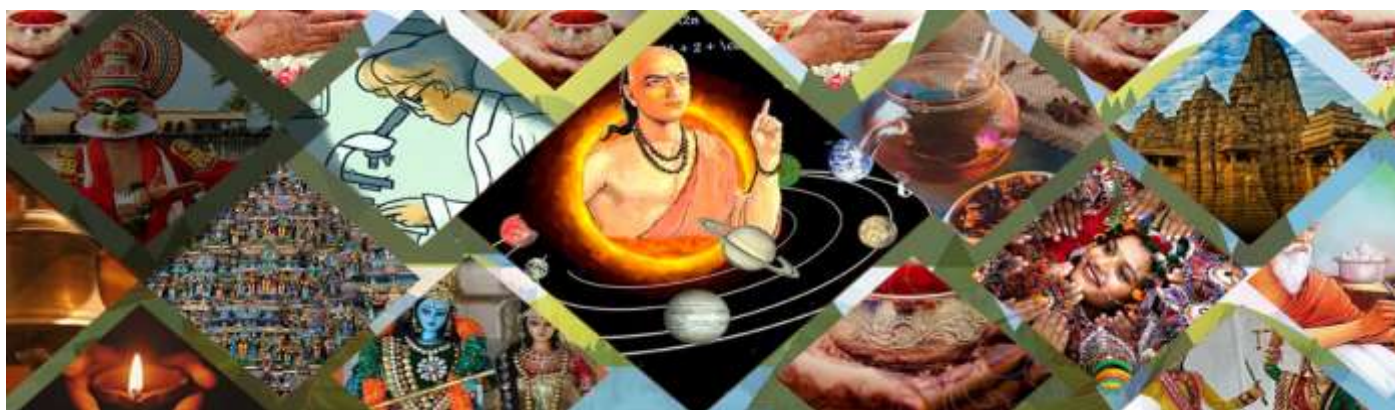


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Special Issue
on
NEP - 2020

“Indian Knowledge Systems”

Mahatma Gandhi Vidyamandir's
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SCIENCE AND COM.MAHILA MAHAVIDYALAYA,
MALEGAON CAMP.
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Guest Editor
Dr Rajani Patil
Principal
Mahatma Gandhi Vidyamandir's
Mahilaratna Pushpatai Hiray Arts, Science
and Com.Mahila Mahavidyalaya,
Malegaon Camp.

Young Researcher Association



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MESSAGE



Congratulations! I extend my best wishes to the Principal and all the faculty member for publishing a special issue on Indian Knowledge System.

The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian Knowledge and thought as a guiding principle. This Indian Knowledge System or tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. India's journey to revitalize itself through Indian Knowledge System is poised to bring about significant changes in the country. It aims to support and facilitate further research to solve contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment and Sustainable development. It will actively engage for spreading the rich heritage of our country and traditional knowledge.

I am sure this special issue will put forth a proper perspective on NEP and Indian Knowledge System and it will definitely help to our students, teachers and educators in implementation of NEP 2020. Best wishes for all future academic endeavors!!

A handwritten signature in black ink, appearing to read 'Prashant V. Hiray', with a long vertical line extending downwards from the end of the signature.

(Dr. Prashant V. Hiray)
GENERAL SECRETARY
MAHATMA GANDHI VIDYAMANDIR
PANCHAVATI, NASHIK - 3.

MESSAGE



It gives me immense pleasure in conveying my heartfelt congratulations and wishes to the Principal, Staff and the Editorial Team for publishing a special issue on '**Indian Knowledge System**'.

India has always been recognized as a prosperous and culturally rich nation, with a long history of knowledge systems and intellectual achievements. In recent years, the concept of '**Indian Knowledge System**' (IKS), has gained momentum, aiming to revive India's ancient traditions and wisdom. Under the National Education Policy (NEP) 2020, India is embarking on a transformative journey to restructure its education system, based on Indian knowledge traditions. Indian Knowledge System' offers a wide range of career, job, professional, business, research, social, and cultural opportunities. India's journey to revitalize itself, through Indian Knowledge System, will certainly bring about significant changes in the Education System.

I am sure that the Special Issue, **Published by, Mahilaratna Pushpatai Hiray Arts, Science and Commerce Mahila College, Malegaoncamp, Dist. Nashik** can provide valuable insights on Indian Knowledge System for the students in India as well world at large.

My best wishes to the entire editorial team their efforts for contributing to promote Indian Knowledge System.

(Dr. Sampadada Prashant Hiray)

TRUSTEE

Mahatma Gandhi Vidyamandir, Panchavati, Nashik-3

EDITORIAL.....



“We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible.”

- Albert Einstein

Indian knowledge system have a strong foundation in Indian culture, philosophy, and spirituality and have evolved through thousands of years. The Indian Knowledge System (IKS) is a methodological transmission of knowledge from one generation to the next. It is a well-structured system and process of knowledge transfer, rather than just a tradition.

The IKS is to be incorporated in scientific manner in the school and higher educational curriculums. This would include tribal knowledge and indigenous and traditional ways of learning and will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation.

UGC plans to start credit courses on Indian culture and traditions in both UG and PG programs. The UGC decision is in line with the National Education Policy, 2020, which directed that knowledge from ancient India and its contributions to modern India must be part of the curriculum.

In view of the implementation of new education policy 2020, soon in Maharashtra and all over the country, this journal will definitely be a guide for students, teachers and educators. The real purpose behind publishing this journal was to reach everyone and create awareness among different stakeholders about what exactly this Indian Knowledge System is? and how important it is?

We understand that the world today is changing at a rapid pace, and children today are being torn between modernity and tradition. It is our responsibility as parents and educators to strike a perfect balance between retaining the necessary traditional values and incorporating the required modern changes.

Dr. Rajani S. Patil
Principal
Mahilaratna Pushpatai Hiray Mahila Mahavidyalaya,
Malegaon Camp



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The Integral Role of Indian Knowledge Systems in Science and Innovation “Bridging Traditions and Innovations” - A Review

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Abstract –

India, with its rich and diverse cultural heritage, boasts a knowledge system deeply rooted in ancient traditions and philosophies. The intertwining of scientific thought and spiritual wisdom has been a hallmark of Indian civilization for millennia. The role of Indian knowledge System in Science and Technology involves integrating traditional wisdom, practices, and insights from indigenous communities of India into modern scientific and technological endeavors. This symbiotic relationship can lead to innovative solutions, sustainable development, and the preservation of cultural heritage. This article aims to unravel the profound influence of Indian Knowledge Systems on science and technology, examining how ancient philosophies, mathematical concepts, and medicinal practices continue to shape modern innovations.

Key words - Indian Knowledge Systems, Ancient Wisdom , Science And Innovation

Introduction –

India, with its rich tapestry of ancient knowledge systems, has played a pivotal role in shaping the trajectory of human understanding since time immemorial. Rooted in centuries-old traditions and bolstered by profound philosophical insights, Indian knowledge systems have significantly influenced the realms of science and technology. The interplay between India's traditional wisdom and modern scientific pursuits has not only facilitated innovative advancements but has also bestowed the world with a holistic approach to problem-solving.

From the concept of zero in mathematics to the principles of Ayurveda in medicine, India's traditional knowledge reservoirs have not only stood the test of time but have also paved the way for cutting-edge advancements in the modern era. By delving into the historical context and contemporary applications of Indian knowledge systems, we can gain valuable insights into how ancient wisdom continues to fuel the engines of progress in the fields of science and technology, both within India and on the global stage.

Material and Method- Books and Research Papers, Interviews and Expert Opinions Online Databases.

Role of Indian Knowledge System in various domains:

The Indian knowledge system has left a lasting legacy, influencing fields like mathematics, astronomy, medicine, philosophy, and art, both within India and globally. It remains a source of pride and inspiration for many. Here's a brief overview of key developments in various domains:

India is the birthplace of yoga and meditation practices. These techniques not only promote physical and mental well-being but have also inspired research in neuroscience, psychology, and stress management.

India has a rich tradition of handcrafted textiles, pottery, jewelry, and more. Indigenous knowledge in these crafts involves intricate techniques and designs that have been passed down through generations. Traditional water management systems like stepwells and tank systems were developed to harvest and store rainwater efficiently. These systems have been instrumental in mitigating water scarcity issues in these days.

Indian knowledge System in Agriculture

Indigenous knowledge plays a vital role in agriculture and farming, contributing to sustainable and resilient agricultural practices.

Crop Diversity: Indigenous communities have cultivated a wide variety of crops and plant species over generations. Their knowledge of traditional seed saving and breeding practices helps maintain crop diversity, which is essential for food security and resilience to pests and diseases.

Sustainable Farming Practices: Indigenous agricultural methods often prioritize sustainability. Practices like crop rotation, intercropping, and agroforestry enhance soil fertility, reduce erosion, and promote biodiversity on farmlands.

Local Adaptation: Indigenous knowledge is highly localized and adapted to specific ecological and climatic conditions. This makes it well-suited for addressing regional challenges and maximizing agricultural productivity.

Water Management: Indigenous farming often involves sophisticated water management techniques, such as terracing, irrigation systems, and water harvesting, which are designed to conserve and efficiently use water resources.

Soil Conservation: Indigenous farmers employ soil conservation techniques like contour farming and the use of cover crops to prevent soil degradation and maintain soil health.

Traditional Breeding: Indigenous communities have engaged in traditional breeding practices to develop crop varieties that are well-suited to local conditions. These varieties may possess unique traits such as drought resistance or pest tolerance.

Indian knowledge System in Health and Well-being

Ayurveda is an ancient Indian system of medicine that has been practiced for thousands of years. It offers a holistic approach to healthcare, focusing not only on treating diseases but also on preventing them and promoting overall wellness. The Charaka Samhita and Sushruta Samhita, written in the classical period, laid the foundations for Ayurveda, a comprehensive system of medicine. Sushruta, often regarded as the "father of surgery," described surgical techniques and tools. Ayurvedic knowledge has influenced the development of herbal medicine and alternative therapies worldwide.

Preventive Healthcare: Ayurveda emphasizes preventive measures to maintain a balance in the body and prevent the onset of diseases. This includes following a balanced diet, practicing yoga and meditation, and adopting a healthy lifestyle based on one's dosha constitution.

Natural Remedies: Ayurveda relies on natural remedies derived from herbs, plants, minerals, and other natural sources. These remedies are often considered safer with fewer side effects compared to synthetic drugs in modern medicine.

Individualized Treatment: Ayurvedic treatments are personalized based on an individual's constitution (Prakriti) and the imbalance of doshas. This individualized approach ensures that the treatment is tailored to a person's specific needs, promoting effective healing.

Mind-Body Connection: Ayurveda recognizes the intricate connection between the mind and body. It incorporates practices like meditation and yoga to promote mental well-being, reduce stress, and enhance overall health.

Diet and Nutrition: Ayurveda emphasizes the importance of a balanced and nutritious diet. It classifies foods based on their qualities and recommends specific dietary guidelines to maintain dosha balance and improve digestion, which is crucial for overall health.

Herbal Medicine: Ayurvedic herbs are used for various health purposes, including boosting the

immune system, improving digestion, and managing chronic conditions. These herbs are often rich in natural compounds that have therapeutic effects on the body.

Complementary Approach: Ayurveda is often used in conjunction with modern medicine, providing a complementary approach to healthcare. Many people combine Ayurvedic practices with conventional treatments for a more comprehensive health strategy..

Indian knowledge System in Biodiversity Conservation

Indigenous knowledge systems play a crucial role in biodiversity conservation. Here are ways in which they contribute to preserving and managing biodiversity:

Local Ecological Knowledge: Indigenous communities have developed intricate understandings of their local ecosystems over generations. They possess valuable insights into the behavior of plants, animals, and ecosystems, which can inform conservation efforts.

Sustainable Resource Management: Indigenous practices often emphasize sustainable resource use and management. Their traditional methods for hunting, fishing, agriculture, and gathering are often in harmony with nature, promoting the long-term health of ecosystems.

Traditional Ecological Practices: Indigenous communities have developed practices like crop rotation, agroforestry, and terrace farming, which help maintain soil fertility, prevent erosion, and enhance biodiversity in agricultural landscapes.

Medicinal Plants and Traditional Remedies: Indigenous knowledge includes extensive knowledge of medicinal plants and their uses. Many of these plants are valuable in pharmaceutical research and can potentially lead to the discovery of new medicines.

Sacred Sites and Cultural Practices: Indigenous cultures often have sacred sites that are protected as part of their spiritual beliefs. These areas can serve as conservation zones, safeguarding critical habitats and species.

Conservation Governance: Some indigenous communities actively participate in conservation governance, working with governments and NGOs to protect natural areas and endangered species. Their traditional systems of governance can complement formal conservation efforts.

Seed Banks and Crop Diversity: Indigenous farmers have conserved a wide variety of crop and plant genetic resources. These diverse collections can be invaluable for breeding programs to develop more resilient and adaptable crops.

Indian knowledge System in Climate adaptation

Indian knowledge systems play a crucial role in climate adaptation. They encompass the traditional knowledge, practices, and wisdom of

Indigenous communities, which have been developed over generations and are tailored to specific local environments.

Weather Prediction: Indigenous communities often have sophisticated ways of predicting weather patterns based on observations of natural indicators, such as animal behavior, plant growth, and celestial events. This knowledge helps them anticipate and prepare for extreme weather events.

Sustainable Agriculture: Indigenous farming practices, like crop diversification and water management techniques, are adapted to local climates and promote resilience in the face of changing conditions.

Resource Management: Indigenous peoples have a deep understanding of ecosystems and sustainable resource management. Their practices, like rotational grazing and controlled burning, can help mitigate the impact of climate change on biodiversity.

Traditional Building Techniques: Indigenous architecture incorporates climate-appropriate design, materials, and insulation methods that can reduce energy consumption and provide comfort in extreme temperatures.

Medicinal Plants: Indigenous knowledge of medicinal plants can offer solutions for health issues related to climate change, such as vector-borne diseases and heat-related illnesses.

Cultural and Spiritual Resilience: Indigenous cultures often emphasize a strong connection to nature, fostering resilience and adaptive capacity in the face of environmental challenges.

Indian knowledge System in Astronomy

Indian knowledge system plays significant role in the field of astronomy throughout its history. Traditional Astronomy and Timekeeping Indigenous systems have been used for celestial navigation and timekeeping.

Early Astronomical Observations: Ancient Indian astronomers made important observations of celestial phenomena and developed methods to calculate the positions of stars and planets. The Rigveda, one of the oldest sacred texts of India, contains references to astronomical phenomena and the movement of celestial bodies.

Aryabhata's Contributions: Aryabhata, an ancient Indian mathematician and astronomer, wrote the Aryabhatiya, a comprehensive work on mathematics and astronomy around 499 CE. He accurately calculated the Earth's circumference, explained the causes of lunar and solar eclipses, and provided theories on the motion of planets.

Siddhanta Texts: Indian astronomers developed Siddhanta texts, which were mathematical treatises that provided detailed calculations related to astronomy. Notable examples include the Brahmasphutasiddhanta and the Surya Siddhanta.

These texts covered topics such as planetary motion, eclipses, and the calculation of celestial events.

Influence on Islamic and Western Astronomy: Indian astronomical knowledge spread to other parts of the world, including the Islamic world and later Europe. Islamic scholars translated Indian texts into Arabic, preserving and expanding upon the knowledge. Some of these works eventually made their way to medieval Europe, contributing to the Renaissance of the sciences.

Invention of Calculus: Indian mathematician and astronomer Madhava of Sangamagrama, along with his Kerala school, made significant strides in the development of calculus. They developed infinite series expansions for trigonometric functions, laying the groundwork for later European mathematicians like Newton and Leibniz.

Modern Space Research: In the modern era, India has made remarkable progress in space research. The Indian Space Research Organisation (ISRO) has launched numerous satellites for various purposes, including communication, navigation, and scientific research. India's Mars Orbiter Mission (Mangalyaan) in 2013 and Chandrayan 2023 demonstrated the country's capability to explore interplanetary space.

Indian knowledge System in Mathematics

Indian mathematics has a rich and ancient heritage that dates back thousands of years. Some notable contributions of the Indian knowledge system in mathematics includes

Zero and Decimal System: The concept of zero as a number and the decimal place-value system were developed in ancient India. The Indian mathematician Brahmagupta, in the 7th century, was one of the pioneers who formalized the use of zero as a numerical digit, which became a fundamental concept in mathematics worldwide.

Infinite Series: Indian mathematicians made significant advancements in infinite series. The Kerala school of astronomy and mathematics, around the 14th century, worked on infinite series expansions for trigonometric functions, anticipating concepts that would later become integral calculus.

Trigonometry: Indian mathematicians, particularly Aryabhata (5th century) and Bhaskara II (12th century), made substantial contributions to trigonometry. Aryabhata, in his work Aryabhatiya, provided accurate values for trigonometric functions and explored the properties of triangles and circles.

Algebra: Indian mathematicians developed algebraic techniques for solving quadratic and simultaneous equations. Brahmagupta's Brahmasphutasiddhanta (7th century) contains solutions for quadratic equations, including both positive and negative roots.

Geometry: Indian mathematicians studied geometry and its applications extensively. The Sulba Sutras, ancient Indian texts dating back to around 800 BCE,

contain geometric principles for constructing altars and other religious structures. These texts demonstrate the knowledge of geometric properties, including the Pythagorean theorem.

Number Theory: Indian mathematicians explored various aspects of number theory, including divisibility, prime numbers, and modular arithmetic. The concept of congruence and modular arithmetic was well understood in ancient India.

Indeterminate Equations: Indian mathematicians like Brahmagupta worked on solving indeterminate equations, where the task is to find integer solutions for equations with multiple variables. Brahmagupta provided solutions for quadratic indeterminate equations.

These contributions from the Indian mathematical tradition laid the foundation for many mathematical concepts and techniques used globally today. The ancient Indian mathematicians' innovations and discoveries continue to inspire and influence the study of mathematics worldwide.

Indian Knowledge System in Architecture:

The Indian knowledge system in architecture is deeply rooted in the country's rich cultural, historical, and religious heritage.

Vernacular Architecture: India has a diverse range of vernacular architectural styles, varying from region to region based on climate, materials, and cultural preferences. Examples include the traditional mud houses in rural areas, havelis in Rajasthan, and wooden houses in Himachal Pradesh. Vernacular architecture represents sustainable practices and local wisdom.

Temple Architecture: Indian temple architecture is renowned for its intricate carvings, majestic entrances, and precise alignment with cosmic principles. Different regions have distinct temple styles, such as Dravidian architecture in South India (characterized by towering gopurams) and Nagara architecture in North India (featuring curvilinear spires).

Mughal Architecture: Mughal architecture, a blend of Indian, Persian, and Islamic styles, flourished during the Mughal empire. Examples include the Taj Mahal, Red Fort, and Jama Masjid in Delhi. Mughal architecture is characterized by symmetrical layouts, bulbous domes, and elaborate ornamentation.

Indo-Islamic Architecture: Indo-Islamic architecture developed under various dynasties in medieval India, combining Islamic architectural elements with Indian influences. It is visible in structures like the Qutub Minar in Delhi and the Adalaj Stepwell in Gujarat, showcasing intricate geometric patterns and arches.

Colonial Architecture: British colonial rule in India left a significant impact on architecture. Colonial buildings, such as government offices, churches, and railway stations, often feature

neoclassical, Gothic, or Indo-Saracenic architectural styles.

Palace Architecture: India is home to several magnificent palaces, reflecting the architectural grandeur of royal families. Examples include the City Palace in Udaipur, Mysore Palace, and Ujjayanta Palace in Tripura. These palaces showcase opulent designs, courtyards, and ornate interiors.

Modern and Sustainable Architecture: Contemporary Indian architects blend traditional principles with modern designs, creating sustainable and eco-friendly buildings. They incorporate concepts from Vastu Shastra (traditional architectural guidelines) and emphasize eco-conscious materials and energy-efficient designs.

Urban Planning: Ancient Indian cities like Mohenjo-Daro and Harappa in the Indus Valley Civilization exhibit advanced urban planning with well-organized streets, drainage systems, and public spaces. Today, urban planners draw inspiration from these ancient cities to create sustainable and well-designed urban environments.

Indian architecture continues to evolve, embracing innovative designs while preserving its cultural and historical roots. Architects and urban planners in India draw from the country's rich architectural heritage to create spaces that are functional, aesthetically pleasing, and culturally significant.

Indian knowledge System in Innovation

The Indian knowledge system has played a innovative role in the 21st century.

India has a rich heritage of traditional knowledge systems such as Ayurveda, Yoga, and meditation. These have gained global recognition and have been a source of innovation in the fields of healthcare and wellness.

India's IT sector has been a driving force in the global tech industry. Indian IT professionals and software companies have been instrumental in developing innovative solutions, software, and technologies used worldwide. The Indian Space Research Organisation (ISRO) has made remarkable advancements in space technology. India's Mars Orbiter Mission, Chandrayaan missions, and the development of low-cost satellite launch technology are examples of its contributions to innovation in space exploration. India has been a pioneer in renewable energy technologies, especially in solar and wind energy. Innovations in solar power and the "Make in India" initiative have contributed to the growth of sustainable energy solutions.

India's pharmaceutical industry has been a leader in the production of generic medicines and vaccines. This has had a significant impact on global healthcare by providing affordable access to essential medications. Indian universities and research institutions have made notable contributions to scientific research and

innovation. Collaborations with international partners have further accelerated innovation in various fields.

India's traditional arts and crafts have found new life through innovative design and marketing. Handicrafts, textiles, and jewelry have gained recognition in global markets. India has been at the forefront of healthcare innovations, with startups and research institutions working on solutions like telemedicine, affordable medical devices, and AI-powered diagnostics. Innovation in agriculture, including precision farming and the development of drought-resistant crops, has been crucial to address food security challenges in India and beyond.

In summary, India's knowledge system has played a vital role in fostering innovation in various sectors during the 21st century. Its rich cultural heritage, technological advancements, and contributions to global research and development have made it a significant player in the global innovation landscape.

Mitigation Strategies to preserve and relevance of Indian knowledge system

To mitigate the risks and challenges facing the Indian knowledge system and ensure its preservation and continued relevance, several strategies can be implemented:

Legal Protection: Strengthen and enforce legal frameworks for the protection of indigenous knowledge, traditional cultural expressions, and intellectual property rights. This includes implementing measures to prevent misappropriation and unauthorized use of traditional knowledge.

Traditional Knowledge Documentation: Continue efforts to document and digitize traditional knowledge through initiatives like the Traditional Knowledge Digital Library (TKDL). This documentation not only safeguards the knowledge but also facilitates its accessibility for research and innovation.

Community-Based Management: Empower indigenous communities to be stewards of their knowledge. Involve them in decision-making processes, and respect their rights and interests regarding the use and sharing of their knowledge.

Benefit-Sharing Agreements: Establish clear benefit-sharing mechanisms for any commercial or research activities that utilize traditional knowledge. Ensure that communities receive a fair share of benefits derived from their knowledge.

Education and Awareness: Promote awareness and education about indigenous knowledge systems within indigenous communities and among the general public. Develop curricula that integrate traditional knowledge into formal education systems.

Research and Innovation: Encourage research that combines traditional and scientific knowledge to address contemporary challenges, such as

sustainable agriculture, natural resource management, and healthcare. Support innovation that builds upon traditional practices.

Collaborative Research: Foster collaborations between indigenous communities, researchers, and institutions to document, validate, and enhance traditional knowledge. Ensure that research is conducted with the informed consent and active participation of indigenous knowledge holders.

International Cooperation: Engage in international forums and agreements related to traditional knowledge protection and benefit-sharing to leverage global efforts and best practices.

Cultural Preservation: Recognize that indigenous knowledge is often deeply intertwined with cultural practices and beliefs. Efforts to preserve knowledge should also include the preservation of cultural heritage and languages.

Community-Based Intellectual Property Rights: Explore the establishment of sui generis systems for protecting indigenous knowledge that are more aligned with the collective and communal nature of traditional knowledge systems.

Access and Sharing: Balance the need for protection with the importance of sharing knowledge for the benefit of humanity. Develop mechanisms for responsible access to traditional knowledge for research, education, and cultural exchange.

Capacity Building: Build the capacity of indigenous communities to engage in negotiations, manage their intellectual property, and make informed decisions regarding their knowledge.

Mitigating the risks to Indian knowledge systems involves a multi-pronged approach that combines legal, cultural, educational, and collaborative efforts. It requires a commitment to respecting the rights and sovereignty of indigenous communities while recognizing the value of their traditional knowledge in addressing contemporary challenges.

Conclusion -

While these indigenous knowledge systems have made significant contributions, there is increasing recognition of the need to integrate them with modern scientific and technological advancements for sustainable development and conservation of traditional wisdom. Collaborative efforts between traditional knowledge holders and modern scientists can lead to innovative solutions that benefit both society and the environment.

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A Study of National Education Policy as an Innovations in Indian Knowledge and Tradition

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Abstract

National Education Policy envisions an education system embedded in Indian morality that contributes directly to transubstantiating India, that's Bharat, sustainably into an indifferent and vibrant knowledge society, by furnishing high- quality education to all, and thereby making India a global knowledge superpower. The vision of the Policy is to install among the learners a deep- confirmed pride in being Indian, not only in study, but also in spirit, intellect, and deeds, as well as to develop knowledge, chops, values, and dispositions that support responsible commitment to mortal rights, sustainable development and living, and global well- being, thereby reflecting a truly global citizen. Therefore, present article focus on the role of national education policy as an innovation in Indian knowledge and tradition.

Key words: National Education Policy, NEP as an Innovations in Indian Knowledge and Tradition

Introduction

Education is fundamental for achieving full human potential for developing an equitable and just society, and promoting national development. It is also furnishing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of positive growth, social justice and artistic preservation. Universal high- quality education is the stylish way forward for developing and maximizing our country's rich bents and coffers for the good of the existent, the society, the country, and the world. With this purpose The National Education Policy 2020 will apply. It's the first similar document of the 21st century, aims to reconfigure the education system of India on the frame of Indian Knowledge System. This National Education Policy envisions an education system embedded in Indian morality that contributes directly to transubstantiating India, that's Bharat, sustainably into an indifferent and vibrant knowledge society, by furnishing high- quality education to all, and thereby making India a global knowledge superpower. The vision of the Policy is to install among the learners a deep- confirmed pride in being Indian, not only in study, but also in spirit, intellect, and deeds, as well as to develop knowledge, chops, values, and dispositions that support responsible commitment to mortal rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.

Objectives of research

- 1) To overview on Indian education system.
- 2) To explain the aims of new education policy.
- 3) To study of NEP as an Innovations in Indian Knowledge and Tradition.

Research methodology

The purpose of the study of national education policy and its role as an Innovations in Indian Knowledge and Tradition. To explain as the aims of new education policy can change Indian education system. for this paper researcher is used descriptive research methodology and scientific analysis. The researcher is used secondary data form reference books, research articles newspapers, journals, published and unpublished materials and also taken intimate facilities.

Inventions of classical languages and literature of India

By National Education Policy the three-language formula will continue to be enforced while keeping in mind the indigenous vittles, bourns of the people, regions, and the Union, and the need to promote multilingualism as well as promote public continuity. The significance, applicability, and beauty of the classical languages and literature of India also cannot be overlooked. Sanskrit, while also an important ultramodern language mentioned in the Eighth Schedule of the Constitution of India, possesses a classical literature that's lesser in volume than that of Latin and Greek put together, containing vast treasures of mathematics, gospel, alphabet, music, politics, drug, armature, metallurgy, drama, poetry, liar, and more written by people of colourful persuasions as well as non-religious people, and by people from all walks of life and a wide range of socio- profitable backgrounds over thousands of times. Sanskrit will therefore be offered at all situations of academy and advanced education as an important, enriching option for scholars, including as an option in the three- language formula. It'll be tutored in ways that are intriguing and existential as

well as contemporarily applicable, including through the use of Sanskrit Knowledge Systems, and in particular through phonetics and pronunciation.

Inventions of Curricular Integration of Chops and Capacities

By National Education Policy scholars can achieve a large quantum of inflexibility in choosing their individual classes, certain subjects, chops, and capacities should be learned by all scholars to come good, successful, innovative, adaptable, and productive mortal beings in moment's fleetly changing world. In addition to proficiency in languages, these chops include scientific temper and substantiation- grounded thinking, creativity and ingeniousness. By National Education Policy scholars can achieve knowledge and practice of mortal and indigenous values; gender perceptivity; Abecedarian Duties; citizenship chops and values; knowledge of India; environmental mindfulness including water and resource conservation, sanitation and hygiene; and current affairs and knowledge of critical issues facing original communities, States, the country, and the world.

Inventions of knowledge from ancient India

'Knowledge of India' will include knowledge from ancient India and its benefactions to ultramodern India and its successes and challenges, and a clear sense of India's future bourns with regard to education, health, terrain, etc. These rudiments will be incorporated in an accurate and scientific manner throughout the academy class wherever applicable; in particular, Indian Knowledge Systems, including ethnical knowledge and indigenous and traditional ways of literacy, will be covered and included in mathematics, astronomy, gospel, yoga, armature, drug, husbandry, engineering, linguistics, literature, sports, games, as well as in governance, polity, conservation. Specific courses in ethnical ethno-medicinal practices, timber operation, traditional crop civilization, natural husbandry, etc.

To promote India's art and culture

The preservation and creation of India's artistic wealth must be considered a high precedence for the country, as it's truly important for erecting the nation's identity. Understanding its significance at the transnational forum and with the spirit of creating artistic bonds and creation of Indian culture. National Education Policy recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would mean including simple conditioning, like traveling by scholars to different corridor of the country, which won't only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions and knowledge of different corridor of India. High- quality programmes and degrees in restatement and Interpretation, Art and

Museum Administration, Archaeology, Artefact Conservation, Graphic Design, and Web Design within the advanced education system will also be created. In order to save and promote its art and culture, develop high- quality accoutrements in colourful Indian languages, conserve artefacts, develop largely good individualities to curate and run galleries and heritage or sightseer spots, thereby also extensively strengthening the tourism assiduity.

Technology Use and Integration

The Digital India Campaign is helping to transfigure the entire nation into a digitally empowered society and knowledge frugality. While education will play a critical part in this metamorphosis, technology itself will play an important part in the enhancement of educational processes and issues; therefore, the relationship between technology and education at all situations is bidirectional. Use and integration of technology to ameliorate multiple aspects of education will be supported and espoused, handed these interventions are strictly and transparently estimated in applicable surrounds before they're gauged up. An independent body, the National Educational Technology Forum, will be created to give a platform for the free exchange of ideas on the use of technology to enhance literacy, assessment, planning, administration, and so on, both for academy and advanced education. The end of the National Education Policy will be to grease decision making on the induction, deployment, and use of technology, by furnishing to the leadership of education institutions, State and Central governments, and other stakeholders, the rearmost knowledge and exploration as well as the occasion to consult and partake stylish practices.

Conclusion

National Education Policy 2020 is the first education policy of the 21st century and aims to address the numerous growing experimental imperatives of our country. The National Education Policy bears evidence to the fact that the Indian Education System needs a complete overhaul. It recognizes that the distinct place that India holds at the global stage is only because of its artistic developments, civilizational values and rich literature in all the fields. This Policy proposes the modification and redoing of all aspects of the education structure, including its regulation and governance, to produce a new system that's aligned with the aspirational pretensions of 21st century education, while erecting upon India's traditions and value systems. The National Education Policy 2020 Education Policy lays particular emphasis on the development of the creative eventuality of each existent.

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Artificial intelligence's role in the transformation of India's education system: pros and cons

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Abstract

Indian Education System started 5000 years back on the lines of the Vedic system. India Is known for its literal work and the dignified scholars it has produced over time. Glancing at the present state of education in the modern-day world and amid COVID-19 were reaching out to children and continuing with the curriculum, and keeping in mind the health of students AI can improve our teaching methods. Artificial Intelligence makes learning interesting and interactive in nature with the help of Chatbots, Virtual Reality (VR), and Learning Management Systems (LMS) A.I. helps teachers in delivering their classes. It helps them to spend more time with students and do all the work on behalf of a teacher correcting and maintaining the records of students. The test can be easily designed to assess the student's performance. The question is often raised as to whether Artificial Intelligence will replace Teachers and Facilitators imparting education, but this is just a half-truth. A.I. really modifies the working of teachers, assisting them in their classroom proceedings. No A.I. can replace teachers and educators although it can help evolve the education system of India and any country in this regard.

Keywords: Artificial Intelligence (A.I), education, Learning Management System (LMS), Virtual Reality (VR)

Introduction

Technology plays an increasingly important role in education but, as a result of the increased availability of sensors and web-based curricula, its use is more widespread than at any time. There are a wide variety of ways that artificial intelligence is being employed in the education sector to help students learn. Here are a few technologies with AI that are already affecting and will affect education in every way:

Chatbots

One such example of artificial intelligence education apps that students will soon have access to is chatbots. These modes of communicating with robots aimed at helping children understand certain topics, like math or reading comprehension, are also becoming more and more widespread in classrooms where kids can communicate on an iPad or laptop. It's possible chatbot tutors could do more than just help students learn new concepts; there may even come whenever the analysis is needed. Chatbots are the future of all technical roots. It reduces the cycle of tasks assigned to teachers. The email communications of teachers and parents, while they meet each other, could also be replaced with chatbots, which are used in the classroom.

Virtual Reality (VR)

An immersive environment allows learners to be totally immersed in a self-contained artificial or simulated environment while experiencing it as real. Immersive environments can offer learners rich and complex content-based learning while also helping learners hone their technical, creative, and problem-solving skills. Because immersive environments are so rich and visual, users tend to be highly engaged. There are several types of immersive environments: virtual worlds, web-based video games, massively multiplayer online games, multiuser virtual environments, simulations, and augmented reality. Virtual reality is next with its ability to introduce practical knowledge to the classroom without actually leaving it, making the educational experience invaluable. VR can augment traditional education through simulations and virtual experiences.

Many potential benefits of introducing VR in education and training have been already identified:

- Virtual platforms and headsets are the new tools for inspiring creative learning;
- Education which is not possible in reality, will be possible in virtual reality;
- Virtual game-based experience increases students' motivation;

- Collaboration in virtual reality classroom fosters social integration of learners;
- Learning is achieved by direct interaction, not by mouse clicks;
- The results from the learning process are truly assessed.

Virtual reality, which is used in classrooms for everything from teaching history to helping students with their math skills, has emerged as one of the latest educational innovations. Virtual Reality is a three-dimensional computer-generated environment that people can explore and interact with. Virtual learning teachers have found new ways of integrating experiences into teaching, which are truly shaping what it means to be a student. Virtual reality is an excellent way to enhance the connection between students and one another. Students can explore things that they may never have the opportunity to see or learn about in real life. The same goes for teachers. There is a lot more interesting way for teachers to teach students. Anybody who has had the chance to try Virtual Reality knows it's a lot more fun than sitting on a screen or in a computer-generated environment. Just two benefits for students and teachers are increasing engagement, as well as deep understanding.

Learning Management System (LMS)

Maintaining up to date with educational advances is one of the most important things in this age of technology. The use of learning management systems is a part of this progress. A learning management system provides a centralized and easy way to manage all the school's online activities. These tools can be used for a variety of purposes, but they are often utilized to achieve the following:

- Assign coursework
- Communicate with students and parents
- Track student progress
- Generate reports on student performance

The common features of any education learning management system are listed below:

1. Content management: Course material like lecture notes and soft copies may be included as a part of the suite and uploaded in parallel with classroom teaching.
2. Assessment and testing: All assignments shall be distributed and submitted online using LMS and quizzes/tests shall be instantly graded.
3. Curriculum Planning: LMS shall be used for designing of course plans and lecture schedules.
4. Reports generation: LMS provides nice reporting tools with options to customize student's reports.
5. Communication and collaboration: Some learning management systems provide chat,

Utkarsh J. Ahire

forums as communication tools, and wiki, blogs, and glossary as collaborative tools.

6. Classroom and college announcements: All classroom and college news in form of updates are visible in announcements in LMS.

These systems allow all aspects of a course to be contained within one space, from lessons and assignments to assessments and grading. This means that teachers can provide feedback on any assignment or assessment at any time. Without having to wait for the end of a semester, students can access their grades immediately.

Using these teaching and learning management systems with the software for artificial intelligence can teach you a lot of things. Using an artificial intelligence, virtual tutor that can help students solve their problems and provide them with the right answer to a problem is just what they need. In the case of artificial intelligence, one can also build a school management system that is able to see how students think and help them improve their skills. There are now LMS systems that can help teachers in creating content, help parents in monitoring their child's progress in the system, and assess them with an AI engine. Teachers were able to reduce classroom management time, helping parents understand their child's progress more effectively and reducing the workload of teachers. LMSs are a priceless resource to teachers and students alike.

Robotics

Robotics with Artificial Intelligence in education has increased over the last few years. It is now being used by both teachers and students to help in education, which can be seen to improve student engagement and safety. Robotics is a necessity in education, given the evolution of artificial intelligence.

Robots are a crucial component of artificial intelligence systems, and the development of educational robots with students as their target has helped to realize the innovation of educational systems and modes. The current state of development has led to the formation of the robot, robot-assisted teaching, robot-assisted testing, and robot-agent transactions between teachers and students. When the demonstration is over, the students will have demonstrated how applicable the procedural principles they studied are in real life.

Teachers can also use robotics as an instructional tool to teach lessons about current events or even math concepts like fractions. As technology evolves, it will undoubtedly play an essential role in people's lives.

Challenges

It is the students and teachers who face the challenge of learning how to use technology. The problem is that teaching staff don't know how to use this new technology at school, in most cases. That's why they have to figure that out on their own or look for someone who knows them. Teachers need help understanding how these tools can be used to provide students with an engaging learning experience.

Pros and Cons of Artificial Intelligence in Education

The advantages and disadvantages of artificial intelligence in the field of education are, however, far from clear. There are advantages and disadvantages for both sides, but they're not all the same. In an increasingly diverse range of areas, including education, artificial intelligence is replacing humans. It's not only the teaching, it's also how we grade papers, write essays and advise students on what to study next.

Pros: Artificial intelligence in education is a hotly debated topic right now. People are divided about whether AI should be used to educate students. Many individuals believe that artificial intelligence will replace teachers and eliminate the human element of education. However, there are numerous benefits to using AI in education. AI can grade papers and essays far more quickly than humans. This will allow teachers to spend more time working with pupils on critical thinking and critical analysis abilities. This would also allow teachers to concentrate on specific children who might benefit from their assistance. AI can also help human teachers by providing insights into student learning styles and delivering hands-on feedback to students who need additional practice with specific topics or abilities. AI doesn't get tiring, doesn't have mood swings, and doesn't have a life outside of education.

Cons: However, In the education sector as well, there are some negative aspects to artificial intelligence. A robot doesn't have to be a better teacher than human beings. The disadvantages of AI for education are that technology may not be able to succeed all the time in teaching. Emotions are not felt by AI. The AI doesn't seem to care about the students when they are being lectured or when they have questions or don't get answers. In universities around the world, where scientists are working on artificial intelligence technologies that improve people's lives, this emerging field is being studied. When artificial intelligence adapts the pace of learning for each individual student based on his or her performance, it may also be used to help students learn adaptively. Meanwhile, some people were worried about the

impact of artificial intelligence at a time when human interaction is diminishing.

Conclusion

AI will benefit parents who are always concerned about their children's social life. The technology of Artificial Intelligence makes it possible for parents to monitor their children's interactions online, more carefully than ever before. The school is using software for analyzing data such as students' capacity to comprehend the content of lessons, so they can be grouped according to their needs. We're able to travel 24 hours a day, thanks to AI. Internet connection to teachers and lessons at any time of day or night. AI can be used as an educational tool that helps students reach their objectives by providing personalized feedback on homework, quizzes and other activities based on artificial intelligence algorithms. AI brings the ability to have 24/hr. Access to teachers and classes at all times, wherever you are. AI can serve as an educational tool to assist students in reaching their goals by providing individualized feedback on homework, exams, etc. through the use of artificial intelligence algorithms. Artificial Intelligence has the potential to make everyone's life easier through automation as it can do menial tasks, so you don't need to spend time doing mundane activities like organizing emails or finding files. A crucial driver of education change is artificial intelligence. There are a lot of benefits to AI. Equal access for all pupils regardless of their learning ability or disability; provides a huge advantage since not every student learns at the same rate, nor does he have similar skill sets. With the help of AI, students can make their future bright.

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Chemistry in India (From Ancient to Modern)

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Abstract:

Chemistry, as we understand it today, is a comparatively young discipline; it took shape in 18th century Europe, after a few eras of alchemical tradition, which was partly borrowed from the Arabs. Other cultures especially the Chinese and the Indian had alchemical traditions of their own, which included much information of chemical processes and techniques. Metallurgy brought about important changes in human society, as it gave rise to a whole new range of weapons, tools and implements. Some of these had been made in stone earlier, it is true, but the result was coarser as well as heavier. Metal, precious or not, is also a prime material for ornaments, and thus enriches cultural life. Metallurgy may be defined as the extraction, purification, alloying and application of metals.

Rasayana:

Chemistry was called as '*Rasayan Shasthra*' in ancient India. Indian ideas about chemistry were not confined to abstract level rather they grew by experimentation. In ancient India, chemistry was evidently developed to a significant level. Many medicinal texts such as *Charaka Samhita* included *Rasayan Shasthra* which describes itself on chemistry and its practices. There are descriptions of a chemical laboratory in a text called **Rasaratna Samuchaya**.

In ancient times, the areas of applications of chemistry in India were extracting metals from ores, making pottery and glass, making dyes and pigments, fermenting beer and wine, extracting chemicals from plants for medicine and perfume, rendering fat into soap, and making alloys like bronze.

Chemistry in Early Literature:

Kautilya's *Arthashastra* is a well-known text of governance and administration authored probably in the 3rd or 4th century BCE, during the Mauryan era. It has much data on prevailing chemical practices, in particular a long section on mines and minerals. It also discusses the various characteristics of precious stones (pearl, ruby, beryl, etc.), details of fermented juices (from sugarcane, jaggery, honey, jamba, jackfruit, mango, etc.), and oil extraction.

Varāhamihira's *Brhat Samhitā*, an encyclopaedia of sorts composed in the 6th century CE, has a chapter on the preparation of numerous perfumes out of sixteen fundamental substances mixed in different proportions. Indeed, perfumery and cosmetics formed a major branch of chemical practices in classical and medieval India.

Early Chemical Techniques:

In India, we can trace techniques all the way to the Indus civilization and its antecedents. The Harappans' metallurgical skills have been described in the module on **Metallurgy in India**. Pottery called for a control of processes such as heating, fusion and evaporation. Harappans also experimented with various mortars and cements made of burnt limestone and gypsum, among other components. Finely crushed quartz, once fired, produced faience, a synthetic material; it was then coated with silica (perhaps fused with soda) to which copper oxide was added to give it a shiny turquoise glaze. Faience was then shaped into various ornaments or figurines. The addition of iron oxide gave a greenish blue tint to glazed pottery, while manganese oxide resulted in a maroon colour.

Laboratory and Apparatus:

Besides mortars (of stone or iron) and pestles, bellows (to heat the furnaces), sieves, pans, tongs, scissors and earthen or glass vessels, the apparatus included specialized instruments ingeniously developed for heating, steaming, distilling, triturating or extracting substances. Let us mention just a few of them:

- **The mūsa yantra or crucible**, usually made of white clay or of the earth of an anthill mixed with rice husk, iron dust, chalk, etc.; such crucibles would have various shapes and sizes, depending on their application;
- **The koṣṭhi yantra**, for the extraction of 'essences' of metals, consisting of two rimmed vessels, with fire urged from above and a side blower; besides the metals, the vessels would be filled with charcoal;
- **The svedanī yantra**, a big earthen vessel used for steaming;

- **The dolā yantra**, in which a pot is half-filled with a liquid and a suspended substance absorbs the liquid's vapours **the pātana yantra**, for sublimation or distillation; it could be upward, downward or sideways; the second was the ādhana yantra, in which a paste of mercury was coated at the bottom of the upper vessel, allowing vapours to descend into the lower vessel and combine with substances kept there;
- **The dhūpa yantra**, used for fumigation of gold leaves or silver foils with fumes of sulphur or other substances. Altogether, India's chemical traditions were rich and varied, and fused elaborate techniques with a spiritual component. [1].

Developments In Metallurgy:

Copper Metallurgy in Ancient India:

Harappan Civilization:

The growth of copper metallurgy had to wait for another 1,500 years; that was the time when village communities were developing trade networks and technologies which would allow them, centuries later, to create the Harappan cities [2]. Among the metal artifacts produced by the Harappans, objects discovered are spearheads, arrowheads, axes, chisels, sickles, blades (for knives as well as razors), needles, hooks, and vessels such as jars, pots and pans, besides objects of toiletry such as bronze mirrors; those were slightly oval, with their face raised, and one side was highly polished. [3].

Gold Metallurgy:

The noble metals, gold and silver, are found in the native state, and as is well known, gold and silver were used to make jewelry and sheet metal due to the great ductility and luster of the pure metals. Some of the early rich finds of gold artifacts were from the cemeteries in Bulgaria in Europe (5th millennium BC) with accouterments of hammered and sheet gold. Some of the most elegant gold vessels made by the repousse technique come from the Mesopotamia [4].

Iron Metallurgy in ancient India:

While the Indus civilization belonged to the Bronze Age, its successor, the Ganges civilization, which emerged in the first millennium BCE, belonged to the Iron Age. But recent excavations in central parts of the Ganges valley and in the eastern Vindhya hills have shown that iron was produced there possibly as early as in 1800 BCE [5].

Zinc:

India was, in any case, the first country to master zinc distillation, and it is estimated that between 50,000 and 100,000 tons of zinc was smelted at Zawar from the 13th to the 18th century CE! British chroniclers record continuing production there as late as in 1760; indeed, there is documentary evidence to show that an Englishman learned the technique of downward distillation there

in the 17th century and took it to England—a case of technology transfer which parallels that of wootz steel [6].

Social Context of Metallurgy in Ancient India:

We should finally note that most of India's metal production was controlled by specific social groups, including so-called tribes, most of them from the lower rungs of Indian society. For instance, the Agarias of Uttar Pradesh and Madhya Pradesh are reputed iron smiths, and there are still such communities scattered across Jharkhand, Bihar, West-Bengal, Kerala and Tamil Nadu. Together, they contributed substantially to India's wealth, since India was for a long time a major exporter of iron [7, 8].

Nuclear Energy:

Ramayana and Mahabharata have many unambiguous references to nuclear weapons. The after-effects of weapons like Brahmastra and Pashupatastra mentioned in these texts are exactly similar to the annihilation effects caused by the atomic bombs. So, nuclear energy was known and harnessed thousands of years ago! In fact, many believe that the '**SHIVALINGA**' is nothing but a nuclear reactor and lord Shiva represents nuclear energy! The following points help us understand why atomic energy is compared to Lord Shiva [9]

We have stories in Ramayana, where Ravan, a very mighty king, was a devotee of Shiva and did tapasya (*to practice austerity*) just to get a Shivalinga – a stone that was a symbol of the lord's radiance. It was a powerful object and had the power to make Ravana invincible! Nations with nuclear power are always considered formidable. It is possible that the power Ravana was seeking was nuclear power! [10]

Alchemy:

Nagarjuna was considered a great alchemist of India. He is the author of an Indian text '**Rasa Shastra**'. Recently, Krishna Pal Shastri, an Ayurvedic practitioner, produced gold from Aluminum chloride, mercury, and some secret powder. Around the 1980s, he continued to make gold in this way at the rate of 3 grams per week. The marble plaques in Visvanath temple at Benares University and Birla temple in Delhi bear witness to the gold produced by his alchemical feats [11]. The advancement of ancient chemical science finds expression in other fields, like the distillation of perfumes and fragment ointments, the manufacturing of dyes and chemicals, weaponry, and the preparation of pigments and colors [12].

Conclusion:

The above discussion indicates that there is rising sign to propose that ancient Indian metallurgists have also made major contributions which deserve their place in the metallurgical history of the world along with other great civilizations of the world. As clearly seen in the case

of zinc and high-carbon steel, ancient India contributed significantly to their modern metallurgical advances and in the development of metallurgical study leading to the Industrial Revolution in Europe.

