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FROM THE EDITOR'S DESK

To
The Readers
Anwesa: A Journal of Education

It was the best of times, it was the worst of times...

– Charles Dickens, *A Tale of Two Cities* (1859)

Dear readers,

Some of you might get confused on thinking as to why I am writing this open letter as an editorial when an editorial contains academic issues in the traditional format. Here, I am deviating from the traditional norms because following some norms blindly impedes your creativity. On the other hand, in the world of digital media, writing a letter is almost a lost art. Though we write letters for the official works, we use very limited words for it. Therefore, we don't get the chance to express our hearts in those letters. Above all, writing in epistolary form might help me to imbibe its lost glory as well as to revive my skill in writing letter.

In the beginning of the letter, I have used a quotation that is perfectly suitable for the present context in India. We are living at a time when we observe a great technological shift across India. We see the excessive dependence on technology and it is making our work easy. One of the greatest innovations in technology is Artificial Intelligence (AI). The innovation of AI has tremendously transformed the outlook of the present society. It is solving our problems in no time. Gradually, we are becoming completely dependent on it and we don't want to spend much time on pondering upon anything because we think it is the waste of time; rather we are spending the time for entertainment by scrolling on social media. We don't want brainstorming anymore, rather we want easy success in everything. It is becoming problem day by day and here Dickens is quite right in saying that it is "the worst of times". Technology has paralyzed us in such a way that we become completely slaves to it. Nowadays, a youth cannot live for an hour without a mobile phone. Since students do not have enough patience to tax their brains by thinking, they are taking the help of AI or software. Even, the researchers are researching or publishing research papers with the help of AI. As a result, we are heading towards self-destruction. I really don't know how to get rid of the situation, but we should be aware of this alarming situation. While reviewing the articles, I found many papers which are written with the help of artificial intelligence and I did not find anything new in those papers. Therefore, I had to reject those papers. I also found many papers which are poorly written and as an editor I tried to modify them. Since it is a double-blind peer reviewed journal, we made it sure that every paper should be reviewed twice by two anonymous reviewers. We tried to maintain the quality and have given maximum time after the exhaustion of day's work and now the fruits of our labor we are dedicating to the holy lotus feet of Bhagawan Shree Ramakrishna.

We tried to rectify the mistakes which we made in the previous issue and continuously we are trying to make this journal attractive. I hope you will enjoy reading this issue.

Thanking you,
Samrat Bisai
Executive Editor
Anwesa: A Journal of Education

EVOLUTION OF HUMAN VALUES ACROSS AGE GROUPS IN BENGALI TEXTBOOKS OF WEST BENGAL : A COMPARATIVE STUDY OF PRE AND POST 2011 CURRICULUM

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ABSTRACT

Human values encompass both widely accepted social norms and the expected behavior of individuals. For school children, these values play a crucial role in helping them adapt to their environment while shaping their emotional and moral development. Textbooks, beyond enhancing cognitive skills, serve as a fundamental tool in instilling these values. In 2011, a political shift in West Bengal led to major educational reforms, including changes in the elementary school curriculum. As a result, the content of vernacular Bengali textbooks before and after 2011 reflects notable differences. Some values have remained consistent, while others have evolved to align with contemporary educational priorities. This study examines the evolution in human values across different age groups in Bengali textbooks, focusing on how value representation has changed due to curriculum revisions. A qualitative content analysis was conducted on sixteen Bengali textbooks — eight from the pre-2011 curriculum and eight from the post-2011 curriculum, covering Classes I to VIII under the West Bengal Board of primary Education (WBBPE). The study employed a coding approach to categorize and analyze values such as aesthetic expression, environmental awareness, national consciousness, empathy, truthfulness, self-confidence, learning to live together, and love for family. The findings reveal a significant shift in the distribution and emphasis of values in newer textbooks. While traditional values like dignity of labor and religious tolerance were more prominent in older textbooks, newer textbooks place greater emphasis on cooperation, democratic decision-making, gender equality, and positive thinking. Additionally, national consciousness and environmental awareness have received increased focus in both textbook versions.

Keywords: Age Group, Bengali Textbooks, Evolution, Human Values

INTRODUCTION

The Evolution of Value Education in Bengali Textbooks

The integration of value education into Bengali literature has been a longstanding tradition, with textbooks serving as a primary tool for instilling moral principles. Institutions like Fort William College and the Serampore Baptist Mission played a pivotal role in incorporating ethical teachings into early educational materials. According to Khastagir (2004), Bengali prose has historically been a key medium for transmitting moral education, particularly among young learners. Given the fragmented structure of Hindu society, divided by caste and sectarian divisions, moral instruction became essential for fostering unity and ethical awareness.

Over time, value education gained prominence in textbooks, reflecting a growing societal interest in character development. From the establishment of Fort William College to Vidyasagar's reforms, vernacular textbooks became a significant means of imparting ethical values. In the post-Vidyasagar era, several Bengali literary works, such as "Sisupathya" by Ramgoti Nayaytarka, "Sikhyasnobisher Podya" by Akshoykumar Dutta, "Hasi-Khusi" (1904), "Adarshapath" (1925), and "Sushiksha" (1926) by Yogindranath Sarkar, played a crucial role in shaping moral education.

A significant transformation occurred with Rabindranath Tagore's contributions to Bengali literature, particularly through "Sahaj Path" (1930). His work introduced a harmonious blend of language, artistic expression, and moral instruction, offering a more engaging and thought-provoking approach to value education. In 1981, the West Bengal Board of Secondary Education introduced "Kishalay," a textbook specifically designed to promote ethical values among young learners. Before incorporating it into the curriculum, committees and education experts carefully evaluated its content, ensuring a structured approach to value integration. Instead of directly stating moral lessons, values were subtly embedded within literary narratives, allowing students to develop an intrinsic sense of ethics.

Post 2011 Reforms and Their Impact on Value Education

Following West Bengal's political transition in 2011, the newly elected government introduced significant educational reforms. A draft report on curriculum and course structure emphasized that moral education should not be limited to textbooks alone but should also be incorporated into extracurricular activities and school governance policies. The report highlighted the critical role of teachers in fostering a value-based learning environment.

The period between 1981 and 2011 was crucial for value education, as Bengali literature reached a peak in moral instruction. However, after 2011, a major shift occurred, transitioning from implicit value teaching to explicit moral education within primary school curricula. While Vidyasagar's writings conveyed moral teachings directly, Tagore's approach relied on metaphors, imagery, and symbolism to express ethical ideas. This shift likely reflects the fact that Vidyasagar was deeply involved in social reform, whereas Tagore, as a literary figure, focused on artistic expression and philosophical thought.

Curriculum Restructuring and the New Educational Approach after 2011

In July 2011, a new curriculum committee was established to review and revise the government school syllabus in West Bengal. The committee aimed to align the curriculum with national and global educational standards, incorporating recommendations from the Right to Education Act (2009), the Yashpal Committee, and the National Curriculum Framework (2005). These reforms emphasized "learning without burden," shifting the focus from rote memorization to conceptual understanding.

To modernize the curriculum, textbook content was thematically structured, integrating works by renowned Bengali authors alongside translated texts from global literature. This ensured a broad and diverse moral education that reflected local traditions as well as international perspectives. The committee also recognized that value education should extend beyond textbooks, incorporating creative activities, cultural learning, and historical perspectives to instill patriotism, communal harmony, cultural pride, and good habits in students.

OBJECTIVES OF THE STUDY

The objective of this present study was:

O1 : To examine the evolution of human values across different age groups in Bengali textbooks in elementary level of West Bengal before and after 2011.

METHODOLOGY

This study adopted a descriptive research design to analyze the shifts in human values reflected in Bengali textbooks before and after 2011. The content analysis method was employed to systematically examine and interpret the values embedded in textbooks, focusing on their presence, frequency, and thematic representation. *Primary data were collected from sixteen Bengali textbooks—eight published before 2011 (Kisलय (Classes I–V), Sahitya Songroho (Class VI), Sahitya Chayan (Class VII), Sahitya Bithi (Class VIII) and eight published after 2011 Amar Boi (Classes I & II), Patabahar (Classes III–V), Sahitya Mela (Classes VI–VIII). Additionally, relevant books, documents, and curriculum reports were reviewed to understand the broader context of value education reforms. The study utilized a coding approach to classify and compare key values, such as aesthetic expression, environmental awareness, national consciousness, empathy, truthfulness, and democratic decision-making. By applying qualitative content analysis, this research identifies patterns in value representation across different age groups, providing insights into how curriculum revisions have influenced moral education in West Bengal's elementary education system.*

DATA ANALYSIS PROCEDURE

To analyze the representation of human values in Bengali vernacular textbooks, a qualitative data analysis approach was followed. The procedure included the following steps:

Step 1: Identification of Values

- The study involved a detailed content analysis of Bengali textbooks from Class I to Class VIII (both old and new).
- Human values were identified based on explicit and implicit references in stories, poems, essays, and illustrations.
- The values considered for analysis included such as aesthetic expression, environmental awareness, national consciousness, empathy, truthfulness, quest for knowledge, discipline, self-confidence, learning to live together, and love for family.
- A systematic coding approach was applied to classify and document the presence of these values in each textbook.

Step 2: Positioning and Frequency Analysis

- Each identified value was categorized based on its occurrence in the textbooks.
- The frequency of each value was noted to determine which values were emphasized more in different textbooks.

- A comparative table was created to track how often each value appeared in different class levels and across old and new textbooks.

Step 3: Comparison across Age Groups and Time Periods

- The values reflected in the textbooks were compared across different age groups to examine shifts in emphasis from lower (Class I–V) to upper (Class VI–VIII) elementary levels.
- A comparison was made between old textbooks (pre-2011) and new textbooks (post-2011) to identify trends and changes in the representation of values.
- Any noticeable increase, decrease, or replacement of values was carefully analyzed.

ANALYSIS AND INTERPRETATION

Vernacular Textbooks and Reflected Human Values:

Bengali textbooks convey a wide range of values through poems, prose, rhymes, theatre, music, and essays. This research focuses on expert-recommended values that were selected for inclusion in elementary-level vernacular textbooks. According to Biswas, Sinha, and Guha (2018), a total of 54 values were identified as essential for elementary education. These values include:

- Aesthetic Expression, Affirmation of Others' Positive Qualities, Altruism, Appreciation and Respect for Cultural Diversity, Appreciation of Teamwork, Appreciation of Productive Work, Bravery, Control of Feelings and Emotions, Cooperation, Courtesy, Curiosity, Democratic Decision-Making, Devotion, Discipline, Dignity of Manual Labour, Empathy, Environmental Awareness, Faithfulness, Friendship, Frugality in Resource Consumption, Gender Equality, Generosity, Gratitude, Health Consciousness, Honesty, Joy of Giving, Justice, Kindness to Animals and Insects, Kindness to Humans, Leadership, Learning to Live Together, Love for Family, Love for Society, Modesty, Multiculturalism, National Consciousness, Non-Acceptance of Untouchability, Non-Violence, Persistence, Positive Thinking, Punctuality, Quest for Knowledge, Religious Tolerance, Respect for Mother Tongue, Self-Confidence, Self-Dignity, Sense of Equality, Simplicity in Conduct and Wants, Social Responsibility, Sympathy, Tolerance, Trust, Truthfulness, and Unity.

FINDINGS FROM THE ANALYSIS

Researcher analyzed 16 Bengali textbooks used for Classes I to VIII over the past two decades, comparing textbooks published before and after 2011.

- New Textbooks (After 2011): 34 out of 54 identified values were reflected.
- Old Textbooks (Before 2011): 26 out of 54 identified values were present.
- Common Values in Both Old and New Textbooks (20 values):
These values appeared consistently in both sets of textbooks: Aesthetic Expression, Affirmation of Others' Positive Qualities, Appreciation of Cultural Diversity, Appreciation

of Group Work, Bravery, Courtesy, Dignity of Manual Labour, Empathy, Environmental Awareness, Fraternity, Health Consciousness, Kindness to Living Beings, Love for Family, Love for Society, National Consciousness, Punctuality, Quest for Knowledge, Respect and Love for Mother Tongue, Self-Confidence, and Unity.

- Values Present in Old Textbooks but Missing in New Textbooks (6 values): These values were emphasized before 2011 but are absent in newer textbooks: Frugality in Resource Consumption, Persistence, Religious Tolerance, Self-Dignity, Sense of Equality, and Tolerance.
- Values Newly Introduced in New Textbooks (14 values): These values were added to textbooks after 2011 and were not present earlier – (Altruism, Cooperation, Curiosity, Democratic Decision-Making, Devotion, Discipline, Gender Equality, Honesty, Learning to Live Together, Modesty, Non-Acceptance of Untouchability, Positive Thinking, Simplicity in Conduct and Wants, and Truthfulness.)

The analysis reveals a shift in value emphasis in Bengali textbooks before and after 2011. While some values remained consistent, several older values were omitted, and new values were introduced in updated textbooks. These changes indicate a possible transformation in educational priorities and societal expectations reflected in the curriculum.

HUMAN VALUES IN ACCORDANCE WITH CHANGE IN AGE GROUP:

According to Notification No. 978-SE (EE)/10M-186/2010, dated 16.11.2016, issued by the School Education Department, Elementary Education Branch, Government of West Bengal, the appropriate age for each elementary class is as follows:

Table No - 1: Age Appropriate class for elementary students

Class	Year
Class- I	above 6 years to less than 7 years
Class- II	above 7 years to less than 8 years
Class- III	above 8 years to less than 9 years
Class- IV	above 9 years to less than 10 years
Class- V	above 10 years to less than 11 years
Class- VI	above 11 years to less than 12 years
Class- VII	above 12 years to less than 13 years
Class- VIII	above 13 years to less than 14 years

This classification confirms that each class is structured based on students' age groups. Therefore, it can be assumed that textbooks are designed in alignment with these age divisions to ensure students receive age-appropriate learning materials.

Grouping of Classes and Learning Outcomes

As per the Draft Report on Curriculum and Syllabus (2011), Government of West Bengal, the eight elementary classes (I–VIII) have been categorized into four groups, with each group consisting of two consecutive classes:

- **Group 1:** Classes I & II
- **Group 2:** Classes III & IV
- **Group 3:** Classes V & VI
- **Group 4:** Classes VII & VIII

Since each group consists of two classes, it is evident that the curriculum is structured to cater to the common learning needs of students within the same age bracket. The learning outcomes for each group are defined accordingly.

Human Values Reflected in Textbooks across Age Groups

Textbooks for each age group (two-class groups) were analyzed to identify human values embedded in the content. These values were categorized based on their presence across different age levels, helping to understand how values are emphasized and developed progressively throughout elementary education. This analysis provides a comprehensive view of how human values are integrated into textbooks, ensuring that students receive age-appropriate moral and ethical education.

Table 2: Human Values Reflected in Bengali Textbooks for Age Group I (Above 6 to Less Than 8 Years, Classes I & II)

Reflected Values (Old Textbooks)	Reflected Values (New Textbooks)
Aesthetic Expression	Aesthetic Expression
Appreciation and Respect for Cultural Diversity	Appreciation and Respect for Cultural Diversity
Appreciation of Group Working	Appreciation of Group Working
Environmental Awareness	Environmental Awareness
National Consciousness	National Consciousness
Dignity of Manual Labour	Affirmation of Positive Qualities
Fraternity	Devotion
Frugality in Consumption of Resources	Discipline
Health Consciousness	Democratic Decision-Making
Kindness to Living Beings	Learning to Live Together
Love for Family	Truthfulness
Empathy	Altruism
Quest for Knowledge	-
Self-Confidence	-

Table 3: Human Values Reflected in Bengali Textbooks for Age Group II (Above 6 to Less Than 8 Years, Classes III & IV)

Reflected Values (Old Textbooks)	Reflected Values (New Textbooks)
Aesthetic Expression	Aesthetic Expression
Appreciation and Respect for Cultural Diversity	Appreciation and Respect for Cultural Diversity
Bravery	Bravery
Dignity of Manual Labour	Dignity of Manual Labour
Environmental Awareness	Environmental Awareness
Fraternity	Fraternity
Kindness to Living Beings	Kindness to Living Beings
National Consciousness	National Consciousness
Persistence	Appreciation of Group Working
Punctuality	Health Consciousness
Quest for Knowledge	Quest for Knowledge
Religious Tolerance	Learning to Live Together
Self-Dignity	Cooperation
-	Positive Thinking
-	Curiosity
-	Truthfulness
-	Unity

Table 4: Human Values Reflected in Bengali Textbooks for Age Group III (Above 6 to Less Than 8 Years, Classes V & VI)

Reflected Values (Old Textbooks)	Reflected Values (New Textbooks)
Bravery	Learning to Live Together
Environmental Awareness	Environmental Awareness
Fraternity	Fraternity
Kindness to Living Beings	Kindness to Living Beings
National Consciousness	National Consciousness
Affirmation of Others' Positive Qualities	Affirmation of Others' Positive Qualities
Aesthetic Expression	Appreciation and Respect for Cultural Diversity
Religious Tolerance	Gender Equality
Unity	Positive Thinking
-	Quest for Knowledge

Table 5 : Human Values Reflected in Bengali Textbooks for Age Group IV (Above 6 to Less Than 8 Years, Classes VII & VIII)

Reflected Values (Old Textbooks)	Reflected Values (New Textbooks)
Affirmation of Others' Positive Qualities	Affirmation of Others' Positive Qualities
Courtesy	Courtesy
Environmental Awareness	Environmental Awareness
Fraternity	Fraternity
National Consciousness	National Consciousness
Respect and Love for Mother Tongue	Respect and Love for Mother Tongue
Kindness to Living Beings	Kindness to Living Beings
Love for Family	Love for Family
Love for Society	Love for Society
Appreciation and Respect for Cultural Diversity	Aesthetic Expression
Sense of Equality	Gender Equality
Tolerance	Honesty
-	Altruism
-	Dignity of Manual Labour
-	Empathy
-	Modesty
-	Cooperation
-	Non-Acceptance of Untouchability
-	Punctuality
-	Quest for Knowledge
-	Devotion
-	Self-Confidence

FINDINGS FROM THE ANALYSIS

- **Common Values in Both Old and New Textbooks:**

Aesthetic Expression, Appreciation and Respect for Cultural Diversity, Bravery, Environmental Awareness, Fraternity, Kindness to Living Beings, National Consciousness, Quest for Knowledge, Affirmation of Others' Positive Qualities, Love for Family, Love for Society, Courtesy, Respect and Love for Mother Tongue.

- **Values Present in Old Textbooks but Missing in New Textbooks:**

Dignity of Manual Labour (for younger age groups), Frugality in Consumption of Resources, Persistence, Religious Tolerance, Self-Dignity, Sense of Equality, Tolerance.

- **New Values introduced in New Textbooks:**

Affirmation of Positive Qualities, Devotion, Discipline, Democratic Decision-Making, Learning to Live Together, Truthfulness, Altruism, Cooperation, Positive Thinking, Curiosity, Unity, Gender Equality, Honesty, Modesty, Non-Acceptance of Untouchability, Punctuality, Empathy, Self-Confidence.

Table 6 : Age Group-Wise Comparison of Human Values in Old and New Textbooks

(This table highlights the similarities, removals, and additions of values across different age groups in old and new textbooks.)

Age Group	Common Values (Present in Both Old & New Textbooks)	Values Removed (Present in Old but Missing in New Textbooks)	Newly Introduced Values (Present in New but Missing in Old Textbooks)
Above 6 to Less than 8 Years (Class I & II)	Aesthetic Expression, Appreciation and Respect for Cultural Diversity, Appreciation of Group Work, Environmental Awareness, National Consciousness	Dignity of Manual Labour, Fraternity, Frugality in Consumption of Resources, Health Consciousness, Kindness to Living Beings, Quest for Knowledge, Self-Confidence	Affirmation of Positive Qualities, Devotion, Discipline, Democratic Decision-Making, Learning to Live Together, Truthfulness, Altruism
Above 8 to Less than 10 Years (Class III & IV)	Aesthetic Expression, Appreciation and Respect for Cultural Diversity, Bravery, Dignity of Manual Labour, Environmental Awareness, Fraternity, Kindness to Living Beings, National Consciousness, Quest for Knowledge	Persistence, Punctuality, Religious Tolerance, Self-Dignity	Appreciation of Group Work, Health Consciousness, Learning to Live Together, Cooperation, Positive Thinking, Curiosity, Truthfulness, Unity
Above 10 to Less than 12 Years (Class V & VI)	Environmental Awareness, Fraternity, Kindness to Living Beings, National Consciousness, Affirmation of Others' Positive Qualities	Aesthetic Expression, Religious Tolerance, Unity	Learning to Live Together, Appreciation and Respect for Cultural Diversity, Gender Equality, Positive Thinking, Quest for Knowledge

Age Group	Common Values (Present in Both Old & New Textbooks)	Values Removed (Present in Old but Missing in New Textbooks)	Newly Introduced Values (Present in New but Missing in Old Textbooks)
Above 12 to Less than 14 Years (Class VII & VIII)	Affirmation of Others' Positive Qualities, Courtesy, Environmental Awareness, Fraternity, National Consciousness, Respect and Love for Mother Tongue, Kindness to Living Beings, Love for Family, Love for Society	Appreciation and Respect for Cultural Diversity, Sense of Equality, Tolerance	Aesthetic Expression, Gender Equality, Honesty, Altruism, Dignity of Manual Labour, Empathy, Modesty, Cooperation, Non-Acceptance of Untouchability, Punctuality, Quest for Knowledge, Devotion, Self-Confidence

FINDINGS FROM THE ANALYSIS

1. **Values Retained Across All Age Groups:**

Environmental Awareness, Fraternity, Kindness to Living Beings, National Consciousness, Affirmation of Others' Positive Qualities were consistently present in both old and new textbooks.

2. **Values Removed in New Textbooks (Previously Present in Old Textbooks):**

Early Age Groups (6–8 years & 8–10 years): Removed values include *Dignity of Manual Labour, Frugality in Consumption of Resources, Religious Tolerance, Self-Dignity, and Tolerance*.

Older Age Groups (10–14 years): *Religious Tolerance, Sense of Equality, and Appreciation and Respect for Cultural Diversity* were no longer emphasized.

3. **New Values Introduced in New Textbooks:**

For Younger Students (6–10 years): *Affirmation of Positive Qualities, Devotion, Discipline, Democratic Decision-Making, Learning to Live Together, Truthfulness, Altruism, Cooperation, Positive Thinking, Curiosity, Unity*.

For Older Students (10–14 years): *Gender Equality, Honesty, Empathy, Modesty, Cooperation, Non-Acceptance of Untouchability, Punctuality, Quest for Knowledge, Devotion, Self-Confidence*.

4. **Shift in Focus:**

Older Textbooks (Before 2011): Focused more on *Dignity of Manual Labour, Religious Tolerance, Persistence, Frugality, Self-Dignity, and Tolerance*.

Newer Textbooks (After 2011): Placed greater emphasis on *Democratic Decision-Making, Cooperation, Gender Equality, Positive Thinking, Learning to Live Together, Non-Acceptance of Untouchability, and Empathy*.

The comparison of human values across age groups reveals a significant shift in focus from traditional ethical values (e.g., dignity of labour, religious tolerance, and frugality) to more modern social values (e.g., gender equality, cooperation, positive thinking and democratic decision-making).

COMPARISON OF HUMAN VALUES IN OLD AND NEW TEXTBOOKS ACROSS AGE GROUPS

Age Group 1 (6–8 years)

In the textbooks designed for students aged 6 to 8 years (Classes I & II), the old textbooks contained a total of 14 values, whereas the new textbooks contained 12 values. Among these, only five values were common between the two versions. These shared values include Aesthetic Expression, Appreciation and Respect for Cultural Diversity, Appreciation of Group Work, Environmental Awareness, and National Consciousness. This indicates that while certain foundational values remained unchanged in both versions, the new textbooks introduced some new values while removing others.

Age Group 2 (8–10 years)

For students in the 8 to 10 years age group (Classes III & IV), the old textbooks reflected 13 values, whereas the new textbooks included 17 values. Among these, eight values were common in both versions. These shared values were Aesthetic Expression, Appreciation and Respect for Cultural Diversity, Bravery, Dignity of Manual Labour, Environmental Awareness, Fraternity, Kindness to Living Beings, and National Consciousness. The increase in the number of values in the new textbooks suggests an expanded emphasis on moral and ethical development at this stage. The introduction of new values in this age group indicates a shift towards instilling additional social and interpersonal qualities in students.

Age Group 3 (10–12 years)

In the textbooks used for students aged 10 to 12 years (Classes V & VI), the old textbooks contained 9 values, whereas the new textbooks contained 10 values. Among these, five values remained the same in both versions. These shared values were learning to Live Together, Environmental Awareness, Fraternity, Kindness to Living Beings, and National Consciousness. While the number of values remained relatively stable in this age group, the shift in focus suggests that certain values were either replaced or newly introduced to align with changing educational priorities.

Age Group 4 (12–14 years)

For students in the 12 to 14 years age group (Classes VII & VIII), there was a significant increase in the number of values in new textbooks compared to the old ones. The old textbooks contained 12 values, whereas the new textbooks reflected 22 values. Among these, nine values were found to be common across both versions. These shared values were – Affirmation of Others' Positive Qualities, Courtesy, Environmental Awareness, Fraternity, National Consciousness, Respect and Love for Mother Tongue, Kindness to Living Beings, Love for Family, and Love for Society. The substantial increase in the number of values in the new textbooks for this age group suggests a greater emphasis on social, ethical, and moral development as students approach adolescence.

FINDINGS FROM THE ANALYSIS

1. Increase in the Number of Values in New Textbooks

The total number of values increased significantly in the new textbooks, especially in the 8–10 years and 12–14 years age groups. The most noticeable expansion occurred in Age Group 4 (12–14 years), where the number of values almost doubled from 12 to 22. This reflects an educational shift towards providing students with a broader moral and ethical foundation in their later years of elementary education.

2. Reduction of Values in Early Age Groups (6–8 years)

While the total number of values increased overall, the 6–8 years age group saw a slight reduction from 14 values in the old textbooks to 12 values in the new ones. This suggests that the curriculum for younger children might have been streamlined to focus on fewer but more essential values at an early stage.

3. Retention of Core Values across All Age Groups

Certain values were consistently present in both the old and new textbooks across all age groups. These include Environmental Awareness, Fraternity, National Consciousness, and Kindness to Living Beings. The continued emphasis on these values indicates that they are considered fundamental for moral education and character development throughout elementary schooling.

4. Shift in the Emphasis of Human Values

- In the old textbooks, there was a stronger focus on traditional ethical values, such as Dignity of Manual Labour, Religious Tolerance, and Tolerance.
- In the new textbooks, there was a greater emphasis on modern values, including Democratic Decision-Making, Cooperation, Truthfulness, Positive Thinking, Gender Equality, and Non-Acceptance of Untouchability.
- This shift reflects an updated educational approach that aligns with contemporary social and cultural values, fostering a more inclusive and progressive learning environment.

The comparison of human values in old and new textbooks highlights a notable shift in educational priorities over time. While certain core values have remained constant, the new textbooks have introduced additional values that emphasize social responsibility, ethical awareness, and inclusivity. The significant increase in values in later age groups (8–14 years) suggests a greater effort to instill broader moral principles as students grow older. This change may indicate that modern educational reforms aim to prepare students for a more diverse, cooperative, and ethically conscious society, reflecting evolving societal needs and expectations.

CONCLUSION

The transition from old textbooks (pre-2011) to new textbooks (post-2011) in West Bengal reflects a paradigm shift in the emphasis on human values in elementary education. While core values such as Environmental Awareness, Fraternity, National Consciousness, and Kindness to Living Beings remain consistent across both versions, significant changes in value priorities can be observed.

In old textbooks, there was a stronger focus on traditional ethical and moral values, such as Dignity of Manual Labour, Religious Tolerance, Persistence, and Tolerance. These values emphasized discipline, respect for work, and ethical living. However, in new textbooks, there is a noticeable shift towards modern social and interpersonal values, including Democratic Decision-Making, Cooperation, Gender Equality, Positive Thinking, and Non-Acceptance of Untouchability. This change indicates a broader emphasis on inclusivity, social awareness, and progressive thinking in education.

Additionally, while early age groups (6–8 years) saw a slight reduction in the number of values, older age groups (12–14 years) experienced a significant increase in values, suggesting a structured and gradual moral development approach. The new curriculum aligns with contemporary societal expectations, preparing students to be more socially responsible, ethically aware, and inclusive citizens.

This paradigm shift highlights the evolution of educational priorities from a discipline-based approach in old textbooks to a value-driven, socially inclusive framework in new textbooks.

The Importance of Value Education in Bengali Vernacular Textbooks

In today's world, value education has gained more significance than ever before. Societies across the globe are facing a crisis of values, where issues such as moral degradation, social injustice, and ethical conflicts are becoming increasingly prevalent. Without instilling strong moral values in individuals, achieving social justice, peace, happiness, and social order remains an unattainable ideal. Value education plays a crucial role in shaping the hopes, aspirations, and ethical foundations of a nation, contributing to the overall progress of society.

