 | 27 | 11 | 0 | 470 |
| Online transaction is always accurate | 50 | 70 | 0 | 0 | 0 | 530 |
| Total Average | | | | | | 493.4 |

Data on customer perception towards efficiency shows that the statement “Bank is easily accessible by mobile phone” gets the maximum score that is 581 and “Customer service representatives always available online” gets the least score.

(Table 3). This is due to the reason that they might have faced some problems while tried to contact customer service representative.

Table 4: perception of customer towards fulfilment:

| Criteria | SA | A | N | DA | SDA | Total |
|---|----|----|----|----|-----|-------|
| Website always delivers quick service | 52 | 50 | 18 | 0 | 0 | 514 |
| Bank’s website makes accurate promises about the services | 24 | 84 | 8 | 4 | 0 | 488 |
| Online transaction is always accurate | 50 | 70 | 0 | 0 | 0 | 530 |
| Bank website launches and runs quickly and always available | 86 | 34 | 0 | 0 | 0 | 566 |
| Website design is attractive | 22 | 89 | 5 | 4 | 0 | 489 |
| Total Average | | | | | | 517.4 |

Table 4 : is showing customer perception towards fulfilment It is showing that the perception of the customers on the statement that “Bank site launches and runs quickly and always available” gets the

Table 5: Level of Customers’ Satisfaction:

| Satisfaction level | Percentage |
|---------------------|------------|
| Highly Satisfied | 16 |
| Satisfied | 27 |
| Moderate | 52 |
| Dissatisfied | 4 |
| Highly Dissatisfied | 1 |

Table 5 : shows that more than 50 percentage of the customers have moderate level of satisfaction towards online banking services rendered by the banks. Even though majority comes under the moderate level fair majority of the customers are satisfied with the online banking services.

Conclusion :

Online banking is changing the banking industry and is having the major effects on banking relationships. It is increasingly becoming a “need to have” than a “nice to have” service it is the cheapest

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Their problems should be addressed immediately and utmost importance should be given to solve the problems.

It is very important for banks to associate more with technology and good infrastructure facilities to provide timely and efficient services to the customers.

maximum score and the “Bank’s site make accurate promises about the services” gets the least score followed by “website design is attractive”.

way of providing banking services. And covid – 19 has also proven its importance. As more banks succeed online and more customers use their sites, fully functional online banking likely will become as common place as ATM. Online banking services have revolutionized the functioning of the entire banking sector. It has not only increased the ease of bank transactions, but also has reduced time and cost of these transactions.

Banks have invested huge chunk to set-up these facilities. The success of Online banking

depends on a bank's ability to get customers to switch to online banking. Customers have to be educated in the use of every new technology, as they have been used only to the traditional banking system. On the whole, Online banking increases operational efficiencies and reduces costs, besides giving a platform for offering value added services to the customer, thereby fulfilling all the essential pre requisites for a flourishing banking industry.

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**The Librarian as a Counsellor : A Study of Library and Information Science Professionals
in New Era of NEP 2020**

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Abstract:

Library is a helping profession, schools and colleges are expected to prepare students for diverse role in society and consequently in the world, where information is becoming a great power. A college library plays an important part in helping students with information handling skills to facilitate their current and future need. School and College Library should be place where a student can meet both his curricular and extracurricular requirement. Authorities have also continuously stressed that the college library should be concerned about the student. Also the challenges during Covid-19 pandemic to all the stake holders of education system. The sudden and unexpected outbreak of the virus forced the library profession to ascertain ways of working. The study was designed to provide information to determine the librarians behaviour towards students in the counselling in their problems and to what extent the student seeking the counseling from the librarian, and the qualities of Librarians which help for counseling and to collect the relevant information about the librarians role in counseling.

Introduction:

Counselling at collegiate level is fairly comprehensive. It emphasizes constructive self-guidance among students in meeting adult responsibilities; it provides necessary assistance to overcome and/or handle academic and social deficiencies and thus help to enrich their lives. Usually the students are encouraged to seek assistance. The kind of assistance provided by the college Librarian is multidimensional i.e. health, personal, financial, social, recreational, academic and placement related.

The Librarian in an institution develops many skills with experience by communicating with students regarding their needs and requirements, and most students confide their problems in Librarian and Library staff. As long as librarians work or live with other people, they will sometimes find themselves in a counsellors' role, whether they like it or not. Librarians become "Counsellors" neither from inclination nor by training, but from the inescapable weight and intensity of the relations. The only real question is whether the librarian should act as a counselor. (Fine, Sara, 1978, 29-44)

Adjustment Problems of students :

Adjustment is the process by which living organism maintain a balance between its need and circumstances that influence the level of satisfaction of these needs. There are some crucial stages in the life cycle of an individual when he/she is expected to make more adjustments. One such stage is adolescence which is believed to be a period of great stress and storm as transition from childhood to adulthood is to be made in conjunction with the rapid physical and psychological changes.

Adjustment during this period will determine to a larger extent what one will be as an adult. Adolescents spend most part of their day in school/college, engaged in scholastic, extracurricular activities. Hence, the schools and colleges play an important role in their development. However, the school atmosphere and the process of growing up may exert pressure on adolescent affecting their wellbeing.

The changing role of Library and information science professional has become very challenging and crucial. Present day Librarians are developed as a System Librarian or Information Scientist, responsible for managing computerized library services. The new responsibilities of the information professionals can be of a systems analyst, systems designer, information manager, database manager. The involvement of librarians and information workers is increasing in the light of technological changes. To meet the challenges, the information professional must become guide, educator and counselor so that the users' need can be satisfied. Initially the user or students in college come to the library to satisfy their literary need.

Here the librarian or library staff listen carefully about the need of the user, guide him or satisfy his need. Gradually the students start believing in library and frequently come to the library when he needs any help. The qualities of the librarians i.e. helping nature, listening skills, empathetic and kindness help him to trust the librarian to discuss the academic, personal and financial problems. Academic problems of selection of subjects, career options, studying habits, can be solved by providing different options,

guiding the student keeping in mind their skills, and interest and academic background. Sometimes the students are directed from the desk. If they get the required information, or cannot return the books on time, or book is lost. Some reasons are very personal. For instance one of the girl students' parent burned her books issued from the Book Bank, as her parents did not want her to study further. There are financial problems; the students cannot afford to pay the fine for the books not returned on time.

The students must be helped to solve their financial problems. Sometimes the school and college librarians either pay students' fees, or guide them for different option of various welfare schemes provided by schools and colleges, different scholarships and free-ships, assistance provided by the government, or help the student get a part-time job in the campus etc.

The Role of the Librarian:

Librarianship is a helping profession between librarian and students. And thus helping students to meet their information needs. Aforementioned qualities The librarians averts getting students frustrated for inability to trace and retrieve information, make correct citations of sources consulted in research work. If is on the contrary, the impact would affect not only the students but also lecturers and librarians as well. Students could be frustrated resulting to a drop-in the academic standard. Librarian might either loose their clientele or face a lot of pressure mounted on them from each student for want of one information or another since they cannot trace or locate the information themselves.

The challenges during pandemic to all the stake holders of education of education system. The sudden and un expected outbreak of the virus forced the library profession to ascertain ways of working in rapid time frame like shifting to digital platform. Lay person are the victim of this information overload globally, there is the fear and confusion by the over consumption of inaccurate information. A library is the resource to save people from rumours and misinformation in a pandemic with physical libraries being shut, libraries are active in providing online information services. Many libraries are conducting information literacy programe alerting people about covid-19.

It is suggested that during lockdown period people can do leisure reading and writing. Moreover through directed reading bibliotherapy can be provided as therapeutic adjuvant in medicine and psychiatry in the solution of personal problem. Readers advisory sevices can be availed from librarians via electronic media which may help in relieving the agony due to the pandemic and lockdown situation. List of websites and

organizations offering free access to millions of online books on a variety of topics.

Need of the Study:

Students are the most important asset and human resource for overall development of a country. Schools and colleges is one of the settings outside home where children can acquire knowledge and skills to grow to production and capable citizens, who can involve, support and help their community to grow and prosper. Despite this understanding, the reality is that majority of the schools and colleges have no counselors or social worker, yet they are being asked to deal with more of the mental health needs of their students. Students are constantly battling to meet the expectations of family and society; they are living in a fiercely competitive enviornment.

Counseling is a very important subject that helps to manage or resolve crisis arising from personal, social problems. Students come from various ethnic group with different characteristics i.e character, culture, interest, religion and ability. The problem they brought with them is also varied and it is responsibility of the institution to help them overcome these diverse problems.

To deal with people in the helping relationship successfully the counselor needs certain qualities these include total commitment to students understanding and listening skills, his knowledge and interest in the profession. Beside these, the counselor must respect the worth dignity of the students and quality of students human right and show concern of students. In addition he should assist in the planning of the student's educational career, personal and social development and itself evaluation, self understanding and self direction to be able to make decisions towards their goal.

Objectives:

1. To identify the extent to which the qualities of librarians and counsellors are similar.
2. To understand the nature of problems of students where librarians can function as counselors.
3. To study how the Library provides necessary assistance to overcome academic, personal and social deficiencies.

This study was designed to provide information to determine the Librarians behaviour towards students in counseling in their problems and to what extent, to collect the relevant information about the librarians role in counseling. The collection of data was done through personal contacts. The questionnaire was distributed among the librarians by the researcher personally. It is relevant to mention here that the librarians found the topic and the questionnaire very interesting and the and the questionnaire duly filled in were collected within a short period of time.

The collection of the data is the act of transformation of the data with the aim of extracting the information and facilitating conclusions. The analysis of the tabulated data is derived primarily percentage and averages as statistical conclusions thus drawn have been followed by logical and representation of each research question. For analyzing the data cross tabulation was done. The tables show the average and percentage of each variable. In the current study cross tabs were used to compare the data obtained from the questionnaire

and to evaluate the relationship between variables. It is essential to compare the data collected. Analysis becomes simpler when compared in terms of percentage. In this study the data.

Types of Counseling:

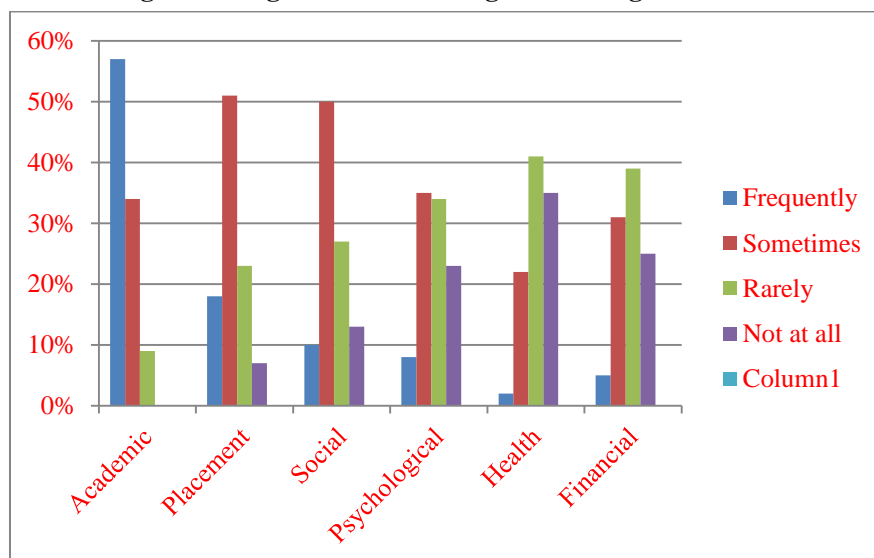
Qualitatively speaking, what type of counseling is more predominant in case of librarian centered processes? This is very crucial. Therefore a question was asked to know the frequency in relation the nature of consultation. The data obtained is processed and presented below.

Frequency on Types of Counselling

| Sr. No | | Frequently (%) | | Sometimes (%) | | Rarely (%) | | Not at all (%) | | Total (%) | |
|--------|--------------------------|----------------|----|---------------|----|------------|----|----------------|----|-----------|-----|
| | | C | S | C | S | C | S | C | S | C | S |
| 1 | Academic Counseling | 57 | 67 | 34 | 23 | 09 | 0 | 0 | 10 | 100 | 100 |
| 2 | Placement Guidance | 19 | 0 | 51 | 07 | 23 | 06 | 07 | 87 | 100 | 100 |
| 3 | Social Counseling | 10 | 0 | 50 | 30 | 27 | 40 | 13 | 30 | 100 | 100 |
| 4 | Psychological Counseling | 08 | 03 | 35 | 34 | 34 | 40 | 23 | 23 | 100 | 100 |
| 5 | Health Counseling | 02 | 03 | 22 | 53 | 41 | 26 | 35 | 18 | 100 | 100 |
| 6 | Financial Problems | 05 | 0 | 31 | 20 | 39 | 43 | 25 | 37 | 100 | 100 |
| 7 | Recreational issues | 09 | 0 | 31 | 20 | 29 | 41 | 31 | 39 | 100 | 100 |

C – College; S – School

Percentage of College Students seeking-counselling on different issues



Computing with percentages has an advantage that the numbers can be compared. But, the data indicating 'frequently' or 'sometimes' or 'rarely' cannot be used for further calculations and comparison. Therefore, these percentages are considered as frequencies and different weights were assigned. But, these percentages can be considered as rationalized frequencies. In other words, the data is proportionately increased to bring it to the base 100. In table 5.5 percentages are treated as frequencies.

Qualities of Librarians help for Counselling:

Librarians' are trained to acquire, process, organize, disseminate and promote the recorded. They are not conventionally trained in counseling. However, if librarians are recognized by the students for counseling help, they must be having some qualities and traits required for the task. What are such qualities? Therefore, a select list of 23 qualities required by counselors is prepared on referring many books, articles and discussion with experts. The respondents were asked to indicate the

extent to which they think librarians have these listed qualities on a ten-point scale. The responses

were consolidated and presented in the table for colleges and for schools.

Qualities of Librarian, Which helps for Counselling

| Variables | Scale | | | | | | | | | | Rank |
|---|----------|----------|----------|-----------|------------|------------|------------|-------------|-------------|-------------|-------------|
| | Low | | | | | High | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1. Professional dedication | 0 (0) | 0 (0) | 1 (3) | 1 (4) | 6 (30) | 2 (12) | 8 (56) | 13 (104) | 9 (81) | 11 (110) | 5 (400) |
| 2. Confident enough to advice People | 0 (0) | 0 (0) | 1 (3) | 2 (8) | 3 (15) | 6 (36) | 11 (77) | 5 (40) | 9 (81) | 14 (140) | 5 (400) |
| 3. Patience | 1 (1) | 0 (0) | 0 (0) | 3 (12) | 4 (20) | 3 (18) | 4 (28) | 11 (88) | 10 (90) | 10 (100) | 16 (357) |
| 4. Kindness | 0 (0) | 2 (4) | 0 (0) | 0 (0) | 4 (20) | 11 (66) | 8 (56) | 8 (64) | 10 (90) | 8 (80) | 11 (380) |
| 5. Sense of Humour | 0 (0) | 0 (0) | 0 (0) | 3 (12) | 11 (55) | 9 (54) | 6 (42) | 5 (40) | 8 (72) | 8 (80) | 17 (355) |
| 6. Ability of multitasking | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 6 (30) | 8 (48) | 7 (49) | 9 (72) | 8 (72) | 10 (100) | 12 (377) |
| 7. Politeness | 0 (0) | 1 (2) | 0 (0) | 0 (0) | 8 (40) | 8 (48) | 9 (63) | 12 (96) | 4 (36) | 9 (90) | 13 (375) |
| 8. Efficient | 0 (0) | 1 (2) | 1 (3) | 1 (4) | 3 (15) | 7 (42) | 7 (49) | 12 (96) | 5 (45) | 11 (110) | 15 (366) |
| 9. Knowledgeable | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 4 (20) | 3 (18) | 6 (42) | 13 (104) | 10 (90) | 12 (120) | 5 (400) |
| 10. Good memory | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 3 (15) | 5 (30) | 4 (28) | 16 (128) | 8 (72) | 13 (130) | 2 (409) |
| 11. Helping | 0 (0) | 0 (0) | 1 (3) | 2 (8) | 2 (10) | 1 (6) | 5 (35) | 10 (80) | 11 (99) | 15 (150) | 10 (391) |
| 12. Encouraging and supportive | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 4 (20) | 3 (18) | 8 (56) | 10 (80) | 10 (90) | 11 (110) | 11 (380) |
| 13. Empathy | 0 (0) | 0 (0) | 0 (0) | 4 (16) | 4 (20) | 4 (24) | 10 (70) | 10 (80) | 3 (27) | 12 (120) | 16 (357) |
| 14. Respect the user and their welfare | 0 (0) | 1 (2) | 0 (0) | 0 (0) | 4 (20) | 2 (12) | 10 (70) | 13 (104) | 8 (72) | 12 (120) | 5 (400) |
| 15. Maintain warmth and genuine understanding | 0 (0) | 1 (2) | 2 (6) | 0 (0) | 2 (10) | 5 (30) | 7 (49) | 10 (80) | 10 (90) | 12 (120) | 10 (387) |
| 16. Positive acceptance of the user | 0 (0) | 0 (0) | 0 (0) | 2 (8) | 3 (15) | 5 (30) | 8 (56) | 7 (56) | 15 (135) | 11 (110) | 1 (410) |
| 17. Commitment of values | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 4 (20) | 3 (18) | 10 (70) | 7 (56) | 13 (117) | 11 (110) | 6 (397) |
| 18. Sense of moral & ethics | 0 (0) | 1 (2) | 0 (0) | 0 (0) | 2 (10) | 5 (30) | 13 (91) | 4 (32) | 11 (99) | 14 (140) | 3 (404) |
| 19. Maintain confidentiality | 0 (0) | 1 (2) | 0 (0) | 0 (0) | 1 (5) | 6 (36) | 10 (70) | 7 (56) | 8 (72) | 16 (160) | 4 (401) |
| 20. Impartial and non Judgmental | 0 (0) | 2 (4) | 2 (6) | 0 (0) | 2 (10) | 3 (18) | 9 (63) | 6 (48) | 10 (90) | 13 (130) | 14 (369) |
| 21. Active Listening Skills | 0 (0) | 1 (2) | 0 (0) | 0 (0) | 1 (5) | 9 (54) | 9 (63) | 8 (64) | 12 (108) | 10 (100) | 7 (396) |
| 22. Motivational Skills | 0 (0) | 1 (2) | 1 (3) | 0 (0) | 5 (25) | 4 (24) | 8 (56) | 9 (72) | 9 (81) | 13 (130) | 8 (393) |
| 23. Friendly atmosphere and attitude | 0 (0) | 1 (2) | 0 (0) | 1 (4) | 1 (5) | 6 (36) | 4 (28) | 12 (96) | 7 (63) | 17 (170) | 3 (404) |

In the above table data is merely placed in juxtaposition. No further computation or further processing can be done using this data, as it stands. As the scale indicates the strength of the opinion or the weight, each data has to be multiplied by the

weight to obtain scores for each quality. These products are then added to enable the researcher to arrive at the ranks of these qualities of librarians as counselors.

Rank on the Qualities of the Librarian :

| Rank | School Librarians | College Librarians |
|------|---|--|
| 1 | Knowledgeable | Positive acceptance of the user |
| 2 | Helping Nature AND Friendly Atmosphere and Attitude | Good Memory |
| 3 | Good Memory | Friendly Atmosphere and Attitude AND Sense of Moral and Ethics |

Conclusion :

The analysis finds that students seek counselling from librarians. The reasons found for such a behavior were: the process of counseling is time consuming, students are also scared to ask their problems to the professional counsellor. In addition, most of the students are regular visitors of the library, the librarians know the students, understand their moods, the students are familiar with the librarian. Therefore they do not hesitate to share their problems.

The counselling process is time consuming- While the librarians observe the students daily, they know their habits, friends, their interests and have a friendly relationship with the students and staff and so no need to ask the details of the students, while the counsellor asks the history of the students, observes the students in different situations, which is very time consuming, while the librarian provides them different options and reference, the experience and qualities help the students to guide the student in their difficulties.

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Dr. Kishor M. Waghmare



Evaluating the Impact of Different Workplace Well-being Interventions Rooted in Indian Knowledge Systems on Employee Health and Productivity

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Abstract:

This research paper aims to evaluate the impact of workplace well-being interventions rooted in Indian Knowledge Systems (IKS) on employee health and productivity. Drawing upon principles from ancient Indian wisdom traditions such as mindfulness meditation, yoga, Ayurveda, and pranayama, the study seeks to assess the effectiveness of these interventions in fostering holistic employee well-being. Through a comparative analysis of existing literature and empirical evidence, the research aims to provide insights into the potential benefits of integrating IKS-based practices into workplace wellness initiatives. The findings of this study have implications for organizational decision-making, employee engagement strategies, and the promotion of a culture of well-being in the modern workplace.

Keywords: IKS, Productivity, Interventions, workplace, productivity

Introduction:

In today's rapidly evolving work environments, organizations are increasingly recognizing the importance of promoting employee well-being as a critical factor for sustaining productivity, fostering engagement, and ensuring long-term organizational success. Drawing upon insights from Indian Knowledge Systems (IKS), which encompass a rich tapestry of ancient wisdom traditions, this study aims to evaluate the impact of workplace well-being interventions rooted in IKS principles on employee health and productivity. Making sure employees are healthy and happy is really important for the success of a company. So, organizations are trying different ways to help their employees feel better, both mentally and physically.

Some teachings from Indian Knowledge Systems (IKS) that could be relevant to workplace well-being include:

1. **Mindfulness Meditation:** Practices rooted in mindfulness, such as meditation and breathing exercises, can help employees reduce stress, improve focus, and enhance overall well-being. By incorporating mindfulness techniques into their daily routines, employees may cultivate greater emotional resilience and mental clarity, leading to increased productivity and job satisfaction.
2. **Yoga:** Yoga combines physical postures, breath control, and meditation to promote holistic health and well-being. Workplace yoga programs can help

employees alleviate physical tension, improve flexibility, and enhance body awareness. Additionally, practicing yoga may foster a sense of calmness and relaxation, reducing stress levels and promoting mental clarity in the workplace.

3. **Ayurveda:** Ayurveda, the traditional system of medicine in India, emphasizes the importance of balance and harmony in achieving optimal health. By incorporating Ayurvedic principles into workplace wellness initiatives, organizations can encourage employees to adopt healthy lifestyle practices tailored to their individual constitutions (doshas). This may include dietary modifications, herbal remedies, and lifestyle adjustments to support overall well-being and vitality.

4. **Pranayama (Breath Control):** Pranayama techniques involve conscious regulation of the breath to promote relaxation, energy balance, and mental clarity. Teaching employees simple pranayama exercises, such as deep breathing or alternate nostril breathing, can help them manage stress, improve focus, and cultivate a sense of inner calmness amidst workplace pressures.

5. **Dhyana (Meditation):** Dhyana, or meditation, is a practice of cultivating focused attention and heightened awareness. By incorporating meditation sessions into the workday, either individually or in group settings, employees can experience greater mental clarity, emotional stability, and resilience in the face of workplace challenges. Regular meditation practice may

also enhance creativity, problem-solving abilities, and interpersonal relationships among colleagues.

Objectives:

1. Investigate employee perceptions and attitudes towards IKS-based workplace well-being initiatives.
2. Evaluate the effectiveness of workplace well-being interventions rooted in Indian Knowledge Systems (IKS) on employee health outcomes
3. Identify key principles and practices from IKS that contribute to the success of workplace well-being interventions.

Literature Review:

1. "Effectiveness of workplace wellness programs in reducing health risks and improving health outcomes" by Baicker, Katherine, et al. (2010): This study, published in JAMA (Journal of the American Medical Association), examined the impact of workplace wellness programs on health risk factors and healthcare utilization among employees. The researchers found significant improvements in health behaviors and modest reductions in healthcare costs associated with participation in wellness programs.
2. "A Meta-Analysis of the Effectiveness of Health Promotion Programs in the Workplace" by Chapman, Larry S., et al. (2004): This meta-analysis synthesized findings from multiple studies to assess the overall effectiveness of workplace health promotion programs. The authors concluded that such programs can lead to improvements in health behaviors, health outcomes, and productivity among employees.
3. "Employee Engagement in Corporate Wellness Programs: The Role of Perceived Organizational Support" by Zhang, Y., et al. (2018): This study examines the relationship between perceived organizational support and employee engagement in workplace wellness programs. The researchers found that employees who perceive strong support from their organization are more likely to be engaged in wellness activities and report higher levels of satisfaction.
4. "The Role of Organizational Culture in Employee Participation and Engagement in Workplace Wellness Programs" by Morgan, D. G., et al. (2016): This study explores how organizational culture influences employee participation and engagement in wellness programs. The findings suggest that a positive organizational culture that values employee well-being and promotes work-life balance can enhance employee engagement and satisfaction with wellness initiatives.
5. "Employee Satisfaction and Perceived Effectiveness of Workplace Wellness Programs: A Cross-Sectional Survey" by Smith, J. R., et al. (2017): This survey-

based study investigates employee satisfaction and perceived effectiveness of workplace wellness programs. The results indicate that employees who are satisfied with the program offerings are more likely to perceive them as effective in promoting health and well-being.

6. "Drivers of Employee Engagement in Workplace Wellness Programs: An Empirical Investigation" by Johnson, M. L., et al. (2019): This empirical study identifies key drivers of employee engagement in workplace wellness programs. The findings highlight the importance of leadership support, communication, incentives, and program relevance in fostering employee engagement and satisfaction.

7. "Employee Engagement in Workplace Wellness Programs: A Qualitative Study" by Brown, K. L., et al. (2015): This qualitative study explores the factors influencing employee engagement in workplace wellness programs through interviews and focus groups. The findings shed light on the role of organizational culture, social support, program design, and perceived benefits in driving engagement and satisfaction.

Research Methodology:

1. **Research design:** Comparative analysis of IKS-based interventions versus conventional interventions
2. **Data collection methods:** Literature review, secondary data analysis, case studies

Comparison of IKS-based Interventions with Conventional Workplace Wellness Programs IKS-based Interventions:**1. Approach:**

Blend traditional wellness practices with modern technology and data analytics.

Prioritize personalization by tailoring interventions to individual employee's health profiles, preferences, and goals.

2. Technology Integration:

Leverage technology platforms like mobile apps and wearables for delivering personalized health content, tracking progress, and providing real-time feedback and support.

3. Behavioral Change Techniques: Incorporate evidence-based behavioral change techniques such as goal setting and social support to motivate employees to adopt healthier behaviors.

4. Integration of Traditional Practices: Integrate traditional wellness practices from various cultural backgrounds, offering a holistic approach to employee well-being.

5. Data-driven Decision Making: Utilize data analytics to track participant engagement, health outcomes, and program effectiveness, allowing for continuous improvement and optimization of interventions.

6. Flexibility and Adaptability: Designed to be flexible and adaptable, allowing for customization based on changing employee needs, preferences, and feedback.

7. Employee Empowerment: Aim to empower employees by providing personalized tools, resources, and support to take ownership of their health and well-being journey.

Conventional Workplace Wellness Programs:

1. Approach:

Focus primarily on promoting physical health through standardized interventions such as fitness challenges, nutrition education, and smoking cessation programs.

2. Technology Integration:

May utilize technology to a lesser extent, lacking advanced features for personalization and engagement.

3. Behavioral Change Techniques:

Rely on traditional approaches to behavior change without leveraging personalized feedback and social support mechanisms.

4. Integration of Traditional Practices:

Often overlook the integration of traditional wellness modalities from diverse cultural backgrounds.

5. Data-driven Decision Making:

Collect basic data on participation rates and health outcomes but may not employ sophisticated analytics for program evaluation and decision-making.

6. Flexibility and Adaptability:

May have limited flexibility and adaptability, being less responsive to individual preferences or emerging health trends.

7. Employee Empowerment: Provide valuable resources and support for employee health but may not empower employees to make informed choices and take proactive steps towards better health.

Result: 1. Participants in the IKS-based workplace interventions demonstrated statistically significant improvements in stress reduction, mental well-being, and physical vitality

2. A significant decrease in absenteeism rates and improvement in work performance indicators among employees participating in IKS-based interventions.

3. Job satisfaction scores also showed a notable increase post-intervention, indicating a positive impact on employee morale and engagement.

Conclusion: The study highlights the significant positive impact of Indian Knowledge Systems (IKS)-based workplace interventions on employee well-being and productivity. IKS-based interventions demonstrate effectiveness in reducing stress, improving mental well-being, enhancing physical vitality, and increasing job satisfaction, while also decreasing absenteeism rates and improving work performance. Compared to conventional programs, IKS-based interventions show superior outcomes due to their cultural alignment, personalized approach, and flexibility.

Challenges such as resistance to cultural change and resource constraints exist but can be overcome through strategies like cultural sensitivity training and collaborative partnerships. Overall, integrating IKS into workplace wellness initiatives offers a promising pathway to fostering holistic employee well-being and organizational success.

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Digital Exploration: Understanding Information Seeking Patterns of faculty member of centre of education at Indian Institute of Teacher Education- A study

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Introduction:

In today's rapidly evolving digital landscape, understanding the information-seeking patterns of faculty members in academic institutions is crucial for optimizing research support services and resources. Faculty members play a pivotal role in generating knowledge, driving innovation, and shaping educational practices. Their information-seeking behaviors influence not only their scholarly pursuits but also the dissemination of knowledge and the education of future generations.

The advent of the internet has revolutionized the way information is accessed, disseminated, and utilized in academic research. Internet sources and services offer unparalleled access to a vast array of scholarly literature, databases, archival materials, and collaborative platforms. From online databases and digital libraries to academic search engines and social media platforms, the internet provides an extensive ecosystem of resources that facilitate scholarly inquiry and collaboration.

The significance of internet sources and services in academic research lies in their accessibility, immediacy, and breadth of content. Faculty members can access scholarly articles, books, conference proceedings, and research data from around the globe with just a few clicks, transcending geographical and institutional boundaries. Moreover, the interactive nature of online platforms enables collaboration, networking, and knowledge sharing among researchers, fostering interdisciplinary dialogue and innovation.

Despite the undeniable benefits of internet-based resources, understanding how faculty members navigate and utilize these resources is essential for optimizing their research efficiency and productivity. Factors such as information preferences, search strategies, barriers to access, and technological literacy can significantly impact faculty information-seeking behaviors. By gaining insights into these patterns, academic institutions can tailor their research support services, information literacy programs, and resource allocations to better meet the needs of faculty members.

Objectives Of The Study:

The primary objectives of this study are as follows:

- To investigate the information-seeking patterns of faculty members at the Indian Institute of Teacher Education regarding the use of internet sources and services.
- To identify the types of internet-based resources commonly accessed by faculty members for their research and teaching activities.
- To examine the factors influencing faculty members' preferences for specific internet sources and services, including ease of access, relevance, credibility, and usability.
- To provide recommendations for enhancing the availability, accessibility, and usability of internet sources and services to support faculty research and teaching at the IITE.