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Chankya's Six Management Principles: Need of time

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Abstract-

The modern world corporate management and corporate governance is dominated by the theories and practices of the US management system, Japanese management system and European management system. The Japanese have established the dynamics of human capital and knowledge management as the best practices for any organisation. The soundness of Japanese management is derived from its treasure. European and the US management system are known for their contributions in the industrialisation process of the world in the 19th and 20th centuries in the pre and post colonialism era. Indian oriental texts, gospels, practices, concepts, doctrines and arguments through logic are the sources of many Japanese management philosophies. India is a store house of pragmatic management and flawless applications in its ancient history phases. Proved and applied management of Chanakya during the Maurya Dynasty is historically evident as the best ever management practice India has followed. Arthashastra and Chanakya Sutras are the two gospels of Indian management, enough to establish (IMS) the Indian management system for the modern corporate world of 21st century. From the prospect of Chanakya, he believed that rewarding those who are performing well motivates them to continue doing their best. It is important to hold people accountable for their work – both good and bad. The ones performing well must be encouraged and rewarded. The underperformers must be put on the spot.

Key Words- Management, Leadership Chanakya the Management Guru

Introduction

Chanakya also known as Kautilya or Vishnugupta, is considered as one of the most intelligent people in the Indian history. He was born in 370 BC at Patliputra, the capital of Magadha. In modern days, Patliputra is known as Patna, the capital of Bihar, India. He was born in a Brahmin family. It is said that Chanakya had a full set of teeth at the time of his birth. In ancient times, it was considered as a sign of becoming a king. However, being a Brahmin, he could never become the Emperor. But, he was destined to rule the world one day and he really did. He was very shrewd and blunt right from his childhood.

Chanakya's father Rishi Chanak was a teacher. Chanakya's education was pursued at Takshashila University. He started studying Vedas at a very young age. He memorized all the Vedas. He studied religion, politics and economics in great detail. Later Chanakya served as a professor in Takshashila University. Chanakya was a very intelligent person and role model for his students. His students were very dedicated towards him and were ready to do anything on his orders. Later, Chanakya left the university to make a mark in the politics of Patliputra. Dhanananda, the king of Patliputra, introduced him in the committee of charity and made him its president later on. However, the king started disliking him due to his

ugly looks and blunt nature. Chanakya never used to praise the king and always speak rudely. So, the king removed him from his post. Chanakya decided to take the revenge. Once he met Chandragupta and decided to get him to kingship. Then started the great saga of Chandragupta and Chanakya. Chanakya became the heart and soul of Magadha kingdom. He not only made Chandragupta an ultimate king but also surprised the world by his political, economics and management knowledge. His creations 'Arthshastra' and 'Nitishastra' are considered as masterpieces. Chanakya used to add a little poison to Chandargupta's food without his knowledge to make him immune to poison. Chandargupta once gave some of his food to his pregnant wife who died on the spot. However, Chanakya managed to save the child named 'Bindusara' who later became Emperor of Magdha. Bindusara's minister Subandhu did not like Chanakya. It is said that Subandhu killed Chanakya around 283 BC.

Research Methodology

The research methodology used for writing this paper is secondary sources.

Introduction:

A great many books have been written about Chanakya, also known as Kautilya, Vishnu Gupta, and Vishnu Sharma. Having lived over 2,000 years ago his legend continues to fascinate

numerous readers even to this day. Perhaps, unfortunately, he's best known to have "avenged" the then ruler of *Magadha* – *Dhanananda* – by "helping" *Chandragupta Maurya* ascend to the throne. This presumed ability of his – vengeance – seems to be the most enthralling aspect to most people. His *Arthashastra* – a great many believe – is a work that highlights scores of ways to dethrone kings and usurp kingdoms. Owing to this misplaced belief, he is often, and unwisely, compared to Niccolo Machiavelli. Alas, nothing could be farther from the truth.

Chanakya was never a vengeful person, nor a ruthless and bloodthirsty conspirator, as is wrongly believed. He wasn't even "Prime Minister" of the *Mauryan* empire under *Chandragupta Maurya*. He was a wise sage who arduously studied, respected and followed the teachings and wisdom of the *Vedas* all his life. And the *Vedas* do not endorse unwise qualities like vengeance. They are always shunned, beyond doubt. This becomes clearer when we measure the life of *Chanakya* according to six *Vedic* principles:

1. *Vasudha-Eva-Kutumbakam* (Accepting the whole world as one and one's family), 2. *Samarpan Bhaav* (Dedication), 3. *Lokasangraha* (Welfare of all beings), 4. *Shubh Laabh* (Ethical Profits), 5. *Nishkaama Karma* (Deeds without greed) and 6. *Ati-Hyaastha-Varjayet* (Shunning extremes).[\[rml_read_more\]](#)

- 1) ***Vasudha-Eva-Kutumbakam*** (Accepting the whole world as one and one's family): Yes, he did support the idea of nation-states, yet he strongly upheld the *Vedic* belief that the nation-state exists "not just for the welfare of its citizen" but also for "the whole world." This is evident from the very first stanza of *Arthashastra* "I, therefore, write this book for the greater good and uplifting of the world..."
- 2) ***Samarpan Bhaav* (Dedication)**: When he saw the sad state of his nation, *Chanakya* was depressed and sought revocation; but then realized, contemplating on *Vedic* literature, that vengeance is dangerous and that it can harm even the one who is holding on to it. He then decided to work towards establishing a single empire for the greater good. He certainly dedicated many years of his life to it. Legend has it that he found *Chandragupta* when was a teenager, then educated, nurtured and mentored him to be a King. It was more over a span of two decades, than less. This is a true testimony of *Samarpan Bhaav* (Dedication),
- 3) ***Lokasangraha*** (Welfare of all beings): According to *Chanakya*, this was the supreme duty of everyone, including the King. This is evident in Book I of the *Arthashastra* which reads "... King... shall maintain his subjects in the observance of their respective duties, by exercising authority; keep

up his personal discipline by receiving lessons in wisdom, and endear himself to the people by bringing them wealth and doing good to them." Also, "... The King shall keep away from hurting the innocent and their property; avoid not only lust, even in a dream, but also falsehood, haughtiness, and evil proclivities; and keep away from unrighteousness and uneconomical transactions."

- 4) ***Shubh Laabh*** (Ethical Profits): This was the key economic objective which the King had to observe, not just among his subjects but, also for himself. In Chapter 7 of *Arthashastra* he notes "Not violating righteousness and economy, he shall enjoy his desires. Then he shall never be devoid of happiness. He may enjoy in an equal degree the three pursuits of life, charity, wealth and desire, which are interdependent on each other. Anyone of these three, when enjoyed in excess, hurts not only the other two but also itself." *Chanakya* held that wealth, is as important as desire and charity; but that this is possible only by "wealth of their knowledge".
- 5) ***Nishkaama Karma*** (Deeds without greed): Apart from other altruist attitudes, *Chanakya* upheld the idea of deeds without greed. While mentioning the "Duties of the King" he writes, "A King by overthrowing the aggregate of the six internal enemies, namely lust, anger, greed, vanity, haughtiness and overjoy, shall restrain the sense organs..." Also, in the same chapter, "The King may enjoy his desires, but only by ensuring non-violation of righteousness, and no harm to the economy."
- 6) ***Ati-Hyaastha-Varjayet*** (Shunning extremes): Balance is a key ingredient according to teachings of *Kautilya* in *Arthashastra*. While he clearly shunned negative qualities, he also mentioned that people should shun extreme and senseless goodness for the sake of unworthy people. "In the woods", he says "that tree is chopped first which is straight." The essence of life, according to him was "finding the balance between good and bad actions, happiness, and unhappiness, pain and pleasure, cries and laughter."

Conclusion

The ultimate question that concerns people is whether *Chanakya* followed these ideals himself. It's easier to write and teach than to actually practice oneself. Interestingly, *Chanakya* was a recluse. He was never married and, had no children. Many legends, including those critical of him, agree that he left the capital as soon as he found a credible prime minister for his disciple and new King – *Chandragupta Maurya*. Even when he stayed in the capital of *Mauryas* – *Pataliputra* (modern day Patna) – he lived in a shed like a hermit and never

sought the luxuries of the palaces. While he wrote about the materialistic aspects of life, he lived like a lotus in a dirty pond – untouched by the desires of life. It's hard to comprehend a genius like *Chanakya*; but it's even harder to understand the absolute qualities of selflessness, dedication, and brilliance of this legend.

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Role of Dr. Babasaheb Ambedkar in Women Empowerment

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Abstract: -

Dr. Ambedkar – the determined fighter and a deep scholar has made significant efforts to lead the society on the path of Liberty, Equality and Fraternity. He was first Indian to break down the barriers in the way of advancement of women in India. He laid down the foundation of concrete and sincere efforts by codifying the common Civil Code for Hindus and other sections of the Indian society. The present paper is an attempt to highlight Dr. Ambedkar's view on women problems in pre and post independent India and its relevancy in present scenario. Dr. Ambedkar started his movement in 1920. He started fierce propaganda against the Hindu social order and launched a journal Mook Nayak in 1920 and Bahiskrit Bharat in 1927 for this purpose. Through its issues he put due stress on the gender equality and the need for education and exposed the problems of the depressed as well as women. The encouragement of Dr. Ambedkar to empower women to speak boldly was seen when Radhabai Vadale addressed a press conference in 1931. He strongly advocated for family planning measures for women in Bombay Legislative Assembly.

Key Words: Women Empowerment, Dr. Babasaheb Ambedkar's contribution in women empowerment, need of women empowerment.

Introduction:

Dr. Ambedkar – the determined fighter and a deep scholar, secured the highest academic honors from some of the most prestigious universities of the world. He made significant efforts to lead the society on the path of Liberty, Equality and Fraternity. It is proved by a recently conducted survey by „History TV 18 and CNN IBN“ in June 2012. „Who is the greatest Indian after Mahatma Gandhi?“ is the question asked from the people of India. The contestants include, First PM Jawahar Lal Nehru, Singer Lata Mangeshkar, Industrialist J.R.D.Tata, A.P.J.Abdul Kalam, Indira Gandhi and Vallbbhai Patel etc. The final cumulative ranking was conducted following the three ways poll; ranking by jury (online and on ground), ranking by popular votes and ranking by market research. Finally, Dr. B.R.Ambedkar declared as winner. Historian Ramchandra Guha stated on the declaration of results “Dr. Ambedkar’s legacy has been distorted to suit particular interests. He was a great scholar, institution builder and economic theorist”.

Objectives:

- 1) To study need of Women Empowerment.
- 2) To study role of Dr. Babasaheb Ambedkar in women Empowerment.

Methodology:

This paper is based on secondary data. Data is collected from research papers and articles.

Need of Women Empowerment:

Empowerment of women is not only imperative but also crucial for all-round

development of society and the nation as a whole. The issue of ‘women empowerment’ has become a central point in the programs and activities of the United Nations and other Government and Non-Government Organizations. Subsequently, it has also become a major concern of the social scientists, politicians, bureaucrats and researchers. But there is a lack of unanimity among the scholars in comprehending the term empowerment.

Social Empowerment:

Social Empowerment refers to the enabling force that strengthens women's social relations and their position in social structures. Social empowerment addresses the social discriminations existing in the society based on disability, race, ethnicity, religion, or gender. Empowerment as a methodology is often associated with feminism. Broadly put, the term empowerment is defined as “a multi-dimensional social process that helps people gain control over their own lives. It is a process that fosters power in people for use in their own lives, their communities and in their society, by acting on issues they define as important”.

Educational Empowerment:

“Traditional concepts recognize higher education as an instrument of personal development. It helps in growing an individual's intellectual horizons, wellbeing and potential for empowerment”. It is considered as the single most important instrument of sociopolitical and economic transformation. But the picture of women's educational empowerment is not rosy in India. “The recently released United Nations Development

Report 2011 ranked India 134 out of 187 countries. Without proper education to all children including girls, gender empowerment is not possible. This maxim - if one male child is literate personally he alone becomes educated but if one girl child is educated the whole family becomes benefited - has been realized by the national political leaders, policy makers, administrators and bureaucrats.

Political Empowerment:

Participation of women in the political field and in various decision-making bodies is an important tool for empowerment. The participation of women at all levels of governance structures is the highest need of this hour for women's actual empowerment. Alida Brill (2000) holds that, "Without our own voices being heard inside the government areas and halls of public policy and debate, we are without the right to accountability – a basic establishment of those who are governed." In other words, "Empowerment is not giving people power; people already have plenty of power, in the wealth of their knowledge and motivation, to do their jobs magnificently. We define empowerment as letting this power out". It encourages people to gain the skills and knowledge that will allow them to overcome obstacles in life or work environment and ultimately, help them develop within themselves or in the society.

Role of Dr. Babasaheb Ambedkar in Women Empowerment:

Dr. Babasaheb Ambedkar's perception on Women's problem emphasized on women's right to education right to property, involvement in the political process, gender equality which resembled with the global feminist demand. He started his movement in 1920 and believed in the strength of women and their role in the process of Social reform and progress of the society which can be achieved by accelerating male educations persuaded side by side with female education. To strengthen his movement and to raise the voice for liberation of women and promoting the need for women's education he started his owned newspaper MookNayak in 1920 and Bahishkrit Bharat 1927) to upgrade the social status and to motivate women to participate in social reform movements against social evils and demanded for their socio-economic rights as the societal positioning of the women were not par with men and were deprived from the basic rights, and were equated to animals and put to the lowest rung of humanity.

Dr Babasaheb was a great believer of women's organization and in their strength of improving the condition of the society and in his movement of 1920 as women actively participated and started acquiring confidence to voice their issue on various platforms by participating in satyagrahas and setting up women's association for untouchable women to spread education and awareness. In 1927

after getting nominated as a member of Bombay Legislative Council Dr. Babasaheb urged the need to recognize the dignity of women and supported maternity benefit bill for women labourers. His stand and argument was". It is in the interest of the nation that the mother ought to get certain amount of rest during the pre-natal period and also subsequently and the principle of the bill is based entirely on that principle, " That being so sir, I am bound to admit that the burden of this ought to be largely borne by the Government, I am prepared to admit this fact because of the conservation of the people's welfare is the primary concern of the Government, And in every country, you will find that the Government has been subjected to a certain amount of charge with regards to maternity benefit. In Indian Constitution, there are few articles exist that help the women of Indian society to improve their position and to compete with their male counterparts.

For example Article 14 – All are equal in the eyes of law and equally protected by the law. It means equal rights and opportunities in political, economic and social spheres. Article 15 prohibits discrimination on the ground of sex.

Article 15(3) enables positive discrimination in favour of women. Article 16 mentions there shall be equality of opportunity for all citizens in matters relating to employment or appointment to any office without any discrimination on the basis of religion, caste, creed and sex.

Article 24 prohibits the employment of children below the age of 14 years in factories, mines or in any other hazardous employment.

Article 39 and 39(d) state Equal means of livelihood and equal pay for equal work. As per article 41 the state shall guarantee within its economic limits to all the citizens, the right to work, to education and public assistance in certain cases.

Article 42 the state makes provision for Human conditions of work and maternity relief. Under article 44, the state provides a uniform Civil Code to all the citizens throughout the territory of India.

Article 46 – The state to promote with special care, the educational and economic interests of weaker section of people and to protect them from social injustice and all forms of exploitation.

Article 47 – The state to raise the level of nutrition and standard of living of its people and the improvement of public health and so on.

Article 51 (A) (C) – Fundamental duties to renounce practices, derogatory to the dignity of women. Article 243D (3), 243T (3) & 243R (4) provides for allocation of seats in the Panchayati Raj System.

Conclusion:

Dr. Babasaheb expressed his views on the state of life of all women. He stated that women must be treated equally and given equal prestige. He insisted on Hindu Code bill suggesting the basic

improvements and amendments in assembly. He also insisted and evoked all the parliamentary members to help to pass the bill in parliament. Eventually, he resigned for the same. The teachings and thoughts of Dr. Ambedkar are useful not only women but also all the Indian even today. His deep concern and feelings for all round development of women is expressed from his each sentence and word.

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Effect of Various Medicinal Plants on Diabetes

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Abstract:

In the last few years there has been an exponential growth in field of herbal medicine and these drugs are gaining popularity both in developing and developed countries because of their natural origin and less side effects. Many traditional medicines in use are derived from medicinal plants, mineral and organic matter. A number of medicinal plants, traditionally used for over 1000 years named Rasayana are present in herbal preparation of Indian traditional health care system. In Indian system of medicine most practitioners formulate and dispense their own recipes. The World Health Organization (WHO), has listed 21000 plants which are used for medicinal purpose around the world, among these, 2500 species are in India, out of which 150 species are used commercially. India is the largest producer of medicinal herbs and is called as Botanical Garden of the World. Current research focus on the plants use in treatment of diabetes mellitus, a major disease in the world, leading to huge economic losses.

Keywords: Medicinal plants, Anti-diabetic, Diabetes, India

Introduction

In the last few years there has been an exponential growth in field of herbal medicine and these drugs are gaining popularity both in developing and developed countries because of their natural origin and less side effects many traditional medicines in use are derived from medicinal plants, mineral and organic matter. A number of medicinal plants, traditionally used for over 1000 years named Rasayana are present in herbal preparation of Indian traditional health care system. In Indian system of medicine most practitioners formulate and dispense their own recipes. The World Health Organisation (WHO) has listed 21000 plants, which are used for medicinal purpose around the world. Among this, 2500 species are in India, out of which 150 species are used commercially on a fairly large scale. India is the largest producer of the medicinal herbs and is called as a Botanical Garden of the World. The current review focus on the plants used in the treatment of Diabetes mellitus, a major disease in the world, leading to huge economic losses.

Objectives

The aim of the review is to categorize and summarize the available information on medicinal plants with anti-diabetic property and suggesting out looks for future research.

To improve the health study of society.

To suggest the recommendation.

To improve the quality of human being as a member of society.

To aware the people about the use of Medicinal plants.

Materials and Method:

Publication regarding diabetes & effective plants were found from Science Journals such as science direct, Pub Med, Wiley, Scopus, Springer and Google.

List of scientifically investigated Medicinal plant

1) Mentha piperita; Diabetes mellitus (DM) is considered to be a syndrome associated with disorders in the metabolism of carbohydrates, lipids, and proteins caused by the absolute or relative lack of insulin.

The use of the *M. piperita* juice has potential as culturally appropriate strategy to aid in the prevention of DM, dyslipidemia, and its complications.

2) Azadirachta indica: Neem has special importance in Indian households. The medicinal herb has been used as a cure for several health ailments for centuries and every part of it is useful. From inflammation to skin disease, fever and dental disorders, this plant can be used for various conditions. According to the Indian Journal of Physiology and Pharmacology, Neem can help in reducing and maintaining blood sugar levels

3) Murraya koenigii: Curry leaves are useful as an antioxidant, anti-diabetic, antibacterial, antihypertensive, cytotoxic, and in treating bronchial respiratory problems. Traditionally, the leaves were utilized as a spice in curries as well as other dishes. It includes coumarins and derivatives, alkaloids, flavonoids, phenolic compounds, and essential oil.

4) Momordica charantia: *Momordica charantia* (*M. charantia*), commonly referred to as bitter gourd, karela and balsam pear. Its fruit is also used for the treatment of diabetes and related conditions amongst the indigenous populations of Asia, South America, India and East Africa. Abundant pre-clinical studies have documented in the anti-diabetic and hypoglycaemic effects.

5) Psidium guajava: *Psidium guajava* is a medicinal plant with antidiabetic properties and can be found growing in tropical and sub-tropical countries around the world.

6) Phyllanthus emblica: *Phyllanthus emblica* Linn, colloquially known as Indian gooseberry or amla and/or some of its important constituents (including gallic acid, gallotanin, ellagic acid and corilagin), possess anti-diabetic effects through their antioxidant and free radical scavenging properties. Amla has also been reported to prevent/reduce hyperglycemia, cardiac complications, diabetic nephropathy, neuropathy, cataractogenesis and protein wasting.

7) Trigonella foenum graecum : *Trigonella foenum-graecum* is one of the medicinal plants which are important in the management of diabetes mellitus.

8) Zingiber officinale: *Z. officinale* shows its antidiabetic therapeutic effects by increasing insulin sensitivity/synthesis, protecting β -cells of pancreatic islets, reducing fat accumulation, decreasing oxidative stress, and increasing glucose uptake by the tissues. In addition to these effects, *Z. officinale* also exhibits protective effects against several diabetes-linked complications, notably nephropathy and diabetic cataract, by acting as an antioxidant and antiglycating agent

9) Areca catechu: Betel-nut consumption is the most common addictive habit globally and there is good evidence linking the habit to obesity, type 2 diabetes (T2D) and the metabolic syndrome. Catechu has been reported to contain catechuic acid, catechutannic acid, acacatechin, catechu red, quercetin, catechin, epicatechin, phlebotannin, quercitrin and fisetin. It also contains cyanodol, tannins and polyphenols. Since catechu (khoyar) is used for treatment of diabetes and pain by the folk medicinal practitioners of Bangladesh.

10) Aloe barbadensis: The antidiabetic and hypoglycemic properties of *Aloe vera* are partially mediated via its strong antioxidant effect. *Aloe vera* treatment is known to lower the blood glucose level through its capability of enhancing the sensitivity towards insulin. Accordingly, there is an increase in the peripheral uptake of glucose, combined with reduction in the amount of hepatic glucose produced.

	Scientific name	Common name	Use part	Type of effects
<u>1</u>	<i>Mentha piperita</i>	Mint	Leaves	Hypoglycemic
<u>2</u>	<i>Azadirachta indica</i>	Neem	Leaf	Anti-hyperglycemic
<u>3</u>	<i>Murraya koenigii</i>	Curry tree	Leaf	Hypoglycemic
<u>4</u>	<i>Momordica charantia</i>	Bitter guard	Fruit	Hyperglycemia
<u>5</u>	<i>Psidium guajava</i>	Guava	Leaf	Anti-hyperglycemic
<u>6</u>	<i>Phyllanthus emblica</i>	Indian gooseberry	Fruit	Anti-hyperglycemic and hypoglycemic
<u>7</u>	<i>Trigonella foenum graecum</i>	Fenugreek	Seed	Anti-hyperglycolic , hypolycemic
<u>8</u>	<i>Zingiber officinale</i>	Ginger	Rhizome	Hypoglycemic
<u>9</u>	<i>Areca catechu</i>	Betel nut	Seed	Hypoglycemic
<u>10</u>	<i>Aloe barbadensis</i>	Aloe vera	Leaf	Hypoglycemic

Conclusion:

According to published results, it can be said that medical plants are more affordable and have less side effects, and are more effective in treatment of diabetes mellitus.

Recommendation:

Counselling is must for girls, parents and society level. Awareness regarding use of medicinal plant should be created through extension activities of the college. There should be separate paper on health in the 12th std.

Health assessment of all students is necessary.

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Indian Religion, Mysticism and Sensibilities Reflected In T. S. Eliot's *The Waste Land*

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Abstract:

The Government of India through New Education Policy (NEP) 2020, conveys Indian knowledge systems into focus and attempts to encourage indigenous knowledge from various disciplines. In this paper an attempt has been made to explore the utterances of Indian religion, mysticism and sensibilities in Eliot's world-renowned poem *The Waste Land*. Eliot represents the tragic mentality of modern humanity because of spiritual draught and also shown the way to restore it through spiritualism. T. S. Eliot's *The Waste Land* is a masterpiece in the history of English literature. It is a quest for a peaceful world that can be achieved through spiritualism. The whole poem delineates the social disorder, ethical scarcity and spiritual dryness. He therefore uses here an extensive use of scriptural writings including the Bible, the Upanishad, Buddha's Fire Sermon etc. Indian thoughts especially Hinduism and Buddhism have a great influence on Eliot's mind has been seen in the poem *The Waste Land*.

Keywords: NEP 2020, Indian knowledge system, indigenous knowledge, mysticism, sensibilities.....

Introduction:

Indian knowledge always attracts the knowledge seekers to get knowledge from this reservoir and shared it in various fields. The English language contributed to provide international platform and academic appreciation to the great works of Rabindranath Tagore and other literary artists. Even Indian religion, mysticism, and sensibilities fascinates western writers like T. S. Eliot, Rudyard Kipling, E. M. Foster and other literary genius. The Government of India through New Education Policy (NEP) 2020, conveys Indian knowledge systems into focus and attempts to encourage indigenous knowledge from various disciplines. In this paper an attempt has been made to explore the utterances of Indian religion, mysticism and sensibilities in Eliot's world-renowned poem *The Waste Land*. Eliot represents the tragic mentality of modern humanity because of spiritual draught and also shown the way to restore it through spiritualism.

T. S. Eliot's *The Waste Land* is a masterpiece in the history of English literature. It is a quest for a peaceful world that can be achieved through spiritualism. He himself predicted it by unlocking treasure trove of Indian philosophy. The poem is divided into five episodes i. *The Burial of the Dead* ii. *A Game of Chess* iii. *The Fire Sermon* iv. *Death by Water* v. *What the Thunder Said* that projects gloomy and desolate landscape. The whole poem delineates the social disorder, ethical scarcity and spiritual dryness. He therefore uses here an extensive use of scriptural writings including the

Bible, the Upanishad, Buddha's Fire Sermon etc. Indian thoughts especially Hinduism and Buddhism has a great influence on Eliot's mind has been seen in the poem *The Waste Land*. The ancient wisdom of India had attracted attention of many academics like Emerson, Thoreau and Whitman who were greatly influenced by Indian scriptures. Eliot was motivated towards Buddhism since his childhood days. He studied the Vedas, the Upanishads, Patanjali and Pali. He remarks, Long ago I studied the ancient Indian languages and while I was chiefly interested at that time in Philosophy, I read a little poetry too, and I know that my poetry shows the influence of Indian thought (Eliot 248).

Eliot's poetic vision is based to perceive humanity in which man is an integral part of the system of creation, but he observes the panorama of desolation and sterility in which man is sexually and spiritually impotent. The poem is an amalgamation of Indian and Western culture. At the very outset of the poem in part one *The Burial of the Dead*, Eliot has reminiscently referred to the living death of modern humanity but at the same time evokes the prospect of spiritual transformation with the drop of rainwater: "April is the cruellest month, breeding Dull roots with spring rain (1-4)." Through this elusive imagistic objective-corerelative of dead winter and revitalizing spring with its drop of water. Eliot refers to spiritual vacuum and draught which can be replaced by the knowledge of Oriental scriptures and that of Buddha.

The problem, as undertaken in the poem, has been tried to be resolved in a universal solution, taking material from among different sources world-wide. He has analysed the philosophies, and also the scriptures at large, and has synthesized his findings on different sources for a solution which could be acceptable to everyone, without stakes of either religion or boundary. Vedic philosophy, as part of Hinduism, has been contributed as an annihilating solution to the problem of both animalism and restraint (Dangwal 20).

In part second *A Game of Chess*, Eliot delineates the deplorable predicament of modern humanity. Modern man is so much absorbed in animalism that they have forgotten that they are human beings. Sex is a vital principle of life as “man’s fate originates in sex” but now instead of becoming a mode of reproduction, it has become a matter of conspiracy. Marriage, the holiest institution, has been reduced to a level of drug addiction and to satisfy sensual and carnal desires without any family commitments and responsibilities. For them, life on this earth is nothing but a ‘game of chess.’ The episode of Albert and Lit reveals the hollowness of married life: “I can’t help it, she said, pulling a long face, What you get married for if you don’t want children? (160-66) These lines reveal the thoughtless sensual hunt, lack of obligation and accountability in matrimony. However, the last line provides solution to the problem if read in Indian context. In India, marriage is a *sanmskar*, a bond of love and commitment between husband-and-wife begetting, again, is considered a ritual (*sanmskar*). Eliot suggests here that sex plays a vigorous role in human life and if man and woman want to have birth control, they should follow the path of *Sanyam*.

The third section *The Fire Sermon* is derived from the famous sermon of Lord Buddha on the suffering and pains of modern humanity which rise from their thoughtless chase of passion and sensuality. Dr. Surekha Dangwal’s remarks in this regard, “Desire is the root cause of man’s sufferings, and the moment he gets rid of it, he attains perfect ‘Nirvana’.... [And] the attainment of ‘Nirvana’, as preached by the Lord, is the self-denial, which implies the rejection of all senses (Dangwal 33).” According to Hindu scriptures, a superior fire of ‘Tapa’, exists which burns the fires of lust and human soul enjoys the ecstasy of purification ‘Anand’. The caption *The Fire Sermon* is taken from *Adittapriyay Sutta* and has been translated from Pali by Bhikkhu Thanissaro. It reveals the poet’s close association with Buddhist philosophy. Nageswara Rao proposes, “What is realized in the ‘Fire Sermon’ is exemplified also in the fourth section ‘Death by Water’ which presents the transformation of the gross self into enlightened being, the same

change underlying the Hindu ceremony of twice born..... (Rao 85).

Eliot inclined that the title has been derived from Miss Jessie Weston’s treatise *From Ritual to Romance* in which the focus is on fertility and vegetation. The significance of Grail legend to reinstate fertility to the unfertile land through the compensation of the sins of Oedipus of Thebes who in turn is identified as Fisher King in the last segment of the poem. Man lives in the barren land of spiritual chaos, but this barren land will turn out to be a land of fertility with the sprinkling of water. So, man has to be in search of water i.e., faith in the existence of God. Eliot has chosen the title *The Waste Land* in order to juxtapose modern and western knowledge and endorse the solution for the problem of spiritual draught. Eliot’s lines can be traced to an important Buddhist text, *Dhammpada* in which Lord Buddha suggests humanity to cultivate *Bodhi Tree* in their hearts with the existence of God. Narasimhaiah says in this regard, In any case we should find it illuminating to read a Thai Buddhist monk’s translation of *Dhammpada* under the title ‘Growing the Bodhi Tree in the garden of the Heart....’ The question now is how to grow the seeds of this tree in the heart of every one of us – which is analogous to the re-enactment of crucifixion in the life of every Christian. The land is wasted and the seeds have no chance to grow without the water. There are verses in the *Dhammpada* which say they should be irrigated well with the waters of compassion and richly manured by meditation (Narasimhaiah 97-98).

The Lord Buddha teaches his disciples to give up earthly passion and pursue freedom from earthly possession. Eliot concludes this section with the word ‘burning’ in accordance with his austere turn to Indian mysticism. The poet appeals to God to uplift him as well as his fellow citizens into the transcendental world saving from the affliction of burning lust: “O Lord Thou pluckest me out Burning.” (309) The meditation structure of the final section entitled as *What the Thunder Said* is based on Eliot’s close juxtaposition with Indian philosophy and religion. The reverberating thunder stands for the poet’s mouthpiece echoing DA sound in the deserted atmosphere. Eliot applied the age-old fable in to the modern man’s spiritual degeneration in the poem:

“DA

Datta: What have we given?

...Dayadhvam.....

...Damayata.... To controlling hands”
(400-422)

These quoted lines illustrate how the poet tries to alert the so called civilized degenerate fellows. *The Waste Land* is Vedic in origin and Upanishadic in its structural matrix. There is no denying the fact that Eliot stepped into Hindu

mythology and got the knowledge of spirituality. The poem ends with a positive note with the triple use of the chanting of *Shanthi*. Mr. F. R. Leavis criticizes the poem ends where it begins. “The thunder brings no rain to revive the waste land.” But Eliot formulates the virtues ‘Give, Sympathise and Control’ throughout the poem. *Shanthi* and *Da* in the structure of the poem remembered in connection with an Upanishad. The word *Shanthi* at the end of the poem is significant from Indian point of view. It is purposefully repeated to indicate peace resulting from a freedom from all disturbances. It is part of both rituals as well as religious activity in Vedic way of living. Eliot wants the universe to be at peace those who are living in acute atmosphere of fear, doubts and frustration.

To conclude, *The Waste Land* is a fine example of the Indian religion, mysticism and sensibilities that realises the grim intensity of the human feeling of pain and hope and also feel the humanity the universal and timeless tragic situation of man and his life. The poet illustrates the decline of civilisation and expresses an innate desire for revival. Indian philosophy and spirituality are evident in the poem. It emphasizes the greatness of the Indian knowledge system. Eliot’s *The Waste Land* plays an important role in preserving and disseminating ancient knowledge. It’s a sad thing to note that the youth of India flock to the West in pursuit of gaining and creating knowledge. But Indian knowledge, philosophy, mythology is treasure for the humanity for living a happy and peaceful life.

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Analysis of the Traditional and Modern Knowledge System in India

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Abstract:

India is a country that has a rich history of traditional knowledge systems that have been passed down from generation to generation. These traditional knowledge systems have been developed over centuries and have been used to solve various problems related to agriculture, medicine, and other fields. However, with the advent of modern knowledge systems, there has been a shift towards using modern technologies and methods to solve these problems. This research article aims to explore the differences between India's traditional knowledge system and modern knowledge system and how they can be integrated to create a more sustainable future.

Introduction:

India is a country that has a rich history of traditional knowledge systems that have been developed over centuries. These traditional knowledge systems have been used to solve various problems related to agriculture, medicine, and other fields. However, with the advent of modern knowledge systems, there has been a shift towards using modern technologies and methods to solve these problems. This shift has led to a debate on the importance of traditional knowledge systems and whether they should be preserved or replaced by modern knowledge systems. This research article aims to explore the differences between India's traditional knowledge system and modern knowledge system and how they can be integrated to create a more sustainable future [1, 2].

Objectives:

1. To understand the concept of India's traditional knowledge system and its importance in the country's history.
2. To explore the differences between India's traditional knowledge system and modern knowledge system.
3. To analyze the advantages and disadvantages of using traditional knowledge systems and modern knowledge systems.
4. To identify ways in which traditional knowledge systems and modern knowledge systems can be integrated to create a more sustainable future.

India's Traditional Knowledge System:

India's traditional knowledge system is based on the idea of holistic living and the interconnectedness of all things. It is a system that has been developed over centuries and has been passed down from generation to generation. This system includes knowledge related to agriculture, medicine, spirituality, and other fields. Traditional knowledge systems are often based on observation, experimentation, and experience. They are also

often based on the idea of sustainability and the need to preserve natural resources for future generations [3].

Modern Knowledge System:

Modern knowledge systems are based on scientific methods and technologies. They are often focused on solving specific problems and are based on the idea of progress and development. Modern knowledge systems are often based on the idea of specialization and the need for experts in specific fields. They are also often based on the idea of efficiency and the need to maximize output [4].

Differences between India's Traditional Knowledge System and Modern Knowledge System:

There are several differences between India's traditional knowledge system and modern knowledge system. One of the main differences is the approach to problem-solving. Traditional knowledge systems are often based on observation, experimentation, and experience, while modern knowledge systems are based on scientific methods and technologies. Another difference is the focus on sustainability. Traditional knowledge systems are often based on the idea of sustainability and the need to preserve natural resources for future generations, while modern knowledge systems are often focused on maximizing output and efficiency [5-7].

Advantages and Disadvantages of Using Traditional Knowledge Systems and Modern Knowledge Systems:

There are advantages and disadvantages to using both traditional knowledge systems and modern knowledge systems. Traditional knowledge systems are often based on the idea of sustainability and the need to preserve natural resources for future generations. They are also often based on the idea of community and the importance of working together. However, traditional knowledge systems can also be limited by a lack of scientific knowledge and

technology. Modern knowledge systems, on the other hand, are often based on scientific methods and technologies. They are also often focused on solving specific problems and maximizing output. However, modern knowledge systems can also be limited by a lack of understanding of local contexts and the importance of sustainability [8, 9].

Integration of Traditional Knowledge Systems and Modern Knowledge Systems:

There is a growing recognition of the importance of integrating traditional knowledge systems and modern knowledge systems. This integration can lead to a more sustainable future and can help to address some of the challenges facing society today. One way to promote the integration of traditional knowledge systems and modern knowledge systems is through education and training. This can help to promote a better understanding of the strengths and limitations of both systems and can help to identify ways in which they can be integrated. Another way to promote the integration of traditional knowledge systems and modern knowledge systems is through research and development. This can help to identify ways in which traditional knowledge systems can be adapted to modern contexts and can help to identify ways in which modern knowledge systems can be made more sustainable [10,11].

Conclusion:

India's traditional knowledge system and modern knowledge system are both important for addressing the challenges facing society today. While there are differences between these systems, there is also a growing recognition of the importance of integrating them to create a more sustainable future. This integration can be promoted through education and training, research and development, and policy interventions. By promoting the integration of traditional knowledge systems and modern knowledge systems, we can create a more sustainable future for all.

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Traditional Indian Knowledge Systems: Bridging the Past and Future

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Abstract:

This research paper delves into the diverse landscape of innovations within Indian knowledge systems, traditions, and research practices. The study aims to uncover the dynamic interplay between ancient wisdom and contemporary advancements, highlighting the transformative potential of traditional knowledge in modern contexts. By examining the rational, objectives, hypotheses, methodology, and conclusions of this study, we explore how India's rich cultural heritage continues to shape innovative practices across various domains.

Introduction:

Traditional Indian knowledge systems are a tapestry of wisdom that has been woven over millennia, encompassing diverse fields such as philosophy, medicine, agriculture, architecture, and more. These systems are deeply rooted in the cultural fabric of India and have continued to evolve through generations. This paper delves into the significance, characteristics, and contemporary relevance of traditional Indian knowledge systems.

Rationale of Study:

India has a profound history of knowledge systems and traditions that have evolved over millennia. The integration of these traditional knowledge systems with modern research and innovation has the potential to yield novel solutions for global challenges. This study seeks to bridge the gap between historical wisdom and modern innovation by investigating how Indian knowledge, practices, and research methodologies are being adapted and transformed to address current societal needs.

Objectives of Study:

1. To analyse the historical evolution of knowledge systems and traditions in India.
2. To identify instances of innovative adaptations of traditional Indian knowledge in contemporary contexts.
3. To assess the impact of integrating traditional practices with modern research and technology.
4. To provide recommendations for promoting and sustaining the fusion of traditional wisdom and modern innovation.

Hypothesis:

The integration of traditional Indian knowledge with modern research and technology leads to innovative solutions that address a wide

range of societal challenges more effectively than conventional approaches.

Methodology:

Literature Review: A comprehensive review of historical texts, academic research, and policy documents related to Indian traditional knowledge systems and innovations.

Analysing the historical evolution of knowledge systems and traditions in India provides a profound understanding of the roots from which contemporary innovations and practices have emerged. This examination sheds light on how ancient wisdom has laid the foundation for the present and continues to influence the future.

Vedic Period:

The historical evolution of Indian knowledge systems begins with the Vedic period, around 1500 to 500 BCE. The Vedas, a collection of sacred texts, encompassed knowledge in various fields, including philosophy, cosmology, mathematics, and medicine. These texts laid the groundwork for philosophical schools like Nyaya, Vedanta, and Mimamsa, shaping intellectual discourse.

Ancient Sciences and Mathematics:

During the Gupta period (4th to 6th centuries CE), Indian mathematicians like Aryabhata and Brahmagupta made significant contributions. They formulated numeral systems, introduced concepts of zero and decimal fractions, and laid the foundation for algebra and trigonometry. These contributions influenced the development of global mathematics.

Medicine and Ayurveda:

Ancient India witnessed the emergence of Ayurveda, a holistic system of medicine. Charaka

and Sushruta, eminent physicians, compiled treatises detailing medical practices, anatomy, surgery, and herbal remedies. Ayurveda's principles continue to shape healthcare practices in contemporary times.

Yoga and Philosophy:

The classical era saw the emergence of philosophical schools like Samkhya, Yoga, and Vedanta. The Yoga Sutras of Patanjali laid the groundwork for the practice of Yoga, encompassing physical, mental, and spiritual dimensions. These philosophies enriched India's cultural landscape and continue to influence well-being practices globally.

Architecture and Vastu Shastra:

The architectural wisdom of Vastu Shastra flourished during the medieval era. This ancient science offered guidelines for designing harmonious spaces in alignment with cosmic energies. Its principles still influence architecture, as seen in temple designs, urban planning, and sustainable building practices.

Islamic and Colonial Influences:

With Islamic and colonial influences, Indian knowledge systems evolved further. Persian and Arabic sciences were integrated into traditional knowledge, leading to hybrid systems. The colonial period witnessed the establishment of modern education systems, contributing to the synthesis of traditional and modern learning.

Revival and Modernization:

In the 19th and 20th centuries, Indian scholars initiated efforts to revive and modernize traditional knowledge systems. Institutions like the Banaras Hindu University and the Indian National Science Academy sought to bridge traditional and modern sciences, fostering innovation and research.

The historical evolution of knowledge systems and traditions in India is a testament to the enduring wisdom that has shaped the nation's cultural and intellectual landscape. From the Vedas to contemporary practices, the fusion of ancient wisdom with modern research showcases the adaptability and resilience of Indian knowledge systems. Recognizing this historical continuum allows us to appreciate the dynamic interplay between tradition and innovation, offering insights into the past, present, and future of Indian knowledge.

Identifying instances of innovative adaptations of traditional Indian knowledge in contemporary contexts showcases the practical relevance and adaptability of ancient wisdom to modern challenges. This exploration highlights the dynamic synergy between tradition and innovation, shaping solutions for today's complex issues.

Ayurveda Medicine in Modern Healthcare:

Ayurveda, a traditional Indian medical system, has found innovative applications in modern

healthcare. Traditional herbal formulations are being researched for their therapeutic potential, and concepts like personalized medicine align with Ayurveda principles of individual constitution (doshas) and holistic healing. Integrative medicine centres combine Ayurveda with conventional treatments for comprehensive patient care.

Revival of Indigenous Farming Techniques:

In the face of ecological concerns and agricultural sustainability, traditional Indian farming practices are being revived. Concepts from organic and permaculture farming draw inspiration from indigenous techniques like mixed cropping, seed saving, and natural pest management. These practices offer environmentally friendly alternatives to modern agrochemical-intensive approaches.

Yoga and Mind-Body Well-being:

Yoga, an ancient practice rooted in India, has transcended cultural boundaries to become a global phenomenon. In contemporary contexts, yoga is recognized for its stress reduction, mental well-being, and physical fitness benefits. Medical institutions offer yoga therapy as a complementary treatment for various health conditions, showcasing the integration of traditional wisdom into modern healthcare.

Vernacular Architecture and Sustainability:

Vernacular architectural principles, rooted in the wisdom of Vastu Shastra, have been adapted to promote sustainable and energy-efficient building designs. Architects combine traditional concepts of spatial harmony, orientation, and natural ventilation with modern materials and technologies, resulting in eco-friendly and culturally resonant structures.

Traditional Knowledge for Biodiversity Conservation:

Indigenous communities possess intricate knowledge of local flora and fauna. In conservation efforts, traditional knowledge about plant uses, habitat restoration, and wildlife behaviour is integrated into scientific research. This collaboration ensures effective biodiversity conservation while preserving indigenous wisdom.

Innovations in Ethno medicine:

Ethno medicine, drawing from indigenous knowledge, is gaining attention for its potential in drug discovery. Traditional healers' insights into medicinal plants have led to the identification of novel compounds with therapeutic properties. Integrating traditional practices with modern pharmacology offers new avenues for drug development.

The identification of innovative adaptations of traditional Indian knowledge in contemporary contexts underscores the resilience and practicality of ancient wisdom. These instances exemplify the harmonious coexistence of traditional practices and

modern advancements, paving the way for holistic solutions that address societal, environmental, and health challenges. By embracing and integrating traditional knowledge, India is leveraging its cultural heritage to navigate the complexities of the modern world.

Assessing the impact of integrating traditional practices with modern research and technology provides valuable insights into the effectiveness, outcomes, and potential of combining ancient wisdom with contemporary advancements. This evaluation sheds light on the transformative potential of such collaborations across various domains.

Healthcare and Ayurveda Integration:

The integration of Ayurvedic principles with modern medical research has led to innovative approaches in healthcare. Clinical trials and scientific studies validate the efficacy of traditional herbal formulations in treating various health conditions. This integration not only offers alternative treatment options but also contributes to a holistic understanding of health and well-being.

Agricultural Sustainability and Traditional Farming:

The adoption of traditional farming practices within modern agricultural systems has demonstrated positive impacts on soil health, biodiversity, and yield sustainability. Organic and agro ecological practices inspired by indigenous wisdom result in reduced environmental impact, increased soil fertility, and healthier produce.

Yoga and Mental Health Research:

Scientific research on the effects of yoga and meditation has confirmed their positive impact on mental health. Studies show that mindfulness practices derived from traditional Indian knowledge can reduce stress, anxiety, and depression while enhancing emotional well-being and cognitive function.

Architectural Harmony and Sustainable Designs:

Architectural projects that integrate Vastu Shastra principles with modern design concepts have shown promise in creating energy-efficient and harmonious living spaces. These buildings maximize natural light, ventilation, and spatial balance, contributing to occupants' well-being and environmental sustainability.

Ethno medicine and Drug Discovery:

Collaboration between traditional healers and modern researchers has led to the identification of bioactive compounds in medicinal plants. The integration of indigenous knowledge with scientific research has potential implications for drug discovery, offering natural alternatives for treating various ailments.

Challenges and Limitations:

1. Validation and Standardization: Integrating traditional practices with modern research requires rigorous scientific validation and standardization to ensure safety and efficacy.
2. Cultural Sensitivity: The integration process should respect the cultural context of traditional knowledge, avoiding exploitation and misappropriation.
3. Commercialization Concerns: While traditional practices have societal benefits, the commercialization of these practices must ensure equitable benefit-sharing with communities.

Positive Outcomes:

1. Holistic Solutions: Integrating traditional knowledge with modern research results in holistic solutions that consider social, environmental, and cultural factors.
2. Sustainable Development: These collaborations contribute to sustainable development by preserving cultural heritage, promoting biodiversity, and ensuring community involvement.
3. Health and Well-being: Integrative approaches in healthcare, mental health, and well-being enhance treatment options and overall quality of life.

The impact assessment of integrating traditional practices with modern research and technology reveals a transformative potential that transcends disciplines. These integrations have the capacity to address complex challenges, offering innovative and holistic solutions. As these collaborations gain momentum, it becomes evident that the synergy between ancient wisdom and modern advancements is essential for a sustainable and culturally enriched future.

Promoting and sustaining the fusion of traditional wisdom and modern innovation requires a multi-faceted approach that respects cultural heritage, fosters collaboration, and ensures equitable benefit-sharing. These recommendations aim to create an environment conducive to the harmonious integration of ancient knowledge and contemporary advancements.

1. Education and Awareness: Incorporate traditional knowledge into educational curricula to foster an understanding of its value and relevance. Create awareness campaigns to highlight successful instances of blending traditional wisdom with modern innovation, showcasing the potential benefits.

2. Interdisciplinary Research and Collaboration: Establish platforms that encourage collaboration between traditional practitioners, scientists, researchers, and policymakers. Organize workshops, seminars, and conferences that facilitate cross-disciplinary exchange of ideas and experiences.

3. Research and Documentation: Invest in rigorous research to scientifically validate and document traditional practices, ensuring their credibility and applicability. Develop comprehensive databases that consolidate traditional knowledge, making it accessible to researchers, practitioners, and policymakers.

4. Intellectual Property Protection: Develop legal frameworks that safeguard traditional knowledge from misappropriation and ensure equitable benefit-sharing with local communities. Facilitate the registration of traditional practices as intellectual property, promoting their recognition and protection.

5. Government Policies and Support: Formulate policies that recognize the value of traditional knowledge and incentivize research collaborations between traditional practitioners and modern scientists. Allocate funding for research projects that focus on integrating traditional wisdom with modern technologies for innovative solutions.

6. Community Involvement: Involve local communities, indigenous groups, and traditional practitioners in decision-making processes regarding the integration of their knowledge. Establish mechanisms for sharing benefits derived from collaborative projects with the communities that hold the knowledge.

7. Technology Transfer and Innovation Hubs: Create technology transfer platforms that facilitate the exchange of ideas, technologies, and practices between traditional knowledge holders and modern innovators. Establish innovation hubs that provide resources and support for translating traditional practices into modern solutions.

8. Ethical Guidelines and Cultural Sensitivity: Develop ethical guidelines for researchers and practitioners engaging with traditional knowledge, emphasizing cultural sensitivity, respect, and reciprocity. Promote capacity-building programs that educate researchers and professionals on the ethical implications of working with indigenous and traditional communities.