Value education is not a one-time process but a continuous practice that must begin from early childhood. Therefore, Bengali vernacular textbooks at the elementary level play an essential role in fostering human values among young learners. Teachers, as facilitators of knowledge, must emphasize value-based education while teaching these textbooks, ensuring that students internalize and practice these values in their daily lives. Elementary education serves as the foundation for shaping a child's character and moral compass, making it a critical stage for value development.

The Role of Vernacular Textbooks in Value Education

Human values are essential tools for leading a meaningful life, and in an era of value crisis, their practice has become more relevant than ever. Bengali language and literature textbooks play a crucial role in shaping children's moral development, as young minds are highly impressionable. Due to their "tabula rasa" (blank slate) nature, children are naturally imaginative and can be molded with the desired ethical principles.

The inclusion of new values such as altruism, cooperation, curiosity, discipline, truthfulness, learning to live together, and positive thinking in new Bengali textbooks provides students with a strong ethical foundation. These values encourage them to engage in acts of kindness, teamwork, and service to humanity, fostering responsible and compassionate future citizens.

However, value education should not be limited to textbooks alone. Teachers must go beyond the curriculum and actively integrate values into students' lives through discussions, activities, and

real-life applications. If these values remain confined to books without being practiced in daily life, the entire purpose of value education through vernacular textbooks will be lost. Only by embedding these values into students' thinking and behavior can we ensure that they grow into morally upright and responsible citizens who contribute positively to society.

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INFRASTRUCTURAL DEVELOPMENT AND IMPLEMENTATION OF MID DAY MEAL SCHEME IN ELEMENTARY EDUCATION: A CASE STUDY OF PURBA MEDINIPUR DISTRICT

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ABSTRACT

This study presents an in-depth analysis of the current situation of elementary education in the Purba Medinipur district of West Bengal, India, focusing on infrastructural progress and persistent challenges, along with a specific focus on the implementation of the cooked mid-day meal programme. The data were gathered through structured interviews with school heads, direct observations, and interactions with students and Self-Help Group (SHG) members involved in cooked mid-day meal preparation. The study reveals that while many schools meet basic educational standards, critical gaps are present in areas such as sanitation, safety, and essential educational resources, including libraries and playgrounds. Moreover, the cooked mid-day meal programme has shown positive outcomes in enhancing attendance and nutritional support, yet it faces challenges in maintaining hygiene and safe cooking practices. These findings underscore the need for focused improvements and policy-driven interventions to create a more inclusive, supportive and secure learning environment in Purba Medinipur, which is essential for the holistic development of learners of the elementary level of education in this region.

Keywords: Elementary Education, Infrastructures, Educational Resources, and Cooked Mid-Day Meal.

INTRODUCTION

Education is a fundamental right and a cornerstone for individual and societal development. In India, the elementary education system plays a crucial role in shaping the future of young learners, providing them with the foundational skills necessary for personal growth and societal participation. Education is not only considered essential for the pleasant development of one's personality but also for the growth and progression of the country as a whole. The elementary level of education shapes the basic foundation of children and is the most important stage among all levels of education. All educationists and policy-makers emphasize elementary education more as it is regarded as the foundation for the growth of not only individuals but also the welfare of the entire nation across the globe. Elementary education in India is regarded as the foundation of compulsory schooling, which is considered essential for individuals. Empirical studies also point out that investment in elementary education increases the output in all the

sectors of the economy much more than other levels of education and that economic returns to investment in primary education are greater than those arising from different levels of education (Colclough, 1980). Universalization of Elementary Education (UEE) is still a distant prospect in a substantial part of the world. In India, the central government, the state governments, and other organizations have been involved in the progression of elementary education. The 86th Constitutional Amendment in 2002 made education the fundamental right of children within the age group of six to fourteen years. The Right of Children to Free and Compulsory Education Act, 2009, commonly known as the Right to Education Act (RTE), 2009 was recognized, it stated all children should be made the provision of free education up to the age of fourteen years and for children with special needs up to the age of eighteen years. To ensure the Universalization of Elementary Education, the Government of India has taken several initiatives since its independence; those are Operation Black Board in 1987-1988, the District Primary Education Programme (DPEP) in 1994, Sarva Shiksha Abhiyan (SSA) in 2000-2001, Mid-Day Meal scheme in 1995. After taking several initiatives from the government end, it is vital to analyze from time to time, the necessary areas to make teaching-learning efficient for the children as the teaching-learning processes are of utmost significance for getting quality elementary education to any county's children. Classrooms are considered to be one of the important areas, where learning takes place. It is important to make the students feel comfortable within the classrooms so that their learning and understanding effectively take place. In this context, we may cite one of the unforgettable statements made by Daulat Singh Kothari in his Report i.e. in the Indian Education Commission (1964-1966), where he said, "The Destiny of India is now being shaped in Her Classroom." The Purba Medinipur district of West Bengal presents a unique context for exploring the effectiveness and reach of educational facilities, particularly in the realm of infrastructural support and nutritional programmes such as the mid-day meal initiative.

This study aims to investigate the various facilities offered by schools to their learners, assessing the progress of infrastructural development at the elementary education level. It also seeks to delve into the implementation and impact of the cooked mid-day meal programme, which is designed to enhance student attendance, nutritional status, and overall learning outcomes. By evaluating these dimensions, the research intends to provide a comprehensive overview of the current educational landscape in Purba Medinipur of West Bengal, India identifying both strengths and areas for improvement.

In light of the ongoing challenges faced by the education system, including disparities in access and quality, this study contributes valuable insights into the effectiveness of existing policies and programs. The findings will not only inform stakeholders about the current state of elementary education in the region but also pave the way for future enhancements that can benefit learners across the district.

OBJECTIVES OF THE STUDY

The objectives of the present study are:

- To understand the various facilities provided by school authorities to their learners at the elementary level of education in the Purba Medinipur district of West Bengal.

- To enquire about the progress of different infrastructural facilities at the elementary level of education in the Purba Medinipur district of West Bengal.
- To enquire about the different matters relating to the cooked mid-day meal programme at the institution level of elementary education in Purba Medinipur district of West Bengal.

OPERATIONAL DEFINITIONS

- **Elementary Education:** In this present study elementary level of education is the education level from the Class- I standard to Class- VIII standard.
- **Primary School:** In this present study Primary Schools are those schools consisting of Class- I to Class- IV or V.
- **Upper Primary School:** In this present study Upper-Primary Schools are those schools consisting of Class- VI to Class- VIII in ambience of Secondary or Higher Secondary set-up.
- **Cooked Mid Day Meal Programme:** The Cooked Mid-Day Meal Programme, a Scheme, is an initiative of the Government of India aimed at improving the nutritional status of school-age children (0-14 years) across the country through the provision of cooked meals in schools. By 2002, the said programme was put into action in every state in India based on the directives from the Supreme Court of India. The scheme has been renamed the PM-POSHAN (*Pradhan Mantri Poshan Shakti Nirman*) Scheme since September 2021.

METHODOLOGY

The present study is a survey research taking a specific district as the case study area. This study is designed to know the different facilities provided by the Schools to their learners, along with how far the institutions progress in different infrastructural facilities at the elementary level of education and to enquire about the different matters relating to cooked mid-day meal programme at institution level of elementary education in Purba Medinipur district of West Bengal, India. We have used both primary and secondary data in this present study. The primary data have been collected through a self-made interview schedule prepared for the head of the institution as well as with close observation of school environment, and interaction with the students, and members of the Self-Help Group (SHG) who are dedicated to cooking the mid-day meal at the kitchen room of the schools. In this study, we have taken 49 schools, covering both Primary and Upper-Primary schools situated in different parts of Purba Medinipur district of the Indian state of West Bengal. Among these 49 studied schools, 38 schools are Primary Schools, and 11 schools are Upper-Primary Schools in higher secondary school ambience. The data were collected from September to December 2023. The secondary data have been collected from research articles, government reports, websites etc. Then, the collected data have been analyzed qualitatively.

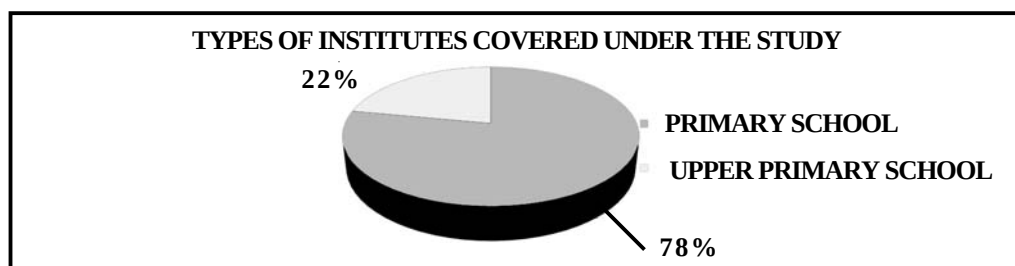


Figure 01: Types of Institutes Covered under the Study

Source : Primary Data

FINDINGS AND DISCUSSION

The present study aims to identify the various facilities provided by schools to their learners, assess the progress of institutions in terms of infrastructural facilities at the elementary education level, and explore issues related to the cooked mid-day meal program at the elementary level of educational institutions in Purba Medinipur district, West Bengal. Below are the findings of the study, followed by necessary discussion:

- A) Availability of Separate Head Master/ Head Teacher Room:** This study reveals that only 43% of schools have separate Headmaster or Head-Teacher rooms for regulating different administrative and academic works smoothly. In the Purba Medinipur district of West Bengal, it is revealed from the present study that there are 57% of schools, where there are no separate Headmaster or Head-Teacher room. According to the provisions laid down in the Sarva Siksha Abhiyan Scheme, there should be a separate Headmaster or Head-Teacher room in every school. But, after 22 years of Sarva Siksha Abhiyan implementation, it has been seen that a major portion of elementary level schools in Purba Medinipur district of West Bengal (57%) have no separate Headmaster or Head-Teacher room for smooth functioning of academic and administrative works of the school.

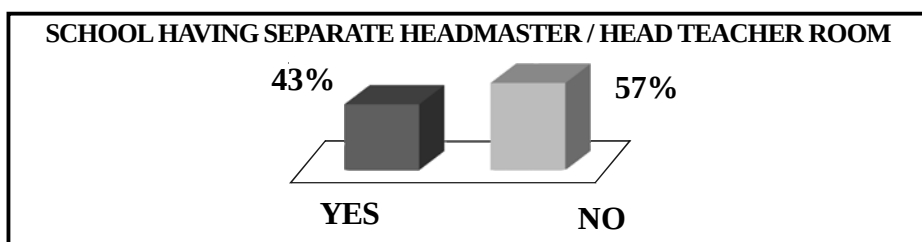


Figure 02: Availability of Separate Headmaster / Head-Teacher Room

Source: Primary Data

- B) School Having Boundary Wall:** There are 57% of schools in Purba Medinipur district where boundary walls exist, but 43% of schools have no boundary wall. As per the provisions laid down in the Right to Education Act- 2009, each school should have a boundary wall as a safety measure for children. In Sarva Siksha Abhiyan, each school should have got the fund allocation for constructing proper boundary walls, but till now 43% of schools run without boundary walls in the Purba Medinipur district of West Bengal.

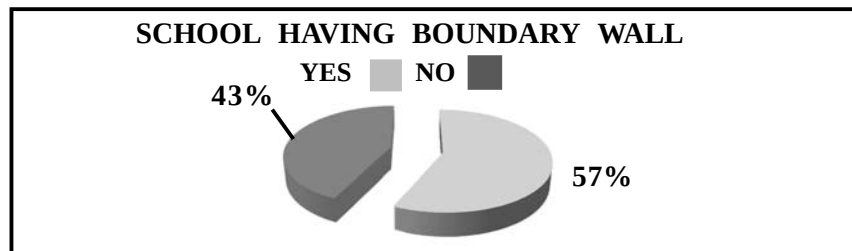


Figure 03: School Having Boundary Wall

Source: Primary Data

- C) **Status of Ramp with Handle:** We have collected data regarding Ramp with Handle, which is a very important part of every school infrastructure mainly for the Children with Special Needs (CWSN). Through the Sarva Siksha Abhiyan Scheme, every school should have the funds to construct a Ramp with a Handle. After making various efforts regarding the construction of a ramp with a handle in the school building, it has been seen that there are 10% of schools in the Purba Medinipur district of West Bengal, where no ramp with a handle has been found. The majority of the schools (90%), have ramps with handle exist in the school building in the said district.

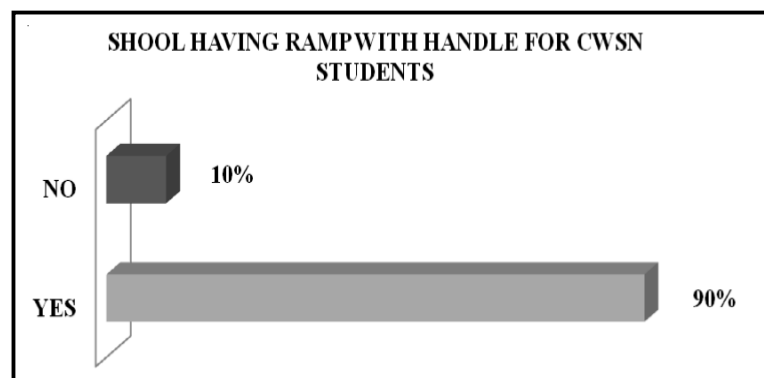


Figure 04: Status of Ramp with Handle

Source: Primary Data

- D) **Availability of Library :** The study revealed that 22% of schools in the Purba Medinipur district of West Bengal had no library, while 78% of the schools surveyed did have a library.

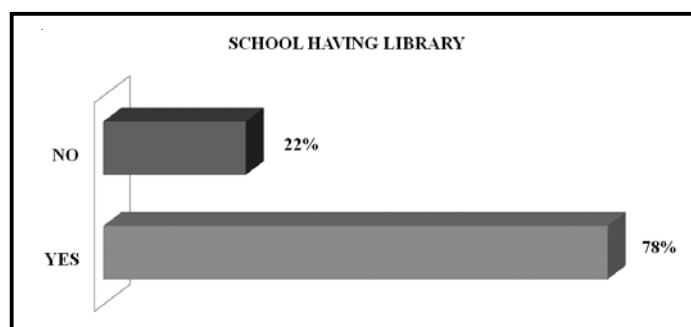


Figure 05: Availability of Library in School

Source: Primary Data

- E) **Availability of Electricity:** All the schools under the study have an electricity connection, and they use it fully for running fans and lighting the bulb in the classroom.

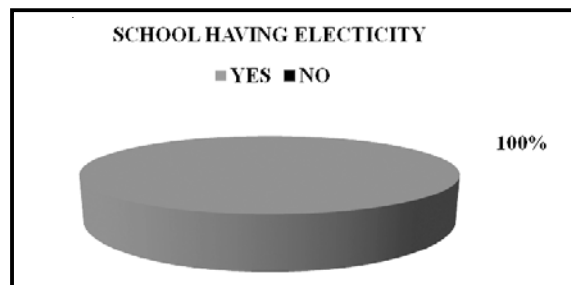


Figure 06: Availability of Electricity

Source: Primary Data

- F) **School Having Playground:** The playground is an important part of the school. It has been revealed from the present study that 59% of schools in the Purba Medinipur district have playgrounds, though 41% of schools have no playgrounds.

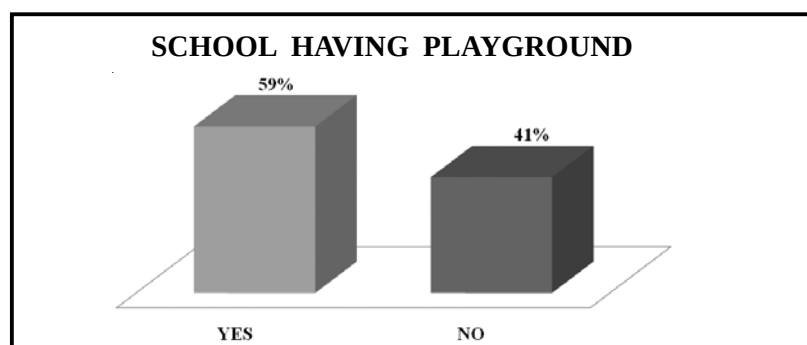


Figure 07: School Having Playground

Source: Primary Data

- G) **Availability of Tap-Water:** In the Purba Medinipur district, there are 90% of schools where tap-water is available, but 10% of schools where students drink water from tube wells.

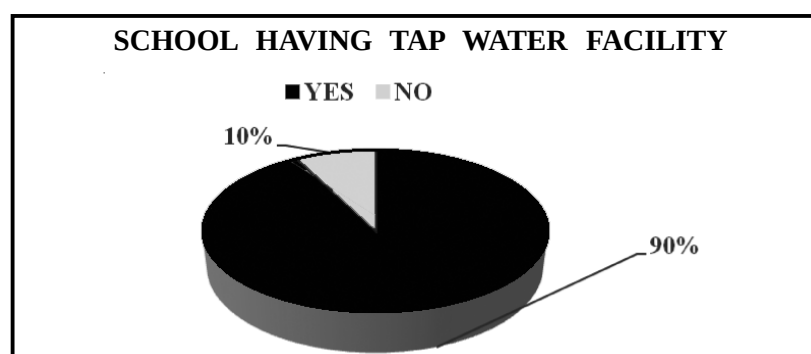


Figure 08: Availability of Tap-Water

Source: Primary Data

- H) Quality of Drinking-Water:** When we asked the head of the institute regarding the quality of drinking water, 92% of the heads of the institute responded that the quality of drinking water is purely safe. However, it is very alarming that 8% of the heads of the institute of elementary level schools in the Purba Medinipur district of West Bengal said that the available drinking water source of their school is not safe to drink.

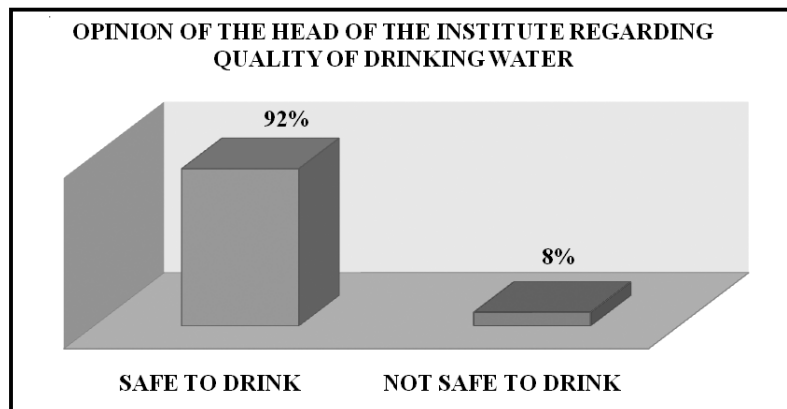


Figure 09: Quality of Drinking-Water

Source: Primary Data

- I) Status of Arsenic Test of Drinking Water:** When we asked the head of the institute regarding the arsenic test of the drinking water regularly, in response of that question, 59% of heads of the institute said that they had done the said test regularly, and 41% of heads of the institute said that they did not go through the arsenic test of their source of drink water. It is evident from the Government of West Bengal's recent report made in 2021 that about 78.1% arsenic contaminations have been found in the Purba Medinipur district (<https://phed.sunandainternational.org/dash-new/purba-medinipur>). Therefore, it can be concluded that the district is highly vulnerable to arsenic contamination in drinking water. It is especially concerning that 41% of schools in the Purba Medinipur district have not undergone testing for arsenic in their drinking water sources.

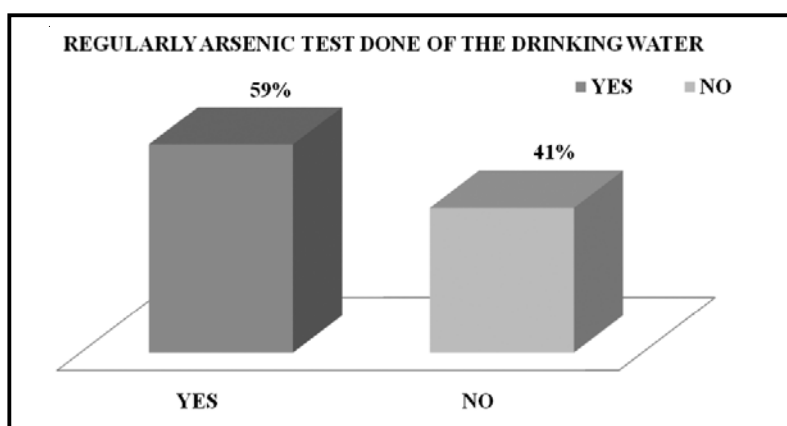


Figure 10: Status of Arsenic Test on Regular Basis

Source: Primary Data

- J) Toilet Facilities in School:** It has been revealed from the study that 100% of schools have well-equipped and functioning boys' toilet for male students, whereas 98% of schools have well-equipped and functioning girls' toilet for female students; 2% of schools where no separate girls' toilets exist though those schools are co-educational i.e. both male and female students enroll every year. In 84% of schools separate staff toilets have been found, whereas in 16% of schools where no separate staff toilets exist. When we asked the head of the institute regarding the regular cleanliness of the school's toilets, in response to that 92% head of the institute said that they cleaned the toilet regularly, whereas 8% head of the institute said that regular cleaning could not be done.

Table 01: Toilet Facilities in Elementary Level Schools of Purba Medinipur District

Boys Students' Toilet		Girls Students' Toilet		Staff Toilet		Clean Everyday	
Yes	No	Yes	No	Yes	No	Yes	No
100%	NIL	98%	2%	84%	16%	92%	8%

Source: Primary Data

- K) Status of Cooked Mid-Day Meal Programme in Purba Medinipur District:**
It has been revealed from the present study that 100% of schools in the Purba Medinipur district of the Indian state of West Bengal have well-equipped kitchen rooms for their Cooked Mid Day Meal Programme (CMDMP). 94% Elementary level of Educational institutes in the Purba Medinipur district have well-equipped storerooms for their Cooked Mid Day Meal Programme, whereas it has been found from the present study that 6% of schools have no storeroom for their Cooked Mid Day Meal Programme. Making a 'kitchen garden' in the school premises is one of the good practices regarding Cooked Mid-Day Meal Programme implementation. We observed during our field visit that 53% of schools have made a kitchen garden in their school premises, where they produced seasonal vegetables without applying chemicals like fertilizers, pesticides etc. and cooked those in their school's Mid Day meal; whereas we did not find kitchen garden in 47% schools' premises. For safety purposes, in schools where Mid Day meals run, there should be a provision of having at least one fire extinguisher in the kitchen room laid down in the Sarva Siksha Abhiyan scheme. We observed during our field visit that 69% of schools have functioning fire extinguishers in their kitchen room, whereas in 31% of schools, we did not find any fire extinguishers in their kitchen room or on their school premises. During our field visit, we observed that 29% of schools have cooked their Mid Day with Liquefied Petroleum Gas (L.P.G.); 53% of schools have cooked their Mid Day with wood, and 18% schools have used both L.P.G. and wood for cooking their Mid Day.

Table 02: Status of Cooked Mid-Day Meal Programme in Elementary Level Schools of Purba Medinipur District

Kitchen Room		Store Room		Kitchen Garden		Fire Extinguisher		Fuel Used for CMDMP		
Yes	No	Yes	No	Yes	No	Yes	No	L.P.G.	Wood	Both Wood & L.P.G.
100%	NIL	94%	6%	53%	47%	69%	31%	29%	53%	18%

Source: Primary Data

KEY FINDINGS

The study conducted in the Purba Medinipur district of West Bengal highlights several critical infrastructural and administrative aspects of elementary schools.

Notably, only 43% of schools had a separate room for the Headmaster or Head-Teacher, while 57% lacked this basic facility.

Similarly, 57% of schools had boundary walls, leaving 43% without adequate campus security.

In terms of accessibility, 90% of schools had ramps with handles, although 10% did not, indicating gaps in inclusive infrastructure.

Library facilities were available in 78% of schools, while 22% lacked them.

Electricity was universally available, supporting lighting and fans in the classrooms.

A total of 59% of schools had playgrounds, leaving 41% without such spaces for physical activities.

Drinking water facilities were largely satisfactory, with 90% relying on tap water and 92% of school heads affirming its safety, although 8% admitted the water was unsafe. Notably, 41% of schools had not tested their water sources for arsenic.

Toilet facilities were nearly universal for boys (100%) and girls (98%), although 2% of co-educational schools lacked separate toilets for girls. Staff toilets were present in 84% of schools. Regular toilet cleaning was reported by 92% of heads.

All schools had functional kitchens for the Mid-Day Meal Programme, and 94% had storerooms, while 6% lacked storage. Kitchen gardens were present in 53% of schools. Fire safety measures were found in 69% of schools, but 31% lacked fire extinguishers. Cooking methods varied: 29% used LPG, 53% used wood, and 18% used both.

RECOMMENDATIONS

To address the infrastructural and environmental gaps identified, several key recommendations are proposed to enhance the overall educational experience in Purba Medinipur district schools.

First, all schools should establish designated administrative spaces, as over half currently lack such facilities, hindering effective management. Constructing boundary walls for the 43% of schools without them is essential for ensuring campus security. To support inclusivity, ramps with handrails must be installed in the 10% of schools where they are missing, complying with accessibility norms.

Library facilities should be provided in the 22% of schools currently without them to enrich learning resources.

Playgrounds must also be developed for the 41% of schools lacking outdoor recreational areas.

Immediate attention is required for the 8% of schools with unsafe drinking water, along with mandatory and regular arsenic testing in the 41% of schools that neglect this. Gender-sensitive infrastructure must be improved by building girls' toilets in the remaining 2% of coeducational schools and ensuring staff toilets in all institutions. Sanitation standards can be raised by enforcing regular cleaning in the 8% of schools not doing so.

To strengthen fire safety, extinguishers should be installed in the 31% of schools currently without them, particularly in kitchens. Transitioning schools from wood-based cooking to cleaner LPG alternatives is vital, as over half still rely on wood.

Schools lacking kitchen storerooms (6%) should be equipped accordingly to preserve food hygiene, while promoting kitchen gardens in the 47% of schools without them can support nutrition and sustainability.

Training programs for cooking staff and regular infrastructure and hygiene audits should be implemented to ensure continuous safety, health, and quality improvements.

These measures, collectively, aim to foster a more inclusive, secure, and developmentally supportive school environment across the district.

CONCLUSION

The findings of this study draw attention to several essential infrastructural and resource-related challenges faced by schools in the Purba Medinipur district of West Bengal. While noteworthy progress has been made in providing basic facilities such as functioning toilets, electricity, and kitchen rooms for the cooked mid-day meal programme, there stay behind some essential deficiencies that must be addressed to guarantee an equitable and beneficial learning environment for all students.

Issues like having separate administrative room for headmasters, few boundary walls, few library resources, and few playgrounds show the necessary requirement for infrastructure modernization in some schools across the district. Despite the fact that most of the schools have ramps with handle it shows that there is some consideration of user-friendliness though a few schools still require such basic amenities for children with disabilities.

Of these, the hurdles observed in some schools in realizing hygiene and safety include the lack of safe source of drinking water, the absence of fire extinguishers and the absence of female-only toilets in some of the co-educational schools. It is also sad to find out that many

schools use charcoal or wood in preparing their cooked mid-day meal programme, the need to encourage schools to use cleaner and safe method of cooking such as LPG.

The study shows that while many schools in Purba Medinipur have met basic educational standards, there is still a need for targeted improvements, especially in the areas of sanitation, safety, and environmental sustainability. Addressing these gaps will be necessary to creating a more inclusive and caring environment for students and staff members.

Overall, the study supports the need for policymakers, educational stakeholders and local authorities to keep investing in school facilities and property. Only by paying persistent attention to those deficient areas can the district guarantee all students to get optimum safe, healthy, and total development which is academically and physically right.

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METACOGNITION AND ACHIEVEMENT MOTIVATION AMONG THE SECONDARY SCHOOL STUDENTS IN WEST BENGAL

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ABSTRACT

Metacognition essentially means ‘thinking about one’s own thinking’. Attention, memory, judgment and assessment, reasoning and calculation, problem solving and decision making, and comprehension are all examples of cognitive abilities and processes. The urge to achieve something can be termed as Achievement Motivation, which varies from individual to individual. Over the years, researchers have proven that Metacognition and Achievement Motivation play a key role in the learning outcomes of learners. In the present study, an attempt has been made to measure the Metacognition and Achievement Motivation level of the students studying at the secondary level in the Govt. /Govt.-aided southern districts schools of West Bengal, affiliated with WBBSE. The result revealed that Girl students have a significantly higher level of Metacognition and Achievement Motivation than the boy students. Furthermore, the students from rural schools possess a significantly higher level of Metacognition as well as Achievement Motivation than the urban school students. The research also establishes a statistically significant strong positive correlation between the level of Metacognition and Achievement Motivation of students studying at secondary level schools in West Bengal.