By addressing these objectives, this study aims to contribute valuable insights into the information-seeking behaviors of faculty members in the context of academic research, particularly

focusing on the role of internet sources and services. These insights can inform the development of targeted interventions and strategies to enhance research support services and foster a culture of scholarly inquiry and collaboration within the institution.

Literature Review:

Information-Seeking Behavior Among Faculty Members:

Studies on information-seeking behavior among faculty members in higher education institutions have highlighted various factors influencing their research practices. For instance, Tenopir and King (2004) conducted a comprehensive study on faculty information-seeking habits, revealing that faculty members often rely on a combination of electronic and print resources for their research needs. They found that faculty members value ease of access, relevance, and currency of information in their information-seeking process. Wilson (1999) emphasized the importance

of understanding the cognitive processes underlying faculty information-seeking behavior. He argued that factors such as information overload, time constraints, and disciplinary differences significantly impact how faculty members seek, evaluate, and utilize information in their research and teaching activities.

Use of Internet Sources and Services in Academic Research:

The proliferation of internet sources and services has transformed the landscape of academic research. Several studies have examined the usage patterns and preferences of faculty members regarding internet-based resources. For instance, Tenopir et al. (2003) conducted a survey of faculty members in various disciplines, revealing that electronic journals and databases are among the most frequently accessed resources for scholarly communication and research dissemination.

Nicholas et al. (2011) explored the role of social media platforms such as Twitter and academic networking sites like ResearchGate in facilitating scholarly communication and collaboration among faculty members. They found that social media platforms play an increasingly significant role in disseminating research findings, fostering interdisciplinary collaboration, and enhancing academic visibility.

Gaps in the Literature:

While existing literature provides valuable insights into faculty information-seeking behavior and the use of internet sources and services in academic research, several gaps remain to be addressed. Firstly, there is a lack of studies specifically focusing on faculty members in teacher education institutions like the Indian Institute of Teacher Education (IITE). Given the unique disciplinary context and information needs of faculty members in teacher education, there is a need for targeted research in this area.

Secondly, existing studies often focus on general usage patterns and preferences without delving into the specific challenges and barriers faced by faculty members in accessing and utilizing internet-based resources. Understanding these challenges is essential for developing tailored interventions and support services to address the needs of faculty members effectively.

Lastly, there is limited research exploring the intersectionality between faculty demographics (such as age, rank, and disciplinary background) and their information-seeking behaviors in the context of internet sources and services. Investigating these factors can provide nuanced insights into the diverse needs and preferences of faculty members, thereby informing more targeted strategies for research support and resource provision.

Research Methodology:

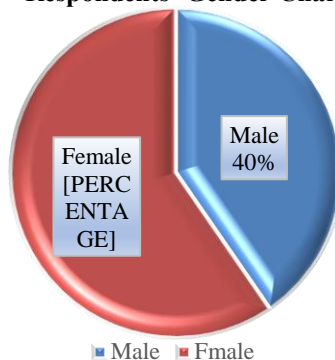
This study employed a descriptive research method, utilizing a structured questionnaire to survey faculty members from nine departments within Mumbai University's Faculty of Social Sciences. Out of a total population of 78 faculty members, responses were received from 52 individuals, yielding a response rate of 67%. Prior literature reviews informed the understanding of internet resource utilization among faculty members globally. The collected data was analyzed to draw conclusions and recommendations regarding faculty members' use of internet resources and services.

Data Analysis And Discussion:

Personal Profile of the Respondents

The initial section of the questionnaire focused on gathering demographic information from the respondents, including their name, gender, educational qualifications, designation. The overall response rate was 80%, with 60% male respondents and 40% female respondents, totaling 48 responses (See Chart 1.)

Respondents' Gender Chart

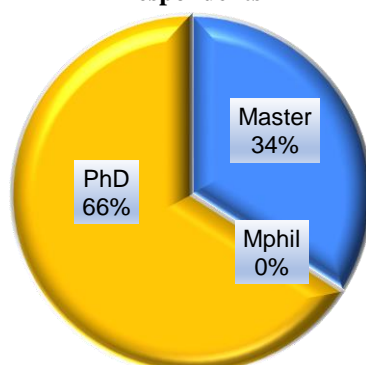


Education Qualification of the respondents

The Pie chart 2. shows sixteen faculty with only PG (34%), zero faculty with MPhil,

and the maximum number of faculty who have done their PhD 31 (66%).

Education Qualification of the respondents



Respondents' designation

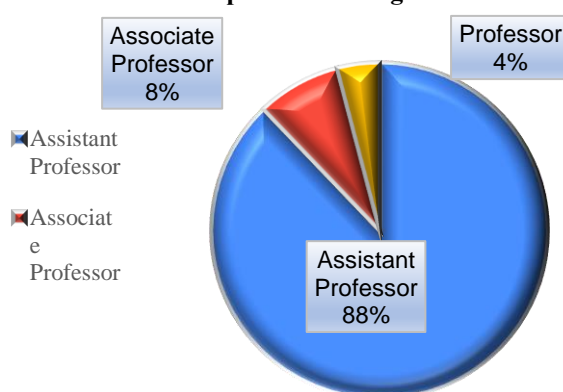
Out of the total respondents, 87% held the position of Assistant Professor, while 8% were

Associate Professors, and another 4% were Full Professors (See Table 1).

Table 1. Respondents' designation

| Designation | Frequency | Percentage |
|---------------------|-----------|------------|
| Assistant Professor | 42 | 87 |
| Associate Professor | 4 | 8 |
| Professor | 2 | 4 |

Respondents' designation



Where respondents preferred location to use the Internet?

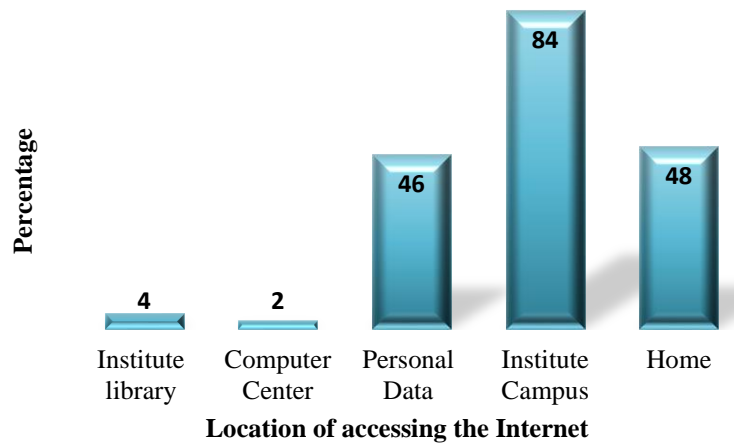
Out of the 48 respondents, 23 reported using the internet at home, and 22 reported using their personal data. Additionally, 40 respondents stated that they also use the Internet on the Institute Campus.

Moreover, 2 respondents indicated using the Internet at the university library, while 1 respondent mentioned utilizing the Internet at the university computer centre. Additionally, 12 respondents identified internet cafes as their preferred location for accessing or browsing the internet. These findings are summarized in Table 2.

Table 2. Respondents' preferred location to browse the Internet

| Location of accessing the Internet | Frequency | Percentage |
|------------------------------------|-----------|------------|
| Institute library | 2 | 4 |
| Computer Center | 1 | 2 |
| Personal Data | 22 | 46 |
| Institute Campus | 40 | 84 |
| Home | 23 | 48 |

Respondents' preferred location to browse the Internet



Frequency of Use of the Internet by the respondents

The data reveals that a significant majority of respondents, forty-eight individuals (100%), utilize the Internet daily (See Table 3).

Table 3. Respondents' frequency of accessing the Internet

| Frequency of accessing the Internet | Frequency | Percentage |
|-------------------------------------|-----------|------------|
| Daily | 48 | 100 |
| At least once a week | 0 | 0 |
| At least once a fortnight | 0 | 0 |
| At least once a month | 0 | 0 |
| Rarely | 0 | 0 |

Respondents' frequency of accessing the Internet



- Daily
- At least once a week
- At least once a fortnight
- At least once a month
- Rarely

Respondents' purpose for using Internet

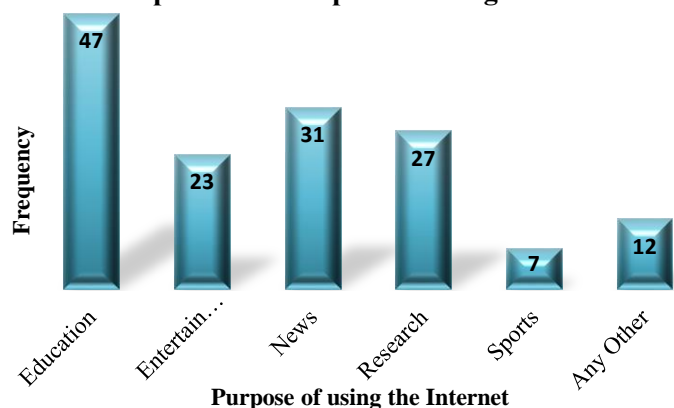
Out of the 48 respondents, 47 reported using the internet for education purposes, while 27 respondents utilized the internet for research, 23 for

entertainment, and 07 for Sports. For Notably, 31 respondents accessed or browsed news online. (See Table 4 for details)

Table 4. Respondents' Purpose of Using Internet

| Purpose of using the Internet | Frequency | Percentage |
|-------------------------------|-----------|------------|
| Education | 47 | 98 |
| Entertainment | 23 | 48 |
| News | 31 | 65 |
| Research | 27 | 56 |
| Sports | 7 | 14 |
| Any Other | 12 | 25 |

Respondents' Purpose of Using Internet



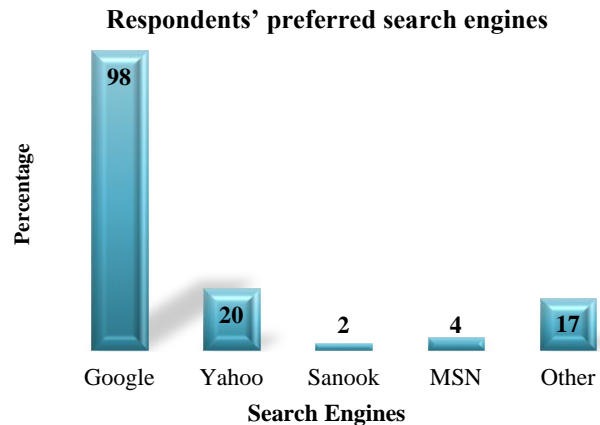
Respondents' frequently used Search Engines

All 48 respondents reported using search engines to find information on the internet. Among them, 47 respondents (98%) use Google, 9 respondents

(20%) use Yahoo, 2 respondents (4%) use MSN, only 1 respondent (2%) use Sanook, and Other 8 respondents (17%) reported using the other search engine (Table 5).

Table 5. Respondents' preferred search engines

| Search Engines | Frequency | Percentage |
|----------------|-----------|------------|
| Google | 47 | 98 |
| Yahoo | 9 | 20 |
| Sanook | 1 | 2 |
| MSN | 2 | 4 |
| Other | 8 | 17 |

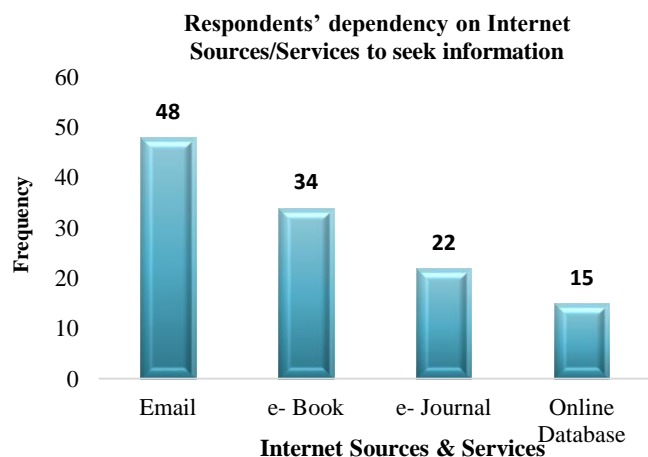
**Respondents' dependency on Internet Sources/Services to seek information**

In summary, the data from Table 6 indicates that among the respondents, 48 rely on email internet

services for seeking information, 34 use e-books, 22 access e-journals, 15 utilize online databases.

Table 6. Respondents' dependency on Internet Sources/Services to seek information

| Internet Sources & Services | Frequency | Percentage |
|-----------------------------|-----------|------------|
| Email | 48 | 100 |
| e- Book | 34 | 70 |
| e- Journal | 22 | 46 |
| Online Database | 15 | 46 |

**Conclusion:**

In conclusion, this study provides valuable insights into the information-seeking patterns of faculty members at the Indian Institute of Teacher Education regarding their utilization of internet sources and services. The findings reveal that internet-based resources play a crucial role in supporting faculty research and teaching activities, with faculty members relying on a variety of online platforms for accessing scholarly literature, collaborating with peers, and staying abreast of research developments in their respective fields. Despite the benefits offered by internet sources, faculty members encounter challenges such as information overload, difficulty in assessing the credibility of online content, and technical barriers that impact their information-seeking behaviours.

Understanding faculty information-seeking patterns is essential for academic institutions to tailor research support services, information literacy programs, and infrastructure investments to meet the evolving needs of faculty members effectively. By addressing these needs and challenges, institutions can enhance research productivity, facilitate interdisciplinary collaboration, and foster a culture of scholarly inquiry and innovation.

Furthermore, this study highlights several areas for future research to deepen our understanding of faculty information-seeking behaviors in the digital age. Future studies could explore the impact of disciplinary differences on information-seeking patterns, investigate the effectiveness of interventions aimed at improving digital literacy skills among faculty members, and examine the evolving landscape of

internet-based resources and their implications for scholarly communication and knowledge dissemination. Additionally, longitudinal studies could track changes in faculty information-seeking behaviours over time, considering technological advancements, institutional policies, and disciplinary trends. By advancing our knowledge in these areas, future research can inform evidence-based strategies for supporting faculty research and teaching in academic institutions.

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Women's Social & Educational Reform Movement in India

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Abstract:

This study aims at shedding light on the 'Female Improvement Movements of the 19th Century'. Daily life for women in the early 1800's, all over the world, was that of many obligations and few choices. Some even compare the condition of women in this era to a form of slavery. Women were completely controlled by men in their lives. First, by their fathers, brothers and finally by their husbands. A sole purpose was assigned to them by the society and that purpose was to find a husband, reproduce and then spend rest of their lives serving others. If a woman decided to stay single she was out thrown by the society. After marriage all her inheritance would belong to her husband. This meant that husband had right to do anything with the lady's life. This notion was supported both by law as well as marriage vows. Until 1891 if a woman attempted to flee an unhappy life she could be captured and punished by the law and punished.

Thus the main reasons that reform was needed were the issues like female infanticide, dowry system, child marriage, sati, tonsure, Devdasi, Purdah, education, property rights etc. Apart from all this there were other things which women had to face like abuse, insults, passing sarcasm, assault, starvation, prohibiting them from going out and meeting people, locking them in a room, bride burning, religious and social pressures customs and traditions etc. Philosophers, religious preachers, political leaders, social reformers and scientists have all justified the inferior status of women in society. For instance the Greek philosopher Aristotle decreed that,

"The relation of the male to female is by nature such that one is superior and the other is dominated. This is because they do not possess a naturally dominating element".

Despite of their genius, writers treated women sordidly in their works by depicting women as pretty, ornamental, idle, mindless and vicious creatures. Even religions have actively promoted women's subordination through injunctions devaluing their status. However in ancient Tamil society the women were placed in higher position as seen in the "Sangam literature". The deterioration in the status of women started from post Sangam Age. Barring the Vedic age the women were placed in low status through all ages. During medieval times their position deteriorated further due to more seclusion and closed life custom of 'Purdah'.

The 18th century also witnessed a miserable condition of women. Women lost their separate entity and their existence became merely a bare necessity and appendage to the male population. The women who belonged to lower class suffered more than the women of higher class. Thus till the beginning of 19th century women were forcefully subjugated to male superiority in all respects.

Movement For Emancipation Of Women In Society:

In 19th century the problems of women in India invited the attention of western humanitarian thinkers, Christian missionaries and Indian socio-religious philosophers. Women's participation in work and other activities increased due to

technological changes of Industrial Revolution. The government expressed deep regret and with the support of social reformers like Raja Ram Mohan Roy asked the District Collectors to prevent the practice of 'sati' and punish all attempts to compel the unwilling women to submit to it. This was done officially on 4th December 1829 in Bengal and Madras. While the orthodox hindu opposed it 'The Hindu Literary Society', 'Triplicane Society', 'Progressive Citizen Society of Madras' welcomed this act.

Reformers also felt that in the practice of child marriage, young girls had to face many evils. Brahmo Samaj and Arya Samaj stressed for a special law to save child wife from physical suffering and harassment. In 1860, the Indian Penal Code prohibited the marriage of girl of less than 10 years of age. Reformers like Keshab Chandra Sen, Ramabai Ranade, Behramji Malabari etc worked a lot in this area. The members of 'Veda Samaj' took a pledge to restrict the child marriage. Because of the pressure given by missionaries, the government created Marriage Register by an act for marriages in India. Under this act marriage parties should give notice in writing to the Marriage Registrar on finalizing the marriage. In Christian the consent of both parties was made necessary and the age of both parties should be 18 years, this was as per Indian

Christian Marriage Act of 1872. 'Hindu Worker's Remarriage Association' asserted that every graduate should discourage child marriage. In Maharashtra leaders like Jyotirao Phule formed Satyashodak Samaj which campaigned for the spread of rational thinking. His wife and a great social reformer Savitribai Phule became head of women's section which later included 90 female members. Both of them made efforts for the spread of female education.

Women's organizations have also contributed significantly towards women development in India. Dr. Annie Besant strongly condemned child marriage. Another social evil which degraded women was prohibition of widow remarriage. The first quarter of 19th century it became centre of reform activity. In 1855 Ishwar Chandra Vidyasagar started a vigorous campaign in favour of widow remarriage. Despite of severe opposition Lord Dalhousie, the Governor General of India passed Widow Remarriage Act of 1856, legalizing the marriage of Hindu Widow. The 'Hindu Remarriage Society' was formed in 1873. In spite of these efforts it must be admitted that widow remarriage is not popular among people.

Economic Welfare Measures:

It is felt that the miserable economic position of women was due to denial of property right to women. Hence for this 'The Married Women's Property Act' was enacted in 1874. The missionaries also condemned dowry system. The Anti Dowry League was started in 1st session of Madras Students Convention. Another social evil was 'deva-dasi' which meant slaves of god. Public opinion gradually turned against this system. Lord Wenlock was 1st prominent official who refused this system on the basis of petition submitted by the missionaries. Later on reformers educated these girls and gave them a new life. Another custom of polygamy was vehemently condemned by the social reformers like Raja Ram Mohan Roy, Dayananda Saraswati and Ishwar Chandra Vidyasagar. By Brahmo Marriage Act of 1872 the polygamy was made impossible.

The social reformers thought that the lack of education was the cause for all the social evils against women. Ramakrishna Mission and Theosophical Society also opined that education would transform women into the 'lights of home'. Like minded reformers like Jyotirao Phule, Savitribai Phule, Ramgopal Ghosh, Raja Mukherjee, M.G. Ranade, Maharshi Karve etc became the pioneers of female education. Mahadev G. Ranade and his wife propagated women's education and started a girl's high school in 1884. Maharshi Karve established the Mahila vidhyalaya in 1907 and S.N.D.T Women's University in 1916. Women's employment and education was acknowledged in 1854 by East India Company's Programme. Slowly

after that there was progress in female education. The overall literacy rate for women increased from 0.2% in 1882 to 6% in 1947.

Woman Claiming Equal Rights:

As seen earlier the western liberal ideas affected a fringe of India. Women raised their voice for liberty. They came forward to serve for welfare of society. Associations such as All India Women Association and All India Women's Conference were started later on. Entry of Margaret Cousins, Annie Besant, Sarojini Naidu and Vijayalaxmi Pandit activated the organizations. They represented their rights to the South Borough Committee in connection with the Royal Commission. The most notable organisation like Bharat Mahila Parishad was formed at 3rd meeting of Indian National Congress in 1887 whereas Sakthi Samithi was formed in Bengal by Swarna Kumari Devi in 1886. In 1932, All Bengal Women's Union was formed to prevent prostitution. By 1929 all the provincial legislatures had given the women the right to vote on equal basis. There were origins of many Government welfare departments for women. However the gender equality was not obtained by them until the promulgation of the constitution of India which was declared in the year 1950.

Conclusion:

As seen above the issues of women in 19th century are mainly related to the social uplift of women in Indian society. Though the question of gender disparity was considered deeply, it was the basic expectation that the women should be treated equally with men, so that the social justice could be established. It would be only then the real welfare society would be formed. Though efforts were to rehabilitate women, it was very much realized that the issues on women could be settled down with strong base of economic self-reliance. Gradually efforts were made to strengthen the economic and social base of women in India.

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Climate Justice and Ecological Crisis: Vandana Shiva's Perspective

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Abstract:

This paper explores the intersection of climate justice and the ecological crisis from the perspective of Vandana Shiva, a leading environmental activist and scholar. Through an analysis of Shiva's work, the paper examines the principles of climate justice, including equity and accountability, and the challenges posed by the ecological crisis, such as biodiversity loss and resource depletion. Shiva's perspective emphasizes the interconnectedness of social, environmental, and economic issues, advocating for sustainable alternatives to corporate-driven development. The paper highlights Shiva's critiques of globalization and industrial agriculture. By incorporating Shiva's insights, the paper aims to contribute to the discourse on addressing climate change and environmental degradation in a just and equitable manner.

Keywords: Climate Justice, Ecological Crisis, Social Justice, Corporate-driven Development, Industrial Agriculture, Seed Sovereignty.

Introduction:

Climate change and ecological degradation pose unprecedented challenges to human societies and the planet's ecosystems. In response, the concept of climate justice has emerged, highlighting the need for equitable solutions to address the disproportionate impacts of environmental crises on vulnerable communities. Vandana Shiva, a renowned environmental activist, scholar, and advocate for sustainable development, is at the forefront of this discourse. Shiva's perspective on climate justice and the ecological crisis offers valuable insights into the interconnectedness of social, environmental, and economic issues, emphasizing the importance of holistic approaches to sustainability.

This paper examines Vandana Shiva's perspective on climate justice and the ecological crisis, focusing on her critiques of corporate-driven development, industrial agriculture, and the exploitation of natural resources. Shiva's work underscores the urgency of transitioning towards more sustainable and equitable models of development, grounded in principles of biodiversity conservation, seed sovereignty, and community empowerment. Through an analysis of Shiva's writings, speeches, and activism, this paper seeks to elucidate the key principles and themes that inform her perspective on climate justice. By exploring the interconnected nature of environmental and social justice issues, as articulated by Shiva, this paper aims to contribute to ongoing discussions on addressing the challenges of climate change and

ecological degradation in a just and equitable manner.

Climate Justice:

Vandana Shiva's perspective on climate justice is deeply rooted in her advocacy for environmental sustainability, social equity, and economic justice. She emphasizes the interconnectedness of social and ecological systems, viewing climate change as a symptom of deeper structural inequalities and unsustainable practices. From Shiva's viewpoint, climate justice requires addressing not only the symptoms but also the root causes of environmental degradation and social injustice.

One of the central themes in Shiva's perspective on climate justice is the recognition of historical and systemic injustices that have led to the current climate crisis. She argues that industrialized nations, corporations, and wealthy elites have disproportionately contributed to greenhouse gas emissions and environmental degradation, while marginalized communities, particularly in the Global South, bear the brunt of the impacts. Shiva advocates for acknowledging and rectifying these historical inequalities through principles of reparative justice and global solidarity.

Shiva also highlights the importance of local knowledge and community-based solutions in addressing climate change. She advocates for the protection of indigenous rights and traditional ecological knowledge, which she sees as essential for building resilience and adaptation strategies in the face of climate impacts. Shiva's work emphasizes the role of small-scale, agro-ecological

farming practices, which she views as more sustainable and resilient alternatives to industrial agriculture and corporate-controlled food systems. Furthermore, Shiva critiques the commodification of nature and the privatization of natural resources, arguing that these practices exacerbate environmental degradation and social inequality. She calls for the recognition of nature's intrinsic value and the rights of ecosystems and communities to self-determination and sovereignty over their lands and resources.

Ecological Crisis:

Vandana Shiva's perspective on the ecological crisis is deeply rooted in her understanding of the interconnectedness of ecosystems, biodiversity, and human societies. She sees the ecological crisis as a multifaceted problem stemming from unsustainable development practices, industrialization, and the commodification of nature. From Shiva's viewpoint, the ecological crisis is not simply an environmental issue but also a social and economic one, with far-reaching consequences for human well-being and planetary health.

One of the central themes in Shiva's perspective on the ecological crisis is the importance of biodiversity conservation. She argues that biodiversity is essential for the resilience and stability of ecosystems, as well as for the provision of ecosystem services that support human livelihoods, such as clean water, pollination, and soil fertility. Shiva critiques industrial agriculture and monoculture farming practices, which she sees as major drivers of biodiversity loss, soil degradation, and ecological imbalance. Instead, she advocates for agroecological farming methods that promote biodiversity, soil health, and food sovereignty.

Shiva also emphasizes the interconnectedness of ecological and social justice issues. She highlights how marginalized communities, particularly indigenous peoples and small-scale farmers, are disproportionately affected by environmental degradation and climate change, often losing access to their lands and resources as a result of corporate-driven development projects. Shiva calls for the recognition of indigenous rights and traditional knowledge systems, which she sees as essential for maintaining biodiversity and fostering resilience in the face of ecological challenges.

Furthermore, Shiva critiques the commodification and privatization of natural resources, arguing that these practices exacerbate the ecological crisis by prioritizing profit over environmental sustainability and social equity. She calls for a paradigm shift towards a more holistic and regenerative approach to development that respects intrinsic value.

➤ **Vandana Shiva's critique of Globalization** centers on its impact on biodiversity, local economies, cultural diversity, and social justice.

1. **Homogenization of Culture:** Shiva argues that globalization leads to the homogenization of cultures, as Western consumerist values and lifestyles are promoted worldwide. This erodes traditional knowledge systems, indigenous practices, and cultural diversity, as local customs and languages are supplanted by globalized media, advertising, and consumer culture.
2. **Exploitation of Natural Resources:** Globalization facilitates the exploitation of natural resources, particularly in the Global South, where multinational corporations extract minerals, fossil fuels, and timber for export to industrialized nations. Shiva criticizes this "resource grab" for its ecological impacts, including deforestation, habitat destruction, and pollution, which threaten biodiversity and ecosystem integrity.
3. **Industrial Agriculture and Food Systems:** Shiva challenges the spread of industrial agriculture and corporate-controlled food systems as part of globalization. She argues that industrial agriculture relies on monoculture farming, chemical inputs, and genetically modified organisms (GMOs), which degrade soil fertility, pollute waterways, and displace small-scale farmers. Shiva advocates for agroecological farming practices that promote biodiversity, soil health, and food sovereignty.
4. **Economic Exploitation and Inequality:** Globalization exacerbates economic inequalities by concentrating wealth and power in the hands of transnational corporations and financial elites. Shiva critiques free trade agreements and neoliberal economic policies for prioritizing corporate profits over the needs of local communities and workers, leading to job losses, wage suppression, and social unrest.
5. **Threats to Democracy and Sovereignty:** Shiva raises concerns about the erosion of democratic governance and national sovereignty in the face of globalization. She argues that international trade agreements and corporate influence undermine democratic decision-making processes, as governments prioritize corporate interests over public welfare and environmental protection.
6. **Alternatives and Resistance:** Despite her critique, Shiva offers alternatives to the dominant model of globalization. She advocates for localization, community-based economies, and decentralized governance structures that prioritize social justice, environmental sustainability, and cultural autonomy. Shiva is also involved in grassroots movements and activism aimed at challenging the power of multinational corporations and promoting alternatives to corporate-driven globalization.

Vandana Shiva's critique of Neoliberalism revolves around its impact on the environment, social justice, and democracy.

1. **Commodification of Nature:** Shiva criticizes neoliberalism for promoting the commodification of nature, reducing complex ecosystems and natural resources to tradable commodities. She argues that this commodification leads to the overexploitation of natural resources, environmental degradation, and the displacement of indigenous peoples and local communities from their lands.
2. **Privatization of Public Goods:** Neoliberal policies often prioritize privatization and deregulation, allowing corporations to control essential public goods and services such as water, energy, and healthcare. Shiva argues that this privatization leads to inequalities in access, as marginalized communities are often excluded from accessing basic necessities while corporations prioritize profit over public welfare.
3. **Corporate Control over Agriculture:** Neoliberal agricultural policies favor large agribusiness corporations at the expense of small-scale farmers and food sovereignty. Shiva criticizes the dominance of industrial agriculture, monoculture farming, and genetically modified organisms (GMOs), which degrade soil fertility, reduce biodiversity, and contribute to food insecurity.
4. **Financialization of Nature:** Neoliberalism promotes the financialization of nature through mechanisms such as carbon trading, biodiversity offsets, and ecosystem services payments. Shiva argues that these market-based approaches to environmental conservation prioritize financial profit over ecological integrity and social justice, leading to greenwashing and the displacement of local communities.
5. **Erosion of Democracy:** Neoliberal economic policies undermine democratic governance by prioritizing corporate interests over public welfare and community decision-making. Shiva critiques the influence of corporate lobbyists, free trade agreements, and international financial institutions in shaping policy agendas that prioritize market deregulation and corporate profits over environmental protection and social equity.
6. **Globalization of Inequality:** Neoliberal globalization exacerbates social inequalities by concentrating wealth and power in the hands of transnational corporations and financial elites. Shiva argues that neoliberal policies such as austerity measures, deregulation, and privatization disproportionately harm marginalized communities, exacerbating poverty, unemployment, and social unrest.

7. **Resistance and Alternatives:** Despite her critique, Shiva offers alternatives to neoliberalism based on principles of environmental sustainability, social justice, and economic democracy. She advocates for localized, community-based economies that prioritize human well-being and ecological resilience over corporate profit. Shiva is also involved in grassroots movements and activism aimed at challenging the power of neoliberal institutions and promoting alternatives that prioritize people and the planet over profit.

Vandana Shiva's critique of profit-driven economic models centers on their negative impacts on social justice, environmental sustainability, and cultural diversity.