9. International Collaboration: Foster international collaboration to share best practices, experiences, and successes in integrating traditional knowledge with modern innovation. Participate in global forums and initiatives that focus on the sustainable utilization of traditional wisdom for innovative solutions.

10. Long-Term Sustainability: Establish mechanisms for the long-term sustainability of collaborative projects, ensuring that traditional knowledge is not exploited but rather contributes to community well-being.

Promoting and sustaining the fusion of traditional wisdom and modern innovation requires a balanced and respectful approach that recognizes the significance of both. By embracing collaborative efforts, ethical considerations, and policy support, societies can harness the transformative potential of traditional knowledge while advancing innovation for a sustainable and culturally enriched future.

Characteristics of Traditional Indian Knowledge Systems:

1. **Holistic Approach:** Traditional Indian knowledge systems emphasize the interconnectedness of various elements – be it the mind and body, nature and humans, or the microcosm and macrocosm.
2. **Integration with Nature:** Indigenous knowledge systems in India are closely aligned with nature, with practices designed to ensure sustainability and harmony with the environment.
3. **Oral Tradition:** Much of traditional Indian knowledge has been passed down orally through generations, preserving cultural heritage and practical wisdom.
4. **Interdisciplinary Nature:** These systems often integrate multiple disciplines, offering a comprehensive understanding of various aspects of life.
5. **Evidential Base:** Traditional knowledge is often supported by empirical evidence accumulated over centuries, contributing to its credibility and applicability.

Significance and Relevance:

1. **Healthcare and Ayurveda:** Ayurveda, a traditional Indian medical system, offers holistic healthcare based on balancing bodily energies. It is being revisited for its preventive and curative aspects, aligning with modern trends towards holistic wellness.
2. **Agriculture and Organic Farming:** Traditional agricultural practices are gaining traction due to their emphasis on sustainability and biodiversity conservation, addressing contemporary concerns about food security and environmental degradation.
3. **Yoga and Mental Health:** The ancient practice of Yoga is recognized worldwide for its benefits in promoting mental and physical well-being, aligning with modern stress management and mindfulness practices.
4. **Architectural Wisdom and Sustainability:** Concepts from Vastu Shastra, an ancient architectural science, are influencing sustainable design principles, emphasizing energy efficiency and spatial harmony.
5. **Ethno medicine and Biodiversity:** Traditional healers often possess knowledge of local medicinal plants, contributing to the preservation of biodiversity and offering potential sources for drug discovery.

Challenges and Opportunities:

1. Documentation and Preservation: The oral transmission of traditional knowledge systems poses challenges in documentation and preservation, risking the loss of invaluable insights.
2. Validation and Integration: While traditional knowledge holds immense potential, integrating it with modern scientific methodologies and gaining wider recognition remains a challenge.
3. Commercialization and Cultural Appropriation: The commercialization of traditional knowledge without appropriate benefit-sharing mechanisms can lead to cultural exploitation and misappropriation.
4. Policy and Institutional Support: Governments and institutions can play a vital role in providing the necessary support, recognition, and protection for traditional knowledge systems.

Futuristic Prospects:

1. Hybrid Solutions: Bridging traditional knowledge with modern research can lead to hybrid solutions that leverage the strengths of both paradigms, resulting in innovative advancements.
2. Interdisciplinary Collaboration: Collaborations between traditional practitioners, scientists, researchers, and policymakers can drive innovative solutions in diverse sectors.
3. Education and Awareness: Integrating traditional knowledge into education curricula can raise awareness and nurture future generations of practitioners and researchers.
4. Intellectual Property Protection: Implementing policies to safeguard traditional knowledge from misappropriation while ensuring equitable benefit-sharing can encourage its preservation and development.

Conclusion:

Traditional Indian knowledge systems are a repository of timeless wisdom that continues to influence contemporary practices and innovations. Their integration with modern research can pave the way for transformative solutions that address the challenges of our times. As India moves towards a future that embraces both tradition and modernity, harnessing the potential of these knowledge systems will be vital in shaping a sustainable and culturally rich society.

Suggestions:

1. Knowledge Preservation: Government and academic institutions should collaborate to preserve and document traditional knowledge systems, ensuring they remain accessible for future generations.
2. Interdisciplinary Research: Encourage interdisciplinary research that promotes the fusion of traditional and modern knowledge in various domains.
3. Public Awareness: Raise public awareness about the value of traditional knowledge and its role in driving innovation and sustainable development.

4. Policy Support: Formulate policies that incentivize research collaborations between traditional practitioners and modern scientists, fostering a conducive environment for innovative endeavours.

5. Education and Training: Develop educational programs that facilitate the understanding and application of traditional knowledge in conjunction with modern scientific methods.

In conclusion, the study highlights the immense potential of combining traditional Indian knowledge with modern research and technology to create innovative solutions. By nurturing these intersections, India can contribute significantly to global innovation while preserving its rich cultural heritage.

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Knowledge Spillovers and the Geography of Innovation

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Abstract

This paper focuses on the geographic dimensions of knowledge spillovers. The starting point comes from the economics of innovation and technological change. This tradition focused on the innovation production function however it was a spatial or insensitive to issues involving location and geography. However, empirical results hinted that knowledge production had a spatial dimension. Armed with a new theoretical understanding about the role and significance of knowledge spillovers and the manner in which they are localized, scholars began to estimate the knowledge production function with a spatial dimension. Location and geographic space have become key factors in explaining the determinants of innovation and technological change. The chapter also identifies new insights that have sought to penetrate the black box of geographic space by addressing a limitation inherent in the model of the knowledge production. These insights come from a rich tradition of analyzing the role of both localization and urbanization economies, by extending the focus to the organization of economic activity within a spatial dimension and examine how different organizational aspects influence economic performance. While the endogenous growth theory emphasizes the importance of investments in research and development and human capital, a research agenda needs to be mapped out identifying the role that investments in spillover conduits can make in generating economic growth. It may be that a mapping of the process by which new knowledge is created, externalized and commercialized, hold the key to providing the microeconomic linkages to endogenous macroeconomic growth.

The knowledge production function

The traditional starting point in the literature on innovation and technological change for most theories of innovation has been the firm [Baldwin and Scott (1987), Cohen and Levin (1989), Scherer (1984, 1991), Griliches (1979)]. In such theories firms are exogenous and their performance in generating technological change is endogenous [Scherer (1984, 1991), Cohen and Klepper (1991, 1992)]. For example, in the most prevalent model of technological change, the model of the knowledge production

Geography and the role of spillovers

As it became apparent that the firm was not completely adequate as a unit of analysis for estimating the model of the knowledge production function, scholars began to look for externalities. In refocusing the model of the knowledge production to a spatial unit of observation, scholars confronted two challenges. The first one was theoretical. What was the theoretical basis for knowledge to spill over yet, at the same time, be spatially within some geographic unit of observation? The second

Penetrating the black box of geographic space

The contribution of the new wave of studies described in the previous section was simply to shift the unit of observation away from firms to a geographic region. But does it make a difference how economic activity is organized within the black box of geographic space? Geographers, political

scientists and sociologists have long argued that the differences in the culture of a region and relationships between actors may contribute to differences in innovative performance across regions, even

Spillover mechanisms

Romer (1986), Lucas (1988, 1993) and Grossman and Helpman (1991) established that knowledge spillovers are an important mechanism underlying endogenous growth. However, they shed little light on the actual mechanisms by which knowledge is transmitted across firms and individuals. By necessity, the knowledge production function focused on the quantifiable aspects of innovation. However, formal R&D data ignore the complex processes of technological accumulation whereby tacit knowledge is built up

Entrepreneurship as a spillover mechanism

The literature identifying mechanisms actually transmitting knowledge spillovers is sparse and remains underdeveloped. However, one important area where such transmission mechanisms have been identified is entrepreneurship. Entrepreneurship is concerned with the startup and growth of new enterprises.

Why should entrepreneurship serve as a mechanism for the spillover of knowledge from the source of origin? At least two major channels or mechanisms for knowledge spillovers have been identified in

Conclusions

Perhaps the greatest development in the literature on the economics of innovation and technological change in the last decade has been the insight that geography matters. A long tradition of analyzing the innovative process within the boundaries of the firm and devoid of spatial context has given way to the incorporation of spatial context in models of innovation and technological change.

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A Study of Personality Characteristics of Persons Working In Musical Field

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Abstract:

Personality is the dynamic organization and it includes various traits and qualities of person. The prediction about the person is associated with his personality type and quality. Therefore, the success of person is very much depending upon his or her personal quality. Plato proposed that Music gives a soul to the universe, wings to the mind, flight to the imagination and life to everything. It means that music is part of life and it is beneficial to developing person. In the present study investigator has assessed three different traits of individual with the help of NEO-FI inventory. This personality inventory assess five traits including neuroticism, openness to experience, extraversion, agreeableness, and conscientiousness but we assess three traits such as neuroticism, extraversion and conscientiousness. The sample was selected from the Nashik district in Maharashtra. The sample included 100 individuals was working in the field of music from last five years. Findings indicates that extraversion, conscientiousness qualities are high and neuroticism is low in persons working in the field of music.

Keywords: Personality, neuroticism, openness to experience, extraversion, agreeableness, and conscientiousness, music etc.

Introduction:

In modern time the research widely emphasize the psychological aspects of music. Music is the part of life and it is way to express different things. Music helps to frame the life style as well as to reduce excessive stress and anxiety. Music has different dimensions and variety and type such as classical, semi-classical, pop, modern contemporary and others. There is particular relationship between individual and type of listening music. Personality is dynamic organization and it includes various traits and qualities of person. The prediction about the person is associated with his personality type and trait. Therefore the success of person is depending upon his or her personal characteristics. Plato proposed that music gives a soul to the universe, wings to the mind, flight to the imagination and life to everything. The North (2010) revealed that person having high self-esteem, creative and outgoing always choose classical music and person perform dance is creative, outgoing but not gentle. Kemp(1966) indicated that music is related to deep and unconscious needs. Cattell also believed that music preferences contributes information about unconscious aspects of person. Rentfrow & Gosling (2003) explained that music preferences are manifestation of more explicit traits of personality. Music has vital meaning and closely associated your needs, motives, emotions, psychological state, it

means that music is not only entertain the person but it gives idea about the person also. The various study shows that music has the influence on learning, memory, cognitive ability way of thinking, personal and social development. Rentfrow & McDonald (2008) described that people enjoy listening to music which reinforces their basic psychological needs. There are various approaches to explain the personality and five factor model of personality is one of the most popular one. The NEO-PI was developed to operationalize the five factor model of personality. The five factor represents the most basic dimensions of personality.

1. Neuroticism: the most pervasive domain of personality scales contrasts adjustment or emotional stability with maladjustment or neuroticism. The general tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt, and disgust is the core of neuroticism. The person having high neuroticism prone to have irrational ideas, to be less able to control their impulses, and to cope more poorly than others with stress. High score may be at risk for some kinds of psychiatric problems but N scale should not be viewed as measure of psychopathology. Individuals who score low on neuroticism are emotionally stable. They are usually calm, even tempered and relaxed.

2. Extraversion: extraverts are sociable but sociability is only one of the trait that comprise the domain of extraversion. Extraverts are assertive, active and talkative. They like excitement and stimulation and tend to be cheerful in disposition. They are energetic and optimistic. They like the group. The E scale domain strongly correlated with the interest in enterprising occupations.

3. Conscientiousness: The conscientious is purposeful, strong willed and determined. And probably few people become great musician or athletes without reasonably high level of this trait. This domain indicates that will to achieve. On the positive side high **Conscientiousness** is associated with academic and occupational achievement and on the negative side it may lead to annoying fastidiousness, compulsive neatness or workaholic behavior. High C score are scrupulous, punctual and reliable. Low score are not necessarily lacking in moral principles.

Reviews of Literature:

Torrance, Tracy A.; Bugos, Jennifer A. (2017) conducted study on 137 musical individuals including 68 instrumentalists and 69 vocalists. The title of study was Music Ensemble Participation: Personality Traits and Music Experience. The data was collected by applying the Big Five Personality Inventory. The multivariate analysis of covariance statistical tool was used to compare instrumentalists and vocalists. The finding shows that higher levels of Extroversion found vocalists compared to instrumentalists. The finding also suggests that extroverted individuals may be more likely to choose percussion or voice as their primary instrument. These data is helpful for structuring curriculum, establishing learning environments, and facilitating teacher-student communications.

Kostagiolas, Petros, Lavranos, et al (2017) conducted study on "The Role of Personality in Musicians information seeking for creativity." In this study survey method was used to collect the data. Personality traits was measured by using the core self evaluation scale based on self-efficacy, self-esteem, locus of control and neuroticism. The results of this study shows that information play important role in different creative activities of musicians. Significant relationship was also found

between musicians personality characteristics and different types of information seeking aspects and creativity. Self-efficacy is associated with information seeking and analysis.

Maja Djikic (2011) university of Toranta studied the effects of music and personality. The research conducted on 87 first year undergraduates in Canadian university. Big-5 questionnaire applied one way analysis of variance showed significant difference in how artistic participants found three conditions. Fishers LSD post hoc analysis revealed that participants found the music and lyrics conditions significantly more artistic than the lyrics only conditions. Music only conditions significantly larger personality change index than lyrics only conditions.

Hasan Gurkan Tekman (2009) study on music presences as sign of who we are: personality and social factors. Study conducted on 150 students. Results indicated that musical preferences may give information about social characteristics that is not redundant with personality type.

Objectives of the study

1. To understand the personality of persons in the field of music.
2. To assess the neuroticism dimension the personality of persons in the field of music.
3. To study the conscientiousness trait of personality of persons in the field of music.
4. To know the extraversion trait of person working in musical field.

Sample:

For the present study, investigator selected 100 individuals in the field of music. The sampling method was simple random sampling. The sample is consisted male and female whose age range is between 30 to 50 years. All individuals select from Nashik District.

Tools: Following personality test administered on persons working in the field of music.

1. **NEO Five Factor inventory (NEO-FFI):** This test is constructed by Paul T. Costa and Robert R. McCrae in 2005. This inventory contains 60 items and each item has five different alternatives. High score indicates high level of trait and low score indicates low level of trait. This inventory explained the five dimensions of personality.
 - i) Neuroticism, ii). Extraversion, iii). Openness to experience, iv). Agreeableness, v). Conscientiousness. This inventory has sound reliability and validity.

Results and Discussion:

Sr. No.	Personality Quality	Percentile	Level
1	Neuroticism	23	Low
2	Extraversion	86	High
3	Conscientiousness	78	High

The table shows the average percentile values of three different dimensions/qualities of personality. Neuroticism percentile value is 23

it means that low level strength of personality. Individuals who score low on neuroticism are emotionally stable and they are usually calm,

even tempered, poised and relaxed. The study find out the extraversion percentile point is 86 and it means in high level of strength. Extraversion is opposite type of introverts. Extraverts are assertive, active and talkative. They like excitement and stimulation and tend to be cheerful in disposition. They are energetic and optimistic. They like the group and enjoy in social gathering. The same type of results also found in various research study. The table shows the conscientiousness percentile is 78 and also indicates high level strength. High level of this trait indicates organized, responsible, cautious, careful, self-disciplined, and scrupulous personality.

Conclusions:

It can be concluded that the extraversion, , conscientiousness of the persons working in the field of music showing high and neuroticism of the persons working in the field of music having low level strength.

Limitations:

- 1: This study is restricted to a particular region of Maharashtra i.e. Nashik District
- 2: The findings of the study are related to only individuals in the field of music.

- 3: The paper pencil test has its unique limitation.
4. The sample size of this study is small.

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Indian Knowledge System in the curriculum of Higher Education :A Proposed Model for Two year Course in IKS.

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Abstract:

The present research article tried to propose a Model Syllabus for IKS two-year PG/Diploma/Degree Program as there is an urgent need for teachers to get accustomed to the initiative of IKS taken by MoE and UGC to run courses at various levels of higher education institutions. The courses in IKS are already running in Central and State Sanskrit universities along with IGNOU but with different names. Some private universities also started various courses in IKS. The NEP 2020, proposed IKS courses at all levels. The UGC also drafted some models of UG/PG courses in IKS. The research article presents a background of the IKS, preamble, rationale, course description, course objectives, Prerequisites, Student Learning Outcomes, Course Structure and Content, and Evaluating pattern. It is assumed that the proposed model IKS course may prove to be helpful for all those who are interested in starting courses in IKS.

Keywords: Indian Knowledge Systems, Model Syllabus, PG- Diploma/Degree, Curriculum in Higher Education.

Introduction:

The Government of India has brought out a National Education Policy to meet the changing dynamics of the population's requirement with regards to quality education, innovation and research. The main thrust of the draft policy is on breaking the "rigid boundaries of disciplines" in higher education and moving towards broad-based, flexible learning. The policy reiterates the importance of incorporating holistic approaches to the existing framework of education *programmes*. *It not just emphasizes the all-round development of an individual but alleges that* quality education would be determined based on its capacity to create vibrant, socially-engaged, and cooperative communities which are happier, productive, cultured, and progressive. The policymakers have suggested introducing Indian Knowledge Systems or Knowledge of India as a component of the educational programmes offered in the country. The esteemed institutions of India like IIT Gandhinagar and IIT Kharagpur have initiated semester long courses on the Indian Knowledge System and paved a path to emulate other higher education institutions across the nation. How this knowledge of our country helps to boost its development and progress? This needs to be understood by academia. This article attempts to discuss why it is essential to incorporate Indian Knowledge into the current academic and research landscape of India.

Education plays an important role in shaping students into good human beings. The modern system of education, which concentrates more on imparting professional skills and developing intellectual knowledge, ignores the holistic development. Imparting holistic education has become a challenge in modern times. The importance of psychological wellbeing, emotional health, of the students for the social-physical-cognitive-development, is well recognized. Various forms of ancient practices such as yoga, meditation, spiritual healing exist in our ancient knowledge system and encompass not only the development of "Annamaya Kosam" (constituting the physical body) but also for the mind, intellect, vitality and spirituality. All these together with balanced food and lifestyle as described in Ayurveda helps to nurture the body, mind, vital force and intellect of school children. A physically, mentally and spiritually advanced child will have enhanced self-esteem, confidence and respect through which the child would be able to deal with the challenges that are posed by modern-day that life True Indian Knowledge System in India...

The introduction of Indian Knowledge Systems (IKS) in the curriculum of higher education institutions will cultivate an attitude of scientific temper among citizens and their approach toward modern science. Through this initiative, citizens will move towards embracing Bharat's rich cultural

heritage. They will see every knowledge and skill with respect to Indian Traditional Knowledge Systems which may lead to new perspectives and create space for new research and development in the field of IKS. The IKS is one of the oldest systems of knowledge in the world which has influenced many scientists and philosophers at a global level. Albert Einstein once quoted, ‘We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible.’ The famous enigmatic American theoretical physicist Mr. J. Robert Oppenheimer, the father of the atom bomb learned the ancient Sanskrit language and counted the book the Bhagavad Gita as one of his favorites and was profoundly influenced by it. There are numerous world-famous leaders who were influenced by ancient Hindu philosophy and knowledge. The frequent invasion of ancient Santana Rashtra of Bharat led to the destruction of IKS. The colonial rule in Bharat introduced their own system of education to create masses to serve them. The present education system is still in line with the western education system which needs to be changed as per our culture and heritage. In a brave move towards embracing Indian Traditional Knowledge Systems (Bharatiya Gnana Parampara), the University Grants Commission (UGC) has announced plans to introduce Indian Knowledge Systems (IKS) in the curriculum of higher education institutions across the country. In order to train the existing college and university teachers, the UGC has started training programmes in IKS, so that courses in IKS can be introduced in higher education institutes from current session. The UGC has drafted guidelines for introducing the courses in IKS at various levels. The Sanskrit universities at central and state level are already providing courses in IKS. The other names of IKS’s are: Vedic Knowledge System, Sanatan Knowledge System, Hindu Knowledge System, Bhartiya Knowledge System, Indic Knowledge System etc. The IGNOU is also running courses at various levels for IKS. The universities like, Bhishma University, Sri Sri University, Apex Professional University, Gujarat Technological University, Gujrat University etc. are already started courses in IKS as per NEP 2020. The Swayam 2 portal is also offering a ten week introductory course in IKS. The Ministry of Education (MoE) has opened an innovative cell for IKS at AICTE, New Delhi to promote interdisciplinary research on all aspects of IKS,

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preserve and disseminate IKS for further research and societal applications. It will actively engage for spreading the rich heritage of our country and traditional knowledge in the field of Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture, Management, Economics, etc. It also opened various centres for IKS in various universities. As there is an urgent need for teachers to get accustomed to this initiative of IKS and develop courses at various levels of higher education as suggested by UGC, the present paper is an attempt to frame a Model Syllabus for IKS two year PG/Diploma/Degree Program.

The National Educational Policy 2020 (NEP 2020) lays emphasis on Indian Knowledge System (IKS) in order to make it applicable in present world and therefore, recommends the incorporation of Indian Knowledge System (IKS) into the curriculum at all levels of education. India has a rich tradition of intellectual inquiry and textual heritage that goes back several thousands of years. India was advanced in knowledge systems, traditions, and practices since antiquity. The vast Indian knowledge, from the Vedas, Upanishads to scriptural, philosophical, scientific, technological and artistic sources are untapped which need to be explored. Vedas contain high-level knowledge of mathematics, science, metallurgy, agricultural science, social formula, philosophy of life, moral values, national defence, etc. Along with the Vedas, the study of the parts of the Vedas is very important. The parts of the Vedas are called Shastras. It is absolutely necessary for every section of the society to study the system of knowledge written in the scriptures. Of more than ten million manuscripts that are available, just five percent have been studied. It’s time to focus on the revitalization of the major knowledge tradition of fourteen Vidyas and sixty four Kalas that are useful in day-to-day living through its activities and programs. In view of the importance accorded in the NEP 2020 to rooting our curricula and pedagogy in the Indian context and in the corpus of Indian Knowledge System, every student enrolled in a UG or PG programme should be encouraged to take credit courses in IKS amounting in all to at least five per cent of the total mandated credits. It’s a high time that the institutions come up with courses that will introduce the students to all aspects of IKS which are related to their fields of study and to promote interest in knowing and exploring more. Therefore, Indian Knowledge System should form an essential part of the curricula taught in our

schools, colleges and other institutions of higher learning.

Rationale of the Course:

PG Diploma in Indian Knowledge System Programme has been started for the study of knowledge system of India. The study of this programme does not mean the study of the Bhagwadgita as a book, or the study of religion but to understand the ancient Indian wisdom for better world tomorrow. It will help to create or make ideal citizens instead of that it will provide the solutions to each problem of human being. This course is of unique in nature and will update a student with basic foundation of ancient Indian Knowledge system and the way of living. The course will deal with eighteen chapters that elaborates the purpose of life. It also focuses on balanced philosophy of life. It will teach students how to maintain perfect balance and harmony in their day-to-day life. The Bhagwatgita is the cultural heritage of India. The course will enable students to excel in the application of Indian Knowledge System in contemporary time which is a source of wisdom. Human Values are aspects of life that are important to individuals in their daily lives. These values can be both abstract and concrete, and they can include : love, joy, truth, peace, justice, beauty, and freedom. The course will help to develop truthfulness, non-violence, cleanliness and austerity that are four fundamental universal morals as declared by Lord Krishna. The nation under the Hon'ble Prime Minister dreamt of becoming a developed nation within 25 years by making five resolutions. These resolutions can be called 'PanchPran' of Amrit Kaal. The IKS aims to contribute to the second and third aspects of "PanchPran" resolutions i.e. "Remove all traces of servitude" and "Be proud of India's heritage and legacy". The application of IKS will bring a prospective sea-change in education as envisaged in NEP 2020.

Pedagogy

The ideas are largely from Bhagavad Gita, therefore, the course will be lecture oriented. At the same time, the lectures will be classroom and discussion oriented. The usual audio visual aids will be useful.

Experiential Learning through the Course

The topic discussed in this course are mostly applicable to individuals. Therefore it has the potential to add value only when the students are able to contemplate on the ideas, make personal reflections and connect it to their

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experience. Moreover, it greatly adds value when the students are able to try out small experiments on some of the concepts and develop their own insights from these. The submissions required for the course are based on the philosophy. There are two types of submissions required; one individual and the other group.

Course Description:

The course is intended to provide students ancient Indian wisdom which is created and developed for the benefit of all human races. The main purpose of the course is to prepare critical and culturally responsive individuals who can gain insight of IKS and apply the acquired knowledge in upliftment of every aspect of life. The course will definitely help students for becoming good citizens and the most importantly, it will help them to become good human being or ideal human being.

Course Objectives

The content and learning activities in this course are designed to help students achieve the following objectives:

- i) To provide a general introduction to Bhagwat Gita & its relevance.
- ii) To acquire a perspective regarding the Indian Knowledge System through the Bhagwat Gita.
- iii) To develop Personality of the student through the values elaborated in Bhagwadgita.
- iv) To sensitize the students to the contributions made by ancient Indians in the field of Science, Philosophy and related applications and concepts.
- v) To reflect on the basic parameters within which the system of Indian Knowledge operates also as in Bhagwadgita.
- vi) To appreciate that the course would help to enhance efficiency, effectiveness, quality and excellence in the System of Indian Knowledge.
- vii) To gain insight to conduct research and verify Indian knowledge through 18 chapters and 700 verses.
- viii) To develop values of human being and understand Hinduism.
- ix) To develop a rational conceptualization of Hinduism.
- x) To identify some of the commonly felt problems that individuals, organizations and the society faces.

Prerequisites:

Any individual across the globe can join if he/she is Graduate and able to understand basic teaching in Hindi and English.

Student Learning Outcomes (SLOs):

By the end of the course, the students will be able to:

- i) Describe the term Hinduism and understand the purpose of life .
- ii) Classify body and spirit
- iii) Discuss the importance of Bhagvadgita in present times.
- iv) Understand “who am I”?
- v) Analyse Indian Society, Culture & Traditions.
- vi) Adopt control over desires
- vii) Find out one’s own temperament
- viii) Implement and practice of Bhagvadgita.
- ix) Understand the duty of the God.

Target Group:

This programme is extremely useful for prospective and in-service school, college, and university teachers to widen their career opportunities. In fact people with any age group working in any field like government organization, doctor, lawyer, CA, engineer, architect or graduate degree holder in any field can think about this programme as a supportive or alternative career. It will enlighten them at the individual level and also will help them to create a change in society in a professional way.

Course Content

SEMESTER-I

1. Introduction to Bhagvadgita
2. The Human Values through The Bhagvadgita .
3. Gita’s Teachings.
4. Purpose of Human life.

SEMESTER-II

9. Chapter-1 to Chapter-6

Project-1

SEMESTER-III

5. Chapter -7 to Chapter-12

SEMESTER-IV

13. Chapter-13 to Chapter-18

Project-2

Programme Structure:

Course Content:

SYLLABUS

Fundamental Concept of Bhagvadgita

Theory : 80 Marks

Internal Assessment : 20 Marks

Total – 100 Marks

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Contributions of Ancient Indian Mathematician

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Abstract:

Ancient Indian mathematicians made significant contributions to the discipline of mathematics. The creation of zero is ascribed to Indians, and this contribution exceeds all others because it forms the foundation of the decimal number system, without which no mathematical growth would have been conceivable. The modern number system was established by Indians, and it is still known as Indo-Arabic numerals since Indians invented them and Arab traders brought them to the western world. We know that there are numerous Indian mathematicians who have received recognition from all around the globe. This article will explain to you about some of the great Indian Mathematicians and their Contributions.

Key words: Indian mathematician, Mathematics, Astronomy, Trigonometric

Introduction:

India has its unique culture and a rich tradition of intellectual inquiry and a textual heritage that goes back to several hundreds of years. India was magnificently advanced in knowledge traditions and practices during the ancient and medieval times. The intellectual achievements of Indian thought are found across several fields of study in ancient Indian texts ranging from the Vedas and the Upanishads to a whole range of scriptural, philosophical, scientific, technical and artistic sources.

Mathematics in India has a very rich, long and hallowed history. Starting from the most elementary thing in mathematics namely the representation of numbers, through the way of expressing recursive relations, to arriving at the solutions of indeterminate equations, to the development of sophisticated techniques in handling the infinite, Indian mathematicians have made remarkable contributions. Sulbasutras, the oldest extant texts (~ 800 BCE), explicitly state and make use of the so-called Pythagorean theorem besides giving various interesting approximations to surds. By the time of Aryabhata (c. 499 CE), the Indian mathematicians were fully conversant with most of the mathematics that we currently teach in our schools, which include the algorithms for extracting square root and cube root based on the decimal place-value system. Brahmagupta (c. 628 CE), for the first time in the history of mathematics, fully discusses the arithmetic operations with zero. Indian mathematician's contributions include the discovery of the

spherical shape of the earth, the number of days in 1 year and notable works are Aryabhatasiddhanta and Aryabhatiya. Contributions of Indian Mathematician are remarkable and unforgettable.

Many of you may find Mathematics difficult to understand and confusing, while others love playing with numbers. However, no matter if you like or dislike Mathematics, it plays an important role in our daily life. After reading this article, you will always remember the great mathematicians of India and their contribution.

Aryabhatta (476-550 CE):

Aryabhatta was born in Patna, Bihar state. He was a renowned astronomer and mathematician of the ancient times of India. The period in which Aryabhatta lived was the golden period of India. Aryabhatta is also known as the father of Indian mathematics. He contributed significant work not only in mathematics but also in science and concluded theories of earth rotation on its axis, approximate value of π , place value of zero, trigonometry, indeterminate equation and many more.

One of his famous works is Aryabhatiya, a magnum opus written in the Sanskrit language and the only known surviving work of Indian mathematician Aryabhata from the fifth century. Aryabhatiya has three sections. These sections are:

- **Ganita (Mathematics):** This section has the names of the first 10 decimal places. In this section he explains how to represent huge decimal numbers using alphabets. Also he provides algorithms for finding cube and square

roots through decimals. In this second, he noticed the second-order sine difference and sine numbers are proportional. Aryabhatta is known for involving one of the two strategies for making the table of sines by utilizing the Pythagorean hypothesis.

- Kala-kriya (Time Calculations): Aryabhata examines cosmology like planetary movements, meanings of different units of time so forth.
- Gola (Sphere): In this section, the mathematician used trigonometry for spherical geometry.

Aryabhatta made several contributions to Mathematics inventions and theories. Due to his significant contribution and achievement in mathematics, he is also called The King of Indian Mathematics

Apart from mathematics, Aryabhatta also made several effective discoveries and inventions in astronomy. Aryabhata's astronomical system was known as the audAyaka system. . Scientists made several discoveries like planet and moon in solar system are lightened by sunlight, is based on his discoveries. He gave the theory that Earth rotates on its axis only. Some of the Aryabhatta's significant contribution to Astronomy includes Solar system motion, Sidereal periods, Eclipses etc.

Aryabhatta died in 550 CE in Patliputra only. The contributions made by Aryabhatta are still used in today's times. Go through Aryabhatta's work that is still practised.

The well-known mathematician of ancient India, Aryabhatta, has received several honours from the government of India. To honour such great Indian mathematicians, the Bihar Government created Aryabhatta Knowledge University (AKU) in Patna to develop and manage educational infrastructure linked to leadership, medical, technical, and associated professional education. Bihar State University Act of 2008 governs the AKU university. Moreover, the government of India names India's first satellite (Aryabhata and the lunar crater Aryabhata) after Aryabhatta to embrace his contribution to astronomy and mathematics. The Aryabhata satellite appears on the backside of the Indian two-rupee note.

Bhaskara I (600-680 CE)

Bhaskara, the 7th-century famous Indian mathematician, was born in c.600 and died in CE 680. He is one of the ancient Indian mathematicians who is known for his contribution to maths. Bhaskara mathematician is famous for inventing the Hindu decimal system. This Aryabhata follower wrote a critique, 'Aryabhatiyabhasya' in CE 629, which

is considered the oldest known Sanskrit language work in the mathematics & astronomy field. In addition, his other works include Mahabhaskariya and Laghubhāskariya.

Mahabhaskariya comprises 8 chapters, dwelling on mathematical astronomy. The book discusses the relationship between cosine and sine and gives the $\sin x$ approximation formula. The book likewise examines about longitudes of the planets, conjunctions of the planets with one another and with eclipses of the sun & the moon, shining stars, the lunar crescent, risings and settings. Furthermore, the book explains the relationship between the sine of a point $>90^\circ$ $>180^\circ$ or $>270^\circ$ to the sine of a point $<90^\circ$. Pell Equation ($8x^2 + 1 = y^2$) is given by Bhaskara I.

Brahmagupta(598-670 CE)

Brahmagupta was born in 598CE in Bhillamala (modern bhinmal) of Rajasthan. Brahmagupta, mathematician of Ancient India, also known as Bhillamalacharya. **Brahmagupta** was the foremost Indian mathematician of his time He made advances in astronomy and most importantly in number systems including algorithms for square roots and the solution of quadratic equations. When he was thirty years old, he composed the Brahmasphutasiddhanta.' The book is related to the use of 0 as a number in calculations. A large portion of his works was in the Sanskrit language.

Brahmagupta made remarkable contributions to Mathematics, including the following:

- He recognized for his contribution to Arithmetics, Trigonometry (Sine Table and Interpolation formula).
- He gives solutions to general linear equation, Brahmagupta's Theorem and Brahmagupta's Formula.
- Brahmagupta couldn't finish the utilization of 0 in calculations with respect to division; however, he offered calculations, for example, $(1 + 0 = 1; 1 - 0 = 1; \text{ and } 1 \times 0 = 0)$, for utilizing the digit 0
- The reason why he is known as the best mathematician in the world is the discovery of negative numbers and their calculations.
- The establishment of $\sqrt{10}$ (3.162277) by Brahmagupta gave new dimensions to trigonometry and geometry.

He also introduces the profound 'bhavana' law of composition for solving quadratic indeterminate equations. Apart from some of these important landmarks in the evolution of arithmetic, geometry, and algebra, significant contributions have also been made in the development of trigonometry.

Bhaskaracharya or Bhaskara II (1114 – 1185):

Bhaskaracharya is regarded as the greatest Hindu mathematician of all time and his contribution to not just Indian, but world mathematics is undeniable. He was born near Bijjada Bida (in present day Bijapur district, Karnataka state, South India) into the Deshastha Brahmin family. Bhaskara was head of an astronomical observatory at Ujjain, the leading mathematical centre of ancient India. His father Maheshwar taught him mathematics and astronomy.

Bhaskaracharya made significant contributions to the study of Mathematics, including the following:

- Bhaskara is the first to give the general solution to the quadratic equation $ax^2 + bx + c = 0$
- He also gives the well known results for $\sin(a + b)$ and $\sin(a - b)$.
- He Stated Rolle's Theorem and the mean value theorem which are the most important theorems in analysis. Traces of the general mean value theorem are also found in his works.
- Bhaskara also gives the solutions of indeterminate quadratic equations (of the type $ax^2 + b = y^2$).
- Bhaskara also goes deeper into the 'differential calculus' and suggests the differential coefficient vanishes at an extremum value of the function.
- He developed the first calculus about 500 years before Newton and Leibniz.
- He also calculated derivatives for trigonometric formulae and functions.
- To show the Pythagorean theorem, he compute the same area using two alternative approaches.

Bhaskaracharya wrote Siddhanta Shiromani in 1150 AD when he was 36 years old. One of the most important characteristic of Siddhanta Shiromani is, it consists of simple methods of calculations from Arithmetic to Astronomy. After Bhaskaracharya nobody could write excellent books on mathematics and astronomy in India.

Lilawati is the part of Siddhanta Shiromani which is an excellent example of how a difficult subject like mathematics can be written in poetic language. Lilawati has been translated in many languages throughout the world. Lilawati covers the topics of definitions, arithmetical terms, interest computation, arithmetical and geometrical progressions, plane geometry, solid geometry. Bhaskara's method of solving was an improvement of the methods found in the work of Aryabhata and subsequent mathematicians.

Today, Bhaskaracharya is remembered as one of the greatest mathematicians and

astronomers of all time. His work on mathematics and astronomy has had a lasting impact on the field of science and serves as an inspiration to future generations of mathematicians and scientists. His ideas on calculus, algebra, and astronomy laid the foundation for the development of a rich tradition of mathematics in India, which continued to thrive for centuries.

Conclusion:

Ancient Indian mathematicians contributed significantly to the study of mathematics and astronomy were phenomenal and influential. The discoveries and inventions made by Indian mathematician turned out to be helpful in the science and mathematics fields. India is home to some of the world's most brilliant brains. Their contribution to mathematics and astronomy brought major changes in the scientific sector, which led scientists and astronauts to achieve new milestones in astronomy. India has been a pioneer in all sectors, from literature and science to art and theatre, thanks to immensely gifted individuals who have made the country proud. Mathematics, as a science, remains vital in the globe, and this blog examines some of the world's most notable Indian mathematicians and their contributions to the field.

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“A Study of Innovations in Indian Knowledge Tradition and Research”

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Abstract

This study focuses on the innovations in Indian knowledge tradition and research. It explores the role of innovation and entrepreneurship in fostering socio-political and economic change in India and other emerging economies. The study aims to inform practitioners, policymakers, and citizens about the importance of innovation and entrepreneurial activity in driving sustainable economic growth. Furthermore, the study highlights the initiatives and efforts made by India to create employment opportunities and improve the innovation ecosystem. Moreover, it recognizes the increasing economic role of knowledge in the development of India's innovative ecosystem and acknowledges that these efforts have yielded positive results.

Keywords:- Innovations, Indian Knowledge, Tradition, Research.

Introduction

In recent years, there has been an increasing interest in examining the innovations within Indian knowledge tradition and research. This study aims to explore the various dimensions of innovation in India, particularly focusing on the role of universities, the capacity for low-cost innovations, and the potential for commercial applications of research. The localization of knowledge diffusion has long been recognized as a crucial aspect of innovation systems, both at national and regional levels.

The Role of Universities in Innovation Universities have emerged as important institutions in the innovation ecosystem, contributing significantly to the innovative capacity of India. Several Indian studies have indicated that the university system in India has played a vital role in driving innovation, although this may not be evident through traditional measures of innovation. For example, Datta and Saad's research highlights that the Indian innovation system, despite its challenges, has been positively influenced by the contributions of universities which have fostered an environment of knowledge creation and research. These universities have become valuable resources for generating new ideas and inventions, which have the potential for commercial applications.

Additionally, the role of universities in knowledge creation has been further strengthened through postgraduate and research education programs. These programs have empowered universities to enhance their research capabilities and engage in more multidisciplinary research initiatives, thereby fueling innovation in India. (Devenish, 2016) Furthermore, Torjman and Leviten-Reid emphasize the relationship between

innovation and poverty reduction. They argue that innovation plays a crucial role in addressing poverty and uplifting communities.

Background of the study

To understand the innovations in Indian knowledge tradition and research, it is important to consider the historical evolution of the Indian innovation system. Over more than 150 years, the Indian university system has undergone a process of evolution. During this process, various theoretical systems of innovation have been established, including the role of universities. Concerning the localization of knowledge diffusion, universities have long been recognized as key institutions in both national and regional innovation systems. They have been seen as sources of human resources and knowledge-information activities for entrepreneurship. Furthermore, in the transition to knowledge economies, the role of universities has become even more critical (Kolomytseva & Porev, 2018).

The increasing recognition of the fundamental role of knowledge and innovation in economic growth has led to a greater focus on understanding the dynamic interconnections between universities, industry, and government. A comprehensive analysis of the Indian innovation system reveals that universities have played a significant role in fostering innovation and knowledge creation.

Various studies, including those conducted by Datta and Saad, have shown that the Indian innovation system has been positively influenced by the contributions of universities. Innovation in India has been facilitated by universities through their research capabilities and multidisciplinary initiatives. Moreover, universities have become a

significant resource for generating new ideas and inventions with the potential for commercial applications. The role of universities in India's knowledge tradition and research is of great importance. The study of innovations in Indian knowledge tradition and research highlights the significant role of universities in fostering innovation and knowledge creation.

Review of Literature

There is a growing body of literature that emphasizes the important role of universities in the innovation process, both at the national and regional levels. Universities are considered important institutions in national and regional innovation systems, as they contribute to the innovative capacity of a country. Various studies, including those conducted by Datta and Saad (National systems of innovation, innovation niches, and diversity 2019), have found evidence to support the idea that universities in India have contributed to the innovative capacity of the country. They have shown that the university system in India, although not reflected through conventional measures of innovation, has played a crucial role in fostering innovation and knowledge creation through research collaborations and the enhancement of research capabilities. Universities in India have recognized the fundamental role of knowledge and innovation in economic growth.

As a result, they have focused on strengthening their research capabilities through postgraduate and research education programs. This has led to universities becoming a significant resource for generating new ideas and inventions with the potential for commercial applications (Sharif et al., 2018). Furthermore, universities in India have recognized the need for multidisciplinary research initiatives to address complex societal challenges.

These initiatives have further enhanced the research capabilities of universities and their ability to contribute towards innovative solutions. Concerning the localization of knowledge diffusion, universities in India have long been acknowledged as crucial institutions in both national and regional innovation systems. They have played a key role in fostering innovation and knowledge creation, contributing to the overall innovative capacity of India (Ahoba-Sam, 2019).

Research Methodology

To study the innovations in Indian knowledge tradition and research, a comprehensive research methodology was employed. This research was utilize a combination of qualitative and quantitative methods. Qualitative methods such as interviews and case studies were used to explore the experiences and perspectives of individuals involved in the Indian knowledge tradition and research. In addition, quantitative methods such as data analysis

and statistical measures were employed to examine and analyze trends, patterns, and outcomes in Indian knowledge tradition and research.

This study aims to provide a comprehensive understanding of the innovations in Indian knowledge tradition and research by examining the role of universities in fostering innovation, knowledge creation, and collaboration. The findings of this study was contribute to the existing body of knowledge on innovation and knowledge creation in the Indian context, particularly highlighting the role of universities in strengthening the innovative capacity of India. Concerning localization of knowledge diffusion, universities in India have long been recognized as important institutions in both national and regional innovation systems. Several Indian studies have shown that universities have contributed to the innovative capacity of India, although this contribution may not always be reflected through conventional measures of innovation.

Drobyshevskaya et al., (2020) Moreover, this research was also examine the role of multidisciplinary research initiatives in addressing complex societal challenges. The results of this study was provide valuable insights into the innovations in Indian knowledge tradition and research, shedding light on the significant role that universities play in fostering innovation and knowledge creation in India. Furthermore, this research was contribute to the understanding of how universities can effectively integrate with industry and government to create a dynamic knowledge-based innovation system. Moreover, this study was also explore the goal of poverty reduction through innovation, as highlighted by Torjman and Leviten-Reid.

Research Findings

The research findings of this study revealed several key insights into the innovations in Indian knowledge tradition and research. Firstly, the study found that universities in India have played a crucial role in fostering innovation and knowledge creation. Their emphasis on postgraduate and research education has strengthened their role as a significant resource for new ideas and inventions with the potential for commercial applications. Through enhancing their research capabilities and engaging in more multidisciplinary research initiatives, universities have been able to contribute to the innovative capacity of India.

Furthermore, the study found that the contributions of universities may not always be reflected through conventional measures of innovation. Instead, universities have made an impact through their ability to localize knowledge diffusion and address complex societal challenges. Overall, this study highlights the important role that universities play in the innovation ecosystem of

India. The study also emphasizes the need for universities to establish stronger collaborations with industry and government to create a dynamic knowledge-based innovation system.

The research findings of this study provide valuable insights into the innovations in Indian knowledge tradition and research.

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Physics in Ancient Indian knowledge System

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Abstract:

Advancements in science and Technology have been the major part for the civilization development of mankind. India has great contribution to this science and technology up to the modern world. The traditional knowledge is based on the scientific reasoning. In India, The study of Vedas and other ancient scriptures was done by philosophers and it is related to physical subjects like astronomy, medicine, chemistry, engineering, metallurgy, mathematics and other sciences. Vedas means knowledge and it is related to different branches of science, related to the life and human beings.

Keywords : Indian, Ancient, Knowledge, System, Astronomy, Science, Physics, Human Being.

Introduction:

First of all, we have to see knowledge system where literature is very important. The meaning of literature is “Written works, especially those considered of superior or lasting artistic merit”. The context of India contains history of more than at least 5000 years. Similarly at that time, the work is composed and transmitted orally from generation o generation.

Systematic analysis of any question is called science. Science is in no way limited to the laboratories or classrooms. Science and mathematics have always been closely interrelated. Nowadays, works of different domains of science are starting to intersect more and more and some of the best research is carried out. The branches are Bioinformatics, Biomechanics, Quantum computing and molecular biology. The backbone of science includes Physics, Mathematics. Nowadays, the diversity is increasing.

Literature Review :

In Ancient Indian Knowledge System, The physics is related to Astronomy, Medicine, Chemistry, Engineering, Space, Metallurgy and Energy, Nature, Matter and Environment

The basic physical quantities of the matter, according to Veda are of Nine types :

1. Solid
2. Liquid
3. Energy
4. Plasma
5. Disa (Lenth Vector)
6. Time
7. Gas
8. Soul (Atma)
9. Mind (manas)

Soul and Mind are cognitive elements. The types of matter such as solid, liquid, energy and gas are not

eternal and plasma, time and length of Vector (disa) are of eternal or continuum type Similarly, according to the Vaisesikha, The gravity is the reason for falling down of solids and liquid. The prasastapadabhyas gives the three forms of the force namely mechanical, emotional and elastic. The material world was divided into five elements namely earth (Prithvi), Fire (Agni), Air (Vayu), Water (Jal) and ether or Space (Akasha), Parmanu (beyond atom) was considered to be the smallest particle, which cannot be divided further. Nuclear energy is produced due to the splitting of atom.

The technology is defined as the applied science, but in the past, these are stone-working agriculture, animal husbandary, pottery, metallurgy, textile manufacturing, bead making, wood carving, cart making, boat making and sailing. Metallurgy has brought important changes in the human life and society. It has given the new implementations as Weapons, tools. Metallurgy means extraction, purification, alloying and applications of metals. The first evidence of metal in the Indian subcontinent comes from Mehargarh in Baluchistan about 6000 BCF. There was Bronze age, Copper age and Iron age, The culture of conservation of nature dates back to the ancient Vedic period. Sun worship is in the Vedic worship. Today we know that sun energy is the alternative source of energy. Similiarly the trees such as bael, asoka, sandal wood and coconut has the significant importance in human life. In other fields, the physics is the important science.

Conclusion-

The Human Society is now living in advance era because of the basic/ fundamental Science and it's applications the continuous research and inventions are happening in the society. The physics is the important in the ancient life of human and it is used in different fields. Some of them are as

energy and it's conservation, nature, non-conventional and conventional energy, chemical and physical properties of the matter. And so on.

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Awareness of Vedic Mathematics in the Modern Era

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Abstract:

Vedic Mathematics, an ancient system of mathematical principles rooted in the sacred texts of the Vedas, has reemerged as a captivating subject in the modern era. This review paper aims to explore the rich history, unique techniques, and potential benefits of Vedic Mathematics. The paper will dive deep into the mathematical sutras and their applications, demonstrating how Vedic Mathematics can be both engaging and relevant in today's world of mathematics education. Through a thorough examination of its concepts and real-life success stories, we hope to ignite curiosity and encourage further exploration of this time-honored mathematical tradition.

Keywords: vedic, vedas, modern, Mathematics

Introduction-

Historical Perspective:

Vedic Mathematics finds its roots in ancient Indian culture, where it was intricately linked to the Vedas, a collection of sacred texts dating back thousands of years. The Vedas, regarded as timeless repositories of knowledge, housed mathematical wisdom that was passed down through generations by revered sages and scholars. This historical context provides a sense of awe and wonder, as we realize that Vedic Mathematics transcends time and continues to be a source of fascination in the modern world.

Philosophical Foundations:

Beyond its practical applications, Vedic Mathematics is steeped in profound philosophical underpinnings. It views mathematics as an intrinsic part of life and the universe, connecting it to spirituality and cosmic harmony. Vedic Mathematics embraces the concept of zero and infinity, representing the infinite possibilities and unity within all numbers. This philosophical depth enriches the study of Vedic Mathematics, elevating it beyond mere calculations and algorithms.