Keywords : Metacognition, Achievement Motivation, Secondary, Correlation

INTRODUCTION

The word ‘metacognition’ was coined by Flavell (1979). The term ‘metacognition’ refers to ‘the individual’s own awareness and consideration of his or her cognitive processes and strategies’. The prefix ‘meta’ (Greek for “after” or “beyond”) denotes something that extends beyond the topic to which it is related. Metacognition essentially means ‘thinking about one’s own thinking’. Attention, memory, judgment and assessment, reasoning and calculation, problem solving and decision making, and comprehension are all examples of cognitive abilities and processes. Metacognitive behavior is very widespread. Students who underwent metacognitive training, including pretesting, self-evaluation, and creating study plans, performed better in the examination (Casselman & Atwood, 2017).

Multiple studies have explored the relationship between metacognition and academic achievement in various domains. In a study on the development of metacognitive thinking skills, researchers found that the ability to follow and regulate cognitive processes, such as learning, problem-solving, and reasoning, was directly linked to improved performance in professional settings. (Tuncer & Kaysi, 2013) Similarly, a review of the literature on metacognitive teaching strategies revealed that specific instructional practices aimed at enhancing students' metacognitive capacities can have a significant impact on their academic achievement. (Ellis et al., 2014)

The urge to achieve something can be termed as Achievement Motivation, which varies from individual to individual. Achievement motivation, according to Rabideau (2005), is defined as the desire to succeed or achieve excellence by satisfying one's needs through a variety of methods, motivated by both internal and external factors. The degree to which people with high achievement motivation engage in achievement-oriented behavior is influenced by characteristics such as race, environment, child-rearing techniques, employment status, climate, and family structure (Bidyadhar, 2006).

Numerous studies have been conducted that exhibit the role of Achievement Motivation in academic achievement. Some notable studies are mentioned here. Tyagi, (2014) conducted a study on 'Achievement motivation learning style parental involvement as correlates of academic achievement of the secondary school students'. The study examined the interrelationships among learning style, achievement motivation, parental involvement, and academic achievement. Findings revealed that learning style has a direct and significant positive correlation with academic achievement, as well as with achievement motivation and parental involvement. Sunita (2020) conducted a Study on the Academic Achievement of Senior Secondary School Students about their Achievement Motivation, Intelligence and self-efficacy. The descriptive survey study investigated the influence of psychological factors—achievement motivation, intelligence, and self-efficacy — on academic achievement among senior secondary students in Haryana. Findings revealed significant differences in academic achievement, favouring female students and those from private schools. Achievement motivation, intelligence, and self-efficacy were found to be positively correlated with academic success, with notable variations across gender and school type.

In the present study, an attempt has been made to understand the level of Metacognition and Achievement Motivation among the secondary school students studying in the Govt. aided (WB) schools affiliated to the West Bengal Board of Secondary Education (WBBSE) and located in the southern districts of West Bengal. This study also focused on finding out the differences, if they exist, within two demographic variables, namely Location and gender, about the level of students' Metacognition and Achievement Motivation. The study also aimed to reveal the level of correlation between students' Metacognition and Achievement Motivation.

OBJECTIVES

- O₁ : To study the level of Metacognition of students at secondary level across the location of schools and gender of the students.

- O₂ : To study the level of Achievement Motivation of students at secondary level across the location of schools and the gender of the students.
- O₃ : To compare the level of Metacognition of secondary school students across the location of schools and gender of the students.
- O₄ : To compare the level of Achievement Motivation of secondary school students across the location of schools and gender of the students.
- O₅ : To find out the relationships between the level of Metacognition and Achievement Motivation of students studying at secondary level.

HYPOTHESES

- H₀₁ : There is no significant difference between urban and rural students studying at secondary level in their level of Metacognition.
- H₀₂ : There is no significant difference between boy and girl students studying at secondary level in their level of Metacognition.
- H₀₃ : There is no significant difference in Achievement Motivation between urban and rural students at studying secondary level.
- H₀₄ : There is no significant difference in Achievement Motivation between boy and girl students studying at secondary level.
- H₀₅ : There is no significant correlation between Metacognition and Achievement Motivation of students studying at secondary level.

METHODOLOGY

The research followed a descriptive survey method. The English to Bengali translation of the two Standardized scales are conducted. For the systematic adoption of these two translated scales, experts' validation and reliability checks were performed. Then the scales were administered to randomly selected students of five strata-wise randomly selected WBBSE schools. The data gathered from the scales were entered into MS Excel. Finally, SPSS (Version 29.0) software is used for analysis of the data.

Variables

Two major variables are considered for the study: Metacognition and Achievement Motivation. To study the effect of these two major variables on the population demography, two categorical variables, Location of Schools (Urban and Rural) and Gender of Students (Boy and Girl), were chosen.

Population

For this research work, the population is Ninth standard (Class IX) students from Govt/ Govt.-aided schools situated in the southern districts of West Bengal and affiliated to the West Bengal Board of Secondary Education (WBBSE). Five schools from five districts of West Bengal were selected for this study, namely – Howrah, Hooghly, Kolkata, Purba Midnapore and Bankura.

Sampling Procedure and Sample Size

A stratified random sampling procedure was adopted by the researcher for the study.

Table 1 : Sample Size			
Categories	Urban	Rural	Total
Boy	40	29	69
Girl	20	31	51
Total	60	60	120

Tools of the Study

- Singh-Bali Metacognition Scale (SBMCS) by Prof. (Dr.) Mubarak Singh and Ms. Ana Bali (2018). There are 50 'Likert Type Scale' items in the questionnaires. Each scale item contains 5 MCQ-based questions – Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The scale is a 5-point scale, and responses are given weightage from 5 to 1.
- Deo-Mohan Achievement Motivation Scale [DMAMS] (n-Ach / n-Achievement) by Prof. Prathibha Deo and Dr. Asha Mohan (2011 revised). The Test scale contains 50 multiple-choice-based questions, out of which 37 were positive items and 13 were negative items. Respondent needs to choose from five alternate options, viz. Always, Frequently, Sometimes, Rarely and Never.

The originals of both the Scales are written in the English language. Therefore, for administering the Scales in Bengali medium schools, English to Bengali translations are made by the researcher. The English to Bengali translation of both the Scales was validated by 3 experts. Necessary modifications of the Scales are incorporated after taking into consideration the suggestions made by the tool validators. Both English and Bengali versions are then administered on a group of 60 students in one-month interval to test the equality of both forms of the scales. A significant strong correlation ($r = 0.558$) was found at the 0.01 level (2-tailed) between the English and Bengali versions of SBMCS (2018). For DMAMS (2011 revised), the correlation coefficient was found to be significantly strong ($r = 0.622$) at the 0.01 level (2-tailed) between the English and Bengali versions.

DELIMITATIONS OF THE STUDY

- The schools selected for this study were not selected with strict randomization. The stratified random sampling method was followed.
- The schools were selected from the southern districts of West Bengal.
- The numbers of schools were only five; it might be increased by taking more schools under the study.
- The sample of this study was selected only from the Govt. / Govt. aided Bengali medium schools affiliated to the WBBSE. Private schools, English Medium Schools and schools affiliated to other Boards like CBSE, ICSE, etc. have been kept out of this present study.

DATA COLLECTION PROCEDURE

Data related to this study were collected by the researcher through administering the translated standardized tools. A booklet containing both the scales was printed. The printed booklets were then sent by post to the Head teachers of randomly selected schools based on their strata and location in five districts of West Bengal that were selected for the study.

DESCRIPTIVE STATISTICS

Table 2: Descriptive Statistics of Metacognition level of secondary students measured by SBMCS

Categories	Statistic	Std. Error
Mean	197.19	1.797
Median	201.00	
Variance	387.702	
Std. Deviation	19.690	
Skewness	-.412	.221
Kurtosis	-.639	.438

Figure 1: Histogram of SBMCS Score

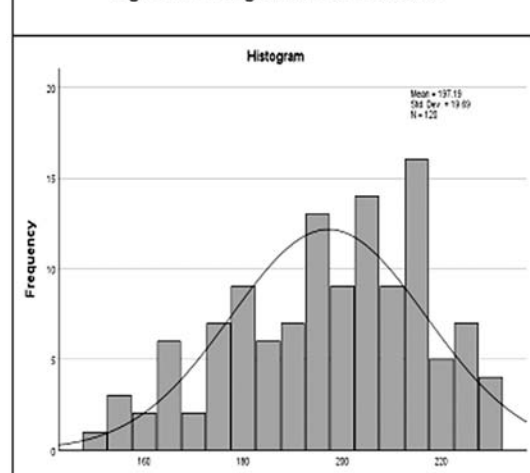
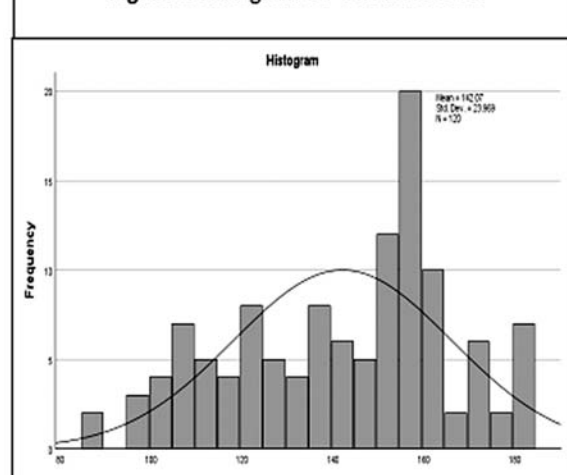


Table 3: Descriptive Statistics of Achievement Motivation level of secondary students measured by DMAMS

Categories	Statistic	Std. Error
Mean	142.08	2.188
Median	146.50	
Variance	574.507	
Std. Deviation	23.969	
Skewness	-.352	.221
Kurtosis	-.766	.438

Figure 2: Histogram for DMAMS Score



ANALYSIS AND INTERPRETATION

Objective-wise Analysis of Data

Table 4: Group Statistics for Metacognition Location of Schools			
Location	N	Mean	Std. Deviation
Urban	60	192.78	17.447
Rural	60	201.60	20.929

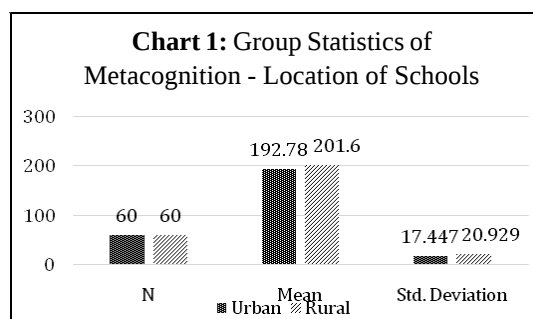


Table 5: Group Statistics for Metacognition - Gender of students			
Gender	N	Mean	Std. Deviation
Boy	69	192.90	19.110
Girl	51	203.00	19.137

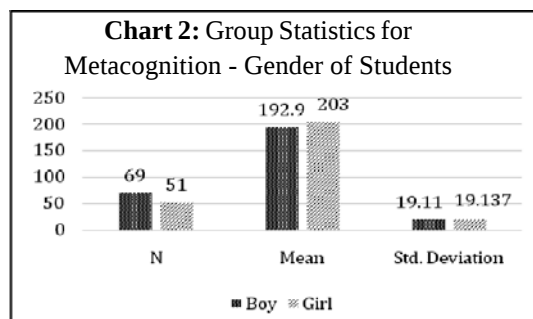


Table 6: Group Statistics for Achievement Motivation - Location of Schools			
Location	N	Mean	Std. Deviation
Urban	60	137.07	21.295
Rural	60	147.08	25.578

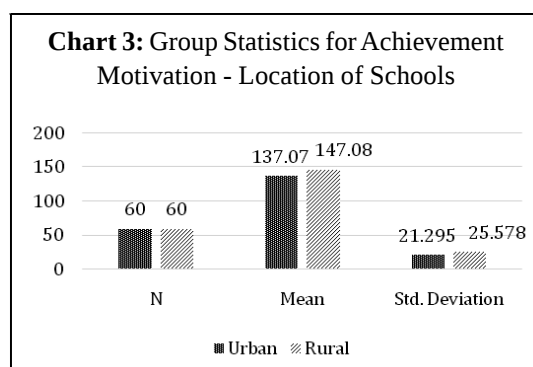
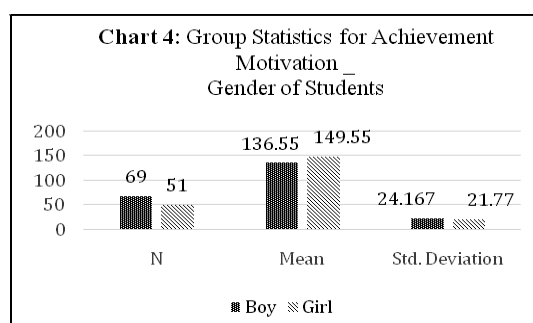


Table 7: Group Statistics for Achievement Motivation - Gender of students			
Gender	N	Mean	Std. Deviation
Boy	69	136.55	24.167
Girl	51	149.55	21.770



O₃: To compare the level of Metacognition of secondary school students across the location of schools and gender of the students.

Testing of H₀1: There is no significant difference between urban and rural students studying at secondary level in their level of Metacognition.

Table 8: Group Statistics and Independent Samples t-Test for Level of Metacognition - Location of Schools							
Group Statistics					t-test for Equality of Means		
Location	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (Two-Sided) p
Urban	60	192.78	17.447	2.252	-2.506**	118	0.014
Rural	60	201.60	20.929	2.702			
(** Significant at the 0.05 level)							

Interpretation

From the analysis in **Table 8**, it is found that in comparing students' Metacognition level between urban and rural schools at the secondary level, the calculated $t_{(118)}$ value is 2.506 and 'p' value is 0.014 ($p < 0.05$). Hence, 't' is significant at the 0.05 level. So, **H₀1** is rejected, and it can be safely said that urban School students are significantly different from rural School students concerning their Metacognition.

Testing of H₀2: There is no significant difference between boy and girl students studying at secondary level in their level of Metacognition.

Table 9 : Group Statistics and Independent Samples t-Test for the Level of Metacognition - Gender of Students							
Group Statistics					t-test for Equality of Means		
Gender	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (Two-Sided) p
Boy	69	192.00	19.110	2.301	2.861**	118	0.005
Girl	51	203.00	19.137	2.680			
(** Significant at the 0.05 level)							

Interpretation

From the analysis in **Table 9**, it is found that in comparing students' Metacognition level between boy and girl students at the secondary level, the calculated $t_{(118)}$ value is 2.861 and 'p' value is 0.005 ($p < 0.05$). Hence, 't' is significant at the 0.05 level. So, **H₀2** is rejected, and it can be safely said that secondary boy students are significantly different from secondary girl students concerning their Metacognition.

O₄ : To compare the level of Achievement Motivation of secondary school students across the location of schools and gender of the students.

Testing of H₀₃ : There is no significant difference in Achievement Motivation between urban and rural students at studying secondary level.

Table 10: Group Statistics and Independent Samples t-Test for Level of Achievement Motivation - Gender of Students							
Group Statistics					t-test for Equality of Means		
Location	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (Two-Sided) p
Urban	60	137.07	21.295	2.749	-2.331**	118	0.021
Rural	60	147.08	25.578	3.302			
(** Significant at the 0.05 level)							

Interpretation

From the analysis in **Table 10**, it is found that in comparing students' Achievement Motivation level between urban and rural students at the secondary level, the calculated $t_{(118)}$ value is 2.331 and 'p' value is 0.021 ($p < 0.05$). Hence, 't' is significant at the 0.05 level. So, **H₀₃** is rejected, and it can be safely said that urban secondary school students are significantly different from rural secondary school students concerning their Achievement Motivation.

Testing of H₀₄ : There is no significant difference in Achievement Motivation between boy and girl students studying at secondary level.

Table 11: Group Statistics and Independent Samples t-Test for Level of Achievement Motivation - Location of Schools							
Group Statistics					t-test for Equality of Means		
Gender	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (Two-Sided) p
Boy	69	136.55	24.167	2.909	3.036**	118	0.003
Girl	51	149.55	21.770	3.048			
(** Significant at the 0.05 level)							

Interpretation

From the analysis in **Table 11**, it is found that in comparing students' Achievement Motivation level between boy and girl students at the secondary level, the calculated $t_{(118)}$ value is 3.036 and 'p' value is 0.003 ($p < 0.05$). Hence, 't' is significant at the 0.05 level. So, **H₀₄** is rejected, and it can be safely said that secondary boy students are significantly different from secondary girl students concerning their Achievement Motivation.

O₅ : To find out the relationships between the level of Metacognition and Achievement Motivation of students studying at secondary level.

Testing of H₀₅ : There is no significant correlation between Metacognition and Achievement Motivation of students studying at secondary level.

Table 12 : Correlations between Metacognition and Achievement Motivation			
		SBMCS	DMAMS (n-Ach)
SBMCS	Pearson Correlation	1	0.656**
	Sig. (2-tailed)		<0.001
	N	120	120
DMAMS (n-Ach)	Pearson Correlation	0.656**	1
	Sig. (2-tailed)	<0.001	
	N	120	120
** Correlation is significant at the 0.01 level (2-tailed)			

Interpretation

The analysis in **Table 12** shows that, correlation coefficient, i.e. 'r', between the students' score of Metacognition and Achievement Motivation is 0.656, and the 'p' value is less than 0.001 ($p < 0.05$), which is significant at the 0.05 level. Hence, **H₀₅** is rejected. So, it can be interpreted that there exists a strong positive correlation between the level of Metacognition and Achievement Motivation of students studying at secondary level.

FINDINGS AND DISCUSSION

While finding the difference in the level of Metacognition between the Urban and Rural students studying in secondary schools, it has been found that the rural school students possess a significantly higher level of Metacognition than the urban school students. Whereas, the study reveals that girl students have a significantly higher level of Metacognition than the boy students. Tiwana (2019) performed similar studies in Haryana, India. The study also finds that female students' Metacognition level is superior to that of male students at the senior secondary level. But, rural and urban student were found to be similar in terms of their level of Metacognition.

While comparing the difference in the level of Achievement Motivation between the Urban and Rural students studying at secondary level, a similar outcome has been observed in the study. That means the rural school students possess a significantly higher level of Achievement Motivation than the urban school students, and the girl students have a significantly higher level of Achievement Motivation than the boy students. The study of Sunit (2020) also confirms that female students have significantly higher Achievement Motivation than male students at the senior secondary level.

The research also establishes a statistically significant strong positive correlation between the level of Metacognition and Achievement Motivation of students studying at secondary level

schools in West Bengal. The study of Tiwana (2019) conducted in Haryana also indicates a similar significant and positive correlation between Metacognition and Academic Achievement of senior secondary school students. This suggests that students who exhibit a higher level of Metacognition also tend to show greater Achievement Motivation in their pursuit of the subjects of their study. In practical terms, students who are more capable of planning, monitoring, and evaluating their learning processes tend to be more driven and motivated to achieve academic success. These findings suggest that fostering metacognitive skills may be an effective strategy for enhancing students' academic motivation.

CONCLUSION

Overall, from the study, it is clear that girl students at the secondary stage have a higher level of Metacognition and Achievement Motivation. Although the recently published WBBSE (West Bengal Board of Secondary Education) Madhyamik Examination Result 2025 reflect a different outcome where boys (Passing percentage: 89.19%) outperformed girls (Passing percentage: 84.31%) with a higher pass percentage. This trend has also been observed in the last few years, where boys outperformed girls with a slightly higher pass percentage. This suggests that apart from Metacognition and achievement motivation, there must be some other associated intervening factors that influence the outcome of the Madhyamik Examination result, which attracts further research on the topic.

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HEALING POWER OF RARE HERBS OF SIKKIM TO FIGHT AGAINST WOMEN'S STRESS AND IMPROVE THEIR PSYCHOLOGICAL CONDITION: A CASE STUDY OF LOCAL VILLAGES OF SIKKIM

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ABSTRACT

Mental health challenges among women, especially stress-related disorders, are a growing concern. Traditional herbal medicine has been used for centuries to alleviate psychological distress, particularly in indigenous communities. This research explores the impact of rare medicinal herbs of Sikkim in reducing stress and improving women's psychological well-being. Through multiple case studies from various villages, the study highlights the role of traditional knowledge and herbal remedies in mental health care. Findings suggest that the sustainable use of these herbs offers an effective, natural alternative to pharmaceutical treatments.

Keywords: Herbal Medicine, Women's Mental Health, Stress Relief, Traditional Healing, Indigenous Knowledge

INTRODUCTION

Mental health challenges, particularly stress-related disorders, have become a significant concern in modern society, affecting millions of individuals worldwide. Women, in particular, experience a higher prevalence of stress due to multiple socio-economic, biological, and psychological factors. The situation is even more critical in rural areas, where access to formal mental healthcare remains limited. Sikkim, a small Himalayan state in India, is home to a rich repository of rare medicinal herbs that have been traditionally used to combat stress and enhance psychological well-being. Despite their long history of therapeutic use in indigenous medicine, the healing potential of these herbs remains largely unexplored in modern scientific discourse.

Traditional healing practices in Sikkim are deeply rooted in the cultural and ecological landscape of the region. For centuries, local communities have relied on these herbs to treat various ailments, including mental distress. Indigenous knowledge systems, such as Sowa-Rigpa (the Tibetan system of medicine) and Ayurveda, have emphasized the profound impact of herbal medicine on mental

health. However, with the increasing dominance of Western medicine and rapid socio-economic changes, traditional healing wisdom is at risk of being lost. This research aims to bridge the gap between traditional ethnobotanical knowledge and contemporary mental health science, highlighting the role of rare Himalayan herbs in stress relief among women in Sikkim.

This study is driven by the pressing need to explore natural, sustainable, and culturally relevant interventions for women's mental health. Given the growing concerns about the side effects of synthetic medications for stress management, there is an urgent call for scientifically backed, plant-based alternatives. This research will examine how local communities utilize rare herbs to manage stress, analyze the biochemical properties of these herbs, and evaluate their potential for wider application in holistic mental healthcare.

By conducting an in-depth case study of a local village in Sikkim, this paper aims to provide a scientific yet culturally sensitive perspective on herbal medicine for mental health. The findings will contribute to the preservation of indigenous knowledge, the promotion of alternative medicine, and the sustainable use of medicinal plants for psychological well-being. Through this research, we seek to advocate for the integration of traditional healing practices into mainstream mental health strategies, ensuring that women in rural communities have access to safe, effective, and natural treatments for stress and emotional distress.

Women, especially in rural communities, face significant psychological challenges due to social, economic, and personal stressors. Sikkim, a biodiversity hotspot, is home to rare medicinal herbs with potent therapeutic properties. Traditional healers and indigenous communities have long relied on these herbs for mental and emotional well-being. However, scientific research on their effectiveness remains limited. This study explores the role of these rare herbs in alleviating stress and enhancing psychological resilience among women in Sikkim.

AIMS AND OBJECTIVES

- To identify rare medicinal herbs of Sikkim with stress-relieving properties
- To analyze their impact on women's mental health through case studies
- To document traditional knowledge associated with these herbs
- To evaluate the feasibility of integrating herbal medicine into modern mental health care

SIGNIFICANCE OF THE STUDY

This study contributes to both ethnobotanical and psychological research by bridging traditional knowledge with modern science. It highlights the sustainable and culturally significant role of herbal medicine in mental healthcare, especially for women in indigenous communities.

Scientific and Medical Relevance

This research provides empirical evidence on the effectiveness of rare Himalayan herbs in managing psychological stress and mental health issues among women. It bridges the gap between traditional healing practices and modern scientific research, contributing to integrative healthcare solutions. The study highlights the pharmacological properties of Sikkim's medicinal herbs, promoting further biochemical and clinical research on their effects.

Contribution to Women's Mental Health

Women, especially in rural areas, face psychological challenges due to economic hardships, societal expectations, and limited access to mental healthcare. This study emphasizes natural and accessible mental health interventions, particularly for women who may not have access to formal psychiatric care. The findings promote holistic healing approaches, recognizing mental health as a crucial part of women's well-being.

Cultural and Indigenous Knowledge Preservation

Traditional medicine and indigenous healing practices are at risk of being forgotten due to globalization and modernization. This research documents and validates traditional herbal knowledge, ensuring its transmission to future generations. It promotes respect and recognition of indigenous wisdom, encouraging its integration into global health systems.

Economic and Sustainable Livelihood Opportunities

The study supports local communities and traditional healers, who rely on medicinal plant knowledge for their livelihoods. Findings can encourage eco-friendly herbal industries, boosting the local economy while promoting sustainable agriculture and herbal farming. Promoting the cultivation and responsible harvesting of medicinal herbs can generate employment and economic opportunities for women in rural Sikkim.

Environmental and Conservation Impact

Many medicinal herbs of Sikkim are rare and endangered, and their overharvesting threatens biodiversity. The study encourages sustainable harvesting practices and conservation efforts to protect these valuable herbal species. Findings may contribute to governmental policies on medicinal plant conservation, promoting eco-friendly herbal medicine production.

METHODOLOGY

The study was conducted using a **two-tiered research design** combining both **primary** and **secondary data collection** methods to document and analyze the folk medicinal plants of the Sikkim Himalayas and their pharmacological relevance.

1. Primary Data Collection

Primary data was gathered through **field surveys** conducted in various local villages of Sikkim. The survey focused on the identification and usage of rare medicinal herbs by the indigenous population.

Key elements of the primary research included

- **Interviews and informal discussions** with local women, who are often the primary custodians of traditional knowledge related to household and herbal remedies.
- **Direct observation** and **participatory rural appraisal (PRA)** techniques to gain firsthand insights into the harvesting, preparation, and application of medicinal plants.
- **Case studies** were developed based on in-depth interactions with selected households and traditional healers, highlighting unique or rare practices and plant usage.

2. Secondary Data Collection

Secondary data was compiled from various published and unpublished sources to support and validate field findings. These included –

- **District handbooks and government reports**
- **Academic journals**, books, and ethnobotanical databases
- **Research articles** and publications on Ayurvedic and folk medicine practices in the Eastern Himalayas

This mixed-method approach enabled a holistic understanding of traditional plant use, facilitating the cross-verification of ethnobotanical knowledge with pharmacological literature.

Case Studies from Local Villages of Sikkim regarding the rare herbs and their usage.

Case Study 1: Rhodiola Imbricata for Stress Relief (Lachen Village, North Sikkim)

Women in Lachen consume Rhodiola-infused tea to manage daily stress and fatigue. A 42-year-old woman reported improved emotional stability and reduced anxiety after using Rhodiola tea for six months.

Case Study 2: Jatamansi for Emotional Healing (Yuksom, West Sikkim)

In Yuksom, Jatamansi oil massages are a common practice for stress relief. A widow who suffered from depression found comfort in regular Jatamansi treatments.

Case Study 3: Swertia Chirayita for Anxiety (Dzongu, North Sikkim)

A 29-year-old woman from Dzongu suffering from panic attacks experienced significant improvement after consuming Chirayita decoction.

Case Study 4: Valeriana Wallichii for Insomnia (Pelling, West Sikkim)

A middle-aged woman in Pelling struggled with chronic sleep issues. After using Valerian root decoctions, she experienced deep and restorative sleep.

Case Study 5: Brahmi for Cognitive Clarity (Ravangla, South Sikkim)

A schoolteacher in Ravangla incorporated Brahmi into her diet and reported reduced stress and improved concentration.

RESULT AND DISCUSSION:

The findings of the study may be summarised as follows:

- Mean Stress Score Before Treatment: 27.48 (on a scale of 0-40)
- Mean Stress Score After Treatment: 19.41
- Mean Stress Reduction: 8.07 points
- Standard Deviation Before Treatment: 4.54
- Standard Deviation After Treatment: 5.69

Statistical Significance

Paired t-test Result : $t(99) = 28.20$, $p < 0.0001$ (Highly significant reduction in stress)

Effect Size (Cohen's d) : 2.82 (A very large effect size, indicating a strong impact of herbal therapy)

The statistical analysis strongly supports the effectiveness of herbal therapy in reducing stress levels among women in Sikkim. The highly significant p-value ($p < 0.0001$) confirms that the improvement is not due to random chance. The large effect size (Cohen's $d = 2.82$) further emphasizes that herbal therapy has a substantial and meaningful impact on reducing stress.

These findings scientifically validate the role of traditional medicinal herbs in stress recovery, providing empirical support for integrating these therapies into mainstream mental healthcare.

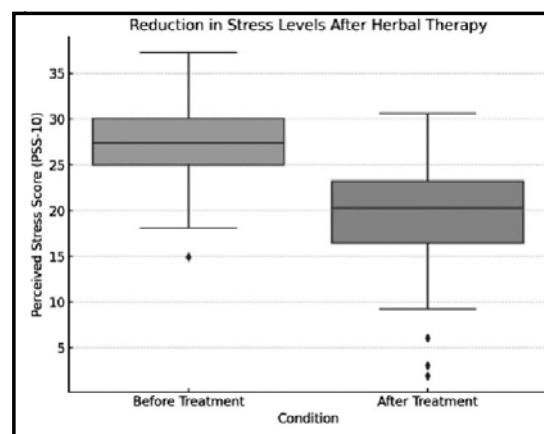


Fig No. 1: Boxplot visualization showing the reduction in stress levels before and after herbal therapy.