1. **Primacy of Profit over People and Planet:** Shiva argues that profit-driven economic models prioritize short-term financial gains for corporations and shareholders over the long-term well-being of people and the planet. She critiques the relentless pursuit of profit as leading to exploitation of labor, environmental degradation, and social inequality.
2. **Exploitation of Natural Resources:** Profit-driven economic models often rely on the exploitation of natural resources for extraction, production, and consumption. Shiva criticizes the extraction of fossil fuels, minerals, and timber, which deplete ecosystems, pollute waterways, and contribute to climate change. She also highlights the impact of industrial agriculture on soil degradation, biodiversity loss, and water scarcity.
3. **Externalization of Costs:** Profit-driven economic models externalize social and environmental costs onto communities, ecosystems, and future generations. Shiva argues that corporations often evade responsibility for the negative impacts of their operations, shifting the burden onto society through pollution, resource depletion, and public health crises.
4. **Marginalization of Indigenous Knowledge:** Profit-driven economic models marginalize indigenous knowledge systems and traditional practices that are essential for environmental sustainability and cultural resilience. Shiva criticizes the commodification of knowledge and biodiversity, which erodes traditional livelihoods and undermines indigenous rights to land, water, and seeds.
5. **Corporate Control over Food Systems:** Shiva challenges the dominance of profit-driven food systems, which prioritize corporate profits over food sovereignty, nutrition, and health. She critiques the industrialization of agriculture, monoculture farming, and genetic engineering,

which degrade soil fertility, reduce biodiversity, and threaten food security.

6. **Cultural Homogenization:** Profit-driven economic models promote cultural homogenization and consumerism at the expense of cultural diversity and autonomy. Shiva argues that corporate globalization undermines local economies, traditional livelihoods, and indigenous cultures, replacing diverse ways of life with standardized products and lifestyles.
7. **Alternatives and Resistance:** Despite her critique, Shiva offers alternatives to profit-driven economic models based on principles of ecological sustainability, social justice, and cultural diversity. She advocates for localization, community-based economies, and decentralized governance structures that prioritize human well-being and ecological resilience over corporate profit. Shiva is also involved in grassroots movements and activism aimed at challenging the power of multinational corporations and promoting alternatives that prioritize people and the planet over profit.

Case studies and Examples that illustrate Vandana Shiva's principles in action, highlighting successful grassroots movements and initiatives promoting environmental sustainability and social justice, while emphasizing the role of indigenous knowledge and traditional practices in addressing the ecological crisis:

1. Navdanya Movement, India: The Navdanya Movement, founded by Vandana Shiva in India, promotes seed sovereignty, agroecology, and biodiversity conservation. Navdanya operates seed banks that preserve and promote indigenous seed varieties adapted to local conditions. The movement also trains farmers in sustainable farming practices, such as organic agriculture, crop diversification, and traditional seed saving techniques. Navdanya's community-based approach empowers small-scale farmers, protects agricultural biodiversity, and promotes food sovereignty, while challenging corporate control over seeds and agriculture.

2. Chipko Movement, India: The Chipko Movement, originating in the Indian state of Uttarakhand in the 1970s, is a grassroots environmental movement led by rural women to protect forests from deforestation and commercial logging. Inspired by traditional practices of tree-hugging and nonviolent resistance, Chipko activists organized tree-sitting protests to prevent the felling of trees. The movement successfully mobilized local communities to assert their rights over forest resources, leading to policy changes in favor of community-based forest management and conservation.

3. La Via Campesina, Global: La Via Campesina is an international peasant movement representing

millions of small-scale farmers, indigenous peoples, and rural workers advocating for agrarian reform, food sovereignty, and social justice. The movement promotes agro ecology, small-scale farming, and peasant-led conservation practices as alternatives to industrial agriculture and corporate-controlled food systems. La Via Campesina's advocacy efforts have influenced international policies on land rights, seeds, and agricultural trade, highlighting the importance of peasant knowledge and traditional farming practices in addressing the ecological crisis.

4. Indigenous Land Rights, Amazon Rainforest: Indigenous communities in the Amazon rainforest, such as the Ashaninka and Kayapó peoples, have successfully resisted deforestation, land grabbing, and extractive industries through collective land tenure rights and traditional land management practices. These communities rely on indigenous knowledge of forest ecosystems, agroforestry, and medicinal plants to sustainably manage their territories and maintain cultural resilience. Indigenous-led conservation initiatives, such as community-based monitoring and territorial mapping, have been effective in protecting biodiversity hotspots and mitigating climate change.

5. Permaculture Projects, Global: Permaculture initiatives around the world promote regenerative agriculture, ecological design, and community resilience based on principles of mimicry of natural ecosystems, diversity, and self-sufficiency. Projects like the Bullock's Permaculture Homestead in Washington State, USA, and the Zaytuna Farm in New South Wales, Australia, demonstrate how permaculture principles can be applied to restore degraded landscapes, build soil fertility, and provide sustainable food and water resources for local communities.

Challenges and Obstacles:

Advancing climate justice and addressing the ecological crisis face numerous challenges and obstacles, including political resistance, corporate interests, and institutional barriers. However, there are also opportunities for collaboration and collective action at local, national, and international levels. Here are some Challenges and Opportunities for Collaboration and Collective Actions:-

Challenges:

1. Political Resistance
2. Corporate Interests
3. Institutional Barriers
4. Social Inequality.

Opportunities for Collaboration and Collective Action:-

1. Community Empowerment
2. Intersectoral Collaboration
3. Policy Innovation
4. International Cooperation
5. Youth Activism

Conclusion:

Vandana Shiva's perspective on climate justice and the ecological crisis underscores the need for integrated approaches that consider social, environmental, and economic dimensions of sustainability. Her perspective highlights the importance of integrating these considerations in efforts to build a more just and sustainable future.

By recognizing the interconnectedness of these issues and promoting alternatives based on principles of equity, ecology, and democracy, Shiva's ideas offer valuable insights for shaping policy, advocacy, and grassroots activism aimed at building a more just and sustainable future for all.

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Effect of Fast Food on Children's Health

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Introduction:

The growth rate is high during childhood and spreads dramatically in adolescence due to hormonal activity. The growth rate is completed as the teenager becomes an adult. For proper growth and development of the body nutritional needs are more during childhood and Adolescence.

Food provides us with different nutrients that are carbohydrates, proteins, fats, minerals and vitamins. These nutrients are essential to keep us healthy and active. Health depends to a large extent on nutrition and nutrition depends on the food intake. So nutritious food is the most important factor for health and fitness.

However fast food is more appealing to children because of the taste, appearance, comparative lower price, its convenience and tempting advertisement by mass media. Increased use of fast food is concerned with the increase in lifestyle disorders in early age.

Research Methodology:

Researcher have used a secondary medium for the research. Data was collected from books, journals and websites.

Objectives:

1. To study the definition of food and fast food.
2. To study the impact of fast food on children's health.
3. To study the measures to improve the eating habits of children.

Results:

Consumption of fast foods has become almost a global phenomenon. India's fast-food industry is expanding at the rate of 40% every year. India ranks 10th in the fast food per capita spending figures with 2.1% of expenditure in annual total spending. (Ashakiran and Dipti, 2012).

Eating fast food is an increasing trend among school going children. Peer impact is the common reason for this. It is easily available as In India, the number of fast food centers and availability of fast food in restaurants have increased. Rapid increase in urbanization and industrialization brings drastic changes in lifestyle. It leads to increase in convenience and quickly available food options. It is an easy option for working parents for their kids.

A study by Singh and Verma in 2019 shows that 85.25 percent of the studied school going children of 10-15 year age were preferring to eat fast food. Fast food availability, TV commercials, banners and other screen aids can lead unhealthy choices

Definition :

Food can be defined as anything solid or liquid which when swallowed, digested and assimilated in the body provides essential substances called nutrients and keeps it set well. It is the basic necessity of life. Food supplies energy, enables growth and repair of tissues and organs, it also protects the body from disease and regulates body functions.

Fast food or junk food is a term used for all kinds of foods which are rich in energy because they contain lots of fat, sugar and salt but are relatively low in other important nutrients such as protein, fibre, vitamins and minerals. Common fast food items available are burgers, pizza, pasta, maggi, sandwiches, french fries, doughnuts, wafers, cookies and other quick and easy to make dishes.

Consumption of fast foods in excess amount is associated with obesity, hypertension, hypercholesterolemia, type II diabetes mellitus, and cardiovascular diseases (Jahan et al. 2020)

Impact of fast food:

Regular consumption of junk food shows short term and long term impact on the body.

Generally the refined sugar is found in junk foods which leads to a quick drop in blood sugar levels because it is digested quickly by the body. Thus instead of providing an energy boost, junk foods lead to a lack of energy. This causes tiredness, cravings and unable to concentrate. It is the short term effect.

Food fibre which helps in digestion and slows the process of emptying the stomach, keeps feeling full for longer. Junk foods lack fibre.

Therefore after eating them, we feel hungry sooner and also notice decreased energy.

When fast foods are regularly consumed over long periods of time may increase the health complications. In the long term, fast food can lead to tooth decay, poor bowel habits. Currently childhood obesity is a severe health problem associated with emotional and self-esteem problems and the non-communicable diseases in later life. High Saturated fats is strongly associated with high levels of bad cholesterol in blood can lead to heart diseases.

Junk food lacks vitamins and minerals such as magnesium and calcium which develops the deficiency like osteoporosis as well as dental caries due to higher sugar intake.

In many fast food items the presence of hazardous food coloring agents and unhealthy trans fats leads to further complications.

Other Negative impact of junk food

Obesity:

In the present era obesity is a serious health problem among children. According to WHO, the main cause of obesity among children is consumption of unhealthy foods, packed and processed foods. Consumption of fast food and lack of physical activity is the main reason for childhood obesity.

Atopy :

Intercourse fast food more than three times a week is associated with the atopic disorders such as asthma, eczema or rhinitis while asthma is almost 40% higher in teenagers and more than 25% in younger children.

Artificial flavouring and colouring agents are used in junk foods that cause asthma. Asthma is a condition in which a person feels difficulty to breathe (Gautam,2023).

Eating junk food 4 to 6 times a week leads to lower maths and reading skills compared with the children who did not eat so much junk food.

Constipation:

Overdose of calories, fats, sugars and other carbohydrates in repeated meals changes the food desires of the child and makes it less likely that the child will eat fibres, fruits, milk and vegetables. This can result in greater chances of constipation.

Addiction:

childhood food habits are set in adulthood eating a lot of junk food in childhood makes it hard to eat healthy in later life the addictive taste of fast food makes it quite and likely that the palette will later accept the less complicated and less spicy flavour of ordinary food.

Poor Academics:

High sugar level in fast food can lead to diminish academy performance. Concentration levels decrease and it is difficult to focus the attention. It results in lack of alertness and reducing classroom participation.

Lack of physical activity:

Fast food does not provide adequate nutrients or physical activity. It impresses the physical and mental health of children and kids them out of pear groups.

Sleep disturbances:

Some cold drinks often contain caffeine which can disturb the normal sleep wake cycles.

Depression and anxiety:

Few children who eat junk food are more prone to develop depression with or without obesity. Depression affects growth and development, academic performance and social relations. It also results in higher risk of suicide.

Consumption of fast foods results in poor mental health. The study by Neil O. (2014) focused on the strong relationship between diet and mental health in children. Frequent consumption of processed food increases the risk of depression and anxiety.

Hyperactivity:

Essential fatty acids are lacking in fast foods like Omega 3 and Omega 6 fatty acids. These are not produced within the body but are essential for manufacturing of cell membrane and required in high concentration within the brain and retina. Lack of these nutrients may be linked with increased Anti-social behaviour and with hyperactivity.

The children who were consuming fast food were observed with behavioural problems like hypertension, aggressiveness etc. (Wiles NJ et. al. 2009)

Consumption of fast foods in excess amount is associated with obesity, hypertension, hypercholesterolemia, type II diabetes mellitus, and cardiovascular diseases (Jahan et al. 2020)

Suggestions:

Fast foods are tasty, affordable and convenient. Therefore there is an increase in consumption of fast food not only in children but in all age groups. But frequent consumption of fast food may impact on the physical and mental health of the child. It adversely affects on attention span, studies and overall growth of the child. As food habits gained in childhood tend to continue in adulthood.

Therefore it is important to educate children about healthy eating habits and make them aware about the health hazards of fast foods right from school level onwards.

Awareness on health hazards of fast foods needs to be taught at schools so as to minimize its consumption.

Parents have to set an example themselves by not eating fast foods and improving home food to support discouragement of fast foods. This would minimize lifestyle disorders among children to a greater extent.

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Educational and Social Work by Mahatma Jyotirao Phule

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Abstract:

In 1848 Phule began his work as a social reformer interested in education of low caste boys and girls, when he started a school for girls of low and untouchable castes. Since, no female teacher was available, Phule asked his wife Savitribai to teach in the school. He opened two more schools for girls in 1851. He was honored by the Board of dictation for the work he did for girls' education in 1852. Phule established a school for untouchables and a night school in 1852. An occurrence in 1848 triggered Jyotiba's crusade against the systemic inequality of caste inequality and ignited a socialist revolution in Indian society. Later, he established two more institutions for females, as well as an indigenous institution for the tribals, particularly the Mahars & Mangs. Jyotiba saw the plight of widows and founded an ashram for teenage widows, eventually becoming an advocate for widow remarriage. Jyotirao's activities infuriated the society's traditional Brahmins. They condemned him for tainting society's norms and standards.

Introduction :

Jyoti Rao Phule was born in 1827. He was born in Kaguna in Satara district of Maharashtra. Among the "reduced" leaders, Jyoti rao Phule is one of the most prominent.

Jyoti rao Phule through social exclusion from the community. Jyotirao Phule was the founder of Satya shodak Samaj. It was founded in 1873. Satya Shodak Samaj promotes equality. Satya shodak Samaj worked to bring justice and human rights to the lower castes. In 1888, social activist Vithalrao Krishnaji Vandekar from Maharashtra bestowed the title of Mahatma on Joti rao Phule, meaning "respected" or "honorable". generous. Mahatma Fowler fought against sexism and racism. Mahatma Jyotiba Phule fought against the laws of pollution and purity.

Childhood And Adolescence :

Jyotirao Govind rao Phule was born in 1827 in Satara district of Maharashtra. His father, Govind Rao, is a vegetable trader in Pune. Jyoti rao family belongs to the "Marli" caste and their first name is "Gorhai". Malians are considered a minority. Brahmins are suffering. Both Jyotirao's father and uncle were farmers, Earning the family the nickname "Phule". Joe Tilong's mother died when he was only nine months old.

Joe Tilong was an intelligent young man, but had to interrupt his studies at a young age due to his family's financial constraints. He began helping his father on the family farm. A neighbor noticed the child prodigy's talent and encouraged his father to send him to school. Jody Long attended the

Scottish Missionary School in Puna in 1841 and graduated in 1847, becoming his lifelong friend. Jyotirao married Savitribai when she was just thirteen years old.

Recognition of Jyoti Rao Phule – Mahatma Phule:

Dr.B.R.Ambedkar, the architect of the India n Constitution, recognized Mahatma Phule as one of the three masters or philosophers. It was released in 1954.

Movements For Social Change :

An incident in 1848 started Jyotibar's struggle against caste inequality and disrupted social relations in Indian society. Jyotirang was welcomed by a friend from the upper Brahmin family. When the groom's relatives learned about Jyotiba's parents, they were embarrassed and beat him at the wedding. Jyotirang escaped the situation and decided to challenge the existing family structure and social restrictions. He made it his life's mission to constantly monitor the situation of the great leadership of the culture with the aim of saving all the poverty stricken people in society. Jodi Long was influenced by Thomas Paine's beliefs after reading his novel "The Rights of Man".

Jyotirao Phule – Criticism of Indian Caste Society:

Jyoti rao Phule worked for the upliftment of Dalits and women, two groups considered to be the lowest group of Brahminical culture. Current injustice. They are considered Aryans. He believed that the Aryans conquered and conquered the true children of India. It is believed that even before the

arrival of the Aryans, the conquerors were here. According to Jyoti rao Phule, the so called lower castes are the indigenous people who have the right to power and land. According to Jyoti rao Phule, "uppercastes" have no right to power and land. Before the arrival of the Lyans, the Maratha country was settled and cultivated fairly and honestly by the agricultural army and was considered a golden age.

Struggle Between Varna and Caste System
Indian society is based on Varna system. Puller questions the idea that this comes from God. He believed that these words were said to deceive the people of Varna. Since this claim is based on Hindu religious texts, it was decided to reveal the falsity of these texts. Phil relies on modern thought and his own creativity to interpret these texts. Therefore, it is believed that the Brahmins, called Aryans, came from the lands of Northern India, probably Iran, thousands of years ago. They came as conquerors and defeated the people of the country. Under the command of leaders like Brahma and Parshuram, Brahmins fought with the villagers. They started living along the Ganges River and later spread to other parts of the country.

They created myths; Varna and caste systems to better control the tribe and became cruel and evil. They established a priesthood in which brahmanas played a central role in all religious ceremonies. The caste system is the work of cunning Brahmins. While Brahmins enjoy the highest rights and privileges, Shudras and Ati Shudras (untouchables) are hated and despised. They are deprived of the most universal human rights.

Their touch and even their shadows are considered pollution. Phule reinterpreted Hindu tradition to show that the Aryans conquered the original inhabitants. He sees Vishnu's nine incarnations as stages of the Aryan conquest. From then on the Brahmins enslaved the Shudras and Atishudras. They carried the yoke of slavery for generations. Some Brahmin writers, such as Manu, have added a sequence to the existing legend to enslave the will. Puller compared Brahmin-created slavery to American slavery, noting that Sudras suffered more poverty and oppression than blacks. He believed that this belief in confidence and growth was the cause of all the evils and stagnation that India had suffered for centuries.

Women's Rights Another oppressed group in Indian society is women. Phil always talks about men and women. When men say it, they don't think women just fall into this category. When he talks about human rights, he talks about women. Just as the Brahmins disenfranchised the Shudras by making them illiterate, Pule believed that selfish men prevented women from learning in order to maintain male dominance. Hindu religious texts give much advice on mindfulness but place severe restrictions on women. Fuller's main concern at that

time was the institution of marriage. He criticizes social and cultural practices such as child marriage, marriage of young girls, marriage, anti-remarriage, prostitution, and mistreatment of widows. He advised Shudra farmers not to have more than one wife and not to marry. He seriously thought about the institution of marriage and created a simple and routine marriage ceremony for members of the Satya Shodhak Samaj (Truth Observation Society). Interestingly, Puller did not see women as equal in terms of marriage, family education and religion, but claimed that women were superior to men in many aspects.

Satya Shodhak Samaj:

Jyotiba Phule founded the Satya Shodhak Samaj (Society of Seekers of Truth) in 1873. He sought to complement the construction of contemporary and historical thought to create a model that promoted equality. Jyotirao strongly opposed the Vedas, the sacred texts of ancient Hinduism. He traced the development of Brahmanism through many other ancient texts and believed that Brahmanism was responsible for the creation of culture and brutality to control his society by creating poor "Sudras" and "Atishudras" of the best life. According to some records, they even accepted Samaj Jews, and in 1876 the "Satya Shodhak Samaj" had 316 members. In 1868, Jyotirao chose to build a public swimming pool outside his home to symbolize his openness to people and his willingness to dine with anyone, no matter who they were.

Gulamgiri – Book Written By Jyotirao Phule:

In 1873, Phule wrote a book called Gulamgiri, which means Slavery. Slavery ended in the United States 10 years ago following the American Civil War. These were Americans who fought against white slaves, thus establishing a connection between black American slaves and the underclass in India. People pretending to be ordinary people while working for the British government. When these people retire and get a salary, they go to hate. In Western India, Ambedkar and E.V.Ramaswamy Naicker in South India.

Jyotirao Phule – Women's Education:

Jyotirao Phule also protested discrimination against upper class women and poverty of the working class. This shows that he is against all forms of inequality. Social Reformer Jyotirao Phule opened the first girls' school in Pune.

1. Jyoti rao Phule also fought against the discrimination meted out against upper caste women and miseries of laborer's. This demonstrates that he argued against all forms of inequality.
2. Some people had contested that education should be available only for privileged people.
3. Some of the reformers argued that women have to be educated if a society has to progress.

4. The first school for women in Pune was opened by social reformer, Jyotirao Phule.

Women's Education Efforts:

Jyotiba's wife, Savitribai Phule, supported her efforts to give women and girls the right to education. Savitribai was one of the few educated women of her time and learned to read and write from her husband Jyotirao. Jyotiba founded a girls' school in 1851 and asked his wife to teach the students. He later built two more houses for women and a native organization for tribes, especially the Mahas and Mungs. Jyotiba saw the plight of widows, founded a church for young widows, and eventually became an advocate for widows' marriage.

In his time, civilization was patriarchal and the situation of women was especially deplorable. Pregnant women are also quite common, as are early marriages; children sometimes marry older ones. Many of these women are widowed before their youth and do not have a family to support them. Moved by their poverty, Jyotiba founded an orphanage in 1854 to protect the sad souls from the cruelty of society.

Efforts To Eliminate Caste Discrimination :

Jyoti rao called traditional Brahmins and other higher castes "hypocrites". Jyoti Rao's activities angered the common Brahmins. They accused him of tarnishing the rights and norms of the nation. Many people think that he collaborated with Christian missionaries. Joe Tilong, however, was determined and determined to try. Surprisingly, Jyotirang had the support of some of his Brahmin friends, who helped ensure the success of the campaign.

Conclusion:

Jyotiba Phule's work on caste discrimination aimed to dismantle the oppressive caste system and establish a society based on equality and justice. His efforts to empower the marginalized and challenge the dominance of the upper castes had a lasting impact on social reform movements in India. Today, Jyotiba Phule's teachings and principles remain relevant as India continues to grapple with issues of discrimination and social inequality. His advocacy for equal rights and his fight against social stigmas serve as an inspiration for those striving for a more inclusive and harmonious society.

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Blended Learning and Its Influence on Mathematics Education

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Abstract:

Traditional teaching and online learning have been changed and slowly replaced by "Blended Learning" with the arrival of the digital age. This study aimed to investigate the effects of blended learning pedagogy on junior high school students' learning achievement and attitudes toward mathematics. A quasi-experiment was conducted with a pre-test-post-test control group design to determine the results of combining Moodle online teaching platform and traditional instruction. According to ANCOVA and MANCOVA analyses, the blended learning experience was beneficial for students in the experimental group. This was not only seen in terms of learning outcomes but also in terms of their attitudes toward mathematics learning in a blended setting. Early results showed that male and high-ability students were more motivated in the blended learning environment. After trying blended learning, students gave positive feedback on the use of the Moodle mathematics learning platform.

Keyword: Ability differences; blended Learning; gender; mathematics attitude.

Introduction :

Teaching is one of the primary approaches used in large class teaching. But it doesn't allow close tutorial supervision, which limits interactive learning. A new approach to education called "Blended Learning" can be used to solve this issue. According to Zou (2005), a blended learning model combines e-learning and traditional classroom teaching. This model allows a teacher to teach the first few sessions in the classroom. Students can start online learning and interaction once they have a general understanding of the course.

Ideally, a blended model will enhance and extend learning effects by combining e-learning and classroom teaching.

While other students worked independently on the topics that just required basic memory and reasoning, teachers may provide training to specific children who struggle with learning in the classroom. Only when students independently evaluate, hypothesize, and investigate issues to find solutions or other answers to questions can they accomplish the goal of their studies.

Teachers may help students advance gradually with this new teaching approach because independent thought and self-study are essential components of what inspires research and creativity in pupils. Since network technology have advanced so quickly in recent years, there are a lot of multimedia teaching platforms available.

Research Hypothesis :

H1: there is no significant difference exists between the experimental group and the control group in the academic achievement in mathematics.

H2: there is no significant difference exists

between the experimental group and the control group in the attitude toward mathematics.

Method :

This study examines the efficacy of blended learning and additionally, the survey assesses the students' attitudes toward mathematics and achieving the objective of academic achievement.

Sampling & Sampling Method :

From the Amravati city researcher have chosen two schools for Selection of sampling. Then applying Simple random method of sampling selection, Researcher choose 27 students for Experiment and 27 students for control group from each school.

Participants and the Experimental Design :

Students enrolled in the school where the researcher works served as the research's respondents. 54 seventh grade children (12–13 years old, in two separate classes) from a junior high school in Amravati, who were primarily below intermediate level learners, served as the study's subjects. used an untreated control group design with pre- and post-tests in this investigation. A pre-test and a post-test were administered prior to the experimental instruction.

The experimental group was instructed in a blended learning environment. Seventh graders studied one mathematics courses a week in a computer lab for 12 Days. Instructors either turned their lesson materials into videos or searched the Internet for movies or other media to give the students homework on before class. During their free time in class, students could see the movies as well. Before each lesson, students were given a list of leading questions to complete, and after seeing

the allotted films, they were expected to prepare one or two questions to pose in class. To promote class discussion, students were asked to take notes and offer their thoughts during class. When the teachers learned about issues that the students were having, they would spend additional time on problem-solving exercises and provide clearer explanations.

Following more clarification, the online student assessment was made available. Based on their prior knowledge, accomplishment pre-test

Quasi - Experimental Study Design :

| Group | Pre – Test | Experimental Treatments | Post - Test |
|--------------------|------------|-------------------------|-------------|
| Experimental Group | O1 | X1 | O2 |
| Control Group | O3 | X2 | O4 |

Research Tools and Method :

The Mathematics Attitude Scale and three achievement exams were used as research methods for this study. All participants in the treatment group

Data Analysis :

results, and the teachers' assessments, students were categorized into high-, medium-, and low- ability groups.

The control group was taught using a conventional approach that involved the entire class. The teachers were instructed to implement their standard teaching strategies in this context, which included exams, individualized practice exercises, and unit presentations.

were given open-ended surveys at the conclusion of the experimental session to determine if they thought the blended learning strategy had an impact on their learning.

Table No. 1

There is no significant difference exists between the experimental group and the control group in the academic achievement in mathematics.

| Variable | No. of Students | MeanM | Standard DeviationSD | StandardError SEDM | ANCOVA | Significant |
|-------------------|-----------------|-------|----------------------|--------------------|--------|-------------|
| ExperimentalGroup | 27 | 64.30 | 24.39 | 0.122 | 5.23 | Significant |
| Control Group | 27 | 54.70 | 28.58 | | | |

Result & Conclusion :

This study sought to validate each of the hypotheses presented in the subsequent paragraphs based on the findings from the mathematics attitude scale and the achievement test.

Comparison of the Achievement Tests' Pre- and Post-test Results:

Two sets of monthly examination results for students in the experimental group were compared with results for students in the control group, and one-way ANCOVA was used to analyse the data to test the hypothesis that the experimental instruction can improve academic achievement. There was insufficient evidence to support a violation of the homogeneity of variance assumption, according to a nonsignificant Levene's test.

Furthermore, homogeneity of regression tests for ANCOVA stepdown analyses demonstrated that all dependent variables satisfied the homogeneity of regression assumption ($p > 0.05$). Since there were no obvious univariate or multivariate outliers, ANCOVA was deemed to be the proper analysis method. Academic achievement of students receiving diverse instruction

differed considerably ($F(1, 51) = 5.23, p = .03$). Hypothesis H1 was confirmed by post-hoc comparisons, which revealed that students in the experimental group had significantly higher post-

test scores ($M = 64.30, SD = 24.39$) than those in the control group ($M = 54.70, SD = 28.58$).

Comparison of Mathematics Attitude Scale Pre- and Post-Test Results:

The findings of a one-way MANCOVA that was used to evaluate how students' views toward mathematics have changed. A nonsignificant Box's M suggested that there was insufficient data to support a violation of the homogeneity of variance-covariance matrix assumption. Since there were no obvious univariate or multivariate outliers, MANOVA was deemed to be a suitable analysis method.

The "confidence in learning mathematics" post-test scores were considerably higher than the pre-test results. Furthermore, compared to the pre-test, the post-test scores on the following items showed a significant increase: "usefulness of mathematics," "motivation for exploring mathematics," "attitude toward success in mathematics," "attitude of important others toward mathematics," and "mathematics anxiety".

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Exploring Research Methodologies and Ethical Considerations in Library and Information Science: Insights and Challenges

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Abstract:

The first part of the abstract focuses on the benefits of investigating research methodologies in LIS. It highlights the importance of conducting meta-analyses of research methodologies to gain a deeper understanding of prevailing trends and practices within the field. By synthesizing existing literature and data, researchers can identify patterns, assess methodological rigor, and make informed decisions about suitable research approaches for their studies. Additionally, this exploration facilitates methodological innovation and promotes the adoption of rigorous and appropriate research methods, ultimately enhancing the quality and validity of research findings in LIS. In the second part, the abstract addresses the limitations inherent in exploring ethical considerations in LIS research.

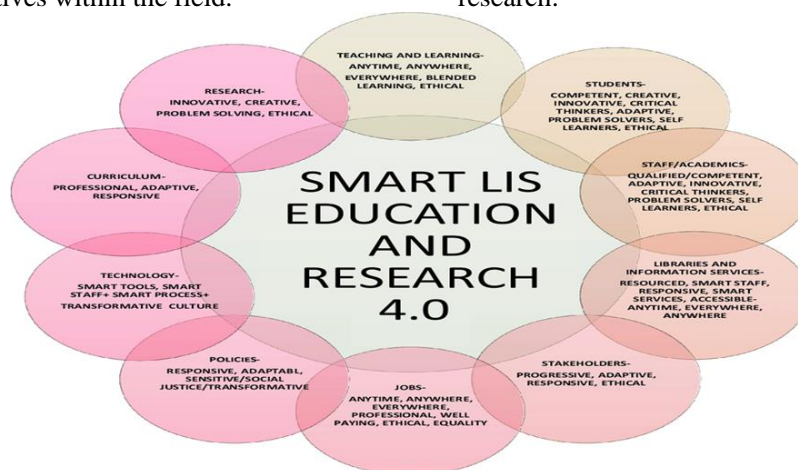
KeyWord: Research methodologies, Ethical considerations, Library and Information Science.

Introduction:

Research methodology in Library and Information Science (LIS) is the systematic approach used to study, understand, and address various aspects of information management, organization, retrieval, and dissemination. It provides a structured framework for conducting research within the LIS domain, enabling researchers to explore questions related to library services, information behaviour, knowledge organization, digital libraries, and more.

It discusses the complexities arising from diverse ethical frameworks, cultural contexts, and disciplinary perspectives within the field.

Despite the significance of ethical considerations in research practice, challenges emerge in standardizing ethical guidelines and ensuring consistent compliance across various research contexts. Ethical dilemmas often require nuanced judgments and trade-offs between competing ethical principles, complicating ethical decision-making processes for researchers. Acknowledging these limitations is crucial for fostering ongoing dialogue and collaboration among researchers, practitioners, and policymakers to develop robust ethical frameworks and guidelines that promote ethical conduct and integrity in LIS research.