Importance in Modern Education:

In the fast-paced world of mathematics education, the revival of interest in Vedic Mathematics signifies its potential as a complementary approach to conventional methods. By incorporating Vedic Mathematics into the curriculum, educators can nurture students' problem-solving skills, enhance their mental agility, and foster a deeper appreciation for the subject. The significance of Vedic Mathematics lies not only in its efficiency but also in its ability to instill a sense of joy and curiosity in students, making mathematics an engaging and enjoyable pursuit.

Vedic Sutras: Unlocking Mathematical Treasures

Fundamental Sutras:

At the heart of Vedic Mathematics are the 16 fundamental sutras, each accompanied by corollaries, which serve as guiding principles for various mathematical operations. These sutras hold the key to unlocking the magic of Vedic Mathematics, providing ingenious shortcuts for complex calculations. For instance, the "Vertically and Crosswise" sutra simplifies multiplications, while the "By One More than the One Before" sutra is a powerful tool for division and algebraic manipulations.

Sutras in Action:

The true essence of Vedic Mathematics becomes apparent when we witness its application across diverse mathematical disciplines. From basic arithmetic to advanced calculus, Vedic methods shine in their efficiency and simplicity. For example, the sutra "All from 9 and the last from 10" is a swift technique for subtraction, and "Nikhilam Multiplication" works wonders for finding products close to certain bases. By comparing Vedic techniques with conventional approaches, we gain valuable insights into the elegance and effectiveness of this ancient system.

Vedic Mathematics and Mental Agility:

One of the hallmarks of Vedic Mathematics is its emphasis on mental math, promoting computational speed and mental acuity. The techniques of Vedic Mental Math enable rapid calculations and empower students to perform complex computations mentally. By engaging in mental math exercises, students not only develop their calculation skills but also enhance their ability to think flexibly and creatively.

Applications in Various Fields**Computer Science and Cryptography:**

In the technologically advanced world, where computational efficiency is of paramount importance, Vedic Mathematics finds applications in computer algorithms and cryptographic protocols. The inherent speed and simplicity of Vedic techniques contribute to optimizing algorithms and securing sensitive information through encryption. For example, the "Ekadhikena Purvena" sutra is used in computer algorithms to achieve faster execution times.

Music and Mathematics:

Vedic Mathematics shares an intriguing connection with the mathematical principles found in classical Indian music. By exploring the rhythmic patterns and harmonic structures in music, students can grasp the beauty of mathematical symmetry and resonance. The interplay of mathematical ratios and musical notes demonstrates the profound link between mathematics and art, enriching both disciplines.

Sanskrit Literature and Numerical Symbolism:

Beyond mathematics and music, Vedic Mathematics finds expression in ancient Sanskrit literature, where numerical symbolism carries profound meanings beyond their quantitative values. Numerical codes embedded in Sanskrit verses add layers of significance, revealing the interplay of mathematics and linguistics in ancient texts.

Empowering Female Students with Vedic Mathematics:**Historical Role of Women:**

Ancient India boasts a history of gender-inclusive mathematics education, with women playing pivotal roles as mathematicians and scholars. Celebrating the contributions of these trailblazing women in Vedic Mathematics inspires today's female students, underscoring the inherent inclusivity of the subject.

Promoting Gender Inclusivity:

As a Professor in a college dedicated to female students, integrating Vedic Mathematics in the curriculum can empower girls to excel in mathematics. By showcasing its relevance and engaging nature, educators can break down gender barriers and instill confidence in young female mathematicians.

Success Stories:

Highlighting success stories of modern-day female mathematicians who have harnessed the power of Vedic Mathematics demonstrates its practicality and effectiveness in empowering women in the field of mathematics. Real-world examples of accomplished female mathematicians who have embraced Vedic Mathematics can serve as role models for aspiring students.

Nurturing Curiosity and Enthusiasm in Mathematics Education:**Integrating Vedic Mathematics in the Curriculum:**

To spark curiosity and enthusiasm among students, strategies for incorporating Vedic Mathematics as a supplementary tool should be explored. Designing lesson plans that integrate Vedic Mathematics concepts in an engaging manner can captivate students' interest. For instance, introducing mental math games and interactive activities can make learning mathematics a joyful and rewarding experience.

Cultivating Mathematical Creativity:

Encouraging students to explore alternative approaches to problem-solving nurtures their creativity and mathematical acumen. By promoting a sense of playfulness in mathematics, educators can transform it into an exciting and enjoyable subject. Real-world problem-solving scenarios can be presented to students, encouraging them to apply Vedic Mathematics techniques to practical situations.

Vedic Mathematics Workshops:

Organizing interactive workshops and activities centered around Vedic Mathematics can provide students with hands-on experiences, making learning mathematics a rewarding and enriching journey. Workshops can include practical exercises, mental math challenges, and opportunities for students to demonstrate their mastery of Vedic Mathematics.

Challenges and Future Prospects:**Overcoming Misconceptions:**

Addressing common misconceptions surrounding Vedic Mathematics with evidence-based explanations fosters a deeper understanding and appreciation for its principles. By dispelling myths and presenting concrete evidence, educators can strengthen the credibility of Vedic Mathematics.

The Way Forward:

To ensure the continued growth of Vedic Mathematics in the modern era, collaborative efforts between academia and educational institutions are crucial. Investing in research and exploring innovative pedagogical approaches can further its integration into mainstream education. For instance, collaboration with mathematics departments in other institutions can foster cross-cultural exchanges and promote a global understanding of Vedic Mathematics.

Global Impact:

The resurgence of interest in Vedic Mathematics is not limited to India alone; it has garnered attention worldwide. Acknowledging and respecting the diverse cultural perspectives on mathematics can lead to cross-cultural exchanges and a richer global mathematical community. By fostering global collaborations, educators can

broaden the reach of Vedic Mathematics and enrich mathematical discourse on an international level.

Conclusion-

Having journeyed through the world of Vedic Mathematics, we recognize its historical significance, philosophical depth, and practical applications in the modern era. The allure of Vedic Mathematics lies not only in its efficiency but also in its capacity to nurture a profound appreciation for the beauty of numbers. As educators and researchers, we are inspired to embrace Vedic Mathematics and continue exploring its timeless marvels. By disseminating this ancient knowledge, we contribute to its revival and ensure its preservation for generations to come. In conclusion, Vedic Mathematics stands as a captivating and empowering discipline that not only enhances

mathematical abilities but also fosters a deep connection with the art of numbers. As we embark on the journey to unravel its mysteries, we invite students, educators, and scholars to rediscover this ancient mathematical heritage and weave its magic into the fabric of modern mathematics education. By incorporating real-world examples and practical applications, Vedic Mathematics becomes more than just a historical curiosity—it becomes a living and relevant subject that can empower students and instill a lifelong love for mathematics.

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Role Of The Knowledge In The Growth Of The Economy As A Knowledge Economy

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Abstract:

After 1991, India accepted globalization and India joined the global economy. Until 1991, India's international trade did not increase much, but after accepting globalization India's international trade increased rapidly. The main. This paper investigates the broad socio-economic background and implications of two decades of rapidly. The transformation in India's Information technology sector has boosted production and export in the service sector and has helped to boosted India's international trade. This paper investigates the broad socio-economic background and implications of two decades developments in India, especially in the information technology industry, through a knowledge management perspective. A defining characteristic of this development is the extensive linkages that the economy has cultivated with global markets since the 1990's by capitalizing on its human infrastructure, painstakingly developed in the previous decades, in the process of engagement with the evolving knowledge economy of the West

Keywords: International Trade, globalization, knowledge economy, economic growth, economic liberalization; Indian economy; India; globalization; information technology.

Research Methodology:

Present research paper the data collection tools used are Reference Books, Journals, Newspaper Articles, Websites etc.

Objective :

The study was based on the secondary data collected from websites books research paper etc. There are three major objectives of the study:

1. To analyze the status of India as a knowledge economy at both national as well as global level
2. To examine the role of India to become a knowledge economy.

Introduction:

The term "knowledge-based economy" results from a fuller recognition of the role of knowledge and technology in economic growth. Knowledge, as embodied in human beings and in technology, has always been central to economic development. In the last few years, importance of knowledge is recognized in economic development as it plays catalyst role in making country more dynamic. The last two decades have witnessed a global transformation of economies on a scale perhaps rarely encountered before. A salient feature of this development has been the extensive participation of countries that hitherto lay largely outside the traditional hubs of industrial and economic advancement, viz., Europe and North America. Equally of interest,

these economies not only seem to have embarked upon a path of growth from different starting points, but also continue to grow in ways that have little in common amongst themselves or with the conventional theories of linear development in stages, say, from the primary to the tertiary or the quaternary.

Several questions arise in attempting to understand this phenomenon, such as, why did these economies take off at the time they did, what factors led to the specific course of development adopted, what challenges were encountered during this period and how they were addressed, and what their past and current states may imply for their future. Among these, India presents an interesting and somewhat unique study partly because its growth has been predominantly led by the services sector unlike most other countries cited above, and partly because of the evident lack of anticipation of its development, both within India and outside, by either conventional wisdom or traditional theory of staged economic progress of societies.

In the present work, we provide a brief sketch of the factors underlying the important steps that India undertook to achieve an impressive beginning of an economic development in a relatively short span of time. In attempting to describe the essence of the transformation of the Indian economy, we adopt

an approach that illustrates its core characteristics through anecdotal examples rather than through extensive empirical analysis.

While it is generally accepted that the Indian economy took off on a high growth trajectory around 1990, two significant factors seem to have essentially influenced its initiation. The first is the creation of a new context for knowledge in the era of globalization, a process that accelerated in the nineteen eighties although its roots perhaps can be traced to earlier times. The serious structural weakness induced in the economy by a weak polity in India is the other factor, notwithstanding the establishment of a wide base for education, industry and agriculture since Indian independence.

India's position in the Global knowledge economy:

There are various methods used and developed to analyze nations performance in terms of knowledge readiness. Among them, one globally recognized method is knowledge assessment methodology (KAM) was developed by world bank to benchmark countries position relative to others in the global knowledge economy. India's position in the global knowledge economy was analyzed through this.

Globalization and the New Context for Knowledge

In recent decades, especially from the standpoint of the industrial societies of Europe and America, the rapid globalization of markets in an environment of sustained technological flux has played a powerful role in redefining the foundations of the modern organization as an economic enterprise. A significant attribute of this development has been the ever-increasing complexity of products and services in the market as well as the processes underlying their production in the organization. Complexity on its part has driven, and in turn has been driven by, intense competition and market spread, heightened consumer awareness, shortened product life cycles and stringent regulatory regimes. The emergence of knowledge as a key driver of productive enterprise in the new economy has also forced a deeper reassessment of the role played by the various factors of production in the organizational supply chain of value, hitherto principally defined in terms of land, labor and capital. and value extraction from the market with a reduced danger of immediate commodification

Towards this, it is possible that India's traditional emphasis on education and knowledge - whose pursuit has been cherished for millennia

as a central purpose of life - also played an important role by enabling a significant section of people to deal with complexity, ambiguity, risk, predictability and sustainability of systems. In hindsight, it therefore appears that all through the nineteen eighties, the situation was ripe for a fundamental change, although it was not clear how it would manifest itself.

Economic Liberalization and Development: 1990 to the present

The balance of payment crisis of 1991, leading to the pledging of the country's paltry gold reserves with the Bank of England in return for foreign exchange, was an important turning point for India, bringing to fore the serious deficiencies of the system developed over the previous forty years. It created an acute awareness that the over-regulated economy was in need of an immediate overhaul and deeply influenced the economic policy of the government towards initiating far reaching structural reforms under the banner of liberalization of the Indian economy (Joshi, V. and Little, I.M.D, 1996). In a phased manner over time, many of the controls imposed on capital, labor and land were eased and barriers for export and import lowered, leading to a gradual improvement in the environment for business and commerce in the country.

The Birth and Development of the Indian IT Industry

Three and a half decades into India's adoption of a mixed economy, Bangalore, a small city of two million people in the state of Karnataka, had transformed itself from a sprawling colonial retreat into a nucleus for advanced technology industries predominantly in the public sector. Leveraging the vast pool of specialized scientific and technological talent available from across the country since the fifties, the city had gradually become an important center for industries in the aerospace, telecommunication, manufacturing and electronics sectors. Its open culture, cosmopolitan outlook and numerous educational institutions of eminence shaped it into a crucible of choice for developing new industries in the high-technology areas.

Meanwhile, in the US and Western Europe, a lack of adequate manpower and rising costs had severely hampered the efficacy of software development in a milieu of increasing adoption of IT into businesses that had begun in the sixties. Moreover, fast paced developments in computing systems since the late seventies held a seductive promise of radical enhancements in competitiveness and market share enabled by a tighter control on all aspects of organizational

performance resulting from the computer's ability to improve engineering processes and efficiently organize and present data and information for speedy decision making. With organizations under mounting pressure to swiftly adapt to these rapidly evolving technologies while ensuring affordable costs, existing models of IT business performance had to explore more effective and less expensive ways of software development, including across geopolitical boundaries. By early 90's, Indians who had emigrated in significant numbers in previous decades had already proven their abilities in universities and enterprises across Europe and USA as students, researchers, scientists and engineers. In many leading IT companies of the time in the USA, for example, it was widely recognized that Indians and other Asians create good quality hardware and software, usually seen as a natural consequence of their strong fundamentals in science and mathematics.

Taking root as it did in the eighties, the IT industry found an inviting host in Bangalore whose high technology organizations and educational institutions provided a steady supply of bright young engineers and managers to provide it with a strong foundation through the difficult initial years. Over time, even as other metropolises in India have come to host significant fractions of the IT business, Bangalore continues to be important for investments in the sector as well as for work for people from across the country. Meanwhile, the story of the success of IT in India has propelled a powerful drive to broaden the IT footprint across the length and breadth of the country, in tier-II cities like Jaipur, Mysore, Coimbatore and Kolkata. From a figure of under 1 billion.

Notwithstanding such a favorable background both in India and in the West, there were still major hurdles in building the Indian IT industry. Primary roadblocks were extreme forms of regulation and a formidable bureaucracy in the Indian government and lack of reliable transportation, power, and telecommunication infrastructure. In addition, even in the USA, since the outsourcing model for IT was not yet widely recognized or accepted in the public space, tremendous efforts were needed to convince potential customers that it was viable, reliable and scaleable. It took extraordinary entrepreneurship on the part of the founders of Indian IT companies, such as Mr. P.C. Kohli, Mr. N. R. Narayana Murthy and Mr. Azim Premji, to struggle and create a reliable set up in such an unpredictable and difficult environment for

producing and delivering high quality software on a consistent basis

It may be recalled here that companies such as Infosys, Tata Consultancy and Wipro had already trodden the difficult path of software outsourcing for more than a decade before the Indian economy was opened up in the early 90's. The accumulated experience over the years seems to have significantly aided them in quickly and optimally shaping the many facets of the outsourcing model and instilling it with a powerful vision that drives its rapid expansion to date.

The Indian IT business is essentially an industry wherein knowledge is a critical factor in the delivery of services to global customers. Where knowledge is endogenous to production, challenges in its integration with the organizational value chain can only be addressed by efficient knowledge bases, a culture of continuous learning and sharing among employees, and systems and methods for the swift and efficient exchange and application of knowledge. Managing knowledge effectively is therefore a key enabler for the rapid growth and sustenance of the industry.

Conclusion:

All the entrepreneurs in the field of information technology have tried to revolutionize the field of information technology by using all the knowledge in the field of research. Although, India is able to mark its position in the global scenario as one of the emerging nations, but still transforming itself into a knowledge-based economy is hard nut to breaking the fast-growing technical global environment. It will be beneficiary for India to fully utilize its human resources by making investment and focusing to increase its productivity, in order to generate spread effects as done by China.

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Contribution of Teachers In Promoting Indian Knowledge System

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Abstract:

This research paper explores the pivotal contribution of teachers in safeguarding and advancing the Indian knowledge system (IKS), a multifaceted repository of wisdom spanning centuries. Rooted in a holistic fusion of philosophy, arts, sciences, literature, management and spirituality, the Indian knowledge system stands as a testament to the profound heritage of the nation. This paper delves into the historical foundations of the system, emphasizing the guru-shishya tradition as a conduit for knowledge transmission.

Moreover, it investigates the potential of the digital age in revitalizing the dissemination of this knowledge. By contextualizing the Indian knowledge system and fostering its relevance, teachers act as vital custodians, ensuring its longevity and resonance in a dynamic world. This paper underscores the critical importance of teachers as torchbearers, preserving the sanctity of the Indian knowledge system while navigating the complexities of modern education in relation to National Educational Policy (NEP)-2020.

Keywords: Indian knowledge system, holistic fusion, custodians, NEP etc.

Introduction:

The Indian knowledge system, deeply rooted in the country's cultural heritage, encompasses a diverse range of disciplines such as philosophy, arts, sciences, literature, management and spirituality. It reflects a unique blend of ancient wisdom and contemporary insights. Traditional knowledge systems have almost continuously evolved through ample experience. If educators and policy-makers are open, they can learn a great deal from 'indigenous knowledge' and advocacy efforts.

The traditional knowledge is passed on continuously for several successive generations - the cumulative knowledge. Some of the knowledge, a student is having; a teacher may not have and which is essential for the teacher to explore in teaching further. If teachers are exposed to the local knowledge, they can better help the student's learning. This paper aims to shed light on the important contribution of teachers undertake in preserving and promoting this invaluable heritage in modern education in relation to National Educational Policy-2020.

Objectives of Indian knowledge system:

Indian knowledge system aims to support and facilitate further research to solve the contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment & Sustainable development. The primary aim of drawing from the past and integration of the Indian knowledge systems is to solve the contemporary and emerging problems of India and world by using our ancient knowledge

systems represented by uninterrupted tradition of knowledge transfer and unique point of view (Bhāratīyū Drishti).

Role of a Teacher-

Teachers play a crucial role in promoting the Indian knowledge system. They are responsible for imparting knowledge, guiding students, and instilling values and a sense of pride in their cultural heritage. Here are some key aspects of the role of teachers in promoting the Indian knowledge system:

1. Preservation and transmission of knowledge:

Teachers act as custodians of traditional knowledge and ensure its continuity by passing it on to the younger generation. They play a vital role in preserving ancient texts, scriptures, and teachings, and sharing them with their students.

2. Creating awareness and appreciation:

Teachers help students understand the importance and significance of the Indian knowledge system. They familiarize them with the rich cultural and intellectual heritage of India and cultivate a sense of pride and respect for their roots.

3. The Guru-Shishya Tradition:

Central to the Indian knowledge system is the guru-shishya tradition, a sacred teacher-student relationship that emphasizes not only the transmission of knowledge but also the cultivation of moral and ethical values. This tradition has been instrumental in passing down knowledge across generations.

4. Incorporating Indian knowledge in the curriculum:

Teachers have the responsibility to integrate Indian knowledge into the educational curriculum. This includes incorporating texts, philosophies, historical events, and contributions of Indian scholars into various subjects, such as history, literature, philosophy, mathematics, and science.

5. Encouraging critical thinking and inquiry:

Teachers should encourage students to question, analyze, and critically evaluate the concepts and ideas in the Indian knowledge system. By fostering open-mindedness and independent thinking, teachers enable students to explore and understand the relevance of traditional knowledge in the modern world.

6. Promoting holistic development:

The Indian knowledge system emphasizes holistic development, considering physical, mental, and spiritual well-being. Teachers promote this holistic approach by encouraging activities such as yoga, meditation, and mindfulness practices, which help students develop a balanced and integrated personality.

7. Nurturing values and virtues:

Indian knowledge is inseparable from moral and ethical values. Teachers play a vital role in imparting and nurturing values such as truth, compassion, non-violence, respect, and self-discipline. They serve as role models and inspire students to embody these values in their daily lives.

8. Facilitating experiential learning:

Teachers often incorporate experiential learning methods, such as storytelling, field trips, cultural activities, and project-based learning, to provide students with practical and hands-on experiences related to the Indian knowledge system. This approach helps students develop a deeper understanding and appreciation of their cultural heritage.

9. Promoting interdisciplinary learning:

To understand the interconnectedness of various aspects of the Indian knowledge system, teachers encourage interdisciplinary learning. They help students make connections between different subjects, allowing them to see the holistic nature of knowledge and its relevance across disciplines.

Salient features of National Educational Policy-2020

Some salient features of NEP 2020 which are relevant for the present study:- Recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres.- respect for diversity and respect for the local context in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject;- full equity and inclusion as the

cornerstone of all educational decisions to ensure that all students are able to thrive in the education system;- a rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions (NEP, 2020). The vision of the National Educational Policy-2020 includes "Quality higher education must aim to develop good, thoughtful, well-rounded, and creative individuals" (NEP, 2020). To fulfill this vision, teachers are to be creative, diverse, well-equipped with the holistic knowledge.

1. Cultural relevance:

Indigenous knowledge systems are deeply rooted in the cultural practices, customs, and traditions of specific communities. By incorporating such knowledge, teachers can make education more culturally relevant and inclusive. This allows students to see themselves and their communities in the teaching and learning process, fostering a sense of identity and belonging.

2. Multilingualism:

Many indigenous communities have their own languages, which are an integral part of their knowledge systems. Incorporating indigenous languages in teacher education can promote multilingualism, preserve linguistic diversity, and ensure that indigenous students can fully engage with education. The National Education Policy 2020 emphasizes the importance of mother tongue-based education in early years, aligning with this aspect of indigenous knowledge systems.

3. Sustainability and environmental awareness:

Indigenous knowledge often encompasses a deep understanding of the environment and sustainable practices. By integrating indigenous knowledge into teacher education, educators can promote sustainable practices, environmental conservation, and a holistic understanding of the interdependence between humans and nature, as emphasized in the National Education Policy 2020.

4. Community engagement:

Indigenous knowledge systems are often community-centered, with strong ties to local practices, values, and ways of life. By incorporating indigenous knowledge in teacher education, educators can foster partnerships and collaborations with indigenous communities. This engagement can enhance community participation and ownership in education, ensuring that policies and practices are inclusive, locally relevant, and responsive to community needs.

5. Countering colonial legacies:

Many indigenous communities have historically faced marginalization and oppression due to colonial policies and practices. Incorporating indigenous knowledge in teacher education can help counter these legacies, promoting social justice, respect for diverse knowledge systems, and decolonization of educational practices.

Conclusion:

Overall, incorporating indigenous knowledge in teacher education can contribute to a more inclusive, culturally sensitive, and equitable education system in alignment with the goals of the National Education Policy 2020. By upholding the guru-shishya tradition, navigating challenges, leveraging digital tools, and fostering relevance, educators can serve as torchbearers of this profound legacy. It can help bridge the gap between formal education and indigenous knowledge systems, empowering teachers to create meaningful learning experiences for all students.

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Role of Ancient Alchemy In The development of Chemical Science

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Abstract:

Science and technology in ancient and medieval India covered all the major branches of human knowledge and activities. Ancient Indian achieved great process in alchemy (the older form of chemistry). An ancient text, amazing information is available on metals, ores, compounds and alloys. Ancient India's chemistry also found expression in practical activities like distillation of perfumes, aromatic liquids, manufacturing of dyes and pigments. Natraj statue of god of dance is made of five metals (pancha dhatu). Also Iron pillar in Delhi is a silent witness to assert the striking metallurgical skill of Hindu's. Painting found on walls of Ajanta and Ellora reveals the high level of chemical science achieved in ancient India.

Introduction:

Vedas is considered as one of the foremost means to gather knowledge on different facets of India's past. Out of the four Vedas it is also largely accepted that Rig Veda is most ancient of them all. Around 18th century BC. Humanity was aware of only 7 metals namely-gold silver copper iron tin lead and mercury. Besides these arsenic, sulphur, orpiment (arsenic, sulphide) and cinnabar (mercuric sulphide) were also used. There is a detailed mention of these metals in our ancient scriptures including the Rigveda Yajurveda and Atharvaveda. The facts in this help us to arrive at the conclusion that discipline of chemistry finds its origin in India at about 1000 BC.

In the post Vedic Era we find references of the world famous "Sushrut Samhita" and the medicinal experiments using Mercury, Zinc, Copper and other metals and acquiring their pure form from their alloys. Sushrut samhita explain the importance of alkalies and classified it into 3 categories mrudu, tiksna and madhyama. Kautilya (Chanakya) made references to metals, alloys minerals and ores in the "Atharva Shastra". There is a detailed astounding explanation of their mining, destruction, arrangements of mines and metallurgy. Varah Mihira in Brihat Samhita wrote about Alam and sulphate or iron as mordants for dyeing of textile fabrics. These text represents one of the most important ancient evidences of India's contribution to science.

Materials and methods:

Data and evidences were collected from secondary sources which include books, article, reference material, Wikipedia etc. from 2200 BC - 1200 AD.

Discussion:

Ancient Indians achieved great progress in Alchemy (the older form of chemistry). Ancient chemistry in India gives out of the early efforts to develop an elixir and to turn base metals into gold. Mercury and its elixirs were used in transmutation of the base metals into noble ones as well as for purifying the body, rejuvenating it and taking it to an imperishable and immortal state. Out of the numerous alchemical text, written between the 9th and the 14th century AD, some give alchemical ideas while others are devoted to Alchemy. The Ras Vidya or Indian Alchemy text show the use of number of organic and inorganic substances. These rasas or minerals were divided into subsidiary or Upa and Superior or Maha Rasas. In the Rasas Shastra text mercury is referred to as the king of Rasas though it is a metal. It was considered to purchase divine properties and the most potent of all substances due to its heavy weight, fluidity, silvery white and shiny appearance and its property of combining with other substances readily. There are also details of hundreds of devices used in chemical experiments in ancient "Rasayan Shastra" which we called chemistry. There have been many chemists in the past, the creation of some of them are as follows:-

Nagarjuna, Rasaratnakar, Kakshaputtantra, Arogya Manjiri, Yog Saar, Yoasthak Vagbhata-Rasratna Samuchaya, Govindacharya-Rasarnava, Somdev, Rasendra Chudamani, Yashodhar, Ras Prakash, Sudhakar, Nagarjun was the most prominent scholar in the field of Indian Alchemy. He explained the methods of purifying and medicinal use of mercury in detail. In his text, Nagarjuna has given the method of preparing a mixture of various metals, purification of Mercury and other metals, purification of Maharas and converting various

metals into gold and silver. Was not only use for converting metals but it was also used for good health and longevity. In India, Para (Mercury) was consider to be 'Shiva' element and gandhak at

'Parvati' element and when both of them we are join with Hingul it was called 'Rassindoor' which was considered as a life enhancing essence. Nagarjun could extract Mercury by roasting cinnabar ore extensively found in the hills of Gandhara . Initially Mercury was used as a colour but subsequently "Parad bhasma", "Makardhwaj", " Rasakapur ", "Parad gandhak ", "RasaParpati" etc. where prepared from Mercury and used as medicines.

In the alchemical text various plants have been mention some of which have medicinal value. The roots leaves or seeds of the plants aid in digestion. According to Alberuni, most of the medicines prepared in Rasayan were from plant sources. According to these texts, minerals and metals couldn't give desired alchemical properties unless they were treated or digested with some medicinal plant. Even Mercury was considered the king of Rasas to undergo treatment with different plants. It was solidified using plant juices, metals and sulphur. Gold was used in preparing a variety of medicine.

The existence of laboratory in ancient India:

The description of chemistry laboratory is mention in 7 chapter of "Rasratna samuchay" in this laboratories different apparatus ,appliances, instruments for heating , steaming distilling etc were kept. More than 32 instruments were used in it . The main ones are-Dol Yantra, Swedani Yantra, Patan Yantra, Adhpatan Yantra, Triyak Yantra , Dhup Yantra , Koshti Yantra, Damru Yantra etc.

Swedani Yantra:

A pot with boiling water has its mouth cover with a piece of cloth and the substance to be steamed is placed on it and a second pot is arranged in an inverted position over the rib of the first. It was used for continuous low heating of ingredients.

Patana Yantra:

Two Vessels are adjusted so that the neck of the one feet into that of the other. The junction of the necks is luted with composition made of lime, sugar rust of iron and the buffalo's milk. The apparatus is used for sublimation and distillation.

Adhapatana Yantra:

It is the modification of Patan Yantra. The bottom of upper vessel is smeared with the substance, the vapour or essence their of condensing into the water of the lower one. Heat is applied on the top of the upper vessel by means of the fire of dried cow - dung cakes.

Koshti Yantra:

This apparatus has special furnace of angulas in width and one hasta (18") in length and one hasta to in height. Two Mushas (crucibles used in the

laboratory) are taken one of which has lid with the hole. The Musha with the lid is filled with ore and is fixed upside down on the furnace, surrounding the upper Musha is filled with hard charcoal made of Bamboo, Khadira wood. A fire is light in the charcoal and has to keep ranging, by blowing air with the help of bellows. Gradually the essence of the mineral gets collected in the lower pot. The science of Indian chemistry progressed with use of more and more metals herbs racious stones and new extraction processes. Alchemy is both a philosophy and practice with an aim of achieving ultimate wisdom as well as immortality involving the improvement of the Alchemist as well as making of several substances describe as possessing unusual properties. The best known goals of ancient Indian Alchemist wear the transmutation of common metals into gold or silver, the creation of a panacea or the elixir of life a remedy that it was supposed would cure all diseases and prolong life indefinitely, and discovery of universal solvent.

Conclusion:

These are some examples on the basis of which it can be said that there has been a wonderful tradition of chemical science in India for thousands of years. Due to attacks of foreign invasions and the destruction of Sanskrit literature in the period of slavery, this tradition decreased. It is necessary today to study some of the ancient text of Sanskrit with some people who have a knowledge of modern science, there by learning from ancient as well as modern science ,the research of chemistry and Ayurveda should be encourage in accordance with India's environment, climate and nature. India's ancient science and precious knowledgeable books today are lying with dust in ancient libraries due to ignorance of Sanskrit and Indian texts. It is hope that the Government of India will pay attention to it and set up the committee to revive it.

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Development of Geometry in Ancient and Medieval India

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Abstract:

The earliest method of calculating, measuring, and describing an object's shape led to the development of the science of structure, discipline, and relationships. It requires both analytical thinking and numerical calculation. Additionally, the idea's evolution and the subject's abstraction have both advanced to a high level. Mathematics has been a crucial component of physical sciences and technologies since the seventeenth century. More recently, it has started to play a similar role in the quantitative parts of the biological sciences. For instance, the mathematics of trade and agriculture significantly outweighed calculations in many civilizations that were inspired by the necessity for practical education. This expansion was more obvious in advanced cultures that could support this activity and expand on the capacity for free thought and time.

Keywords: Mathematics, History, Calculating.

Introduction:

In the sixth century BC, the study of mathematics as "visual arts" began. The Greek mathematical system was enhanced with the Pythagorean people's invention of the ancient Greek word "mathematics," from (mathemata), meaning "the subject of study," broadening the subject of mathematics. However, the ancient Romans employed mathematics for research, mechanical and civil engineering, research, lunar and solar calendars, and even in practical calculations employing Chinese systems and the first negative numeral. Hindu-Arabic numbers and usage guidelines spread throughout the world. The first millennium from India to the West world by Islamic mathematics for the work of Muhammad bin Musa al-Isamic mathematics developed and expanded the mathematics of the known civilizations surrounding Khwarizmi today. These practices are distinct from the evolving Mayan arithmetic of Mexico and Central America that provides imagination in terms of Mayan value and population. Since the eleventh century, several books and mathematical works in Greek and Arabic have been translated into Latin. It influenced the growth of mathematics in classical Europe. From the early middle Ages to the Middle Ages, mathematical study often occurred at the end of the century. The 15th century saw the fast development of a new mathematical system known as Newtali. By working with ongoing scientific research and fresh discoveries. These include the innovative work of Gottfried Wilhelm Leibniz and Isaac Newton as well as the unparalleled advancement of the seventeenth century system. In the late 19th century, it was established International

Congress of Mathematicians and there is continuous progress in this area. Connect students with case studies and literature.

Additionally, it enables students to take a deeper look at the mathematical literature and answer fascinating and significant issues. These global challenges examine every issue that pupils encounter in the classroom. If a difficulty emerges, it transports the reader back in time and shows the mathematical issues of the period. The similar issue frequently arises in modern mathematics. Both this general understanding and familiarity with twentieth-century mathematical formulae. It encourages learning. Students can experience the thrill and satisfaction of resolving issues from millennia before. In a way, students have experienced these issues in the past.

History of Mathematics India-

The first civilization of the Indian subcontinent was the Indus civilization (mature period: 2600- 1900 BC), which grew in the Indus river basin. Their cities were built with geometric regularity, but no mathematical documents of this civilization have survived. The oldest mathematical records in India are the Sulba Sutra (marked separately between the 7th and 2nd centuries BC), which complements religious texts that provide simple rules for building altars of various sizes, such as squares, rectangles, parallelograms, etc. As in Egypt, concern for temple activities indicates the origins of mathematics in religious rituals. Sulba formulas provide methods for constructing circles in the same area as a given square, which involve different approximations to the value of π . All these results are present in Babylonian mathematics,

indicating the influence of Mesopotamia. It is not known how much the Sulba formula influenced Indian mathematicians later. Like China, there is no continuity in Indian mathematics; significant progress is divided by long-term inactivity. Panini (5th century BC) formulated the rules of Sanskrit grammar. Its notation is similar to modern mathematical notation and meta-rules, conversions and iterations have been used. Pingala (2nd, 3rd - 2nd centuries BC) used an instrument related to the binary number system in his prosody treatise. His discussion of the mixture of meters coincides with the initial version of the binary theorem. Pingal's writings also contain the basic idea of the Fibonacci number (known as the Matrameru). The next notable mathematical documents in India after the Sulba Sutras are Siddhanta, a book of astronomy from the 4th and 5th centuries (Gupta period) that shows strong Hellenic influences. It is important to note that these contain the first examples of half-gender-based trigonometric relationships, such as modern trigonometry, such as Ptolemy's trigonometry. Due to several translation errors, the words "sign" and "cosine" come from the Sanskrit "zia" and "kozia". Although about half of the entries are incorrect, the decimal system first appears in Aryabhatia. Centuries later, the Muslim mathematician Abu Raikhan described BiruniAryavatya as "a mixture of ordinary stones and precious crystals." In the seventh century, Brahmagupta identified the Brahmagupta theorem, the personality of Brahmagupta and the Brahmagupta formula, and for the first time in Brahma- Sput-Siddhanta. The interestingly explained zero, both a substitute and a number, decimal, and explained to Hindus: the system of Arabic numerals. Through the translation of this Indian text on mathematics (c. 7070), Islamic mathematicians became familiar with this number system, which they adapted to represent Arabic numerals. Islamic scholars brought knowledge of this number system to Europe in the twelfth century, and have now moved all the old number systems around the world. To represent numbers in the Indian-Arabic numeral system, different sets of characters are used, all of which are derived from Brahmi numbers. India has its own symbols, numbered by about a dozen major scriptures. The works of Pingala of the 10th century were studied in Halayudha according to the Fibonacci sequence and Pascal's triangle, and there is a description of the formation of the matrix. In the XII century, Vaskara II lived in India and wrote a lot on all the branches of mathematics known at that time. There is debate among mathematician historians about how much he invented the computation, according to which his work contains mathematical or non-finite object equivalents, derivatives, the average quality theorem, and the derivative of an equal amount of a

sinusoidal function. In the 14th century, Madhav of Sangamgram, the founder of the Kerala school of mathematics, received the Madhava-Leibniz series and a modified series from it, the first 21 terms, which he used to calculate the comp value as 3.14159265359. Madhav also received the Madhava-Gregory series for the definition of architects, the Madhava-Newton energy series for the definition of sine and cosine, and Taylor for the sine and cosine functions. In the 16th century, Jyastadev united many developments and divisions of the Kerala school. Yuki-B. Through Jesuit missionaries and traders who operated at that time in the vicinity of the old port of Muziris and, as a result, directly influenced subsequent European events in subsequent analyzes and calculations. However, other researchers argue that Kerala has not developed a systematic theory of school differences. Both the consolidation and there is direct evidence that their results were transferred outside of Kerala. Egyptian Egyptian mathematics refers to mathematics written in the Egyptian language. From the Hellenistic period the Greeks replaced the Egyptians as the written language of the Egyptian scholars. The study of mathematics in Egypt continued as part of Islamic mathematics during the Arab Empire, when Arabic became the written language of Egyptian scholars. The most extensive mathematical text in Egypt is derived from Rinda Papyrus (sometimes named Ahms Papyrus after its author), c. 1650 BC, but copies of ancient documents of the Middle Kingdom from 2000-1800. B.C. This is a guidebook for students studying arithmetic and geometry. In addition to field formulas and methods of multiplication, division and working with unique fractions, it also contains evidence of other mathematical knowledge, including mixed and prime numbers; It means arithmetic, geometric and harmonious; And a simple understanding of both the Erotothis CV and the perfect number theory. He shows how to solve first-order linear equations, as well as geometric drawings and series. Another important lesson in Egyptian mathematics is the Moscow Papyrus, which dates from the Middle Kingdom period, beginning in 1890 BC. Today it is called works of words or stories that were clearly intended for entertainment. A problem is considered particularly important because it provides a method for determining the size of a pyramid (filled pyramid). Towards the end, the Berlin Papyrus 19 6619 (c. 1800 AD) shows that the ancient Egyptians could solve second-order algebraic equations. Greek has it that Pythagoras traveled to Egypt with Egyptian priests to study mathematics, geometry, and astronomy. His achievement with the first application of cutting-edge thinking in geometry. Four decisions were made from Thales's theorem. As a result, he became the first true mathematician

and the first instinct of mathematical discovery. Pythagoras founded the Pythagorean school. The Pythagoreans invented the term "mathematics", from which they began to study mathematics. The first evidence of the Pythagorean theorem was responsible to the Pythagorean people, although the theorem has a long history Numbers exist.

Although Christians (Babylonians and Chinese) Nicholas (60–102 AD) provided a table of the oldest Greco-Roman standards, it is still the oldest Greek standard table found in the first century AD (now in the British Museum). Found in wax slabs Link to Neo-Pythagoras value. Eratosthenes of Sirene (2–19–44 BC) created a sieve of Eratosthenes in search of original images in the third century BC which is generally regarded as the "golden age" of Greek mathematics. There was progress in authentic mathematics. With relative decline, however, applied mathematics has made great strides in the next century..

Medieval European-

The European interest in mathematics stemmed from problems very different from those of today's mathematics. With the taking elements of the theory of mathematics finds the keys to understanding the discipline created by nature, as is often proved by Timothy Plato and the biblical passage (in the book of Wisdom) directed by God measures all things, quantities and weights. Botias introduced mathematics into the curriculum in the 6th century, forming the term quadrangle to describe the study of mathematics, geometry, astronomy, and music. He is the author of *De Instituti Arithmetica*, an inaccurate translation from Greek mathematical meanings to the entry of Nicocomas; Music at Institute D, derived from Greek sources; And a few excerpts from the elements of Euclid. His work was deceptive, useless, and the basis of mathematical research until Greek and Arabic works were revived. In the twelfth century, European scholars traveled to Spain and Sicily to study Arabic literature, including the arming and balancing of al-Harizmi's compositions, Chester Robert's Latin translation, and translations of all elements of Euclid in different languages. Gagan. Edellard's edition is of Bath, Hermann's of Carinthia and Gerard's of Croma. These and other new resources lead to mathematical innovation. Pisa Leonardo, now known as Fibonacci, traveled with his merchant father to Bedzaya, Algeria, where he gained knowledge about Hindu-Arabic numeracy. (In Europe, Roman numerals are still used.) There he built an arithmetic framework (specifically, an algorithm) that is more efficient and business - friendly thanks to the value of Arabic numerals. Leonardo wrote the *Liber Abaci* in 1202 (revised in 1254), introduced the method in Europe, and began a long period of popularity. The book also brought to Europe what is now known as the Fibonacci

sequence (known by Indian mathematicians hundreds of years ago), which was used as an unforgettable example in the text. In the fourteenth century, new mathematical ideas for the study of various problems emerged. Mathematics during the Scientific Revolution 17th century In the seventeenth century, the number and science increased throughout Europe. Galileo observed the moon Jupiter in orbit around the planet with a telescope based on toys brought from the Netherlands. Tycho Brahe collected a large amount of numerical data to describe the position of the planets in the sky. In his position as Brahe's assistant, Johannes Kepler first rose and made significant contact with the problem of planetary orbit. Kepler's data were simplified by the discovery of logarithms by John Napier and JostBergi. Kepler succeeded in constructing a mathematical law of planetary motion. The detailed geometry developed by Rena Descartes (1596-1650) allowed the Cartesian coordinator to graph this cycle. Isaac Newton discovered the laws of physics by interpreting Kepler's laws, appreciated many of his earlier works, and combined ideas now known as calculus. Individually, Gottfried Wilhelm developed Leibniz, calculus and many of the symbolic calculations that are still in use today. Science and mathematics have become an international field that has spread rapidly throughout the world. In addition to the application of mathematics to the study of the sky, applied mathematics and communication by Pierre de Fermat and Blaise Pascal began to expand into new fields. Pascal and Fermat were the basis for the discussion about sports, exploring learning opportunities and rules about attachments. Pascal tried to argue with his bet for a new increase in the probability of a life dedicated to religion and, for this reason, the chances of success were low, but the rewards are endless. In a sense, the development of educational institutions in the 18th-19th centuries. 18th century It is estimated that the 18th century Leonard Euler (1707-1783) was considered the most educated mathematician of the eighteenth century. His work ranges from the study of graphic theory and the conjugation of the seven bridges in Königsberg to many contemporary mathematical numbers and statistics. He was instrumental in the study of calculus, calculus and complex analysis. This is evident from the history and symbols in his name. Other important European mathematicians in the eighteenth century were Joseph Louis Langaras, the algebra of number theory, algebra, differential and differential calculus and Laplace who sometimes wrote important works of Napoleon at the beginning of the machines and statistics. Modern 19th century throughout the nineteenth century mathematics gradually became abstract Carl Friedrich Gauss (1777-1855) showed this tendency. He

revolutionized the work of complex variables, geometry and continuous change. This makes him a huge contribution to science. He also gave the first satisfactory proof of the basic theorem of algebra and the law of quadrilateral compensation. Line behavior with a common perpendicular for each of the three geometry types. Two forms of Euclidean geometry developed in this century. Where parallel hypotheses of Euclidean geometry no longer exist. Russian mathematician Nikolai Ivanovich Lobachevsky and his Hungarian mathematician Janos Bolyai. Define and study hyperbolic geometry individually. The sum of the angles of the triangles in this geometry is no less than 180. Equality is not found here. And Rimón also developed Rimonian geometry by adding more than 180 angles to the triangles, combining and summarizing three types of geometry to give rise to the concept of perennials. Which summarizes the concept of curves and surfaces. In the nineteenth century good abstract algebra was introduced in Germany, Hermann Grassman gave the first version of vector space. Although William Rowan Hamilton of Ireland created chaotic algebra. The British mathematician George Boole developed an algebra that soon evolved into Boolean algebra. Where numbers are only 0 and 1, Boolean algebra is the starting point of mathematical reasoning and has important applications in electrical and computer engineering. Augustin-Louis Cauchy, Bernhard Rimón and Carl Weierstrass explored the limits of mathematics for the first time, while Norwegian Nils Henrik Abel and Frenchman Augustus De Morgan proved that there was no common algebraic method. To solve a perennial equation of more than four degrees (the Abel-Ruffini theorem), other 19th-century mathematicians used it to prove that it was not enough to separate any desired angle to create the right-hand and the compass alone. Double the cube size of a given cube. Or to create a square equal to a given section, the parameter space and the number of hypercomplexes have been considered and vice versa. In 19th century geometry, the limit of three dimensions was exceeded. Abel and Galloway's research group on the solution of multiple equations formed the basis for further development in the field of theory and abstract algebra. See group theory as the ideal way to study symmetry. In the late nineteenth century, George Cantor laid the first foundations of set theory. Which allows rigorous practice of the concept of eternity. And became the lingua franca of almost all mathematics. Cantor's set theory and Peano, L.E.J. Brouwer, David Hilbert, Bertrand Russell and A.N. Whitehead. The rise of mathematical reasoning in the hands of Whitehead started a long debate on the basis of mathematics. A number of national mathematical societies were formed in the 19th century: the Mathematical Society of London in 1865, the Mathematical Society of France in

1872, the Circolo Matematico di Parigi in 1884, the Mathematical Society of Edinburgh in 1883, and the American Mathematical Society in 1888. 20th century Mathematics became an important profession in the twentieth century. Thousands of new doctoral awards are given each year and are employed in both teaching and the arts. Attempts were made to list the fields of mathematics and their applications in the Clean Encyclopedia. In 1900 he made a list of 23 solved mathematical problems in his speech at the International Congress of Mathematicians. This is important for many mathematicians of the twentieth century to expand the field of mathematics, as today ten are approved, seven are partially approved and two are still open. Tried. In 1977, Wolfgang Haken and Kenneth Appel demonstrated a four-letter theory to oppose the use of computers for this purpose. It differs from the standard axiom of set theory. (This cannot be proven or disproven) This was confirmed by Thomas Colister Hales Kepler in 1998. There have been mathematical interactions of unprecedented amounts and boundaries, for example the classification of finite general groups. (Also note how differential geometry became independent when Albert Einstein used it in general relativity from 1955 to 2004 and the need for about 100 authors in 500 journal articles of thousands of pages. Types have changed. In short, the qualitative study of kinetics began with great progress in the 1890s. The theory of measurement developed in the late 19th and early 20th centuries. There are ergonomic theories. The node theory is led by Quantum Mechanics to develop functional analysis. , Fixed point theory, Renault Thom's monism and catastrophe theory. X of numbers Failing to limit the theory by expanding the field to hyperreal numbers here is an infinite and infinite amount. John Horton Conway has discovered a number of amazing related games, starting with the continuous development and improvement of computers, analog mechanical machines and later digital electronic machines, helping the industry to produce, distribute and transmit large amounts of data. The NIAAC used the following number theory and Lucas-Lehr experiments; King Peter Ruckers Theory of Function; Claude Shannon's information theory; Signal processing; Data analysis; Optimization and other aspects of function research have included many mathematical representation calculations and continuous operations over the past century. However, the development of computer and communication networks has led to the proliferation of personal ideas and investments. The speed and data processing capabilities of computers, including graph theory, allow you to solve mathematical problems that take longer to calculate with pencil and paper. It takes us to fields like number analysis and symbolic calculations. On the other hand, in

1929 and 1930 the decision of addition and multiplication was proved to be true or false. Also all the statements related to natural numbers, i.e. these are determined using an algorithm. In 1931, Kurt Gödel discovered that this did not apply to addition or multiplication by natural numbers. This system is called Peano imperfect mathematics. (Peano arithmetic is consistent with a number of theories. An evolution of Gödel's two incomplete theories. And David Hilbert's dream of perfecting and consolidating all mathematics. Theta function. Gamma function, modular also studied. Erdős's papers have published more articles than any other mathematician, no, it leads to the number of mathematicians, measured by the general authority of mathematical work, the ear describes a "joint distance" between the individual and Paul Erdős. Algebra has been studied, for example, in many fields of education. In the age of knowledge, the development of knowledge led to specialization. In 2000 the Clay Mathematical Institute announced the Seven Millennium Prize, and in 2003 the Poincaré conjecture was solved by Gregory Perelman (who refused to accept any award for criticizing the creation of mathematics). Most math journals now have both online and print versions, and many online journals have been launched. There is a growing push for open source disclosure pioneered by arXiv. First of all, I want to conclude that Western historians have seriously neglected the work of Indian mathematicians, although the situation is improving somewhat. The main point I wanted to focus on was the answer to two questions: first, why Indian works are being ignored; this seems to have been the inspiration and goal of the scientists who contributed to the Eurocentric view of the history of mathematics. This raises a secondary question as to why this negligence should be viewed as a serious injustice. We have developed this "answer" by providing compelling evidence that we subsequently had a negative impact on European affairs. I have also included a discussion of the Indian decimal system of values, which is undoubtedly India's largest contribution to the development of mathematics and its applications in science, economics and beyond. My first "question" is not easy to discuss because we see different types of "positions" in the history of mathematics. If we "follow" the latest Eurocentric model, then all mathematics is considered European, and even in the latter positions the contribution of Europeans is not taken into account. When visiting the huge art museum, you can usually see different groups of schoolgirls who have admired and studied painting, sculpture and artwork with their teachers for centuries. Their teachers or mentors draw the students' attention to the artist's techniques: color, tone, light and shadow, and even the meaning of the scene being described. As part of the study, any

painting or sculpture becomes a witness to the genius of its creator and gives some idea of the period in which the artist lived and how he worked. Are being studied. This teaching is both cognitive and sensitive. These are the mathematical problems of history. They are, in a sense, intellectual and educational works of art that testify to the manifestation of human talent. However, unlike museum exhibits, visitors can capture these issues by participating in the process of resolving them. Questions that arose thousands or thousands of years ago can be understood and answered in today's class. Historical questions and problem-solving topics may be the focus of the lesson itself, but such questions are more likely to intersect more effectively between class activities and homework assignments. Teachers who like to quote "questions of the week" will find historical questions to be perfect. A large number of historical problems can be found in textbooks on the history of mathematics or in parallel with other problems of the time. Finding and using math problems in a textbook is a useful and rewarding experience for math teachers. The future of both the very nature of mathematics and the development of individual mathematical problems is a widely discussed problem - many of the past predictions of modern mathematics were irrelevant or completely false, so there is reason to believe that many predictions today may follow the same track. However, the subject continues to carry significant weight, and many prominent mathematicians have written that they are generally motivated by the desire to establish a research agenda for specific attempts at solving specific problems or to clarify the general discipline of mathematics and its potential.