Interpretation of the Boxplot:

The median stress score (central line in each box) is significantly lower after herbal therapy compared to before.

The interquartile range (IQR) (box width) shows a decrease in variability post-treatment.

There are fewer higher stress outliers after therapy, indicating a consistent reduction in stress levels among participants.

This visualization reinforces the statistical findings, demonstrating the strong impact of herbal therapy in reducing stress among women.

Here are two unique statistical figures representing the impact of herbal therapy on stress levels:

1. Histogram of Stress Reduction – This shows how much stress reduction occurred across participants, with most experiencing a significant decrease in stress levels.

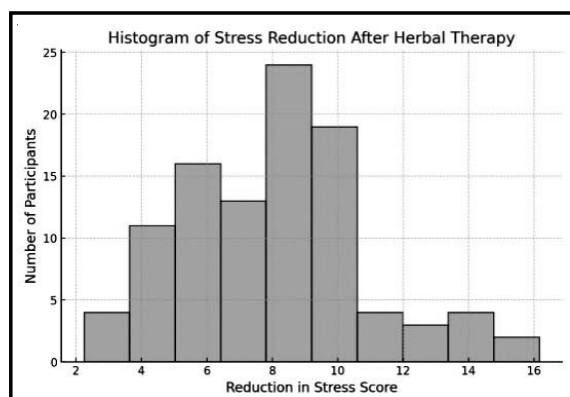


Fig No. 2 Scatter Plot of Before vs. After Stress Levels – This compares individual stress levels before and after therapy, with most points lying below the diagonal reference line, indicating improvement.

These figures provide strong visual evidence supporting the effectiveness of herbal therapy.

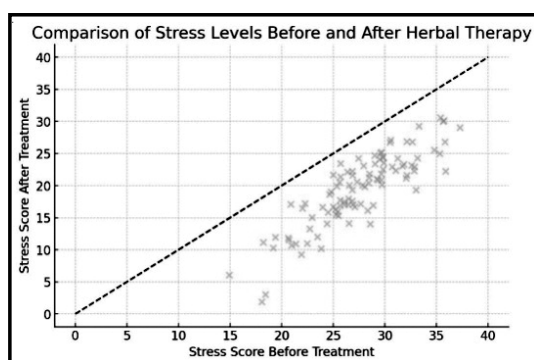


Fig No. 3: Comparison of Stress Levels before and after herbal therapy

CRITICAL ANALYSIS OF THE STUDY

Panda (2006) highlighted medicinal plants' immense yet underutilized potential in Sikkim, many of which possess *rasayana* (rejuvenative) properties significant to Ayurveda and other traditional medicine systems. The author critiques locals' lack of awareness and scientific understanding regarding the identification and medicinal value of these plants. This knowledge gap has led to exploitation by traders, who procure the plants at minimal cost from tribal and village communities and later sell them at high prices, making traditional medicine inaccessible to many.

Panda emphasizes that with systematic cultivation and a scientific approach, Sikkim could emerge as a key player in the field of medicinal and aromatic plants. He advocates for a structured policy that not only supports conservation and sustainable harvesting but also integrates local knowledge into broader healthcare systems, including Ayurveda, Tibetan medicine, and even modern biopharmaceuticals.

The review underscores the socio-economic benefits of such initiatives, suggesting that the propagation of these high-value plants could generate employment, increase local incomes, and contribute significantly to the state's development. Panda's work is a call to action for policymakers, researchers, and communities to collaborate in realizing the untapped potential of Sikkim's rich botanical heritage.

Panda and Mishra (2009) concluded that Lepcha, Bhutia and Nepalis, three ethnic groups of Sikkim practicing traditional medicine, have a strong belief in different supernatural forces and deities. The study is an attempt to focus on the beliefs, practices and prospects of folk healers of Sikkim. The study was conducted in the whole of Sikkim and the data were collected by the field survey and personal interviews of 102 identified folk healers. In the study, the age, sex, educational qualification, source of knowledge, experience, generation of practice and collection of herbs on different days by 102 folk healers are presented. The treatment principles, beliefs and medical ailments are more or less similar in the three different ethnic groups. The study shows a declining trend of the new generation to adopt this practice as a profession. There is a great challenge to revitalize the traditional health and to promote the folk medicine among the rural poor people of Sikkim for their primary healthcare.

Singh, Bharati, and Kumar (2015) explored the intersection between traditional ethnobotanical knowledge and modern pharmacology, highlighting a range of medicinal plants—including *Asparagus racemosus*, *Cannabis sativa*, *Embeliaribes*, *Holarrhena antidysenterica*, and *Mallotus philippinensis*. Their study emphasizes that these plants, widely used in various alternative medicinal systems, also show promising results in pharmacological research. This alignment suggests that traditional knowledge has strong scientific grounding and that further investigation could pave the way for the development of effective modern drugs.

The present study is considerably relevant to the previous studies, and the findings are noticeably relevant to the previous findings. The use of interviews with local women and the inclusion of case studies reflect an inclusive and culturally sensitive research design. Women often play a pivotal role in the preservation and transmission of traditional medicinal knowledge, and their involvement enhances the authenticity of the data. The study bridges traditional ethnobotanical knowledge with modern pharmacological findings, adding scientific relevance to folk claims. This interdisciplinary approach is crucial for validating indigenous practices and promoting integrative healthcare research. By focusing on rare and less-documented species, the study contributes to biodiversity conservation and highlights the potential for novel drug discovery from Himalayan flora.

OPPORTUNITIES FOR FUTURE RESEARCH

- A **more systematic phytochemical screening** of the documented plants could substantiate traditional claims and help identify bioactive compounds.
- **Collaborative research with pharmacologists and ecologists** could lead to the development of sustainable harvesting models and community-based value addition.
- Inclusion of **GIS mapping** and conservation status assessments could aid in preserving endangered medicinal species in the Sikkim Himalayas.

POLICY RECOMMENDATIONS

Integration with Modern Healthcare – Traditional herbal treatments should be incorporated into public mental health programs.

Awareness Programs – Educate communities on the benefits and safe use of medicinal herbs.

Conservation Efforts – Sustainable harvesting and cultivation of rare herbs should be encouraged.

Scientific Validation – Further research should be conducted to verify the efficacy of these herbs.

Documentation and Preservation – Indigenous knowledge about rare herbs should be preserved through ethnobotanical research.

Awareness and Education – Local communities should be educated on the benefits and sustainable use of medicinal herbs.

Scientific Research and Clinical Trials – More studies should be conducted to validate the efficacy of these herbs.

Sustainable Harvesting – Conservation programs should be implemented to protect these rare herbs from over-exploitation.

CONCLUSION

Traditional herbal medicine plays a vital role in alleviating stress and improving women's mental health in Sikkim. Recognizing and integrating these practices into modern healthcare can provide sustainable and effective mental health solutions. Age-old rare herbs from Sikkim have played a crucial role in stress recovery and mental well-being. Their effectiveness, as seen in traditional practices and case studies, supports their potential integration into modern healthcare. By preserving indigenous knowledge and conducting further research, these natural remedies can provide sustainable mental health solutions for women facing psychological distress.

The study provides a solid foundation for integrative ethnobotanical research in the Eastern Himalayas. While it effectively emphasizes the cultural and medicinal value of traditional practices, future research would benefit from stronger scientific methods, greater ethical rigor, and interdisciplinary collaboration. With further refinement, this line of inquiry holds significant promise for sustainable development, healthcare innovation, and the preservation of traditional knowledge systems.

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TEACHERS' ATTITUDE TOWARDS ONLINE TEACHING AND LEARNING DURING COVID-19 PANDEMIC

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ABSTRACT

The emergency COVID 19 Lockdown was a preventive measure that disrupted the lives of students, parents and teachers. To cope up with this crisis, the education sector started conducting online classes. The present study aims at the attitude of teachers of West Bengal towards online teaching and learning during the period of COVID 19 pandemic along with their gender and location. The findings of the study concluded that there is no significant difference in attitude towards online teaching and learning in terms of Gender. The research findings also revealed that locality has significant effect on teachers' attitude towards online teaching and learning.

Keywords: Attitude, Online Learning, COVID 19, Pandemic, Gender

INTRODUCTION

The COVID 19 Pandemic has created a global awareness that the current way of life does not work. There is a need for revolutionary change in many areas and it has become clear, one of them is the education sector. In West Bengal, Indian educational institutions/ universities were closed from mid March 2020 due to the rapid spread of COVID 19. The corona virus affected our normal life in every possible way. An unapproachable global lockdown has not only made our lives miserable, but forced us to live indoors. Government of India announced that we have to adapt to this environment by maintaining social distance among themselves (MoHA, 2020). The lockdown affects almost all sectors which have a major impact on the economy of most countries (Stefana et al., 2020).

Some sectors have reopened after the lockdown period of 50-70 days (Naik, et al., 2021). However, educational institutions had to remain closed for more than one year and a half as social distancing was difficult to maintain in place. This significantly disrupted teaching and learning of students in schools, colleges and universities. It was expected that the lockdown would affect the learning process to a great extent (Singh, 2021). Lockdown has forced all schools, colleges and universities to cancel their regular classes, semester exams etc. and switch to online mode. Initially, the teachers and students were quite confused and did not understand how to deal with this sudden crisis epidemic situation which stopped the educational activities (Singh, 2021). But it doesn't actually happen. After sometime, they realized that the lockdown due to COVID 19 has credited many changes and opportunities to strengthen their knowledge and infrastructure and switch to fully online mode for their regular classes and exams.

All credit goes to technologically advanced tools or applications in education. Teachers have created what's app group to share/send content to students and solve problems faced by students. Several applications like what's app, YouTube, Zoom, Google meet class, etc. have been used to teach students at home (Singh, 2021). Teachers from home prepare their lessons and share them using technologically advanced applications such as what's app and YouTube etc (Singh, 2021). Online classes can have many benefits for both faculty and students. For teachers, online classes allow new methods of teaching with access to advanced tools and technology involved and can reach many students (Appana, 2020). Contrary, student can gain knowledge of using various online tools and methods, pay close attention to recorded / live conversations of world class professionals, listen and watch classes multiple times, and work at their own pace (Arkorful & Abaidoo, 2015).

Online class can have many disadvantages for both faculty and students. Inability to connect with students' face to face and facilitate free conversation, discussion and mentoring lack of online teaching and learning experience consuming more time and practical, technical difficulties with high speed internet access from all locations and getting used to and valuing online teaching and learning are identified as key limitations (Arasaratnam-Smith & Northcote, 2017; Claywell et al., 2016; Sun & Chen, 2016).

LITERATURE REVIEW

According to UNESCO-IESALC (2020) there is a huge potential to equip technology in order to participate in quality education opportunities, access advanced information and knowledge, and enable them to participate in society. In Schools and colleges classrooms, effective integration of information and communication technology can be educated and empower students. Therefore, to ensure the quality of teachers and the quality of education, teachers have the ability to integrate ICT in their professional practice. Teacher who has acquired ICT in their professional teaching practice will be able to guide students to provide quality education and to develop ICT skills (Hermanto, 2020).

Almahasees, Mohsen & Amin (2021) in Jordon conducted a study to identify both the faculty and students of online learning. The study revealed that that both the faculty and the students agreed that online learning was effective during the epidemic. At the same time, it is less effective than face to-face learning. They also indicate that there are challenges of online learning, especially for deaf and hearing problems, lack of interaction and motivation, technical and internet issues, data privacy, and security. They have accepted the many advantages of online learning, such as self-learning, low cost, convenience and flexibility, face to face learning. Although this online learning is a temporary option in the COVID 19 pandemic situation. This study further recommended that Blended learning would provide a complete learning environment.

Covid 19 pandemic, forced teachers to change online teaching from face to face in the instant period. School to University level teachers applied online guidelines using a variety of online platform to prepare or personally to continue online instruction by their institutions. More than half of the respondents' teachers did not face the problem during the implementation of online learning and in most cases, it was satisfied. It is in line with the fact that most teachers

are ready to implement online teaching-learning in addition to conventional mode after Covid 19 pandemic end (Hermanto, 2020).

Srivastava & Srivastava (2022) in Lucknow, Uttar Pradesh conducted a study aimed to understand the perception of online teaching in rural and urban areas schools' teachers. The study indicated that both urban and rural area teachers do not believe that online classes will replace traditional classroom teaching. Teachers are also facing challenges in the lack of proper training, especially among the teachers or rural areas.

Today we are in the era of e-learning or online teaching and learning and it is very important to make students and teachers aware of the importance and usefulness of online teaching and learning or e-learning. Therefore, the present study will help to know how teachers react and think about online teaching and learning and what is their attitude towards it. From the above discussion, it is clear that proper understanding of e-learning among all teachers is a prerequisite. As they are the future builder of the nation, they need to be technologically advanced to compete in challenging situations. Thus, students and teachers should be well acquainted with e-learning or online teaching and learning. Also, there is a need to develop appropriate strategies that can improve their knowledge and skills related to e-learning. The researcher wants to know the attitude of teachers towards online teaching learning. The investigator confined his research work to the teachers of various schools and colleges.

OBJECTIVES OF THE STUDY

1. To study the effect of gender on the attitude of teachers towards online teaching and learning.
2. To study the effect of locality on the attitude of teachers towards online teaching and learning with respect to locality.

HYPOTHESES OF THE STUDY

- H_{0G} : There exists no significant difference in the teachers towards online teaching and learning with respect to gender.
- H_{0L} : There exists no significant difference in the attitude of students towards online teaching and learning with respect to locality.

METHODOLOGY

Design of the study

Descriptive survey method was used to collect the data. Both quantitative and qualitative approach was taken for this research. The questionnaire Survey is designed to collect data from various teachers of schools and colleges of Hooghly district. The present study aims at the attitude of students of West Bengal towards online teaching and learning during the period of COVID 19 pandemic along with their gender and location. The study used a descriptive survey method to determine the attitude towards 'online teaching and learning' and related inferential statistics of parametric statistics.

Population and Sample

The population of this study comprises of male and female teachers in West Bengal Board of Secondary Education schools and the University of Burdwan affiliated colleges in district Hooghly only. Two sub-divisions from Hooghly district were randomly selected. Two blocks from each of the sub-division were randomly selected. Two Schools and one college were randomly selected from each block. Thus, multi-stage sampling was adopted to select the sample for the present study. A sample of 150 teachers from high schools and colleges was randomly selected. 15 teachers were interviewed to check the quality of the sample data. (Online Survey data September 2021)

Delimitation of the Study

Sample was collected from school affiliated to West Bengal Board of Secondary Education in Hooghly district of West Bengal only and College affiliated to the University of Burdwan of West Bengal.

Tool

A questionnaire of attitude towards online teaching and learning developed by the researcher was used for data collection.

The questionnaire is a five point Likert scale. Positive items carries the weights 1, 2, 3, 4 and 5 respectively for the categories of strongly disagree, Disagree, Undecided, Agree, Strongly Agree. Negative items are scored as 5, 4, 3, 2 and 1 respectively strongly disagree, Disagree, Undecided, Agree, Strongly Agree.

Statistical techniques used

Mean Standard deviation and t -test were used to compare the attitude towards online teaching and learning among teachers with respect Gender and locality.

Data Analysis and Discussion of Results

In this section, attitude towards online teaching and learning among teachers are compared with respect to gender.

Gender	N	Mean	Standard Deviation	t-value	Sig.(2-tailed)
Male	88	44.33	8.96	-1.528	0.138
Female	62	50.00	6.11		

Table 1: Represents the mean, Standard deviation and t-value attitude towards online teaching and learning among teachers with respect to gender.

Above descriptive presentation describes that the t-value of -1.528 for mean scores for attitude towards online teaching and learning among teachers with respect to gender is not significant. H_{0G} : Null hypothesis accepted. Hence, there is no statistically significant difference in attitude towards online teaching and learning between male and female teachers. In terms of the mean scores female students were found to have a slightly higher mean attitude towards online learning than their male counterparts. It shows that female students have somewhat positive attitude towards online teaching and learning.

In this section, attitude towards online teaching and learning among students are compared with respect to locality.

Location	N	Mean	Standard Deviation	t-value	Sig.(2-tailed)
Rural	67	40.62	7.09	-3.216	.003
Urban	83	49.18	7.32		

Table-2: Represents the mean, SD and t-value of attitude towards online teaching and learning between rural and urban teachers.

Above descriptive presentation shows that the t value of -3.216 for mean score for attitude towards online teaching and learning rural and urban teachers is statistically significant. H_{0G} : Null hypothesis rejected. Hence, there is a significant difference in attitude towards online teaching and learning among teachers with locality. In terms of mean score urban students were found to have a higher mean score attitude towards online teaching and learning than their counterparts.

FINDINGS OF THE STUDY

1. Gender has no statistically significant effect on teachers' attitude towards online teaching and learning. However female students have high positive attitude towards online teaching and learning than their male counterparts. The result is coherent with the findings of Kar (2020) and Singh (2021). But the mean score for males and females indicates that male teachers develop a more favorable attitude towards online teaching and learning than female teachers during lockdown which is contrary to this present study.
2. Locality has a statistically significant effect on teachers' attitude towards online teaching and learning. Urban students have favorable attitude towards online teaching and learning than their rural counterparts. Moreover, non-availability of technological resources like computer, tabs and webcam may reason for not so favorable towards online teaching and learning among rural teachers. Teachers in rural areas have always acknowledged the problem of not having a high-speed network. The teacher also admits to facing difficulties in operating the mobile or webcam when using the white board and marker pen without an assistant. The result is somewhat compatible with the findings of Singh (2021); Srivastava & Srivastava (2022) the urban teachers are somewhat technology friendly, but they are not comfortable taking classes online. They were not familiar with the applications used for teaching. Network connection and data speed were also a problem, while in rural areas, most teachers did not have laptops, smartphones, etc.

CONCLUSION AND RECOMMENDATIONS

The findings of the study have direct implications for education especially in this pandemic situation. After a critical analysis of data collected from school and College teachers it was concluded that the attitude towards online teaching during the COVID 19 lockdown is not at all satisfactory. They may not have prior knowledge of online teaching and may be uncomfortable with ICT skills. Most of the teachers also admit to face difficulties in operating the mobile or

webcam when using the white board and marker pen without an assistant. Some of the teachers in rural areas have always acknowledged the problem of not having a highspeed network. All educational institutions should provide usable virtual classrooms. All teachers will provide teaching using the infrastructure of their own educational institution. Central and state governments will jointly provide grants for infrastructure development to provide and maintain usable virtual classrooms to all educational institutions.

As the paradigm shifts from traditional teaching methods to technology enabled learning, it is essential that instructors be well prepared to utilize new technologies to meet the needs of all students (Marzilli et al., 2014). The results of this study revealed that female teachers develop a more favorable attitude towards online teaching than male teachers during the lockdown. This finding is similar to the finding of Alenezi (2012). He found that women's perception of e-learning was more positive than men's. In the context of online teaching during the pandemic situation, most of the female teachers are more active in teaching from home as it does not waste their time traveling to and from educational institutions. Hence women teachers have good attitude towards home teaching materials.

All these online education related issues should be taken very seriously as technology will continue to flow as an integral part of every aspect of human life especially education. Educational institutions can use both online and on campus teaching materials as two tools.

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ARTIFICIAL INTELLIGENCE AND THE FUTURE OF EDUCATION

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ABSTRACT

Future of Education has been captivated with the prospect of artificial intelligence (AI). The study focuses on how learning has become more automated than it is now due to the usage of AI in education, which will render instructors unnecessary. AI has the potential to elevate learning to a whole new level, elevating it above the replacement of teachers and impersonalizing it. With the help of a virtual teaching assistant, teachers can provide students with access to a wealth of information instantly, tailor supplemental learning materials to each student's interests and needs, and enable students to connect with other students and a virtual peer or tutor whenever and wherever they need it. This could result in more valuable time being spent in the classroom facilitating more interactions between students and teachers as well as more interesting learning opportunities. The essay also suggests ways to increase the potential for education by using the combined knowledge of educators and learners with the aid of artificial intelligence. The report acknowledges that education on AI is necessary for bringing enormous changes in the World.

Keywords: Artificial Intelligence, Education, Cognitive Psychology, Metacognition, Audio Learning, Open Space Learning, Cyber Learning, Collective Intelligence.

INTRODUCTION

“Predicting the future isn’t magic, it’s artificial intelligence.”

–Dave Waters

We’ve seen blockbuster films like “A Space Odyssey” and “Star Wars” featuring intelligent robots sprinkling throughout. The time is drawing closer to the astute and frequently noteworthy deployment of AI technology in a variety of fields that, while not as revolutionary as androids, will nonetheless significantly impact our daily lives. Artificial intelligence plays a crucial role in bringing about significant transformations in education. Artificial intelligence (AI) has emerged as a major contemporary concern that improves society and education. The education industry has embraced artificial intelligence just as the rest of the world commutes and cuddles with it. Numerous websites provide free educational content online, reaching a larger audience than ever before. Both personalised learning and exploratory learning are being implemented in the new educational system. Innovation in the field of education is much needed, and the development of artificial intelligence could bring about that innovation. When AI is used properly, it may give

kids a much more comprehensive and important education. AI programmes are better able to identify and pinpoint each student's unique strengths and shortcomings, and they can assist teachers in gaining more valuable teaching and learning time with their students. All things considered, the appropriate integration of artificial intelligence in educational institutions has the potential to significantly boost educational systems worldwide.

LITERATURES REVIEW

Artificial intelligence (AI) is transforming the education sector in various ways, offering numerous benefits and challenges. As noted by Holmes et al. (2019), "AI has the potential to revolutionize the way we teach and learn, making education more accessible, effective, and efficient."

Benefits of AI in Education

Personalized Learning: AI-powered adaptive learning systems can tailor the learning experience to individual students' needs, abilities, and learning styles. According to Luckin et al. (2016), "AI can help teachers to personalize learning, making it more effective and engaging for students."

AI-powered adaptive learning systems can tailor the learning experience to individual students' needs, abilities, and learning styles. According to Shan Wang and others (2024), AI in education can provide "personalized learning experiences, improving student outcomes and enhancing teaching practices".

Improved Academic Achievement: AI can help students achieve better grades and academic outcomes by providing real-time feedback, guidance, and support. As stated by Knight et al. (2018), "AI-powered feedback systems can provide immediate and detailed feedback to students, helping them to improve their performance."

Challenges of AI in Education

Ethics and Transparency: The use of AI in education raises concerns about bias, fairness, and transparency. As noted by Williamson (2017), "AI systems can perpetuate existing biases and inequalities if they are not designed with fairness and transparency in mind." The use of AI in education raises concerns about bias, fairness, and transparency. Researchers have emphasized the need for transparency and accountability in AI-powered educational systems.

Plagiarism and Academic Integrity: AI-powered tools can make it easier for students to plagiarize or cheat, which can undermine academic integrity. According to Selwyn (2019), "The use of AI-powered tools raises important questions about academic integrity and the need for new forms of assessment and evaluation."

Adoption and Implementation: Despite the potential benefits, there are concerns about the adoption and implementation of AI in education, including issues related to infrastructure, training, and support.

AI-powered Learning Systems: Researchers are exploring the development of AI-powered learning systems that can provide personalized learning experiences, real-time feedback, and support.

Ethics and Fairness: There is a growing need for research on ethics and fairness in AI-powered educational systems, ensuring that these systems are transparent, accountable, and free from bias.

FUTURE OF AI IN EDUCATION

Increased Adoption: AI is likely to become more widespread in education, with more institutions adopting AI-powered tools and systems. As predicted by Spector (2019), “AI will become an essential tool for teachers and educators, helping them to personalize learning, improve student outcomes, and enhance teaching practices.”

New Forms of Assessment: AI may enable new forms of assessment and evaluation, such as automated grading and feedback systems. According to Ifenthaler et al. (2019), “AI-powered assessment systems can provide immediate feedback and support to students, helping them to improve their performance and achieve better learning outcomes.”

OBJECTIVES OF THE STUDY

The paper seeks to set the following objectives to analyse the prospects of Artificial Intelligence in educational field the near future. Here are the objectives below:

- I. To justify the use of Artificial Intelligence in formal education such as School, college and University education system.
- II. To verify the use of Artificial Intelligence in informal and non-formal education that is in audio space learning, open space learning and cyber space learning.
- III. Identifying the Cognitive and Meta cognitive system of Human Mind more appropriately to discover the most wonderful Artificial Intelligence for Excellent learning process.
- IV. To explore the role of Artificial Intelligence in Academic Advisory process by Collective Intelligence and Robots with Artificial Intelligence for appropriate execution of the academic system.

METHODOLOGY

Our study explores the role of artificial intelligence (AI) in education, focusing on its potential applications and impact on teaching-learning and educational management. By incorporating AI-generated images, we’ve likely examined various aspects of AI in education. Our study likely investigates these aspects and more, providing insights into the potential benefits and challenges of AI in education.

FINDINGS OF THE STUDY

Finding 1: Application of Artificial Intelligence in Formal Education System like Schools, Colleges and Universities

AI in School Education System

Tech Thought Staff (2018) states that science fiction writers, futurists, and filmmakers have been projecting the incredible—and occasionally disastrous—shifts that will occur when artificial intelligence becomes widely used for decades. AI hasn’t really created a lot of noise thus far, and it’s actually quietly permeated many facets of our everyday life. Artificial intelligence

of one form or another is present everywhere and can be helpful in the field of education in schools in the following ways. Examples of this include intelligent sensors that back up to take flawless pictures, automated parking features in cars and annoying personal assistants on smart phones.

- ***Educational Softwares can be Adapted to fulfil the needs of the students***

Applying higher levels of individualised learning is one of the main ways AI will impact education, from kindergarten to graduate school. A portion of this is already taking place thanks to the proliferation of adaptive learning applications, games, and software. By emphasising particular topics more, repeating lessons that students have not yet learned, and generally assisting students in working at their own pace, these systems adapt to the demands of the learner. With the help of initiatives like Khan Academy, adaptive learning has already had a significant global impact on education. As artificial intelligence (AI) develops over the next several years, these kinds of programmes should only get better and more widespread.

- ***Students could get additional support from AI tutors***

In the future, more students may receive tutoring from tutors who only exist in zeros and ones, even though there are undoubtedly benefits that human tutors can provide that computers cannot at least not now. There are currently some artificial intelligence-based intelligent teaching programmes available that can assist kids with writing, basic maths, and other disciplines. Although these programmes can teach kids the fundamentals, they are currently not the best at teaching them how to think creatively and with higher order thinking. ITalk2Learn by “Mika” keeps an eye on younger pupils, noting their development, emotional condition, and mental needs while they work through maths.

- ***AI programs can give students and educators helpful feedback***

AI can give instructors and students feedback on the overall success of the course in addition to assisting them in creating courses that are tailored to their individual needs. AI systems are being used by certain online colleges to track students’ progress and notify instructors when there may be a problem with a student’s performance. These artificial intelligence (AI) technologies assist both students and instructors in finding areas where they might construct lessons for pupils who might struggle with the subject.

- ***AI is altering how we find and interacting with information***

The way we engage with data and information has drastically evolved over the last few decades because to AI-based technological solutions. Future students with greater technological integration may view research and development and fact-finding very differently from today’s students.

- ***AI could change the role of teachers***

Teachers will always have a place in education, but as a result of new technologies like intelligent computer systems, that position may change. As we’ve already seen, AI can help students learn more effectively, replace human coaching, and even take over responsibilities like grading. However, AI could also be tailored to a wide range of different teaching exposures.

AI systems might be designed to offer knowledge, acting as a resource for students to seek information and ask questions, or they might even be able to substitute instructors for some course topics. AI will typically cause students to take on the role of the teacher. Many of these changes in the classroom are already being driven by technology, particularly in online schools that use the flipped classroom paradigm. AI will help instructors work more productively rather than rendering them obsolete, freeing up more time for important duties.

- ***Data fuelled by ai can substitute how schools find, teach and supports students***

Colleges and universities are transforming the way they engage with both present and potential students by implementing clever data gathering strategies supported by sophisticated computer systems. Intelligent computer technologies are helping to make every aspect of the college experience more precisely matched to the requirements and aspirations of students, from recruitment to choosing the ideal courses for them. The current landscape of higher education already heavily relies on data mining technologies, but artificial intelligence has the potential to drastically change the field much more.

- ***AI may change when students learn, who teaches them and how they acquire basic skills***

Even though significant changes in schooling might not occur for several decades, it is true that artificial intelligence has the power to drastically alter almost everything we currently take for granted. Students can learn from anywhere in the world at any time with the help of AI systems, software, and assistance. Since these programmes can substitute for some forms of classroom Instruction, artificial intelligence may eventually replace instructors in certain situations.

- ***AI Can Automate Some Basic Activities***

Even while AI can't completely replace human grading, the gap is closing. These days, teachers can grade almost all multiple-choice and fill-in-the-blank exams on their own, and automated grading of student papers is also possible. While essay-grading software is still in its early stages and not quite there yet, it will likely get better in the upcoming years, freeing up professors to spend more time with their students and doing in-class activities rather than marking essays. AI is still in its infancy as a compelling, essential component of the classroom. Teachers are utilising more artificial intelligence (AI) in order to provide more personalised learning experiences for their pupils, thanks to intelligent tutoring programmes and content. With the advancement of ITS technology, kids could have access to a personalised learning platform that lasts a lifetime.