Overall Discussion:

Scope and Purpose: Research methodology in LIS encompasses a wide range of methods and techniques aimed at investigating issues pertinent to libraries, information services, and the broader information environment. The primary purpose is to generate knowledge that can enhance the efficiency,

effectiveness, and impact of library and information services.

Research Paradigms:

LIS research draws from various paradigms, including positivism, interpretivism, and critical theory. These paradigms shape the researcher's worldview, guiding their choice of

research methods, data collection techniques, and data analysis approaches.

Quantitative Methods:

Quantitative research methods involve the collection and analysis of numerical data to test hypotheses, identify patterns, and measure relationships. Common quantitative techniques used in LIS research include surveys, experiments, statistical analysis, and bibliometric analysis.

Qualitative Methods:

Qualitative research methods focus on understanding phenomena from the perspective of the participants, emphasizing context, meaning, and interpretation. Qualitative techniques such as interviews, focus groups, case studies, and ethnographic observation are frequently employed in LIS research to explore complex issues and generate rich, contextualized insights.

Mixed Methods:

Mixed methods research combines quantitative and qualitative approaches within a single study to provide a comprehensive understanding of research questions. By integrating multiple data sources and analytical techniques, mixed methods research in LIS enables researchers to triangulate findings and gain deeper insights into multifaceted phenomena.

Data Collection Techniques:

Researchers in LIS employ a variety of data collection techniques tailored to their research questions and objectives. These may include surveys, interviews, observations, content analysis, document analysis, usability testing, and log analysis, among others.



Ethical Considerations:

Ethical considerations are paramount in LIS research, particularly concerning issues of confidentiality, privacy, informed consent, and intellectual property rights. Researchers must adhere to ethical guidelines and protocols to ensure the integrity and ethical conduct of their studies.

Research Dissemination:

The findings of LIS research are disseminated through scholarly publications, conference presentations, reports, and other channels. By sharing their research outcomes, LIS researchers contribute to the advancement of knowledge and inform evidence-based practices in the field.

Meta-Analysis of Research Methodologies in Library and Information Science:

This literature review could examine the prevalence and trends of various research methodologies (quantitative, qualitative, mixed methods) employed in LIS research over a specific time period, highlighting their strengths, weaknesses, and applications.

The Evolution of Research Paradigms in Library and Information Science:

This review could trace the historical development of research paradigms (positivism, interpretivism, critical theory) within LIS research, analysing how different paradigms have shaped

research approaches and contributed to theoretical advancements in the field.

Critical Review of Quantitative Research Methods in Library and Information Science:

Focusing specifically on quantitative research methods, this review could evaluate the use of surveys, experiments, statistical analysis, and bibliometric analysis in LIS research, discussing their methodological rigor and relevance to practical applications.

Qualitative Research Trends in Library and Information Science:

This review could explore recent trends and innovations in qualitative research methods within LIS, examining the use of techniques such as interviews, focus groups, case studies, and ethnographic observation to study information behaviour, user needs, and library services.

Integration of Mixed Methods Approaches in Library and Information Science Research:

This literature review could assess the integration of quantitative and qualitative methods in LIS research, examining how mixed methods approaches have been employed to address complex research questions and enhance the validity and reliability of findings.

Ethical Considerations in Library and Information Science Research:

Focusing on ethical issues, this review could analyse the ethical challenges faced by researchers in LIS, including issues of confidentiality, privacy, informed consent, and intellectual property rights, and discuss best practices for addressing these concerns.

The Role of Literature Reviews in Library and Information Science Research:

This review could examine the importance and functions of literature reviews in LIS research, discussing their role in identifying research gaps, synthesizing existing knowledge, and providing theoretical frameworks for empirical studies.

Research Dissemination Practices in Library and Information Science:

This review could explore how LIS researchers disseminate their findings through scholarly publications, conference presentations, reports, and other channels, discussing the impact of different dissemination strategies on knowledge dissemination and uptake.

Cross-Disciplinary Perspectives on Research Methodologies in Library and Information Science:

This review could analyse how research methodologies and approaches from other disciplines (such as psychology, sociology, computer science) have been adapted and applied in LIS research, highlighting interdisciplinary trends and collaborations.

Future Directions in Research Methodologies for Library and Information Science:

This review could speculate on future trends and innovations in research methodologies within LIS, discussing emerging methods, technologies, and interdisciplinary approaches that are likely to shape the future of research in the field.

Exploring the aforementioned literature review topics in research methodology and Library Information Science offers significant benefits to both scholars and practitioners within the field. Firstly, by conducting a meta-analysis of research methodologies, researchers can gain insights into the prevailing trends and practices, enabling them to make informed decisions about the most suitable methodologies for their own studies. This understanding facilitates methodological innovation and promotes the adoption of rigorous and appropriate research approaches, ultimately enhancing the quality and validity of research findings in Library and Information Science.

Additionally, examining ethical considerations in LIS research fosters a culture of responsible conduct and integrity among researchers.

By critically evaluating ethical challenges and best practices, scholars can ensure that their research respects the rights and dignity of participants, maintains confidentiality and privacy,

and upholds ethical standards of scholarly inquiry. This emphasis on ethical conduct not only safeguards the well-being of individuals involved in research but also strengthens the credibility and trustworthiness of research outcomes, contributing to the advancement of knowledge and the promotion of ethical standards across the LIS community.

While investigating the topics outlined above can yield valuable insights and contributions to the field of Library Information Science (LIS), it's essential to acknowledge the limitations inherent in such endeavours.

Firstly, conducting a meta-analysis of research methodologies may encounter challenges related to the availability and accessibility of comprehensive datasets across various research domains within LIS. Variability in research practices, terminology, and publication formats could hinder the aggregation and synthesis of data, potentially limiting the scope and generalizability of meta-analytic findings.

Moreover, the dynamic nature of research methodologies and emerging trends in LIS may pose difficulties in capturing the most current and representative landscape of research practices, requiring ongoing updates and revisions to meta-analytic studies.

Conclusion:

The exploration of research methodologies and ethical considerations within Library and Information Science (LIS) offers both valuable insights and challenges. While conducting meta-analyses of research methodologies provides a comprehensive view of prevailing trends, challenges arise from the variability in data availability and the dynamic nature of research practices. Similarly, delving into ethical considerations confronts complexities stemming from diverse ethical frameworks and cultural contexts, leading to challenges in standardization and implementation. Acknowledging these limitations is crucial for researchers to navigate effectively, fostering ongoing dialogue and collaboration to enhance the rigor, integrity, and ethical conduct of research within the LIS field.

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लेवा पाटीदार समाजातील लोकांच्या सामाजिक संघटना, विकास आणि आर्थिक अध्ययन

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गोष्टवारा:

प्रस्तुत संशोधन लेखामध्ये लेवा पाटीदार समाजातील लोकांचा विकासाचा अभ्यास केला असून या विकासात समाजातील विविध जातीय संघटनांची भूमिका खूप महत्वाची आहे असे स्पष्ट केले असून. या संघटनांनी समाजाच्या सामाजिक, सांस्कृतिक, आर्थिक आणि राजकीय विकास होण्यासाठी विविध मार्गांनी प्रयत्न केलेला दिसून येतो. या अभ्यासामध्ये संशोधक स्पष्टपणे नमूद करितो कि या संघटनांमुळे लेवा पाटीदार समाज हा विविध पातळ्यांवर प्रगती करताना दिसतो. या अभ्यासात असे लक्षात येते कि समाजाचे आर्थिक प्रगतीसाठी सामाजिक संघटनांनी जे मोलाचे योगदान दिलेले आहे ते खूप महत्वाचे आहे,

प्रस्तावना :

समाज म्हणजे परस्परांशी आंतरक्रिया कर-णाऱ्या व्यक्ती आणि समूहांची मिळून बनलेली एक व्यापक संघटना-व्यवस्था होय. सामाजिक आंतरक्रियेमुळेच व्यक्ती आणि समूहात निश्चित स्वरूपाचे सामाजिक संबंध निर्माण झालेले असतात.

कोणत्याही समाजात ज्ञान, श्रद्धा, कला, नीती, रूढी, परंपरा, मूल्ये, अभिवृत्ती, सवयी, तंत्रे, कल्पना, देवदेवता, पुजाअर्चा, कारक, कौशल्ये, इ. या सर्व घटकांचे एकत्रीकरण झालेले असते. प्रत्येक समाजाचा स्वताचा स्वतंत्र असा एक वारसा असतो व त्यानुसार विशिष्ट समाजातील व्यक्तीचे समाजिकरण झालेले असते. समाजाच्या मुल्यांसोबत अनेक घटक समाजाच्या उन्नतीसाठी किंवा अवनतीसाठी कारणीभूत ठरतात, हे प्रामुख्याने त्या समुदायातील सदस्य हे बदलत्या परिस्थितीशी जुळवून घेऊन आपल्या अस्तित्वाला टिकवतात, ते विकसित समाज म्हणून समोर येतात.

असाच एक सामाजिक परिवर्तनाला आपल्या लवचिक स्वभावामुळे सामावून घेणारा खान्देशातील एक समाज म्हणजे लेवा पाटीदार समाज. लेवा पाटीदार समाज हा मुळचा लाहोर या प्रदेशातून स्थलांतर झालेला आहे. या समाजाने राजस्थान, गुजरात व नंतर महाराष्ट्र या याराज्यात आपले बस्थान स्थापित केल्याचे संदर्भावरून दिसून येते. असे असले तरीही समाजाने आपल्या अंगी जो गुण आहे तो अजूनही त्यांच्यात दिसून येतो. कारण रोजगारासाठी समाज हा जगाच्या कोणत्याही जाण्यास तयार आहे म्हणूनच जगाच्या वेगवेगळ्या ठिकाणी समाजातील लोकांनी स्थलांतर केलेले दिसून येत आणि त्यांसाठी विविध समूह आणि संघटना स्थापन झालेल्या दिसून येतात. त्यामध्ये पुणे भातू मंडळ, ठाणे कल्याण, नाशिक नागपूर सुरात

अहमदाबाद दिल्ली अमेरिका इंग्लंड इत्यादी ठिकाणी वेगवेगळे समूह आणि संघटना स्थापन झालेले दिसून येतात.

संशोधनाची उद्दिष्टे:

१. लेवा पाटीदार समाजातील विविध सामाजिक संघटनांचा अभ्यास करणे

२. लेवा पाटीदार समाजाचा विकासाचा अभ्यास करणे

संशोधनाची गृहितके:

१. लेवा पाटीदार समाजातील विविध जातीय संघटना यांचे विकासातील कार्य खूप महत्वाचे आहे

२. लेवा पाटीदार समाजाने सर्वच स्तरांवर विकास केलेला दिसून येतो

संशोधन पद्धती:

या अभ्यासाची माहिती हि दुय्यम स्त्रोत यांच्या सहाय्याने संकलित केलेली असून ज्यामध्ये संदर्भ पुस्तके, जर्नल्स, शोधनिबंध, लेख आणि सरकारी अहवाल इ. समावेश आहे. सदर शोधनिबंध हा वर्णनात्मक असून दोन चालतील संबंध दर्शवत आहे. या मध्ये सामाजिक संघटना हा स्वतंत्र चल असून त्याच्या कार्याचा सहसंबंध लेवा पाटीदार समाजाच्या विकासावर कसा होतो हे तपासण्या प्रयत्न या शोधनिबंध करत आहे.

अभ्यासाचे महत्व:

प्रस्तुत शोधनिबंध हा विकास होण्यासाठी काय आवश्यक आहे याचा अभ्यास करत असून याचे महत्व आपल्याला दिसून येते. प्रत्येक राष्ट्र आणि त्याची सरकारे जनतेच्या विकासासाठी कार्य करत असते. त्यासाठी धोरण आखून भांडवल खर्च करत असते. यासाठी जर समाजात असलेल्या विविध सामाजिक संघटनांनी जर प्रयत्न केले तर सरकारची शक्ती दुसऱ्या उत्पादक कार्यामध्ये वापरता येऊ शकते. या अभ्यासामध्ये सामाजिक संघटनांनी कार्य करत असतांना समाजाच्या विकासासाठी कसे प्रयत्न केले हे

समजून जाते. याचा फायदा त्या समाजाला तर होतो त्यासोबत इतर समाजासाठी मार्गदर्शक सुद्धा सिध्द होतो.

महाराष्ट्र लेवा पाटीदार महासंघाची मुख्य उद्दिष्टे:

- गावात, समाजात आणि समाजातील सदस्यांमध्ये प्रेम, सहकार्य आणि आपुलकी निर्माण करण्यासाठी प्रयत्न करणे.
- शैक्षणिक, सांस्कृतिक आणि आर्थिक प्रगतीच्या माध्यमातून समाजाचा विकास साधणे.
- दारू पिणे, सोम करणे, हुंडा घेणे व घेणे, जुगार, अंधश्रद्धा अशा वाईट गोष्टींचे उच्चाटन करणे.
- गरीब व इच्छुक विद्यार्थ्यांना शैक्षणिक क्षेत्रात मदत करणे.
- गरीब कुटुंबांना औषधोपचार आणि जीवनावश्यक गोष्टींसाठी आर्थिक मदत उपलब्ध करून देणे.
- समाजात राष्ट्रप्रेमाला प्रोत्साहन देणे आणि राष्ट्रीय विकास कार्यक्रमात सहभागी होणे.
- गावोगावी ग्रंथालये स्थापन करून साक्षरता आणि ज्ञानाचा प्रसार करणे.

जेथे लेवा पाटील सोसायटी आहे तेथे यश मिळविण्यासाठी वरील उद्दिष्टे साध्य करण्यासाठी तालुका, जिल्हा आणि राज्य स्तरावर अशा प्रकारच्या संस्थांशी संबंध प्रस्थापित करणे. लेवा समाज मंडळे स्थापन करून त्यांना महासंघाचे सभासद बनवावे, तसे प्रयत्न सुरू आहेत.

लेवा पाटीदार लोकांचे स्थलांतर:

खानदेशातील लेवा पाटीदार समाजातील लोकानी आपल्या मूळ ठिकाणाहून स्थलांतर केलेले दिसून येते. परंतु त्यांनी हे स्थलांतर का केले याबद्दल ठोस माहिती मिळत नाही. लेवा पाटीदार समाज हा पंजाब नंतर राजस्थान आणि मग गुजरात या ठिकाणी स्थलांतरित झाला. हे स्थलांतर का होते त्याचे माहिती मिळत नाही. सलमान राजवटीत जिझिया या कराला कंटाळून, नैसर्गिक आपत्ती व गरिबीच्या कारणामुळे त्यातील काही लोक नर्मदा व तापी नदी ओलांडून खानदेशात आले. या मध्ये १४०० च्या जवळपास बैलगाड्यांमध्ये हे लोक आले. यांचा शेवटच्या मुक्काम नांदेड या धरणगाव तालुक्यातील गावात होता नंतर ते जळगाव, भुसावळ, रावेर बुज्जानपूर, आणि बुलढाणा या ठिकाणी स्थायिक झाले.

सामाजिक संघटनांचे कार्य:

लेवा पाटीदार समाज हा लवचिक स्वभावाचा असून या समाजाने काळाची पाऊले ओडवून समाजामध्ये बदल घडवून घेतला. या समाजाने शिक्षणाला महत्व देऊन आपला विकास साधला. नवीन प्रयोग करून पहिले. या समाजातील समाज बांधवांनी समाजाच्या विकासासाठी योगदान देण्याचा यशस्वी प्रयत्न केला. समाजाच्या विकासासाठी वेगवेगळ्या संघटना कार्य करण्यासाठी समाजातील धुरंधरांनी स्थापन केल्यात. या मध्ये सर्व सामाजिक संघटनांचा समावेश आहे. या संघटना समाजातील उणीवा समजून घेऊन दूर करण्याचा प्रयत्न करू लागल्यात. त्यांनी समाज हा शिक्षित, समृद्ध, प्रगतीशील

आणि विकसित होण्यासाठी प्रयत्न केले. या संघटनांनी शिक्षणाचे महत्व समजून समाजाला शिक्षित होण्यासाठी समाजातील लोकांना प्रोत्साहित केले, काळाचे पाऊले समजून घेऊन समाजाच्या पारंपारिक व्यवसाय सोडून त्यात बदल करण्यासाठी प्रयत्न केले. कोणत्याही कामाची लज्जा न बाळगता येईल तो व्यवसाय करण्यासाठी तत्पर झालेत. या मध्ये संघटनांनी समाजालाचालना दिली. त्यांनी समाजातील उद्योगीकता विकासासाठी प्रयत्न केले. विविध ठिकाणी कार्यशाळा घेऊन प्रबोधन करण्याचा यशस्वी प्रयत्न केला. आज या प्रयत्नांमुळे पुणे, मुंबई, नागपूर, औरंगाबाद, जळगाव, धुळे आणि नाशिक या ठिकाणी लेवापाटी दार लोकांचे स्थिर स्थावर व्यवसाय आहेत. या मध्ये या संघटनांचे कार्य खूप मोठे आहे.

लेवा पाटीदार समाजाचा आर्थिक विकास:

लेवा पाटीदार समाज मुळात स्थलांतरीत समाज असून ज्या ठिकाणी समाज गेलेला आहे तेथे समाजाने प्रगती आणि विकास केल्याचे दिसून येते. या मध्ये या समाजचे सामुहिक व्यक्तिमत्व, कष्ट करण्याची तयारी. लवचिक स्वभाव, काळाला ओळखण्याची शक्ती आणि सामाजिक संघटन या सर्वांची महत्वाची भूमिका दिसून येते. या संघटनांमध्ये लेवा भातु मंडळ, लेवा चेम्बर ऑफ कॉमर्स, लेवा नवयुवक संघ, लेवा भोर पंचायत, अखिल भारतीय लेवा विकास महासंघ व महाराष्ट्र लेवा पाटीदार महासंघ इ. संघटनांनी समाजाचा सर्वांगीण विकास करण्या मध्ये मोलाचा वाट उचलला.

या मुळे आज समाजामध्ये वेगवेगळ्या ठिकाणी लेवा पाटीदार लोकांचे व्यवसाय असून ते व्यवस्थित कार्य करत आहेत. महाराष्ट्रात नागपूर, पुणे, संभाजीनगर, नाशिक, मुंबई, चंद्रपूर, नगर, ठाणे, नंदुरबार आणि धुळे इत्यदी ठिकाणी व्यवसाय स्थापन केलेत या मध्ये सामाजिक संघटनांनी मोलाचे योगदान दिलेले आहे. यामुळे समाजातील लोकांचे उत्पन्न वाढीक लागून इतर लोकांची उत्पन्ने वाढीसाठी कारणी भूत झालेले दिसून येते.

या संघटनांनी त्याप्रकारे समाजातील लोकांना विविध ठिकाणी व्यवसाय स्थापन करण्यात मध्ये मदत केलेली आहेत त्याप्रमाणे नोकरी साठी समाजातील इतरलोक यायला सुरुवात झाले करण त्यांना एक सबळ पाठबळ उभे राहले त्यामुळे व्यवसायिक यांना खात्रीलायक, विश्वासू नोकरवर्ग मिळाला त्यामुळे समाजातील इतर लोकांना उत्पन्न मिळण्यास सहकार्य मिळाले. यासोबत समाजामध्ये रोजगार प्राप्त झाल्यामुळे बचत अहि आणि गुंतवणूक वाढीस लागली.

उपलब्ध माहिती नुसार लेवापाटीदार समाजातील लोक बचत आणि गुंतवणुकीला खूप महत्व देतांना दिसून येते. आपल्या मासिक उत्पन्नातून २० ते २५ % भाग ते बचत साठी ठेवतात. शिक्षणासाठी खर्च करतात. उत्पन्न वाढल्या मुळे राहणीमानात सुधारणा झालेली दिसून येते. विविध वैद्यकीय, विमा, बँकिंग सुविधा वापण्यात वाढ झालेली दिसून एते.

निष्कर्ष :

१. संदर्भानुसार समाजातील उच्च शिक्षितांचे प्रमाण हे ८३% त्यांना अढळून आले. त्यानंतर लेवा पाटीदार समाजातील नोकरदार वर्गाचे प्रमाण ५२.६६% त्यांना अढळून आले.
२. तसेच लेवा पाटीदार समाज उच्च शिक्षितांचे प्रमाण वाढलेले आहे. उच्च शिक्षितांचे प्रमाण समाजात वाढल्यामुळे त्याचा पररणाम विवाहसंस्थेवर झालेला दिसून येतो. घटस्पोटाचे प्रमाण वाढलेले दिसून येते. शिक्षणामुळे ८७.३३% आर्थिक व सामाजिक विकास झाल्याचे दिसून येते.
३. तसेच मुलीच्या नोकरी करण्याचे प्रमाण वाढून ते ९४.६७ आहे. शेतकऱ्यांपैकी ५८.६७% शेतकरी शिक्षित आहेत. नोकरीसाठी व्यवसायासाठी लोक परदेशात गेलेले आहेत. यामुळे असे लक्षात येते कि समाजामध्ये नोकरी व व्यवसायासाठी व्यक्ती हा स्थलांतर करताना दिसून येतो.
४. उपलब्ध असलेल्या माहिती नुसार ७५% लोक नोकरी साठी स्थलांतर केलेले दिसून येते. यामुळे समाजासाठी काही फायदे हि आहेत आणि त्यासोबत तोटेही आहेत. य समाजात अश्या प्रकारे झालेल्या विकासांमुळे आणि शिक्षणामुळे सामाजित लोकांचा राजकीय सहभाग वाढलेला दिसून येतो.

या सर्व परीस्थिति मध्ये समाजातील स्थलांतर मोठा प्रमाणात ग्रामीण भागातून शहरी भागात नोकरी, व्यवसाय यासाठी स्थलांतर समाजातील लोकांनी केलेले दिसून येते.

५. समाजातील लोक बचत आणि गुंतवणूक आणि शिक्षणाला महत्व देतांना दिसून येते.

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आदिवासी कवितेतील स्त्री जीवनविषयक व्यथा

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प्रस्तावना :-

समाज आणि शिक्षण यांचे अतूट नाते आहे. शिक्षणामुळे समाजाला ऊर्जा प्राप्त होते. शिक्षण हा समाजाच्या सांस्कृतिक उन्नतीचा आधार आहे. स्वातंत्र्यानंतर अगदी खेड्यापाड्यापर्यंत पोहोचलेल्या शिक्षणामुळे सर्वांना शिक्षणाची संधी आणि हक्क मिळाला. दलितांप्रमाणेच आदिवासीही शिकू लागले. शिक्षणामुळे आत्मभान जागृत झाल्यामुळे नव्या प्रतिभेचे आदिवासी कवी व कवयित्री आदिवासी जीवनाच्या बाबतीत विविध अंगांनी बोलीभाषामधून लिहू लागले. आपल्या बोलीतून आदिवासींच्या संवेदना व्यक्त करू लागले. आदिवासी समाज पारंपारिक रूढी, अज्ञान, दारिद्र्य यांनी पूर्वी ग्रासलेला होता. आजही आहे. त्यामुळे आदिवासींविषयी आदिवासी कोण ? आदिवासी असे नामाभिधान का करावयाचे ? याविषयी “ भारतीय संस्कृतीकोश यात आदिवासींची लक्षणे सांगून वन्यजमात, अर्ध वन्यजमात, संस्कारीत वन्यजमाती, विलीन जमाती अशा गटात आदिवासींची वर्गवारी केली आहे. यात आर्य व द्रविड यांच्याही पूर्वी वने व पर्वत यांच्या आश्रयाने स्थायिक झालेल्या जमातींना ‘ वन्य जमाती किंवा आदिवासी ‘ असे म्हटले आहे.”^२ आदिवासी जमातीतील बहुतांशी लोकजीवन हे वन्यपर्यावरणाशी शेती निष्ठेचे, अतिवअतिशय कावाडकष्ट कष्टाचे असते. निसर्गावलंबी कष्टमय जीवन यामुळे त्यांच्या जीवनाला करुणा आणि समाधान या संवेदना अधिक चिकटलेल्या असतात. अलीकडील परिवर्तनवादी विचारांनी या जीवनाकडे पाहण्याची दृष्टी अज्ञान ,दास्य रूढीग्रस्तता व अन्याय निवारणासाठी चळवळ अशा स्वरूपाची दिली आहे.

त्याचाही परिणाम साहित्य निर्मितीवर झालेला आहे. त्याला ‘ आदिमतेची जाणीव ‘ किंवा ‘ संवेदना ‘ असे म्हटले जाते. या सर्व जाणिवांचा प्रकटणारे साहित्य म्हणजे आदिवासी साहित्य होय असे म्हणता येईल. आदिवासी समाजातील विविध संवेदनाप्रमाणेच स्त्री जीवनविषयक संवेदना प्रामुख्याने साहित्यातून व्यक्त झालेली आहे. आदिवासींच्या विविध प्रश्नांप्रमाणेच स्त्रियांचे प्रश्नही तेवढेच गंभीर आहेत. आजही आदिवासी स्त्री ही पूर्णपणे इथले जाचक प्रश्न आणि व्यवस्थेच्या कचाट्यातून मुक्त झाली आहे असे म्हणता येत नाही. उपासमार, बेरोजगारी, व्यसन यांच्या चक्रव्यूहात आदिवासी स्त्री अडकलेली आहे. त्यामुळे आदिवासी स्त्रीमध्ये जागृती आणि तिला सक्षम बनवण्याकरिता प्रयत्न होणे गरजेचे आहे. आदिवासी पुरुषांप्रमाणेच आदिवासी स्त्री ही लाजाळू, भित्रेपणा, अबोल असून मन स्वच्छ, मनात स्वार्थ अथवा कपट नाही. त्यांच्या या साध्या व स्वच्छपणाचा फायदा इथल्या प्रस्थापित

लोकांनी घेतला आहे. स्वातंत्र्याच्या पाच दशकानंतरही आदिवासी स्त्रियांचा पूर्णपणे विकास झाला नाही. आदिवासी स्त्रियांचे सामाजिक प्रश्नांबरोबरच त्यांचे आरोग्यविषयक काही प्रश्न आहेत. त्यामुळे आदिवासी समाजातील स्त्रियांचे प्रश्न, त्यांच्या समस्या या इतर समाजातील स्त्रियांच्या समस्यांपेक्षा वेगळा आहेत. आज आदिवासी शिक्षित स्त्रिया त्यांच्या प्रश्नांवर बोलू लागल्या आहेत. लिहू लागल्या आहेत. आदिवासी स्त्रियांच्या सामाजिक, शारीरिक, मानसिक, आर्थिक, लैंगिक शोषण यासारख्या विविध प्रश्नांवर त्या उघडपणे बोलू लागल्या आहेत. त्यांचे आत्मभान जागृत झाल्यामुळे स्वतःचे अस्तित्व सिद्ध करण्यास धडपडू लागल्या आहेत. त्यामुळे आदिवासी समाजातील स्त्रियांच्या जीवनातील विविध व्यथांचा सूक्ष्मपणे शोध घेवून, त्याचा अभ्यास करून त्यावर प्रकाश टाकण्याचा या शोधनिबंधातून प्रामाणिक प्रयत्न केला आहे.

आदिवासी कवितेतील स्त्री जीवनविषयक व्यथा :

आदिवासी समाजातील दारिद्र्य, वर्षानुवर्षे चालत आलेली त्यांची वेढबिगारी, त्यांचे होणारे आर्थिक, सामाजिक आणि सांस्कृतिक शोषण, त्यांचा हरवत गेलेला इतिहास, त्यांचे अज्ञान, अंधश्रद्धा रूढीपरंपरा इत्यादी विषयांना केंद्रवर्ती ठेवून आदिवासी समाजाचे प्रतिनिधीक दुःख कवितेतून आदिवासी कवींनी व्यक्त केले आहे. आदिवासी समाजातील स्त्रीला इथल्या समाजात जीवन जगताना वेदना, होणारा अत्याचार आणि शोषण असे अन्याय जीवन उघड्या डोळ्यांनी पाहून जगावे लागत आहे. या अन्याय जीवनाविरुद्ध तिच्या मनात आक्रोश आहे. या आक्रोशातूनच प्रस्थापित समाज व्यवस्थेविरुद्ध प्रतिकार करण्याची तिची मानसिकता तयार झाली आहे. त्यासाठी ती आपल्या रानावनातील सर्व सखींना एकत्र आणून त्यांची नेतृत्व म्हणजे ‘ म्होरकी ‘ होण्यास पुढे सरसावली आहे. ही

“ राणे , एवढा शिंगार करू नगं.

रानानं फुलावं काढ्यातं, परणं वास दावू नये,
वाटेनं जातेस... तर समद्या डोयाले आग लागत,

राणे ! तुझ्यावर नजर, समद्या
सुधारलेल्या बाप्याची म्हणून म्हणते
“तू रातराणी होवू नगं, व्हाशील त
पयसाची लाल तांबडी आग
व्हयं-नायतं बिब्याची फुलं व्हयं “

आदिवासी स्त्री अजूनही दुर्लक्षित आहे. आजही ती रानात बंदिस्त आहे. तिच्याकडे पाहण्याचा समाजाचा दृष्टिकोन अद्यापही बदललेला नाही. ती अबोल आहे. स्त्रिया प्रतिष्ठेच्या लढाईची भाषा तिच्यापासून कोसोदूर आहे. तिच्यातील स्त्रित्वाचे तेजस्वीपण अद्यापही अंधारातच आहे. संपूर्ण काया गोंदवून घेवून सौंदर्य नष्ट करण्याला ती संस्कृती मानते. अत्यंत साधीभोळी, सरळ मनाची व परंपरा शरण

“ सखे, मला सांग, आपण कुठवर असे लाजायचे ग ?

आपण भर चौकात मशाल लावू
त्यांच्या डोळ्यात झणझणीत अंजन घालू
ज मी साऱ्या सख्यांना मोर्चात आणते
सगळ्यांच्या पदरात सूर्याचे वाण देते “

किती दिवस आपण शस्त्राला घाबरणार आहोत. किती दिवस रडणार आहोत. त्यांची शस्त्र हिसकावून घेऊन अन्यायाविरुद्ध लढण्याची सिद्ध होण्यास सांगत आहेत. कवयित्री त्या सगळ्यांनाच त्यांची “ म्होरकी “ म्हणजे नायिका असल्याचे सांगते त्यांना डोळ्यातील भीती काढण्याचे सांगून क्रांतीच्या लढ्याचे नेतृत्व करण्यासाठी

म्होरकी म्हणजे आदिवासींच्या गोदूलातील हुशार, जिद्दी, निर्भीड, नेतृत्व करणारी नायिका होय. गोंडी भाषेत तिला “ मोट्यारिन ‘ असे संबोधले जाते. समाजात स्त्री जागृती करण्यासाठी, स्त्रियांवरील शोषण, अन्याय, अत्याचाराविरुद्ध बंड पुकारून आदिम, श्रमिक, शोषित, पिडित महिलांचे दुःख वेशीवर टांगण्यासाठी संघर्ष करण्यास सिद्ध झाली आहे. इथल्या स्त्री जातीवर अन्याय करणाऱ्या सामाजिक रूढीपरंपरांवर प्रभाव टाकणारी म्होरकी निर्भीड आहे. त्यामुळे थंडीत केस धुवून, चोपूनचापून वस्त्र नेसल्यावर डोक्यात फणी खोवत, गळ्यात बंदी, गुंजा, शिंपल्याची माळ घालून आरशामध्ये निरखून पाहत असते. त्यावेळी तिचा नवरा तिला ओरडतो तेव्हा कवयित्री उषाकिरण आत्राम “ पळसाची लाल आग व्हतं “ या कवितेतून सखीला उद्देशून म्हणतात,

अशी गोंड आदिवासी स्त्री सुधारलेल्यांच्या अमिषाला बळी पडते. कधीकधी बलात्कारालाही बळी पडते. तिच्या शील, चारित्र्याचा बाजार मांडला जातो. उद्विग्न, साध्या भोळ्या असाह्य आदिवासी स्त्रीची स्थितीगती पाहून कवयित्री उषाकिरण आत्राम आपल्या सगळ्यात आयाबहिणींना सावधानतेचा इशारा देतांना “ शिर्षक “ या कवितेत म्हणतात

,पुढाकार घेऊन या लढा सहभागी होण्याची गरज असल्याचे सांगत आहे.