Conclusion:

Mathematics is the study of the relationship between quantity and properties, as well as the determination of unknown quantities and properties, or "the study of quantity, its structure, space, and change," either as mathematically derived numbers or shapes, or as a combination of these two categories. Some people assist in the identification of patterns in algebra. Since it encompasses mathematical or symbolic thinking, mathematics is seen as a more fundamental science of relationships or references. Others, though, believe it to be extremely restrained. There are many mathematical chains in use today, including algebra, geometry, analysis (calculus), mathematical reasoning, and set theory. Other applications of mathematics, like probability theory and statistics, include the remarkable matrix group theory, sequence theory, and node theory. concerned groups Geometry, fractal geometry, graph theory, functional analysis, complex analysis, unit theory, catastrophe theory, chaos theory, measurement theory, model theory, division theory, control theory, game theory,

and complexity theory are among the groups actively engaging in field studies. a much more. The development of mathematics has a rich history. Agricultural breakthroughs in mathematics led to its founding in Mesopotamia and Egypt. As well as the Hellenistic Empire's and ancient Greece's revolutionary development. Before mathematical discoveries returned to Europe, then in Europe in the Renaissance, the Islamic Empire in the Middle Ages lasted until the end of the Middle Ages and the time of the Renaissance. In the nineteenth century, a number of groundbreaking occurrences ushered in mathematics' increasing difficulty and abstraction. The ambitious and occasionally disastrous invention of the 20th century is this.

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Vedic Culture and Its Interpretation in the Modern World: Challenges and Opportunities

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Abstract:

Ancient Indian culture still has a big impact on today's world. Despite modern medical advancements, there is a growing interest in revisiting ancient traditions and their approaches to health and healing. The Vedic era, with its holistic and spiritually connected perspective on well-being, provides a unique lens for understanding the eternal human quest for health and disease prevention. Exploring the Vedic period's insights on health and disease prompts reflection on the enduring relevance of this ancient wisdom in contemporary healthcare practices, offering the potential for a valuable fusion of ancient and modern knowledge to enhance holistic health and prevent illnesses. Vedic culture, intertwined with its sacred scriptures such as the Vedas and Upanishads, is a rich source of knowledge and practice that has significantly influenced India's religious, philosophical, and cultural landscape. This article embarks on a journey to explore the complexities of interpreting Vedic teachings within an ever-evolving global context. It acknowledges the challenges of potential misinterpretation and appropriation while recognizing the transformative power of embracing the wisdom enshrined in Vedic culture.

Keywords: Vedic culture, Science and Innovation

Introduction:

The Vedic culture, which originated in ancient India, continues to exert a profound influence on the modern world. Its rich tapestry of philosophy, spirituality, rituals, and traditions has captivated the imagination of people both in India and beyond. However, as we step into the 21st century, interpreting and preserving Vedic culture presents both challenges and opportunities.

This period, which predates the codification of contemporary medical science, offers an intriguing glimpse into the ancient Indian perspective on health and illness. The Vedic scriptures, including the Rigveda, Yajurveda, Samaveda, and Atharvaveda, contain a treasury of knowledge encompassing various facets of existence, particularly matters related to well-being and the human body. The concept of health in the Vedic era was intricately interwoven with broader themes such as spirituality, the forces of nature, and holistic living.

This paper embarks on a journey to delve into the Vedic understanding of health and disease. It endeavors to uncover the timeless wisdom enshrined in the Vedic texts, illuminating the practices, beliefs, and rituals that guided the lives of the people during that era. As the complex tapestry of Vedic thought is unraveled, the aim is to attain a deeper insight into the underpinnings of health and wellness, the causation of diseases, and the

techniques employed to maintain and restore equilibrium in the body and mind.

Despite the remarkable advancements of modern medicine, there is a burgeoning interest in revisiting ancient traditions and their perspectives on health and healing. The Vedic era, with its holistic approach and spiritual connection to well-being, offers a unique vantage point from which to scrutinize the perennial human quest for health and the prevention of diseases.

Exploring the Vedic period's discernments regarding health and disease beckons us to contemplate the enduring relevance of this ancient wisdom within the framework of contemporary healthcare practices and the pursuit of holistic well-being. In doing so, we may uncover a valuable amalgamation of ancient and modern knowledge that can contribute to a more holistic comprehension of health, ushering in novel prospects for improving the quality of life and averting maladies.

Vedic culture, most often associated with its sacred scriptures including the Vedas and Upanishads, boasts a rich tapestry of knowledge and practice. It has played a pivotal role in shaping the religious, philosophical, and cultural contours of India, leaving an indelible imprint on the beliefs and traditions of the subcontinent. Within this tapestry, we encounter the origins of faiths such as Hinduism, Buddhism, and Jainism, the birth of yogic and meditative practices, and a source of inspiration for

countless scholars, spiritual leaders, and artists throughout the ages.

This article embarks on a journey to delve into the challenges and opportunities that Vedic culture presents in the modern world. It explores the complexities of interpreting the profound teachings of the Vedas, Upanishads, and their companion scriptures within the context of a continually evolving global landscape. It acknowledges the potential pitfalls of misinterpretation and appropriation while simultaneously recognizing the transformative power of embracing the wisdom enshrined in Vedic culture.

Vedic Culture Legacy:

Vedic culture, often associated with the Vedas, Upanishads, and other ancient texts, is characterized by its deep spiritual insights, reverence for nature, and a complex web of rituals. It has played a pivotal role in shaping the religious and philosophical landscape of India. Its influence can be seen in the birth of religions like Hinduism, Buddhism, and Jainism, as well as the development of yoga and meditation practices.

Challenges in Vedic Culture:

1) Harsh Environmental Conditions: The Vedic era was marked by a variety of environmental challenges, including extreme weather conditions, monsoons, and droughts. These conditions required ancient societies to adapt and develop strategies for survival.

2) Disease and Health: Health and sanitation challenges were prevalent, and the understanding of disease and healthcare was limited during this period. Traditional Ayurvedic medicine and practices began to emerge as a response to health challenges.

3) Agriculture and Food Security: Agriculture was the primary means of sustenance during the Vedic era. Challenges included crop failures, pests, and the need for effective farming techniques to ensure food security.

Opportunities in Embracing Vedic Culture:

1. Harsh Environmental Conditions: The Vedic era was marked by a variety of environmental challenges, including extreme weather conditions, monsoons, and droughts. These conditions required ancient societies to adapt and develop strategies for survival.

2. Holistic Health and Wellness:

Ayurveda, deeply rooted in Vedic culture, advocates holistic health and well-being. Modern medicine increasingly acknowledges the importance of embracing a balanced and holistic approach to healthcare, opening doors for the integration of Vedic practices.

3. Championing Environmental Sustainability:

Vedic culture underscores the interconnectedness of all life forms and the sanctity of nature. In an era grappling with pressing environmental challenges,

Vedic principles provide valuable insights into sustainable living and ecological preservation.

4. Fostering the Global Yoga and Meditation Movement:

Vedic culture's contributions to the global proliferation of yoga and meditation have gained prominence. These practices offer a pathway to mental and physical well-being, and their popularity continues to soar worldwide.

Conclusion:

Vedic culture can inspire individuals to lead more mindful and balanced lives, promote environmental sustainability, and contribute to the global dialogue on spirituality and well-being. By navigating the challenges and embracing the opportunities, we can ensure that the legacy of Vedic culture remains a source of inspiration and transformation in the modern world.

The Vedic people believed that being healthy wasn't just about not being sick. It meant feeling good in your body, mind, and spirit. They thought that our health was connected to nature and the divine. In their ancient texts, they had lots of smart ideas about things like Ayurveda (a natural healing system) and how our thoughts and feelings affect our health. They believed that our physical well-being is tied to our mental and spiritual well-being, showing how we're all connected to the universe.

The Vedic period, a time predating the formalization of contemporary medical science, stands as a testament to the enduring relevance of holistic wisdom and its harmonious integration of the physical, mental, and spiritual dimensions of health.

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The study of Vedic culture

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Abstract

Focus on Satyam, Shivam, and Sundaram:

A nation's economic development depends heavily on innovation. During the Vedic era, instances and its applicability were also there. Innovation must meet the satyam, shivam, and sundaram standards of verifiable truth, societal utility, and aesthetic elegance. Vedic writings provide a vast quantity of information that demonstrates a comprehensive approach, classification, and measurement. Related concepts like creativity, innovation, invention, discovery, and entrepreneurship are popular right now. A novel thought or idea lies at its foundation. It takes fresh notions and ideas to be creative. Innovation is the effective application of original ideas that have an influence on the economy and society. Efficiency gains, productivity increases, quality enhancements, competitive positioning, etc. may all be related to innovation. The act of invention involves creating something novel. Finding something unfamiliar is discovery. Jugaad is an Indian concept that might mean to innovate in a non-formal approach that isn't always immediately clear in an organised fashion. Even untrained workers may be capable of such inventiveness. Entrepreneurs generate value to turn "material" into "resources" and launch new enterprises or services. Both organised innovation and jugaad, or unstructured/intuitive creativity, may be included in inclusive innovation.

Introduction

The hunt for Satyam is in science. Technology for issue resolution is developed as a result of applied science. Concerns regarding integrated design that is sustainable, humane, and environmentally friendly are prevalent today. It gains value from aesthetics. Thus, the engineering solution must take into account both Sundaram and Shivam. As a result, innovation is encouraged.

The ability of economies to innovate and their capability to adapt to change will be key factors in determining their future success. Common man, who must be encouraged to cooperate for inventions and compete for reaching excellence to suit local environments, will be the source of future breakthroughs.

Sustainable development is mostly driven by inclusive innovation. The major driver of long-term economic progress, from the agricultural revolution to the current knowledge revolution, has always been knowledge—better ways to do things. The world is becoming a networked society. Distances are getting shorter. The idea of a global community is advanced. It can be difficult in today's multicultural society. Technological culturization may entail the localisation process, which would hasten the adoption of new technologies.

The Vedic scriptures include the scientific underpinnings of knowledge. Standard practises were developed for performing arts through Guru-Shisyaparampara, which involves intimate interaction between teacher and student, for

knowledge refining through Shastrarth, dialogue, and loss-less information transmission through Shruti, an oral tradition. We aspired for excellence and cooperation. At all levels of activity, the holistic approach to problem-solving was emphasised. "Let noble thoughts come from all directions," "Everyone can do it," and "we barely harness a very small fraction of brain power" The Vedic proverb "Divine powers are within, become a leader not a follower" is rich. Create a foundation for a new innovation based on your own experiences. Such inspiration inspired me to support and pursue innovation constantly. Thus, the study of the Vedas are still very relevant today.

Knowledge as a growth driver for the economy:

The key to successfully completing any work is knowledge. The development of modern science is built on a series of observations and analyses. Large samples of related observations served as the foundation for the evolution of hypotheses and postulates, and inductive reasoning was used to support conjectures.

A mathematical framework uses symbols to cope with abstraction. A greater knowledge of the physical world via science resulted in the development of novel methods and technologies to create marketable goods that produced riches. Economic growth has replaced other measures of technology relevance. Innovation has become a term across many economic sectors, particularly in the context of globalisation. Multidisciplinary frameworks of knowledge reflect innovation. It

might be a concept, a method, a plan, or an approach. Its applicability is, of course, evaluated in the current or ideal setting. Innovation is now synonymous with economic development and the generation of riches.

Studies of the Vedas and technology:

According to technology futurist Ray Kurzweil, technologies will become so small that they will vanish by the year 2010 and become a component of skin and clothing. They will also advance exponentially quickly, enabling true Artificial Intelligence and human immortality. Fantastic nanotechnology capabilities will also become accessible in ten years, and by the year 2029, technology will have developed to the point where it will be possible to engineer the human brain. The majority of his forecasts were accurate. IT may be viewed as an enabling technology that is used for text processing, digitalization, storage, and retrieval. This requires figuring out where technology needs to advance. The creation of specialised technologies in fields like speech sound categorization, Vedic mathematics, and cognitive features, as covered in the Mimamsa, Nyay, and Vaisheshik, are examples of domains that may profit from Vedic knowledge. Sanskrit word processors, knowledge representation tools, inferencing and interpretation mechanisms, Vedic fonts, optical character recognition systems for Vedic overlay, schemes for Sama Veda data entry, spell-checkers, grammar checkers, web authoring tools, content digitization, etc. are some examples of the natural language processing tools that may be developed. Innovation is made easier by the diversity of knowledge frameworks and language inference techniques. According to this theory, Vedic studies in SANSKRIT have a better chance of inspiring creativity from a holistic standpoint.

Conclusion:

The main force behind socioeconomic progress is innovation. Engineering solutions are developed with a holistic approach in mind. To facilitate modularity, interoperability, reusability, and scalability, scientific foundation is required. Enhancing value is aesthetics. Ethics and sustainability are also significant. Vedic knowledge spans a wide range of fields, including metallurgy, linguistics, medicine, astronomy, physics, chemistry, biology, and the visual and performing arts. The majority of the documentation that describes language architecture and application is written in Sanskrit. Therein lays high-quality knowledge that has been proven through time. Sanskrit is suitable as a computer language, particularly for AI applications, according to several experts. For the communication of knowledge among different global languages, concept-based networking language (CNL) might be created. Vedic studies and IT might both profit from one another.

There aren't many proposed technology development initiatives. Sanskrit as a science of language and Vedic studies as an alternative knowledge system need to be introduced in technical education courses.

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मराठी भाषा: परंपरा आणि नवीनता

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प्रस्तावना :

केवळ साहित्यव्यवहारातच नव्हे तर एकूणच जीवन व्यवहारात भाषा ही केंद्रस्थानी असते. भाषा ही साहित्याचे साधन, वाहन, माध्यम तर असतेच, शिवाय साहित्यनिर्मितीचे आशयद्रव्यही असते. भाषा ही मनुष्यप्राण्याला इतर प्राणीमात्रांपेक्षा वेगळी अशी खास ओळख देणारी शक्ती असते. आपल्यासाठी मराठी भाषा ही आपली सामाजिक - सांस्कृतिक पातळीवरची ओळख आहे. कोणतीही भाषा ही समाजाकडून मिळालेला वारसा असतो. परंतु भाषा व्यक्तिगत पातळीवर कष्टपूर्वक आत्मसात करावी लागते. मराठी भाषेने आपल्या समाजाला एका सूत्राने बांधले आहे. तसेच मराठी मनाचे भावविश्व घडविण्याचे कामही त्यांनी केले आहे. मराठी भाषेचे हे ऋण आपण विसरता कामा नये.

मराठी भाषा नवव्या शतकापासून प्रचलित आहे. मराठी मातृभाषा असणाऱ्या लोकसंख्येनुसार मराठी ही जगातील पंधरावी व भारतातील चौथी भाषा आहे. देशातील ३६ राज्यांत आणि ७२ देशांमध्ये मराठी भाषकांची वस्ती आहे. ही भाषा वेगवेगळ्या क्षेत्रांत वापरली जात आहे. तरीही मराठी भाषा टिकणार की मरणार या प्रश्नाची चर्चा गेली कित्येक वर्षे सुरू आहे. अशी चर्चा असतानाही दुसरीकडे मराठी भाषेतील वृत्तपत्रांची, पुस्तकांची, दूरचित्रवाणी वाहिन्यांची संख्या वाढत चाललेली आहे. शिक्षण घेणारा नवा मोठा वर्ग पुढे येत आहे. मराठी टिकणार की मरणार या चर्चेपेक्षा विविध क्षेत्रांमधील तिची सध्याची स्थिती, तिच्या पुढच्या समस्या, त्या सोडविण्यासाठी उपाय या भाषेच्या जतनाचे व संवर्धनाचे मार्ग यांचा संगोपांग विचार करावा व नवीन शैक्षणिक धोरणानुसार प्रत्यक्ष कृतीची दिशा शोधण्याचा आणि पर्यायाने कृतीला चालना देण्याचा प्रयत्न करावा हे महत्त्वाचे आहे.

मराठी भाषेची परंपरा :

मराठी समाजाच्या समग्र जीवनव्यवहाराची प्रगतीशील भाषा म्हणून मराठीला सुमारे १००० वर्षांची अतूट परंपरा आहे. किमान आठ शतके तिच्यात विविध स्वरूपाची मौलिक वाङ्मय निर्मिती होत आहे. आज भारतात मराठी भाषकांचे स्वतंत्र घटक राज्य आहे.

तेराव्या शतकाच्या उत्तरार्धात मराठी वाङ्मयाची सुरुवात करण्याचे श्रेय महानुभाव व वारकरी या दोन धर्मपंथांना द्यावे लागते. या दोन्ही पंथीयांनी जाणीवपूर्वक व आत्मविश्वासाने मराठीतून निर्मिती केली. ज्ञानेश्वरांनी मराठी भाषेविषयीच्या अभिमानाचे उद्गार वेळोवेळी काढले आहेत. 'ज्ञानेश्वरी' व 'अमृतानुभव' या दोन्ही ग्रंथांमधून त्यांनी मराठी भाषेविषयीचे विचार मांडले आहेत. "माझा मराठाचि बोलु कौतुके | परी अमृतातेही पैजासी जिंके"

(ज्ञानेश्वर); "संस्कृत वाणी देवे केली | प्राकृत तरी चोरापासोनि जाली?" (एकनाथ) आणि "आम्हां घरी धन शब्दांचीच रत्ने | शब्दांचीच शस्त्र यत्न करू | तुका म्हणे पहा शब्दचि हा देव | शब्देंची गौरव पूजा करू||" (तुकाराम) यासारखे अभिमानाचे उद्गार सर्वपरिचित आहेत.

ओवी आणि अभंग ही मराठी काव्याची अस्सल रूपे आहेत. वारकरी संत कवी व कवयित्री यांच्या रचनेमुळे एक प्रकारची भाषिक वाङ्मयीन व सांस्कृतिक लोकशाही साकार झाली. चक्रधरांची धर्मसूत्रे ('सूत्रपाठ' हा ग्रंथ) समजून घेण्यासाठी विविध भाषिक महानुभावीयांना मराठी शिकण्याची प्रेरणा मिळाली. नंतरच्या काळातील पंडित कवी पुन्हा संस्कृतप्रचुर भाषेकडे वळले. पेशवाईत रचलेले पोवाडे व लावण्या मात्र अस्सल मराठमोळ्या परंपरेशी नाते

सांगणारे होते. १९ व्या शतकात मराठीसमोर इंग्रजीचे आव्हान उभे राहिले.

मराठी साहित्याची भूमी संपन्न आहे. तिच्या समग्र साहित्याचा आढावा घेताना ज्या साहित्य प्रवाहांमुळे इतर भाषांमधील लेखकांना प्रेरणा मिळाली त्यांचा उल्लेख करणे महत्वाचे आहे. मराठीतील पहिले स्त्रीलिखित आत्मचरित्र रमाबाई रानडे यांचे 'आमच्या आयुष्यातील काही आठवणी' हे आहे. हे आत्मचरित्र वाचून जानकीदेवी बजाज यांना आत्मचरित्र लिहिण्याची प्रेरणा मिळाली होती. त्यामुळे हिंदी भाषेत स्त्रीलिखित आत्मचरित्रे पुस्तकरूपाने प्रकाशित व्हायला लागली. १९६० नंतर दलित साहित्याचा प्रवाह अस्तित्वात आला. डॉ. बाबासाहेब आंबेडकर यांच्या वैचारिक प्रेरणामुळे हे घडले. अनेक दलित कवींचे काव्य आणि लेखकांची आत्मचरित्रे प्रकाशित होत गेली. त्यातील काहींचे अनुवाद इंग्लिश, फ्रेंच आदी परकीय भाषांमध्ये तसेच हिंदी, गुजराती अशा भारतीय भाषांमध्ये झालेली दिसतात. दलित साहित्यातून समोर आलेले सामाजिक स्थित्यंतराचे चित्रण जगातील विविध भाषांमध्ये कुतुहलाचा विषय झालेले दिसते. डॉ.माया पंडित यांनी उर्मिला पवार यांच्या 'आयदान' या आत्मचरित्राचा इंग्रजीत अनुवाद केला आहे. १९ आणि २० च्या शतकात मराठी भाषेचे पुनरुज्जीवन झाले असे म्हटले तर ते वावगे ठरणार नाही. या काळात कथा, कादंबरी, कविता, चरित्र आणि इतर ग्रंथांच्या लेखणीतून मराठी भाषेचे सौंदर्य अधिकच फुलत गेले.

मराठी भाषेतील नवीनता :

नवीन शैक्षणिक धोरण- २०२० मध्ये मातृभाषेतील शिक्षण या संकल्पनेला महत्त्व आहे. वैद्यकीय, अभियांत्रिकी या ज्ञानशाखेतील विषयदेखील विद्यार्थ्यांना मराठी भाषेतून शिकता येणार आहे. मराठी भाषेच्या विकासासाठी ही अतिशय महत्त्वपूर्ण बाब आहे. १९६४ मध्ये कोठारी आयोग स्थापन झाला. त्यांनी मातृभाषेतून शिक्षण देण्याची शिफारस केली. महात्मा गांधी, विनोबा भावे ते ताराबाई, अनुताई या शिक्षणतज्ञांनी हे मान्य केले. मराठी भाषेची बलस्थाने पाहता संपन्नता, सर्वसमावेशकता, लवचिकता, अखंडता, संज्ञा निर्मितीक्षमता, विकसनशीलता, बोलीभाषेचे स्रोत अशा अनेक निकषांवर मराठी भाषा खरी उतरते. त्यासाठीच मराठी भाषा ज्ञानभाषा म्हणून कशी विकसित होईल याकडे लक्ष देणे जरूरीचे आहे. ज्ञानभाषा ही

जीवनातील सर्व क्षेत्रांना केवळ स्पर्श करत नाही तर त्या क्षेत्रांच्या विकासासाठी पाठबळ देणारी असते.

भाषा खराब होत चालली आहे आणि भाषेचा दर्जा घसरतो आहे ही ओरड नेहमीच चालू असते. नव्या फिल्मस, इलेक्ट्रॉनिक मीडिया, बेशिस्त तरुण, वाईट दर्जाचे शिक्षण आणि नव्या तंत्रज्ञानाचा वाढता प्रभाव या सर्वांवर याचा ठपका ठेवला जातो. भाषेला खरा धोका तयार होतो तो आधुनिक माहिती तंत्रज्ञानाला न जोडल्याने. भारतात टीव्ही क्रांती घडली. आपण इंटरनेटच्या साह्याने माहिती युगात प्रवेश केला. मोबाईल क्रांतीनंतर व्यापक प्रमाणात आपण माहिती युगात प्रवेश केला. मागच्या माध्यमांच्या तुलनेत इंटरनेट आणि त्यातून तयार होणारी सोशल नेटवर्किंग, चॅटिंग, सर्च वगैरे सर्व साधने मुळातच परस्परसंवादी आहेत. त्यापैकी व्हाट्सअप, ट्विटर यांना स्वतःची शब्द, वर्ण संख्या मर्यादा असते. त्यात काम करावे लागते. थोडक्यात प्रभावी कसे लिहावे, संगणक किंवा मोबाईलच्या स्क्रीनवर ते चांगले दिसेल आणि वाचता येईल ही कला आहे. ती छापील लेखनापेक्षा थोडी वेगळी आहे. अर्थातच यात आजचा युवक हे तंत्र आत्मसात करून भाषेत बदल घडवत आहेत.

आज जागतिकीकरणाच्या पार्श्वभूमीवर भाषेच्या परिघाचा विचार करताना हे जाणवतं की, भाषा हे चलन एक दूरगामी परिणाम करणारे व्यवहाराचे महत्वाचे साधन आहे. सध्याचे युग हे ज्ञानकेंद्रित उद्योगाचे असल्यामुळे भाषा हा त्यातील एक मूल्यवान घटक आहे आणि विशेषतः माध्यम विश्वात तर भाषा कच्चा माल आणि प्रक्रिया होऊन तयार मालही भाषाच, हे वास्तवही आपल्या डोळ्यासमोर सतत असायला हवं. अलीकडे दृश्य, भाष्य यांनी नटलेले एक फेसबुकसारखे नवे माध्यम आपल्याकडे लोकप्रिय आहे. पण तिथेही ही माध्यमे आपल्या वेगवान प्रसारणात अचूक भाषा, भावनांचा परिघोष करणारी नेमकी भाषा, विविध भावच्छटा व्यक्त करणारी प्रवाही भाषा यांना फारसे स्थान देताना दिसत नाही. इमोजी माध्यमातून म्हणजे चिन्हांतून आपण आपल्या भावना व्यक्त करत आहोत. माणसांनी आपल्या संवादाची सुरुवात अशाच चिन्हाच्या माध्यमातून केली होती. आपण त्यानंतर अमृताशी पैजा जिंकणारी भाषा तयार केली. आपण आता पुन्हा चिन्ह भाषेकडे जाणार असू तर हा उलटा प्रवास मराठी भाषेला रस्त्यात तसाच तिष्ठत ठेवून सुरू राहणार का हा विचार मनाला अस्वस्थ करतो.

मराठी भाषेवरील वाढत्या अतिक्रमणाबाबतची चर्चा महाजालाच्या आगमनानंतर अधिक तीव्र झाली. बहुतेक कामे संगणकावर होत असल्याने आणि संगणकाची भाषा मुखत्वे इंग्रजी असल्याने मराठी भाषेची काळजी करणाऱ्यांसमोर मोठे प्रश्नचिन्ह उपस्थित झाले होते. २०१० नंतर तर मराठी ही आता विश्वाच्या अन्य भाषांच्या रांगेत पहिल्या दहामध्ये येण्यास सिद्ध झाली आहे. युनिकोडचा शोध हा या सर्वात महत्वाचा घटक म्हटला पाहिजे. त्यासोबतच मराठी वृत्तपत्राने सुरू केलेली संकेतस्थळे आणि विकिपीडियापासून समाजमाध्यमांत मराठीचा आग्रह धरणारा नवा तरुण, यामुळे मराठी भाषा अभिव्यक्तीचे सशक्त माध्यम ठरत आहे.

समारोप :

मराठीच्या सर्वांगीण विकासाचा आराखडा तयार करताना देश-परदेशातील बाबींचे अनुकरण करण्यापेक्षा आपल्याला ज्या बाबी उपयुक्त वाटतील त्यांचा स्वीकार झाला पाहिजे. पारंपारिक विचार करणे सोडून आव्हानांना सामोरे जाण्यासाठी नवे मार्ग शोधले पाहिजेत.

शतकानुशतके असंख्य व्यक्तींच्या जाणीवनेनिवांचे तरंग स्वतःत सामावून घेणाऱ्या, मराठीकडे टिकून राहण्याजोगे आणि जगाला देण्याजोगे बरेच काही आहे. इतर भाषांच्या आक्रमणांना तोंड देण्यासाठी आवश्यक ती रगदेखील तिच्यात आहे. तिच्या संस्कृतीत बलस्थानांची जगाला ओळख करून देण्याचे कर्तव्य आपण निभावले पाहिजे.

संदर्भसूची :

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- 2) भाषा संवाद- डॉ.नंदकुमार मोरे व डॉ.अनिल गवळी, सायन प्रकाशन, पुणे
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प्राचीन भारतीय ज्ञान व्यवस्था ते नवीन शिक्षण धोरण

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प्रस्तावना

विशिष्ट भागात काही चालीरीती, रूढी, परंपरा या फार पूर्वाकाळापासून रुढ झालेल्या असतात. त्यातील जो भाग आपल्याकडे साहित्य रूपाने उपलब्ध आहे. ज्यातून ज्ञान, विज्ञान, तत्त्वज्ञान, शास्त्र याची उलगडणे होते. त्या आधारावर देश व प्रदेशातील ज्ञान शाखांचे विविध पैलू जाणून घेता येतात. भारतीय ज्ञान परंपरेलाही अगदी प्राचीन कालखंडाचे संदर्भ व साहित्य उपलब्ध आहेत. जगाच्या पाठीवर अनेक ज्ञान परंपरांचा इतिहास आहे. परंतु त्या काळाच्या परिवर्तनाबरोबर लुप्त झालेल्या दिसतात. भारतीय ज्ञान परंपरेच्या बाबतीत त्यात कायम गतिशीलता राहिलेली दिसून येते. भारतीय ज्ञान परंपरा प्राचीन काळापासून तर आज आधुनिक युगात गुप्त शिष्याच्या अनमोल संस्कृती ने बांधली गेलेली आहे. भारतीय ज्ञान परंपरा जागतिक ज्ञान परंपरेच्या विकासापेक्षा वेगळ्या पद्धतीने आपले अस्तित्व सिद्ध करते. प्राचीन कालखंडापासून भारतात ज्ञान मिळवण्यासाठीची विविध अध्ययन व अध्यापन पद्धती, भारतात अस्तित्वात आहेत. त्यात भारतीय समाज व्यवस्था, संस्कृती, राजव्यवस्था, धार्मिक साहित्य सक्रिय असल्याचे दिसून येते. भारतीय ज्ञान परंपरा गुरुकुलपीठ धार्मिक शास्त्र, शास्त्रविद्या, युद्धनीती, प्रशासन, अर्थकारण, विज्ञान, आधुनिकता अशा अनेक गतिशील बदलांचा व नव साशोधनाचा त्यात अंतर्भाव दिसून येतो. या शोधनिबंधातून हे जाणून घेण्याचा प्रयत्न करण्यात येणार आहे की भारतीय ज्ञान परंपरा ही कायमच विज्ञान व आधुनिक बदल स्वीकार करणारी आहे. नवीन आर्थिक धोरण हे आजच्या काळातली ज्ञान परंपरेतील अग्रगण्य बदलांचा एक भाग आहे.

संशोधन पद्धती :

दुय्यम साधन सामग्रीच्या आधारावर शोधनिबंधाची रचना करण्यात आली आहे. सदर साधन सामग्रीच्या आधारावर शोधनिबंधाची शुद्धता व विश्वसनीयता निश्चित करण्यात आली आहे. संकेतस्थळे, पुस्तके, वर्तमानपत्र, लेख इत्यादी साहित्याचा वापर करण्यात येईल.

समस्या विधान: भारतीय प्राचीन शिक्षण व्यवस्था नवीन शिक्षण धोरणासाठी मार्गदर्शक ठरेलका? हा मुळ हेतू तपासून पाहणे.

उद्दिष्टे:

- 1) भारतीय प्राचीन ज्ञान परंपरा जाणून घेणे
- 2) भारतातील स्वातंत्र्यपूर्व शिक्षण धोरणाची कार्यपद्धती जाणून घेणे.
- 3) 21 व्या शतकातील नवीन शिक्षण धोरण 2020 नव संकल्पना अभ्यासने.

गृहितके:

- 1) प्राचीन भारतीय ज्ञान परंपरेत आधुनिक दुरदृष्टी दिसून येते.
- 2) नवीन शिक्षण धोरण २०२० मध्ये आधुनिक दूर दृष्टीकोन ठेवण्यात आला आहे.

प्राचीन भारतीय ज्ञान परंपरा:

प्राचीन भारतीय शिक्षण व्यवस्था एक संपूर्ण विश्वाच्या प्राचीन गौरवशाली शिक्षण व्यवस्थेचा व सांस्कृतिक विकासाचे प्रतीक आहे. वैदिक कालखंडापासून ऊर्जा स्तोत्र म्हणून शिक्षणव्यवस्थेचा उल्लेख केला जातो. प्राचीन कालखंडात भारतीयांनी शिक्षणास खूप महत्त्व दिलेले दिसून येते. अध्यात्मिक ज्ञानाबरोबर भौतिक ज्ञान मिळवणेस त्या काळात महत्त्व दिलेले दिसून येते. ज्ञान हे मानवाचा तिसरा डोळा आहे. जे विश्वातील मूळ तथ्य जाणून घेण्यास मदत करते व मानवाला योग्य दिशेने घेऊन जाते. म्हणून प्राचीन कालखंडात औपचारिक व अनौपचारिक या दोन्ही शिक्षण पद्धतीचे अस्तित्व दिसून येते. महाभारतात देखील असे वर्णन आढळून येते की

ज्ञानासारखे तिसरे नेत्र आणि सत्यासारखे दुसरे तप नाही. जी मानवाच्या मोक्षाची साधन आहेत. वैदिक कालखंड, रामायण, महाभारत, बुद्ध कालखंडात त्या काळात धार्मिक, चालीरीती, संस्कृती, जीवनशैलीचा त्या काळात शिक्षणावर प्रभाव दिसून येतो. वैदिक कालखंडात तपश्चर्या, पाठांतर, यावर जास्त भर दिलेला दिसून येतो. तर विद्यार्थीदशेत शिष्यास गुरुकुला तरा हावे लागत असे. महाभारत, रामायण कालखंडात अस्त्र शस्त्रविद्या, धर्म, संस्कृती, तत्त्वज्ञानाचे शिक्षण महत्त्वपूर्ण समजले जात. बौद्ध कालखंडात शिक्षा, व्याकरण, छंद, वाङ्मय, ज्योतिष इ. विषय अध्ययन व अध्यापन केले जाई. यालासुत्र वांग्मयाचा कालखंड म्हटले जाते. पाणिनी पासून पतंजली पर्यंत हा कालखंड ग्राह्यधरण्यात येतो. या काळात स्त्रीया शिक्षण घेत असत. बौद्ध कालखंडात भिक्षुच्या हाती शिक्षण व्यवस्था असलेली दिसून येते. निवासी शिक्षण, मौखिक अध्ययन, प्रश्न उत्तरे, माधुकी या तात्विक नियमावर आधारित ही शिक्षण व्यवस्था होती.

स्वतंत्रपूर्व काळातील भारतीय शिक्षण व्यवस्था :

भारतात मोगल व मराठा साम्राज्याच्या असताना नंतर परकीय सत्तांनी भारतात आपले पाय मजबूत केले. तत्पूर्वी गुरुकुल, मदरसे यासारख्या पारंपारिक शिक्षण व्यवस्था भारतात अस्तित्वात होत्या. परकीय सत्तांना भारतीय शिक्षण व्यवस्थेत फारसा रस होता असे नाही. परंतु, भाषेच्या अडचणी लक्षात घेऊन त्यांचे शिक्षण व्यवस्थेकडे लक्ष गेलेले दिसून येते. सर्वप्रथम ख्रिश्चन मिशनरी विल्यम केरी यांनी सन १८०० मध्ये ब्रॅंस्टीस मिशनरी शाळांची स्थापना केली. त्यामुळे पुढे त्या आजूबाजूच्या भागात प्राथमिक शाळा सुरू झालेल्या दिसून येतात. त्या काळी भारतीय समाज सुधारकांचे ही शिक्षण सुधारणांमध्ये मोठे योगदान राहिले आहे. राजाराम मोहन राय यांनी स्वतः १८१५ मध्ये अँग्लो हिंदू शाळेची स्थापना केली. तर तेज चंद्रराय बहादुर, राजा राधाकांत देव यांचा ही त्यात उल्लेख करता येईल. इंग्रजी सत्तेने भारतात चार्टर अँक्ट १८१३ मध्ये लागू करण्यात आला. त्याद्वारे शिक्षणासाठी प्रती वर्ष एक लाख रुपये निधी उपलब्ध केला जाऊ लागला. १८२३ कोलकत्ता येथे संस्कृत महाविद्यालयाची स्थापना १८५७ मध्ये शिक्षण विभागाची स्थापना तसेच मुंबई, मद्रास व कोलकत्ता विश्वविद्यालयांची स्थापना झाली. १८३५ लॉर्ड मेकॅलेयाने इंग्रजी शिक्षण वाढवण्यासाठी प्रस्ताव सादर केला. तर, लॉर्ड होर्डिंग यांनी

इंग्रजी शिक्षण जाणणाऱ्यांना सरकारी नोकरी भरती करता येईल असे जाहीर केले. लॉर्ड रिपनने १८८२ मध्ये हंटर कमिशनची स्थापना केली. आणि शाळा व महाविद्यालयांना अनुदान मंजूर करण्यात आले. भारतात १९०४ मध्ये विद्यापीठ कायदा पास झाला. त्याला चार्ल्स मिशन असे म्हटले जाते. अर्थात भाषेची अडचण सोडविण्याच्या दृष्टिकोनातून इंग्रजी सत्तेने भारतात शिक्षण क्षेत्राकडे बघितलेले दिसून येते. परंतु त्यामुळे भारतात आधुनिक शिक्षणाचा पाया रचला गेला. तसेच भारतीय शिक्षण रुजविण्यासाठी महात्मा ज्योतिबा, सावित्रीबाई, लोकमान्य टिळक, छत्रपती शाहू महाराज, डॉ. बाबासाहेब आंबेडकर या आधुनिक विचारसरणीच्या समाज सुधारकांचे मोलाचे योगदान आहे.

स्वातंत्र्योत्तर भारतातील शिक्षण धोरण:

१९६४ मध्ये इंदिरा गांधी सरकारच्या काळात कोठारी आयोगाच्या शिफारशीनुसार १९६८ मध्ये मातृभाषा, राष्ट्रभाषा, इंग्रजी भाषा या त्रिभाषा सूत्रावर प्रथम शैक्षणिक धोरण भारतात अमलात आणण्यात आले. १९८६ मध्ये दुसऱ्या शैक्षणिक धोरणाचा अवलंब करण्यात आला. महिला, अनुसूचित जाती, जमाती मधील असमानता दूर करण्यासाठी समान शैक्षणिक संधी निर्माण करणे हा या धोरणाचा मुख्य हेतू होता. स्वातंत्र्योत्तर काळात भारतातील शिक्षण धोरणातून औपचारिक शिक्षणा बरोबरच अनौपचारिक शिक्षणाकडे देखील लक्ष दिसून येतो. जसे गरीब मुलांना शिक्षणाच्या प्रवाहात आणणे, दुर्गम भागात जिथे शिक्षण पोहोचू शकत नाही तेथे शिक्षण पोहोचवणे, निरक्षर नागरिकांस साक्षर करणे, इ. साक्षरतेचे प्रमाण, अक्षर ओळख यावर सुरुवातीला भर दिलेला दिसून येतो. भारतात शिक्षण घेणाऱ्यांचे प्रमाण या कालखंडात मोठ्या प्रमाणात वाढले. त्याप्रमाणात तांत्रिक व कौशल्य शिक्षण, स्वयंपूर्ण व आत्मनिर्भर शिक्षण व्यवस्थेकडे जागतिक स्तरावर विचार केला असता गुणवत्तेत बदल दिसून येत नाही.

स्वतंत्रपूर्व काळातील भारतीय शिक्षण व्यवस्था :

भारतातील शिक्षण व्यवस्था जगातील दुसऱ्या क्रमांकाची सर्वात मोठी शिक्षण व्यवस्था म्हणून ओळखली जाते. ३४ वर्षांच्या दीर्घ कालखंडांत २१ जुलै २०२० रोजी सरकारने शैक्षणिक सुधारणेस मान्यता दिली. १९७६ च्या घटना दुरुस्तीनुसार शिक्षण हा विषय सामायिक सूचित समाविष्ट करण्यात आला. त्यामुळे नवीन शिक्षण धोरण कायदा केंद्राने मंजूर केला असला तरी, राज्याने त्याची अंमलबजावणी करण्यासाठी प्रशासकीय व्यवस्था निर्माण करणे गरजेचे आहे. या शिक्षण धोरणात

पूर्व प्राथमिक शालेय अभ्यासक्रमहा महत्त्वपूर्ण पैलू असणार आहे कृती शिक्षण, जिज्ञासा, सांघिककार्य, स्वच्छता, शारीरिक विकास, संवाद कौशल्य, आकलन, भाषाविकास, हा त्याचा महत्त्वपूर्ण उद्देश आहे. पूर्वप्राथमिक शिक्षणानंतर त्याच्या शिक्षणात सातत्य निर्माण करण्याची जबाबदारी तसेच मातृभाषा शिक्षणावर भर, तर त्यापुढे प्राथमिक, माध्यमिक, उच्च माध्यमिक व उच्च शिक्षण अशी विभागाची नवीन रचना नवीन शिक्षण धोरणात नमूद केली आहे. उच्च माध्यमिक विभागात तंत्रशिक्षणास संधी निर्माण करण्यात आली आहे. पूर्वीच्या शिक्षण व्यवस्थेत विद्यार्थ्यास एकाच शाखेतून पदवी मिळविता येत असे. नवीन शिक्षण धोरणात आंतरविद्याशाखीय शिक्षणास प्राविण्य देण्यात आले आहे. बारावीनंतर शिक्षणामध्ये खंड पडल्यास किंवा अडचण पडल्यास विद्यार्थी शिक्षण सोडण्याची व पुढील कालावधीत शिक्षण पूर्ण करण्याची सवलत व पूर्ण केलेल्या शिक्षणाचे प्रमाणपत्र विद्यार्थ्याला मिळविता येणार आहे. अध्ययनाबरोबरच अध्यापन हा देखील शिक्षण व्यवस्थेतील महत्त्वपूर्ण भाग आहे. म्हणून नवीन शैक्षणिक धोरणात व्यवसायिक विकासासाठी ऑनलाईन प्रशिक्षण शिक्षण विकास मॉडेल तयार करण्यात येणार आहे. भाषा, कला, शारीरिक शिक्षण, व्यवसाय शिक्षण याकरिता वेगळ्या शिक्षकाची नेमणूक करण्यात येईल. उद्योजकता, हस्तकला, शेती, स्थानिक व्यावसायिकता या क्षेत्रासाठी स्थानिक क्षेत्रातून किंवा स्थानिक क्षेत्रातील व्यक्तींना प्रशिक्षक म्हणून नेमता येणार आहे. समानता निर्माण करण्यासाठी शिक्षण हा महत्त्वपूर्ण घटक आहे त्या अनुषंगाने शिक्षकांना करिअर विकासाच्या संधी उपलब्ध करून दिल्या जातील. व गुणवत्तेनुसार संधी निर्माण केल्या जातील. नाविन्य व नवशिक्षणाला नवीन शिक्षण धोरणात मोठ्या संधी आहेत. भारताला जागतिक स्तरावर ज्ञान महासत्ता बनविणे त्यासाठी तंत्रज्ञान व कौशल्य शिक्षणाबरोबरच पारंपारिक शिक्षण व कला, लोकसंगीत, स्थानिक कला

इत्यादी घटकांचाही कौशल्यविकास शिक्षणावर भर दिलेला दिसून येतो.

सारांश :

प्राचीन कालखंडापासून भारत शिक्षण, प्रशिक्षण व ज्ञान अर्जुन करण्यात भारतीय समाजवलेक अग्रगण्य व कृतिशील बदलांचा साक्षीदार आहेत. ज्याप्रमाणे प्राचीन कालखंडामध्ये त्या काळातील गरजेनुसार शस्त्रविद्या, राजनीती, समाजकारण, धार्मिक व सांस्कृतिक तसेच कौशल्य शिक्षणाला प्राधान्य दिलेले दिसून येते. त्याप्रमाणे भारताने परकीय सत्तेच्या कालखंडात ही परकीय शिक्षणाबरोबरच स्वतःला जोडून घेतले व शैक्षणिक क्षेत्रात स्थिरता न येऊ देता त्यात गतिशीलता व आधुनिकता स्वीकारली. स्वातंत्र्योत्तर कालखंडात भारतात शैक्षणिक क्षेत्रामध्ये केलेल्या सुधारणा व धोरणे यामुळे भारत आज जगात सर्व क्षेत्रात आपली प्राधान्यता सिद्ध करत आहे. भारत संगणक क्षेत्र, खगोल विज्ञान, आंतरराष्ट्रीय राजकारण, समाजविज्ञान, समाजशास्त्र, राज्यशास्त्र, अर्थशास्त्र, संगणक या सर्व क्षेत्रात प्रगतीपथावर आहे. नवीन शिक्षण धोरण कौशल्य व तंत्रज्ञानकौशल्य विकास संधी निर्माण करते. त्याच बरोबर पारंपारिक व सांस्कृतिक व प्रादेशिक ज्ञानाची जोपासना करेल. व्यावसायिकता, उद्योजकता, दृष्टिकोनातून भारतमार्गक्रमण करेल

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मराठी संगीतनाटकांतील नाट्यपदांद्वारे होणारे सामाजिक प्रबोधन

अस्मिता चंद्रहास सेवेकरी

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सारांश :

मराठी रंगभूमीवरील संगीतनाटक या दृक्-श्राव्य माध्यमातून मनोरंजनाच्या साथीने समाजात जागृती घडवण्याचे काम खूप वर्षांपासून केले आहे. मराठी नाटकांची परंपरा संत ज्ञानेश्वर यांच्या काळापासून असून यानंतरही मराठी रंगभूमीवरील संगीत नाटकांची परंपरा कै.विष्णुदास भावे यांपासून सुरु झाली. पौराणिक विषयांपासून विविध विषयांवरील संहिता, दर्जेदार नाट्यसंगीत, गायन-अभिनय असलेल्या मराठी नाटकांची परंपरा कै.अण्णासाहेब किर्लोस्कर, कै.भास्करबुवा बखले, कै.केशवराव भोळे, कै.मा.कृष्णराव, कै.बालगंधर्व, कै.पं.दिनानाथ मंगेशकर, इत्यादी अनेक प्रभृतींनी प्रभावीपणे गाजवलेली आहे. अलिकडील काळात कै.विद्याधर गोखले, कै.पं.जितेंद्र अभिषेकी यांनी संगीत नाटकांची परंपरा पुनरुज्जीवित करण्याचे प्रयत्न केलेले दिसतात. मराठी संगीत नाटके ही नाटकाची संहिता व त्यातील नाट्यपदांद्वारे रसिक प्रेक्षकांच्या मनोरंजनासोबतच सामाजिक प्रबोधनाचेही अत्यंत महत्वाचे कार्य करत असतात.

प्रस्तुत विषयाद्वारे मराठी संगीत नाटक परंपरेस उर्जितावस्था प्राप्त होण्यास प्रोत्साहन मिळावे, तसेच मराठी संगीत नाटके जतन आणि संवर्धन होण्यासाठी प्रयत्न करण्याची प्रेरणा याद्वारे मिळावी, उत्तमोत्तम दर्जेदार नाट्यसंगीत असलेली मराठी संगीत नाटकांची निर्मिती व्हावी, याकरिता या विषयास उजाळा देण्याचा प्रस्तुत प्रयत्न आहे.

उद्दिष्ट :

मराठी रंगभूमीवर संगीतनाटकांनी आपल्या संहितेतून, त्यांतील संवाद आणि बहारदार नाट्यगीतांद्वारे रसिक प्रेक्षकांच्या मनोरंजनासोबतच विविध सामाजिक प्रश्नांवर भाष्य करणारे, उद्बोधन करणारे संदेश अतिशय परिणामकारकरित्या दिलेले आढळतात. या सामाजिक प्रबोधनाचा आढावा काही बोधात्मक मराठी नाट्यपदे उदाहरणादाखल घेऊन थोडक्यात मांडण्याचा प्रयत्न केलेला आहे.