Findings 2: Application of artificial intelligence to change in college and university education system

Figure 1 illustrates how many scientists, according to the World Economic Forum (Dogson, M., Gann, D., August 9, 2017), are confident that AI and machine learning will enhance the process of scientific discovery. Eight (8) years have passed since researchers at the University of Aberystwyth developed a robotic system that was able to conduct every step of the scientific

method independently, including developing hypotheses, planning and carrying out tests, evaluating results, and selecting which experiments to conduct next. Exams and marking assignments for lengthy lectures in college can be challenging tasks. Teachers frequently discover that grading takes up a large amount of time, even in lower grades, time that could be spent interacting with students, getting ready for class, or working on professional development. We can already see how AI will impact the future of higher education.

Artificial intelligence (AI) has the capacity to generate hypotheses on its own, make unexpected connections, lower the cost of acquiring knowledge, and be more predictive. AI is being utilised by several publishers, including Reed and Elsevier, to automate systematic literature reviews. It can also be used to detect instances of plagiarism and statistical misuse.

Diagram 1: University Education leads by AI



Source : Blog Mackenzie (2019)

“If you look at the field of robotics today, you can say robots have been in the deepest oceans, they have been everywhere, but they are just now starting to come into your living room,” stated Dr Cynthia Breazeal, Founder and Chief Scientist of Jibo. For robots, your living room is the last frontier. (J. Roberts, August 31, 2016)

- ***Open space learning***

Open-space Learning, or OSL, is a pedagogic methodology. OSL is also a trans-disciplinary pedagogy that is dependent on the use of physically open spaces - in the sense that tables and chairs are absent - and an open viewpoint to intellectual content and the role of the tutor as is shown in figure 3. Participants in OSL, typically but not solely, grasp in a ‘embodied’ way. In OSL, the workshop is the elementary activity of pedagogic interplay. Such as OSL activities include ‘still image’ or ‘tableau’, in which participants embody sometimes-abstract ideas; ‘theory building’, in which participants create a narrative, a concept, or a ‘theory’ from a collection of materials relating to a particular subject; and simulation and role-play (Wikipedia free Encyclopaedia 1st Aug.2018).

Diagram 3 : Open learning system for many people



Source : Monash University (2014)

- **Cyber space learning**

A cognitive space that can be accessed by computers and used by people to interact with texts and AI-generated virtual reality avatars in educational contexts is known as educational cyberspace. In fact, students are concentrating on one or more instances or their comprehension of texts as they engage with multimedia on their computer displays. Figure 4 depicts the Cyberspace Learning method.

Diagram 4 : Close-up of a Robot's Hand Typing On Laptop



Source : Tech Talks (2019)

In fact, it is predicted that the use of classroom AI may be increased by 50% from 2017 to 2024.

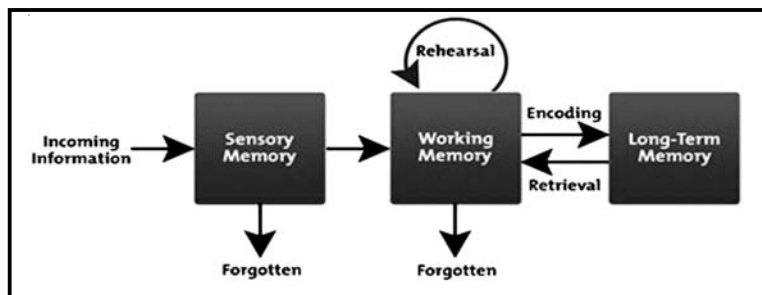
Finding 3: Identifying the cognitive and meta-cognitive system of human mind more appropriately to discover the most wonderful artificial intelligence for excellent learning process.

- **AI and cognitive psychology**

Our brain has been shown to be an information processing system. This theory is further supported by artificial intelligence, and the image depicts the brain's information processing model. According to Daroczy, G. Jan. (2010), stimuli must be evaluated to represent cognitive psychology and artificial intelligence. In the near future, AI will play a major role in developing cognitive processes and correctly detecting them, which will help learners learn quickly and

tackle challenging tasks with ease. Diagram 5 illustrates the technological procedure for creating the cognitive psychological process.

Diagram 5 : Cognitive process of Human Mind for better AI



Source: The Modal Model of Memory Atkinson & Shiffrin (1968)

- **AI and meta-cognition**

The study presented in this paper is centred on the premise, which is illustrated in figure 6, that an intelligent tutoring system that offers advice regarding students' metacognitive skills can assist them in becoming better learners. Numerous classroom studies have demonstrated how teaching learning programmes that place a significant emphasis on the meta-cognition process can enhance students' learning outcomes (Brown & Campione, 1996; Palincsar & Brown, 1984; White & Frederiksen, 1998). This was demonstrated by A. Vincent, McL. Bruce, R. Ido, K. Kenneth, Jan 2006. Therefore, whether intelligent tutoring systems can effectively assist meta-cognitive skills is an essential subject. A limited amount of research indicates that it is capable of performing.

For instance, research has demonstrated that the development of knowledge and domain-specific skills can be positively impacted by supporting self-explanation, a crucial meta cognitive skill (Aleven & Koedinger, 2002; Bunt, Conati, & Muldner, 2004; Conati & Van Lehn, 2000; Mitrovic, 2003; Renkl, 2002; Trafton & Tricket, 2001). Gama's (2004) work is a another illustration of his proficiency in having pupils evaluate their own competence levels.

Diagram 6: Meta cognitive process for better AI



Source: Forbes (2018)

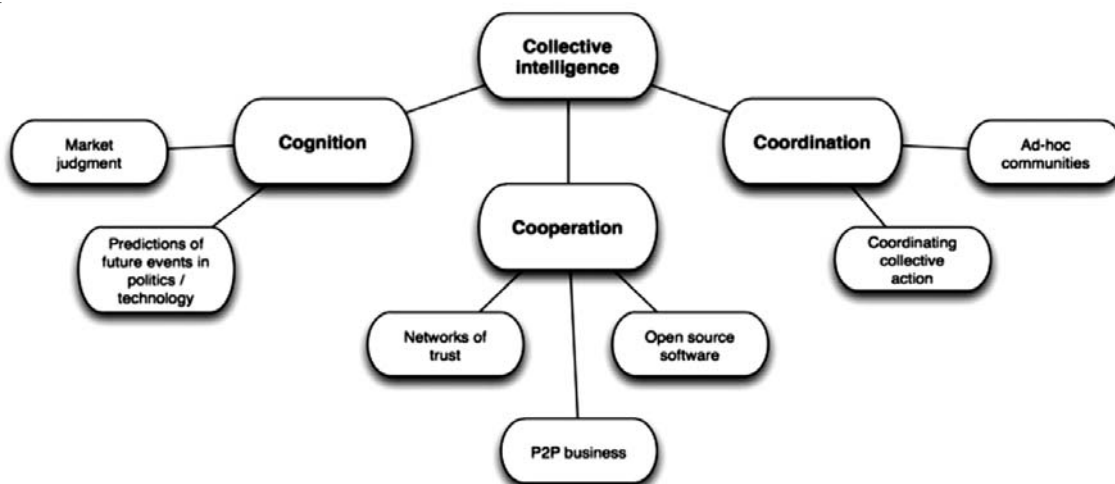
Finding 4: To explore the role of artificial intelligence in academic advisory process by collective intelligence and robots with artificial intelligence for appropriate execution of the academic system.

- **Academic advisory by collective intelligence**

As seen in Diagram 7, collective intelligence (CI) or group intelligence arises from the cooperation, group efforts, and rivalry of numerous individuals and manifests itself in consensus decision making. The movement from individual knowledge and power to communal knowledge and power is greatly aided by collective intelligence. Free open source intelligence will eventually produce better results than information produced by proprietary software created within corporations.

Raymond (1998) and J.C. Herz (2005) (Flew 2008). According to media theorist Henry Jenkins, convergence culture is connected to collaborative intelligence as a “alternative source of media power.” The argument that collective intelligence is crucial for democratisation is supported by both Levy (2007) and Jenkins (2008). This is because collective intelligence fosters a better understanding of diverse societies, particularly in the modern era, and is linked to knowledge-based cultures.

Diagram 7 : Types of Collective Intelligence for academic advisory



Source : Wikimedia Commons (2020)

- **Academic advisory by robots**

When we are too sluggish to recall something or question a human, we Google it. We frequently question Siri and Cortana about the weather now that we’ve grown used to them. Diagram 8 illustrates how the current generation of artificial intelligence can extract information from the internet to schedule appointments, make jokes, and more. What if you had a crucial helper to guide you while making decisions about real-life commitments, including whether to

enrol in business school or launch a brewery? The goal of IBM and the University of Michigan's Project Sapphire is to create an artificially intelligent academic advisor that helps undergraduate students choose their courses, select extracurricular activities, and ultimately offer career guidance.

Diagram 8 : Academic advisory by robots



Source : Business Insider (2019)

The college campus has been chosen by both research teams as their starting point because they believe that studying the relationships between thousands (1000) of students and their professors will aid in the development of a conversation system with an EQ that corresponds with its IQ. When responding to your inquiries, digital colleagues over the phone use rule-based technology to generate relevant feedback. In this sense, the responses are somewhat predetermined, but real-world discussions are erratic and full of emotional indications that current virtual assistants aren't Yet trained to pick it up on.

CONCLUSION

Over the coming years, artificial intelligence (AI) systems will alter the dynamics of human-machine interaction. Although Project Sapphire is currently housed inside a university, its knowledge and emotional intelligence will eventually be applied to all human-machine interactions. In order to better serve our objectives, our machines will be able to comprehend us and our context. Although it's unlikely that we'll see humanoid robots teaching in the next ten years, a number of initiatives are now underway that leverage computer intelligence to improve learning outcomes for both teachers and pupils. These are just a few examples of how those tools, and others that come after them, will influence and characterise future educational experiences.

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AWARENESS OF CYBER-CRIME AMONG THE B.ED. STUDENTS IN WEST BENGAL

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ABSTRACT

India's rapid technological advancement and the widespread adoption of digital technologies have made the country increasingly vulnerable to various forms of cybercrime. The rise in online transactions, social media usage and internet-enabled devices has created space for cybercriminals to exploit. Therefore, we must remain vigilant against digital frauds that occur over the internet. Teachers are the center of the teaching-learning process. Many students fall victim to cybercrime attacks. Therefore, educating our teachers about these digital crimes is crucial to fostering a digitally healthy world. This article aimed to assess the awareness of B.Ed. students in West Bengal. A standardized Cyber-crime Awareness Scale was used, developed by Rajasekar (2011), to collect the relevant data from 171 B.Ed. Students from Six NCTE recognized institutions in the state. The study found slight differences in awareness levels, with female students and students with a science background showing higher awareness than their counterparts. Moreover, students from urban and semi-urban areas showed higher awareness than those from rural areas. However, this study highlights the necessity of integrating cybercrime education into teacher training programs. Hence, the future researchers can explore the pros and cons of digital security and can help to build a more cyber resilient generation.

Keywords: Cyber-Crime, Awareness, B.Ed. Students, Attitude.

INTRODUCTION

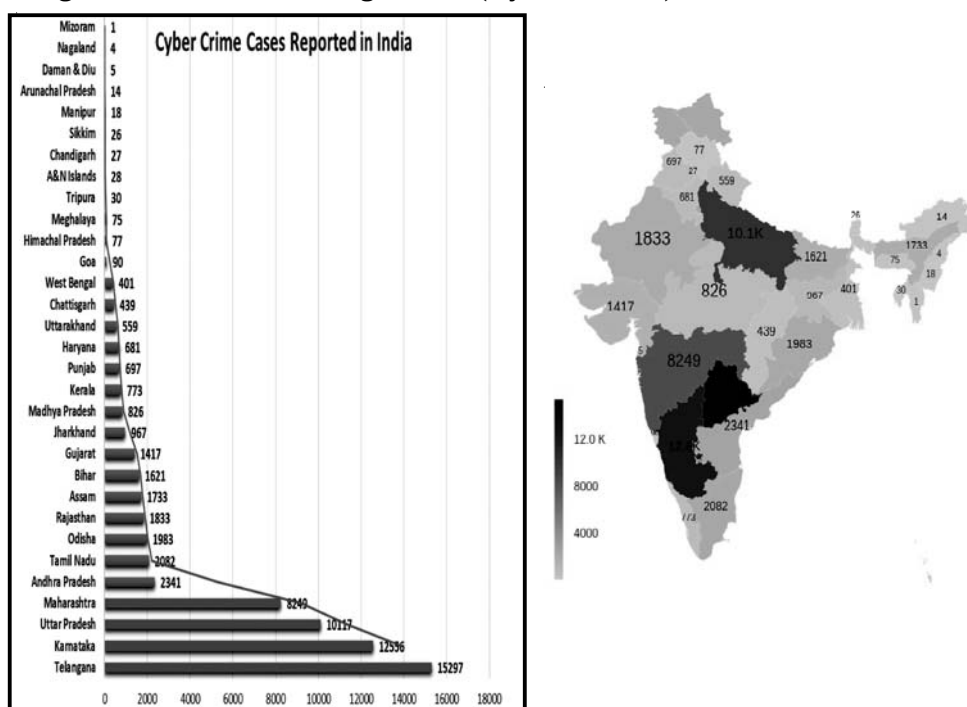
In the digital age, the rise of cybercrime has become a growing concern worldwide, and India is no exception to it. The rapid expansion of the internet and advancements in Information and Communication Technologies (ICT) has transformed the way we live, work, and interact. However, this digital transformation has also led to a significant increase in criminal activities, commonly known as cybercrime (Halder & Jaishankar, 2010).

Cybercrime takes many forms, including hacking, child pornography, cyber stalking, malware, phishing, ransomware, cyberbullying, online scams, and more (Jain & Srivastava,

2014). With its large and rapidly expanding population of internet users, India has become a prime target for cybercriminals, particularly in rural areas where people may have less awareness of digital security (Kumar, 2016). The country has seen a surge in various types of cyber-attacks, such as financial fraud, identity theft, online harassment, and data breaches.

This trend is largely attributed to the widespread use of smartphones, e-commerce platforms, and digital payment systems, which provide cybercriminals with opportunities to exploit vulnerabilities in these technologies. A summary of reported cybercrime cases in 2022, as documented by the National Crime Records Bureau (NCRB), highlights the extent of these crimes across Indian states and the districts of West Bengal.

Fig. 1: No. of Cases Registered (Cyber Crime) across the States



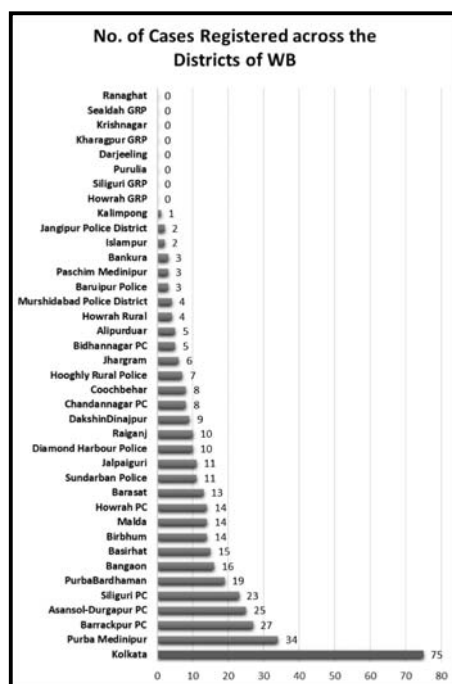
Source: Cyber Crime, NCRB (2022)

In 2022, there was a notable increase in reported cybercrimes in India compared to the previous year. According to the latest NCRB report (2022), Telangana recorded the highest number of cybercrime cases with 15,297 incidents, followed by Karnataka with 12,556 cases and Uttar Pradesh with 10,117 cases. Therefore, it is recommended that these states prioritize strengthening cyber security measures and enhancing public awareness about cybercrimes.

On the other hand, Mizoram, Nagaland, and Daman & Diu reported the fewest cases, each with fewer than 10 incidents, it is advisable for these states to take proactive measures to prevent potential digital threats.

Although West Bengal's cybercrime rate is not as high as that of some other states, there is a strong possibility that the number of cases may rise if appropriate steps are not taken promptly. The Figure 2 demonstrates the district-wise distribution of registered cases in West Bengal.

Fig. 2: District-wise No. of Cases registered for Cyber Crimes in WB



Source : Cyber Crime, NCRB (2022)

The above statistics show that Kolkata, Purba Medinipur and Barrackpur PC reported the highest number of cases, with 75, 34, and 27 cases, respectively. On the other hand, a few districts, such as Darjeeling, Purulia, and Krishnanagar, have reported no cases.

REVIEW OF LITERATURE

Awareness of cybercrime plays a significant role in mitigating digital fraud, which predominantly occurs over the internet. The incidence of such crimes has gradually increased, particularly since the onset of the COVID-19 pandemic, during which cybercriminals gained partial access to users' personal information due to expanded online activity and digital vulnerability. In response, several studies have been investigated to understand cybercrime awareness across different regions and demographic groups.

Goel (2014) studied among B.Ed. students in the Sonitpur district and found that cybercrime awareness was significantly influenced by location and academic stream but not by gender. Similar findings were reported by Suvera and Tailor (2020), Velmurugan and Ramachandran

(2022), and Chaudhuri (2022), who all observed significant variations in awareness based on academic stream, gender and locality.

Gender has emerged as a particularly complex and contested variable in this context. While studies by Muthulakshmi and Kumar (2017), Vinnarasi and Rajkumar (2021), Maurya and Suryavanshi (2023), and Bala (2022) revealed significant gender-based differences in cybercrime awareness, other researchers, including Goel (2014), Choudhary (2020), and Sahu and Shukla (2024), reported no such variation. These divergent findings highlight the nuanced and context-specific influence of gender on cybercrime awareness.

Academic stream has also been identified as an important determinant. Goel (2014) and Choudhary (2020) observed that students enrolled in professional courses tended to demonstrate higher levels of awareness. This trend was further supported by the findings of Vinnarasi and Rajkumar (2021), Chaudhuri (2022), and Velmurugan and Ramachandran (2022).

Locality remains another key factor influencing cybercrime awareness. Goel (2014) and Bhutia and Passah (2019) reported lower awareness among rural B.Ed. trainees, which was attributed to limited access to digital resources and exposure. Consistent with this, Kumar et al. (2021), Bera and Chel (2020), Bala (2022), and Sahu and Shukla (2024) found higher levels of awareness among urban students, particularly urban females. However, this trend was contested by Vinnarasi and Rajkumar (2021), who reported no significant difference based on locality.

In conclusion, the literature suggests that cybercrime awareness among B.Ed. trainees is shaped by a complex interplay of demographic and academic variables, most notably gender, academic stream and locality. These findings highlight the need for context-sensitive interventions to enhance digital literacy and cyber security awareness in teacher education programs.

NEED OF THE STUDY

The need for this study on cybercrime awareness stems from the growing threat the cybercrime poses to society, particularly to individuals who may lack adequate knowledge of digital safety. Cybercrime awareness involves educating individuals and organizations about various cyber threats, vulnerabilities, and risks in the digital landscape, equipping them with essential knowledge to protect themselves against potential harm (Jain & Srivastava, 2014; Kumar et al., 2021; Suvera & Tailor, 2020).

In an increasingly interconnected society where technology is embedded into daily life, cyber threats are rapidly evolving, making detection challenging and leaving many individuals exposed to risk. The lack of education and awareness is a critical factor that exacerbates the spread of cybercrime. As such, efforts are being made by governments to proactively counter cyber threats, underscoring the importance of educating all citizens, particularly those involved in the education sector, about cyber safety.

Teacher trainees in Bachelor of Education (B.Ed.) programs are positioned as future educators for the next generation, making it essential for them to cultivate awareness and understanding of cyber threats and digital safety. Their familiarity with cybercrime prevention

is crucial as they prepare to guide future students in safe digital practices. To address this need, integrating cybercrime awareness into B.Ed. curricula, along with organizing workshops and seminars, can significantly enhance teacher trainees' preparedness and confidence in digital spaces. This study, therefore, seeks to explore the importance of cybercrime awareness among B.Ed. trainees, aiming to promote a proactive, informed attitude towards technology and online security.

OBJECTIVE OF THE STUDY

This paper aims to assess the level of cyber-crime awareness among B.Ed. students in West Bengal, considering factors such as gender, location, and academic streams.

HYPOTHESES

The following hypotheses have been framed for this study:

- **Ho1** : There would be no significant difference between male and female B.Ed. students in their level of awareness towards cybercrime.
- **Ho2** : There would be no significant difference between arts and science stream B.Ed. students in their level of awareness towards cyber-crime.
- **Ho3** : There would be no significant difference between rural and urban B.Ed. students in their level of awareness towards cybercrime.
- **Ho4** : There would be no significant difference between urban and semi-urban B.Ed. students in their level of awareness towards cybercrime.
- **Ho5** : There would be no significant difference between rural and semi-urban B.Ed. students in their level of awareness towards cybercrime.

METHODOLOGY

This study employed a descriptive research approach. The population comprises of all the B.Ed. students studied in the NCTE recognised Teacher Education Institutions in West Bengal. For this study, the investigators have collected the data from 171 B.Ed. students studied in different TEIs at Cooch Behar district by using simple random technique. The demographic details of the respondents based on gender (male and female), location (Rural, Urban and Semi-Urban) and stream (arts and science) is given in Table 1.

Table 1 : Demographic Details of the Respondents

Main Variable	Categorical Variable	No. of Respondents	% of response	Total
Gender	Male	69	40	171
	Female	102	60	
Location	Rural	113	66	171
	Urban	38	22	
	Semi-Urban	20	12	
Stream	Arts	130	76	171
	Science	41	24	

After collection of relevant data, the researchers have used descriptive as well as inferential statistics like Mean, Standard Deviation and t-Test to assess the hypotheses.

Tool used for the study

The Cyber-Crime Awareness Scale (CCAS), developed by Rajasekar (2011), have been used in order to measure the cyber-crime awareness level among the B.Ed. students in West Bengal. This scale consists of 36 statements, including positive and negative statements. The details of positive and negative statements are as follows.

Statement Type	Item No.	Total
Positive Statements	1, 2, 4, 6, 7, 9, 11, 12, 14, 17, 18, 20, 21, 23, 24, 26, 27, 29, 30, 34, 36	21
Negative Statements	3, 5, 8, 10, 13, 15, 16, 19, 22, 25, 28, 31, 32, 33, 35	15

Each statement has five (5) alternative responses, namely “Strongly Agree”, “Agree”, “Undecided”, “Disagree”, and “Strongly Disagree”. For the positive statements, the scoring is done as 5, 4, 3, 2, and 1 and for the negative statements it scored as 1, 2, 3, 4, and 5, respectively.

RESULTS AND DISCUSSION

The data has been analysed based on the scores obtained by the respondents. First, the scores were organized according to the level of awareness achieved. Then, each hypothesis was tested to measure the significant differences between the mean scores of the considered variables (gender, location, and streams) using the Student’s t-test. The findings of the study are as follows.

Table 2: Awareness Level achieved by the Respondents

Score Range	No. of Respondents	%	Awareness Level
36 to 98	1	0.58	Low Level
99 to 107	2	1.16	Below average Level
108 to 122	27	15.78	Average Level
123 to 132	46	26.90	High Level
143 to 180	95	55.55	Excellent Level

Regarding the level of cyber-crime awareness, it was observed that a significant percentage of respondents, 55%, achieved an ‘Excellent Level,’ while only 0.58% and 1.16% were found to have ‘Low Level’ and ‘Below Average Level’ awareness, respectively (see Table 2).

Testing of Hypotheses

H₀₁: There would be no significant difference between male and female B.Ed. students in their level of awareness towards cybercrime.

Table 3: Difference between the Awareness of B.Ed. students towards Cyber-crime based on gender (Male and Female)

Sl. No.	Variable	N	Mean	S.D.	SEM	df	t-value	Remark
1.	Male	69	134.09	13.118	1.579	169	0.704	Not Significant*
2.	Female	102	135.55	13.449	1.332			

**at 0.05 level of significance*

Table 3 reveals that the mean value of male students is found to be 134.09 and 135.55 for female students. It indicates that the mean score of the female students has found slight higher than the male students. The obtained value of t is 0.704 which is much lesser than the critical value of t at 0.05 level of significance (1.98) against 169 degrees of freedom (df).

Thus, it can be concluded that there is found no significant difference between the male and female B.Ed. students towards cybercrime awareness. Hence, the null hypothesis is retained at 0.05 level of significance.

Ho2: There would be no significant difference between arts and science stream B.Ed. students in their level of awareness towards cyber-crime.

Table 4: Difference between the Awareness of B.Ed. students towards Cyber-crime based on Stream (Arts and Science)

Sl. No.	Variable	N	Mean	S.D.	SEM	df	t-value	Remark
1.	Arts	138	134.20	13.098	1.115	169	1.541	Not Significant*
2.	Science	33	138.15	13.850	2.411			

**at 0.05 level of significance*

Data in Table 4 reveals that the mean value of arts students is found to be 134.20 and 138.15 for the students belonging to science stream. It is indicated that the mean score of the science stream students has found slight higher than the arts students. The obtained value of t is 1.541 which is much lesser than the critical value of t at 0.05 level of significance (1.98) against 169 degrees of freedom (df).

Thus, it can be concluded that no significant difference is found between the arts and science B.Ed. students towards cybercrime awareness. Hence, again the null hypothesis is retained at 0.05 level of significance.

Ho3: There would be no significant difference between rural and urban B.Ed. students in their level of awareness towards cybercrime.

Table 5: Difference between the Awareness of B.Ed. students towards Cyber-crime based on location (Rural and Urban)

Sl. No.	Variable	N	Mean	S.D.	SEM	df	t-value	Significant at 0.05
1.	Rural	114	132.57	13.017	1.219	169	2.219	Significant
2.	Urban	37	138.08	13.459	2.213			

**at 0.05 level of significance*

Results in Table 5 illustrates that the mean value of rural students is found to be 132.57 and 138.08 for the students belonging to urban areas. Therefore, it is indicated that the mean score of the urban students is much higher than the students belonging to rural areas. The obtained t-value is 2.219 which is much higher than the critical value of t at 0.05 level of significance (1.98) with 169 degrees of freedom (df).

Thus, it can be concluded that there exists a significant difference between the rural and urban B.Ed. students in their awareness towards cybercrime. Consequently, the null hypothesis cannot be retained at 0.05 level of significance.

Ho4: There would be no significant difference between urban and semi-urban B.Ed. students in their level of awareness towards cybercrime.

Table 6: Difference between the Awareness of B.Ed. students towards Cyber-crime based on location (Urban and Semi-urban).

Sl. No.	Variable	N	Mean	S.D.	SEM	df	t-value	Significant at 0.05
1.	Urban	37	138.08	13.459	2.213	169	1.354	Not Significant*
2.	Semi-Urban	20	142.80	10.636	3.378			

**at 0.05 level of significance*

Table 6 shows that the mean value of urban students is found to be 138.08 and 142.80 for semi-urban students. Thus, it is indicated that the mean score of the semi-urban students has found much higher than the students lived in urban areas. The obtained value of 't' is 1.354 which is much lesser than the critical value of t at 0.05 level of significance (1.98) against 169 degrees of freedom (df).

Thus, it can be said that no significant difference exists between urban and semi-urban B.Ed. students in terms of cybercrime awareness; hence, the null hypothesis cannot be retained at the 0.05 level of significance.

Ho5: There would be no significant difference between rural and semi-urban B.Ed. students in their level of awareness towards cybercrime.

Table 7: Difference between the Awareness of B.Ed. students towards Cyber-crime based on location (Rural and Semi-urban)

Sl. No.	Variable	N	Mean	S.D.	SEM	df	t-value	Significant at 0.05
1.	Rural	114	132.57	13.017	1.219	169	3.322	Significant*
2.	Semi-Urban	20	142.80	10.636	2.378			

**at 0.05 level of significance*

The above table (Table 7) indicates that the mean value for semi-urban students (142.80) is significantly higher than that for rural students (132.57). The calculated t-value is 3.322, which exceeds the critical value of t at 0.05 level of significance (1.98) with 169 degrees of freedom (df).

This result indicates a significant difference in cybercrime awareness between rural and semi-urban B.Ed. students. Consequently, the null hypothesis cannot be retained at the 0.05 level of significance. It is also observed that students from rural areas tend to be more susceptible to cybercrime victimization.

DISCUSSION OF THE FINDINGS

The findings of this study explore the levels of cyber-crime awareness among B.Ed. students based on gender, stream and location. Each of these factors reveals distinct trends in students' understanding of cyber-crime, which could inform targeted educational interventions and awareness programs in the B.Ed. curriculum.