आदिवासी उपेक्षित समाजावर तथाकथित समाजाने सतत अन्याय केला. वर्षानुवर्षे जातीभेदाच्या व्यवस्थेखाली ही उपेक्षित समाज दडपला गेला व आजही दडपला जात आहे. दलित आदिवासी, भिकारी, मजूर वेश्याव्यवसाय करणाऱ्या स्त्रिया यांच्या वाट्याला आलेले

उपेक्षित जीवन कवी वाहरु सोनवणे यांच्या कवितांमधून व्यक्त झालेले दिसून येते.दारिद्र्यापायी परिस्थितीला शरण जावून अनेक स्त्रियांना आपल्या पोटाची आग क्षमविण्यासाठी देहविक्रय करावा लागतो. कवी वाहरु

सोनवणे “ कामाठीपुरा चौदावी गल्ली “ या कवितेत तथाकथित समाजाचा उपेक्षित स्त्रीकडे बघण्याचा दृष्टिकोनाविषयी सांगताना म्हणतात,...

“ तुम्ही पहावे पोलक्यातले अर्धचंद्र

मी पाजावी पेज ?

तुम्ही फाडावे क्षितीज

मी पोसावी भट्टारी सेज “

आदिवासींचे दारिद्र्य, दैवते, रुढीपरंपरा, समृद्धी यांचेही दर्शन आदिवासी कवितांमधून घडतांना स्त्री जीवनातील व्यथावेदनाही प्रकट होते. लहान्या शिंगडा याला आश्रमशाळेत एक गणपती दिला जातो. तो गणपती घेऊन लहान्या शिंगडा घरी जातो. गणपती आपल्या आईजवळ देतो तेव्हा त्याची आई चिडते आणि म्हणते की, आधीच झोपडीत दहा-बारा देव असतांना हा नवीन देव कशाला

आणला. प्रत्येक सण साजरा करण्यासाठी कर्ज काढावे लागते. खूप कष्ट करूनही त्यांना दारिद्र्यातच जीवन जगावे लागते. कवी भुजंग मेश्राम “लहान्या शिंगडा “ या कवितेत हा अनुभव घेतलेली आई लहान्या शिंगड्याला म्हणजेच आपल्या मुलाला गुरुजीजवळ एकच गोष्ट मागायला लावते तीम्हणते,

“ कालजात बसल अशी गोस्ट दे एकुंदी

देव ठिवाया आता कुठीच जागा नाई “

आदिवासी स्त्रीचे कष्टमय जीवन पराकोटीतले आहे. कुटुंबाच्याही जबाबदारीने तिचे स्वातंत्र्य बंदिस्त करून टाकले आहे. उदरनिर्वाह करण्यासाठी रानोरान हिंडावे लागते आणि विविध कष्टाची कामे करावी लागतात.काबाडकष्ट करून आपल्या मुलाबाळांना जमेल तेवढा घास भरवायचा आणि दुसरीकडे संस्कृतीची मूल्ये जोपासत नवऱ्याची कोणतीही तक्रार न करता मर्जी सांभाळायची कसरत त्यांना करावी लागते.एवढे सारे

करूनही सेठ, सावकार, सरकारी नोकर आदींच्या वासनेची शिकार व्हावे लागते. डोळ्यात मरण घेऊन जगण्याची यातनामय कसरत करावी लागते, असा हा अन्याय कुठवर सुन्नपणे पाहात राहायचा. मुक्तपणे सोसत राहायचा. त्यामुळे चांदण्या रात्रीला साक्षी ठेवून स्वानंदात बुडून वेधुंदपणे नाचणाऱ्या आदिवासी तरुणीला सावध करून होणाऱ्या अन्यायाविरुद्ध लढण्याची साथ घालतांना कवयित्री कुसुम आलाम म्हणतात

“ तुझ्या शोषणासाठी बसलेल्या सर्व चिलटांना,

भस्म कर जळजळीत नेत्र कटाक्षाने, तरच तुझे नाचणे खऱ्या अर्थाने, आनंद पर्व होईल..”

अशी वास्तवाची जाणीव कवयित्री करून देते. आदिवासी स्त्रीचे सामाजिक समानतेचे गोडवे आज-काल खूप गायले जातात. तिच्या जगण्याचे उदात्तीकरण आपला समाज करतांना दिसतो. देशाला स्वातंत्र्य मिळून कितीतरी वर्षांचा काळ लोटला आहे परंतु आदिवासी स्त्रियांवरील अन्याय ,अत्याचार अजून थांबले नाहीत. जल, जमीन, जंगल इथपासून त्यांची अब्रू यांची लुट सुरू आहे. आदिवासी समाजातील दारिद्र्य, वर्षानुवर्षे चालत आलेली त्यांची वेढबिगारी, त्यांचे होणारे आर्थिक, सामाजिक आणि सांस्कृतिक शोषण, त्यांचा हरवत गेलेला इतिहास या पुढारलेल्या जगात असंस्कृत ठरला आहे, याची जाणीव

आणि शल्य आदिवासी स्त्रीच्या मनात कायम आहे. डॉक्टर बाबासाहेब आंबेडकरांनी स्त्री उन्नतीसाठी भारतीय राज्यघटनेत सुरक्षितता दिली. शिक्षण आणि अभिव्यक्ती स्वातंत्र्य दिले. स्त्रियांना सन्मानाने जगण्यासाठी तरतूद केली. या घटनात्मक तरतुदींचा सर्वदूर प्रभाव झाला असला तरी जगण्याचे स्वातंत्र्य हिरावून घेणाऱ्या लोकशाही विरुद्ध तिच्या मनात आकस निर्माण झालेला दिसून येतो. त्यामुळे लोकशाहीतील अमान्य कृत्यांचा निषेध नोंदविताना कवयित्री कुसुम आलाम “ रानपाखरांची माया “ कवितेत म्हणतात,

“ एरवी मी खूप रडणारी,पण हल्ली रडायचं सोडलं,

कारण अश्रू रक्ताचे झालेत, त्या रक्ताची आग होईपर्यंत थांब,

मग असे जगण्याचे, मरण्याचे,

सारे संदर्भ जळून टाकून “

“गोटूल “ हे माडिया आदिवासी जमातीचे सांस्कृतिक केंद्र असून ते त्यांच्या सामाजिक व्यवस्थेतील एक महत्त्वाची विसाव्याचे स्थान आहे. दिवसभराच्या भटकंतीनंतर आदिवासी तरुण-तरुणी रात्रीच्या वेळी या ठिकाणी एकत्र येवून गाणी म्हणतात. नृत्य करतात, सुखदुःखाच्या चर्चा करतात, चांदण्या रात्री धुंद होऊन नाचतात. दुःख विसरून एकमेकांच्या सहवासात निसर्गाशी एकरूप होतात. आपल्या जीवनसाथीची निवड ही करतात मात्र यात भावनेला

“ गोटूल “ या कवितेतून आवाज उठवितांना म्हणतात, “ तुम्ही भडवेगिरी केली, बलात्कार, छेडछाड केली,

कुरण खाते चालविले तरी तुमचे फावते,

आम्ही मात्र चांदण्यांना साक्षीला ठेवून

जीवनसाथी निवडण्यास गोटूलमध्ये येतो त्यावेळी तुम्ही म्हणता..

गोटूल म्हणजे काय हो ? व्यभिचाराचे, स्वैराचाराचे केंद्र का ?

कवयित्री कुसुम आलाम यांनी विकृत आणि कुत्सित वैचारिक नजरांना जाळून राख करण्यासाठी हा प्रश्न विचारलेला आहे. एकूण समाज व्यवस्थेत आदिवासी स्त्रियांचे गौणस्थान असून त्यांना अवला समजून केला निष्कर्ष :-

1. आदिवासी कवितेतून आदिवासी स्त्री जीवनाचे प्रातिनिधिक दर्शन घडते.
2. आदिवासी समाजातील अज्ञान, निरक्षरता, व्यसन आणि अंधश्रद्धा यामुळे आदिवासी स्त्रीची सामाजिक आणि शैक्षणिक उन्नती झाली नाही.
3. आदिवासी कवितेतून आदिवासी स्त्रियांच्या वेदना आणि विद्रोहाचे दर्शन घडते.
4. जागतिकीकरणाच्या विकासप्रक्रीयेतही आदिवासी स्त्रियांच्या जीवनात आमुलाग्र बदल व विकास झाला नाही, असे दिसून येते.
5. आदिवासी स्त्रियांना आत्मसन्मान आणि आत्मप्रतिष्ठा प्राप्त करून देण्याचा प्रयत्न आदिवासी कवयित्रींनी काव्य लेखनातून केल्याचे दिसून येते.

समारोप :-

आदिवासी कवितांमधून आदिवासी समाज जीवनातील स्त्रियांचे प्रतिनिधीक स्वरूपात दर्शन घडते. आदिवासी स्त्रियांच्या जीवनातील विविध समस्या आणि दाहक प्रश्न आदिवासी कवींनी कवितेतून प्रखरतेने मांडले आहेत. आदिवासी समाज आणि आदिवासी इतर समाजातील स्त्री जीवन यामधील तफावत, स्त्री मनाची व्यथा आदिवासी काव्यातून व्यक्त झाली आहे. आदिवासी स्त्रियांना उपेक्षित ठेवणारी शासनपद्धती, उच्चवर्गीय समाजाकडून होणारे शोषण, याविषयीची चिड व आक्रोश आदिवासी कवितेतून प्रामुख्याने दिसून येतो. उपेक्षित राहिलेल्या आदिवासी समाजातील स्त्रियांचे दुःख, अन्याय, अत्याचार, त्यांच्या

प्रा. पुरुषोत्तम प्र. सूर्य

वासनेचा स्पर्श नसतो की स्पर्धा नसते की स्पर्धेतील विकृती नसते. सारे व्यवहार सामाजिक नितीबंधनात, नियम, परंपरेला आणि संस्कृतीला धरून असतात पण शहरवासीयांचा गोटूलकडे बघण्याचा दृष्टिकोन अतिशय विकृत असा आहे. गोटूलला ते स्वैराचाराचे व्यभिचाराचे केंद्र मानतात. शहरवासीयांच्या गोटूलकडे पाहण्याच्या विकृतदृष्टिकोनाविरुद्ध कवयित्री कुसुम आलाम

जाणारा अत्याचार, केवळ भोगवादी वस्तू म्हणून तिच्याकडे बघण्याचा दृष्टिकोन आहे. त्यामुळे त्यांचे केले जाणारे लैंगिक शोषण यापासून आदिवासी स्त्री स्त्रिया मुक्त नाहीत.

6. आदिवासी स्त्रियांच्या जीवनातील संस्कृती आणि शहरी संस्कृतीतील तफावत आदिवासी कवितेतून प्रकट झाली आहे.
7. आदिवासी स्त्रियांच्या जीवनातील अमानवी प्रवृत्ती विरोधातील विद्रोह आदिवासी कवितेतून प्रकट झाला आहे.
8. आदिवासी कवितेतून स्त्रियांच्या सामाजिक व सांस्कृतिक शोषणाचे दर्शन घडते.
9. आदिवासी समाजातील स्त्रियांविषयी सुधारित पुरुषवर्गातील विकृत मानसिकतेचे दर्शन कवितेतून घडते.
10. मानवतेच्या दृष्टीने आदिवासी स्त्रियांना समानसंधी आणि सर्वच क्षेत्रांमध्ये प्रगतीची आस आदिवासी कवितेतून व्यक्त झाली आहे.

संस्कृतीकडे पाहण्याचा तथाकथित समाजाचा विकृत दृष्टिकोन या कवितेतून व्यक्त होऊन अन्यायाविरुद्ध आदिवासी समाजातील स्त्रियांनी एकसंघ होण्याची आस व गरज प्रकर्षाने व्यक्त झाली आहे. माणुसकीचे मूल्य मानणारा समताधिष्ठित समाजाविषयी आशावाद व्यक्त करून स्त्रीमुक्तीचा संदर्भ असलेली ही कविता विद्रोही व क्रांतीप्रवण अशी आहे.

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२००० नंतरच्या ग्रामीण कादंबरीतील बदलते समाज वास्तव**डॉ. उज्ज्वला यशवंत सामंत**

सहयोगी प्राध्यापिका, मुंबई विद्यापीठ संलग्न,
स. का. पाटील सिंधुदुर्ग महाविद्यालय मालवण, ता. मालवण जि. सिंधुदुर्ग

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ग्रामीण साहित्य म्हणजे 'गाव किंवा खेडे यांचे वर्णन करणारे साहित्य' अशी ग्रामीण साहित्याची ओळख करून दिली जात होती. या प्रवाहातील साहित्य जसजसे वाढत गेले तसतसा या प्रवाहाकडे पाहण्याचा दृष्टिकोन परिपक्व होत गेला. ग्रामीण साहित्य म्हणजे केवळ 'ग्रामाचे म्हणजेच खेड्याचे वर्णन करणारे साहित्य' एवढाच अर्थ अभिप्रेत नसून या खेड्यातील समस्या, त्याचा विकास, होऊ घातलेले बदल अशा वेगवेगळ्या अंगोपांगाविषयी चर्चा हे साहित्य करते. मुळातच साहित्य हे त्रिकालबाधित असते. भूतकाळाकडे नजर ठेऊन वर्तमानकालीन वास्तव मांडताना, भविष्यकाळाचा वेध घेणारे असे अक्षर वाङ्मयाचे स्वरूप आहे. या दृष्टीने ग्रामीण साहित्याचा विचार करताना खेड्याचे वर्तमानकालीन वास्तव मांडताना खेड्याचे भवितव्य काय आहे याची चर्चा या साहित्यातून होणे अपेक्षित आहे.

वर्णन प्रधानता हा कादंबरी लेखनाचा विशेष आहे. ग्रामीण वास्तव चितारण्यात कादंबरी या साहित्य प्रकाराचा मोठा वाटा आहे. १९व्या शतकात ग्रामीण कादंबरीला इतर साहित्य प्रकारांप्रमाणेच आकार व स्वरूप प्राप्त झाले. भारत हा कृषिप्रधान देश आहे. देशातील ८० टक्के जनता खेड्यात राहते. खेड्यातील प्रमुख व्यवसाय शेती हा आहे. बारा बलुतेदारी, जाती व्यवस्था, सण-उत्सव, दुष्काळ, गुरे-ढोरे, ग्रामसंस्कृती, भाषा या सर्व गोष्टी ग्रामीण कादंबऱ्यांचे वर्ण्यविषय होते. इतर कादंबऱ्याहून ग्रामीण कादंबऱ्या ठळकत्वाने वेगळ्या उठून दिसत होत्या.

खेड्यांचे वैशिष्ट्य म्हणजे खेड्यातील वातावरणात परस्पर सहकार्याची भावना असल्याने प्रत्येक जण दुसऱ्यांना ओळखत असतो. त्यांच्यात परस्पर सहकार्य असते त्यामुळे त्यांचे जीवन हे सामूहिक जीवन बनते, त्यामुळे ग्राम संस्कृतीला महत्त्वाचे स्थान प्राप्त होते. १८७४ पासून मराठी साहित्याने कात टाकली असली तरी, ग्रामीण साहित्याला १९४५ नंतरच बहर आला. महात्मा गांधींची 'खेड्याकडे चला' ही हाक त्याला पूरक ठरली. मार्क्स - लेनिन यांच्या प्रभावामुळे १९१७ ते १९४५ पर्यंतचे साहित्य प्रेरित झाले.

रा.वी. टिकेकरांच्या १९०३ साली प्रसिद्ध झालेल्या 'पिराजी पाटील' या कादंबरीला डॉ. आनंद पाटील यांनी 'मराठीतील पहिली ग्रामीण कादंबरी' म्हणून मान दिला आहे. तर १८५७ साली लिहिल्या गेलेल्या 'बळीबा पाटील' या कादंबरीला मराठी ग्रामीण साहित्यातील पहिली कादंबरी म्हणून विचारात घेतली जाते. ही कादंबरी कृष्णाराव भालेकर यांनी लिहिली. १९०३ ते आज २०२४ सालापर्यंत झालेल्या मराठी ग्रामीण कादंबरीच्या प्रवासाचा विचार केल्यास ग्रामीण कादंबरीने आपल्या प्रत्येक पावला

पावलावर अधिकाधिक परिपक्वतेचा प्रवास केलेला दिसतो. विविधांगी ग्रामीण समस्यांचे चित्र व भवितव्य या कादंबरीने रेखाटलेले दिसते.

१९२० नंतर मराठी ग्रामीण कादंबरीने प्रादेशिकतेचे रूप धारण केले. १९२० ते १९४५ या कालखंडात बरेच ग्रामीण लेखन झाले. या ग्रामीण कादंबरीकारांमध्ये ग. त्र्यं. माडखोलकर यांची 'चंदनवाडी' (१९४३), र. वा. दिघे यांची 'सराई' (१९४३), वि. द. चिंदरकर यांची 'महापूर' (१९४३) आणि ग. ल. ठोकळ यांची 'गावगुंड' (१९४५) या चार कादंबऱ्या या कालखंडातील अतिशय महत्त्वाच्या कादंबऱ्या मानता येतील. ग्रामीण जीवन, बदलणारे विचार प्रवाह, जीवनाकडे बघण्याचा दृष्टिकोन, प्रादेशिक कादंबऱ्यांचे वळण, ग्रामीण जीवनाचे दाहक अनुभव अशा विविध गोष्टी या कादंबऱ्यांनी चित्रित केल्या.

१९४५ ते १९५० या कालखंडात प्रादेशिक जीवन चित्रित करणाऱ्या कादंबरीकारांमध्ये प्राधान्याने श्री. ना. पेंडसे आणि गो. नी. दांडेकर यांचे नाव घेता येईल. श्री. ना. पेंडसे यांच्या 'एल्वार' (१९७४), 'हृदपार' (१९५०), 'गारंबीचा बापू' (१९५१) यासारख्या कादंबऱ्यांतून ग्रामीण प्रादेशिक जीवनाचे चित्रण केले आहे. तर गो. नी. दांडेकरांची 'पडघवली' (१९५५), 'पवनाकाठचा धोंडी' (१९५५), 'माचीवरला बुधा' (१९५८) या कादंबऱ्यांतून कोकणातील प्रादेशिक वैशिष्ट्ये प्राधान्याने चित्रित केलेली दिसून येतात. १९४५ ते १९५० या कालखंडातील ग्रामीण कादंबरी अधिक तपशीलाने लिहिली गेलेली जाणवते.

ग्रामीण कादंबरीला प्रामुख्याने बहर आणि तिचे स्वतःचे वेगळेपण सिद्ध करणारे लेखन १९६० पासून जन्माला आले. या लेखनाने ग्रामीण प्रादेशिक कादंबरीची स्वतःची ओळख निर्माण केली. विभावरी शिरूरकर यांच्या 'बळी' या १९५० साली प्रसिद्ध झालेल्या आणि व्यंकटेश माडगूळकर यांच्या 'बनगरवाडी' (१९५५) या दोन्ही कादंबऱ्यांनी मराठी कादंबरी विश्वात ग्रामीण प्रादेशिक कादंबरीची स्वतःची ओळख निर्माण केली. ग्रामीण परिसरातील आर्थिक, सामाजिक, शैक्षणिक जीवनातील अनेक पैलूंवर माडगूळकरांनी प्रकाश टाकला. तर शिरूरकर यांनी मांगगावडी समाजातील समस्यांचे चित्रण बळीच्या निमित्ताने केले. १९६० नंतर खेड्यातील समस्यांचे अतिशय सखोल चित्रण करण्यात आले. उद्धव शेळके यांची 'धग', शंकर पाटील यांची 'टारफुला' (१९६४), रणजीत देसाई यांची 'माझा गाव', हमीद दलवाई यांची 'इंधन' (१९६५), ना. धो. महानोर यांची 'गांधारी', रा.रं. बोराडे यांची 'पाचोळा', आनंद यादव यांची 'गोतावळा' या कादंबऱ्यांनी या कालखंडात आपला वेगळा ठसा उमवला. 'धग' (१९६०) सारख्या कादंबरीने कौतिकच्या रूपाने अस्सल ग्रामीण अविष्काराचा प्रत्यय रसिकांना दिला. 'पाचोळा' सारख्या कादंबरीने गंगारामच्या रूपाने बारा बलुतेदारी पद्धतीचा ज्ञास चित्रित केला. हमीद दलवाई यांच्या 'इंधन'ने कोकणातील हिंदू मुस्लिम नातेसंबंधाचे चित्रण केले. शंकर पाटील यांच्या 'टारफुला'च्या रूपाने ग्रामीण व्यवस्थेतील नको असलेला बदल चित्रित केला. या सक्षम कादंबऱ्यांनी प्रादेशिक ग्रामीण कादंबरीला अधिक समृद्ध केलेले दिसते.

१९७० ते १९७५ या कालखंडामध्ये ग्रामीण कादंबऱ्यातील सखोल लेखनामागे या कालखंडातील ग्रामीण चळवळीची निर्मिती हे सुद्धा एक कारण आहे. या ग्रामीण चळवळीचे प्रणेते डॉ. आनंद यादव, नागनाथ कोत्तापल्ले, रा.रं. बोराडे हे होते. जयवंत दळवी यांची 'महानंदा' (१९७०) आणि 'धर्मनंद' (१९८०) ह्या या कालखंडातील उल्लेखनीय कादंबऱ्या आहेत. 'महानंदा' ही कोकणातील भावीण प्रथेवर प्रकाश टाकणारी कादंबरी आहे. चि. त्र्यं. खानोलकर यांच्या 'कोंडुरा' (१९६६) या कादंबरीतून कोकणच्या निसर्ग सौंदर्याबरोबरच मानवी मनाच्या तळाचा सखोल वेध घेतलेला दिसतो. 'पाचोळा'कार रा.रं. बोराडे यांच्या 'चारापाणी' (१९८९), 'सावट' (१९८७),

'इथं होतं एक गाव' (२०००) या इतर कादंबऱ्या आहेत. ग्रामीण जीवन आणि राजकारण या विषयावर रा.रं. बोराडे यांची अतिशय गाजलेल्या कादंबऱ्या म्हणजे 'आमदार सौभाग्यवती' (१९८६) व २००७ साली प्रसिद्ध झालेली 'नामदार श्रीमती' या दोन कादंबऱ्या होय. विरोधी पक्षातील नेत्यांनी पक्षाबद्दल करून सत्तेत येण्याचे अलीकडच्या डॉ. उज्वला यशवंत सामंत

राजकारणातील वारे 'नामदार श्रीमती' या कादंबरीत चित्रित करण्यात आले आहे. नारबाच्या रूपाने 'गोतावळा' (१९७१) मधून रसिकांसमोर येणारे डॉ. आनंद यादव हे 'नटरंग' (१९८०) या तमाशा कलावंताच्या जीवनाचा पट मांडणाऱ्या अतिशय संवेदनशील कादंबरीला घेऊन प्रेक्षकांच्या भेटीला आले. 'झोंबी', 'नांगरणी', 'काचवेल' हे त्यांचे आत्मचरित्रात्मक लेखनही ग्रामीण संदर्भ मांडणारे आहे. ना. धो. महानोर यांची 'गांधारी' (१९७३) ही कादंबरी स्वार्थी राजकारण आणि भ्रष्टाचार यांचे वास्तव दर्शन घडवते. चंद्रकुमार नलगे यांच्या 'अग्नी फुल' (१९७४), 'गस्त' (१९७६), 'देवाची साक्ष' (१९७९) या कादंबऱ्या आहेत. ग्रामीण जीवनाच्या संघर्षाची गाथाच जणू या लेखकाने मांडली. उपेक्षितांचे अंतरंग शब्दबद्ध करणारा या कालखंडातील ग्रामीण लेखक म्हणजेच महादेव मोरे होय. त्यांनी विडी कामगार स्त्रिया, वेश्या, जोगते-जोगतीणी, भटके यांचे जीवन 'पाव्हणा' (१९६६), 'एकोणीसावी जात' (१९६८), 'पनौती' (१९६९), 'वर आभाळ खाली धरती' (१९७३), 'प्रवाह' (१९७६), 'लाईन' (१९८०), 'झोंबड' (१९९०) या कादंबऱ्यातून मांडले आहे.

१९७५ नंतरच्या काळातील कादंबरी लेखन करणाऱ्या लेखकांमध्ये बाबुराव मुसळे यांची 'हाल्या हाल्या दूध दे' (१९८५) ही कादंबरी आहे. सावकारी, मानवी मन, सरकारी कर्मचारी आणि सरकारी दसरी शेतकऱ्याची होणारी ससेहोलपट ही कादंबरी चित्रित करते. नागनाथ कोत्तापल्ले यांच्या 'गांधारीचे डोळे' (१९८५) आणि 'उलट चालला प्रवाह' (१९८५) या दोन प्रसिद्ध कादंबऱ्या आहेत.

राजकारण आणि समाजकारणाचा शांत ग्रामीण जीवनात प्रवेश झाल्यावर गढूळ झालेले ग्रामीण विश्व या कादंबऱ्या चित्रित करतात. राजन गवस यांनी 'चौडक' (१९८५), 'भंडार भोग' (१९८८) या कादंबऱ्यांतून जोगते आणि जोगतीणी यांच्या मानवी शोषण करणाऱ्या अन्यायकारक ग्रामीण प्रथेविषयी पोट तिडकीने लिखाण केले आहे. वासुदेव मुलाटे यांच्या 'विषवृक्षाच्या मुळ्या' (१९८९) या कादंबरीत सहकार क्षेत्रातील भ्रष्टाचाराचे चित्रण आले आहे. 'पाचर' (१९८९) ही रंगनाथ पठारे यांची कादंबरी आहे.

ग्रामीण जीवनातील विविध सामाजिक सुधारणा, स्वार्थी राजकारण यांचे चित्रण या कादंबरीत आले आहे. ग्रामीण जीवनाची पार्श्वभूमी मांडणारी त्यांची 'हारण' (१९९०) नावाची आणखी एक कादंबरी आहे. 'मेड इन इंडिया' (१९८७) ही पुरुषोत्तम बोरकर यांची कादंबरी ग्रामीण पार्श्वभूमी असणाऱ्या माणसाला राजकारणात ज्या समस्या येतात त्यांचे चित्रण करते. विश्वास पाटील यांची 'आंबी' (१९८०) ही कादंबरी ग्रामीण जीवनातील आपली

ओळख आणि आपल्या घरंदाजपणा टिकवण्यासाठी माणसे कशी तडजोड करतात, त्यातून निर्माण होणारी शोकांतिका चित्रित करते. 'पांगिरा'(१९९०) ही कादंबरी खेड्यातील आधुनिक बदलामुळे उध्वस्त होत जाणारे परंपरागत ग्रामजीवन चित्रित करते 'झाडाझडती' (१९९१) ही कादंबरी धरणग्रस्त लोकांच्या पुनर्वसनाविषयी असणाऱ्या समस्या चित्रित करते. एकूणच विश्वास पाटील यांनी ग्रामजीवनातील असंख्य प्रश्न अतिशय समर्थपणे मांडले आहेत.

सदानंद देशमुख यांच्या 'बारोमास' (२००२) आणि 'तहान' (१९९८) या प्रसिद्ध ग्रामीण कादंबऱ्या आहेत. माणसाला स्वार्थामुळे निर्माण होणारी अति हाव माणसाला उध्वस्त करते. या सूत्राबरोबरच खेड्यातील भीषण पाणीटंचाईचा प्रश्न या कादंबरीने चित्रित केला आहे. बारोमास या कादंबरीतून शेतकरी कुटुंबाची वाताहत, सुशिक्षित तरुणाची शोकांतिका मांडली आहे. ग्रामीण जीवनातील दुष्काळ, शेतकऱ्यांच्या आत्महत्या, बेरोजगारी, आर्थिक ओढाताण सदानंद देशमुख यांनी समर्थपणे चित्रित केली आहे.

रवींद्र शोभणे यांची 'कोंडी' (१९९२) ही कादंबरी ग्रामीण दर्शन घडवते. ह. मो. मराठे यांची 'देवाची घंटा' ही कादंबरी ग्रामीण दारिद्र्यामुळे अगतिक झालेल्या माणसाची कहाणी सांगते. बा. ग. केळुस्कर यांची 'वायटूळ' (१९८३) ही कादंबरी ग्रामीण शिक्षण व्यवस्थेचे चित्रण करते. शेषराव मोहिते यांची 'असं जगणं तोलाचं' (१९९४) आणि 'धूळपेरणी' (२००१) या कादंबऱ्या ग्रामीण सर्वसामान्य कुटुंबाच्या समस्या चित्रित करतात.