प्रस्तावना:

मराठी संगीतनाटकांतील 'नाट्यगीत' हा उपशास्त्रीय संगीतातील महाराष्ट्रातील एक अत्यंत जिह्वाळ्याचा व लोकप्रिय गायनप्रकार आहे. संगीतनाटकात संवाद कमी प्रमाणात असून त्यांतील संगीतनाट्यपदांवर जास्त भर दिलेला असतो. संगीतनाटकात त्यातील कथेला अनुसरून असलेली नाट्यपदे संगीतबद्ध करताना संगीतकाराचे संगीतातील कसब अतिशय प्रभावीपणे दिसून येते. व या नाट्यपदांना आपल्या प्रभावी गायनाद्वारे कौशल्य पूर्ण रितीने सादर करताना नाटकातील गायक-गायिका यांनी अभिनयासह सादर करून ते नाट्य प्रेक्षक-श्रोत्यांसमोर सादर केले जाते. नाट्यपदांमधल्या शब्दांतील भाव बहारदार अशा सांगीतिक शैलीत विस्तार करताना शास्त्रीय संगीत म्हणजेच रागदारी संगीताचेही मिश्रण करत तसेच कधीकधी विविध शैलींचे सांगीतिक

प्रकार प्रयोगात आणत उपशास्त्रीय अंगाने अभिनयासहित वैविध्यपूर्ण संगीताद्वारे सादरीकरण यांमधून रसिक प्रेक्षकांना खिळवून ठेवण्याची क्षमता असते. अशाप्रकारे मराठी संगीतनाटकांतील नाट्यगीतात शब्द आणि त्या शब्दांचा अर्थ-भावार्थ सजवण्यासाठी, आकर्षक बनवण्यासाठी संगीताचा वापर केला जातो. यांद्वारे त्या नाटकातील कथेचा विषय रसिक प्रेक्षकांवर बिंबवला जातो व ते नाटक मनोरंजनासोबत संगीत रसिकांना सांगीतिक मेजवानीच देणारे ठरते, व त्यातील कथेद्वारे विशिष्ट संदेशही परिणामकारक पद्धतीने प्रेक्षकांना पोहचवला जातो.

सामाजिक प्रबोधन करणारी काही नाट्यपदे उदाहरणादाखल पुढीलप्रमाणे :

कै.कृष्णाजी प्रभाकर खाडिलकर लिखित संगीतकार कै.पंडित गोविंदराव टेंबे आणि कै.बालगंधर्व या दिग्गजांनी गाजवलेल्या 'संगीत मानापमान' या संगीतनाटकातील 'शूरा मी वंदिले । धारातीर्थी तप जे आचरती । सेनापति यश याचि बले ॥ शिरकमला समरी अर्पिती । जनहित पूजन वीरा सुख शांती । राज्य सुखी या साधुमुळे, वंदिले ॥' तिलकशाम या रागावर आधारित या नाट्यपदातून आपल्या राज्याकरिता (देशाकरिता) आपल्या जिवाची जराही पर्वा न करता धैर्याने, स्वाभिमानाने शत्रूशी लढणा-या शूरवीरांप्रती कृतज्ञता व्यक्त केली आहे.

'संगीत मानापमान' या नाटकातील राग पहाडी, मांड रागांवर आधारित अजून एक पद ' खरा तो प्रेमा ना

धरी लोभ मनी ॥ पीडित जन देखता स्वसुखा त्यागी दया । जनभयहरण हेचि सुख सदया देवराया । दर्शन गुणवंताचे नाचवी प्रेमलहरी । गुणरसपान हेचि सुख, प्रेम तथा नाव जनी ॥' या नाट्यपदात परमेश्वर भक्तांकडून कसल्याही मोबदल्याची अपेक्षा न ठेवता भक्तांवर दया करतो, हे सांगितले आहे. तसेच खरी दया आणि खरे प्रेम यांचा बाजार कधीही असू शकत नाही. खरे प्रेम हे लोभरहित असते, हा बहुमोल संदेश या नाट्यगीतातून दिलेला आहे.

कै.राम गणेश गडकरी यांनी लिहिलेली संगीत 'एकच प्याला' आणि 'भावबंधन' ही नाटके १९१९ साली रंगभूमीवर आली. तत्कालिन समाजातल्या घराघरांत घडणारे नाट्य कै.राम गणेश गडकरी यांनी त्यांच्या या नाटकांमध्ये सादर केले. त्यांचे कथानक प्रेक्षकांना कुठल्या तरी पौराणिक किंवा काल्पनिक काळातल्या अद्भुत वाटणा-या जगात न नेता त्या नाटकांमधील घटना आपल्याच शहरात घडल्या असाव्यात, असे रसिक प्रेक्षकांना वाटावे आणि त्यातली भाषा रोजच्या बोलीभाषेसारखी असावी, अशा पद्धतीने ही नाटके लिहिली आहेत. रोज बोलतांना कोणी गाणी गाऊन त्यात आपल्या मनातला आशय व्यक्त करत नाहीत, पण संगीत नाटकांनी प्रेक्षकांना एवढी मोहिनी घातलेली होती की गद्य नाटके त्यांना पसंत पडतील याची खात्री नव्हती. तसेच बालगंधर्वासारखा नटश्रेष्ठ त्यात काम करणार असेल तर त्याच्या अलौकिक गायनकौशल्याला पुरेसा वाव द्यायलाच हवा, अशा पद्धतीने नाट्यपदे तितक्याच प्रभावीपणे संगीतबद्ध केली जायची. नाटकाच्या व्यवसायातला हा एक अत्यंत महत्वाचा भाग होता. या कारणांमुळे गडक-यांच्या या नाटकात त्यांनी पदे घातलीच. 'एकच प्याला' या नाटकातली 'कशि या त्यजू पदाला, प्रभु अजि गमला, लागे हृदयी हुरहुर, सत्य वदे वचनाला, दया छाया घे निवारुनिया, प्रभु मजवरि कोपला' वगैरेसारखी नाट्यगीते अजरामर झाली आहेत. कै.राम गणेश गडकरी लिखित गंधर्व नाटक मंडळी व सुंदराबाई यांचे संगीत असलेले 'एकच प्याला' हे मद्यपान व त्याचे दुष्परिणाम हा विषय असलेल्या या नाटकात मद्यपानाच्या व्यसनाने दुष्टाकरसारखा एक बुद्धिमान, तेजस्वी माणूस स्वतःचा, आपल्या साधवी पत्नीचा आणि आपल्या संसाराचा कसा नाश करून घेतो, असा या नाट्यकथेचा विषय आहे. यात पतीची पराकाष्ठेची व्यसनासक्ती आणि पत्नीची पराकोटीची पतिभक्ती यांच्यातला हा संघर्ष कै.राम गणेश गडकरी यांनी अत्यंत प्रभावीपणे 'एकच प्याला' या नाटकाची संहिता आणि त्यातील नाट्यपदे यातून मांडलेला आहे.

उदाहरणार्थ :

१) वसुधातल रमणीय सुधाकर । व्यसनघन तिमिरी बुडवीसी कैसा ॥ सृजनी जया परमेश सुखावे । नाशुनी त्या तुजसि मोद नृशंसा ॥

बिलावल रागावर आधारित असलेले संगीत 'एकच प्याला' मधील हे प्रसिद्ध नाट्यपद, मूळ गायक: श्रीपादराव नेवरेकर, गीतकार: विठ्ठल सीताराम गुर्जर.

२) दया छाया घे निवारुनिया । प्रभु मजवरि कोपला ॥' मिश्र तिलककामोद रागावर आधारित नाट्यपद गाताना पतीला दारूचे व्यसन लागल्यामुळे आर्त झालेल्या सिंधूच्या हृदयाची तळमळ अत्यंत प्रतिभावान गायक-अभिनेते बालगंधर्व आपल्या स्वरांतून, गायकीतून तितकीच आर्ततेने प्रेक्षकांसमोर सादर करत असत. अशाप्रकारे 'व्यसनाधीनता' कुटुंबाचे किती हाल करते, हे या नाट्यपदांद्वारे अत्यंत विलक्षण परिणामकारकरित्या प्रेक्षकांसमोर आणले आहे.

स्वातंत्र्यवीर कै.वि.दा.सावरकर यांनी 'उःशाप', 'संन्यस्त खड्ग' आणि 'उत्तरक्रिया' या नाटकांच्या माध्यमातून लोकजागृती आणि ब्रिटिश राजवटीवर असूड ओढण्याचे काम सुरूच ठेवले. त्याग, प्रखर, ज्वलंत भाषा, परकीय सत्तेखाली जगण्यातील खंत आणि संताप हे त्यांच्या नाट्यगीतांतूनही तळपतात. भारत देश इंग्रज राजवटीच्या अंमलाखाली पारतंत्र्यात असताना त्या काळात इ.स.१९२७ मध्ये आलेल्या 'रणदुंदुभी' या नाटकातल्या 'दिव्य स्वातंत्र्यरवि आत्मतेजोबले' या नाट्यगीतांमध्ये सरळ उघडपणे स्वातंत्र्याचे गुणगान आणि आवाहन केले आहे. आणि 'परवशता पाश दैव ज्यांच्या गळा लागला । सजीवपणे घडती सारे मरणभोग त्याला ॥' या नाट्यगीतांमध्ये पारतंत्र्याची खंत प्रकट केली आहे. तसेच 'जगी हा खास वेड्यांचा पसारा मांडला सारा' या गाण्यात तत्कालीन समाजावर कोरडे ओढले आहेत. स्वातंत्र्य मिळाल्यानंतर ही गाणी चांगली गाजली होती. या नाटकातील पंडित दिनानाथ मंगेशकर हे अभिनयासोबत अत्यंत प्रतिभावान, आक्रमक ताना, तेजस्वी गायकीने रंगभूमी भारावून टाकत असत.

उपाययोजना :

- मनोरंजनासह सांगीतिक श्रवणीय नाट्यपदांद्वारे प्रभावीपणे सामाजिक प्रबोधनासारखे विषय हाताळणारी ही मराठी संगीतनाटकांची रंगभूमीवरील प्रत्यक्ष प्रयोगाची परंपरा वर्तमान काळात भारतात परत जोमाने सुरू व्हावी आणि इतरही देशांत प्रसारित व्हावी, नवीन पिढीतील जाणकार रसिकवृंद निर्माण व्हावा.
- शालेय तसेच महाविद्यालयीन स्तरांवर कलेच्या अभ्यासक्रमात मराठी संगीतनाटकांचा समावेश असावा.
- नाट्यसंगीत आणि अभिनय याकरिता विविध संगीत व अभिनय शिबिरांचे आयोजन वेळोवेळी केले जावे.
- 'मुंबई मराठी साहित्य संघ' यांची 'नाट्यशाखा', 'संगीत नाटक अकादमी' यांसारख्या नावाजलेल्या विविध संस्थादेखील संगीत नाटक परंपरेस प्रोत्साहन देण्यास प्रयत्नशील आहेत. महाराष्ट्र राज्य सांस्कृतिक कार्य संचालनालयातर्फे महाराष्ट्र राज्य हौशी संगीत नाट्य स्पर्धा आयोजित करण्यात येत असते. याद्वारे हौशी रंगभूमीवरील संगीत क्षेत्रात कार्यरत असलेल्या नाट्य कलावंतांना हक्काचे व्यासपीठ उपलब्ध करून संगीत नाटकांचा प्रसार आणि संवर्धन करण्यासाठी महत्वाची भूमिका बजावत आहेत.

निष्कर्ष :

जुन्या मराठी संगीतनाटकांच्या प्रयोगांसोबत नवनवीन मराठी संगीतनाटकांची निर्मिती होऊन , नवनवीन संगीतनाटक दिग्दर्शकांना, संगीतकारांना, गायक कलाकारांना, संगीत अभ्यासकांना प्रेरणा मिळावी, याकरिता प्रस्तुत विषयाद्वारे प्रकाश टाकण्याचा प्रयत्न केला आहे.

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नासिक जिल्ह्यातील गड किल्ले व शिलालेख

प्रा. योगिता एस. पाटील

महिलारत्न पुष्पाताई हिरे महिला महाविद्यालय, मालेगांव

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प्रस्तावना

शिलालेख म्हणजे एक प्रकारचा लेखन आहे जो खडकावर किंवा दगडावर कोरलेला असतो. लिखित मजकुराचे दीर्घायुष्य सुनिश्चित करण्यासाठी, म्हणून तो दगडी शिळेवर कोरून ठेवायची प्रथा अस्तित्वात होती. राजकीय, धार्मिक, सामाजिक आणि ऐतिहासिक माहिती गोळा करण्यासाठी या प्रकारची कोरीवकाम अत्यंत उपयुक्त आहे. एखाद्या व्यक्तीचे नाव आणि शिलालेखातील अक्षरे फिरवण्यावरून वयाचा अंदाज लावला जाऊ शकतो.

इतिहास हा भूतकाळातील माहिती एकत्रित करणाऱ्या साधनांच्या विस्तृत श्रेणीचा वापर करून लिहिला आणि अभ्यास केला जातो. भूतकाळाबद्दल जाणून घेण्यासाठी तुम्ही ज्या गोष्टींचा वापर करू शकता त्यांना इतिहास साधने म्हणतात. ऐतिहासिक माहिती देणारी साधने विविध स्वरूपात उपलब्ध आहेत. विशिष्ट निकषांच्या आधारे त्यांचे वर्गीकरण केले जाते. इतिहास हा भूतकाळात एका विशिष्ट क्रमाने घडलेल्या घटनांची वैज्ञानिक आणि पद्धतशीर नोंद आहे. इतिहासाचे चार मूलभूत घटक आहेत: लोक, समाज, स्थळ आणि काळ. इतिहासाचा अभ्यास हा अनुभवजन्य पुराव्यावर आधारित असतो. या दस्तऐवजांना "इतिहासाची साधने" म्हणून संबोधले जाते. तीन प्रकारची साधने आहेत: भौतिक, लेखी आणि तोंडी. त्यामुळे इतिहासातही साधने करा. ऐतिहासिक घटना समजून घेण्यासाठी अनेक बाबी विचारात घेतल्या पाहिजेत. त्यासाठी ऐतिहासिक साधने वापरली जातात. या साधनांची तपासणी करणे आवश्यक आहे. त्याची सत्यता पडताळून पाहिली पाहिजे. त्याची पडताळणी करणे आवश्यक आहे. ही साधने तारतम्याने व चिकित्सकपणे हेतूसाठी वापरली जावीत आणि सावधगिरीने वापरली पाहिजेत. सदर संशोधन पेपर मध्ये नासिक जिल्ह्यातील गड किल्ले व तिथे दगडावर कोरलेला शिलालेखच्या अभ्यास केला आहे.

इतिहासाची प्रमाण अभ्यास करण्याची साधने

प्राथमिक साधने - कागदपत्रांचा आधार, शासकीय आदेश व कागदपत्रे, राजाने काढलेली फर्माने, आज्ञापत्रे, करारनामे,, तहनामे, आपापसातील पत्रव्यवहार, पोलीस व न्यायखात्याचे अहवाल, प्रत्यक्ष सहभागी व्यक्तीचा पत्रव्यवहार, शासकीय इतिवृत्त

पुरातत्त्वीय साधने - प्राचीन वास्तूंचे अवशेष, मातीची खापरे, बौद्ध विहार(लेण्या), अलंकार, मंदिर, मूर्ती, शिलालेख, ताम्रपट, नाणी, अभिलेख, प्राण्यांची हाडे, जळालेले धान्य, मानवी हाडे, अश्मयुगीन दगडी हत्यारे

दुय्यम साधने - तवारिखा, बखरी,पोवाडे, स्रोत्रे, प्रवास वर्णने, कुळकरी, शकावल्या, ऐतिहासिक काव्ये, म्हणी, महजर/कारीने, वंशवेली, मुलाखती

नासिक जिल्ह्यातील गड किल्ले व तिथे दगडावर कोरलेला शिलालेख

१) हतगड



इ स १५४८. साली कोरलेला शिलालेख हतगड किल्ल्यावर असून किल्ल्याचा उजव्या बाजूला एक आडवाट आहे त्या ठिकाणी असून तब्बल ४७० वर्षांपूर्वी कोरलेला शिलालेख

आहे. या शिलालेखाची उंची ४फूट उंच २.४इंच रुंद असून सोळा ओळींचा शिलालेख असून पहिल्या १४ओळी संस्कृत आणि शेवटच्या २ मराठी म्हणजेच संस्कृत+प्राकृत अशा

भाषेत हा शिलालेख आपल्याला बघायला मिळेल. कुलथे यांनी मिळवलेल्या माहितीनुसार राज्यातील देवनागरी

भाषेतला हा सगळ्यांत मोठा शिलालेख आहे.

* अप्रकाशित शिलालेखावरील ओळी *

- स्वस्ति श्री नृप विक्र मार्क स (स्य)
- ...ती....शाळिवाहन सके
- 1469...संवत्सरे आषा
- ढ क्षय 11 भौमे तद्दीने महाराजा
- धिराज प्रौढ प्रताप चक्रवर्ती वेद मा
- र्ग प्रवर्तक आचार परायण सा
- रासार विचारक प्रताप नाराय
- ण धर्मधुरीण सकळ वेद शा
- ख कोविद राष्ट्रौड बागुल मुगु
- ट मणी...वा...श्री मा
- न ब्रह्मकुळ प्रदिप श्री महादेव
- सूत तपश्री...रकिच श्री
- रा (जा) धीराज बहिरम (भैरव) सेन राजा
- जबळ पराक्रमे हातगा दुर्ग वेढा
- घालुनु (न) नीजाम सहा (शहा) पासून
- घेतला...विजयी भव

शिलालेख कोरीव प्रकारातील आहे. किल्ल्यावरील वापरात नसलेल्या अवघड अशा जागेवर उभ्या कातळकड्याच्या एका भिंतीवर आजही सुस्पष्ट स्थितीत दिसून येतो. शिलालेखावर केलेल्या संशोधनानुसार माहिती सांगताना कुलथे म्हणाले, की शिलालेख शालिवाहन शके 1469 मधील आषाढातील क्षय एकादशीला कोरलेला आहे. म्हणजेच इसवी सन 1547 मध्ये कोरलेल्या शिलालेखाला 469 वर्षे पूर्ण झाली आहेत. त्यावर बागुलवंशी राजांच्या पराक्रमाबद्दलच्या ओळी आहेत. बागलाण प्रांतातील बागुलराजे जे स्वतःला राष्ट्रौड

वंशीय म्हणत. बागुलवंशातील राजा महादेवसेन यांचा पुत्र भैरवसेन यांनी नगर निजामाच्या ताब्यातून हतगड किल्ल्याला वेढा घालून हा किल्ला जिंकल्याचा उल्लेख शिलालेखावर आहे. 16 व्या शतकाच्या मध्यावर नगरचा बुरहान निजामशहा हा या भागातल्या राजवटीतील बलाढ्य राजा होता. त्याच्या ताब्यात असलेला मोक्यावरचा हतगड किल्ला मिळवणे हा बागुलवंशीय भैरवसेन राजाचा मोठा पराक्रम होता. हेच शिलालेखावरून स्पष्ट होते.

२) धोडप किल्ला



हा शिलालेख धोडप किल्ल्याच्या दुसऱ्या दरवाज्याच्या डावीकडील भिंतीवर आहे. शिलालेख फारशी लिपी व भाषेत असून हिजरी १०४६ मोहरम महिन्याच्या २५ व्या

दिवसाचा उल्लेख त्यात आहे, आणि “दुसरा शूर शहाजहान बादशहा, त्याचा नम्र सेवक अलावर्दी खान तुर्कमान, तसेच त्यांचे इतर चौदा किल्ले चार महिन्यात जिंकल्याचा उल्लेख

त्यात आहे. चौदा किल्ल्यात धोडप ,चांदोर(चांदवड), इंद्राई,
राजदेहर,कोळदेहर,कांचना,मांचना

,कणहेरा,जोला(जवळ्या), रोला(रवळ्या), मार्कांड्या,
अहिवंत, अचलगड,रामसेज यांचा समावेश आहे.

३) हरिहर किल्ला :



हरिहर किल्ला म्हंटला की सर्वांना गडाच्या थरावर कातळ कोरीव पायरी मार्गच तो दिसतो पण निर्गुडपाड्याच्या वाटे व्यतिरिक्त हर्षेवाडीतून जी एक दुसरी वाट गडावर जाते त्या वाटेवरून अर्ध्या तासाच्या चढाई नंतर एक पठार लागते त्या पठारापासून एक वाट सरळ गडावर जाते व एक डावीकडील पायवाट जंगलात जातांना दिसते त्याच वाटेने पुढे गेल्यावर एक आश्रम आपल्यानजरेस पडतो त्याच आश्रमासमोर एक बारव सुध्दा आहे आणि त्याच बारवेवर

हा शिलालेख कोरलेला आहे. सदर शिलालेख हा नक्षीदार दगडामध्ये कोरलेला आहे सध्या या शिलालेखावर रंग मारलेला असल्यामुळे यातील काही शब्द वाचता येत नाहीत लेखाच्या डाव्या आणि उजव्या बाजूस गजशिल्प कोरलेली आहेत, तर वरील बाजूस कमळ कोरलेली आहेत शिलालेख हा देवनागरी लिपीत आहे

४) अलंग गड



अलंगगड : शिलालेख

श्री सदाशिव सहश
श्री दीवानवीर साहीप
किल्लेदार अलंग, प्रौरतराप माणसिंग भदोरिआ
तानी अर्ध्यांगी
श्रीदेशरुवरी सहगौन सईति न पाईग
याचा अर्थ असा की गडाच्या मानसिंग भदोरीया नावाच्या किल्लेदाराच्या मृत्युनंतर त्याची पत्नी येथे सती गेली.

५) रामसेज किल्ला



रामसेज किल्ल्याच्या पायथ्याशी एक भली मोठी दगडात बांधलेले कमानी प्रवेशद्वार आहे.प्रवेशद्वार अतिशय सुंदर दिसते.गडावर जाण्यासाठी डोंगरात मळलेली पायवाट आहे.गडाच्या वरील बाजूस कड्याखाली एक गुहा असून गुहेमध्ये महादेवाची पिंड आहे.तिथून थोडे वर गेल्यावर

सुंदर रामाचे मंदिर असून मंदिरात राम,सिता,लक्ष्मन,व मारुतीची सुंदर मूर्ती आहे.मंदिराच्या भिंतीवर एक शिलालेख कोरलेला आहे.

निष्कर्ष : टिकाऊ माध्यम कोरलेल्या लेखनासाठी एक सामान्य संज्ञा. पुरातत्वशास्त्र ही अभिलेखागार आणि

त्यांच्या संग्रहाच्या अभ्यासासाठी वैज्ञानिक संज्ञा आहे. पूर्वी विविध राजेघरे, सरकारी संस्था, धार्मिक संस्था, महंत, भाविक असे. त्याची दखल घ्यावी. हा मजकूर तयार करताना, वर्तमान आणि भावी पिढ्यांना समजेल असा मजकुराचा हेतू लेखकाने ठेवला आहे. उत्खनन आणि फील्डवर्क दरम्यान यापैकी मोठ्या प्रमाणात लेख सापडले आहेत. आजही हेच तंत्र वेगवेगळ्या प्रमाणात लागू केले जात आहे. मोठ्या इमारती, मंदिरे, स्मारके, डाईक, पूल आणि शिल्पे यांच्या बाजूने या प्रकारचे तुकडे कोरलेले पाहणे अजूनही सामान्य आहे. ज्या लोकांनी त्यांना बनवले आणि ज्यांनी त्यांचे अनुयायी बनवले त्या लोकांइतकेच या प्रकारच्या गोष्टी कलेचा एक भाग आहेत. पहिल्या शतकात चर्मपत्र, चामडे आणि नंतर कागदाचा शोध लागल्यानंतर या प्रकारचे खोदकाम फार काळ टिकले नाही. असे असूनही, लेखनाचे अधिक टिकाऊ स्वरूप तयार करण्यासाठी समान तंत्राचा वापर केला जातो.

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नालंदा विद्यापीठ

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प्रास्ताविक :

प्राचीन काळात भारताने शिक्षणाच्या क्षेत्रात मोठी प्रगती केली होती. प्राचीन काळी भारतात बौद्ध धर्माच्या उदयानंतर अनेक विद्यापीठे उदयास आली होती. तत्कालीन राज्यकर्त्यांनी विद्यापीठांना राजाश्रय दिला होता. त्यामुळे विद्यापीठांचा मोठ्या प्रमानावर विकास झाला होता. ह्या विद्यापीठांमध्ये अनेक विद्वान गुरु असत. ह्या विद्यापीठांमध्ये मोठ्या प्रमाणावर ग्रंथ संपदा असे. भारतातून आणि परदेशातून अनेक विद्यार्थी ह्या विद्यापीठांमध्ये शिक्षण घेण्यासाठी येत असे. भारतातील नालंदा विद्यापीठ हे भारतातील सर्वात मोठे विद्यापीठ होते. नालंदा विद्यापीठ हे जगप्रसिद्ध विद्यापीठ होते. नालंदा विद्यापीठाची किर्ती सर्व जगभर पसरली होती. युनेस्कोच्या जागतिक वारसा स्थळांच्या यादीत नालंदा विद्यापीठाच्या समावेश आहे.

नालंदा विद्यापीठाची स्थापना :

नालंदा विद्यापीठाची स्थापना गुप्त कालखंडात झाली. हे विद्यापीठ बिहारमधील पाटना शहरापासून २० मैलावर आहे. सुरवातीला नालंदा विद्यापीठाचे स्वरूप लहान होते. गुप्त घराण्यातील राजा कुमारगुप्ताने राजाश्रय दिल्यामुळे विद्यालयाचे रूपांतर विद्यापीठात झाले. तर काही अभ्यासक नालंदा विद्यापीठाच्या स्थापनेचे श्रेय बौद्ध आचार्य नागार्जुन यांचा शिष्य आर्यदेव यास देतात. येथील उत्खननात सापडलेल्या मुद्रेवर “श्रीनालंदा महाविहार आर्यभिक्षुसंघस्य” असे लिहिलेले आहे व तिच्या दोन्ही बाजूंवर सारनाथचे धर्मचक्र आहे. पुढील काळात नालंदा विद्यापीठाचा मोठा प्रमानावर विस्तार झाला. पाचव्या शतकात नालंदा विद्यापीठ भरभराटीस आले होते. नालंदा विद्यापीठ हे बौद्धधर्मीय विद्यापीठ होते. या विद्यापीठात बौद्ध धर्माचा व बौद्ध धर्म साहित्याचा अभ्यास केला जात असे. या विद्यापीठात बौद्ध धर्मीय विद्यार्थ्यांची संख्या सर्वात जास्त होती. सातव्या शतकात राजा हर्षवर्धन यांनी नालंदा विद्यापीठास १०० गावे दान केली होती. ह्या गावांचे उत्पन्न नालंदा विद्यापीठास मिळत असे.

विद्यापीठाचे स्वरूप :

नालंदा विद्यापीठ केवळ भारतातच नव्हे तर परदेशात देखील शिक्षणासाठी प्रसिद्ध होते. नालंदा विद्यापीठात एकाच वेळी हजारो विद्यार्थी शिक्षण घेत असे.

यामध्ये परदेशातील विद्यार्थ्यांची संख्या लक्षणीय होती. विद्यार्थ्यांना नालंदा विद्यापीठात सहजपणे प्रवेश मिळत नसे तर विद्यार्थ्यांना प्रवेश परीक्षा द्यावी लागत असे. प्रवेश परीक्षा कठीण असल्यामुळे केवळ २०% विद्यार्थीच प्रवेश परीक्षा उत्तीर्ण होत असे. विद्यार्थ्यांकडून शिक्षणासाठी कोणतीही फी घेतली जात नसे. विद्यार्थ्यांच्या राहण्याची आणि जेवणाची सोय मोफत केली जात असे. नालंदा विद्यापीठाच्या खर्चासाठी, विद्यार्थी आणि शिक्षकांच्या खर्चासाठी अनेक गावांचे उत्पन्न विद्यापीठाला दिलेले होते. राजा हर्षवर्धन यांच्या काळात नालंदा विद्यापीठात १०,००० विद्यार्थी शिक्षण घेत होते तर १,५०० शिक्षक अध्यापन करीत असे. विद्यापीठ परिसरात अनेक इमारती होत्या. काही इमारती ग्रंथालयासाठी, काही महाविद्यालयासाठी तर काही इमारती शिक्षक आणि विद्यार्थी यांना राहण्यासाठी होत्या. येथे इमारती अनेक मजली होत्या. काही इमारती दोन मजली, काही इमारती तीन मजली तर काही इमारती तब्बल ९ मजली होत्या. इमारतीच्या भिंती आणि स्तंभांची आकर्षक सजावट केलेली होती. विद्यापीठ परिसरात स्नानगृह, उद्याने व क्रीडांगणे होती.

सक्रम :

नालंदा विद्यापीठाचा अभ्यासक्रम प्रगत, उदार आणि बहु व्यापक होता. नालंदा विद्यापीठात बौद्ध धर्मग्रंथ व साहित्य, वेदग्रंथ, उपनिषदे, वेदांगे, संगीत, व्याकरण, आयुर्वेद, सांख्यतत्त्वज्ञान, वैदिकशास्त्र, तर्कशास्त्र, मंत्रविद्या, चिकित्साविद्या, गणित, ज्योतिष, दंडनीती, वेदविद्या, चित्रकला, तत्त्वज्ञान, शिल्प, स्थापत्य, खगोलशास्त्र यासारखे विषय शिकविले जात असे. त्याकाळातील महान विद्वान नालंदा विद्यापीठात अध्यापनाचे काम करीत असे. त्यामुळे नालंदा विद्यापीठात शिक्षणाचा दर्जा हा उच्च होता. सत्याच्या शोधाची पहिली अट स्वातंत्र्य आहे, असे मानण्यात येई. न्यायशास्त्र हि या विद्यापीठाची मोठी देणगी आहे. नालंदा विद्यापीठात धर्मपाठक, चंद्रपाल, प्रभामित्र, कर्णमती, आर्यदेव, शीलभद्र, शांतरक्षित, जिनमित्र, ज्ञानमित्र या सारखे विद्वान अध्यापनाचे कार्य करीत असे. नालंदा विद्यापीठ शिक्षण घेण्यासाठी फाहीयान, युआनश्वंग, ह्युन्चौ, नाऊशींग हंग, आर्यवर्मन, बुद्धवर्मन इत्यादी चीन, कोरिया, तिबेट इत्यादी ठिकाणावरून नालंदा येथे आले होते. चीनी प्रवाशी युआन श्वंग यानी तेथे वेधशाळा असल्याचा उल्लेख केलेला आहे. यावरून तेथे खगोलशास्त्राचा अभ्यास केला जात असे. येथे दररोज वादविवाद व चर्चा आयोजित केल्या जात असे. विद्यापीठात दररोज १०० भाषणे व परिसंवाद होत असे. चारीत्र्यसंपन्न व बुद्धिमान शिक्षक , अभ्यासू व होतकरू विद्यार्थी, कुशल प्रशासन, राज्यकर्त्यांचा सतत लाभलेला राजाश्रय यामुळे नालंदा विद्यापीठाची उत्तरोत्तर सतत आठ शतके भरभराट होत गेली. भारतातील अध्ययन – अध्यापनाच्या श्रेष्ठ परंपरेला सातत्य व समृद्धी मिळवून देण्यात या विद्यापीठाचा मोठा वाटा आहे. परंतु विक्रमशीला विद्यापीठाच्या प्रगती बरोबर नालंदा विद्यापीठास उतरती कळ लागली.

ग्रंथालय :

कोणत्याही विद्यापीठाचा दर्जा हा तेथे असलेल्या ग्रंथालयावरून ठरतो. नालंदा विद्यापीठात पुस्तके मोठ्या प्रमाणावर होती. चीनी प्रवाशी युआन श्वंग यानी नालंदा

विद्यापीठातील ग्रंथालयाचे वर्णन केले आहे. नालंदा विद्यापीठात खूप मोठे ग्रंथालय आहे. तेथे पुस्तकांना ठेवण्यासाठी तीन मोठ्या इमारती होत्या. रतिसागर, रत्नोदधी व रत्नरंजन नावाच्या इमारतीमध्ये सर्व ग्रंथ ठेवण्यात आले होते. यामध्ये रत्नोदधी नावाची इमारत तब्बल ९ मजली होती. या सर्व इमारतीमध्ये लाखो ग्रंथ होते.

विद्यापीठाचा शेवट :

नालंदा विद्यापीठाने इ.स.१२०० पर्यंत ज्ञानदानाचे कार्य केले. बख्तियार खिलजीने इ.स. ११९३ मध्ये नालंदा विद्यापीठावर आक्रमण करून विद्यापीठाची मोडतोड करून व नालंदा विद्यापीठ जाळून त्याचा विध्वंस केला. यामुळे अतिशय मौल्यवान, दुर्मिळ ग्रंथ संपदा आगीच्या भक्ष्य स्थानी पडले. असे सांगितले जाते कि , विद्यापीठाच्या ग्रंथालयात एवढी पुस्तके होती कि तब्बल तीन महिने हि आग घुमसत होती. बख्तियार खिलजीने नालंदा विद्यापीठातील सर्व धर्माचार्य आणि बौद्ध भिक्षुंना ठार मारले. यानंतर नालंदा विद्यापीठ कायमचेच नामशेष झाले.

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भारतीय ज्ञान परंपरा और नई राष्ट्रीय शिक्षा नीति

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हिंदी विभागाध्यक्ष, महिलारत्न पुष्पाताई हिरे कला विज्ञान एवं वाणिज्य महिला महाविद्यालय,
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शिक्षा मनुष्य के व्यक्तित्व और व्यवहार का परिमार्जन कर उनके भीतर अच्छे विचारों का निर्माण करती है तथा जीवन के मार्ग को प्रशस्त करती है। बेहतर समाज के निर्माण में सुशिक्षित नागरिक की भूमिका महत्वपूर्ण होती है। आज के समय की सबसे बड़ी शक्ति ज्ञान ही है। 'ज्ञान' शब्द देखने में जितना छोटा है, उतनी ही व्यापकता लिए हुए है। ज्ञान का क्षेत्र बहुत विशाल है। यह जीवन-पर्यंत चलता है। आज वही देश सबसे कामयाब है जिसके पास ज्ञान की अद्भुत शक्ति है। यह ज्ञान ही है जो मनुष्य को अन्य जीव-जन्तुओं से श्रेष्ठ बनाता है। भारत की प्राचीनकालीन शिक्षा व्यवस्था देश में ही नहीं, समूचे विश्व में भी प्रसिद्ध थी।

चरित्र निर्माण, आध्यात्मिक ज्ञान के साथ-साथ व्यक्ति के सर्वांगीण विकास के उद्देश्य पर आधारित शिक्षा प्रणाली की ख्याति चारों ओर फैली हुई थी। चीन, जापान, तिब्बत तथा लंका आदि देशों से यहां शिक्षार्थी ज्ञानार्जन हेतु आते थे। विभिन्न विषयों के विषय विशेषज्ञ आचार्यों के कारण नालन्दा, तक्षशिला एवं विक्रमशिला विश्वविद्यालय विश्व में सुविख्यात थे।

इस तरह प्राचीन भारतीय शिक्षा अपने उद्देश्यों एवं व्यावहारिकता के कारण संसार में अनूठी थी। भारत के पास बौद्धिक अनुसंधान एवं मूल ग्रंथों के धरोहर की एक अत्यंत समृद्ध परंपरा रही है जो कि सदियों पुरानी है। भारतीय ज्ञान परंपरा अद्वितीय ज्ञान और प्रज्ञा का प्रतीक है जिसमें ज्ञान और विज्ञान, लौकिक और पारलौकिक, कर्म और धर्म तथा भोग और त्याग का अद्भुत समन्वय है।

“भारतीय ज्ञान परंपरा की जड़ें इतनी मजबूत और प्रभावी थी कि लॉर्ड मैकाले को ये आभास हो गया था कि भारतीयों को पूर्णरूपेण गुलाम बनाना संभव नहीं है। इसलिए उसने शिक्षा व्यवस्था पर प्रहार किया और पुरातन ज्ञान परंपरा के स्थान पर अंग्रेजी शिक्षा की नयी प्रणाली थोप दी। इसके तहत सम्पूर्ण मानव बनाने वाली या भारत के सांस्कृतिक उत्थान वाली व्यवस्था को रोकने का प्रयास था। पूरी व्यवस्था में येन केन प्रकारेण छद्म अंग्रेजी बाहक तात्कालिक योग्यताओं के बल पर भारतीयों के बीच नौकरी के लिए स्पर्धा का निर्माण करना था। 64 कला-कौशल सिखाने के साथ मानवीय गुणों और मूल्यों का समावेश कर पूर्ण मानव की परिकल्पना हमारे सामने गौण हो गए। स्वामी विवेकानंद, महर्षि अरविंद घोष, गुरुदेव रविंद्र नाथ टैगोर, महात्मा गाँधी आदि कई शिक्षाविदों ने भारतीय ज्ञान परंपरा को ही आदर्श मानकर शिक्षा के लक्ष्य निर्धारित किये। पूर्व की दो शिक्षा नीतियों ने भी कई प्रगतिशील सुझाव दिए किन्तु दुर्भाग्य से एकपक्षीय योग्यता के आधार पर नौकरी देने वाली शिक्षा व्यवस्था को नहीं बदल पाए।”^१

राष्ट्रीय शिक्षा नीति- 2020 ऐसे बड़े बदलाव की और कदम बढ़ाने की बात करती है जिसको लागू करने में वही शिक्षक सक्षम होंगे जो अपने आधार और भारतीय संस्कृति पर गर्व कर सकें। वैसे शिक्षक जो घर और समाज से

भारतीय ज्ञान परंपरा को आत्मसात की हुई भारतीय संस्कृति से भी जुड़े रहे हों और इस कारण पल भर में 'दृष्टि से सृष्टि' को समझने की क्षमता रखते हों। नई शिक्षा नीति 2020 भारत की शिक्षा नीति है जिसे भारत सरकार द्वारा 29 जुलाई 2020 को घोषित किया गया। सन 1986 में जारी हुई नई शिक्षा नीति के बाद भारत की शिक्षा नीति में यह पहला नया परिवर्तन है। यह नीति अंतरिक्ष वैज्ञानिक के. कस्तूरीरंगन की अध्यक्षता वाली समिति की रिपोर्ट पर आधारित है।

प्रमुख बातें:- (१) नई राष्ट्रीय शिक्षा नीति, 2020 के तहत वर्ष 2030 तक सकल नामांकन अनुपात (Gross Enrolment Ratio-GER) को 100% लाने का लक्ष्य रखा गया है। (२) नई शिक्षा नीति के अन्तर्गत शिक्षा क्षेत्र पर सकल घरेलू उत्पाद के 6% हिस्से के सार्वजनिक व्यय का लक्ष्य रखा गया है। (३) 'मानव संसाधन प्रबंधन मंत्रालय' का नाम परिवर्तित कर 'शिक्षा मंत्रालय' कर दिया गया है। (४) पाँचवीं कक्षा तक की शिक्षा में मातृभाषा/स्थानीय या क्षेत्रीय भाषा को शिक्षा के माध्यम के रूप में अपनाने पर बल दिया गया है। साथ ही मातृभाषा को कक्षा-8 और आगे की शिक्षा के लिये प्राथमिकता देने का सुझाव दिया गया है। (५) देश भर के उच्च शिक्षा संस्थानों के लिये "भारतीय उच्च शिक्षा

परिषद" नामक एक एकल नियामक की परिकल्पना की गई है। (६) शिक्षा नीति में यह पहला परिवर्तन बहुत पहले लिया गया था लेकिन अबकी बार 2020 में जारी किया गया।”^२

“शिक्षण के माध्यम के रूप में पहली से पांचवीं तक मातृभाषा का इस्तेमाल किया जायेगा। इसमें रट्टा विद्या को खत्म करने की भी कोशिश की गई है जिसको मौजूदा व्यवस्था की बड़ी खामी माना जाता है।”^३ “किसी कारणवश विद्यार्थी उच्च शिक्षा के बीच में ही कोर्स छोड़ के चले जाते हैं। ऐसा करने पर उन्हें कुछ नहीं मिलता एवं उन्हें डिग्री के लिये दोबारा से नई शुरुआत करनी पड़ती है। नई नीति में पहले वर्ष में कोर्स को छोड़ने पर प्रमाण पत्र, दूसरे वर्ष पे छोड़ने पे डिप्लोमा एवं अंतिम वर्ष पे छोड़ने पे डिग्री देने का प्रावधान है।”^४

केंद्रीय शिक्षा मंत्री डॉ रमेश पोखरियाल निशंक का कहना है कि, “नई राष्ट्रीय शिक्षा नीति से हम आत्मनिर्भर भारत प्राप्त करेंगे। उन्होंने कहा कि नई शिक्षा नीति अनुसंधान और नवाचार को भी बढ़ावा देगी यह वैचारिक सोच पर आधारित है और इसमें भारतीय जीवन मूल्य भी समाहित है। उन्होंने कहा कि नई शिक्षा नीति लागू होने से भारत दुनिया में ज्ञान की एक महाशक्ति के रूप में उभरेगा शिक्षा के क्षेत्र में एक वैश्विक ब्रांड बनेगा।”^५

“शिक्षा मंत्री ने नई शिक्षा नीति पर राज्यपालों के सम्मेलन को संबोधित करते हुए यह बात कही, कि देश में पहली शिक्षा नीति 1968 में बनी थी। इसके बाद दूसरी शिक्षा नीति 1986 में आई थी और अब करीब 34 साल बाद नई शिक्षा नीति आई है। जिससे शिक्षा के क्षेत्र में बहुत परिवर्तन होगा और यह शिक्षा नीति भारत को ज्ञान की मां शक्ति बनाएगी तथा पूरी दुनिया में भारत शिक्षा के क्षेत्र में एक ब्रांड के रूप में उतरेगा उन्होंने कहा कि मैं इसे राष्ट्रीय शिक्षा नीति डिजिटल और दूरवर्ती होगी। हम उच्च शिक्षा में 50 फ्रीसदी दाखिले का लक्ष्य पार करेंगे और 3 पॉइंट 50 करोड़ छात्रों को उच्च शिक्षा का अवसर देंगे शिक्षा मंत्री निशंक ने कहा कि भारत के चुनिंदा विश्वविद्यालय और शिक्षण संस्थानों के बीच विदेशों में कैम्पस खुलेंगे और दुनिया के १०० चुने हुए शैक्षणिक संस्थानों को भी भारत में प्रवेश दिया जाएगा। उन्होंने कहा कि नई राष्ट्रीय शिक्षा नीति के जरिए भारत स्वच्छ भारत, मेकिंग इंडिया और डिजिटल इंडिया के लक्ष्य को भी हासिल करेंगा।”^६

शिक्षा मंत्री के वक्तव्य अनुसार नई राष्ट्रीय शिक्षा नीति में किसी भी प्रदेश पर कोई दहशत नहीं होगी बल्कि इसमें लचीलापन और स्थायित्व रहेगा। राष्ट्रीय शिक्षा नीति के तहत सभी चुनौतियों का समाधान करने के लिए एक बहुत ही व्यवस्थित और संगठित प्रयास किया गया है ताकि उच्च शिक्षा के क्षेत्र में समग्र पुनर्गठन को नए भारत की आवश्यकताओं के अनुरूप बनाया जा सके यह शिक्षा नीति

सभी चुनौतियों का समाधान करने के लिए एक बहुत ही व्यवस्थित और संगठित प्रयास है ताकि उच्च शिक्षा के क्षेत्र में समग्र पुनर्गठन को नए भारत की आवश्यकताओं के अनुरूप बनाया जा सके।

“राष्ट्रीय शिक्षा नीति ज्ञानार्जन के अवसरों के लिए उच्च शिक्षा में अंतर विषय अध्ययन और एकीकृत पाठ्यक्रम पर जोर देती है जिसका उद्देश्य मूल्य आधारित समग्र शिक्षा प्रदान करना वैज्ञानिक सभा का विकास करना और साथ ही भारत के युवाओं को कौशल प्रशिक्षण प्रदान करना है।”^७

हमारी राष्ट्रीय शिक्षा नीति 21वीं सदी की आवश्यकताओं को पूरा करने के लिए छात्रों को पूर्णतः सक्षम करेगी इसकी मदद से वह अपनी शिक्षा को अधिक अनुभवात्मक समग्र एकीकृत खोज उन्मुख चर्चा पर आधारित लचीला और सुखद बना सकेंगे पाठ्यक्रम में विज्ञान और गणित के अलावा बुनियादी कला, शिल्प और खेल, भाषा, साहित्य, संस्कृति और मूल्य शामिल होंगे। इसके अलावा नई शिक्षा नीति का विजन भारतीय विश्वविद्यालय आयोग के लिए नए आयाम स्थापित करना और उन्हें साकार करना होगा यह नीति नया भारत बनाने की दिशा में उच्च शिक्षण संस्थानों एवं विश्वविद्यालयों को उनकी भूमिका फिर से परिभाषित करने की स्वतंत्रता देगी। अर्थव्यवस्था सहित सभी क्षेत्रों में आत्मनिर्भरता का रास्ता शिक्षा और शिक्षा नीति से होकर ही गुजरता है और हमारी नई शिक्षा नीति इंडिया इंटरनेशनल, इंफैक्टुल, इंटरएक्टिव और इंकलूजिविटी के तत्व को एक साथ समाहित करती है।

नई राष्ट्रीय शिक्षा नीति शिक्षा के सभी क्षेत्रों में सुधारों को परिभाषित करती है। इस नीति के मुख्य उद्देश्य में से एक स्कूल शिक्षा से उच्च शिक्षा में तकनीकी शिक्षा को शामिल करना है। नई राष्ट्रीय शिक्षा नीति समग्र और बहु विषयक शिक्षा के साथ-साथ अतिरिक्त शैक्षणिक गतिविधियों जैसे कि खेलकूद और मानविकी विषयों पर पर्याप्त जोड़ देती है। यह नीति निश्चित रूप से राष्ट्र के मेक इन इंडिया, स्किल इंडिया, स्टार्टअप इंडिया और आत्मनिर्भर भारत के मिशन को सफल बनाने के लिए मानवीय मूल्यों के साथ ज्ञान विज्ञान अनुसंधान तकनीकी तथा नवाचार को समाहित करते हुए भारत के विश्व गुरु बनने के संकल्प में पथ प्रवर्तक साबित होगी।

श्री निशंक ने कहा कि “नई राष्ट्रीय शिक्षा नीति २०२० नए भारत के निर्माण में महत्वपूर्ण भूमिका अदा करेगी केंद्रीय मंत्री ने नई राष्ट्रीय शिक्षा नीति के लिए सभी छात्रों शिक्षकों अभिभावकों और सभी हित धारकों को बधाई दी और कहा कि यह देश के लिए ऐतिहासिक पल है उन्होंने आगे कहा कि नहीं राष्ट्रीय शिक्षा नीति २०२० से देश में स्कूल और उच्च शिक्षा प्रणाली में परिवर्तन कार्य सुधार आएगा उन्होंने कहा कि नई राष्ट्रीय शिक्षा नीति २०२० पूरे भारत में उच्च गुणवत्ता वाली बच्चों की प्रारंभिक देखभाल

और शिक्षा तक सार्वभौमिक पहुंच सुनिश्चित करेगी उन्होंने कहा कि हम सामाजिक क्षमता व संवेदनशीलता अच्छे व्यवहार नैतिकता टीमवर्क और बच्चों के बीच सहयोग पर ध्यान केंद्रित करेंगे।"८

"यह २१ वीं शताब्दी की पहली शिक्षा नीति है और यह शिक्षा २४ साल पुरानी राष्ट्रीय नीति १९८६ की जगह लेगी। निष्पक्षता, गुणवत्ता और जवाबदेही के मूलभूत आधारों पर निर्मित यह नीति विकास को लेकर एजेंडा सन २०३० से जुड़ी हुई है और इसका उद्देश्य स्कूल और कॉलेज शिक्षा दोनों को अधिक समग्र बनाकर भारत को एक जीवन पर ध्यान वाले समाज और विज्ञान महाशक्ति में बदलना है। साथ ही इसका मकसद २१वीं सदी की जरूरतों के अनुकूल लचीला बहू विषयक और प्रत्येक छात्र की अद्वितीय क्षमताओं को सामने लाना है।"९

निष्कर्ष-

लगभग 35 वर्षों बाद नई जीवनानुकूल शिक्षा प्रणाली आ रही है। नई शिक्षा नीति में ऐसे छात्रों का निर्माण होगा, जो भारत की जड़ों से जुड़े रहें और आधुनिकता के साथ भी कदम मिलाए। इसलिए इस नीति का स्वागत ही किया जाना चाहिए, क्योंकि यह आत्मनिर्भर भारत की दिशा में बड़ा एक और महत्वपूर्ण कदम है। नई शिक्षा नीति 2020 का स्वागत करना चाहिए। नई शिक्षा नीति निश्चित ही दूरगामी परिणाम का प्रारंभ है। परिवर्तन चाहे किसी भी क्षेत्र में हो, वह यदि सकारात्मक हो तो आनंद का विषय होता है। भारतीय शिक्षा प्रणाली में कोई 35 सालों बाद परिवर्तन आया है। इस घोषणा का स्वागत ही किया जाना चाहिए। यह अपने आप में एक महत्वपूर्ण कदम है। इसके साथ लक्ष्य भी जुड़ा है और लक्ष्य के पहुंचने के साधन भी जुड़े हैं। इस शिक्षा नीति में मानवीय मूल्यों से युक्त नागरिक बनाने की कोशिश महसूस होती है। इसमें ऐसा लचीलापन महसूस होता है जो वर्तमान शिक्षा की जड़ता को तोड़ सके। शिक्षार्थियों ने जो भी अपना समय शिक्षा के लिए दिया है उसका कोई ना कोई लाभ उसे मिल सकता है। इन बातों को सुनिश्चित करने का प्रयास इस नई शिक्षा नीति में किया गया है। जैसे एक विज्ञान का विद्यार्थी संगीत की पढ़ाई कर सकता है। विज्ञान और संगीत दोनों विषय उस विद्यार्थियों को रचनात्मक बना सकते हैं। संगीत से आत्मिक आनंद मिल सकता है और विज्ञान से व्यवसायिक लाभ भी हो सकता है।

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प्राचीन भारताची संस्कृती: स्वच्छता व आरोग्य

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प्रस्तावना :-

प्राचीन भारतीय संस्कृतीमध्ये वैयक्तिक व सार्वजनिक स्वच्छतेला अनन्यसाधारण महत्त्व दिले गेले होते. सदृढ व निरोगी समाज निर्माण करण्याच्या हेतूनेच प्राचीन धर्म ग्रंथातही स्वच्छता व आरोग्याच्या मूल्याला प्राथमिकता देण्यात आली होती. त्याला शास्त्रीय व व्यवहारिक आधार होता. प्राचीन धर्मग्रंथातील स्वच्छतेबाबतचे नियम हे व्यवहारिक बुद्धी आणि विशेषता महिलांची सोय या अधिष्ठानावर आधारलेले होते. प्राचीन धर्मग्रंथातील स्वच्छतेबाबतचे हे नियम जितके तत्कालीन सामाजिक परिस्थितीमध्ये आरोग्याच्या दृष्टीने उपयुक्त होते तितकेच आजही उपयुक्त आहेत. त्यामुळेच प्राचीन भारतातील स्वच्छतेच्या परंपरेचा आदर्श विचारात घेणे आजही आवश्यक झाले आहे.