The study finds no statistically significant difference in cyber-crime awareness levels between male and female B.Ed. students, corroborating results from earlier studies (Choudhary, 2020; Sahu & Shukla, 2024). These results suggest that both male and female students have similar awareness levels about cyber-crime, indicating a gender-neutral understanding of digital safety and security issues. However, despite the lack of significant difference, the mean awareness score of female students (135.55) was slightly higher than that of male students (134.09). This could point to a subtle difference in engagement or exposure to cyber-crime information among female students. While earlier studies support the lack of significant difference, contrasting findings from studies like Suvera & Tailor (2020), Vinnarasi & Rajkumar (2021), and Velmurugan & Ramachandran (2022) indicate a possible gender difference in cyber-crime awareness.

In terms of academic stream, the results reveal no significant difference in cyber-crime awareness between B.Ed. students from arts and science backgrounds (Velmurugan & Ramachandran, 2022). However, the mean score for science students (138.15) was notably higher than for students in the arts or social sciences (134.20). This pattern suggests that students from scientific disciplines may possess a stronger foundation in or interest towards

technological and cyber-related subjects, likely due to curriculum exposure to topics in computer science or data security. This subtle but consistent trend indicates a potential benefit in incorporating basic cyber-crime awareness into the B.Ed. curriculum across all disciplines to ensure a more balanced understanding among future educators, who may go on to teach in varied fields.

The study also highlights a significant difference in cyber-crime awareness between rural and urban B.Ed. students, aligning with findings from Sahu & Shukla (2024) and Kumar et al. (2021). Urban students showed higher awareness levels, with a mean score of 138.08, compared to rural students, who had a mean score of 132.57. This finding indicates that urban students might have greater exposure to digital technologies, media, and educational resources, which enhances their awareness of cyber-crime threats. In contrast, rural students might have limited access to digital literacy resources, leading to a lower awareness of cyber-crime risks. This significant discrepancy noises for tailored educational programs focused on improving cyber-crime awareness in rural areas to bridge the digital literacy gap and promote equal digital safety understanding across different geographic areas.

CONCLUSION

The present study concludes that cybercrime awareness among trainee teacher in West Bengal is a vital issue, especially given the rapid growth of cyber-related threats globally and within India. With the sample of 171 B.Ed. students, the study assesses awareness levels across gender, location, and academic stream. B.Ed. students generally have similar levels of awareness regarding cybercrime, regardless of their gender, academic background and location. Although slight differences were noted, female students and science background's students had higher awareness than their counterparts. Students of urban and semi-urban area showed higher awareness than those from rural areas. The findings of this study indicate the varying degrees of cyber-crime awareness among different groups, suggesting gaps in knowledge that could make some students more vulnerable to cyber-crimes. Although West Bengal has the lower number of Cybercrime cases than other state, the risk of future escalation remains high without proactive education and awareness. This study highlights the necessity of integrating cyber-crime education into teacher training programs, so future educators can better understand digital security and help to build a more cyber-resilient generation.

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EDUCATIONAL THOUGHTS OF TAGORE, MAHATMA GANDHI AND SRI AUROBINDO WITH REFERENCE TO NEP 2020

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ABSTRACT

This study undertakes a comparative analysis of three inspiring Indian educational philosophers Tagore's Santiniketan, Gandhi's Nai Talim, and Sri Aurobindo's Integral Education concerning the contemporary framework of the National Education Policy (NEP) 2020. By examining the historical contexts, philosophical foundations, and practical implementations of these approaches, the research reveals their enduring influence on modern Indian education. Santiniketan's emphasis on aesthetic experience and holistic cultural synthesis, Nai Talim's integration of craft-based learning with vocational skills, and Integral Education's focus on the balanced development of mind, body, and spirit are critically analyzed. The study employs a qualitative approach such as extensive literature review with qualitative comparative analysis. Findings reveal that while NEP 2020 aspires to strengthen holistic and multidisciplinary education, it also faces challenges in resolving traditional values with contemporary global educational demands. The discussion highlights areas of interaction such as the emphasis on creativity, critical thinking, and the integration of vocational training with practical policy implications for integrating indigenous pedagogical insights into modern curricula. These results emphasize the importance of drawing on India's rich educational heritage to inform progressive reforms that provide to cognitive and holistic human development (Tagore, 1933; Gandhi, 1940; Aurobindo, 1989; Ministry of Education, 2020).

Keywords: Nai Talim, Integral Education, NEP 2020, Holistic Learning, Indian Educational Philosophy

INTRODUCTION

Indian education has long been shaped by diverse philosophies that emerged during the country's struggle for identity and self-determination. The early twentieth century witnessed the rise of innovative pedagogical approaches as exemplified by Rabindranath Tagore's Shantiniketan, Mahatma Gandhi's Nai Talim, and Sri Aurobindo's Integral Education. Tagore imagined education as an art of living that transcends conventional classroom learning. At Shantiniketan, learning was interconnected with nature, art, music, and literature—thereby nurturing creativity and cultural consciousness (Tagore, 1933). In contrast, Gandhi's Nai Talim (literally “new education”)

was premised on the idea of learning by doing, emphasizing manual work, craft-based activities, and a direct connection to the social and economic realities of rural India (Gandhi, 1940). Complementing these views, Sri Aurobindo's Integral Education aimed at the individual's holistic development by integrating intellectual, physical, emotional, and spiritual dimensions of life (Aurobindo, 1989).

With the introduction of the National Education Policy (NEP) 2020, Indian education is again at the crossroads. The NEP 2020 predicts a radical transformation by promoting multidisciplinary learning, flexibility in curricula, and a balanced emphasis on academic and vocational skills (Ministry of Education, 2020). This policy, while forward-looking, resonates with the core principles of the above-mentioned educational experiments. The legacy of these pioneers is evident in the renewed focus on experiential learning, critical thinking, and the development of the whole person—principles central to NEP 2020. However, the implementation challenges and the need for contextual adaptation pose significant questions regarding integrating traditional educational philosophies with modern policy frameworks.

Therefore, this study aims to systematically compare these influential pedagogical models and explore how their original values can enrich the contemporary educational environment. By critically engaging with historical texts and government policy documents, the research offers insights into the potential for a synergistic educational model that bridges traditional wisdom and modern imperatives. The exploration is timely and necessary as educators and policymakers grapple with the complexities of globalization, technological change, and cultural preservation in today's educational environments.

OBJECTIVE OF THE STUDY

To critically examine and compare the philosophical foundations and pedagogical strategies of Tagore's Santiniketan, Gandhi's Nai Talim, and Sri Aurobindo's Integral Education, and to assess how these diverse educational approaches have influenced modern Indian education, mainly as reflected in the design and implementation of NEP 2020.

Table: 1. Methods and Procedures

Phase	Method	Procedure	Data Sources	Analysis Approach
Literature Review	Qualitative Analysis	Systematic review of primary texts and scholarly articles on Tagore, Gandhi, and Aurobindo	Primary texts (Tagore, Gandhi, Aurobindo), government documents (NEP 2020), peer-reviewed journals	Thematic coding and comparative analysis
Data Extraction	Document Analysis	Extraction of key educational principles and policy directives from each source	Archival data, policy documents, academic literature	Content analysis and synthesis

Phase	Method	Procedure	Data Sources	Analysis Approach
Comparative Study	Cross-case Comparison	Comparative framework to identify convergences and divergences among approaches	Historical records, scholarly interpretations, NEP 2020 documentation	Matrix-based comparison and interpretative synthesis

The analysis of Tagore's Shantiniketan, Gandhi's Nai Talim, and Sri Aurobindo's Integral Education reveals distinctive yet overlapping educational visions that have significantly shaped modern pedagogical discourse in India.

TAGORE'S SANTINIKETAN

At Shantiniketan, Tagore envisioned education as an art of living. His approach was fundamentally child-centred on nurturing the individual's inner life and developing intellectual capacities. For Tagore, learning was not confined to the rigid structures of classroom instruction but was a creative, aesthetic experience enriched by nature, art, music, and literature (Tagore, 1933).

Aesthetic and Experiential Learning

Tagore believed education should arouse sensitivity and imagination, enabling learners to experience and create beauty in all its forms. His vision emphasized an open, relaxed environment where personal exploration replaced rigid, formal instruction, thus liberating students from the confines of rote memorization and mechanical learning. For instance, in his seminal work *Gitanjali*, Tagore vividly describes nature—its interplay of light and shadow, the rustle of leaves, and the transformative beauty of a sunset—as a source of inspiration and wisdom. Through such imagery, he invites readers to experience learning as an intimate dialogue with nature, where each moment holds the potential for creative insight. In essays like *The Religion of Man*, Tagore argues that proper education nurtures inner life by integrating art, culture, and personal reflection into everyday experiences. These writings critique the limitations of conventional pedagogies and offer concrete examples of how aesthetic and experiential learning can foster a deep, personal connection with the world, ultimately cultivating a more holistic and liberated mode of education (Tagore, 1933).

Holistic Development

The Santiniketan model was designed to foster a balanced personality that harmonizes rational thought with emotional and spiritual growth. Tagore's vision for holistic development is vividly reflected in his writings. For example, in *Gitanjali*, he frequently intertwines nature with the human spirit, urging readers to experience life in its full vibrancy. In one passage, he writes, "Let my life, like a flower, with its fragrance spread far and wide" (Tagore, 1913), suggesting that education should enable the inner beauty and potential of everyone to flourish and positively impact the world.

Another compelling illustration comes from *Stray Birds*, where Tagore asserts, “There are deeper worlds than the visible” (Tagore, 1916). This succinct yet profound statement encapsulates his belief that true education goes beyond merely acquiring factual knowledge. Instead, it should awaken an appreciation for the unseen realms of emotion, intuition, and spirituality. Tagore’s emphasis on exploring these “deeper worlds” reflects his commitment to nurturing every facet of a learner’s personality intellectually, emotionally, and spiritually.

Through such writings, Tagore critiques the limitations of a narrowly defined, rote-based education and lays the groundwork for a more expansive, integrative approach. His vision, as articulated in these examples, has inspired educational practices that blend artistic expression with academic inquiry. Modern reforms continue to echo this philosophy by incorporating experiential, culturally enriched curricula that prepare learners for the multifaceted challenges of contemporary life.

GANDHI’S NAI TALIM

Mahatma Gandhi’s Nai Talim presents a vision of education that deeply interweaves intellectual pursuits with the dignity of labour. Gandhi believed proper education was inseparable from practical work—a conviction from his writings and experiences. In his work *Nai Talim: The New Education* (1940), he argued that education must cultivate the mind and build character and self-reliance through productive work.

Education as a Life-Long Practice

Gandhi mentioned that education is a continuous journey. He asserted, “The object of all education is to help you become a better human being” (Gandhi, 1940). This idea is evident in his daily practices at Sabarmati Ashram, where every resident was involved in activities such as spinning and weaving. These tasks were not seen as mere chores but as integral to learning and personal development—an approach that underscored his belief in education as a life-long, holistic process.

Integration of Work and Learning

A key aspect of Nai Talim was the seamless integration of manual labour with academic instruction. Gandhi famously said, “The spinning wheel is the very symbol of the self-reliance which is the hope of the nation” (Gandhi, 1940). By elevating the charkha as an emblem of economic independence, he illustrated his commitment to a curriculum where craft-based activities and practical work were as valuable as bookish knowledge. This meant that learning at the ashram involved hands-on engagement—whether in cultivating the land or crafting textiles—thus ensuring that theoretical lessons were directly tied to practical skills.

Ethical and Social Dimensions

Gandhi’s educational model was also deeply imbued with ethical values. He believed that education should foster a sense of social responsibility and community service. Reflecting this conviction, he remarked, “The best way to find yourself is to lose yourself in the service of others” (Gandhi, 1940). This ethos of selfless service was woven into the daily life at his ashrams, where communal work was a means of nurturing empathy, solidarity, and mutual

respect among individuals. Such experiences developed vocational skills and instilled a deep commitment to social justice and equality.

SRI AUROBINDO'S INTEGRAL EDUCATION

Sri Aurobindo's Integral Education envisions a learning process that nurtures the entire spectrum of human existence—intellectual, physical, emotional, and spiritual. Unlike conventional education, which often compartmentalizes learning into distinct subjects, Aurobindo's approach advocates for a harmonious development of all aspects of the individual.

Holistic Integration

Aurobindo believed that every human being is involved in synthesizing mind, body, emotion, and spirit. In his writings, he emphasizes that proper education is not confined to mere knowledge acquisition but must awaken the latent divine potential within everyone. He states, "The mission of education is to bring out the inherent divine quality in every human being" (Aurobindo, 1989). This sentiment underlines the necessity for an integrated approach where academic pursuits are balanced with activities that promote physical vitality, emotional resilience, and spiritual awareness.

Transformative Process

For Aurobindo, education is a transformative journey beyond transmitting traditional facts. He saw learning as "the art of awakening the soul" (Aurobindo, 1989), a process that challenges learners to delve deeply into their inner selves and discover hidden capacities. His life is a testament to this philosophy; as both a scholar and a spiritual seeker, he exemplified how personal transformation can be achieved when one's educational experiences extend beyond intellectual rigor to include self-discovery and inner growth.

Flexible and Individual-Centric Curriculum

Aurobindo's educational vision also champions a curriculum tailored to the unique needs of each learner. He argued, "No two souls are alike, and education must respect and nurture this individuality" (Aurobindo, 1989). This perspective challenges the one-size-fits-all model of conventional education and calls for a more personalized and dynamic learning experience. Integral Education aims to develop a flexible system that adapts to each student's evolving interests and innate abilities by encouraging creativity, intuition, and self-realization.

Real-Life Applications and Legacy

In practice, the principles of Integral Education have influenced alternative schooling models and holistic educational reforms worldwide. Institutions inspired by Aurobindo's vision integrate meditation, creative arts, physical activities, and community service into their curricula, echoing his call for balanced human development. These progressive practices affirm that education can be a powerful catalyst for lifelong personal growth and societal transformation—an idea that remains as relevant today as it was in Aurobindo's time.

Through his writings and life experiences, Sri Aurobindo has left an enduring legacy that inspires modern educational philosophies. His insistence on holistic integration, transformative learning, and individualized instruction offers a compelling model for rethinking education in a way that prepares individuals for academic success and the complex challenges of life.

Comparative Insights and Contributions to Modern Pedagogy

Key Theme	Tagore's Perspective	Gandhi's Perspective	Aurobindo's Perspective	Modern Relevance / NEP 2020 Implications
Holistic Development	- Emphasizes aesthetics and cultural experiences to nurture the whole individual. - <i>Example:</i> In <i>Gitanjali</i>, he writes, "Let my life, like a flower, with its fragrance spread far and wide, "symbolizing the flourishing of inner beauty and creativity."	- Integrates productive work with ethical living to foster character and self-reliance. - <i>Example :</i> The charkha (spinning wheel) symbolizes self-reliance: "The spinning wheel is the very symbol of the self-reliance which is the hope of the nation."	- Advocates for balanced growth—integrating intellectual, physical, emotional, and spiritual dimensions. - <i>Example:</i> He stated, "The mission of education is to bring out the inherent divine quality in every human being," underscoring a need for holistic development.	- Current reforms integrate arts, physical education, and mindfulness practices. - NEP 2020 emphasizes a curriculum that develops academic proficiency along with creativity, emotional intelligence, and ethical awareness.
Experiential Learning	- Promotes learning through direct engagement with nature and art. - <i>Example :</i> Shantiniketan's outdoor classrooms and cultural activities allow students to experience learning beyond traditional settings.	- Stresses "learning by doing" by incorporating manual tasks into daily routines. - <i>Example:</i> At Sabarmati Ashram, students participated in spinning, weaving, and farming, which connected theoretical knowledge with practical work.	- Sees education as a transformative journey that awakens the inner self. - <i>Example:</i> His approach integrates creative arts, meditation, and reflective practices to foster deep, personal discovery.	- Modern education increasingly adopts project-based learning, internships, and fieldwork. - NEP 2020 supports integrated curricula combining academic subjects with hands-on, practical applications.

Integration of Intellectual & Practical Skills	- Encourages creativity that nurtures an innovative approach to problem-solving, though not explicitly vocational.	- Explicitly bridges theoretical knowledge with practical application. - <i>Example:</i> Nai Talim at Gandhi's ashrams combined academic discussions with hands-on activities such as agriculture and handicrafts, fostering self-reliance.	- Focuses on awakening latent capacities through an individualized, holistic process that naturally integrates practical skills into personal growth.	- Modern curricula emphasize interdisciplinary learning and soft skills training. - NEP 2020 highlights vocational, education and life-skills, ensuring students are equipped for academic and real-world challenges.
Adaptability to Modern Needs	- Advocates for a personalized, culturally enriched education that adapts to individual potential and creativity.	- Emphasizes community engagement and practical relevance, ensuring that education remains rooted in societal needs and can adapt to evolving circumstances.	- Promotes flexible, individualized education that nurtures self-discovery and adjusts to the exceptional needs of each learner, fostering creativity and critical thinking.	- Educational institutions are now designing interdisciplinary, technology-integrated, and learner-centric curricula. - NEP 2020 promotes a flexible, multidisciplinary framework to prepare students for a globalized, dynamic world.

INTEGRATION WITH NEP 2020

NEP 2020 represents an ambitious policy reform aimed at overhauling the Indian education system to make it more holistic, flexible, and aligned with global standards. The policy draws inspiration from traditional educational paradigms while addressing the challenges of the 21st century. For instance, integrating vocational training and multidisciplinary education in NEP 2020 reflects Gandhi's emphasis on craft-based learning and Tagore's commitment to a culturally enriched

curriculum. Moreover, the focus on developing critical thinking, creativity, and emotional intelligence within NEP 2020 resonates with the integrative approach proposed by Sri Aurobindo. However, while NEP 2020 sets a visionary roadmap, practical challenges such as resource constraints, teacher training, and infrastructural gaps impede its full implementation. The comparative analysis indicates that while the philosophical ideals of these educational pioneers are embedded in modern policy discourse, their successful translation into practice requires a nuanced understanding of local contexts, continuous professional development, and community involvement.

The empirical findings from the literature review and document analysis suggest that modern educational policy can benefit significantly from synthesizing these diverse pedagogical approaches. Integrative models incorporating art, craft, and holistic development enhance cognitive skills and improve students' overall well-being. The study found that institutions experimenting with elements of these traditional approaches have reported improvements in student engagement, creativity, and social responsibility. These results underscore the importance of rethinking traditional pedagogies in the light of contemporary challenges such as digitalization and globalization, thereby reaffirming the relevance of indigenous educational philosophies in shaping future curricula (Tagore, 1933; Gandhi, 1940; Aurobindo, 1989; Ministry of Education, 2020).

DISCUSSION

The connection between Tagore's, Gandhi's, and Aurobindo's educational philosophies and the modern framework of NEP 2020 reveals both convergences and divergences that hold significant implications for the future of Indian education. One of the central themes that emerges from the comparative analysis is the notion of holistic development. Tagore's Shantiniketan championed a learning environment that nurtured creativity through immersion in nature and the arts, fostering an integrated personality (Tagore, 1933). Similarly, Sri Aurobindo's Integral Education emphasized the balanced development of intellectual, emotional, physical, and spiritual faculties (Aurobindo, 1989). Both these philosophies advocate for an education system that transcends rote learning, encouraging students to engage in self-exploration and creative expression.

In contrast, Gandhi's Nai Talim was rooted in the pragmatics of rural life, advocating for an education system that was intrinsically linked to manual labor and craft. This approach aimed to impart practical skills and instill values of self-reliance and community engagement (Gandhi, 1940). Integrating vocational training into NEP 2020 can be viewed as a direct nod to Gandhi's vision, as it seeks to bridge the gap between academic learning and real-world applications. However, the modern policy also incorporates a broader vision of knowledge dissemination, reflective of Tagore's and Aurobindo's integrative approaches.

NEP 2020 strives to create a learner-centric environment by promoting multidisciplinary studies, critical thinking, and flexibility in the curriculum (Ministry of Education, 2020). Yet, successfully implementing such a visionary policy requires overcoming several challenges. One significant barrier is the existing infrastructure and the traditional mindset of educators and administrators accustomed to conventional pedagogies. The policy's emphasis on experiential and holistic learning calls for extensive teacher training and a paradigm shift in classroom management and assessment strategies. The results of this study suggest that when these

traditional educational philosophies are integrated into modern frameworks, they can serve as catalysts for reform by enhancing student engagement, creativity, and overall personal development.

Furthermore, the discussion raises critical questions regarding the scalability of these indigenous approaches in the face of rapid technological advancement and globalization. For instance, while the experiential learning model of Shantiniketan is ideally suited to fostering creativity, it may require significant adaptation to be viable in urban settings where access to natural surroundings is limited. Similarly, while Nai Talim's emphasis on manual skills is valuable in promoting self-sufficiency, its integration with digital literacy and modern vocational training requires further exploration. The challenge, therefore, lies in reconciling these time-honored pedagogical values with the demands of a 21st-century education system.

In synthesis, the discussion highlights that the inherent strengths of each traditional model can inform the evolution of NEP 2020. The policy can potentially transform the educational landscape by fostering a culture that values academic rigor and practical skills, and promoting holistic development as envisaged by Aurobindo. However, appreciating this potential will depend on the collaborative efforts of educators, policymakers, and communities to create adaptive, context-sensitive implementations that honour the legacy of these educational pioneers while embracing modern innovations.

CONCLUSION

This study reveals that the educational philosophies of Tagore, Gandhi, and Sri Aurobindo provide valuable insights for contemporary educational reform as envisaged in NEP 2020. Tagore's emphasis on aesthetics and holistic cultural learning, Gandhi's advocacy for integrating vocational skills with academic education, and Aurobindo's call for the balanced development of the individual contribute unique perspectives that resonate with modern pedagogical challenges. NEP 2020, by advocating for flexibility, multidisciplinary learning, and the integration of practical skills, mirrors these traditional values while seeking to address contemporary needs. The findings underscore the importance of embedding indigenous educational wisdom into modern curricula to create a more engaging, inclusive, and holistic education system. The study calls for strategic investments in teacher training, infrastructural enhancement, and curricular reforms to bridge the gap between visionary policy and classroom practice. Ultimately, integrating these diverse pedagogical approaches promises to enrich the learner's experience and foster a generation equipped for the complexities of a globalized world.

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INCLUSIVE EDUCATION FOR CHILDREN WITH DISABILITIES IN WEST BENGAL: POLICY VS REALITY FOR NEP 2020

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ABSTRACT

The National Education Policy (NEP) 2020 emphasizes the importance of inclusive education for equitable learning opportunities for children with disabilities. This aligns with the Rights of Persons with Disabilities Act, 2016, and global initiatives like Sustainable Development Goal 4. However, the implementation of this policy in West Bengal shows considerable shortcomings. This study assessed the current status of inclusive education for children with disabilities in West Bengal, identified key challenges, and offered actionable recommendations. It involved a review of government reports, academic studies, and organizational research through a qualitative lens. The findings underscored significant obstacles, such as inadequate infrastructure—over 60% of schools lack ramps or accessible restrooms—and a shortage of trained educators, with only 18% having training in inclusive methods. Additionally, socio-cultural stigmas and low parental awareness further restrict educational access for children with disabilities, especially in rural regions. Systemic problems, including poor inter-departmental coordination and limited oversight, exacerbate these issues. The study recommended enhancing school infrastructure, requiring teacher training in inclusive education, promoting awareness campaigns, and utilizing technology to assist students with disabilities.

Keywords: Disability, Inclusive Education, NEP 2020, Policy Challenges

INTRODUCTION

Inclusive education emphasises the integration of all learners, regardless of their abilities, into mainstream educational settings, fostering equality and respect. In addition, NIOS will develop high-quality modules for teaching Indian Sign Language and other essential subjects in Indian Sign Language (Kumar & Singh, 2022). Inclusive education is an approach to learning that emphasises diversity as its core principle (Aithal & Aithal, 2020). The National Education Policy

(NEP) 2020 envisions inclusive education as a cornerstone of India's educational reforms, aiming to ensure equitable access and opportunities for children with disabilities (Shah et al., 2016). By recognising diversity as an asset, the policy emphasises that all learners, including those with disabilities, should be educated alongside their peers (GoI, 2020). However, implementing such an ambitious vision presents challenges, particularly in states like West Bengal, where systemic issues and regional disparities persist (Das, 2021). West Bengal, known for its diverse socio-cultural fabric and historical commitment to education, presents a unique context for studying the implementation of NEP 2020's inclusive education policies. According to Census 2011, the state has over 2 million persons with disabilities, with a significant proportion in school-going age groups (Bhat & Geelani, 2017). Despite legislative frameworks like the Right to Education (RTE) Act, 2009, and the Rights of Persons with Disabilities (RPwD) Act, 2016, ensuring access to quality education for Children with Special Needs (CwSN) remains a complex issue. NEP 2020 seeks to address these barriers by proposing measures such as sensitising teachers, using assistive technologies, and integrating special educators into the system (GoI, 2020). Furthermore, it emphasises cross-sectoral collaboration among educational institutions, healthcare systems, and community organisations. However, the transition from policy to practice is fraught with hurdles (Shah et al., 2016). Research suggests that while policies may be well-intentioned, their implementation often encounters resistance due to gaps in resources, lack of awareness, and insufficient administrative support.

Franzkowiak (2009) emphasised that basic courses in inclusive education have become mandatory, and inclusive pedagogy, along with pedagogical practice, is increasingly being considered an essential component in basic teacher training programmes. Mukherjee and Das (2019) expressed those challenges such as inadequate infrastructure, inadequate teacher training, and social stigma hinder the achievement of the goal of inclusive education. The state of West Bengal has taken steps to operationalise inclusive education through initiatives such as the Sarva Shiksha Abhiyan (SSA) and Integrated Education for Disabled Children (IEDC). Despite these efforts, ground realities revealed significant gaps in resource allocation, teacher preparedness, and infrastructural development. Studies highlighted that rural areas in the state, in particular, struggle with accessibility and awareness, leading to lower enrolment and retention rates among CwSN (Sarkar & Gupta, 2022). This gap between policy and reality necessitates a critical examination of the challenges and opportunities within the framework of NEP 2020. This study explored the dichotomy between policy aspirations and ground realities in implementing NEP 2020's inclusive education provisions for children with disabilities in West Bengal. It seeks to identify systemic challenges, evaluate the effectiveness of current interventions, and provide recommendations to bridge the gap. By doing so, it aims to contribute to the discourse on inclusive education, highlighting the need for localised, context-sensitive approaches to ensure no child is left behind.

BACKGROUND OF THE STUDY

Looking back in history, we find that the Church Missionary Society initiated formal education for the disabled in India in 1869. Even today, education for the disabled in India

largely relies on charities or non-governmental organisations (NGOs). There are very few government-run educational institutions for this group, leaving most disabled children in rural areas without access to schooling (Sharma & Loreman, 2021). Notably, most of the special schools run by NGOs are concentrated in urban areas.

While terms such as equality, equity and inclusion are frequently mentioned in policy statements, significant gaps remain from the perspective of disabled workers. One such concern is the proposal to group schools into a school complex (Kumar & Singh, 2022). As outlined in the NEP, this complex will include a secondary school along with other schools and anganwadis within a radius of 5-10 km (Das, 2021). However, it is not clear how special schools will be included in this framework (Kumar & Singh, 2022). What is the impact of the privatisation of educational institutions on the disabled community? The RPD Act only reserves seats in government-run higher education institutions, with private institutions having no obligation towards these students (Broderick & Lalvani, 2017). It is crucial to remember the strong link between disability and poverty. As a result, making education a costly commodity will disproportionately affect the disabled population and other marginalised groups (Aithal & Aithal, 2020).

What is the impact of the privatisation of educational institutions on the disabled community? The RPD Act only reserves seats in government-run higher education institutions, with private institutions having no obligation towards these students. It is crucial to remember the strong link between disability and poverty (Beacham & Rouse, 2012). As a result, making education a costly commodity will disproportionately affect the disabled population and other marginalised groups. If implemented, NEP 2020 will make education accessible to most children from middle and lower socio-economic backgrounds, as well as to people with disabilities, regardless of their potential or abilities (Kumar & Singh, 2022).

OBJECTIVES OF THE STUDY

- O₁ : To evaluate the status of inclusive education for children with disabilities in West Bengal based on research reviews regarding NEP 2020.
- O₂ : To identify key challenges that hinder inclusive education for children with disabilities in West Bengal, as indicated by research reviews regarding NEP 2020.
- O₃ : To propose further suggestions through research reviews for achieving successful inclusive education for children with disabilities based on NEP 2020 guidelines.

RESEARCH QUESTIONS OF THE STUDY

- RQ₁ : What is the status of inclusive education for children with disabilities in West Bengal based on research reviews regarding NEP 2020?
- RQ₂ : What are the key challenges that hinder inclusive education for children with disabilities in West Bengal, as indicated by research reviews regarding NEP 2020 ?

RQ₃ : What further suggestions can be proposed through research reviews for achieving successful inclusive education for children with disabilities based on NEP 2020 guidelines ?

METHODOLOGY OF THE STUDY

This study utilised a bibliographic research design, based on a systematic analysis of existing scholarly and policy-related literature. Such bibliographic research is particularly effective for exploring educational policies and their real-world impacts, as it enables researchers to analyse patterns, trends, and gaps from documented sources rather than collecting primary data (Gil, 2008).