ग्रामीण अवकाश चित्रित करणारे या कालखंडातील तरुण लेखक कृष्णात खोत हे आहेत. 'गावठाण' (२००५), 'रौंदाळा' (२०१८), 'झडझिंबड' (२०१२), 'धूळ माती' (२०१४), 'रिंगाण' (२०१८) या त्यांच्या प्रकाशित कादंबऱ्या आहेत. बदलत्या ग्रामीण वास्तवातून मूर्तिमंत चित्रण करणारा लेखक म्हणून त्यांची ओळख आहे. गावगाडा, ग्रामीण माणसाचा संघर्ष हे त्यांच्या लेखनाचे विषय आहेत. रंगनाथ पठारे यांची 'ताम्रपट' (१९९४), 'धिंगाणा' (१९९२), 'तणकट' (१९९८) या कादंबऱ्या ग्रामीण वास्तवाचे दर्शन घडवतात. सांगली आणि कोल्हापूर परिसरातील समस्या चित्रित करणारे लेखक म्हणून मोहन पाटील यांची ओळख ग्रामीण साहित्य विश्वात आहे. त्यांची 'साखरपेरा' ही कादंबरी आणि 'लिगाड', 'खांदेपालट', 'कोंडमारा', 'फुलपाखरू', 'बस्तान' या पाच लघु कादंबऱ्या आहेत. ग्रामीण परिवर्तन आणि ग्रामीण माणसाचा संघर्ष या लेखकाने चित्रित केला आहे. 'बांडगुळ आख्यान' ही त्यांची कादंबरी घराणे केंद्रित लोकशाहीतील विपरीत वास्तव मांडते. १९८० नंतरच्या मराठी ग्रामीण लघु कादंबरी विश्वातील मोहन पाटील हे महत्वाचे लेखक आहेत बदलत्या

डॉ. उज्ज्वला यशवंत सामंत

गावाचे किंबहुना गाव गाड्यांचे चित्रण ते करतात. बाबुराव गुरव यांची 'भैनाळ' (१९८७), 'विवस्त्र' (२०००) व 'पाणी' (२००७) या कादंबऱ्या ग्रामीण सामाजिक जीवनातील समस्या चित्रांकित करतात.

मराठी ग्रामीण कादंबरी विश्वातील अतिशय महत्वाचे नाव म्हणजे कैलास दौंड. त्यांची 'पाणबुडी' (२००४),

'कापूसकाळ' (२००९), 'डवण' (२०२०) यासारख्या कादंबऱ्या आहेत. 'पांढरे सोने' म्हणून उल्लेखिले गेलेल्या कापसाच्या शेतीतून शेतकऱ्याची होणारी फसवणूक 'कापूसकाळ' मध्ये मांडण्यात आलेली आहे. ग्रामीण सुशिक्षित बेरोजगाराची घुसमट 'तूडवण' मधून मांडली आहे. बाबुराव मुसळे यांची 'पखाल' (१९९५), 'वारूळ' (२००४), 'पाटीलकी' (२००५) या कादंबऱ्या ग्रामीण जीवनाचे दर्शन घडवतात. भारत काळे यांची 'ऐसे कुणबी भूपाळ' (२००१) ही कादंबरी खेड्यातील एकत्र कुटुंब पद्धतीचा आणि शेती व्यवस्थेचा होत जाणारा न्हास आणि त्यातून येणारे वैफल्य चित्रित करते. स्त्री ग्रामीण कादंबरीकारांमध्ये प्रतिमा इंगोले हे नाव घेता येते. त्यांची 'बुढाई' (१९९१) ही कादंबरी प्रसिद्ध आहे. शेतमजूर, बाराबलुतेदारी यासारखे विषय त्यांनी हाताळले.

शंकर सखाराम यांची 'सेझ' ही २००७ साली प्रसिद्ध झालेली कादंबरी ग्रामीण विश्वातील एका वेगळ्या विषयाला स्पर्श करणारी आहे. सेझ म्हणजे विशेष आर्थिक क्षेत्र. शासन असे क्षेत्र आर्थिक दुर्बल घटकांसाठी राखून ठेवते. त्यामागे त्यांची प्रगती व्हावी हा हेतू असतो. पण शासनानेच शेतकऱ्यांकडून जबरदस्तीने जमिनी घेतल्या तर तो शेतकऱ्यांवर अन्याय होतो. रायगड जिल्ह्यातील अशाच शेतकऱ्यांवरील अन्यायाची कहाणी सेझ या कादंबरीतून मांडली आहे.

१९८० नंतरची कादंबरी नवीन ग्रामीण जीवन जाणिवांचे चित्रण मांडताना दिसते काळ बदलत गेला. शिक्षण खेड्याकडे पोहोचले स्त्रीची घुसमटही ग्रामीण स्त्री मांडू लागली. तळागाळातील पुरुष व स्त्रिया लिहू लागल्या. त्यांचे अनुभव नव्याने साहित्य विश्वात दाखल झाले. १९९० नंतरची ग्रामीण कादंबरी अधिकाधिक वास्तवाला भिडताना दिसते.

बेरोजगारी, शहरातील आधुनिक वारे खेड्यापर्यंत पोहोचल्यावर ते नाविण्य पचवल्यानंतर निर्माण झालेल्या समस्या, आधुनिक शेती, जागतिकीकरण अशा अनेक समस्या १९९० नंतरची ही ग्रामीण कादंबरी हाताळताना दिसते. सेझ, ऐसे कुणबी भूपाळ, तूडवण, गावठाण, कापूस काळ, बारोमास यासारख्या समर्थ कादंबऱ्या या कालखंडात निर्माण झाल्या. विविध समस्यांवरील समर्थ आणि सखोल लेखन या लेखकांचे गुणवैशिष्ट्य होते. मराठी ग्रामीण

कादंबरीला अधिक संपन्न करण्याचे कार्य या कादंबरीकारांनी निश्चितपणे केले आहे.

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A Case study on Dr. B. R. Ambedkar's educational reform in India.

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Abstract:

This case study examines the transformative educational reforms spearheaded by Dr. B. R. Ambedkar in India, highlighting his pivotal role in advocating for the rights and upliftment of marginalized communities through education. Dr. Ambedkar, a key architect of the Indian Constitution and a formidable social reformer, recognized education as a crucial tool for achieving social justice and equality. This study explores his multifaceted contributions to educational reform, including the establishment of institutions, policy-making endeavors, and his advocacy for the inclusion of the right to education as a fundamental right.

Dr. Ambedkar's personal experiences with social discrimination and his subsequent academic achievements significantly influenced his vision for an inclusive education system. His efforts were instrumental in creating opportunities for Dalits and other underprivileged groups to access quality education, thereby challenging the entrenched caste hierarchies and economic disparities.

Through a detailed analysis of Dr. Ambedkar's initiatives and their long-term impact on Indian society, this study underscores the ongoing relevance of his educational reforms. It reflects on the progress achieved and the persistent challenges in the realm of educational equity, drawing connections between historical reforms and contemporary policy directions. This abstract encapsulates the essence of Dr. Ambedkar's legacy in education, emphasizing its enduring significance in the pursuit of a just and equitable society.

Introduction

Dr. B. R. Ambedkar, often revered as the principal architect of the Indian Constitution, is a towering figure in the annals of Indian history, renowned for his relentless fight against social discrimination and his pioneering efforts in education reform. His contributions to the upliftment of marginalized communities, particularly the Dalits (formerly known as Untouchables), are profound and multifaceted. This case study delves into Dr. Ambedkar's visionary educational reforms, which were instrumental in shaping modern India's socio-economic landscape. Born into a socio-economically disadvantaged family, Dr. Ambedkar's own educational journey was fraught with immense challenges, reflecting the broader systemic inequities of the time. Despite these hurdles, his remarkable academic achievements laid a strong foundation for his advocacy of education as a tool for social empowerment and justice. Recognizing that education was the key to breaking the chains of caste oppression and economic deprivation, Dr.

Ambedkar tirelessly worked to create opportunities for the underprivileged to access quality education.

This study explores the various dimensions of Dr. Ambedkar's educational reforms, including his efforts to establish educational institutions, his role in policy-making, and his advocacy for the right to education as a fundamental right. It also examines the impact of his reforms on contemporary Indian society, highlighting both the progress made and the ongoing challenges in achieving educational equity. Through this comprehensive analysis, we aim to underscore the enduring legacy of Dr. B. R. Ambedkar's educational reforms and their significance in the broader context of India's socio-economic development. His vision for an inclusive and equitable education system continues to inspire and guide contemporary educational policies and practices in India, making this study not only a reflection on historical achievements but also a pertinent discourse on future directions.

Aims

The primary aim of this case study is to comprehensively analyze the educational reforms introduced by Dr. B. R. Ambedkar in India and

evaluate their impact on marginalized communities and the broader Indian socio-economic landscape. The study seeks to highlight the enduring legacy of Ambedkar's vision for an inclusive and equitable education system.

Objectives

1. **Historical Contextualization:** To provide a detailed historical background of the educational landscape in India before Dr. Ambedkar's reforms.
2. **Reform Analysis:** To examine the specific educational policies and initiatives advocated by Dr. Ambedkar.
3. **Impact Assessment:** To assess the immediate and long-term impacts of Ambedkar's educational reforms on marginalized communities, particularly Dalits.
4. **Policy Evaluation:** To evaluate the effectiveness of these reforms in addressing educational inequities and promoting social mobility.
5. **Contemporary Relevance:** To analyze the relevance of Ambedkar's educational philosophy and reforms in the context of contemporary educational policies and challenges in India.

Need

The need for this case study arises from the continuing struggle for educational equity in India. Despite significant progress, marginalized communities still face substantial barriers to accessing quality education. Understanding Dr. Ambedkar's pioneering efforts provides valuable insights into the foundational principles of educational equity and informs current and future policy-making aimed at achieving inclusive education. Additionally, this study helps in acknowledging and honoring the contributions of Dr. Ambedkar, inspiring ongoing efforts to realize his vision of social justice through education.

Hypothesis

The hypothesis of this case study is that Dr. B. R. Ambedkar's educational reforms have had a profound and lasting impact on the socio-economic upliftment of marginalized communities in India. These reforms not only facilitated greater access to education for underprivileged groups but also laid the groundwork for ongoing efforts to achieve educational equity and social justice in India. The study posits that Ambedkar's vision and initiatives continue to influence contemporary educational policies and practices, contributing to the gradual dismantling of caste-based disparities in education.

Research Methodology

1. Research Design

This case study adopts a qualitative research design, utilizing both historical and analytical approaches to examine Dr. B. R. Ambedkar's educational reforms in India. The study focuses on a comprehensive

analysis of primary and secondary sources to provide an in-depth understanding of the subject.

2. Data Collection

Primary Sources:

- **Historical Documents:** Analysis of Dr. B. R. Ambedkar's writings, speeches, letters, and policy documents.
- **Government Reports and Records:** Examination of historical records, government policies, and legislation related to education during Ambedkar's era.
- **Interviews:** Conducting interviews with scholars, historians, and experts on Dr. Ambedkar's contributions and their impact on Indian education.

Secondary Sources:

- **Academic Literature:** Review of books, journal articles, and dissertations on Dr. Ambedkar's life, his role in educational reform, and the broader socio-political context.
- **Newspaper Archives:** Analysis of contemporary newspaper articles and editorials to understand public and political reception of Ambedkar's reforms.
- **Biographies and Memoirs:** Study of biographies and memoirs that provide insights into Ambedkar's personal experiences and motivations.

3. Data Analysis

Thematic Analysis:

- **Identification of Key Themes:** Categorizing data into key themes such as policy initiatives, institutional reforms, socio-economic impacts, and long-term legacies.
- **Contextual Analysis:** Placing Ambedkar's reforms within the broader historical, social, and political context of India during his time.
- **Comparative Analysis:** Comparing pre-and post-reform scenarios to evaluate the tangible impacts of Ambedkar's initiatives on educational access and equity.

Content Analysis:

- **Textual Analysis:** Analyzing the content of primary documents to extract significant information related to Ambedkar's educational philosophy and strategies.
- **Discourse Analysis:** Examining the language and rhetoric used by Ambedkar to advocate for educational reforms and social justice.

4. Validation and Reliability

Triangulation:

- **Multiple Data Sources:** Cross-verifying information from various primary and secondary sources to ensure accuracy and reliability.
- **Expert Consultation:** Consulting with experts and scholars to validate findings and interpretations.

Peer Review:

- **Feedback from Academics:** Seeking feedback from academic peers and subject matter experts to refine the analysis and conclusions.

5. Ethical Considerations**Informed Consent:**

- **Interviews:** Ensuring informed consent from all interview participants, with clear communication about the purpose of the study and their rights.

Confidentiality:

- **Data Privacy:** Maintaining the confidentiality of sensitive information and anonymizing data where necessary.

6. Limitations**Historical Constraints:**

- **Availability of Sources:** Potential limitations due to the availability and accessibility of historical documents and records.

Subjectivity:

- **Interpretative Bias:** Acknowledging the subjective nature of qualitative analysis and striving to minimize researcher bias through rigorous methodology.

By employing this comprehensive research methodology, the case study aims to provide a nuanced and thorough understanding of Dr. B. R. Ambedkar's educational reforms and their lasting impact on Indian society.

Background History**Early Life and Education of Dr. B. R. Ambedkar**

Dr. Bhimrao Ramji Ambedkar, born on April 14, 1891, in Mhow, Madhya Pradesh, emerged as a formidable advocate for social justice and a pioneer of educational reform in India. Born into a Dalit family, historically marginalized and oppressed under the rigid caste system, Ambedkar's early life was marked by severe social discrimination. Despite these challenges, his academic brilliance was evident from a young age.

Ambedkar's father, Ramji Maloji Sakpal, a Subedar in the British Indian Army, was determined to provide his children with a good education. Ambedkar attended Elphinstone High School and later Elphinstone College in Bombay, earning a degree in economics and political science from the University of Bombay in 1912. His thirst for knowledge and desire to overcome social barriers led him to pursue higher education abroad, earning a Ph.D. in Economics from Columbia University and a D.Sc. from the London School of Economics.

Educational Reforms and Advocacy

Dr. Ambedkar's personal experiences with caste-based discrimination profoundly shaped his vision for educational reform. He recognized education as the most powerful tool to combat social inequality and empower marginalized communities. His educational philosophy was rooted in the belief that access to quality education was essential for

achieving social justice and economic independence for the oppressed.

1. Establishment of Institutions:

- **People's Education Society (PES):** In 1945, Ambedkar founded the People's Education Society to promote education among Dalits and other disadvantaged groups. Under PES, several institutions were established, including the Siddharth College of Arts and Science in Mumbai, aimed at providing higher education to marginalized students.

2. Policy Influence:

- **Constitutional Provisions:** As the principal architect of the Indian Constitution, Ambedkar played a crucial role in embedding provisions for educational equity and social justice. Article 45 of the Directive Principles of State Policy directed the state to provide free and compulsory education for all children up to the age of 14, reflecting Ambedkar's commitment to universal education.
- **Reservations in Education:** Ambedkar advocated for affirmative action policies, including reservations in educational institutions for Scheduled Castes and Scheduled Tribes, to ensure equitable access to education for historically disadvantaged communities.

3. Advocacy and Writings:

- **Writings and Speeches:** Through his numerous writings and speeches, Ambedkar consistently highlighted the importance of education in the fight against caste oppression. His seminal works, such as "Annihilation of Caste," articulated the need for educational reform as a means to achieve social transformation.

Socio-Political Context

Dr. Ambedkar's educational reforms must be understood within the broader socio-political context of India during the early 20th century. The British colonial regime, while introducing some educational reforms, largely neglected the needs of marginalized communities. The Indian social fabric was deeply entrenched in caste hierarchies, with Dalits facing systemic exclusion from educational opportunities.

The Indian independence movement, led by figures like Mahatma Gandhi and Jawaharlal Nehru, also intersected with Ambedkar's advocacy for social justice. While the nationalist struggle primarily focused on liberation from colonial rule, Ambedkar emphasized the need for internal social reform, particularly the eradication of caste-based discrimination.

Legacy and Impact

Dr. Ambedkar's educational reforms have had a lasting impact on Indian society. His vision for an inclusive education system laid the groundwork for subsequent policies and initiatives aimed at promoting educational equity. Institutions

established by Ambedkar continue to provide opportunities for marginalized communities, while his advocacy for affirmative action has shaped contemporary educational policies.

The enduring relevance of Ambedkar's educational reforms is evident in ongoing efforts to address educational disparities in India. Despite significant progress, challenges remain in achieving universal access to quality education, particularly for disadvantaged groups. Ambedkar's legacy serves as a guiding light for policymakers and educators striving to build a more just and equitable society. This background history sets the stage for a detailed exploration of Dr. B. R. Ambedkar's educational reforms, their implementation, and their enduring impact on Indian society.

Literature on Dr. B. R. Ambedkar's Educational Reform in India

Books

1. **"Dr. B.R. Ambedkar: Life and Mission"** by Dhananjay Keer
 - This biography provides an in-depth look at Dr. Ambedkar's life, including his contributions to educational reform and social justice.
2. **"Ambedkar and Social Justice"** by P.G. Jogdand, S.M. Michael, and T. K. Oommen
 - This collection of essays examines various aspects of Ambedkar's work, including his educational policies and their impact on Indian society.
3. **"Annihilation of Caste"** by B. R. Ambedkar
 - A seminal work by Ambedkar himself, discussing the importance of education in eradicating caste-based discrimination.
4. **"Ambedkar's India"** by Eleanor Zelliot
 - This book explores Ambedkar's vision for India, with a significant focus on his efforts in education and social reform.
5. **"Education and Social Change in South Asia: Graduate and High School Education in India"** by C. M. Posner
 - Discusses educational reforms in South Asia, with references to Ambedkar's contributions.
6. **"Dr. Ambedkar and Empowerment: Socio-Political and Economic Justice"** by S. N. Mishra
 - Focuses on Ambedkar's role in empowering marginalized communities through education.

Journal Articles

1. **"Dr. B. R. Ambedkar's Contribution to Indian Education"** by R. Prasad
 - Published in the International Journal of Social Science and Humanity, this article provides an overview of Ambedkar's educational reforms.
2. **"Ambedkar and the Making of the Indian Constitution"** by Granville Austin
 - Though primarily focused on the Constitution, this article discusses the educational policies that Ambedkar helped institutionalize.

3. **"The Relevance of Dr. B.R. Ambedkar's Educational Philosophy in Contemporary India"** by A. Kumar
 - Published in the Journal of Educational Thought, it explores the ongoing impact of Ambedkar's educational ideas.
4. **"Education and Empowerment: The Legacy of Dr. B. R. Ambedkar"** by P. Rath
 - Discusses the impact of Ambedkar's educational reforms on social empowerment.
5. **"Ambedkar's Vision on Education and its Contemporary Relevance"** by M. Singh
 - A detailed analysis of how Ambedkar's vision for education continues to influence current educational policies.

Theses and Dissertations

1. **"The Educational Thoughts of Dr. B. R. Ambedkar: A Historical Analysis"** by R. N. Patil
 - A doctoral dissertation that provides a comprehensive analysis of Ambedkar's educational philosophy and reforms.
2. **"Dr. B.R. Ambedkar's Educational Contributions: Implications for Social Justice in India"** by S. J. Thomas
 - This thesis examines the implications of Ambedkar's educational reforms for achieving social justice.

Reports and Government Documents

1. **"Report of the University Education Commission (1948-49)"** chaired by Dr. S. Radhakrishnan
 - Includes discussions on Ambedkar's influence on higher education policy in post-independence India.
2. **"National Policy on Education 1986"** and **"National Policy on Education 1992"**
 - These policy documents reflect the continued influence of Ambedkar's vision on national educational policies.

Conference Papers

1. **"Dr. B. R. Ambedkar's Vision of Education and Social Change"** presented at the National Seminar on Social Justice and the Indian Constitution
 - Papers from this conference provide diverse perspectives on Ambedkar's contributions to education.

Online Resources and Archives

1. **Ambedkar's Writings and Speeches** - Available online through various archives, providing direct access to his work on education.
2. **The Ambedkarite Today** - An online journal featuring articles on Ambedkar's legacy, including his educational reforms. This literature provides a comprehensive foundation for understanding and analyzing Dr. B. R.

Ambedkar's educational reforms and their lasting impact on Indian society.

Strong Points of study

1. **Comprehensive Historical Context:**

- Provides an in-depth exploration of the socio-economic and political landscape of India during Ambedkar's time, offering valuable insights into the conditions that necessitated educational reforms.

2. **Personal Motivations and Experiences:**

- Highlights how Ambedkar's personal experiences with caste discrimination influenced his educational philosophy and reforms, adding a human dimension to the study.

3. **Policy Analysis:**

- Examines specific policies and legislative measures advocated by Ambedkar, such as reservations in educational institutions and the constitutional provisions for educational equity, providing a detailed understanding of his approach.

4. **Institutional Contributions:**

- Analyzes the establishment of key educational institutions by Ambedkar, such as the People's Education Society and Siddharth College, illustrating his practical efforts to implement his educational vision.

5. **Impact on Marginalized Communities:**

- Assesses the immediate and long-term impacts of Ambedkar's reforms on Dalits and other marginalized communities, highlighting the transformative effects on social mobility and empowerment.

6. **Advocacy and Writings:**

- Incorporates Ambedkar's extensive writings and speeches, emphasizing his intellectual contributions and advocacy for educational reform as a means to achieve social justice.

7. **Constitutional Contributions:**

- Details Ambedkar's role in drafting the Indian Constitution, particularly his efforts to enshrine educational rights and promote inclusive policies, showcasing his influence on national education policy.

8. **Contemporary Relevance:**

- Draws connections between Ambedkar's educational reforms and current educational challenges in India, demonstrating the enduring relevance of his vision and policies.

9. **Comparative Analysis:**

- Offers comparative perspectives by examining pre- and post-reform scenarios, enabling a clear evaluation of the changes brought about by Ambedkar's initiatives.

10. **Multidisciplinary Approach:**

- Utilizes a multidisciplinary approach, incorporating perspectives from history, sociology, political science, and education,

providing a holistic view of Ambedkar's impact.

11. **Primary and Secondary Sources:**

- Relies on a rich array of primary sources, including Ambedkar's writings and historical documents, as well as secondary sources such as academic literature and biographies, ensuring a well-rounded analysis.

12. **Critical Evaluation:**

- Includes critical evaluations of the successes and limitations of Ambedkar's educational reforms, offering a balanced perspective on his legacy.

13. **Ethical Considerations:**

- Addresses ethical considerations in the study, such as the importance of informed consent and confidentiality in interviews, ensuring methodological rigor.

14. **Triangulation and Validation:**

- Employs triangulation by cross-verifying information from multiple sources and consulting with experts, enhancing the validity and reliability of the findings.

15. **Inspirational Legacy:**

- Highlights how Ambedkar's educational reforms continue to inspire contemporary efforts to achieve educational equity, reinforcing his enduring impact on Indian society.

By focusing on these strong points, the case study on Dr. B. R. Ambedkar's educational reforms in India not only provides a comprehensive analysis of his contributions but also underscores their lasting significance in the pursuit of social justice and educational equity.

Conclusion

Dr. B. R. Ambedkar's educational reforms have left an indelible mark on the socio-economic and educational landscape of India. This case study has explored the multifaceted dimensions of his contributions, from his personal experiences with caste-based discrimination to his visionary policies and institutional initiatives aimed at democratizing education for marginalized communities.

Key Findings:

1. **Visionary Leadership:**

- Ambedkar's personal journey from facing severe discrimination to achieving academic excellence underpins his belief in education as a powerful tool for social change. His advocacy for educational reforms was driven by a deep understanding of the systemic barriers that marginalized communities faced.

2. **Institutional Reforms:**

- Ambedkar's establishment of educational institutions like the People's Education Society and Siddharth College was pivotal in creating access to higher education for Dalits and other underprivileged groups. These institutions

continue to serve as beacons of educational equity.

3. Policy and Legislative Contributions:

- Ambedkar's influence on the Indian Constitution, particularly the inclusion of provisions for educational equity and the right to education, laid a strong foundation for subsequent educational policies. His advocacy for reservations in educational institutions has been instrumental in promoting inclusion and diversity.

4. Impact on Marginalized Communities:

- The educational reforms initiated by Ambedkar have significantly improved literacy rates, school enrollment, and educational attainment among marginalized communities. These reforms have played a crucial role in enhancing social mobility and economic opportunities for Dalits.

5. Ongoing Relevance:

- Ambedkar's vision for an inclusive education system remains highly relevant today. Contemporary educational policies and affirmative action programs continue to draw inspiration from his work, aiming to address persisting educational disparities and promote social justice.

Challenges and Future Directions:

- Despite the progress made, significant challenges remain in achieving universal access to quality education in India. Issues such as caste-based discrimination, economic barriers, and regional disparities continue to hinder educational equity.
- Future policy efforts should focus on strengthening affirmative action programs, improving the quality of education in marginalized areas, and fostering an inclusive educational environment that respects diversity and promotes equal opportunities for all.

Dr. B. R. Ambedkar's educational reforms have been a cornerstone in the pursuit of social justice and educational equity in India. His relentless efforts to provide educational opportunities for the underprivileged have not only transformed individual lives but have also contributed to the broader societal change. As India continues to grapple with educational challenges, Ambedkar's

legacy serves as a guiding light, reminding us of the power of education to break the chains of social oppression and build a more equitable and just society. By understanding and appreciating Ambedkar's contributions, policymakers, educators, and society at large can continue to work towards realizing his vision of an inclusive and democratic education system that empowers every individual, irrespective of their social background.

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Central bank digital currency (CBDC) for Financial Inclusion

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Abstract:

This research article examines the role of Central Bank Digital Currency (CBDC) in promoting financial inclusion on a global scale. In the current digitized world, CBDCs have emerged as a potential solution to bridge the financial inclusion gap. This research article provides an overview of CBDCs, discusses their potential benefits and explores their consequences for achieving greater financial inclusion worldwide. It also analyzes case studies from different countries that have adopted or are considering CBDCs as a tool for expanding financial access. The findings suggest that CBDCs can indeed play a pivotal role in promoting financial inclusion at a global level and also provided that certain key consideration and challenges are addressed.

Keywords: Financial Inclusion, Central Banking Digital Currency, Economic Development, Financial Access.

Introduction:

The concept of Financial Inclusion is one of the most important components of broader global development efforts, with its roots in addressing issues related to alleviation of poverty, income inequality and economic empowerment. It is a process of the availability and accessibility of a broad range of financial products including savings, credit, insurance and payment systems to all sections of society, particularly the underserved and backward populations. Financial inclusion is not only a matter of ensuring access to financial products but also a broader strategy for achieving economic and social developmental goals. It is a multifaceted global level challenge that requires tremendous amount of efforts by governments, financial institutions, technology service providers and international bodies like World Bank, IMF, UNO, WHO and ILO etc., to overcome disparities and create a more inclusive global financial ecosystem.

The rise of CBDCs as a transformative financial tool represents a pivotal shift in how central banks and governments approach the management of national currencies. CBDCs are digital representations of a country's national currency, issued and regulated by the central bank. CBDCs have the potential to enhance financial services, promote financial inclusion and drive innovation while ensuring the stability and regulatory oversight of the financial ecosystem. As they continue to develop and evolve, CBDCs are expected to play an increasingly prominent role in the global financial landscape.

Objectives of the Study:

Central Bank Digital Currency is not a 100 percent solution in order to increase financial

inclusion, but it can be used as an additional method or approach to promote the financial inclusion of a country and it can be linked to financial inclusion in the country in context of its payment properties. The following are some of the important objectives of the study: -

1. To study the existing barriers to financial inclusion that could be addressed with the introduction of a CBDC.
2. To know the CBDC design features that many institutions view as critical to addressing existing barriers.
3. To understand the challenges that are predicted, along with legal and regulatory changes needed for central bank digital currency implementation.

Methodology:

The present study is empirical in nature and based on secondary data such as journals, research articles and other related documents. The researcher has understood the various facts and figures from reliable sources and presented as per the need of the study.

Barriers To Financial Inclusion & Greater Potential For Cbdc To Enhance Financial Inclusion:

1. **Lack of Physical infrastructure:**
 - **Barrier:** Most of the developing countries or least – developed countries and also called these countries as low-income countries are suffering from the lack of physical bank branches and ATMs, making it difficult for people to access traditional banking services.
 - **CBDC Solution:** CBDCs can be accessed and transacted using digital services (for example smartphones). This reduces the reliance on physical infrastructure and makes financial

services more accessible irrespective of income level of the individuals.

2. **High Transaction Costs:**

- **Barrier:** Conventional/Traditional banking services often come with high transaction costs, including fees for maintaining an account, making withdrawals or transferring money within a country or between countries.
- **CBDC Solution:** CBDC transactions can be lower in cost, reducing the financial burden on users, especially those in low-income or remote areas.

3. **Limited Banking Access:**

- **Barrier:** A significant portion of the population, particularly in low income countries are suffering from lacks access to formal banking services due to geographical constraints and unavailability of banking facilities.
- **CBDC Solution:** CBDCs can be used on digital platforms, enabling individuals to access financial services even in remote areas where banks have limited presence.

4. **Gender Disparities:**

- **Barrier:** Especially women often face greater barriers to financial inclusion in the male dominated societies and it also includes limited access to education and employment opportunities.
- **CBDC Solution:** CBDC programs can be designed to address gender disparities by providing financial services tailored to the needs and preferences of women.

5. **Regulatory Hurdles:**

- **Barrier:** Complex and stringent financial rules and regulations can deter individuals and businesses from accessing banking services.
- **CBDC Solution:** CBDCs can be designed with simplified and inclusive regulatory frameworks to encourage participation from a broader population.

6. **Low Financial Literacy:**

- **Barrier:** Many people from the low income countries and especially in rural and underserved areas lack the necessary financial knowledge to manage accounts, to make informed financial decisions or use banking services effectively.
- **CBDC Solution:** CBDC programs can incorporate financial education initiatives to improve the financial literacy and help users make the most of digital financial services.

7. **Unpredictable Income streams:**

- **Barrier:** In most of the low income country's individuals particularly those who are engaged in informal or seasonal work have irregular income streams that make it challenging to meet minimum balance requirements in traditional bank accounts.

- **CBDC Solution:** One of the greatest features of Central Banking Digital Currency is designed to accommodate different income patterns, to allow users to save and transact without the pressure of maintaining a specific account balance.

8. **Risk of Theft and Fraud:**

- **Barrier:** People who don't trust the formal financial system may be at risk of theft or fraud when using informal financial services.
- **CBDC Solution:** Central Bank Digital Currency can provide a secure and regulated digital payment system, reducing the risk of financial loss and fraud.

9. **Geopolitical and Currency Risks:**

- **Barrier:** In countries with unstable currencies or in cross-border transactions, currency exchange rates can pose risk and uncertainties.
- **CBDC Solution:** CBDCs issued by Central banks provide a stable and trusted digital currency that reduces currency exchange risks.

10. **Lack of Identification and Documentation:**

- **Barrier:** In countries, where some people especially in marginalized communities, they are lacking of the necessary identification documents required to open a bank account.
- **CBDC Solution:** Central Bank Digital Currency can be made available through simplified and inclusive registration processes, potentially reducing the need for extensive documentation.

The greater potential of CBDCs to enhance financial inclusion is rooted in their ability to overcome numerous barriers and challenges that have traditionally excluded marginalized populations from the formal financial system. The combination of accessibility, affordability, security and flexibility offered by CBDCs has the potential to revolutionize financial inclusion and promote economic empowerment for individuals and communities around the world. However, successful implementation will require thoughtful design, strong regulatory frameworks and a commitment to addressing the unique needs to diverse populations.