भारतातील प्राचीन आणि मध्ययुगीन काळातील लोक मनशुद्धी, शरीरशुद्धी वापरावयाच्या वस्त्रांची स्वच्छता, धार्मिक विधी करण्याची ठिकाणाची स्वच्छता, जेवणाच्या पदार्थातील घटकांची स्वच्छता यांच्या शुद्धीला विशेष महत्त्व देत होते. त्याबाबत प्राचीन काळातील विविध धर्मग्रंथात मार्गदर्शन करण्यात आले आहे. मात्र त्या संदर्भातील बहुतांश भाग मानवी व्यवहारातून आज लुप्त झालेला आहे. प्राचीन काळातील ग्रह धर्मग्रंथांमध्ये केवळ उपासना करण्यासाठी पाळावयाचे नियम सांगितले नाहीत तर मानवी समुदायाच्या विकासाकरिता पाळावयाचे नियम ही सांगितले आहेत. समाजातील प्रत्येक व्यक्तीला चांगल्या स्वच्छतेच्या सवयी लागण्यासाठी तशा प्रकारचे लोकांना आरोग्य शिक्षण मिळणे ही तितकेच गरजेचे आहे. त्या दृष्टीने भारतातील प्राचीन काळातील पुढील संदर्भ विचारात घेणे आवश्यक ठरते.

भारतातील प्राचीन काळातील नगर राज्यांमध्ये वैयक्तिक व सार्वजनिक स्वच्छतेबाबत काळजी घेतली जात होती. नागरिकांच्या आरोग्याच्या दृष्टीने नगर राज्यातील प्रमुख मार्गावर मलमूत्राचे विसर्जन करणे गुन्हा समजला जात होता. कौटिल्याने ही नगर राज्यातील साफसफाईला प्राधान्यक्रम दिला होता. कौटिल्याचे असे मत होते की,

एखाद्या व्यक्तीने जर नगरातील राजमार्गावर घाण करण्याचा प्रयत्न केला तर त्याच्या उत्पन्नाचा आठवा भाग द्रव्य दंड रूपाने वसूल करण्यात यावा. त्या काळात रस्त्यावर किंवा रस्त्याजवळ मृत जनावरे किंवा माणसे टाकणाऱ्याला कठोर दंडाची शिक्षा दिली जात होती.

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मोहेंजोदडो आणि हडप्पा या दोन प्राचीन नगरा मधील संस्कृती आदर्शवत होती. इ.स. 1922 मध्ये पुराण वास्तूशास्त्रज्ञ श्री. राखालदास बॅनर्जी हे सिंधू नदीच्या परिसरात कुशनकालीन स्तूपांचा शोध घेत होते तेव्हा एक विटाचे बांधकाम त्यांच्या नजरेस पडले. त्यांनी तात्काळ सरकारची मदत मिळवून त्या ठिकाणी मोठ्या प्रमाणावर उत्खननाला प्रारंभ केला. त्यातूनच त्यांना भूमीत गाढलेले एक शहरच आले. ते शहर म्हणजेच मोहेंजोदडो होय. त्याच वेळी दयाराम सहानी यांच्या नेतृत्वाखाली हडप्पा या ठिकाणी सुद्धा उत्खननाचे काम मोठ्या प्रमाणावर हाती घेण्यात आली. त्याही ठिकाणी हडप्पा नावाचे शहर भूमीत गाढले गेलेले जसेच्या तसे सापडले. या दोन्ही ठिकाणी केलेल्या उत्खननातून सिंधू नदीच्या खोऱ्यात अस्तित्वात असलेल्या एका प्राचीन संस्कृतीच्या नव्याने अविष्कार

झाला. येथील संस्कृतीचा काळ हा ख्रिस्त पूर्व 2800 ते 2500 असावा मात्र याबाबत इतिहासकारात एक मत आढळून येत नाही.

मोहेंजोदडो आणि हडप्पा या नगरातील अंतर चार किमी आहे. दोन्ही नगरांच्या रचनेमध्ये मोठ्या प्रमाणात साम्य आहे. त्यामध्ये कोट आणि नागरी वस्ती असे या अवशेषांचे आपणास दोन भाग करता येतील. कोटाच्या भागात शहराच्या संरक्षणासाठी महत्वाच्या ठिकाणी भाजलेल्या पक्क्या विटांचे बुरुज बांधलेले होते तर कोटाच्या आत नागरी वस्ती होती. या नागरी वस्तीची रचना योजनाबद्ध अशी करण्यात आली होती. या नागरी वस्तीतील घरांमध्ये कमीत कमी खोल्या, एक स्वयंपाक गृह व स्नानगृह दिसून आले. या दोन्ही नगरा मधील आरोग्य व्यवस्था उत्कृष्ट होती. तेथील सांडपाण्याची व्यवस्था शास्त्रशुद्ध होती. तेथील गटारांचे बांधकाम अतिशय दर्जेदार केलेले असून ती नगराची मुख्य बंदिस्त गटारीला जोडलेली होती. यावरून तत्कालीन संस्कृतीमध्ये सार्वजनिक स्वच्छता व आरोग्याला विशेष महत्त्व दिल्याचे अधोरेखित होते. या संस्कृतीतील आणखी एक विशेष बाब म्हणजे येथील मोठ्या घरांमध्ये असलेल्या स्नानगृहाची उत्तर दक्षिण लांबी 12 मिटर, रुंदी सात आणि खोली 2.4 मिटर एवढी असून त्या ठिकाणी कुंडात पाणी भरण्याची व काढण्याची व्यवस्था करण्यात आली होती. या स्नानगृहातील सांडपाणी नगराच्या मुख्य गटारीला जोडले जात असे. त्या काळात स्वच्छता आणि आरोग्य रक्षणाच्या दृष्टीने अत्यंत चांगल्या शास्त्रशुद्ध पद्धतीच्या स्वच्छता सुविधा उपलब्ध होत्या हे यावरून स्पष्ट होते. एक आदर्श नमुना म्हणून या मोहीम जवळ आणि हडप्पा या दोन्ही प्राचीन संस्कृतीकडे आपणास पाहता येईल. मात्र हा आपल्या पूर्वजांचा संस्कृती वारसा आजच्या पिढीसमोरून लोप पावत चालला आहे. म्हणूनच भारतीय समाजाने आज आधुनिक युगामध्ये जीवन जगत असताना प्राचीन संस्कृतीचा हा वारसा जतन केला पाहिजे. किंबहुना तो जतन करण्याची भारतीय समाजाला गरज असल्याचे अधोरेखित होते. ³

2) प्राचीन नगर राज्यातील स्वच्छता सुविधांची उपलब्धता:-

पुरातत्त्व खात्याकडून करण्यात आलेल्या उत्खननाच्या आधारे प्राचीन इतिहासाचे अभ्यासक डॉक्टर सईफ उल्लाह खान यांनी प्राचीन नगर राज्यातील स्वच्छता प्रा. आर. के. सुर्यवंशी

सुविधांची उपलब्धता आणि सार्वजनिक आरोग्य बाबत काही निष्कर्ष नोंदविले आहेत. त्यांच्या मते मोहेंजोदडो येथे सांडपाण्यासाठी विटांची बांधलेली बंदिस्त व उघडी गटारे आणि सार्वजनिक संडास सापडले आहेत. या प्राचीन नगर राज्यात सांडपाण्याची योग्य विल्हेवाट लावण्यासाठी बंदोबस्त व उघडी गटात व्यवस्था केलेली दिसते. याशिवाय नगर राज्यातील सर्व गटारे मुख्य गटाराला जोडून एकत्रित करून नगराबाहेर एका विशिष्ट शोषखड्यात सोडण्याची व्यवस्था करण्यात आली होती हे दिसून येते. नगरातील सांडपाण्याचे योग्य व्यवस्थापन करून तेथे नागरिकांच्या आरोग्याचे रक्षण करण्याचा त्यामागे हेतू असावा. तसेच प्राचीन नगर राज्यांमध्ये सांडपाण्याबरोबरच मलनिःसारणासाठी विशेष उपाययोजना केल्या होत्या. या नगरात अत्याधुनिक प्रकारच्या बांधकाम केलेल्या शौचालयाची सोय घरांच्या बाहेर असे. त्याची रचना पाश्चात्य पद्धतीच्या स्वच्छता गृहप्रमाणे असून विटा व घडी व दगडांचे बांधकाम व वरचा भाग लाकडी पद्धतीचा असे. यावरून प्राचीन भारतीय नगर राज्यांमध्ये सार्वजनिक स्वच्छता व आरोग्याकडे विशेष लक्ष दिल्याचे अधोरेखित होते. म्हणूनच प्राचीन समाजातील जीवनमान उंचावलेले होते हे यावरून स्पष्ट होते.

प्राचीन भारतातील स्वच्छता सवयी आणि सार्वजनिक स्वच्छता व आरोग्य बाबत महत्वाचे असे संदर्भ दिलेले आहेत. प्राचीन काळात उघड्यावर मलमूत्र विसर्जनाचे (शौचविधी) प्रमाण फारच मोठे होते. त्या काळापासून ग्रामीण समुदायात राहणाऱ्या लोकांना उघड्यावर शौचविधी करण्याची सवय जडली आहे. मात्र त्याकाळात महिला झाडांच्या किंवा इतर आडोशाच्या ठिकाणी उघड्यावर शौच विधी करताना दिसतात. त्या पाठीमागे त्यांचा लज्जा रक्षण करणे हा हेतू दिसतो. प्राचीन काळात शहरी क्षेत्रामध्ये मात्र लोकांना मलमूत्र विसर्जनाची सोय करण्यात आली होती. त्यामुळे शहरी भागातील महिलांची योग्य विल्हेवाट (व्यवस्थापन) लावण्याची आवश्यकता निर्माण झाली होती. या गरजेतूनच डोक्यावर मैला घेऊन जाणाऱ्या 'भंगी' किंवा 'मेहतर' या कनिष्ठ जाती अस्तित्वात आल्या. याशिवाय बौद्ध काळात डोक्यावर मैला वाहून नेण्याचा उल्लेख 'चांडाळ' असा केला जात असे. यावरून तत्कालीन सामाजिक विषमतेचे दर्शन घडते. तसेच मौर्य काळात भंगी व सफाई काम करणाऱ्या कर्मचाऱ्यांकडून

पाटलीपुत्र शहरातील मैला वाहून नेण्याचे काम केले जात असे. त्यामुळे त्या काळात साफसफाईची स्थिती सुधारित (चांगले) स्वरूपाची होती त्या काळातील राज्याच्या प्रमुख सल्लागार (मंत्री) आर्य चाणक्य (कौटिल्य) याने तर प्रत्येक घरात स्वयंपाक घर आणि स्नानगृह असावे असा आदेश दिला होता. चाणक्याने उघड्यावर शौचविधी करणाऱ्या लोकांना द्रव्य दंडाची शिक्षा केली जाईल असा आदेश वजा सूचना दिल्या होत्या.

सारांश :-

आज ही भारत हा खेड्यांचा देश आहे कारण 2011 च्या जनगणनेनुसार आजही भारतातील सुमारे 68.84% लोक ग्रामीण भागात राहत आहे. या ग्रामीण समुदायात राहत असलेल्या लोकांना प्राचीन काळापासून उघड्यावर शौचविधी करण्याची सवय लागली आहे. ही उघड्यावर शौचविधी करण्याच्या सवयी आजही मोठ्या प्रमाणावर चालू आहे. मानवी संस्कृतीच्या उद्याच्या सुरुवातीस मानवी विष्टेच्या उल्लेवाट लावण्याची समस्या निर्माण झाली नव्हती कारण त्याकाळी लोकांना खुल्या जागेवर आणि नद्यांच्या काठी मलमूत्र विसर्जन करण्याची सवय त्यामुळे ही उघड्यावरील घाण उचलण्यासाठी त्याकाळी एका विशिष्ट यंत्रणेची गरज त्यांना वाटत नव्हती मात्र मध्ययुगीन काळात समाजातील उच्चभू लोकांकडून शौचालयाचा वापर सुरु झाला त्यामुळे तेथील मैल्याची विल्हेवाट लावण्याचा प्रश्न निर्माण झाला. त्या कामासाठी भंग्यांचा वापर केला जाऊ लागला. त्यांच्याकडून ही अप्रतिष्ठाची कामे करून घेतली जाऊ लागली. परिणामी तो वर्ग शोषण व अन्यायाला बळी पडला.

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प्राचीन भारतीय शिक्षण प्रणालीचा ऐतिहासिक संदर्भ

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प्रस्तावना -

भारतात पूर्वी शिक्षण केवळ राजेरजवाडे पुरतेच मर्यादित होते. राजपूत्र राजदरबारातील लोक शिक्षण घेत असत. हिंदू संस्कृतीत मानवी भारत देशही तितकाचा महत्त्वाचा आहे असे दिसून आले. भारतीय संस्कृतीची प्राचीनता ही अभ्यासकांच्या कल्पनेपेक्षाही अधिक असल्याने दिसून आले. उत्तर वैदिक काळात आश्रम व्यवस्था उदयास आली. प्रत्येक मनुष्याला पुढील जीवनात यशस्वी होण्यासाठी आवश्यक ते शिक्षण घेता यावे व समाजाच्या गरजा पूर्ण व्हाव्या हा प्राचीन भारतातील शिक्षणाचा हेतू होता. मानवी जीवनात पुरुषार्थ साधण्यासाठी संपूर्ण जीवनाला चार आश्रमात विभाजित केला गेले होते. ब्रह्मचर्याश्रम हा पहिला आश्रम असून त्यापासून मानवी जीवनाला व शिक्षणाला सुरुवात होते. ब्रह्मचर्याश्रमाला व्यक्तीच्या भावी काळातील जीवनाचा पाया मानले गेले आहे. मुलाच्या उपनयन संक्रमणापासून या आश्रमाची सुरुवात होते. विद्यार्थ्यांच्या निष्कलंक चारित्र्यावर येथे भर दिला जातो. ज्ञान प्राप्ती करणे, सामाजिक सेवा म्हणून शिक्षण घेणे तसेच धार्मिक ज्ञानप्राप्तीसाठी शिक्षण घेणे हा मुख्य उद्देश प्राचीन काळातील शिक्षणाचा होता.

शिक्षणाची उद्दिष्टे -

चारित्र्य निर्मिती करणे विद्यार्थ्यांचा बौद्धिक विकास करणे हे मुख्य उद्दिष्टे असून व्यक्तिमत्व विकासावर भर दिला जात असे. या विद्यार्थ्यांचे शरीर, मन व बुद्धी यांचा विकास होत असे. ज्ञान संवर्धन व संरक्षण करणे हे शिक्षणाचे प्रमुख ध्येय आहे. विशाल वैदिक साहित्य मौखिक परंपरेने सुरक्षित राहिले हा मोठा चमत्कारच आहे. कर्तव्याची भावना जागृत करणे, दुसऱ्याच्या जनसंपत्तीची अपेक्षा न करणे आणि गरज असणाऱ्यांना सर्वस्व दान करणे हे शिकविण्यासाठी शिक्षण आवश्यक होते.

प्राचीन भारतीय शिक्षणाची वैशिष्ट्ये -

विद्यार्थी शिक्षण पूर्ण होईपर्यंत गुरुकुलात (तपोवन) राहत असे. कालांतराने श्रीमंत लोक आपल्या मुलांना गुरुकुलात पाठविण्याऐवजी त्यांना शिक्षण देण्यासाठी गुरूलाच आपल्या घरी बोलावत असत. सामान्य लोकांच्या मुलांना मात्र गुरुकुलाच शिक्षण घेण्यास जावे लागत असे. विद्यार्थ्याला गुरूच्या अग्नीचे पालन करणे आवश्यक होते. तसेच विद्यार्थ्यांच्या प्रत्येक क्षमतेचे निरसन करणे हे गुरु के कर्तव्य होते. शिक्षणासाठी कसलीही फी नव्हती गुरुकुलाच्या सर्व खर्च समाज व राजे करीत असत. शिक्षण संपल्यावर शिष्य आपल्या इच्छेप्रमाणे गुरुदक्षिणा देत असे. गुरूंना सर्व विद्यार्थी सारखे असत. मग तो एखाद्या राजाचा पुत्र असो की गरीब ब्राह्मणाचा पुत्र, गुरु सर्वांकडे समान दृष्टीने पाहत असे. साधे जीवन व उच्च विचार हे प्राचीन भारतीय शिक्षणाचे महत्त्वाचे वैशिष्ट्य होते.

शिक्षणाचा प्रारंभ-

मानवाचे सरासरी 100 वर्षांच्या आयुष्यात मानवाला काही कर्तव्य पार पाडावयाची असतात. त्यासाठी जीवनाचे नियोजन चार भागात विभागले गेले. मानवी जीवनाचे चार टप्पे कल्पून आर्यांनी आदर्श जीवन निर्माण करण्यासाठी आश्रम पद्धतीचा स्वीकार केला. आश्रम व्यवस्थेतील प्रत्येक आश्रमाचा काळ 25 वर्षांचा होता. वयाच्या आठ ते बाराव्या वर्षी मुलाचा उपनयन संस्कार केला जात असे.³ उपनयनाचा अर्थ जवळ नेणे असा होतो. शिक्षण प्राप्तीसाठी बालकास गुरूच्या जवळ घेऊन जाण्यामुळेच या संस्काराचे नाव उपनयन संस्कार असे पडले. प्रथम या संस्काराचे स्वरूप साधे व सरळ होते. विद्यार्थी गुरु जवळ जाऊन शिक्षण घेण्याची इच्छा प्रकट करीत असे. तसेच गुरु सोबत राहण्याची प्रार्थना करीत असे. साधारण वयाच्या आठव्या वर्षी उपनयन संस्कार झाल्यानंतर बालकास शिक्षणासाठी गुरुगृही जावे लागत असे. निरनिराळ्या विद्या व शास्त्रीय अध्ययनाचा कालखंड 12 वर्षांचा असे. अध्ययन पूर्ण झाल्यावर त्यास पितृगृही पाठविले जाई. उपनयन संस्कारानंतर आई-वडिलांच्या आज्ञा व आशीर्वादाने गुरु त्यास धम्मचर्याची दीक्षा व शपथ देत असे. गुरुगृही कडक शिक्षा व नियम पाळले जात असत. शुद्ध आचरण व आज्ञा पालन करणे, स्नान करणे वेद मंत्र पठण करणे, त्यानंतर समिधा (इंधन) आणणे, पाणी भरणे, झाड तोड करणे, भिक्षा मागून आणणे असा दिवसभर त्यांच्या कार्यक्रम ठरलेला असे. शिक्षण घेत असताना शिष्याला गुरूचा व गुरु पत्नीचा आदर करावा लागत

असतो. त्यांची सेवा करणे शिष्याची कर्तव्यच होते. विद्यार्थ्यांचे खेळणे राहणे इत्यादी सोय गुरुकुलात मोफत केली जात असे.

शिक्षणाच्या कालावधी -

प्राचीन काळात शिक्षण क्षेत्राची सुरुवात श्रावण महिन्यात होत असून (ऑगस्ट ते फेब्रुवारी) पौष महिन्यात समाप्त होत असे. मुलावर उपनयन संस्कार केल्यानंतर त्यास ब्रह्मचर्याची दीक्षा देऊन विद्या अभ्यासासाठी पाठविले जाई. साधारणतः मुलगा 25 वर्षांचा होईपर्यंत त्याला संस्कारक्षम व इतर उपयुक्त अशी कर्तव्य पार पाडण्यासाठी त्याला शिक्षण दिले जात होते. शिक्षण क्षेत्राच्या प्रारंभी एक समारंभ केला जात असे. देवांना प्रसन्न करण्यासाठी अग्नीत आहुती (समिधा) दिली जात असे. तसेच शिक्षण क्षेत्राच्या समाप्तीच्या दिवशी ही उत्सर्जन समारंभ केला जात असे. यानंतर विद्यार्थी आपल्या घरी जात असे. परंतु कालांतराने जसजसे पाठ्यक्रमाच्या विषयात वाढ झाली तसे अर्तावृष्टी, थंडी, जवळचे नातेवाईक, अतिथींचे आगमन, माता-पिता, गुरु वगैरेंचे निधन इत्यादी कारणांमुळे समाप्तीनंतर शिष्य गुरुदक्षिणा देत असे शिक्षण समाप्तीनंतर समावर्तन संस्कार होत असे. या संस्कारानंतर विद्यार्थी विद्वान मंडळीत हजर राहून त्यांच्या प्रश्नांची उत्तरे देत असे.

शिक्षण पद्धती -

भारतातील शिक्षण मौखिक पद्धतीचे होते. सर्वप्रथम ओंकार व गायत्री शिकवले जात होते. त्यानंतर वेदांचे इतर भाग शिकवले जात असतात. शिक्षण केवळ मौखिक पद्धतीने शिकवले व शिकवले जात होते. विद्यार्थी आपल्या शंका समाधानासाठी गुरूला प्रश्न विचारून शंका निरसन करून घेत असे. प्राचीन काळात वेद लिपीबद्ध नव्हते. वेद अध्ययनाचे तात्पर्य केवळ मंत्र पाठ करणे एवढेच नव्हते तर त्याचा अर्थ समजून घेणे ही महत्त्वाचे होते. तिला पुस्तकाच्या मदतीने ज्ञान प्राप्ती होणे हे प्राचीन शिक्षण पद्धतीचे महत्त्वाचे लक्षण होते.

शिक्षण शुल्क -

प्राचीन भारतात वेदांचा अभ्यास करण्यासाठी पूर्व निर्धारित शुल्क नव्हते. गुरुदक्षिणा आवश्यक होती. गुरुने शिष्याला संपूर्ण शिक्षण दिल्याशिवाय शिष्याकडून कोणताही पुरस्कार व शुल्क घेणे अनुचित मानले जात होते. शिक्षण संपल्यानंतर विद्यार्थ्यांनी आपल्या इच्छेनुसार व सामर्थ्यानुसार अवलंबून होते. काही गुरुदक्षिणेचा स्वीकार करणे, न करणे हे गुरुवर अवलंबून होते. काही गुरु धन प्राप्तीसाठी शिक्षण कार्य करीत असत. तर केवळ उपजीविकेसाठी शिक्षण कार्य करणाऱ्या गुरूला उपाध्याय असे म्हटले जात असे.

अभ्यासक्रमाचे विषय -

प्राचीन भारतातील शिक्षण पद्धतीत अनेक पाठ्यक्रमांचा समावेश होता. वेदांचा अभ्यास करणे हे शिक्षणाचे प्रथम क्षेत्र होते. प्रथम पाठ्यक्रम संख्या कमी असली तरी नंतर ते वाढत गेली. वैदिक काळात इतिहास, वेद, गाथा हे प्रमुख विषय होते. उत्तर वैदिक काळात

प्रा. सूर्यवंशी रामदास काळू

ब्राह्मण ग्रंथांचा अभ्यासक्रमात समावेश झाला. उपनिषदांच्या काळात अभ्यासक्रमाच्या विषयात प्रचंड वाढ झाली. चार वेद, सहा वेदांशे, पुराण, न्याय, धर्मशास्त्र या १४ विद्या याज्ञवल्क्याच्या काळात प्रसिद्ध होत्या. अंकगणित, भूकंप, वायुकोष, सर्पविद्या, जादू, कृषी, पशुपालन, व्यापार, शिल्पकला, ज्योतिष, औषधशास्त्र, तर्कशास्त्र, धनुर्वेद, गांधर्ववेद, तत्वज्ञान, युद्धशास्त्र, खगोलशास्त्र, वैद्यकशास्त्र, भूगर्भशास्त्र, काव्य इत्यादी विषय या काळात शिकवले जाऊ लागले होते.

शिक्षण संस्था -

गुरुकुल ही सर्वाधिक प्राचीन शिक्षण संस्था होती. गुरुकुल शहराच्या बाहेर जंगलात असे. प्रत्येक व्यक्तीस शिक्षणासाठी गुरुकुलात जावे लागे. गुरुकुल हेच सर्वप्रथम केंद्र होते. वेद, पुराणे, रामायण, महाभारत व संस्कृत साहित्यात गुरुकुल पद्धतीने उल्लेख आढळतात. गुरुकुलाशिवाय राजधानी, तीर्थस्थळे, बौद्धविहार, अग्रहार, ग्राम ही सुद्धा शिक्षणाची केंद्र होती. राजे स्वतः विद्वान होते. त्यामुळे त्यांनी अनेक विद्वानांना आश्रय दिला होता. राजधानीतील राजसभेत अनेक विद्वान होते. या विद्वानांकडे अनेक विद्यार्थी शिक्षणासाठी येत असत. उज्जयीनी, मिथिला, तक्षशिला, पाटलीपुत्र, वासिम, बदामी, कल्याणी, कंधार वेरूळ, कनोज, मगध ही प्राचीन काळातील शिक्षणाची केंद्रे होती बौद्ध विहार व मठ देखील शिक्षणाची केंद्रे होते. या विभिन्न केंद्र शिवाय अनेक विद्यापीठे देखील शिक्षणाची केंद्रे होती. तक्षशिला, वाराणसी, काशी, नालंदा, अजिंठा व विक्रमशीला हे विद्यापीठे प्राचीन काळात जगात प्रसिद्ध होती.

सारांश -

19 व्या शतकात शिक्षणाचा प्रसार करण्यासाठी अनेक समाज सुधारक पुढे सरसावले. महात्मा ज्योतिबा फुले यांनी सावित्रीबाई फुले यांच्या माध्यमातून सर्वसामान्य जनतेच्या सुलीसाठी शिक्षणाची सुविधा निर्माण केली. विसाव्या शतकात भारतात सगळ्यांसाठी शिक्षणाची सुविधा निर्माण करण्यात आली. विसाव्या शतकाच्या उत्तरार्धात पारंपारिक शिक्षणाबरोबर व्यवसायिक शिक्षण देण्याची प्रक्रिया सुरू झाली.

आजच्या शिक्षण पद्धतीने ज्ञान-विज्ञानाच्या क्षेत्रात प्रगती केलेली आहे. भारतात आज आधुनिक इमारती व शिक्षणाची केंद्रे आहेत. प्राचीन भारतात गुरु विषयी आदर विद्यार्थी व समाजात होता. आज तो आदर राहिलेला नाही. चारित्र्य निर्माण करणे, संस्कृतीचे संरक्षण करणे, कर्तव्याची भावना जागृत करणे, ही प्राचीन भारतीय शिक्षणाची उद्दिष्टे आजच्या शिक्षणात राहिलेली नाही असे म्हणावे लागते.

असे असले तरीसुद्धा सध्या भारतात व्यावसायिक, तांत्रिक, वैद्यकीय शिक्षणाची सुविधा व संशोधनाचे कार्य सुरू आहे.

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नवीन राष्ट्रीय शैक्षणिक धोरण आणि भारतीय ज्ञानपरंपरेत मराठी भाषेचे स्थान

डॉ. मीनाक्षी पुंडलिक पाटील

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प्रस्तावना-

नवीन राष्ट्रीय शैक्षणिक धोरणात भारतीय ज्ञान प्रणालीचा त्यातील संस्कृती परंपरांचा फार मोठा वाटा आहे. आणि त्याचा समावेश नवीन राष्ट्रीय शैक्षणिक धोरणात त्यानुसार बनणाऱ्या अभ्यासक्रमात होणे अत्यंत गरजेचे आहे किंबहुना निकडीचे आहे. भारतीय ज्ञान परंपरा ही शिक्षण प्रणाली कायमच महत्वाची भूमिका बजावत आली आहे. नवीन संशोधन भारतीय ज्ञान प्रणाली वापरल्यास प्राचीन भारतीय वारसा जपण्यास मदत होईल. नव्या शैक्षणिक धोरणात अनेक भाषांतील अभिजात साहित्याचा देखील समावेश होईल तसेच तो मराठी भाषेचा देखील होईलच ते होणे गरजेचे आहे कारण वैदिक काळातील मराठी भाषा, व्याकरण, भाषाशास्त्र, भाषा विज्ञान आणि त्यानंतरचे अभिजात मराठी साहित्य हे दुर्लक्षित करून चालणार नाही. पूर्वपार चालत आलेले मराठी भाषेचे ज्ञान समाविष्ट होईलच मात्र त्यासोबतच आजच्या विज्ञान युगात समाज माध्यमांच्या जगात मराठी भाषेचे माहिती तंत्रज्ञानात फार मोठे स्थान आहे हे नाकारून चालणार नाही.

जागतिकीकरण, भारतीय ज्ञानपरंपरा आणि मराठी भाषा-

जागतिकीकरण हा साम्राज्यशाहीच्या विकास कामातील एक समकालीन टप्पा आहे. जागतिकीकरणाची प्रक्रिया संपूर्ण जगभर पसरलेल्या आर्थिक व सांस्कृतिक सत्तांनी लोकांचे व्यक्तिगत जीवन व स्थानिक समूह प्रभावित करत असते अशी व्याख्या बेल ऍश क्राफ्ट यांनी केली आहे. या व्याख्येत जगातील सत्ता गटांचे वर्गीकरण करताना आर्थिक निकषा इतकाच सांस्कृतिक निकष ही संकल्पना लक्षात घेता भाषा, संस्कृती साहित्य हे अपरिहार्यपणे त्यात येतातच. ढोबळमानाने विचार केल्यास जागतिकीकरणाची प्रक्रिया भांडवलशाहीच्या उदयापासून सुरू झाली.. आंतरराष्ट्रीय हा शब्दच आठव्या शतकात निर्माण झाला. जागतिकीकरणाची प्रक्रिया ही 1980 नंतर

सुरू झाली. विशेषता १९७० मधील भांडवलशाहीतील अरिष्टांमुळे जागतिकीकरणाची गरज निर्माण झाली. त्याचा परिणाम म्हणून भांडवली शोषण सुरू झाले. भांडवली शोषण विरोधात कामगार, शेतकरी, स्त्री, पुरुष, विद्यार्थी, बुद्धीजीवी तरुण विचार प्रवण होऊ शकतात मात्र ते भांडवलदार वर्गाने उभारलेल्या सांस्कृतिक उद्योगात गुरफडतात त्यातूनच सांस्कृतिक कला वस्तूंची सेवांची निर्मिती प्रयोजन प्रदर्शन आणि वितरण करणाऱ्या संघटनांचा समावेश होतो.

थोडक्यात टीव्ही चॅनेल, व्हिडिओ, सिनेमा, वृत्तपत्र इत्यादींचा समावेश होतो एकूणच या सर्व बाबींचा परिणाम भाषा व साहित्य यावर होतो. इतर क्षेत्रांच्या तुलनेत भाषा हे जागतिकीकरणाच्या संदर्भात दुर्लक्षित राहिलेले क्षेत्र असले तरी जागतिक पातळीवर भाषांवर दूरगामी व भया व परिणाम

झालेले आहेत. डेव्हिड क्रिस्टल यांनी जगातील 3000 ते 10 हजार भाषा असल्याचा अंदाज व्यक्त केला आहे. भाषा हे केवळ दळणवळणाचे साधन नसते तर ती विचार प्रणालीची वाहक असते भारतात संस्कृत ही भाषा एका विशिष्ट वर्गाची वाहक होती. समाजातील वरचा वर्ग हा सतत सत्ताधार्यांची भाषा शिकून सत्तेचा भाग बनण्याचा प्रयत्न करीत असतो. मध्ययुगीन भारतात ब्राह्मणांनी पर्शियन ही सत्ताधार्यांची भाषा मोठ्या प्रमाणावर आत्मसात केली होती नंतर त्यांनी इंग्रजीवरही प्रभुत्व मिळवले. या सर्व बाबी लक्षात घेता आपल्या ही गोष्ट लक्षात येते की भाषा ही कोणत्याही ज्ञान संरचनेत, परंपरेत अत्यंत महत्त्वाची अविभाज्य अशी गोष्ट आहे. डेव्हिड क्रिस्टल यांच्या मतानुसार सध्या जगात अस्तित्वात असलेल्या अंदाजे सहा हजार भाषांपैकी तीन हजार भाषा या शतकाच्या अखेरपर्यंत संपलेल्या असतील. भाषेच्या मृत्यूचा वेग सध्या दर दोन आठवड्याला एक भाषा असा आहे. सध्या जगात केवळ 300 पेक्षा कमी भाषिक असलेल्या 500 भाषा आहेत.

पंधराशे भाषांमध्ये केवळ हजार भाषिक आहेत व तीन हजार भाषा अशा आहेत की ज्यांना प्रत्येकी फक्त दहा हजार भाषिक उरलेले आहेत. या मतानुसार संपूर्ण जग हे भाषिक संहाराच्या खाईत लोटले जात आहे. अखिल मानवाने अतिशय कष्टाने विकसित केलेली भाषिक संपत्ती तिच्यातील संस्कृतीसह साम्राज्यवाद नष्ट करीत आहे. ज्या भाषेतील 30 पेक्षा भिन्न भाषेत लोकशिक्षण घेतात ती भाषा मृत्युपंथला लागलेली असते असा एक निकष आहे. आणि म्हणूनच नवीन राष्ट्रीय शैक्षणिक धोरणात जागतिक स्तरावरील भाषांचा समावेश करणं गरजेचं तर आहेच आहे मात्र भारतीय भाषांचा देखील त्यातील पुरातन ज्ञानाचा अनेक संशोधनांचा समावेश हा या शैक्षणिक धोरणात झालाच पाहिजे .

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खरंतर साहित्य आणि जागतिकीकरण या दोन परस्पर विरोधी गोष्टी आहेत. अगदी अलीकडेच वसाहतवाद सुरू झाल्यावर साहित्याला आंतरराष्ट्रीय दर्जा मिळवण्याचे प्रयत्न हेतूपूर्वक सुरू झाले.. पूर्वी पंचतंत्र, रामायण, महाभारत हे महाकाव्य निर्मिती स्थळाच्या बाहेर देशोदेशी पसरले. मौखिक साहित्य तर संस्कृतीच्या जन्मापासून अत्यंत देशी राहिलेले आहे. सुमेरियन काळातल्या लिखित पुराव्यांपासून वसाहत काळापर्यंत म्हणजे अठराव्या शतकापर्यंत साहित्य हे जागतिक तत्त्वावर कुठेही वापरले जात नव्हत. वसाहतवादी युरोपी लोकांनी विशेषता इंग्रजी साम्राज्यवाद्यांनी अशी चाल सुरू केली की अमुक शेक्सपियर आमचा असल्यामुळे तो आंतरराष्ट्रीय महत्त्वाचा आहे मग ह्या जगात जॉन मिल्टनचाही नंबर लागला. मिल्टन फक्त इंग्लंडमध्येच मोठा असेल पण तो महाकवी त्याने म्हणे महाकाव्य लिहिलं. हे पॅराडाईज लास्ट महाकाव्य म्हणजे आपल्या एकनाथांच्या भावार्थ रामायणाच्या पलीकडे फार मोठे नाही. आपण होऊन वाचक एन्जॉय करतील असं हे मौलिक ओरिजनल महाकाव्य नाही हे खुद्द इंग्लंडमधल्या सॅम्युअल जोन्स या मोठ्या समीक्षकांना म्हटलं होतं परंतु हे असं महाकाव्य केवळ इंग्रजी असल्याने आपल्यावर असं अनेक अभ्यासकांचे मत आहे.

शिवाय ते इंग्रजी म्हणून जगप्रसिद्ध असतंच हेही मूल्य लाभलं गेलं आणि मग महाभारताच्या आपल्या या देशात इंग्रजीच्या वर्गातून इंग्रजीचे प्राध्यापक ह्याच विषयावर एपिक म्हणजे काय चर्चा करत असत. साहित्याचा संस्कार आंतरिक स्वरूपाचा असतो. तो संस्कार मानवी मनाला आतूनच वळण लावू शकतो इतका तो सूक्ष्म आणि सखोल तसेच मनाच्या जाणीवनेनिवेच्या पातळ्यांवरही होणारा असतो. मनाच्या उपायांना न मानणारा आधुनिक मानव साहित्य आस्वादाने

निश्चितपणे आतून संस्कृत होऊ शकतो भूतकाळाच्या प्रचंड ऐतिहासिक ओझांनी आणि आधुनिक समाजाच्या असंख्य प्रश्नांनी, समस्यांनी आधुनिक सामान्य माणूस आतून चिन्ह झाला आहे त्याच्या मनाला अनेक तडे गेले आहेत. त्याचे हे मन साधण्याचे कार्य आत्मिक शक्ती द्वारे दुसरे कोणी करू शकेल असे वाटत नाही. आत्मिक मूल्यांची शिकवण देणारी समाजातील व्यवस्था आज कालबाह्य ठरल्याने साहित्य शिवाय दुसरे कोणते अन्य माध्यम आधुनिक मानवावर आत्मिकतेचे अंतरिक संस्कार करू शकेल असे दिसत नाही त्यासाठी प्राचीन ऋषींनी मध्ययुगीन संतांनी आणि आधुनिक महान लेखकांनी चोखाळलेले मार्ग आणि दिलेली शिकवण आधुनिक साहित्यिकांनी आत्मसात करण्याची गरज आहे.

माहिती तंत्रज्ञानात मराठी भाषेचे स्थान-

भाषेच्या अस्तित्वाचा प्रश्न जेव्हा निर्माण होतो तेव्हा मराठी भाषेबद्दल नेहमी नकारात्मक अशी चर्चा आजूबाजूला घडताना दिसते. वर्तमानपत्रांना एक गहन प्रश्न पडतो की मराठीचा काय होणार. आणि नेहमीप्रमाणे सगळे आरोपी येऊन थांबतात ते तरुण पिढीवर. आजची तरुण पिढी शुद्ध मराठी बोलत नाही त्यांच्या मराठी बोलण्यात मराठी पेक्षा इंग्रजीत जास्त असतं. आजची पिढी नेमकी कोणत्या भाषेत बोलते हे कळत नाही. सारस अर्धवट आहे मराठी हिंदी आणि इंग्रजी अशा तिन्ही भाषांमधून आजची पिढी बोलत असते याचा अर्थ पुढची पिढी कदाचित मराठीतून बोलणारच नाही असा अंदाज व्यक्त केला जातो आणि मग भाषा जिवंत राहील कशी असा आरोप सतत होताना दिसतो. असे असले तरी हे चित्र सत्य आहे असे नाही. सत्य मात्र वेगळेच आहे

मराठी भाषिक समाज महाराष्ट्रातील व वृहत् महाराष्ट्रातील मराठी भाषिकांचा मिळून

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एकत्रितपणे ओळखला जातो. प्रत्येक भाषेचे म्हणून एक भाषिक भांडार असते.. समाजातील व्यावसायिकांनी या भाषिक भांडारात महत्वपूर्ण भर घातलेली असते. सर्वसामान्य स्वरूपाच्या दैनंदिन व्यवहारात या भाषिक भांडाराचा उपयोग सामाजिक संकेत सरनेनुसार होत असतो परंतु त्या त्या व्यवसायाच्या लघुक्षेत्रात व्यवसाय विशिष्ट बोलीचा प्रयोग होत असतो. उदाहरणार्थ विणकारांचा भाषा व्यवहार, हात मार्गावर काम करणाऱ्या मजुरांना रीडाचा धागा संपला की नवी रे भरून येईपर्यंत काम नसते या दहा-पंधरा दिवसांच्या काळात ओढवलेल्या बेकारीचा उल्लेख ते तार तुटली असा करतात याचा अर्थ व्यवसायानुसार जीवनमानाची बोली ठरलेली आहे. भाषा अनेक मार्गांनी उत्क्रांत होत असते. आणि म्हणूनच भाषेची ही समृद्धी कमी होण्याऐवजी वाढत जाते. आणि ही वाढलेली भाषा समृद्धी भारतीय ज्ञानपरंपरेत मोलाची भर घालत असते. त्या समृद्धीचा समावेश हा नवीन राष्ट्रीय शैक्षणिक धोरणात झाला पाहिजे असे मत येथे आपण मांडू शकतो.

भाषा आणि संस्कृती या प्रवाही गोष्टी असतात हे मान्य पण प्रवाही असणारी प्रवाहात संपूर्ण जाणं या गोष्टी वेगळा आहेत. भाषावार प्रांत रचनेनंतर जे राज्य आपण मिळवलं ते युरोपातल्या अनेक भाषिक समाज घट्ट राजकीय ओळख टिकवत स्वतःच्या भाषा आणि संस्कृतीच्या उत्कर्षाला सहाय्यभूत झाल्याचे दिसते. इतकी तीव्र मराठीपणाची जाणीव आपल्या समाजात नसण्याचे कारण आपण आपल्या मनावर लादून घेतलेले अनावश्यक ओझे हे आहे. या देशात राहायचे भारतीयत्व स्वीकारायचे याचा अर्थ मराठीपणाबद्दल लाज बाळगायची किंवा त्याला तिलांजली द्यायची असा होत नाही. आपण ज्या संघराज्यात्मक चौकटीत आहोत त्यात प्रादेशिक अस्मितांच्या न्याय

विकासाला दरवेळी पुरेसा अवकाश मिळतोच अस नाही. तो अवकाश मिळवणं हे ह्या पुढच्या काळातील मराठी समाजापुढची महत्वाची गरज आहे ती पार पाडली नाही तर आपण महाराष्ट्राचा नुकसान करूच पण देशातही करू. ही जाणीव निर्माण होणे अत्यंत महत्वाचा आहे भाषेच्या नियोजनाबद्दलची आपली जाणीव तीव्र होणं जसं गरजेचं आहे तसं देशाला उपलब्ध राजकीय चौकटीचा पुनर्विचार करणे ही गरजेचा आहे. हाच विचार लक्षात घेऊन नवीन बहुभाषिक तंत्रविज्ञान मराठीला लाभदायक आहे असे वाटते. आजही आपल्या भाषेचा विचार संगणकाशी जोडून जेव्हा होतो तेव्हा तो प्रामुख्याने मुद्रण केंद्रीय असतो. टंकलेखनाचा पर्याय म्हणून आपण संगणकाकडे पाहतो भाषा आणि संगणक यांच्या संबंधाचा विचार खरंतर याहून अधिक खोल्यात जाऊन करायला हवा. माहिती तंत्रज्ञान हा आजच्या काळातला कळीचा शब्द आहे.

ही ज्ञानशाखा माहिती नोंदवण्याचे, नेटकेपणाने मांडण्याचे, जुनेच माहिती नव्याने शोधण्याचे, माहितीकडे देवाण-घेवाण सुकर करण्याचे नवे नवे मार्ग शोधते आहे. मानवी समूहात माहितीच्या देवाणघेवाणीचे महत्वाचे माध्यम भाषा हे आहेत त्यामुळेच मानवी भाषेतील माहिती वार संगणकाच्या साह्याने विविध प्रक्रिया कशा करता येतील याचा अभ्यास करणारी भाषा भाषा संस्करण ही ज्ञान शाखा निर्माण झाली.. मानवी भाषा वापरणाऱ्या संवाद कुशल संगणक प्रणाल्या कशा करता येतील यावर या शाखेत संशोधन होत असतो. भाषेत उच्चांतरित रूप आणि लिखित रूप या दोघांचाही अभ्यास संगणक प्रक्रियेच्या दृष्टीने होत असतो जगातील विविध भाषांसाठी विविध संगणकीय साधना मोठ्या प्रमाणावर उपलब्ध होत आहेत. मराठी भाषेसाठी आपल्या समाजात यापैकी

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काय कार्य चालले आहे याचा शोध घेत गेलो तर काही अर्थ निराशाच आपल्या पदरी येईल. नव्या तंत्रविद्याशी आपल्या भाषेला जोडण्याचे स्वप्न आपल्याला पूर्ण करणे अत्यंत महत्वाचं आहे संगणकाच्या पडद्यावर आपल्याला आपल्या भाषेच्या लिपीतली चिन्हे, त्यातील मांडणीच्या वैशिष्ट्यांसह दिसणे हे एक उदाहरण जरी विस्ताराने पाहिलं मराठीची स्थिती काय आहे हे आपल्याला कळेल. हा सर्व विचार किंवा उहापोह करण्याचा अर्थ असाच आहे की आपल्याजवळ असणारी भारतीय संस्कृती भारतीय ज्ञानपरंपरा भारतीय संशोधन परंपरा ही आपल्याला माहिती तंत्रज्ञानाशी जोडून नवीन राष्ट्रीय शैक्षणिक धोरणामध्ये तिचा अत्यंत महत्वाचा समावेश करणे गरजेचे आहे म्हणून आपला आपली भारतीय मराठी भाषा आणि संगणकीय तत्व प्रणाली या दोघांचा समन्वय साधने गरजेचे आहे. आज अभ्यासक्रमामध्ये समाज माध्यमे, नव समाज माध्यमे, आधुनिक भारतीय भाषा यांचा समावेश झालेलाच आहे.