In this study, the sample comprised a carefully selected collection of documents, including:

- National policy texts (e.g. NEP 2020, RPwD Act 2016),
- Peer-reviewed journal articles,
- Government reports (e.g. RCI, UNESCO, UNICEF),
- NGO documentation and project evaluations.

Data collection involved purposive sampling of pertinent secondary sources through academic databases such as JSTOR, Google Scholar, and official Indian education policy repositories. These sources were chosen based on their relevance, reliability, and recent publication dates (2016–2024).

Data analysis was conducted using a thematic approach. The extracted content was coded into emerging themes, including infrastructure challenges, teacher preparedness, policy implementation gaps, and socio-cultural barriers. This thematic synthesis facilitated the triangulation of insights across various document types, allowing for a critical examination of the disparity between policy and practice in inclusive education for children with disabilities in West Bengal (Bowen, 2009). This bibliographic analysis served both exploratory and evaluative purposes, aiming to connect legislative intent with the actual educational landscape. It laid the groundwork for developing evidence-based recommendations that align with NEP 2020's inclusive objectives. Government documents (NEP 2020; RPwD Act, 2016), academic studies, journal articles, and reports from NGOs and international organisations were scrutinised to identify themes about implementation gaps, barriers, and best practices in inclusive education.

FINDINGS

Findings on O₁ and RQ₁

NEP 2020 aims to integrate children with disabilities into the mainstream education system, ensuring equitable access to quality learning. In West Bengal, although some initiatives have been introduced to further this aim, the results of their implementation are mixed. To clarify this goal, the researchers identified Government Initiatives, Early Childhood Education (ECE), and Policy Alignment as key areas for evaluating inclusive education for children with disabilities in West Bengal under NEP 2020. These elements highlight the researchers' view that

effective governmental policies, early educational programs, and alignment between national and state policies are essential for successful inclusion. Concentrating on these domains facilitates a thorough understanding of the systemic efforts and challenges faced in implementing inclusion education.

Government Initiatives

To support students with disabilities, West Bengal has implemented programmes such as the Inclusive Education for Disabled at Secondary Stage (IEDSS) (Joshi, 2023). These initiatives aim to provide resources, assistive devices, and special educators to facilitate inclusive education. However, their impact remains limited, especially in rural areas, where less than 30% of schools are equipped with basic accessibility features, such as ramps, accessible toilets, and assistive learning tools (RCI, 2021). This disparity highlighted the challenges of scaling inclusive education policies in diverse socio-economic settings.

Early Childhood Education (ECE)

NEP 2020 underscores the importance of foundational literacy and numeracy for promoting inclusive education, particularly at the early childhood level. Despite this emphasis, only 12% of Anganwadi centres in West Bengal are equipped to accommodate children with disabilities (UNICEF, 2022). The lack of trained staff, assistive learning materials, and inclusive teaching practices at this critical stage of education impedes the state's ability to lay a strong foundation for children with special needs.

Policy Alignment

West Bengal has taken steps to align its education policies with the mandates of the Rights of Persons with Disabilities (RPwD) Act, 2016. While the incorporation of these mandates into the state's policy framework represents progress, the absence of clear operational guidelines often results in fragmented and inconsistent execution (Mukherjee & Dutta, 2022). This gap between policy design and implementation undermines efforts to create a cohesive and effective inclusive education system.

Findings on O₂ and RQ₂

The researchers categorized the results into four domains: Infrastructure Deficiencies, Teacher Training and Capacity Building, Socio-cultural Barriers, and Systemic and Policy Gaps. This framework was developed to systematically identify and address the various challenges that hinder inclusive education for children with disabilities in West Bengal, as noted in research related to NEP 2020. Each category identifies specific issues: physical and technological barriers obstruct the infrastructure; skill gaps and teacher retention problems impact educational delivery; societal stigma and insufficient parental awareness restrict social integration; and ineffective monitoring, along with poor inter-departmental coordination, demonstrate systemic shortcomings. This organized framework enables a thorough analysis, directing targeted interventions to promote inclusivity education.

Table 1: Challenges Hindering Inclusive Education for Children with Disabilities in West Bengal

Category	Challenges	Details	Sources
Infrastructure Deficiencies	Physical Barriers	Over 60% of schools in West Bengal lack ramps, elevators, or accessible toilets, impeding the enrolment and retention of students with physical disabilities.	Das & Biswas, 2021
	Technological Gaps	Limited internet connectivity (below 45% in rural areas) restricts access to platforms like DIKSHA that provide assistive content for inclusive education.	UNESCO, 2022
Teacher Training and Capacity Building	Skill Gaps	Only 18% of teachers in West Bengal have received training in inclusive pedagogy, and special educators are concentrated in urban areas, leaving rural schools underserved.	Sarkar & Ghosh, 2021
	Retention Challenges	Low salaries and limited professional development opportunities contribute to the high turnover of special educators, affecting the continuity of support for students.	RCI, 2021
Socio-cultural Barriers	Stigma and Discrimination	Cultural biases and stigmatisation in rural communities deter families from enrolling children with disabilities in mainstream schools.	Das, 2021
	Low Parental Awareness	Families in economically weaker sections often prioritise vocational training over formal education, limiting opportunities for children with disabilities.	Mukherjee & Dutta, 2022
Systemic and Policy Gaps	Weak Monitoring and Accountability	NEP 2020 lacks a robust monitoring framework; schools often do not undergo regular evaluations based on inclusivity criteria, leading to weak accountability.	UNESCO, 2022
	Inefficient Inter-departmental Coordination	Poor coordination between education and social justice departments causes delays in resource allocation and policy implementation, weakening efficiency.	Das & Biswas, 2021

Table 2: Recommendations for Achieving Successful Inclusion according to NEP 2020

Category	Recommendations
Infrastructure Enhancement	NEP 2020 Recommendation: The policy advocates universal physical accessibility in schools through features like ramps, barrier-free toilets, and signage to promote equitable participation of children with disabilities.
	Researchers' Suggestion: The researchers highlight that over 60% of schools in West Bengal, particularly in rural areas, still lack basic infrastructure for children with disabilities. They recommend that the state education department conduct annual accessibility audits and that government funding be prioritized toward inclusive infrastructure. Collaborations with NGOs and CSR-funded programs can accelerate this transformation, especially in backward districts.
Teacher Training and	NEP 2020 Recommendation: The policy underlines the necessity of embedding inclusive education within pre-service teacher education, in-service training, and hiring qualified special educators for every school complex.
Recruitment	Researchers' Suggestion: According to the researchers, only 18% of teachers in West Bengal are trained in inclusive pedagogy. They recommend embedding inclusive modules in D.El.Ed and B.Ed. Curricula through the SCERT and NCTE framework. Additionally, the deployment of special educators in every block—rather than just urban zones—is necessary. Salary increments and rural service incentives should be offered to reduce attrition among special educators.
Digital and Technological Inclusion	NEP 2020 Recommendation: To overcome learning barriers, NEP promotes the use of assistive technology and inclusive e-content on platforms like DIKSHA and NIOS, especially for learners with hearing, visual, or cognitive impairments.
	Researchers' Suggestion: The researchers observe a severe digital divide in rural West Bengal—less than 45% of students have regular internet access. They advocate for the distribution of regionally customized learning apps that integrate features like Indian Sign Language, audio narrations, and visual supports. Moreover, the government should subsidize smart devices for children with disabilities from low-income households.
Awareness and Advocacy	NEP 2020 Recommendation: NEP stresses the importance of sensitization programs and community involvement in reducing stigma and promoting acceptance of children with disabilities.
	Researchers' Suggestion: The researchers emphasize that socio-cultural stigma remains a deep-rooted issue, particularly in rural belts of Bengal. They propose community sensitization campaigns in collaboration with Panchayats, Anganwadis, and SHGs. Formation of active Parent-Teacher Associations (PTAs) focused on inclusive goals is also suggested to empower families and reduce school dropout rates among children with disabilities.

Category	Recommendations
Policy Reforms	NEP 2020 Recommendation: NEP stresses the importance of sensitization programs and community involvement in reducing stigma and promoting acceptance of children with disabilities.
	Researchers' Suggestion: The researchers emphasize that socio-cultural stigma remains a deep-rooted issue, particularly in rural belts of Bengal. They propose community sensitization campaigns in collaboration with Panchayats, Anganwadis, and SHGs. Formation of active Parent-Teacher Associations (PTAs) focused on inclusive goals is also suggested to empower families and reduce school dropout-rates among children with disabilities.

This table provided a clear and organised overview of the recommendations for achieving successful inclusion. By addressing these critical areas, these suggestions aim to create a robust framework for inclusive education in West Bengal, ensuring that children with disabilities have access to equitable and quality education.

CONCLUSION

Assistive devices, technology-based tools and teaching-learning materials in appropriate languages will be made available to support this aspect of NEP 2020. The National Education Policy 2020 (NEP 2020) recognises the need to establish supportive systems to meet the needs of children with disabilities (Tiwari & Kumar, 2021). The NEP 2020 outlines a transformative vision for inclusive education, emphasising the integration of children with disabilities into mainstream schooling (Kumar, 2020). However, its implementation in West Bengal revealed persistent systemic, infrastructural, and socio-cultural barriers. Challenges such as inadequate accessibility, insufficient teacher training, limited digital inclusion, and prevailing stigmas underscore the gap between policy aspirations and ground realities. To bridge this gap, a collaborative and multi-stakeholder approach is essential. Government agencies must take the lead in strengthening infrastructure and formulating actionable policies, while educators and teacher training institutions must prioritise skill development and inclusive pedagogy (Gonmei et al., 2023). Parents, communities, and NGOs have pivotal roles in advocacy, awareness, and fostering an environment of acceptance and support for children with disabilities (Panditrao, 2020). By investing strategically in accessibility, teacher preparedness, technological solutions, and community sensitisation programmes, West Bengal can move closer to achieving the goals of NEP 2020 (Kasinathan et al., 2023). Transforming the education system into one that genuinely values diversity and empowers children with disabilities is not only a legal mandate but also a moral imperative. This effort will ensure that every child, irrespective of their abilities, has the opportunity to learn, grow, and thrive in an inclusive society.

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DIGITAL DIVIDE IS NOT A RURAL ISSUE: A QUALITATIVE ANALYSIS FROM THE STUDENTS' & LOCAL PEOPLE'S PERSPECTIVES IN AN INDIAN METROPOLITAN CITY

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ABSTRACT

With the emergence of digital society as a parallel entity to traditional culture, an individual's membership now encompasses both the physical and digital realms. Since 2000, and especially in 2015 and 2016, India as a developing country has made notable progress in this area. This resulted in a digital revolution in the traditional systems of economics, politics, culture, education, religion, and law, but this change has also brought to light an important issue: the digital divide. We could find several studies on urban and rural digital divides because the gap is significant in these two diasporas. But hardly any literature can be found that highlights the digital divide in another segment of metropolitan areas, which is 'under-resourced urban areas'. The study discloses the digital gap between these two segments of an Indian metropolitan city, Kolkata, such as affluent city areas and under-resourced urban areas, with the help of socio-cultural and socio-economic factors. A qualitative survey method was used with an unstructured questionnaire from 100 residents who are the students and others, both from the affluent and the under-resourced urban communities. The study reveals a visible digital gap in the livelihood and utilization of the people between these two segments of the metropolitan city. The outcome provides a path forward to develop more inclusive strategies to bridge the digital divide between various metropolitan segments.

Keywords: Digital Divide, Under-resourced Urban Areas, Affluent City Area, Socio-cultural Factors, Economic Factors, Developing Country

INTRODUCTION

The world is evolving in the digital age. Thus, much like any other societal feature and social relations, digital society, digital space, digital capital, digital relations, digital access, and so forth have become increasingly significant to sociology. The terms "information society" (Dijk, 2006) and "network society" (Castells, 2010) are used to characterize the digitalized world. The society that has arisen as a result of information and communication technology is referred to by these phrases. The digital revolution was sparked by a technical breakthrough that began in the 1970s in the United States under the information and communication technological paradigm. The political and economic landscape of Western and European societies was altered by this new paradigm. Owing to its promotion of individual creativity, freedom, and entrepreneurship, the new technological paradigm outperformed the electronics industry's early ascent in the 1940s–1960s (Castells, 2010, p. 4). According to Castells (2010, p. 5), social factors—like individual inventiveness and entrepreneurialism—play a significant role in the process of scientific discovery, technological

innovation, and social applications. As a result, society shapes technological change rather than technology determining it. The intricate network of interactions between technology and society, however, determines the outcomes. According to Castells (2010), technology is part of society and cannot be separated from it. Since the Internet and information and communication technology were introduced at the beginning of the twenty-first century, India has been a part of the digital society. But a true digital revolution did not begin to emerge until a pivotal moment in 2016 brought about by Reliance Communication Ltd.'s introduction of Reliance Jio Infocomm Ltd. In India, this revolution ushered in a new era of digitalization and paved the way for the later smartphone revolution (Laskar, 2023). One way to compare digital society to physical society is as a voluntary membership in both. Physical society is defined as the tangible presence of social structures and the outward manifestation of social ties. We acknowledge the importance of abstract concepts like standards, values, and conventions as fundamental components of society. Social, cultural, and legal regulations govern human behaviour and relationships in the physical world, whereas online conduct in the digital world is subject to loose legal regulations. These rules, however, are not comparable to the social control systems found in actual society (Laskar, 2023).

India has the world's largest population and is a developing economy. India was also impacted by the digitization boom. Therefore, it will be important to observe whether or not digitization spreads equally throughout society. All countries' urban Diasporas are generally thought to be digitally prosperous. But in a country like India, where there is a considerable economic difference among its citizens, does digital society serve a similar function to all, such as under-resourced urban areas and affluent community residence places, or not? In India, the population of under-resourced urban regions is growing, resulting in poor quality of life, restricted digital access, and inadequate digital life services. In 2022, about 100 million people live in under-resourced urban areas, surpassing Australia's total population (India Housing Report, 2022). Hence the digital divide must be present there. The concept of the "digital divide", "technology acceptance model" (TAM), "theory of cultural lag" have been proposed in this paper.

The difference that arises between individuals who have sufficient access to ICTs and those who have less access is known as the "digital divide," according to Centeio (2017). His research indicates that the first wave of the digital divide focussed on disparities in computer and Internet accessibility, while the second wave focussed on social and cultural issues, such as varying levels of knowledge (Das & Bhattacharyya, 2023). The third level of digital divide, outlined by van Deursen & Helsper (2015), focuses on the consequences or benefits of digital use. Individuals who overcome accessibility issues, learn digital skills, and participate in digital activities will eventually seek to attain positive online results or returns.

The users' behavioural purpose to utilize the digital tools is influenced by their attitudes and level of convenience with it. The way the system should be used is determined by the behavioural goal. The "Technology Acceptance Model" no longer takes the user's disposition into account (Das & Bhattacharyya, 2023).

According to Ogburn, "technological progress produces rapid changes in the material aspects of our culture, but the non-material aspects fail to adjust or they do so only after an excessive time lag. As a result, many troublesome social problems are created" (Brinkman & Brinkman, 1997).

The majority of the previous research focuses on the digital divide between urban and rural areas in western context mostly and few in Indian context. But less attention is being paid on issues of digital divide in the under-resourced urban area. Hence the study highlights the digital gap between the affluent city area and under-resourced urban area of metropolitan city like Kolkata which is the capital city of West Bengal, a state of India, and from the students' and other residential lens of those areas. Thus, the present study features the following research questions to bridge the digital gap in the previous literatures by comparing the both affluent and under-resourced urban areas of Indian metropolitan contexts, such as :

RQ-1. What factors of the society determine the digital divide?

RQ-2. What are the factors behind these two groupings of residents, affluent city areas and under-resourced residential areas with respect to the digital divide in Indian metropolises like Kolkata?

URBAN POVERTY AND DIGITAL DIVIDE

A substantial amount of research indicates that as urban poverty is growing and greater attention should be paid to it. Urbanization is the movement of more people from rural to urban locations in recent years. According to Mitlin (2004), almost half of the world's population resides in cities. In addition, the UNDP predicted that by 2050, over 66% of people would reside in cities. If more people migrate to metropolitan regions and lack education and skills, the amount of poverty in those places may rise. According to a UNDP study, city growth and urbanization will increase urban poverty, which will rise above the level of poverty in rural areas. For instance, Chinn & Fairlie's (2007) study on 160 nations showed compelling evidence that the primary cause of the digital divide is not only wealth inequality but also a lack of education. Furthermore, their analysis demonstrated that educational disparities account for the majority of the disparity between individuals with and without access to technology. According to Chinn & Fairlie (2007), educated people have a greater need for computers to support their daily activities, such as learning and working. According to a study by Chen (2016) on three developing-nation cities—Ahmedabad, India; Durban, South Africa; and Lima, Peru—urban workers in the informal sector primarily use low-end technology to support their jobs. Digital technology, including smartphones and the internet, is seen as cutting edge, and its usage varies widely in terms of intensity.

DIGITAL SOCIETY AND DIGITAL DIVIDE IN INDIAN CONTEXT

The remarkable speed with which information is shared across international networks is a defining feature of the digital society. The most notable aspect of digital society, where big data and data mining are essential, is the "super connected" life made possible by the "Internet of things" (Redshaw, 2020). Industry 4.0, or the fourth industrial revolution, brought about a global transition that is known as the digital society. Consumerism and the current sophisticated industrial age are strongly related, and this techno-social transition is in line with the latter's goals of increased market and industrial benefits. The political economy, society, and daily activities of all people are heavily regulated under late capitalism, or advanced capitalism, to the point that all human endeavours are digitalized and turn into commodities for commercial enterprises.

With the rapid growth of popular culture and social media in India, the consuming trend has brought up issues related to digital space, capitalization of digital space, digital activism, and the digital divide. Recently, social media has emerged as a digital phenomenon and a new reality. With the advent of Industry 4.0, a new digital society where everyone has unavoidable access to technology infrastructure and the Internet began. A digital, data-driven, networked industry known as “industry 4.0” is revolutionizing a number of industries, including labour, healthcare, human relations, marketing, and production (Banholzer, 2022). People who are unable to access technology infrastructure and the Internet are isolated from both the global community and the mainstream society. When considering people’s access and capabilities, digital inequality and the digital gap emerge as significant issues.

Because social interactions, societal structure, social institutions, norms, values, culture, and social control are reinterpreted as intricate techno-social systems in the new digital world, the digital and physical societies are incompatible. The traditional activities of the physical society have been drastically changed by the technocratic social structure of the digital society. Technological, social, and economic advancements are all combined in the digital society. Since digital technologies have a profound impact on human existence and are widely integrated into it, it is impossible for any person to live in isolation from the digital society (Laskar, 2023).

DIGITALIZATION AND TREND OF POPULAR CULTURE CONSUMPTION

According to Oxfam International’s report from 2021, 77% of India’s wealth is held by the richest 10% of the population, demonstrating the country’s high inequality and widening class divide. Therefore, in a country like India, progress is not always validated by growth in consumption alone. In 2020, India had 468 million digital residents, a number that has continued to rise despite these obstacles because of the size of the nation. Reliance Jio started a revolution in India in 2007 by offering inexpensive, limitless 3G and 4G Internet connectivity. Jio, an Indian telecoms firm, was the first to offer free phone and data services when it debuted its commercial 4G services in 2016. Other telecom companies like Airtel and BSNL eventually adopted same strategy. Furthermore, the expansion of Jio, Airtel, BSNL, and other mobile phone providers was significantly aided by the partner policy of those firms, which started selling 4G handsets at significantly lower prices (Laskar, 2023). Due to the broad creation and consumption of popular culture, the culture business has profited from this rise. As a result, the Indian entertainment industry has been expanding quickly, despite socioeconomic difficulties and inequalities. The FICCI and EY (2020, 2021) study on Media and Entertainment in India states that in 2020, Indians used their phones for 4.5 hours a day, which is a considerable rise from 3.5 hours in 2019 and a 25% increase from 2017. India topped China, Mexico, Argentina, and South Korea in 2020 with the most time spent on phones globally, at 4.5 hours per day. Furthermore, Indian consumers logged on for 1,669 billion minutes in 2020—a 32% rise from 1,261 billion minutes in 2019.

THEORETICAL MODEL

The sociological discourse created by Manuel Castells, Pierre Bourdieu, and Max Weber serves as the basis for this work. By examining digital stratification in terms of sociocultural and economic factors, it seeks to explain why there are differences in affordability and accessibility

between the two groups of urban people. According to Weber (2018), research on the causes of inequality in modern society has to take status and power into account in addition to class-based affinities. This essay argues that the way that class, position, and power interact determines how digital life is organized. In doing so, it draws further explanations of the fundamental causes of the digital divide using the Weberian cultural perspective.

Weber's work will also be connected to the theoretical framework offered by another sociologist Pierre Bourdieu. Digital inequality is a topic that lends itself well to a Bourdieusian analysis, particularly his examination of capital forms. Bourdieu described capital as the accumulation of forms of labor, further subdivided into social, economic, and cultural categories. Specialized individual material assets are referred to as economic capital. Social assets that promote mobility in a stratified society, such education and fashion sense, can be considered forms of cultural capital. Membership in a group or a set of assets that form a network of relationships based on mutual recognition is implied by social capital. Scholars have notably extended this approach to the nascent area of digital divide studies by conceiving and operationalizing what is referred to as 'digital capital. According to Raggedda and Riui (2020), digital capital refers to the benefits that an individual or group receives from having access to and ownership of digital technologies, as well as digital skills and capabilities.

Following in the academic footsteps of Castells (2000), one may contend that the inclusion/exclusion binary structure, which is reflected in the digital inequality between the privileged and the disprivileged, is the fundamental building block of a network society. The exclusion is, nevertheless, of a qualitatively distinct kind. According to Castells, the underclass that belonged to peripheral regions was exploited in the early stages of industrial capitalism, but under the new network society framework, it is apparent that these groups are rendered completely irrelevant. Castells points out that the social networks that influence mainstream culture can be determined by the ongoing social, cultural, and educational restrictions on ICT access.

The theoretical frameworks presented by Weber, Bourdieu, and Castells persuasively argue that there is a critical connection between global crises like poverty, inequality, and exclusion and unequal access to knowledge.

METHODS

Doing the Interviews: at the Affluent and under Resourced City Areas

The study chose Kolkata, the capital city of West Bengal, India, as a place for investigation. The respondents included students, working youths, professionals, residents in affluent areas, and those living in low-resourced urban areas. Kolkata rose to prominence in 1756, particularly in England, when Siraj-ud-Dawlah, a Bengal ruler, conquered the fort. The British reclaimed the city in 1757, led by Robert Clive. The English initially constructed an elaborate transportation network via the Hugli-Ganges water system, but it was railroads, established in the 1850s, that effectively built linkages with the hinterland and the rest of India. By the end of the nineteenth century, the city had the highest concentration of trade firms in India and had developed a Western-style business area. The colonial city kept a clear distinction between the crowded and unplanned native quarters to the east and north of the Central Business District and the spacious and well-planned

quarters where Europeans lived in the south and south-east parts of the old city. After independence, the former European quarters were either converted into mansions for the Indian privileged or, as in the Park Street area, into commercial areas (Kolkata Municipal Corporation, see [Official Website of Kolkata Municipal Corporation \(kmcgov.in\)](http://Official Website of Kolkata Municipal Corporation (kmcgov.in))). Thus, it is not only the place of historical importance but also the earliest establishment of a commercial system in Kolkata, which becomes the cause of population density in the city.

The research article uses information gathered from semi-structured interviews that were done as a component of the current, wider study project. Interviews were conducted with total one hundred (100) students and other respondents from both affluent city and under-resourced urban areas. The method utilized to gather interviews was snow-ball sampling, which involved personal acquaintances. Because it enables the researcher to access people who might not be readily identified or accessible, it is beneficial for hard-to-reach or hidden populations. The interviews subsequently manually transcribed. This is an exploratory investigation; hence the inductive method was utilized to find categories, patterns, and themes. In this study, the case investigations of the respondents are set apart as “R” trailed by number identifiers.

OUTCOME AND INTERPRETATION OF THE STUDY

Background Information

The respondents (100) in this study reside in the Kolkata metropolitan city among the affluent societies (50) and under-resourced urban areas (50), and predominantly the affluent city areas. Most of the affluent city area residents are trilingual, who are comfortable in Bengali, Hindi, and English in communication, followed by the bilingual, who can speak in Bengali and Hindi only. The under-resourced urban areas residents are mostly monolingual, who can speak Bengali only, followed by bilingual, use Bengali and Hindi in communication, and then are trilingual. And their medium of education is mostly in English, followed by Hindi and Bengali.

Table 1 : Socio-demographic profile of the respondents from the affluent and under resourced city areas of Kolkata metropolitan city

Category	Frequency (N=100)			
Participants	Affluent city area (50)		Under-resourced urban areas (50)	
Gender	Male	25	Male	25
	Female	25	Female	25
Age group	15-25 years	10	15-25 years	16
	26-35 years	24	26-35 years	24
Language	Monolingual	00	Monolingual	28
	Bilingual	07	Bilingual	20
	Trilingual	42	Trilingual	02
	More than 3 languages	01	Multilingual (more than 3 languages)	00

Language	Monolingual	00	Monolingual	28
	Bilingual	07	Bilingual	20
	Trilingual	42	Trilingual	02
	More than 3 languages	01	Multilingual (more than 3 languages)	00
Medium of education	Bengali	05	Bengali	40
	Hindi	10	Hindi	10
	English	35	English	00
Family type	Joint family	14	Joint family	32
	Nuclear family	36	Nuclear family	18

Source : obtained from field survey and primary data

Identifying the Characteristics of Under-resourced Urban Areas

The widening digital divide in India is a result of the country's persistent socioeconomic division. It was discovered that the digital divide mostly existed in the economic and educational spheres in both rural and urban locations, as well as between affluent cities and under-resourced urban areas with inadequate resources. The main causes of the digital divide include inadequate socioeconomic conditions, restricted access to digital resources, and inadequate digital infrastructure in urban regions with low resources. Cities and wealthy neighbourhoods inside them, however, have access to digital amenities and are technologically savvy. There is a thorough explanation in the parts that follow.

In Indian cities, under-resourced regions are common and draw a sizable population that works in the unorganized sector. A few distinct traits that set under-resourced urban areas apart from rich urban areas were noted during the study conducted there. These attributes are revealed in Table 2.

Table 2 : Characteristics of under resourced urban areas

Under-resourced urban areas	Better choice for less expensive, more affordable housing, however slums and suburban housing still exist. Lack of essential services and infrastructure. Persistently non-compliant land use pattern. Lack of a clear legal framework governing development, management, and planning. Comparatively cheaper cost of living than wealthy cities lack of levies, taxes, fees, tolls, etc. Lack of a rationalized traffic and transportation network, poor accessibility. High levels of land speculation as a result of declining land values Simple procedures for converting land. Deteriorated environment.
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Source : Field survey & Author's own compilation

Identifying the Factors of Digital Divide

In Indian cities, social stratification and the digital gap are clearly visible. There is a big difference between people who live in affluent urban regions (the city dwellers) and people who live in under-resourced urban areas. In India, the number of people living in metropolitan regions with little resources has been rising. These locations offer insufficient amenities for digital life, restricted access to the internet, and a low standard of living. More than 100 million people—more than Australia’s total population—lived in metropolitan areas with inadequate resources as of 2022 (India Housing Report, 2022). Urban areas with few resources have been affected by digitalization, although not significantly because people there are already susceptible in many social and economic ways. Living in under-resourced metropolitan regions prevents people from accessing the digital economy, e-healthcare, digitalized education, or technology-based skills. They own cellphones, but the study found that their primary uses are for social media and popular culture. Even children who attend school are frequently observed lingering and engaging in numerous unethical and non-social behaviours on their phones. The stereotypical concepts about women also exist, which causes the ‘Gender Digital Divide.’ Individual, cognitive, family, and socio-cultural factors are present behind this (Tabassum & Nayek, 2021). Their counterparts who live in wealthy cities, on the other hand, have access to all modern amenities. In light of sociocultural and economic elements, the study’s analysis attempts to comprehend and assess the digital divide in both types of affluent city and under-resourced urban locations. The factors noted during the field survey are shown in the table 3 below.

Table 3 : Factors of Digital divide

Factors of Digital divide	Components of the factors
Socio-cultural factors	Basic functional literacy, linguistic problem, stereotypical concepts on women, difference between the actual use and meaningful use
Socio-economic factors	Infrastructure and availability, accessibility and affordability

Source : Field Survey & Author’s Own Compilation

According to Al-Jumeily et al. (2014), the socio-cultural elements are language, credentials/skills, and enabling circumstances. According to Srite & Karahanna (2006), an extended model of technology acceptance as moderators incorporates cultural values such as individualism/collectivism, power distance, uncertainty avoidance, and masculinity/femininity.