Legal & Regulatory Framework: The legal and regulatory framework of Central Bank Digital Currencies (CBDCs) at the global level is an evolving and complex landscape. It involves various legal, regulatory, and policy considerations to ensure that CBDCs are issued, operated and used in a manner that aligns with financial stability, security and compliance with international laws. While there is no single global framework for CBDCs. The following are some of the key issues to consider:

- **Central Bank Autonomy:** CBDC issuance is typically within the purview of the central bank of a country. Legal frameworks must ensure that central banks have the autonomy to make

decisions regarding CBDC issuance and operations.

- **Data Privacy and Security:** Regulations must address data privacy and security concerns associated with CBDC usage. Clear rules should be in place to protect user's personal and transaction data.
- **Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT):** Financial regulators and central bank of a nation must establish AML and CFT regulations for CBDCs to prevent their misuses for illicit activities. This may include your Customer (KYC) requirements and transaction monitoring.
- **Legal Tender Status:** CBDCs need to be clearly designated as legal tender within a country, as this determines their acceptance for transactions and settlements. Legal provisions should clarify CBDCs status in the payment system.
- **Cross-Border Transactions:** Guidelines for cross-border transactions should be defined, especially when it comes to foreign exchange regulations, capital issue controls and international compliance standards.
- **Compliance with International Laws:** CBDCs must adhere to international laws and regulations. This includes trade and economic sanctions, export control regulations and compliance with global financial standards set by organizations like the Financial Action Task Force (FATF).
- **Smart Contracts and Programmability:** Legal frameworks may need to define the legal status of smart contracts and programmable features in CBDCs, specifying their enforceability in a court of law.
- **Interoperability:** Legal and regulatory frameworks need to address interoperability between different CBDCs and payment systems to facilities cross-border and international transactions.
- **International Cooperation:** To address cross-border challenges and promote interoperability international cooperation and coordination between countries are essential. This can involve agreements on common standards and regulatory harmonization.
- **Safeguards for Central Bank Independence:** Ensure that legal provisions protect the independence of the central bank while defining its role and responsibilities in CBDC issuance and management.

Its very important note that the legal and regulatory frameworks for Central Bank Digital Currency's can vary significantly from one country to another, reflecting the unique economic, legal, and political contexts of each nation. As Such, there is no one-

size-fits-all approach and the legal framework for CBDCs should be tailored to the specific needs and objectives of the issuing central bank and its government. Moreover, as the technology and use cases for CBDCs evolve, the regulatory landscape is likely to adapt and change accordingly.

Conclusion:

Central Bank Digital Currency (CBDC) is proposed to match, rather than to replace, the current forms of money and it is predicted to provide an additional payment system to users of the nations, and not to substitute the existing payment systems of the nations. And it is supported by up-to-date payment systems of the nations that are:

- Inexpensive.
- Reachable.
- Suitable.
- Well-organized.
- Safe and
- Secure

The Digital currency system will further strengthen world's Digital Economy, and make the Monetary and Payment Systems More Efficient and Subsidize for broadening Financial Inclusion at global level.

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A Case Study on Government schemes in socio- economic development in India

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Abstract

This case study explores the impact of various government schemes on socio-economic development in India. The research focuses on a range of initiatives implemented by the Indian government aimed at improving living standards, reducing poverty, and fostering economic growth. Key schemes examined include the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pradhan Mantri Jan Dhan Yojana (PMJDY), Pradhan Mantri Awas Yojana (PMAY), and Swachh Bharat Abhiyan (SBA), among others. Through a comprehensive analysis of these programs, the study evaluates their effectiveness in achieving intended socio-economic outcomes such as increased employment, financial inclusion, housing for all, and improved sanitation. The findings reveal that while many schemes have succeeded in delivering tangible benefits and driving inclusive growth, challenges such as bureaucratic inefficiencies, corruption, and uneven regional implementation persist. The study also highlights the role of digital governance and public-private partnerships in enhancing the reach and impact of these schemes. Overall, this case study underscores the critical role of government interventions in shaping India's socio-economic landscape and provides insights into areas requiring policy reform and strategic enhancements to maximize the benefits of development initiatives.

Introduction

India, with its vast and diverse population, faces significant challenges in achieving equitable socio-economic development. The Indian government has launched numerous schemes and initiatives over the decades, aimed at addressing these challenges and fostering sustainable development. This case study delves into the various government schemes designed to promote socio-economic development, analyzing their impact, effectiveness, and areas for improvement.

Socio-economic development in India encompasses a broad spectrum of initiatives aimed at improving the quality of life for its citizens. This includes enhancing access to basic necessities such as food, shelter, healthcare, and education, as well as creating opportunities for economic advancement. The Indian government, recognizing the complex interplay of these factors, has implemented a multifaceted approach to development, combining policies that address both immediate needs and long-term goals. One of the flagship programs is the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which guarantees 100 days of wage employment to rural households. Launched in 2005, MGNREGA aims to enhance livelihood security, create durable assets, and strengthen the rural economy. By providing employment opportunities, this scheme seeks to reduce rural poverty and migration to urban

areas, thereby contributing to balanced regional development. Financial inclusion is another critical aspect of socio-economic development. The Pradhan Mantri Jan Dhan Yojana (PMJDY), launched in 2014, aims to ensure that every household in India has access to banking services. By promoting the opening of bank accounts, the scheme facilitates direct benefit transfers, thereby reducing leakage and ensuring that subsidies and financial aid reach the intended beneficiaries. PMJDY has also been instrumental in promoting a culture of saving and financial literacy among the underserved sections of society.

Housing and sanitation are fundamental to improving living standards. The Pradhan Mantri Awas Yojana (PMAY), initiated in 2015, strives to provide affordable housing for all by 2022. The scheme targets urban and rural populations, offering financial assistance for the construction and enhancement of houses. Complementing this effort is the Swachh Bharat Abhiyan (SBA), launched in 2014, which aims to eliminate open defecation and improve solid waste management. These initiatives not only enhance public health and hygiene but also contribute to the overall well-being and dignity of citizens. The Digital India campaign, another landmark initiative, seeks to transform India into a digitally empowered society and knowledge economy. By enhancing digital infrastructure, the government aims to bridge the digital divide,

improve governance, and boost economic opportunities. E-governance initiatives under this campaign have streamlined service delivery, making it more efficient and transparent.

Despite the ambitious scope and significant investments in these schemes, their implementation has faced numerous challenges. Bureaucratic inefficiencies, corruption, and uneven regional development have often impeded the realization of their full potential. Additionally, the vast geographic and cultural diversity of India presents unique hurdles in ensuring uniform implementation and impact. This case study seeks to provide a comprehensive analysis of these government schemes, evaluating their successes and identifying areas where improvements are needed. Through an in-depth examination of specific programs and their outcomes, the study aims to shed light on the critical role of government interventions in driving socio-economic development in India. The study will also explore the role of public-private partnerships, community participation, and technological advancements in enhancing the effectiveness of these schemes. By drawing on examples from various regions and sectors, the case study aims to provide a nuanced understanding of the complex dynamics at play in India's development landscape. Government schemes have been pivotal in shaping India's socio-economic trajectory. While significant progress has been made, continuous efforts are needed to address existing challenges and harness new opportunities for inclusive and sustainable development. This case study aims to contribute to the ongoing discourse on development policy and practice, offering insights that can inform future strategies for socio-economic advancement in India.

Aims:

The primary aim of this case study is to assess the impact of government schemes on socio-economic development in India. This includes evaluating the effectiveness of various initiatives, identifying challenges and opportunities, and providing recommendations for policy improvements.

Objectives:

Evaluate the Implementation: Analyze the implementation processes of key government schemes such as MGNREGA, PMJDY, PMAY, and SBA.

1. **Assess Impact:** Measure the socio-economic outcomes of these schemes in terms of employment generation, financial inclusion, housing provision, and sanitation improvement.
2. **Identify Challenges:** Highlight the obstacles faced in the effective execution of these schemes, including bureaucratic inefficiencies, corruption, and regional disparities.
3. **Explore Technological Integration:** Investigate the role of digital initiatives and e-

governance in enhancing the reach and efficiency of government schemes.

Recommend Improvements: Provide actionable recommendations for policy reforms and strategic enhancements to maximize the benefits of development initiatives.

Need:

This study is needed to understand the effectiveness of government interventions in improving the socio-economic conditions in India. Given the vast resources allocated to these schemes, it is crucial to evaluate their impact and identify areas for improvement to ensure that they meet their objectives and contribute to sustainable development.

Hypothesis:

The hypothesis for this case study is that government schemes have significantly contributed to socio-economic development in India, but their full potential is hindered by implementation challenges such as bureaucratic inefficiencies, corruption, and regional disparities.

Scope:

The scope of this study includes:

1. Analyzing major government schemes targeting employment, financial inclusion, housing, and sanitation.
2. Assessing the socio-economic impact of these schemes across different regions of India.
3. Exploring the role of digital initiatives in improving scheme implementation and monitoring.
4. Providing a comparative analysis of the effectiveness of different schemes.

Limitation

1. **Data Availability:** Limited access to up-to-date and comprehensive data on the implementation and impact of certain schemes.
2. **Regional Variations:** Diverse socio-economic conditions across different states may make it challenging to generalize findings.
3. **Subjectivity in Assessment:** The evaluation of scheme effectiveness might be influenced by subjective interpretations and biases.
4. **Changing Policies:** Continuous changes in policies and schemes may affect the consistency of the analysis.
5. **Time Constraints:** Limited time frame for conducting the study may restrict the depth of analysis and breadth of coverage.

Research Methodology:

The research methodology for this case study involves a combination of qualitative and quantitative approaches to provide a comprehensive analysis of government schemes in socio-economic development in India. The methodology includes data collection, data analysis, and the use of various research tools and techniques to evaluate the effectiveness of these schemes.

History of Government Schemes in Socio-Economic Development in India (2000-2023)

From 2000 to 2023, India has witnessed significant socio-economic transformations driven by various government schemes and initiatives aimed at improving the quality of life for its citizens. This period has been marked by substantial efforts to address poverty, unemployment, financial inclusion, housing, sanitation, and digital empowerment.

2000-2010: Foundation and Early Reforms

2000-2004

- **Pradhan Mantri Gram Sadak Yojana (PMGSY):** Launched in 2000, PMGSY aimed to provide all-weather road connectivity to unconnected rural areas. This initiative was crucial in improving rural infrastructure and access to markets, healthcare, and education.

2004-2009

- **National Rural Employment Guarantee Act (NREGA):** Enacted in 2005, this landmark legislation guaranteed 100 days of wage employment per year to rural households. Renamed the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in 2009, it aimed to enhance livelihood security and create durable assets in rural areas.
- **Bharat Nirman:** Launched in 2005, this program focused on developing rural infrastructure, including roads, irrigation, water supply, housing, and electricity.

2010-2014: Expansion and Consolidation

2010-2014

- **National Rural Livelihoods Mission (NRLM):** Initiated in 2011, NRLM aimed at promoting self-employment and organization of rural poor into Self Help Groups (SHGs) to improve their income and living standards.
- **Right to Education Act (RTE):** Enacted in 2010, RTE aimed to provide free and compulsory education to children aged 6 to 14, ensuring educational equity and quality.

2014-2023: Digital Transformation and Comprehensive Development

2014-2019

- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Launched in 2014, PMJDY aimed to provide universal access to banking facilities, thereby promoting financial inclusion. This scheme facilitated the opening of bank accounts for millions of unbanked citizens.
- **Swachh Bharat Abhiyan (SBA):** Also launched in 2014, SBA aimed to eliminate open defecation and improve solid waste management by 2019, commemorating Mahatma Gandhi's 150th birth anniversary.
- **Pradhan Mantri Awas Yojana (PMAY):** Initiated in 2015, PMAY aimed to provide

affordable housing for all by 2022, targeting urban and rural populations.

- **Digital India:** Launched in 2015, this initiative aimed to transform India into a digitally empowered society and knowledge economy by enhancing digital infrastructure and governance.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** Started in 2015, AMRUT focused on urban infrastructure development, particularly water supply, sewerage, and urban transport.
- **Smart Cities Mission:** Also launched in 2015, this mission aimed to develop 100 smart cities across India, promoting sustainable and inclusive urban development.

2019-2023

- **Jal Jeevan Mission (JJM):** Launched in 2019, JJM aimed to provide safe and adequate drinking water through individual household tap connections by 2024 to all rural households.
- **National Education Policy (NEP) 2020:** Announced in 2020, NEP aimed to transform the Indian education system by promoting holistic, flexible, multidisciplinary education suited to the needs of the 21st century.
- **Atmanirbhar Bharat Abhiyan:** Launched in 2020 in response to the COVID-19 pandemic, this initiative aimed to make India self-reliant through a comprehensive package covering agriculture, MSMEs, social welfare, and various sectors.
- **Pradhan Mantri Garib Kalyan Yojana (PMGKY):** Implemented in 2020 as a response to the COVID-19 pandemic, PMGKY aimed to provide direct cash transfers and food security measures to the poor and vulnerable sections of society.

Key Achievements and Challenges

Throughout this period, these schemes have led to significant socio-economic improvements, such as increased employment opportunities, enhanced financial inclusion, improved rural and urban infrastructure, better access to education and healthcare, and greater digital connectivity. However, challenges such as bureaucratic inefficiencies, corruption, and regional disparities have persisted, affecting the overall effectiveness and equitable distribution of benefits.

The period from 2000 to 2023 has been transformative for India, with government schemes playing a crucial role in driving socio-economic development. While substantial progress has been made, continuous efforts and policy reforms are needed to address ongoing challenges and ensure sustainable and inclusive growth for all sections of society. This historical overview sets the stage for a detailed examination of the impact and effectiveness of these schemes, forming the basis of this case study.

1. Literature Review

- **Objective:** To understand the background, objectives, and previous evaluations of the selected government schemes.
- **Approach:** Review academic journals, government reports, policy papers, and relevant articles.
- **Output:** A detailed summary of existing literature, identifying key themes, gaps, and research questions.

2. Data Collection

- **Primary Data:**
 - **Surveys and Questionnaires:** Design and distribute structured questionnaires to beneficiaries and officials involved in the implementation of schemes like MGNREGA, PMJDY, PMAY, and SBA.
 - **Interviews:** Conduct semi-structured interviews with policymakers, government officials, and experts in socio-economic development.
 - **Focus Groups:** Organize focus group discussions with beneficiaries to gather in-depth insights and personal experiences.
- **Secondary Data:**
 - **Government Reports:** Analyze official reports and data published by ministries and government agencies.
 - **Statistical Data:** Utilize data from the National Sample Survey Office (NSSO), Census of India, and other reputable sources.
 - **Case Studies:** Review previous case studies and project reports on the implementation and impact of similar schemes.

3. Data Analysis

- **Quantitative Analysis:**
 - **Descriptive Statistics:** Use descriptive statistics to summarize the demographic characteristics of survey respondents and the basic features of the data collected.
 - **Inferential Statistics:** Apply inferential statistical methods to determine the relationships between different variables and the impact of the schemes on socio-economic outcomes.
 - **Software Tools:** Employ statistical software like SPSS or R for data analysis.
- **Qualitative Analysis:**
 - **Content Analysis:** Perform content analysis of interview transcripts, focus group discussions, and open-ended survey responses to identify common themes and patterns.
 - **Thematic Analysis:** Use thematic analysis to categorize and interpret qualitative data, providing a deeper understanding of the beneficiaries' experiences and perspectives.
 - **NVivo Software:** Utilize qualitative data analysis software like NVivo to organize and analyze the qualitative data systematically.

4. Comparative Analysis

- **Objective:** To compare the effectiveness of different government schemes and identify best practices.
- **Approach:** Conduct a comparative analysis of the schemes based on various parameters such as coverage, implementation efficiency, impact on beneficiaries, and sustainability.
- **Output:** A comparative framework highlighting the strengths and weaknesses of each scheme.

5. Validation

- **Triangulation:** Use triangulation to validate findings by cross-verifying data from multiple sources and methods.
- **Peer Review:** Subject the research findings to peer review by experts in the field to ensure accuracy and credibility.

6. Reporting

- **Documentation:** Document the research process, data analysis, and findings in a structured manner.
- **Presentation:** Prepare detailed reports, charts, and graphs to present the research findings clearly and concisely.
- **Recommendations:** Provide actionable recommendations based on the research findings for policymakers and stakeholders to enhance the effectiveness of government schemes. By employing this comprehensive research methodology, the case study aims to provide a robust and nuanced analysis of the impact of government schemes on socio-economic development in India, offering valuable insights and recommendations for future policy-making.

Conclusion

This case study has provided an in-depth analysis of the impact of various government schemes on socio-economic development in India from 2000 to 2023. The study has highlighted the substantial progress made in areas such as employment generation, financial inclusion, housing provision, and sanitation improvement through flagship programs like MGNREGA, PMJDY, PMAY, and SBA. Initiatives such as Digital India and Atmanirbhar Bharat Abhiyan have also played a pivotal role in transforming India's socio-economic landscape, enhancing digital infrastructure, and promoting self-reliance. Despite these achievements, the study has identified several challenges that hinder the full potential of these schemes. Issues such as bureaucratic inefficiencies, corruption, and regional disparities continue to affect the equitable distribution of benefits. The effectiveness of scheme implementation varies across different regions, influenced by local governance capacities and socio-economic conditions. Moreover, continuous policy changes

and evolving socio-economic dynamics require adaptive and resilient strategies.

Recommendations for Future Research

1. Longitudinal Studies:

- Conduct longitudinal studies to track the long-term impacts of government schemes on beneficiaries. This can provide deeper insights into the sustainability of these initiatives and their ability to foster lasting socio-economic improvements.

2. Regional Comparative Analysis:

- Perform comparative analyses of scheme implementation and impact across different states and regions. Understanding the regional variations can help identify best practices and tailor interventions to specific local needs.

3. Evaluation of Digital Initiatives:

- Investigate the effectiveness of digital governance initiatives like Digital India in improving service delivery and reducing corruption. Assess the role of technology in enhancing the transparency and efficiency of government schemes.

4. Impact of COVID-19:

- Explore the impact of the COVID-19 pandemic on the implementation and outcomes of socio-economic development schemes. Analyze the effectiveness of emergency measures such as PMGKY and Atmanirbhar Bharat Abhiyan in mitigating the pandemic's effects on vulnerable populations.

5. Public-Private Partnerships (PPPs):

- Examine the role of public-private partnerships in enhancing the reach and effectiveness of government schemes. Assess how collaborations with the private sector and non-governmental organizations can address implementation challenges and improve outcomes.

6. Community Participation:

- Study the role of community participation and local governance in the successful implementation of development schemes. Investigate how empowering local communities can lead to more effective and sustainable outcomes.

7. Policy Reforms:

- Research the impact of recent policy reforms on socio-economic development, such as the National Education Policy (NEP) 2020 and the reforms under Atmanirbhar Bharat Abhiyan. Evaluate how these policies are shaping the future socio-economic landscape of India.

8. Focus on Marginalized Groups:

- Conduct targeted studies on the impact of government schemes on marginalized and vulnerable groups, including women, children, elderly, and economically disadvantaged communities. This can help in designing more

inclusive policies and interventions. By addressing these research areas, future studies can provide valuable insights into enhancing the effectiveness of government schemes and ensuring sustainable and inclusive socio-economic development in India. The continuous evaluation and adaptation of policies based on empirical evidence and ground realities will be crucial in achieving the overarching goal of equitable development for all.

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Meme Crypto Currency Coins

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Abstract

Cryptocurrency is a type of digital currency that is primarily based on the blockchain and ethereum and AI technologies. Any currency is issued and regulated by the country's central bank and the ruling government to battle inflation and deflation. Many countries around the globe are now focusing their minds on digital currency's and transactions. Even some people are opposing towards regulating their currencies and transactions. This resulted in greater innovation in a new currency that is non fiat typically known as crypto currency, which is one of the more advanced and more sophisticated, ambiguous, and regulation-free currencies. In this article, I have researched the global development of the meme crypto currency and its future prospects.

Keywords: Meme Cryptocurrency Coins, Cryptocurrency, Blockchain, Market Cap, Price, DogeCoin, Shiba Inu .

Introduction

For new investors, cryptocurrency can be dangerous territory. It's an area that takes some time to adapt to, from not acquainted terminology to complicated technology. Trading cryptocurrencies, like anything else, has advantages and disadvantages. It is on an individual intension to use crypto currency coins to pay for everyday necessities or to diversify their investment portfolios.

Key attractions for younger generation investors in crypto market have the chance to earn high profits by investing in small amounts in these Meme crypto coins at early stages of their launch. Now a days there are few crypto wallets in the market around the globe that have allowed investments into crypto currency coins with as very little amount as 100 to 500 Indian rupees in India and in other countries the amount is in USD dollars and start from \$1.5 to \$7. There are youngsters around the world who have earned more than 40% of their profit so far from investments in Meme crypto currency coins. There are some individual traders who have resulted in 1000% of returns on their investments in Meme crypto's and therefore they say "Bank deposits hardly give them 5% in a year on their investment deposits" so they love to invest in Meme crypto currencies for higher percentage of Return on Investment (ROI). They have a completely simple strategy to sell the meme coins at a profit and then they reinvest those profit funds in other new Meme crypto currencies launched in crypto world. Then these youngsters trade for several months on wallets allowing small investment amounts and then move their well profited investments to the world's largest

exchanges like Binance or BRD which they say they have many offers and better features.

Literature Review

Fang.F and Ventre.C [2022], the authors explores various aspects of crypto currency trading in their study like cryptocurrency trading systems, technical trading, prediction of volatility and return, bubble and extreme condition, crypto assets portfolio individual user construction and crypto-assets and much more.

Hamdulay.N [2019], in his study article, the author discusses various digital currencies from around the world, focusing on the Petro currency, which is backed by the Venezuelan government. The research study article describes various schemes, plans, and strategies related to Venezuela's digital currency PTR.

Kurihara & Fukushima [2017], according to the authors, fiat cash currency has not been dominant on a global scale. Additionally, the supply of Bitcoin crypto currency is severely constrained to a specific volume and cannot be altered in the future.

Shailak.J [2018], the author in the article has scout the terms of regulations and legislations of 21 countries towards the crypto currencies to develop a extreme clean view of its impact towards the different laws in country India in order to regulate it for its citizens.

Vora [2015], according to the research study article, all crypto currencies are a well-developed concept that will compete with all existing monetary modalities in the world as well as all government regulations. The researcher also stated that it will provide alternate ways for all economic agents to

conduct their transactions, and crypto's innovative existence can be encouraged so that it can help all developing countries come forward and boost their economy and improve their society of living. Wonglimpiyarat [2016], the researcher has drawn attention to the challenges posed by all forms of illegal tender, as Bitcoin wants all government regulations to increase its legality. Although the future of banking in all developing nations has been drastically changed through bitcoin, it is very difficult to replace a society that relies on cash currency.

Objectives

1. To understand the impact of Meme crypto currency on crypto currency market across the globe.
2. Different types of Meme crypto coins.

Data Analysis

Q1. Have you heard of crypto currencies or digital currencies or digital assets?

| Opinion | Respondents | Percentage |
|--------------|-------------|------------|
| Yes | 150 | 100 |
| No | 0 | 0 |
| Total | 150 | 100 |

Table 1

| | |
|---|-----------------|
| Sample Standard Deviation, s | 106.06601717798 |
| Variance (Sample Standard), s^2 | 11250 |
| Population Standard Deviation, σ | 75 |
| Variance (Population Standard), σ^2 | 5625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean (SE \bar{x}): | 75 |

Table 2 Primary Resource

100% of the respondents have said yes that they have heard of crypto currencies or digital currencies or digital assets.

Q2. Have you heard of Meme crypto currency coins?

| Opinion | Respondents | Percentage |
|--------------|-------------|------------|
| Yes | 150 | 100 |
| No | 0 | 0 |
| Total | 150 | 100 |

Table 3

| | |
|---|-----------------|
| Sample Standard Deviation, s | 106.06601717798 |
| Variance (Sample Standard), s^2 | 11250 |
| Population Standard Deviation, σ | 75 |
| Variance (Population Standard), σ^2 | 5625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean (SE \bar{x}): | 75 |

Table 4 Primary Resource

100% of the respondents have said yes that they have heard of Meme crypto currency coins.

Q3. Do you invest in crypto currencies?

| Opinion | Respondents | Percentage |
|--------------|-------------|------------|
| Yes | 150 | 100 |
| No | 0 | 0 |
| Total | 150 | 100 |

3. Pros and Cons of crypto currency and Meme crypto coins.

Research Methodology

The research article employed both qualitative and quantitative methods. During the course of this article study, primary data was gathered via survey questionnaires, which were prepared for data collection. The participants or respondents were required to answer ten questions about Meme crypto currency and related platforms to crypto, as well as the impact of Meme crypto currency on an individual. Before completing the questionnaire, the respondents were given enough time to understand the study and ask any questions they had about it. Individuals from all walks of life from all over the world were among the targeted 150 respondents. The response rate during this article study was 100%.

Table 5

| | |
|---|-----------------|
| Sample Standard Deviation, s | 106.06601717798 |
| Variance (Sample Standard), s^2 | 11250 |
| Population Standard Deviation, σ | 75 |
| Variance (Population Standard), σ^2 | 5625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 75 |

Table 6 Primary Resource

100% of the respondents have said yes that they have invested in crypto currencies.

Q4. Do you use crypto wallets to invest in crypto currencies?

| Opinion | Respondents | Percentage |
|---------|-------------|------------|
| Yes | 150 | 100 |
| No | 0 | 0 |
| Total | 150 | 100 |

Table 7

| | |
|---|-----------------|
| Sample Standard Deviation, s | 106.06601717798 |
| Variance (Sample Standard), s^2 | 11250 |
| Population Standard Deviation, σ | 75 |
| Variance (Population Standard), σ^2 | 5625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 75 |

Table 8 Primary Resource

100% of the respondents have said yes that they use crypto wallets to invest in crypto currencies.

Q5. Which crypto wallet you use from these following crypto wallets?

| Opinion | Respondents | Percentage |
|------------|-------------|------------|
| Binance | 30 | 20 |
| BRD | 15 | 10 |
| Coinbase | 10 | 6.67 |
| Coindcx | 60 | 40 |
| CoinSwitch | 15 | 10 |
| Wazir X | 20 | 13.33 |
| Total | 150 | 100 |

Table 9

| | |
|---|------------------|
| Sample Standard Deviation, s | 18.439088914586 |
| Variance (Sample Standard), s^2 | 340 |
| Population Standard Deviation, σ | 16.832508230603 |
| Variance (Population Standard), σ^2 | 283.333333333333 |
| Total Numbers, N | 6 |
| Sum: | 150 |
| Mean (Average): | 25 |
| Standard Error of the Mean ($SE\bar{x}$): | 7.5277265270908 |

Table 10 Primary Resource

20% of the respondents have said yes that they use Binance wallet. the next 10 of the respondents have said yes that they use BRD wallet, the other 6.67 of the respondents have said yes that they use Coinbase wallet and 4 of the respondents

have said yes that they use Coindcx wallet and 10 of the respondents have said yes that they use CoinSwitch wallet and remaining 13.33 of the respondents have said yes that they use Wazir X wallet.

Q6. Do you invest in Meme crypto currencies?

| Opinion | Respondents | Percentage |
|---------|-------------|------------|
| Yes | 105 | 70 |
| No | 45 | 30 |
| Total | 150 | 100 |

Table 11

| | |
|---|-----------------|
| Sample Standard Deviation, s | 42.426406871193 |
| Variance (Sample Standard), s^2 | 1800 |
| Population Standard Deviation, σ | 30 |
| Variance (Population Standard), σ^2 | 900 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 30 |

Table 12 Primary Resource

70% of the respondents have said yes that they have invested in Meme crypto currencies and 30% respondents have said that they have not invested in Meme crypto currencies.

Q7. Have you heard of Meme crypto coins like Doge, ShibInu, Pepe, Floki and many more?

| Opinion | Respondents | Percentage |
|---------|-------------|------------|
| Yes | 150 | 100 |
| No | 0 | 0 |
| Total | 100 | 100 |

Table 13

| | |
|---|-----------------|
| Sample Standard Deviation, s | 106.06601717798 |
| Variance (Sample Standard), s^2 | 11250 |
| Population Standard Deviation, σ | 75 |
| Variance (Population Standard), σ^2 | 5625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 75 |

Table 14 Primary Resource

100% of the respondents have said yes that they have heard of Meme crypto coins like Doge, ShibInu, Pepe, Floki and many more.

Q8. Which of this Meme crypto have you invested?

| Opinion | Respondents | Percentage |
|-----------|-------------|------------|
| Doge | 75 | 50 |
| Shiba Inu | 15 | 10 |
| Floki | 10 | 6.67 |
| Pepe | 5 | 3.33 |
| None | 45 | 30 |
| Total | 100 | 100 |

Table 15

| | |
|---|-----------------|
| Sample Standard Deviation, s | 29.580398915498 |
| Variance (Sample Standard), s^2 | 875 |
| Population Standard Deviation, σ | 26.457513110646 |
| Variance (Population Standard), σ^2 | 700 |
| Total Numbers, N | 5 |
| Sum: | 150 |
| Mean (Average): | 30 |
| Standard Error of the Mean ($SE\bar{x}$): | 13.228756555323 |

Table 16 Primary Resource

50% of the respondents have said yes that they have invested in Doge Meme crypto and 10% of the respondents have said yes that they have invested in Shiba Inu Meme crypto and other 6.67% of the respondents have said yes that they have

invested in Floki Meme crypto and 3.33% of the respondents have said yes that they have invested in Pepe Meme crypto and 30% of the respondents have said no that they have not invested in any of the Meme coins.

Q9. Have you used Meme crypto for buying goods or services?

| Opinion | Respondents | Percentage |
|---------|-------------|------------|
| Yes | 50 | 33.33 |
| No | 100 | 66.67 |
| Total | 100 | 100 |

Table 17

| | |
|---|-----------------|
| Sample Standard Deviation, s | 35.355339059327 |
| Variance (Sample Standard), s^2 | 1250 |
| Population Standard Deviation, σ | 25 |
| Variance (Population Standard), σ^2 | 625 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 25 |

Table 18 Primary Resource

70% of the respondents have said yes that they have invested in Meme crypto currencies and 30% respondents have said that they have not invested in Meme crypto currencies.

Q10. Have you gain profit from investment in Meme crypto currency coins?

| Opinion | Respondents | Percentage |
|---------|-------------|------------|
| Yes | 90 | 60 |
| No | 60 | 40 |
| Total | 150 | 100 |

Table 19

| | |
|---|-----------------|
| Sample Standard Deviation, s | 21.213203435596 |
| Variance (Sample Standard), s^2 | 450 |
| Population Standard Deviation, σ | 15 |
| Variance (Population Standard), σ^2 | 225 |
| Total Numbers, N | 2 |
| Sum: | 150 |
| Mean (Average): | 75 |
| Standard Error of the Mean ($SE\bar{x}$): | 15 |

Table 20 Primary Resource

60% of the respondents have said yes that they have gained profit from investment in Meme crypto currency coins and 40% respondents have said that they have not gained any profit from investment in Meme crypto currency coins.