मात्र संगणकावर कसे टाईप करावे हे एक प्राथमिक ज्ञान झाले.. संगणकावर मुद्रित करताना काय काळजी घ्यावी ते कसे करावे ह्या तंत्रज्ञानापेक्षा संगणकाच्या माध्यमातून भारताची उज्वल सांस्कृतिक ज्ञानपरंपरा आधुनिक तंत्र प्रणालीशी आपण कशा पद्धतीने जोडू शकतो या गोष्टीचा विचार करून नवीन राष्ट्रीय शैक्षणिक धोरणात प्राचीन मराठी साहित्य अर्वाचीन मराठी साहित्य आधुनिक मराठी साहित्य या सर्व साहित्य प्रवाहांचा समावेश नवीन शैक्षणिक धोरणात झाला पाहिजे. त्यासाठी आपण प्रयत्नशील राहिले पाहिजे. खरंतर जगातील बहुतेक सर्व लिप्यांची व्यवस्था लावणारी युनिकोड ही संकेत प्रणाली 2000 सालानंतर संगणकीय भाषा प्रक्रियेत प्रामुख्याने वापरली जाते. ती वापरून इंग्रजी जितक्या संस्थेने संगणकावर

मुद्रित केले जाते तसेच मराठी वापरणे शक्य आहे हे आपल्याला आता माहीत झाले आहे. महाजालावर इंग्रजी भाषेत ज्ञानाचा मोठा साठा आहे हे आपल्याला माहित आहे. पण हा साठा आता बहुभाषिक होऊ लागला आहे याकडे मात्र आपण पुरेसे लक्ष द्यायला हवं. विविध भाषा हा ज्ञानाच्या देवाणघेवाणीतला अडसर नसून तो मानवी संस्कृतीतून निर्माण झालेला मोठा ठेवा आहे. अशी जाणीव जगभरात निर्माण होते आहे त्यामुळे संगणक तंत्रज्ञान ही बहुभाषिक होत आहे मराठीच्या संदर्भात आपल्या सांस्कृतिक ठेवायला आपल्याला या प्रणालीशी जोडावे लागेल.

आपल्या विद्यापीठांच्या किंवा विविध ग्रंथालयातील जुन्या मराठी नियतकालिकांचे अंक नष्ट होण्याच्या मार्गावर आहेत. महाजालावरील संकेत स्थळांचे पत्ते लोकांना आपापल्या लिप्यातून कसे लिहिता येतील यावर प्रायोगिक तत्त्वावर संशोधन चाललेला आहे ही संस्था भारतीय भाषा संदर्भात काम करत आहे बोललेला मजकूर संगणकाने एखादे भाषेच्या लिपीत लिहून द्यावा लिखित मजकूर वाचून दाखवावा आणि संगणक प्रणाली निर्माण झाल्या आपल्या भाषांसाठी नाहीत जिथे जिथे तिथे आपण मराठी भाषेसाठी ह्या लिप्यांचा वापर होतो की नाही हे जोखणे अत्यंत महत्त्वाचे आहे. एकूणच वरील सर्व बाबींचा विचार करता अत्यंत समृद्ध अशी ज्ञान परंपरा जतन करणे आणि ती पुढील पिढ्यांकडे सुपूर्द करणे त्यासाठी प्रयत्नशील राहणे अत्यंत गरजेचे आहे असे वाटते

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संगीत विभागप्रमुख, महात्मा गांधी विद्यामंदिर, नाशिक संचलित, महिलारत्न पुष्पाताई हिरे
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सारांश :

भारतीय राज्यघटनेचे/संविधानाचे शिल्पकार भारतरत्न डॉ. बाबासाहेब आंबेडकर यांनी १४ ऑक्टोबर १९५६ रोजी नागपूर येथे लाखो अनुयायांसह बुद्ध धम्माची दीक्षा घेतली. तथागत भगवान गौतम बुद्ध यांनी प्रतिपादित केलेल्या धम्माच्या स्वीकाराद्वारे मानव मुक्तीचा मार्ग असलेल्या बुद्धाच्या धम्माचा सद्धम्मप्रकाश धम्मचक्रप्रवर्तन करून बाबासाहेबांनीच पुन्हा दाखवून दुःखितांचे कल्याण केले आहे व डॉ. बाबासाहेब आंबेडकर यांच्यामुळेच दीनजनांच्या जगण्याला अर्थ प्राप्त झाला आहे अशी महाकवी वामनदादा कर्डक यांना खात्री होती. दीनजनांना दास्यत्वाच्या बेडीतून मुक्त करणाऱ्या बाबासाहेबांप्रति वामनदादांना निस्सीम आदर होता. डॉ. बाबासाहेब आंबेडकर यांनी दीनदुबळ्यांवर केलेल्या उपकारांची जाणीव ठेऊन त्यांच्याप्रति कृतज्ञता व्यक्त करताना वामनदादा त्यांच्या एका गाण्यातून फार नेमकेपणाने लिहितात की,

"उद्धरली कोटी कुळे, भीमा तुझ्या जन्मामुळे" १

वामनदादा कर्डक हे डॉ. बाबासाहेब आंबेडकर व तथागत सिद्धार्थ गौतम बुद्ध यांच्या विचारसरणीनुसार आपल्या आयुष्याची प्रबोधनाची सांगीतिक वाटचाल मोठ्या जोमाने चालत होते. बाबासाहेबांचे समस्त मानवाच्या हिताचे क्रांतिकारी विचार गाण्यांच्या माध्यमातून लोकांसमोर मांडत फिरणे हेच वामनदादांचे चळवळीचे ध्येय झाले होते. त्यांच्या मनावर बाबासाहेब व बुद्धांच्या विचारांचा अफाट प्रभाव पडल्यामुळे जळी, स्थळी, काष्ठी त्यांना केवळ आणि केवळ बाबासाहेब आणि बुद्धांच्याच मानवी कल्याणाच्या मार्गाचा प्रकाश दिसायचा व हा मानव मुक्तीचा प्रकाश समस्त मानवांना मुक्तहस्ते वाटण्यासाठी ते सातत्याने गावोगावी भटकंती करून लोकांना प्रकाशाचे, ज्ञानाचे, कल्याणाचे सांगीतिक दान द्यायचे.

प्रस्तावना :

१९४१ साली नायगाव, मुंबईच्या सभेत महाकवी वामनदादा कर्डक यांना डॉ. बाबासाहेब आंबेडकर यांचे दर्शन घडले होते. बाबासाहेबांचे ते क्रांतिकारी आणि तेजस्वी रूप बघून वामनदादा त्यावेळी अत्यंत भारावून गेले

"नायगावच्या मुक्कामी
एकेचाळीस सालात
झाले दर्शन भीमाचे
जपले रे काळजात" २

वामनदादांची भटकंती सातत्याने सुरूच होती. बाबासाहेबांच्या सभा असतील तिथे जाऊन बाबासाहेबांचे विचार झपाटल्यासारखे ऐकणे ही वामनदादांची जणू गरजच बनली होती. बाबासाहेबांना बघण्यासाठी व त्यांचे विचार ऐकून मनात साठविण्यासाठी वामनदादा जीवाचे रान करीत होते. चाळीसगाव (महाराष्ट्र)

होते. वामनदादांच्या आयुष्यामध्ये ऊर्जा भरणारी अशी ही घटना होती. याविषयी प्रा. डॉ. सागर जाधव त्यांच्या 'महाकवी वामनदादा कर्डक : चरित्रकाव्य' या ग्रंथात लिहितात की,

येथे बाबासाहेबांची सभा असतानादेखील वामनदादा त्या सभेला मोठ्या कष्टाने पोचले. याविषयी वामनदादा स्वतः लिहितात की, "बाबासाहेबांच्या अगोदरच मी सभास्थानी पोचलो आणि गाणी गाऊ लागलो. मी गात असतानाच बाबासाहेब, दादासाहेब आणि माईसाहेब आल्या. सोबत बरेच

पुढारी होते.बाबासाहेबांना पाहण्यासाठी सारेच लोक उठून उभे राहिले आणि एकच जल्लोष झाला 'आंबेडकर जिंदाबाद' या गर्जनेने आसमंत दणाणून गेला.मी पटकन स्टेजवरून खाली उडी मारली आणि पहिल्या रांगेत बसलो. भाषणाच्या अगोदर मानसिक अवस्थेप्रमाणे बाबासाहेबांचे रंग पलटत होते.क्षणात ते तेजाळ ताऱ्यासारखे दिसायचे,तर क्षणात धीरगंभीर दिसायचे.मी ती सारी रुपं नेत्रावाटे काळजात साठवीत होतो.दादासाहेब बोलले,बाबासाहेब बोलले आणि अलोट गर्दीतून वाट काढीत बाबासाहेबांना जावे लागले.अवधी चार हजाराची थैली चाळीसगावकरांनी बाबासाहेबांना दिली.तीही भामट्याने माईसाहेबांच्या हातून लांबवली.बाबांच्या पाठोपाठच मी ही डाकबंगल्यावर गेलो.बाबा मनमोकळेपणाने बोलत होते.पण लोक रात्रभर सभास्थानी थांबून असल्याने मला ताबडतोब सभास्थानी नेण्यात आले.फक्त धुळ्याचे जलसाकार गात होते.मी एकटाच होतो.त्यांच्यातच सामील झालो.आजचा भारतीय

"झाले चाळीसगावला
पुन्हा भीमाचे दर्शन
दादा गाईले सभेत
असे घडले दर्शन ४

वामनदादांना बाबासाहेब व त्यांच्या जवळपासच्या माणसांचा प्रचंड लळा लागला होता.बाबासाहेबांच्या विचारांनी तर वामनदादा पुरते भारावून गेले होते.बाबासाहेबांच्या समाज प्रबोधनाच्या सभा असो अथवा इतर कोणतेही कार्यक्रम असोत,त्या ठिकाणी वामनदादांचे जाणे व गाणे हे ठरलेलेच होते. वामनदादा हे आंबेडकरी चळवळीसाठी स्वतःला वाहून घेतलेले कलावंत होते.बाबासाहेब व बुद्धांच्या समताधिष्ठित विचारांचा दीनजनांमधे प्रचार व प्रसार करणे हाच त्यांच्या जीवनाचा अंतिम उद्देश होता.

भीम मिळाला भीम आम्हाला भीम मिळाला भीम
भीम मिळाला येऊनि झाला न्यायाची रिमझिम...॥धृ॥

वामनदादांना बाबासाहेबांनी केलेल्या क्रांतिलढ्यांच्या ऐतिहासिक मौलिकतेची हृद्य कल्पना होती.बाबासाहेबांनी महाडच्या चवदार तळ्याच्या पाण्याचा सत्याग्रह केला होता ती घटना वामनदादांना अत्यंत महत्वपूर्ण वाटत होती.खऱ्या अर्थाने ती घटना शोषित,पीडित व वंचितांच्या जीवनाला आकार देणारी अत्यंत महत्वपूर्ण घटना होती.या घटनेचे

गातो गौरव गीत, भीमाचे गातो गौरव गीत

ठायी ठायी असेच घुमते, नवे नवे संगीत...॥धृ॥

महाड येथील चवदार तळ्याचा सत्याग्रह करून बाबासाहेबांनी वंचितांना त्यांचे मौलिक अधिकार मिळवून

प्रा. अशोक एस. जाधव

कीर्तीचा भीमगीत गायक आणि छोटा इस्माईल आझाद नावाने ओळखला जाणारा किसन खरात हा जलसाकारांसमवेत मला साथ देत होता.मनमाडचा हरी झुरा निकम हा बाबांचा मालीशवाला.दिल्लीपर्यंत जाऊन बाबांची मालिश करायचा." ३

बाबासाहेबांची चाळीसगावची सभा सुरु होण्यापूर्वी वामनदादा सभामंचावर बसून गाणी गात होते.सभास्थळापासून जवळच असलेल्या डाकबंगल्यावर बाबासाहेब थांबलेले होते.त्याठिकाणी त्यांनी वामनदादांचा आवाज ऐकून दादासाहेब गायकवाड यांना विचारले की हे कोण गात आहे.तेव्हा दादासाहेब गायकवाड यांनी बाबासाहेबांना सांगितले की हे नाशिकचे वामन कर्डक गात आहेत.तेव्हा बाबासाहेबांनी वामनदादांच्या आवाजाचे व गायनाचे कौतुक केले होते.

याविषयी प्रा.डॉ.सागर जाधव लिहितात की,

बाबासाहेबांच्या रूपाने बहुजनांना एक खंबीर असे क्रांतिकारी नेतृत्व मिळाले होते.बाबासाहेबांमुळेच या देशातील दीनजनांच्या जीवनातील शोषणाचा काळाकुट्ट इतिहास पुसला जाऊन गुलामीची जोखड दूर फेकल्या गेली होती.बाबासाहेबांमुळेच बहुजनांच्या जीवनात सोन्याची सकाळ उगवली होती.याबाबत वामनदादा त्यांच्या 'भीम मिळाला भीम आम्हाला' ५

या पुढील गाण्याद्वारे बाबासाहेबांच्या कार्यकर्तृत्वाबाबत कृतज्ञता व्यक्त करताना लिहितात की,

मोल जाणून वामनदादांनी बाबासाहेबांच्या या क्रांतीकारी लढ्याची त्यांच्या गाण्याद्वारे मार्मिकपणे नोंद घेऊन या घटनेने सर्व वंचितांच्या जीवनात आमूलाग्र बदल घडून आल्याचा विचार वामनदादांनी त्यांच्या 'गौरव गीत' ६

या पुढील गाण्याद्वारे अत्यंत विनम्रपणे परंतु खूप कौशल्याने मांडला आहे.

देण्याच्या दृष्टीने टाकलेले ते खंबीर पाऊल होते.वंचितांना त्यांच्या न्याय्य हक्कांबाबत जागविण्याचा तो महान लढा

होता.महाडच्या चवदार तळ्याचा सत्याग्रह करून बाबासाहेबांनी गावोगावी,खेडोपाडी व दऱ्याकपारीत राहणाऱ्या वंचित माणसांच्या जीवनातून अंधारल्या युगाचा अंत केला होता. ज्या गावांमध्ये वंचितांना इतर प्रस्थापितांच्या बरोबरीने व त्यांच्या पाणवठ्यांवर पाणी भरू दिले जात नव्हते अशा ठिकाणी सर्वांनाच समानतेने सार्वजनिक पाणवठ्यांवर पाणी भरावयास मिळण्याची एक क्रांती सुरु झाली होती. निसर्गाने भरभरून दिलेल्या पाण्यासारख्या जीवनावश्यक घटकाचे मौलिक अधिकारांन्वये बाबासाहेबांनी संरक्षण करून फार मोठी क्रांती केली होती.या घटनेचे खूप सुंदर असे वर्णन वामनदादांनी त्यांच्या या वरील गाण्याद्वारे केले आहे.

इथे गीत माझे विचारीत आहे
कोण रे कुणाला अन्हेरीत आहे...॥६॥
कोण हे कुणाला हीन लेखणारे
कोणत्या जगाची अशी रीत आहे...॥१॥

बाबासाहेबांची क्रांती वामनदांच्या गाण्यांमध्ये खूप सखोल अशी झिरपलेली असल्याचे दिसून येते.वामनदादांनी विषमतेच्या व अन्यायाच्या क्रूर मानसिकतेला अत्यंत टोकदार असे प्रश्न विचारून भंडावून सोडले आहे.त्यांनी या संबंध गाण्यामधून विषमतेचे उच्चाटन व समतेची प्रतिष्ठापना याबाबत खूप हृद्य असे विचार मांडलेले आहेत.बाबासाहेबांच्या पश्चात बाबासाहेबांचे क्रांतीकार्य वामनदादा खूप जोमाने करीत असल्याचे सदर गाण्याद्वारे दिसून येते.

बाबासाहेबांच्या सामाजिक कार्याची जबाबदारी मोठ्या जबाबदारीने पार पाडतांना वामनदादांनी सम्यक भानदेखील जोपासलेले आहे.आपल्या हक्कांसाठी व्यवस्थेशी भांडत असताना कोणाचे मन दुखावणार नाही,कोणाचेही अहित होणार नाही याची त्यांनी पुरेपूर दक्षतासुद्धा घेतली आहे.तथागत भगवान गौतम बुद्धांनी प्रतिपादन केलेली कायिक,वाचिक व मानसिक अशी सर्वकष अहिंसा वामनदादांनी समाज प्रबोधनाचे कार्य करताना अत्यंत काटेकोरपणे पाळली आहे.त्यामुळे बाबासाहेबांचा सामाजिक क्रांतीचा ज्वलंत विचार मांडतानासुद्धा त्या विचाराला बुद्धाच्या करुणेची जोड देऊन त्यांनी तो विचार मांडल्याचे खूप प्रकर्षाने लक्षात येते.बाबासाहेब व बुद्ध या दोन्ही महामानवांच्या मानवहिताच्या कार्याचा प्रचार व प्रसार

जुने सारे सारे गाडले भीमाने
ताट अमृताचे वाढले भीमाने
जुलमी चाकरीचे आणि भाकरीचे
प्रश्न पामरांचे ताडले भीमाने...॥६॥

वामनदादांनी, बाबासाहेबांनी केलेल्या या मौलिक मार्गदर्शनाची संवेदनशीलपणे नोंद घेऊन त्यांच्या गाण्यांच्या

बाबासाहेबांच्या सामाजिक समतेच्या क्रांतीचा वामनदादांवर खूप सखोल असा प्रभाव पडला होता.विविध मानवी समूहांतील सर्वच प्रकारची विषमता बघून त्यांनासुद्धा प्रश्न पडू लागले होते.बाबासाहेबांच्या क्रांतीने प्रेरित झाल्यामुळे वामनदादा स्वतःसुद्धा क्रांतीचा अंगार झाले होते.त्यांना माणसांचे दुःख,दैन्य बघून कळवळा येत असे तशीच अत्यंत चीडसुद्धा येत असे.माणसांच्या या दयनीय अवस्थेला कोण जबाबदार आहे असा प्रश्न ते साकल्याने विचारत असत.

वामनदादांनी 'गीत माझे विचारीत आहे' ७ या त्यांच्या पुढील गाण्यातून खूप संवेदनशील असे प्रश्न इथल्या व्यवस्थेला केले आहेत.

करण्याच्या कार्याला वाहून घेतले असतांना वामनदादांनी सम्यक मार्ग आजीवन आचरला.त्यामुळे वामनदादांची गाणी प्रखर विचार मांडणारी जरी असली तरी त्या विचारांना कारुण्याची जोड आहे.विश्वकल्याणाची भावना त्या विचारांमागे आहे हे स्पष्ट होते.

बाबासाहेबांनी जुन्या अनिष्ट रूढी,परंपरांचे समूळ उच्चाटन केले.ज्या अनिष्ट रूढी,परंपरांनी माणसांना मानसिक गुलाम बनवून टाकले होते त्या कुचकामी प्रथांचा बाबासाहेबांनी नायनाट केला.माणसाला विज्ञाननिष्ठ बनविले.माणसाचा उद्धार केवळ माणसेच करू शकतात दुसरा कुणीही येऊन उद्धार करू शकत नाही असा आत्मविश्वास बाबासाहेबांनी माणसांमध्ये जागविला.त्यांनी माणसांना स्वावलंबी बनविले.शिक्षणाच्या प्रवाहात आणले,प्रगतीच्या मार्गावर आणून चालते केले.बाबासाहेबांनी समस्त भारतीयांच्या जीवनाला उन्नत करण्यासाठी अत्यंत परिश्रम घेतले.संविधानाच्या माध्यमातून सर्वांना मौलिक अधिकार बहाल करतानाच त्यांच्या उपयोगाची शिकवणसुद्धा दिली.

बाबासाहेबांनी केलेल्या कार्याचे 'जुने सारे सारे गाडले भीमाने' ८ या पुढील गाण्याद्वारे वामनदादांनी अत्यंत चपखल असे वर्णन केले आहे.

माध्यमातून बाबासाहेबांची तळमळ समस्त माणसांमध्ये पोचविण्यासाठी अतोनात कष्ट घेतले.वामनदादांचे प्रत्येक

गाणे हे बाबासाहेबांनी माणसांच्या हितासाठी अव्याहतपणे केलेल्या क्रांतीकार्याच्या संदेशाने ठासून भरलेले आहे.

कोटी कोटी काळजात भीम माझा होता

सात कोटी दलितांचा तोच राजा होता...॥धृ॥

कोट्यवधी लोकांच्या जीवनाला नवा आकार देणाऱ्या बाबासाहेबांच्या ऋणाचे मोजमाप करणे कोणालाही कदापिही शक्य नाही.बाबासाहेबांच्या कालातीत कर्तृत्वामुळे आज बहुजनांच्या जीवनात आनंद आहे.बाबासाहेबांच्या मानवमुक्तीच्या या ऐतिहासिक महत्वाचे वामनदादांनी खूप हृद्य असे वर्णन वरील गाण्याद्वारे केले आहे.

बाबासाहेबांनी मानवमुक्तीची सामाजिक क्रांती करताना लोकांना शिका,संघटित व्हा व संघर्ष करा हा मूलमंत्र देऊन आत्मनिर्भर व्हायला शिकविले,स्वावलंबी व्हायला शिकविले.स्वतःच्या उन्नतीसाठी तुम्हाला स्वतःलाच झटावे लागेल अशी स्वत्वाची ताकत बाबासाहेबांनी सामान्य

ऊठ भीमाच्या बाळा

काळाच्या कर्दन काळा

जाळ तुझ्या भवतीचा

अंधार काळा काळा...॥धृ॥

वामनदादा लोकांना जागविण्याचे कार्य खूप संयमितपणे करतात.लोकांच्या मनावर कोणताही ओरखडा न ओढता फक्त त्यांना त्यांच्या अस्मितेची आणि त्यांच्यावर होत असलेल्या अन्यायाची जाणीव करून देतात.वामनदादांची जनजागृतीची ही शैली अत्यंत परिणामकारक असून त्यांच्या गाण्यांच्या माध्यमातून या प्रकारे संयमितपणे व्यक्त झालेल्या विचारांमुळे लोक प्रभावीत होत आलेत.

बाबासाहेबांनी समस्त भारतीयांना दिलेला शिक्षणाच्या महत्वाचा संदेश वामनदादांनीसुद्धा समस्त माणसांना

छंद लागो तुला शिक्षणाचा,मुला नको भटकू असा

जाण आपुले भले,नेणत्या पाडसा नको भटकू असा...॥धृ॥

अस्पृश्यतेचे,गुलामीचे हीन जीवन जगणाऱ्या तरुणांना वामनदादांनी शिक्षण घेण्याचा अत्यंत महत्वपूर्ण संदेश दिला आहे.शिक्षण घेण्यासाठी संघर्ष केल्याशिवाय ज्ञानाची कवाडे उघडली जाणार नाहीत,आणि त्याशिवाय आत्मोन्नतीचा मार्गसुद्धा सापडायचा नाही.त्यामुळे हे तरुणांनो शिक्षणा शिवाय पर्याय नाही.तुमच्या जन्मदात्याच्या घरी अत्यंत दारिद्र्य आहे,परंपरेने आलेली गुलामी आहे,दैन्य आहे,दास्य आहे.तुम्ही जर शिक्षण घेतले नाही तर तुम्हीसुद्धा दारिद्र्यातच खितपत पडून संपून जाल,तुमच्या जीवनाला मग कोणताही अर्थ उरणार नाही.त्यामुळे शिका आणि उन्नत व्हा असा महान विचार वामनदादांनी या गाण्याद्वारे

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'काळजात' ९ या पुढील गाण्याद्वारे वामनदादांनी दीनजनांच्या जीवनात असलेली बाबासाहेबांच्या मातृ - पितृतुल्य भूमिकेची खूप सुंदर अशी मांडणी केली आहे.

जनतेला दिली होती.याचाच उपयोग करून लोक आज स्वतःची प्रगती करतांना दिसून येत आहेत.परंतु स्वतःच्या अथवा समाजाच्या हितासाठी करावयाच्या संघर्षांचे हे चित्र हवे तेवढ्या मोठ्या व्यापक स्तरावर दिसून येत नाही.त्यामुळे बाबासाहेबांच्या जन जागविण्याच्या पद्धतीप्रमाणेच वामनदादासुद्धा लोकांमध्ये जागृती करण्याचे व त्यांच्यात चेतना भरण्याचे कार्य करतांना 'उठ भीमाच्या बाळा' १० या गाण्याद्वारे लोकांमध्ये निसर्गतःच असलेल्या ताकतीची त्यांना जाणीव करून देतात.कितीही मोठे संकट जरी आले तरी त्या संकटाला तोंड देण्याची ताकत तुमच्यात आहे,तुम्ही फक्त लढा अशी ते लोकांना हिम्मत देतात.

देतानाच गोरगरीब व दीनजनांना शिक्षणाशिवाय तरुणोपायच नाही असा डोळस विचार दिलेला आहे.बाबासाहेब म्हणाले होते की शिक्षण हे वाघीणीचे दूध आहे,जो कुणी ते प्राशन करील तो गुरगुरल्याशिवाय राहणार नाही.वामनदादांनी नेमका हाच मुद्दा पकडून आंबेडकरी व तमाम बहुजनांना 'नको भटकू असा' ११ या पुढील गाण्याद्वारे शिक्षणाचे महत्व पटवून दिले आहे.

मांडला आहे.शिक्षणाच्या प्रचार व प्रसाराचे बाबासाहेबांचे महान कार्य स्वतः कधीही शाळेत न गेलेल्या वामनदादांनी ओळखून लोकांनी मात्र शिक्षित व्हावे यासाठी त्यांनी लोकांचे मनःपूर्वक प्रबोधन केले आहे. यातूनच वामनदादांची शैक्षणिक तळमळ लक्षात येते.

वामनदादा हे थोर समाज सुधारक व सांगीतिक महापुरुष होते.संगीताच्या माध्यमातून त्यांनी समाज सुधारणेसाठी व मनुष्याच्या सर्वांगीण उन्नतीसाठी आवश्यक असणाऱ्या शिक्षण,एकी,नेकी,बंधुभाव, प्रगति इत्यादी महत्वाच्या बाबींची प्रबोधनाच्या माध्यमातून लोकांमध्ये सातत्याने रुजवण केली.त्यामुळे त्यांच्या गाण्यांना मनुष्याच्या विकासाचा जणू छंद लागल्याचे दिसून येते.

या अनुषंगाने वामनदादा त्यांच्या एका गाण्यात लिहितात की,

"माणूस नवा घडवावा हा लोकलढा लढवावा

एकजुटीचा आवाज आमचा आभाळ आता गाठी" १२

वामनदादा लोकलढा लढविण्यासाठी सातत्याने खपले.लोकांना संघटित करण्यासाठी त्यांनी त्यांची सर्व सांगीतिक शक्ती वेचली.सामाजिक क्रांतीच्या विचारांनीच लोक संघटित होऊ शकतात आणि या संघटित लोकांच्या माध्यमातूनच सामाजिक सुधारणेच्या कार्याला नक्कीच बळ येऊ शकते असे वामनदादांचे स्पष्ट विचार होते.

वामनदादा हे बाबासाहेबांच्या विचारांनी भारावलेले होते.त्यामुळे बाबासाहेबांच्या क्रांतीकारक विचारांनाच दीपस्तंभ मानून त्यांनी संगीताच्या माध्यमातून सामाजिक प्रबोधनाची मोठी व्यापक अशी चळवळ उभी केली.त्यामुळे आयुष्यभर आपल्या गाण्यांच्या माध्यमातून केवळ बाबासाहेब व बुद्ध सांगणाऱ्या वामनदादांची प्रतिभासुद्धा

भीमाच्या डोळ्यांनी त्या भीमाच्या डोळ्यांनी

दुनिया दाखवली त्या भीमाच्या डोळ्यांनी...॥धृ॥

'आंबेडकरी प्रतिभेचा महाकवी : वामनदादा कर्डक' या संपादित ग्रंथामध्ये वामनदादांचे वरील गाणे असून वामनदादांनी अत्यंत सोप्या भाषेतून लिहिलेल्या या गाण्याद्वारे बाबासाहेबांनी समस्त मागासलेल्या लोकांच्या जीवनात केलेल्या क्रांतिकारक बदलाची नोंद मोठ्या कौशल्याने घेतली आहे.

बाबासाहेबांनी सामाजिक क्रांती करतांना समाजातील वाईट रूढी,प्रथा,परंपरांना केंव्हाच फाटा दिलेला आहे.बाबासाहेबांनी १४ ऑक्टोबर १९५६ रोजी नागपूर

"रित्या घड्याचे,मेल्या मढ्याचे गाणे गाऊ नका रे

हरिजन राहू नका रे आता हरिजन राहू नका रे

मुक्तीच्या दाराकडे या बुद्ध विहाराकडे

इथे नवेच सारे घडे बुद्धाशी नाते जडे

करील तारण तो करुणाधन दुरून पाहू नका रे

हरिजन राहू नका रे आता हरिजन राहू नका रे" १४

जातीय विषमतेबरोबरच आर्थिक विषमता हे सुद्धा या देशातील भयाण वास्तव आहे.काही लोकांकडे गडगंज संपत्ती आहे तर काही लोकांना एका वेळच्या जेवणाची सुद्धा भ्रांत आहे.बाबासाहेबांनी त्यामुळेच या देशामध्ये सर्वंकष समता प्रतिपादन केली होती.जोपर्यंत सर्वांचे समसमान भले होणार नाही तोपर्यंत ही विषमतेची दरी वाढतच जाणार आणि

"इथे माडी तिथे झोपडी, हीच का रे विकासा उडी

कष्ट मरणाचे करतो कुणी, पोती आयतीच भरतो कुणी

घाम गाळी उपाशी गडी...हीच का रे विकासा उडी..." १५

बाबासाहेब म्हणाले होते की 'शासनकर्ती जमात व्हा'.कारण, सत्तेशिवाय सर्वंकष विकास शक्य नाही हे त्यांना कळून चुकले होते.वामनदादांनासुद्धा बाबासाहेबांचे हे विचार

प्रा. अशोक एस. जाधव

जाज्वल असल्याचे लक्षात येते.बाबासाहेबांच्या समाजहितकारक व राष्ट्रहितकारक विचारांची चळवळ वामनदादांनी आयुष्यभर राबवून बाबासाहेबांची देशव्यापी कल्याणकारी प्रतिभा वामनदादांनी जणू त्यांच्या स्वतःमध्ये बाणवून स्वतःच्या व्यक्तिमत्त्वाला एक उच्च असे परिमाण प्राप्त करून दिले आहे.त्यामुळे वामनदादा हे केवळ महाकवी नव्हते तर ते 'आंबेडकरी प्रतिभेचे महाकवी' होते हे स्पष्ट होते.बाबासाहेबांच्या अनंत उपकारांच्याप्रति कृतज्ञता व्यक्त करताना वामनदादा त्यांच्या 'भीमाच्या डोळ्यांनी' १३ या पुढील गाण्याद्वारे खूप विनम्रतेने मनोगत व्यक्त करतात.

येथे आपल्या लाखो अनुयायांना बुद्ध धम्माची दीक्षा देऊन या माणसांच्या पूर्वाश्रमीच्या लाजिरवाण्या जीवनपद्धतीचा अंत केला.या धम्मदीक्षेची वामनदादांनी त्यांच्या गाण्यांद्वारे अत्यंत चपखल अशी नोंद घेऊन जन जागविण्याचे कार्य केले आहे.बाबासाहेबांनी बुद्ध धम्माची दीक्षा देऊनही जुनाट रुढींचे भूत मानगुटीवर बसलेल्या माणसांना शुद्धीवर आणण्यासाठी वामनदादा त्यांच्या पुढील गाण्याद्वारे फटकारतात की,

त्यातूनच कधीतरी मोठा सामाजिक संघर्ष होणार असे त्यांचे विचार होते.वामनदादासुद्धा बाबासाहेबांच्या पाऊलावर पाऊण ठेऊन समाजोद्धारासाठी झटत असल्याने त्यांनासुद्धा विषमतेचे भयाण वास्तव उद्दिग्ध करते.त्यामुळे आर्थिक विषमतेवर परखड प्रहार करतांना वामनदादा त्यांच्या गाण्याद्वारे लिहितात की,

अत्यंत सखोलपणे पटले होते.त्यांना हे चांगल्या प्रकारे माहीत होते की राजकीय सत्तेशिवाय शैक्षणिक,सामाजिक,राजकीय,सांस्कृतिक व आर्थिक विकास

शक्य नाही.त्यामुळे सत्ता हस्तगत केल्यावरच आपल्याला हवे असलेले मानवतेचे कार्य साकार करता येईल असे वामनदादांना वाटायचे.सत्तेशिवाय शहाणपण नाही या

प्रचितीतूनच वामनदादांनी पुढील गाण्यामध्ये सत्तेबाबत ठोस विचार व्यक्त केलेत.

"देश के लोग यहाँ देश के हकदार बने
देश के धनी बने देश के सरदार बने
हम भी मतदाता हैं चुनकर देनेवाले
क्यों न यहाँ आज हमारी सरकार बने..." १६

बाबासाहेबांचा प्रत्येक क्रांतीविचार वामनदादांनी त्यांच्या गाण्यांतून मांडला.बाबासाहेब समाजभर सांगत जाणे हेच वामनदादांचे जीवितकार्य होते ते त्यांनी अत्यंत निष्ठेने व अव्याहतपणे त्यांच्या आयुष्याच्या अगदी शेवटच्या क्षणापर्यंत केले.वामनदादांना माणसांना हीन लेखणाऱ्या व्यवस्थेची प्रचंड चीड होती.सर्व माणसे ही निसर्गाची अपत्ये आहेत त्यामध्ये उचनीच हा भेदभाव नको असे त्यांना वाटायचे.एखाद्या समाजाला विशिष्ट शब्दांचा उपयोग करूनसुद्धा हीन लेखले जाऊ लागल्याचे वामनदादांनी खूप सूक्ष्मपणे निरीक्षण केले आहे.'दलित' हा असाच एक शब्द.जीवनाच्या विकासाच्या सर्वच स्तरावर मागासलेल्या माणसांचे मोजमाप करणारा हा शब्द.परंतु या शब्दाच्या आडून मानवतेची खिल्ली उडविण्याचेच काम होत असल्याचे वामनदादांनी जाणले.त्यामुळे 'दलित' हा शब्द इथूनपुढे आंबेडकरी माणसांनी उच्चारायचाच नाही तर त्याऐवजी 'आंबेडकरी' हा शब्दप्रयोग करावा असे प्रतिपादन वामनदादांनी २८ नोव्हेंबर १९९३ रोजी वर्धा (महाराष्ट्र) येथे झालेल्या अखिल भारतीय आंबेडकरी साहित्य संमेलनामध्ये बोलताना केले.वामनदादा यावेळी बोलतांना म्हणाले की, 'दलित' या शब्दात मनाच्या कोपऱ्यात विषमतावादी हिंदुत्व जोपासण्याची व कधी कधी मार्क्सवादी म्हणवून क्रांतीकारी समजूत करून घेण्याची जी सोय होती,ती यापुढे 'आंबेडकरी' या शब्दात राहणार नाही.'आंबेडकरी' म्हणजे डॉ. बाबासाहेब आंबेडकर यांनी मार्गदर्शित केलेला स्वातंत्र्य,समता,बंधुता व न्याय या संविधानिक तत्वानुसार आचरण करणारा,तथागतांचा जीवनमार्ग स्वीकारणारा.महात्मा फुल्यांच्या

सामाजिक,धार्मिक विचारांचे विश्लेषण मान्य करणारा आणि अखिल मानवी समता मूल्यांवर अढळ विश्वास बाळगणारा माणूस होय.आंबेडकरी साहित्याला कथा - कवितेला हे भान ठेवावे लागणार आहे.आंबेडकरी साहित्य म्हणजेच दलित साहित्याच्या निर्मितीचा पुढील विकास टप्पा होय." १७ वामनदादांचे सामाजिक निरीक्षण दांडगे होते.सामाजिक हिताच्या दृष्टीने काय योग्य काय अयोग्य याची नोंद घेऊन ते वेळीच त्यावर उपाययोजना सुचवत असत.

वामनदादा हे बाबासाहेबांचे निष्ठावंत पाईक होते.बाबासाहेबांनी दाखविलेल्या क्रांतीमार्गाने जाणे आणि जाताजाता जन जागविणे हेच वामनदादांचे ध्येय होते.या कार्यासाठी त्यांनी कोणतीही कसर बाकी न ठेवता स्वतःच्या रक्ताचा थेंब अन थेंब बाबासाहेबांच्या क्रांतीकार्याच्या प्रचार व प्रसारासाठी खर्ची घातला.वामनदादांसारखे निष्ठावंत बाबासाहेबांना मिळाल्यानेच खरेतर बाबासाहेबांची सामाजिक चळवळ गावोगावी,खेडोपाडी मोठ्या जोमाने पोचू शकली.परंतु, काही नतद्रष्ट लोकांना बाबासाहेबांच्या कार्याचे व त्यांच्या अनुयायांचे उन्नत रूप बघून पोटशूळ होऊ लागला.हे लोक बाबासाहेबांच्या अनुयायांना फसवून बाबासाहेबांच्या विचारांविरुद्धात जायला भाग पाडू लागले.त्यामुळे आंबेडकरी समाजाची संघटनशक्ती क्षीण होऊ लागली व समाजामध्ये दुही निर्माण झाली.बाबासाहेबांनी इतक्या मेहनतीने निर्माण केलेल्या या स्वप्रवत प्रगत जीवनाचे लयास जाणारे क्लेशकारक चित्र बघून वामनदादा अत्यंत व्यथित झाले.त्यांनी अत्यंत दुःखी अंतःकरणाने त्यांच्या 'भीमाच्या रथाचे' १८ या पुढील गाण्याद्वारे प्रांजळ मनोगत व्यक्त केले आहे.

असे ज्यात सारे भले भारताचे
नको चाक मोडू भीमाच्या रथाचे
नको पक्ष फोडू नको पाय मोडू
नको लोक ओडू चांगल्या पथाचे...॥धृ॥

बाबासाहेबांचा सामाजिक कल्याणाचा विचार हा काही केवळ आंबेडकरी समाजाच्या हितापुरताच मर्यादित नव्हता तर बाबासाहेबांचा क्रांतीविचार हा संपूर्ण देशवासियांच्या हिताचा होता.प्रत्येक कृतीमधून समस्त देशवासीयांचे हीत होईल असेच महान कार्य बाबासाहेबांनी केले आहे.तरीसुद्धा

काही नासक्या प्रवृत्तींनी बाबासाहेबांचे कर्तृत्व मर्यादित स्वरूपामध्येच देशवासीयांसमोर आणले आहे ही अत्यंत खेदाची बाब आहे.आंबेडकरी समाजातील लोक आजही तितकेसे राजकीय व आर्थिक सक्षम नसल्याने ते बाबासाहेबांचे विश्वव्यापी कर्तृत्व पूर्ण क्षमतेने

देशवासीयांच्या मनावर ठसवू शकलेले नाहीत. त्यामुळेच वामनदादांसारख्या सांगीतिक कलावंत असलेल्या अवलियाने मात्र हे काम आपल्या गाण्यांच्या माध्यमातून लोकांसमोर आणून लोकांचे डोळे उघडण्याचे महान कार्य केले आहे.

विश्वशांतीचे व कल्याणाचे प्रणेते तथागत भगवान गौतम बुद्धांच्या विचारांना सखोल अभ्यासाअंती स्वीकारून व १४ ऑक्टोबर १९५६ रोजी नागपूर येथे आपल्या लाखो अनुयायांसह बुद्ध धर्माची दीक्षा घेऊन बाबासाहेबांनी त्यांचे विचार हे विश्वव्यापी होते हे जगाला दाखवून दिले आहे. बाबासाहेब हे मानवतेचे हीत जोपासणारे महामानव होते. त्यांचे विचार हे समतेचे, ममतेचे व मानवतेचे होते. वामनदादांनी बाबासाहेबांच्या या विश्वव्यापी

उभ्या विश्वास ह्या सांगू तुझा संदेश भीमराया

तुझ्या तत्वाकडे वळवू तुझा हा देश भीमराया...॥धृ॥

बाबासाहेबांचे विचार गाण्यांमधून प्रसारित करीत असताना वामनदादांनी बाबासाहेबांबाबत अनेक विशेषणे योजलेली आहेत. वामनदादा हे बाबासाहेबांना जनतेचा वाली, तारणहार, बंधु, सखा, माता, पिता इत्यादी अनेक विशेषणे देऊन संबोधतात. या सर्व विशेषणांवरून

"काय सांगू तुला आता भीम माझा कसा होता

लेकरांना जशी माता भीम माझा तसा होता..." २०

आई जसे आपल्या लेकरांचे मोठ्या कष्टाने का होईना भरण पोषण करते अगदी त्याचप्रमाणे बाबासाहेबांनी देखील दीनजनांसाठी खूप कष्ट उपसून त्यांना सुखाचे दिवस प्राप्त करून दिले आहेत अशा आशयाच्या ह्या सुंदर ओळी वामनदादांनी लिहिलेल्या आहेत. मोठा प्रगल्भ अर्थ परंतु अत्यंत कमी शब्दांत मांडण्याची वामनदादांची मौलिक अशी शैली होती.

वामनदादांनी त्यांच्या संबंध आयुष्यामध्ये समाज जागृतीसाठी डॉ. बाबासाहेब आंबेडकर व तथागत भगवान गौतम बुद्ध यांच्या जीवन कर्तृत्वावर आधारित लोककल्याणकारक अशी पाच हजारांच्यावर गाणी लिहिलेली आहेत, संगीतबद्ध केलेली आहेत व प्रत्यक्ष सामाजिक प्रबोधनाच्या सांगीतिक सभांमधून जनतेसमोर गायलेली आहेत. यातूनच, वामनदादांच्या एकूणच वैचारिक जीवनावर डॉ. बाबासाहेब आंबेडकर व तथागत भगवान गौतम बुद्ध यांच्या मानवी कल्याणाच्या क्रांतिकारक विचारांचा प्रचंड व सखोल असा प्रभाव दिसून येतो.

निष्कर्ष -

१) वामनदादा कर्डक यांच्या वैचारिक आयुष्यावर डॉ. बाबासाहेब आंबेडकरांच्या मानवीय सामाजिक समतेच्या क्रांतीच्या विचारांचा प्रचंड प्रभाव होता.

व्यक्तिमत्वाला आपल्या आयुष्यामध्ये सर्वोच्च स्थान देऊन बाबासाहेबांच्या कर्तृत्वाचा प्रकाश त्यांच्या गाण्यांद्वारे सर्वदूर फिरविला. त्यांनी सातत्याने बाबासाहेबांचा संदेश जनतेत वाटला. बाबासाहेबांच्या विचारांचेच जागरण केले. बाबासाहेब आणि त्यांची सामाजिक क्रांती लोकांना सांगून बाबासाहेबांच्या पायवाटेनेच सर्वांचे भले आहे हे सतत पटवून दिले. बाबासाहेबांच्या पश्चात बाबासाहेबांना अभिवचन देतांना वामनदादा त्यांच्या 'तुझा संदेश भीमराया' १९

या पुढील गाण्यांद्वारे बाबासाहेबांचे अपूर्ण राहिलेले कार्य पूर्ण करण्याबाबत मनोदय व्यक्त करतांना विचार मांडतात की,

वामनदादांच्या हृदयात बाबासाहेबांचे स्थान अत्यंत परम आदराचे होते हे लक्षात येते. वामनदादांनी त्यांच्या पुढील गाण्यांद्वारे बाबासाहेबांचे जनतेच्या जीवनातील मौलिक स्थान मोठ्या आदराने व्यक्त केले आहे.

- २) वामनदादांनी त्यांच्या आयुष्यात आंबेडकरी चळवळीच्या प्रचार व प्रसारासाठी संबंध महाराष्ट्रातील गावो गावी व बहुतेक ठिकाणी उपाशी पोटाने व दूर पायी चालत जाऊन सांगीतिक कार्यक्रम केलेले आहेत.
- ३) वामनदादांनी त्यांच्या आयुष्यात आंबेडकरी चळवळीलाच केंद्रस्थानी मानून आपले गाणे फुलविले.
- ४) वामनदादांनी भीम गीते, बुद्ध गीते, लहान बालके, स्त्री, पुरुष, निसर्ग, समाजातील अनिष्ट रूढी- परंपरा, देशभक्ती, परदेश, विषमता, स्वातंत्र्य, समता, बंधुता, शांतता, जातीय सलोखा, एकता, शेती, विविध महापुरुष, ऋतू, सुख दुःखे, सण, गुलामगिरी, साम्राज्यवाद, दास्य, नाती, विवाह न्याय्य हक्कांसाठी बंड, आकाश, धरती, वारा, अग्नी, पाणी, तहान- भूक, अन्न, वस्त्र, निवारा, प्रवास, स्वप्न, न्याय-अन्याय, नेकी- बेकी, मातापिता, आयुष्य, जन्म-मृत्यू, दया, क्षमा, शांती, प्रेम, करुणा, जाती, धर्म, पंथ, अधिकार - कर्तव्ये इत्यादी विषयांवर हिंदी व मराठी भाषेतून हजारोंच्या संख्येने गाणी, लिहून, संगीतबद्ध करून व स्वतः गाऊन जनतेसमोर सादर केलेली आहेत.

- ५) वामनदादांच्या गानप्रतिभेवर अनेक मान्यवरांनी परीक्षणे, निरीक्षणे, लेख लिहून वामनदादांच्या सांगीतिक प्रतिभेचे उचित मूल्यांकन वेळोवेळी केलेले आहे.
- ६) वामनदादा हे संगीताच्या माध्यमातून आंबेडकरी चळवळीचे काम करणारे फकीर होते.
- ७) वामनदादांनी त्यांच्या आयुष्यभरात हजारोंच्या संख्येने लिहिलेल्या गीतांची साहित्यिक उंची, मूल्य व सामाजिक एकता व उन्नतीच्या दृष्टीने उपयोगिता पाहू जाता वामनदादा हे महाकवी ठरतात.
- ८) वामनदादांनी त्यांच्या एकूण ८२ वर्षांच्या आयुष्याच्या कालखंडात, जवळपास ६० वर्षे सातत्याने गीत लेखन, संगीत तयार करणे व सदर गाणी सांगीतिक सभामधून अव्याहतपणे गाण्याचे कार्य केलेले आहे.
- ९) वामनदादा कर्डक यांच्या वैचारिक आयुष्यावर तथागत भगवान बुद्ध यांनी प्रतिपादन केलेल्या शांतीच्या संदेशाचा, समतामूलक विचारांचा, प्रेम, मैत्रीचा, वैश्विक करुणेचा सखोल प्रभाव होता.
- १०) विकाररूपी तणाला मनातून समूळ उपटून टाकल्यानंतरच मन हे पूर्णतः शुद्ध होईल व मगच या विशुद्ध मनाच्या माध्यमातून समस्त मानवांच्या हिताचा विचार परिदृढ होईल असे बुद्धांचेच विचार वामनदादांनी त्यांच्या गाण्याच्या माध्यमातून शब्दबद्ध करून मांडले आहेत. त्यामुळे वामनदादांचे गाणे हे माणसांना जीवन जगण्याचा आदर्शवत असा बुद्धांनी प्रतिपादन केलेला वैश्विक करुणेचा वैज्ञानिक विचार देते.
- ११) बाबासाहेबांनी सामाजिक उन्नतीच्या दृष्टीकोनातून त्यांच्या वैचारिक जीवनामध्ये स्वीकारलेल्या बुद्ध, कबीर, फुले या महापुरुषांच्या जीवनकार्याचा वामनदादांनी सखोल अभ्यास करून या महापुरुषांचे समाज हितकारक विचार आपल्या गाण्यांद्वारे मोठ्या मौलिकतेने मांडलेले आहेत.
- १२) वामनदादांनी बाबासाहेबांच्या सामाजिक क्रांतीच्या कार्याची नैतिक जबाबदारी स्वेच्छेने स्वीकारून आयुष्यभर संगीताच्या माध्यमातून समाज प्रबोधनाचे व समाज सुधारणेचे अखंड कार्य केले.
- १३) वामनदादांच्या आयुष्यावर बाबासाहेब व बुद्ध यांच्या विचारांचा अत्यंत प्रभाव असल्यानेच त्यांनी त्यांच्या गाण्यांतून सातत्याने प्रेम, मैत्री, दया, करुणा, समता, ममता, एकता, वैश्विक शांतता, उन्नती इत्यादी बाबींचा अहोरात्र जागर करून मानवी समाजात जीवनाला उन्नत करणाऱ्या मौलिक तत्वांची सातत्याने पेरणी

केली व माणसांना जागे करून उन्नतीच्या वाटेने अग्रेसर केले.

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