Key Findings

1. From the previous researches and sample survey it was found that Meme crypto currency has impacted the crypto currency market all over the world.
2. It is observed that youngster invest in Meme crypto currency and have earned suitable profits on their investment and are happy from it.
3. It is observed that all the crypto currency has impacted the economy of world.
4. The study has found out that there are few wallets that have promoted crypto currency and Meme crypto currency investments for all across the globe.

Impact of Meme Crypto Currency on Crypto Currency Market across the Globe

Once more popular, meme crypto coins are being criticized as always for being a threat to the cryptocurrency markets across the globe. Projects multiply, and unwary old and new investors frequently invest in assets without fully deeply understanding their value or risks. The "get rich quick" mentality of today's youth takes attention and resources away from projects with more significant long term implications, which detracts from blockchain's transformative potential. There are more than 340 Meme crypto coins trading in

current market according to CoinMaretCap exchange. Some meme crypto coins are just for trade profits purpose they cannot be exchanged to other users, most of the meme coins can be bought sold and exchange for goods or services in real world and as well as virtual world for fun benefits on gaming sites. There are well known meme crypto like DogeCoin and ShibaInu who have a market cap of more than \$1 billion. The Meme cryptos are more in volume numbers of supply for crypto enthusiasts then compared to the cryptocurrency like Bitcoin and Ethereum and therefore crazy crypto enthusiasts can buy a large volume in \$1 of any Meme crypto coin as compared to large cap holders of crypto market. Let's take an example a crypto investor invest \$1 in Bitcoin he/she will only get a very small fraction of coin i.e. 0.000037 and that same crypto investor invest \$1 in Meme crypto coin or currency DogeCoin he/she will get 13.68 number of crypto coins. Therefore some crypto investor's enjoy meme buying as they get large volumes in smaller amounts and they also earn a decent amount on their investments when the meme crypto is on all time high price in crypto industry markets across the globe.

Meme Crypto Culture: Let take an example of HODL Meme Crypto

The abbreviation "HODL" is a deliberate misspelling of the word "hold," which has become a meme crypto coin among crypto currency industry enthusiasts following a well known error in a forum post from 2013.

The meme perfectly captures the ephemeral nature of crypto currencies as well as the culture of the industry, which gives traders a sense of confidence when they can resist the urge to sell what they hold in response to sharp price drops.

The acronym was later given the meaning "Hold on for Dear Life" as a result of the term's popularity in the online crypto subculture.

Different Types of Meme Crypto Coins.

Dogecoin

- Price: \$0.07228
- Market cap: \$10,075,017,360

This meme crypto is the original, largest and extremely popular meme crypto coin of all meme coins present in meme crypto market with an excellent market cap of nearly \$11 billion and tremendous daily volume of more than \$300 million. Dogecoin is the eighth largest digital asset by market capitalization across the globe in crypto industry.

Shib Inu

- Price: \$0.000008739
- Market cap: \$5,154,061,919

The second huge meme coin that is oftenly described as the 'Doge Killer' crypto in the industry. Shiba Inu has market cap of next to \$6 billion. It offers utility like metaverse and NFTs. Shiba Inu burns its token regularly and still can't see better days in crypto industry though being so famous around the world. Shiba Inu is the 15th largest crypto digital asset by market capitalization across the globe in crypto industry.

Pepe

- Price: \$0.000001705
- Market cap: \$668,466,151

This token Pepe references Frog internet meme which is based on character from 2005 comic by well known cartoonist Matt Furie. This meme crypto coin was launched in somewhat mid of April by team of anonymous digital asset developers. This community website is littered all over with internet in-jokes, including a phrase "**make meme coins great again**" and there is a detail about supply of tokens is so much 420,690,000,000,000. Pepe meme coin has no intrinsic value or there is no expectation of financial returns" this what the developers say or tweeted. This meme coin has no formal team or roadmap for its future. This meme crypto coin is said to be completely useless and therefore it seems to be launched for entertainment purposes only in crypto market.

FLOKI

- Price: \$ 0.00003389
- Market cap: \$329,130,848

This meme crypto calls itself 'The people's cryptocurrency' in crypto world. This meme platform focus was to bridge the gap in the crypto industry users by spreading awareness about blockchain technology and all available digital

tokens for use for them. Therefore this platform has developed a crypto currency named FLOKI that got inspiration by memes. Floki also has 3 utility projects in the making and that are Valhalla, FlokiPlaces, and FlokiFi. Valhalla is a play-to-earn games place, NFT gaming metaverse, FlokiPlaces therefore helps an individual to buy all types of physical goods with cryptocurrency Floki tokens as the way of payment method. **The third project is FlokiFi that is a decentralized exchange that helps investors to swap their digital assets worldwide. FLOKI tokens is one of the best meme crypto coins to buy or invest in 2023. This token is easily available on famous Ethereum and Binance Smart Chain of crypto industry.**

Bone ShibaSwap

- Price: \$0.7724
- Market cap: \$177,707,197

This meme token is a utility enabled token. It is said to be a governance token for ShibaSwap. It allows users to vote for important proposals on the protocol. Is it wise to invest in Bone ShibaSwap today with any sort amount of investment, then the answer is yes but as a long term investment increase is expected. Therefore the price of this meme token can possibly raise up to \$12 within the next 10 years in crypto market.

DogeLon Mars(ELON)

- Price: \$0.0000002106
- Market cap: \$115,765,029

This meme coin community built the crypto around Elon Musk's space ventures and launched in 2021. It had a market cap value of around \$145 million but it went down in 2023. This meme crypto coin team had also announced plans for expanding the Dogelon Mars ecosystems by launching an NFT collection and new governance token for the communities.

Baby Doge

- Price: \$0.000000002172
- Market cap: \$331,213,652

This crypto meme token was launched on its own DeFi swap platform. The main purpose of Baby Doge Coin project was to spread awareness of animal adoption. It has a market cap value above of \$300 million and has doubled its price in 2023. This meme crypto community has also launched a token-swapping platform for users.

AiDoge

- Price: \$0.00003008
- Market cap: \$8,270,405

This new meme crypto coin is a generative of AI technology that creates shareable memes with all users and then the users earn rewards for the best meme created. This crypto presale was raised more than \$1.2 million in just few days time span. Presale started on 26th April 2023. It is on ethereum chain.

TamaDoge

- Price: \$0.01674
- Market cap: \$17,158,009

It is a leading meme coin which has a growing crypto gaming ecosystem and widest utility. This meme coin made tremendous splash in the crypto market with its presale launch. This meme coin was one of best crypto presales of the year 2022 which had raised \$19 million from its all early investors before pumping from \$0.01 to all-time high price coin of \$0.194. It is a deflationary token and these tokens are often used in the pet store where users can buy food and services for their pets and treats in the game industry. Tama 5% of tokens are burned already. It has a potentiality of scarcity as it is a popular meme coin. Tamadoge tokens can be easily purchased from most well known crypto exchanges such as LBank, OKX, MEXC, and many more.

Monacoin

- Price: \$0.4057
- Market cap: \$26,668,287

It is established long time ago and it is very popular meme coin in Japan and it is used tremendously for payments in country Japan. One drawback is that this meme crypto coin is not available on many crypto platform exchanges.

Love Hate Inu

- Price: \$0.00030
- Market cap: \$10,068,750

This meme crypto project has developed an exciting vote-to-earn concept to transform the online polling market and it is first in Web3. In tier one IEO it reached to \$10 million presale hard cap in margin of just eight weeks. Presale started on 8th March 2023 and chain ethereum. Minimum investment for an investor is \$10 and maximum none.

Hoge Finance

- Price: \$0.00002173
- Market cap: \$8,740,007

This meme coin is a DeFi. It motivates for a long-term investment with a tax fee of 2% on each and every transactions. This meme had a very strong surge in February 2023 but sadly retraced back to January 2023 price.

Hollywood x Pepe

- Price: \$0.000144
- Market cap: - - - -

Meme coin newly launched with a attracting hilarious new attention and grabbing hype towards new promotion video and claims of A-list backing. This meme coin project has anonymous number of developers that are aiming to flip \$DOGE and \$PEPE and is also launched on Ethereum with \$HXPE tokens that are available for purchases during its presale launch. This meme crypto name is just not only horse riding on the Pepe meme crypto coin wave but it also has spontaneous name recognition with Hollywood i.e. the very global home of entertainment for the globe.

Pros and Cons of Crypto Currency

Pros

- Youngsters in this era love taking risk towards digital assets and in crypto assets there is always a high risk in investments and hence there is always a potential for high investment rewards too for any digital asset investor. It has taught youngsters how to take risk and on the same time to handle the risk while doing digital asset investments financially on day to day basis. The crypto world has also taught them an excellent skill when and at what exact time an individual needs to acquire and release their crypto assets for profits and not make a single loss in their investments.
- Crypto industry has made youngsters good and spontaneous decision makers.
- Crypto tokens have created jobs for youngsters in digital asset industry like miners, crypto trader and blockchain developer and Metaverse developer and Crypto Asset Auditors and many more.
- Crypto assets can help youngsters to beat inflation woes in near future.
- Crypto currency has given this era youngsters a decentralized financial platform other than traditional banking system that is being used from decades.
- The crypto markets are 24x7 open and never closes and hence made youngsters pro active and very wise towards daily life investment's policies to keep up the extreme pace with competitive investment market of crypto world.
- It has made all job going individuals more responsible towards security purpose for their accounts on all crypto wallets where they purchase, sell and trade their crypto assets.

Cons

- Understanding crypto currency takes lot time and effort and it may hurt the investment of an individual or a group.
- Crypto digital asset are tremendously volatile investments and an individual have to understand and think seriously before investing time and money.
- An individual investor has to understand that crypto assets have not always proven themselves as long-term investments in investment market across the globe.
- A crypto asset always has major scalability issues across the globe.

Pros and Cons of Meme Crypto Coins

Pros

- Meme coins are giving birth to new technologies in crypto world.
- The meme crypto coins changed the job going youngster's fun buying attitude towards meme crypto coins to a very serious earning attitude for them and for their entire families to support whose families are not financial sound.

- Meme crypto coins are cheaper as too compared to other large cap crypto's in crypto market.
- Meme coins are being accepted on many entertainment sites and gaming sites, then they are also accepted on food joints and groceries stores in few countries.
- It is being traded for digital galleries in Metaverse world.
- Meme communities have donated many institutes that help poor countries and war affected countries.
- Meme coins have doubled the profit of individual investors in a very less time frame.
- Meme coins have brought in all classes of incoming making investors in crypto markets for serious profit making across the globe.

Cons

- All the crypto meme coins are vulnerable to high security risks in crypto industry.
- All crypto meme coins were affected badly during the downfall of crypto market in 2022 when trillions of dollars were washed away in the crypto asset market.
- All meme crypto coins do not make a fortune for an investor.
- Some meme coins are just for fun purposes for users to use.
- Lack of regulation and transparency compared to other crypto currencies.
- Some meme coins have less volume of coins as they are launched as jokes or parodies and even by anonymous developer's community and therefore it makes difficulty for investors to buy and hold their meme coins for a long period of time.
- Some meme coins have huge volume of coins and they developers burn that coins on regular basis to attract more users and to gain popularity while burning and introducing new features and technology but in this process of the meme coin community is largely affected on investment pocket of an individual.

Conclusion

Meme Crypto coins have offered effective and attractive new technologies and payment methods that have boosted entertainment and gaming companies and communities revenues to an extreme level. It also has provided individuals to make specific financial activities like buying and selling products in real world and services in digital world, transferring and exchanging stocks easily across the globe. The research study has analyzed the impact of meme crypto currency on youngsters and entire society. The research study has analyzed the threat of meme crypto currency towards world economy. Hence further more studies can be conducted on meme crypto currency and the platforms that support meme crypto currencies and the entire digital asset industry.

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An Evaluation of Awareness and Satisfaction Regarding Library Resources and Services: A Study of Central University of Jammu, Jammu

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Abstract:

In this study, an attempt is made to evaluate the awareness and satisfaction regarding library resources and services of Central University of Jammu, Jammu which is divided into five sections: Introduction of the study, Review of literature, Research methodology, Data analysis and interpretation and Conclusion of the study. In this study, non probability sampling used. 250 respondents selected as sample size from Central University of Jammu, Jammu but 227 respondents replied. Null hypothesis of the study is “there is no significance difference of awareness and satisfaction regarding library resources and services among the user of Central University of Jammu”. The present study was based on primary data. The data collected through questionnaire. Data analysed with the help of SPSS and Chi-Square test used for hypothesis testing. The study found that majority of respondents was male and they visiting the library on daily basis for issued or return the books and update themselves. It also observed that mostly respondents were preferred both printed and electronic resources; also preferred e-books as well as e-Journals; fully satisfied with the assistance of library staff; and fully satisfied with the library's print as well as e-resources.

KeyWords: e-books, e-Journals, library resources, books.

Introduction:

Libraries play an important role in promoting the distribution of the essential information to the right user at the right time, as well as in allowing wider access to global information and knowledge resources. The library system, developed in response to the evolving demands of research, seeks to provide seamless information services spanning from the identification and acquisition of information to the sophisticated usage of data (Mahapatra, 2017). University libraries play an important role for supporting the teaching and learning with adequate information sources. Nowadays, universities are offering different type of undergraduate and postgraduate courses in different disciplines. The university libraries and library staff have been focusing on different type of library resources to full fill the information needs of library users. With the information overload on different media, the roles of university libraries become more critical in selecting, processing and dissemination of information sources to the users. Even the university libraries also have become the member of different library networks to provide the non-available resources to the users through inter-library loan. INFLIBNET and DELNET are the major national level library networks to connect the college and university libraries with each other. With the implication of information and communication

technology, libraries are providing different type of electronic resources in different modes. Moreover, university libraries are also providing the access of various open access resources. Use and users studies are the important aspects of the university library system. The main emphasis of university libraries is to satisfy the users information needs with adequate resources. The big share of university library budget has spent on different type resources. Even, the university libraries are also providing the non available resources through inter library loan to their users. It is an important aspect to evaluate the use of library resources by diverse category of users and also to know about the information needs and satisfaction level of users with available library resources. Wilson (1981) has described that library should know the information needs, information seeking behaviour and their familiarity with library collection and services.

Review Of Literature

Burhansab; Batcha and Ahmad (2021) investigated the awareness and usages of electronic resources by the users of selected colleges of Solapur University. The study shows that aided, self financed and education colleges respondents visit the library once in three days. A majority of respondents from selected colleges visit the library to issue and return books. Moreover, most of respondents preferred to use mobile phones to access the electronic resources followed by

laptops/desktops for the same. It was found that a large number of users have not any knowledge about IT training programmes for accessing the electronic resources. **Alokluk (2020)** conducted a study to know the attitude of users towards the library facilities. The study found that a majority of students have stated that they use the library for different purposes like reading of materials and to access the internet based resources and services. The study further described that mostly students have admitted that library is a very useful place for them and it help to enhance their knowledge. It was suggested by the respondents that the use of library can be increased by reducing the cost of printing and photocopy services. **Kumar and Pandey (2020)** conducted a survey to know the use of library resources by the users of Doon University, Dehradun. The study found that a majority of the students and faculty members visited the library to borrow books. A large number of research scholars consulted Journals and used reference sources. The study further described that most of the respondents were satisfied with the available text books followed by reference books and newspapers. **Singh and Mahajan (2020)** conducted a comparative study to know the use of library and library resources in Northern India. The study revealed that mostly research scholars and faculty members of all the universities visited the library daily. The researchers of different universities have spent four to six hours in the library per week, whereas only faculty members of same universities spend same time. It also observed that research scholars were utilizing the library and library resources more than the faculty. The study further revealed that research scholars and faculty members from all the universities visited the library for research and reading purposes, while researchers and faculty members visited the library for reading journals and magazines. It is clear from the study that majority research scholars and faculty members found the print resources more flexible in use. It was suggested by the respondents that user orientation programmes should be conducted frequently to aware the users about the use of library resources. **Krishnappa and Kemparaju (2019)** focused on the level of awareness regarding library resources and facilities of ISEC library, Bangalore. The study revealed that the majority of the respondents are aware of library collections, such as Books, National Journals and International journals etc., and with regard to library services, Mostly of the respondents are aware of photocopy services provided by the library and different reference services available in the library, while opining that these services are important for their research. The regression results show that in respect of researcher category, accessing index journals and thesis/dissertations is statistically significant. The findings of the study

also show that the major purpose of using the library services and facilities was search for the most relevant information. **Ahmed and Sulaiman (2017)** conducted a study to investigate the use and awareness of electronic resources by medical students of University of Saudi Arabia. The study revealed that mostly respondents from medical college and dental college have knowledge about electronic resources, while few respondents have stated that they learned the use of electronic resources with the help of library staff. Lack of information literacy programmes has also impacted the access to electronic resources. It was suggested by the respondents that the university should integrate the information literacy programmes with the course curriculum. **Gupta and Sharma (2017)** studied the user's awareness and satisfaction levels regarding digital information resources and services with respect to the students of IIT Guwahati. They found that mostly users were aware of e-books, e-resources and found these resources important in their research. They also revealed that majority of the users were aware of OPAC/Web OPAC services. They observed that maximum respondents were satisfied with the digital information resources and services. **Veena and Kotari (2016)** investigated the satisfaction of library services and facilities among the students of the SDM college library. The study found that mostly respondents were satisfied with general books, textbooks and considered circulation services as being excellent. They resulted that the library should try to identify users information needs and their information gathering behaviours. **Pandey (2015)** evaluated users' satisfaction levels regarding library resources and services. The study found that a majority of the respondents were satisfied with the availability and use of library resources such as books, journals/magazines and conference proceedings and library services like circulation, reference and book-bank services. The study also resulted that a majority of the respondents were dissatisfied with electronic resources, OPAC and online databases, resources and services.

The present study attempts to evaluate the awareness and satisfaction level of library and information services and facilities in University.

Research Methodology

Objectives of Study: The objectives of the study is as under:

1. To know the awareness about library resources among the users.
2. To know the satisfaction level of users with library resources

Null Hypothesis of the Study:

H0: There is no significance difference of awareness and satisfaction regarding library resources and services among the user of Central University of Jammu

Methodology:

The present study used the descriptive research design. The study conducted at Central University of Jammu, Jammu. To complete the study 250 respondents were selected for research sample. The structured questionnaire was designed for collection of primary data. Three categories of users *i.e.* Post graduate students, research scholars and faculty members were taken to organise this study. Convenient sampling technique was used to collect the data. Out of 250 distributed questionnaires, 227 fully filled questionnaires were received.

Data Analysis and Interpretation

This section covers the analysis and interpretation of the collected data. Table 1 presents the gender wise sample of Central University of Jammu. Out of total respondents, 119 respondents (52.4 percent) were male and 108 (47.6 percent) respondents were females. 107 respondents (46.7 percent) were PG students and 62 respondents (27.7 percent) were faculty members.

Table 2 shows that out of total respondents, 91 respondents (40.1 percent) reported to be daily library visitors, whereas, 64 (28.2 percent) respondents were occasional library visitors. Whereas, 50 (22.0 percent) respondents were visiting the library twice a week. Statistically, Chi-square resulted that there is no significant difference among the users towards frequency of library visits.

Table 3 shows that 125 respondents (55.1 percent) were fully aware of library resources, whereas, 98 (43.1 percent) respondents were partially aware of library resources. Only 4 (1.8 percent) respondents were not aware of library resources.

Table 4 depicts that 157 (69.2 percent) respondents visit the library to get the books issued or return the books followed by 130 (57.3 percent) respondents who visit the library to update themselves; 79 (34.8 percent) respondents visit the library and to use resources for academic and research purposes. Statistically, Chi-square resulted that there is a significance difference among library visits by respondents from the Central University of Jammu.

Table 5 shows the preferences for the mode of library resources indicated by the respondents from the Central University of Jammu. The table shows that 128 (56.4 percent) respondents prefer both printed and electronic resources followed by 50 (22.0 percent) respondents who prefer only printed resources and 26 (11.5 percent) respondents who prefer only electronic resources of the library. Statistically, Chi-square resulted that there is no significant difference of the preferred mode of library resources by the respondents of Central University of Jammu.

Table 6 shows the preferences amongst the available e- resources in the library by the respondents of Central University of Jammu. Table depicts that 168 (74.0 percent) respondents prefer e-books followed by 121 (53.3 percent) respondents who prefer e-journals and 87 (38.3 percent) respondents prefer e-lecture notes. Statistically, Chi-square resulted that there is no significant difference among respondents towards preferences of available e-resources in the library of the Central University of Jammu.

The table 7 shows that 74 (32.6 percent) respondents spend 1-2 hours in the library followed by 62 (27.3 percent) respondents who spend up to one hour in the library and 43 (18.9 percent) respondents spend 2-4 hours in the library. Moreover 26 (11.5 percent) respondents spend 6-8 hours in the library for consulting different type of resources. Statistically, Chi-square resulted that there is no significant difference among library users towards average time spend in the library per week.

Table 8 indicates that 129 (56.8 percent) respondents were fully satisfied with the assistance of library staff, while 89 (39.2 percent) respondents were partially satisfied. On the other hand, 9 (4.0 percent) respondents of them were not at all satisfied with the assistance of library staff in using the library. Statistically, Chi-square resulted that there is no significant difference among users towards satisfaction level regarding the assistance of library staff for using library

Table 9 shows that 136 (59.9 percent) respondents were partially satisfied, while 73 (32.2 percent) respondents were fully satisfied with the library's print as well as e-resources. 18 (7.9 percent) respondents were not at all satisfied with the printed as well as e-resources available in the library. Statistically, Chi-square resulted that there is no significant difference among users towards satisfaction level regarding the library printed and e-resources, Therefore, null hypothesis is accepted.

Major Findings:

1. The study found that mostly respondents reported to be daily library visitors.
2. A majority of the respondents visit the library to issued or return the books and update themselves.
3. It was also found that most of respondents preferred both printed and electronic resources.
4. The study observed that majority of respondents preferred e-books as well as e-Journals.
5. It was found that mostly respondents were fully satisfied with the assistance of library staff.
6. The study depicts that maximum respondents were fully satisfied with the library's print as well as e-resources.

Conclusion Of The Study

The present study observed that Central University of Jammu has well stocked and fully

computerized library. The library has a good collection of textbooks, reference books, general books, resources, print journals, CDs, DVDs, and other magazines. Moreover, the library has a good collection of electronic resources which are being subscribed from INFLIBNET through e-shodhsindhu consortium. The library has a well-equipped computer lab with Wi-Fi network facility. The study concluded that all the user of the library was aware about the library resources and services, and satisfied with the library resources and services.

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Table 1: Gender wise sample of the study

| Category | Male | Female | Total | Percentage |
|------------------|------|--------|-------|------------|
| Faculty Member | 37 | 25 | 62 | 27.7% |
| Research Scholar | 24 | 34 | 58 | 25.6% |
| PG Student | 58 | 49 | 107 | 46.7% |
| Total | 119 | 108 | 227 | 100% |

Source: Survey.

Table 2: Frequency to visit the library

| Sr. No. | Visit the Library | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|-------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Daily | 23 (37.1%) | 28 (48.3%) | 40 (37.4%) | 91 (40.1%) | 2.216 (0.330) |
| 2 | Occasionally | 34 (54.8%) | 10 (17.2%) | 20 (18.7%) | 64 (28.2%) | |
| 3 | Twice a week | 4 (6.5%) | 14 (24.1%) | 32 (29.9%) | 50 (22.0%) | |
| 4 | Once a week | 1 (1.6%) | 2 (3.4%) | 5 (4.7%) | 8 (3.5%) | |
| 5 | Twice a month | 0 (0.0%) | 1 (1.7%) | 2 (1.9%) | 3 (1.3%) | |
| 6 | Rarely | 0 (0.0%) | 3 (5.2%) | 7 (6.5%) | 10 (4.4%) | |

Source: Survey.

Table 3: Awareness about library resources

| Sr. No. | Level of Awareness | Faculty Members (N=62) | Research Scholars (N=58) | PG Students (107) | Total (N=227) |
|---------|--------------------|------------------------|--------------------------|-------------------|---------------|
| 1 | Fully | 34 (54.8%) | 26 (44.8%) | 65 (60.7%) | 125 (55.1%) |
| 2. | Partially | 28 (45.2%) | 31 (53.5%) | 39 (36.5%) | 98 (43.1%) |
| 3. | Not at all | 0 (0 %) | 01 (1.7%) | 03 (2.8%) | 04 (1.8%) |

Source: Survey.

Table 4: Purpose of visit to the library

| Sr. No. | Purpose | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|--|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Issue and return books | 40 (64.5%) | 43 (74.1%) | 74 (69.2%) | 157 (69.2%) | 5.976 (0.05)* |
| 2 | To study library resources for academic/research purpose | 9 (14.5%) | 30 (51.7%) | 40 (37.4%) | 79 (34.8%) | |
| 3 | To complete assignments | 4 (6.5%) | 24 (41.4%) | 46 (43.0%) | 74 (32.6%) | |
| 4 | To consult reference materials | 44 (71.0%) | 24 (41.4%) | 42 (39.3%) | 110 (48.5%) | |
| 5 | For preparing materials | 5 (8.1%) | 28 (48.3%) | 55 (51.4%) | 88 (38.8%) | |
| 6 | For updating yourself | 50 (80.6%) | 31 (53.4%) | 49 (45.8%) | 130 (57.3%) | |
| 7 | To browse online information resources | 18 (29.0%) | 13 (22.4%) | 35 (32.7%) | 66 (29.1%) | |
| 8 | To read print journals and other information resources | 28 (45.2%) | 24 (41.4%) | 21 (19.6%) | 73 (32.2%) | |
| 9 | To consult thesis/dissertations | 25 (40.3%) | 18 (31.0%) | 12 (11.2%) | 55 (24.2%) | |
| 10 | To read newspapers | 15 (24.2%) | 39 (67.2%) | 58 (54.2%) | 112 (49.3%) | |
| 11 | To use e-resources | 47 (75.8%) | 15 (25.9%) | 32 (29.9%) | 94 (41.4%) | |
| 12 | To browse the internet | 10 (16.1%) | 16 (27.6%) | 23 (21.5%) | 49 (21.6%) | |
| 13 | To get photocopy of reading material | 28 (45.2%) | 21 (36.2%) | 26 (24.3%) | 75 (33.0%) | |

Source: Survey.

Table 5: Preference for mode of library resources

| Sr. No. | Preferences of mode | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|---------------------------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Only printed resources | 1 (1.6%) | 20 (34.5%) | 29(27.1%) | 50(22.0%) | 0.968 (0.616) |
| 2 | Only electronic resources | 17 (27.4%) | 5 (8.6%) | 4 (3.7%) | 26(11.5%) | |
| 3 | Both printed and electronic resources | 46 (74.2%) | 29 (50.0%) | 53(49.5%) | 128(56.4%) | |
| 4 | Any other, please specify | 0 (0.0%) | 2 (3.4%) | 5 (4.7%) | 7 (3.1%) | |

Source: Survey.

Table 6: Type of e- resources as per prefer to use

| Sr. No. | Preference for type of e- resources | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|-------------------------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | E-Journals | 55 (88.7%) | 32 (55.2%) | 34 (31.8%) | 121 (53.3%) | 3.53 (0.171) |
| 2 | E-Books | 47 (75.8%) | 42 (72.4%) | 79 (73.8%) | 168 (74.0%) | |
| 3 | E-Thesis/ Dissertations | 22 (35.5%) | 15 (25.9%) | 24 (22.4%) | 61 (26.9%) | |
| 4 | E-Reports | 39 (62.9%) | 9 (15.5%) | 23 (21.5%) | 71 (31.3%) | |
| 5 | E-Lecture notes | 26 (41.9%) | 18 (31.0%) | 43 (40.2%) | 87 (38.3%) | |
| 6 | CD Rom Databases | 30 (48.4%) | 17 (29.3%) | 18 (16.8%) | 65 (28.6%) | |
| 7 | Wiki and online references | 20 (32.3%) | 15 (25.9%) | 25 (23.4%) | 60 (26.4%) | |

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| | | | | | | |
|---|----------------------------|----------|----------|----------|----------|--|
| 8 | Any other (please specify) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | |
|---|----------------------------|----------|----------|----------|----------|--|

Source: Survey.

Table 7: Average time spend per week in the library

| Sr. No. | Time spend | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|--------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Up to one hour | 28 (45.2%) | 10 (17.2%) | 24 (22.4%) | 62 (27.3%) | 1.626 (0.443) |
| 2 | 1-2 hours | 28 (45.2%) | 19 (32.8%) | 27 (25.2%) | 74 (32.6%) | |
| 3 | 2-4 hours | 4 (6.5%) | 14 (24.1%) | 25 (23.4%) | 43 (18.9%) | |
| 4 | 6-8 hours | 3 (4.8%) | 7 (12.1%) | 16 (15.0%) | 26 (11.5%) | |
| 5 | 8-10 hours | 0 (0.0%) | 5 (8.6%) | 11 (10.3%) | 16 (7.0%) | |
| 6 | More than 10 hours | 0 (0.0%) | 2 (3.4%) | 2 (1.9%) | 4 (1.8%) | |
| 7 | More than 20 hours | 0 (0.0%) | 2 (3.4%) | 2 (1.9%) | 4 (1.8%) | |

Source: Survey.

Table 8: Satisfaction towards the assistance of library staff for using library

| Sr. No | Level of Satisfaction | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|--------|-----------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Satisfied | 37 (59.7%) | 34 (58.6%) | 58 (54.2%) | 129 (56.8%) | 1.689 (0.430) |
| 2 | Partially Satisfied | 25 (40.3%) | 22 (37.9%) | 42 (39.3%) | 89 (39.2%) | |
| 3 | Not Satisfied | 0 (0.0%) | 2 (3.4%) | 7 (6.5%) | 9 (4.0%) | |

Source: Survey.

Table 9: Satisfaction towards the library printed and e-resources

| Sr. No. | Level of Satisfaction | Faculty Member (N=62) | Research Scholar (N=58) | PG Student (N=107) | Total (N=227) | χ^2 (p value) |
|---------|-----------------------|-----------------------|-------------------------|--------------------|---------------|--------------------|
| 1 | Fully | 28 (45.2%) | 12 (20.7%) | 33 (30.8%) | 73 (32.2%) | 0.622 (0.733) |
| 2 | Partially | 34 (54.8%) | 40 (69.0%) | 62 (57.9%) | 136 (59.9%) | |
| 3 | Not at all | 0 (0.0%) | 6 (10.3%) | 12 (11.2%) | 18 (7.9%) | |

Source: Survey.

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