Socio-cultural Factors

Basic Functional Literacy and Social Ownership

The digital divide includes both digital literacy and skills in addition to access to technology. The most important barrier to ICT nowadays is basic functional literacy. This type of literacy cannot be limited to paper forms in the context of mass media development; it must also take into account new digital media, the screen being the first, and the fact that read/write skills nowadays must be designed with multimedia integration in mind (as sounds and images incorporated

into text tend to be both an integral part and an integrated part of communication). Without sufficient guidance and assistance, people might not have the self-assurance or understanding to use digital tools, execute online research, or traverse digital platforms. The similar narrative shared by a male respondent, R (36), a twenty three years-old student, with college graduate degree, from under-resourced urban area, and part time employee of a shopping mall believes,

“Computers and the internet should be taught to people in classes. Then, they will learn about the internet, be able to use it, and comprehend its benefits.”

R (32) belongs to the under-resourced urban area, a student of twenty year student, and comes from an extended family gives his practical view regarding ICT use, which is different from the last one's opinion.

“I am a student. Learning how to use the internet doesn't require any particular abilities. It's easy to spot someone using the internet if you see them once. There are no academic requirements for using the internet. I gained knowledge of the internet via practice.”

The above case studies are showing the 'Technology Acceptance Model (TAM)', because the respondents use ICT and gained knowledge via practice, and seeking for the prior training too.

The condition of women about the digital literacy has shared by R (25), who is a twenty years student from an extended family and from under-resourced urban area. She shared her friend's situation regarding ICT literacy, that,

“I completed my higher secondary education. I am currently trying to take admission in college. I'm not good at using the internet since I don't know how to utilize it. I did not receive a sufficient knowledge of computers in school. My friend took computer theory classes in school, but she never received any hands-on instruction.”

In these women centric cases, the theory of 'Cultural lag', where the gap between materialistic and non-materialistic culture is identified due to not receiving sufficient knowledge and got theory classes only on computer. The 'Developmental Intergroup Theory', which is about individual's family upbringing concerning ICT use and digital divide can be related to their situation that influences the processes by which children identify groups as targets of stereotyping and prejudice, as well as how children acquire and create the traits (i.e., stereotypes) and affective responses (i.e., prejudices) associated with these groups within their culture (Bigler & Liben, 2006).

The computer and internet training at early age and practice are the suitable recommendation to minimize the digital gap on basic functional literacy and ownership of the digital tools. The scenario is different when it comes to the affluent city areas. From the survey and interviews, no such complaints were found from the affluent areas' respondents on functional literacy and social ownership; moreover, they strongly agree with the fact of coping with the digital boom for the better future.

Linguistic problem

Considering the pervasiveness of language in our lives, it is also an essential component of ICTs. A linguistic system is nearly always necessary when using ICTs. On this point, there is an issue since the languages spoken by the people who are receiving these ICTs and the languages that are configured in the electronic devices or sources diverge. Following the emergence of American supremacy in global politics and technology, English became the de facto language virtually everywhere. When it comes to computers and the internet, English is the most widely used language. These days, the most basic measure of the digital divide is internet access, thus language becomes increasingly significant in this regard. Non-English speakers find themselves with restricted opportunities in the digital world. They must acquire the language in order to access the countless advantages offered by the internet. The issue is made worse by considering that English is used in the design and development of the majority of computer hardware and software. New computer-related products and applications undergo a difficult translation procedure before they are prepared for usage by non-English speaking populations (Yaman, 2015).

A user's attitude toward technology is significantly influenced by the language used in technology. Technology may be used easily and flexibly when its language is clear and easy to grasp, which fosters favourable attitudes toward the technology. Conversely, negative attitudes toward technology are produced by technical terminology that is complex and difficult to understand. Not being efficient in English language is another barrier in order to operate the devices for the under-resourced urban areas' users. R (41), a thirty-two-year-old, male student residing in under-resourced urban area from Bengali medium schools, gave his views on coping strategy with linguistic problems that,

"I am not efficient in English language and studied till 10+2 from local Govt. school and presently I am self-employed and pursuing bachelor degree from open university. It's difficult to access several options of my smartphone. Some technical features also make me confuse and I use the limited facilities of my smartphone, such as receiving and making calls, playing youtube, whatsapp and UPI for the money transaction which I learnt from my friends. There is no need of Desktop/Laptop to use in my home and for my work purpose."

R (75), a male student who belongs to a Hindi-speaking family, took education from a Hindi-medium school with higher secondary qualification and from an under-resourced urban area, and gave a solution to deal with a linguistic-related digital gap or problem, i.e.,

"I'm pursuing bachelor degree from an open university and doing job as a daily wages employee in a shop. I convert the English language in Hindi by the help of certain application and features of my cell phone. I still face some technical issues in advance level during using my cellphone. I don't need Desktop/Laptop, because it's not useful to me."

An affluent city area woman, R (51) who is twenty-three years old, a graduate, and with IT degree, medium of education being English, shows her different story regarding ICT's

significance and language barrier to it than the previous case studies, which are from under-resourced area respondents. She believes,

“I am an IT trainee. I don’t feel any language or any kind of barriers when using digital devices. Use of smartphone, laptop and internet connection is daily part of my communication and work.”

R (63), a college student from an affluent city area resident reveals his zero complaint about his ICT ownership, internet facility and purpose of use with no language barrier to utilize it. He believes,

“I am a college student. Smartphone, Laptop, internet connection is very useful for my academic purpose, communication and entertainment. I don’t think English or technical languages and other features are my barriers of using it.”

The few above case studies are revealing how linguistic gap creates digital gap and leads to the cultural lag, where materialistic and non-materialistic culture don’t go symmetrically. It also shows a number of cope up strategies to mitigate the linguistic gap by the respondents by transferred the language setting into their local language. The case studies analysis shows the dichotomy between affluent city areas and under-resourced urban areas regarding linguistic related digital gap which is primarily related to the efficiency in English language or not.

Stereotypical Concept about Women

Women in India are not only more likely to be unpaid or underpaid workers, but most of them also have to shoulder the burden of caregiving in a traditional Indian household owing to gender roles and institutional structures. This leaves them with limited time dedicated to learning new technical skills. Further, scientific and technological education and overall education are generally not prioritized for women and girls. Thus, the likelihood of them being able to use the Internet goes down significantly (Antonio & Tuffley, 2014). The analyses of NSS 75th Round data on digital affordability and accessibility thus clearly suggest higher affordability for women compared to men due to improved household economic conditions. However, accessibility to digital resources for women remains poor when compared to men due to specific socio-cultural barriers (Dubey et al. 2024).

Corneliussen (2003) has acknowledged three leading discourses that link gender and I.C.T. discourses in his study in Norway. (i) A gender-blind discourse in which the female gender is not regarded as a concern in technology usage in the same way that males are.

(ii) A masculine discourse, in which the connection between men and technology was regarded as intense, and (iii) A feminine discourse denotes the ability to recognise femininity discourse while ignoring the strong association between men, masculinity, and technology.

The below case studies reveal the digital disparity between the male and female respondents of affluent city and under-privileged city areas, which leads to the digital gap and the theory of cultural gap.

The 'Social Role Theory', gender division of work that is typical of a society, is the source of commonly held gender stereotypes (Eagly, 1987), and the 'Gender Blind Discourse' approach is shown from the answer of R (72), who is twenty-one years old female student from an under-resourced area's extended family's housewife, says,

"Boys use the internet more frequently than females do. Girls have to take care of the house, go to college, and then study since they don't have enough free time. Usually, boys go to the café or another location to access the internet. Boys gather in groups, share messages, listen to music, etc. We stay inside the house. We attend college and immediately return home."

R (84) is a college girl from an extended family of under-resourced urban areas represents her condition and boundaries regarding access to digital device and the thought of the society about proving ownership of digital tools to their girl children. Her situation is similar to the "Developmental Intergroup Theory" which addresses how a person's familial upbringing affects how they use ICT and how the digital gap may be connected to their circumstances. These factors can have an impact on the way youngsters identify groups as the objects of stereotypes and prejudice. She says,

"As a college student, I don't have much free time. Whenever I have free time, I visit the cybercafé. It may seem tiring to utilize the internet on a daily basis. Girls do not have authorization to use the internet on their mobile phones, but boys do. Girls don't even have smart phones, so they can't ask for permission to access the internet."

R (31), a nineteen year old college girl from the under-resourced urban areas respondent says,

"As a student, I do not have access to the internet on my phone. The family forbids me from leaving the house, and the computer cafés are too far away."

The support of men is shown towards their female counterparts about utilization of digital tools explicitly by denying the 'Gender-Blind Discourse' in which the female gender is not viewed as relevant in technology usage in the same manner that males are, and 'Masculine Discourse', in which the relationship between men and technology has been described as fierce. R (45), who is a male of thirty-six years with a postgraduate degree, administrator by profession, and from an affluent city area, gives his optimistic and liberal opinion about mitigating the gender-based digital gap. The same view was shared by the male respondents R (3), R (7), and R (25), which is,

"Technology should be used regardless of time, geographical location, gender, race, and ethnicity for the betterment of society and proceed to the information age. Every member of my family gets an equal opportunity to use digital devices and the internet."

Researchers have extended the concept of digital capital by elaborating on appropriations of Bourdieu's formulation of capitals. This finding can also be utilized to investigate the gendered nature of differing quantities of digital capital. Because girls and women are assigned a secondary role in society, feminist researchers have observed that gender has a significant link to the development of social capital position relative to males, therefore they have less access to

resources for health, education, and literacy (Burt, 1998). Using this reasoning further, it can be said that gaining digital capital via the accessibility and Online resource accessibility is significantly impacted by the gendered control mechanisms outlined above.

Actual use and meaningful use

Possessing the ability to work with digital tools and comprehend conceptual and cultural concerns related to the digital world are prerequisites for making effective and efficient use of ICT. It is feasible to address some of the needs in the field of development by using ICT, which is not limited to gaming or interpersonal communication.

The below case studies are instances of the 'Technology Acceptance Model (TAM)', where users' views and level of convenience with digital technologies influence their behavioural purpose of using them (Das & Bhattacharyya, 2023). The case studies are showing that the respondents use technology for their work, communication, and entertainment purposes mainly.

R (2), from an affluent city area, a thirty-four-year male with an IT profession, gives his view about the use of ICT and digital technology. He says,

"I use the internet to check official emails, forward client complaints to my seniors via e-mail, pay for my phone and internet recharge, and also for the family members' mobile phones, make money transfers, and online shopping. The majority of people here only use the internet for entertainment and communication, Facebook, and WhatsApp."

R (54), a male student of a postgraduate course and from an affluent city area, says, "Being a postgraduate student, I use technology for academic purposes with communication and entertainment. I acquire various knowledge from YouTube tutorials that enhance my knowledge."

R (81), a twenty-five-year-old female and medical student, says,

"I believe that digital devices and the internet make our lives easier by introducing net banking facilities, online payment, online booking on railways, and flights, which is commendable. And for the academic purpose, it brings revolution by giving easy information access."

The third level of the digital divide, articulated by van Deursen and Helsper (2015), focuses on the outcomes or benefits of digital use, as demonstrated by case studies and respondents' histories of ICT usage, which reveal a positive trend in both affluent and under-resourced urban locations.

Socio-economic Factors

Infrastructure and Availability

According to Warren (2007), a discrete sector of the population suffers significant and possibly indefinite lags in its adoption of ICT due to circumstances beyond its immediate control constitutes digital exclusion. Territorial digital exclusion is one kind of this, which is a reflection of differences in the quality and availability of telecommunications infrastructure at various spatial scales.

It is evident that access to the ICT cannot be granted in the absence of a suitable infrastructure. It is important to understand “access” not only in terms of geographic reach (e.g., granting access in remote areas) but also in terms of economic reach (enabling access for those with limited financial resources). Cost restrictions frequently prevent low-income urban areas from using ICT services. In some places, there may be less competition among internet service providers, which can raise prices and make it difficult for consumers to afford monthly internet services. The main cause of this is digital redlining, when internet service providers purposefully invested less in minority and low-income areas in the belief that they will make more money in affluent, privilege neighbourhoods. An assessment of internet access points is crucial to understanding the infrastructural barriers faced by users.

R (44), twenty two years old male student from an Under-resourced urban area stated about the fact related to the internet network problem and digital gap. Others few respondents are from the under-resourced areas complaint about the same problem. R (44) says,

“The network at home is either non-existent or inadequate. I leave the house and head outside to use the internet or head toward the road. There are more network issues when you go deeper within the locality, but the network is better outside in the open air.”

The scene has changed when it turns to the affluent city areas. The respondents from the affluent areas have good infrastructure and think about privacy too while using the web. Some of these tech-efficient people also address some digital availability and infrastructural issues, which are not negligible.

R (53), a twenty seven year old female respondent from affluent city areas with IT profession says,

“In my opinion, mobile internet provides access to information at the appropriate time. If not, it would be necessary to attend the cyber café and complete all tasks before departing. Hence, using mobile internet to stay connected is preferable. But in our flat broadband service is not as expected.”

R (91), a twenty four year female Post-graduate student states that,

“I like to utilize a touchscreen mobile device to access the internet. Using it is simpler than using a laptop or a PC. Cyber cafés are prohibited for use in private. Thus, the smartphone is your best alternative.”

Accessibility and Affordability

In cities, mainly in under-resourced urban areas the expense of digital gadgets can also be a major obstacle to digital inclusion. Many people in low-income neighbourhoods find it difficult to afford digital devices like tablets, laptops, and PCs, and a high speed internet facility as well. There are also issues on regular internet recharge and price hike which lead to the digital divide in spite of having demand. The below case studies are showing different situations of the respondents from both of the city areas; under-resourced and affluent areas, where the socio-economic conditions are different for all and which caused digital divide and exclusion.

R (25), a twenty four year old male with graduate degree and now searching for suitable job and from an under-resourced urban area says,

“Most people are unable to pay the monthly internet packages. Because of this, not many members of the community own it. Although some residents of our areas have access to regular internet packs, I have not.”

R (50), a twenty year male respondent with a private job and from an under-resourced urban area stated about the network issue in their areas. He says,

“What’s the need of spending money on internet packs if you don’t get any speed or range? It’s not affordable if you pay money and receive inferior service. In order to get some connectivity, we have to sit outside.”

R (37), a twenty-five-year-old male respondent from an under-resourced urban area, complained about the poor service of a cyber café that is nearby their area. He says,

“Because there weren’t enough computers and they were sometimes packed, we had to wait our turn at the cyber cafés. The outdated PCs would cause the speed to be slow. This was how I would sometimes waste thirty minutes.”

The affluent city dwellers’ conditions are different than their under-resourced areas counterparts. R (48), a twenty-three-year-old female graduate, says,

“Although there is a cyber café, internet privacy is non-existent. Thus, the smartphone is your best alternative.”

R (13), a thirty-year-old male and doctor by profession, talks about the obsolete equipment issue, and he says,

“The obsolete equipment’s issues make me feel annoying. The technological advancement is increasing frequently.”

Bourdieu doubted the importance of economic factors. The social and economic capital in this case is further converted into digital capital, so solidifying the dominance of the wealthy elite at the top of the social strata, where they are typically concentrated. While the under privileged section of peripheral regions was clearly rendered entirely irrelevant under the new framework of network society, Castells (2000) claims that in the initial phases of industrial capitalism, this under privileged section was exploited. It might be argued that the core component of a network society is the inclusion/exclusion binary framework, which is mirrored in the digital inequalities between the privileged and the disprivileged.

Conclusion and recommendation

The study finds several obstructions to the digital divide, including the educational system, language barriers, low literacy rates, gender stereotype issues, economic barriers, and infrastructural issues identified from the analysis of this study. That is to say, there are multiple digital divides rather than just one, and in order to close them, numerous and varied initiatives are required. The difference in possibilities to access ICT and use the internet for a wide range

of purposes across individuals, households, businesses, and geographic areas at different socioeconomic levels is known as the “digital divide.” Based on comparative research between affluent metropolitan areas and under-resourced urban areas, it is necessary to minimize the digital divide in these areas’ livelihoods through innovative solutions.

The results can be sorted into two categories. Regarding digital affordability, even though economic class was not explored in depth as a variable, it was recurrently used to explain the purchasing limits of marginalized groups who live in under-resourced urban areas.

Models for researchers, social scientists, and librarian technologists must be created in order to ensure that technological innovation and policymaking satisfy local requirements. Improved connectivity is required in under-resourced urban areas. Internet service providers and telecom firms should prioritize these areas by offering higher-quality internet services and introducing affordable internet packages that are affordable for the majority of residents.

It implies the need to reduce entry-level pricing and reconcile them with income disparities. In sociological terms, efforts must be made to increase the perceived value of technology while also incorporating digital resources into the spending priorities of underprivileged groups. We should concentrate on the low-Internet user population, which includes women, the elderly, and children in all locations, in order to close the digital divide. Inequalities exist due to socio-cultural factors. Despite women’s increased affordability, gender stereotypes and unpaid care work limit their access to internet knowledge and digital abilities. Initiatives to raise gender awareness and challenge prejudices are critical for promoting 'digital inclusion'.

Both the mobile applications and the contents should be created in the local languages. Since the majority of students from under-resourced areas attend public schools where there is no emphasis on the English language. Additionally, the indigenous languages which are widely spoken and understood by the people living in these places. Therefore, it is possible to propose the idea to close the digital gap.

A moral and ethical framework, volunteer support, non-governmental organizations, and community services can all help to advance the agendas of awareness on ICT use, training programs, and relevance in our daily lives so that people in the majority of underprivileged areas learn about them, participate in reducing the digital divide for welfare, and demand that the government and private sector find a solution. In an effort to eventually encourage digital equity and inclusion, this study argues for a reciprocal relationship between affordability and accessibility, highlighting the need for coordinated attempts to support digital affordability and skill development for vulnerable groups residing in under-resourced urban areas mainly.

Addressing the digital divide in India is an intricate problem that necessitates a multifaceted solution. The study attempted to present an appraisal of the existing scenario based on exploratory research and the authors’ own self-investigation in a comparative way between affluent and under-resourced areas in Kolkata, India. It is possible to design a study to collect primary data that will deliver a larger, more diverse sample and, in a comparable manner, on the consumption and expenditure on digital services, allowing for more robust analyses to be performed by covering other metropolitan regions in India and other countries. By offering different solutions to more people from different diasporas, future research could try to get beyond all of those

obstacles and further our understanding of how to improve the digital facilities and abilities of tech-challenged, under-resourced urban regions mainly.

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LOCATING THE BARRIERS AND NAVIGATING THE PATHWAYS TO WOMEN EMPOWERMENT THROUGH EDUCATION

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ABSTRACT

All the levels of formal education from elementary to tertiary have a vital role for national development. Technology has been given a lot of importance in education. We are moving towards the goal of gender equity in education sector but still some road blocks are hindering the progress of women. Even in the era of women empowerment, the larger section of womenfolk across the globe is neglected in all spheres. Moreover, the degree of women empowerment is diverse across India. West Bengal is a 4th largest State of India in terms of population. In West Bengal, 77.08% is the total literacy rate as per 2011 census where is 71.16% of female and 82.67% of male. Now it is quite pertinent to reexamine where West Bengal stands at present in terms of women empowerment from the lens of education. It also seeks to unpack the dominant barriers to women empowerment through education with an objective of navigating some viable pathways to their empowerment to the fullest.

Keywords: Education, Literacy, Women Empowerment, Gender Equity, National Development.

INTRODUCTION

Women constitute almost 50% of the total population in India. Education is the key to women empowerment. Education has a positive role in the overall development of any country and society. Its holistic development calls for equal contribution from both men and women. Swami Vivekananda thus stated, “There is no chance for the welfare of the world unless the condition of woman is improved. It is not possible for a bird to fly on only one wing” (Vivekananda, 1993 as cited in Singh, 2014, p. 40). When Mahatma Gandhi said at the All India Women’s Conference in 1936, “When a woman, whom we call ‘abala’ becomes ‘sabala’, all those who are helpless will become powerful” (Gandhi, 1982 as cited in Kapoor, 2016), he actually wanted to put emphasis on the necessity of women’s freedom and strength for building a humane and exploitation free society. So, it is an important responsibility of the state to provide education to girls like boys. The development and progress of any nation is never possible if women are neglected, unaware, ignorant and uneducated. Therefore, women’s education can be an effective tool for the overall welfare of any nation. In order to develop the latent potential of women to the fullest, women’s education is essential.

As per the Census Report of 2011, West Bengal is the fourth largest state in terms of population of India and it holds the 13th position in terms of literacy. Moreover, 4.45 crore constitutes female population out of total population 9.13 crore in West Bengal. It has ratio of sex 950 females for every 1000 males. There is 71.16% female and 82.67% male literacy rate out of total 77.08% in West Bengal. As per the report of employment and unemployment surveys conducted by the Labour Bureau (Ministry of Labour and Employment, 2018) in the years 2012–13, 2013–14, and 2015–16, the working population ratios of women in West Bengal aged 15 years and above are 20.6%, 17.2%, and 20.5%, respectively. But in the era of women empowerment, the rate of female literacy is highly an area of concern. Still, girls, especially from Socio-Economically Disadvantaged Groups (SEDGs), face various challenges to complete their education at all levels. Child marriage, domestic work, forced labour, school distance from home, cultural prejudices etc. create barriers to girls' education. Let's now see what the contemporary research speak about the barriers to women empowerment in West Bengal.

RESEARCH METHOD AND MATERIALS

The present study is an analytical as well as qualitative in nature. It is chiefly based on the secondary sources of data obtained from books, journals, and education reports related to this problem. Secondary data analysis method has been applied in this study. This study has sought to address the following objectives:

- 1) To reexamine where West Bengal stands at present in terms of women empowerment through the lens of education.
- 2) To unpack the dominant barriers to women empowerment through education with an objective of navigating some viable pathways to their empowerment to the fullest.

EXAMINING THE CONTEMPORARY RESEARCH EVIDENCES

Lahane (2024) carried out a study on “educational impact on women empowerment”. Result of the study revealed that empowering women through education can bring radical changes in women's employment and social infrastructure. Sarkar (2017) studied on “Recent Status of Education, Employment and Empowerment of Women in West Bengal.” Researchers showed that the home had a positive effect on women's active participation in employment-related decision-making processes. Chakraborty and Mondal (2014) examined a study on “Role of Education in Women Empowerment: A Case Study on the Social Development of the ‘Santal’ of Birbhum District, West Bengal.” The researcher showed in the study, ‘Santal’ women were not empowered or improved because of their low social literacy rate. The researcher also said that educational improvement was essential for the social development of ‘Santal’ women in rural Bengal. Kundu and Chakraborty (2012) conducted a study on “the empowerment of Muslim women in Murshidabad district of West Bengal”. Result was revealed that participation of local NGO's could change awareness of women rights and empowerment process of Muslim women community. Mukhopadhyay (2008) carried out an investigation on the “the role of education for women empowerment at Malda district and reflection on survey of women”. The researcher found that educated and economically empowered women of Malda district can take strong decisions on any issue and stand against “Dowry system”. Sarkar and Ghosh (2021)

studied on “Empowerment of Women in West Bengal: Issues and Challenges.” Researcher had mentioned that government initiatives were not sufficient for women empowerment. As a way of empowering women, researcher had showed that the mindset of common people, media, politicians, women community will create an environment where will be no differentiate between men and women. Banerjee and Pan (2023) conducted a study on “Empowerment of Rural and Urban Women in West Bengal: A Case Study in Birbhum District”. The study showed the involvement of women at all levels through the civilization of family formation, cultural initiation, rise of economic elements. It was also revealed that empowerment of urban women was better than rural women. Khatun (2024) in a study title “Scenario of Women Empowerment: A Regional Analysis of Selected Indicators in West Bengal” showed that urban women had a higher literacy rate than rural women. It was also revealed that higher level of decision-making power among Hindu women was higher than among Muslim women. Roy and Banerjee (2024) in a study titled “Women’s Education in West Bengal: Initiatives and Challenges” showed that government initiatives to promote women’s education were effective. The whole gamut of contemporary research literature thus shows diverse factors behind the failure in achieving women empowerment in West Bengal. The present has thus intended to unpack the dominant barriers of women empowerment through education. It also aims to navigate some viable pathways of their empowerment in the present scenery.

REVIEWING THE SCENARIO OF WOMEN EDUCATION IN WEST BENGAL

West Bengal has repeatedly shown the way of women’s empowerment. ‘Satidaha’ abolition due to untiring efforts of Raja Rammohun Roy, Hindu Widow Remarriage Act by Pandit Ishwarchandra Vidyasagar, establishment of Calcutta Female School as early as in 1849 by John Elliot Drinkwater Bethune were the landmark steps towards women empowerment in 19th century” (Sarkar and Ghosh, 2021). The contribution of these great thinkers to the education and empowerment of women in West Bengal and India is unforgettable. Education is the only imperative for women empowerment. In this context, the overall education rate of women in West Bengal since the 20th century is mentioned in Table No. 1 and Figure No. 1 below.

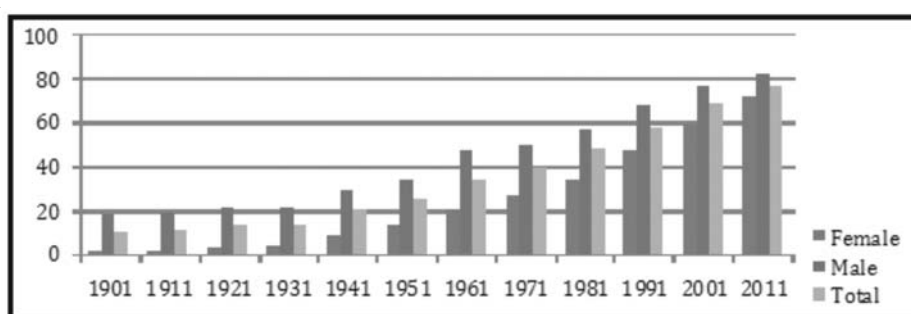
Table 1: Literacy Rate (%) in West Bengal

Year	Female	Male	Total
1901	1.2	17.9	9.8
1911	1.7	19.1	10.8
1921	2.5	21	12.3
1931	3.8	20.4	12.4
1941	8.3	29.3	19.7
1951	12.7	34.1	24.61
1961	20.3	46.6	34.46
1971	26.6	49.57	38.86

Year	Female	Male	Total
1981	34.4	56.93	48.65
1991	46.6	67.81	57.70
2001	59.68	77.02	68.64
2011	71.16	82.67	77.08

Source: Census Reports, Government of India

Figure 1: Female Literacy Rate (%) Growth in West Bengal



Source: Census Reports, Government of India

From Table 1 and Figure 1, it can be understood that since the early 20th century the female literacy rate has increased significantly along with the male literacy rate but still there is a huge gap between the male literacy rate and the female literacy rate. According to the 1901 census, the gap between male and female literacy rates was 16.7 and at the beginning of the 21st century, according to the 2001 census, the gap was 17.34. According to the 2011 census, the female literacy rate is 71.16 and the male literacy rate is 82.67, i.e. the difference between the male and female literacy rate is 11.51, which raises the question whether it is promising in the era of women empowerment in the 21st century.

Now, let's us look at the table 2 which shows the female literacy rate in terms of areas in West Bengal in comparison with whole India in the post-independence era;

Table 2: Compare Female Literacy Rate (%) Rural and Urban area of WB and India

Year	West Bengal		India	
	Urban	Rural	Urban	Rural
1951	-----	-----	22.33	4.87
1961	50.02	11.73	43.75	26.49
1971	54.11	18.05	52.54	26.13
1981	60.72	25.34	58.07	26.92
1991	68.25	38.12	64.05	30.17

Year	West Bengal		India	
	Urban	Rural	Urban	Rural
2001	76.14	53.82	72.86	46.13
2011	81.70	66.08	79.92	58.75

Source: Census Reports, Government of India

Table 2 represents the urban female literacy rate in West Bengal is higher than the national rate and the female literacy rate has increased gradually since independence. But the rural female literacy rate in post-independence North West Bengal was lower than the national rate till 1980. Later it increased, as seen in the female literacy rate of West Bengal (as per census 38.12% in 1991, 53.82% in 2001 and 66.08% in 2011) and the national literacy rate (as per census 30.17% in 1991, 46.13% in 2001, and 58.75% in 2011). If we review the status of school education in terms of Gross Enrolment Ratio (GER) in West Bengal in comparison with India, the following tables 3 and 4 reveals that the GER of girls in West Bengal is in better position at all levels of school education in terms of national rate in the last five years.

Table 3: GER by Gender and Level of School Education in India

Year	Elementary (1 to 8)			Secondary (9-10)			Higher Secondary (11-12)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2018-19	95.5	96.7	96.1	76.9	76.9	76.9	49.5	50.8	50.1
2019-20	97.0	98.7	97.8	78.0	77.8	77.9	50.5	52.4	51.4
2020-21	98.3	100.0	99.1	80.1	79.5	79.8	53.0	54.6	53.8
2021-22	99.3	101.1	100.1	79.7	79.4	79.6	57.0	58.2	57.6
2022-23	92.2	95.8	93.9	78.3	80.1	79.2	55.1	58.7	56.8
2023-24	90.7	92.9	91.7	76.8	78.0	77.4	54.4	58.2	56.2

Source: UDISE+, Government of India

Table 4: GER by Gender and Level of School Education in West Bengal

Year	Elementary (1 to 8)			Secondary (9-10)			Higher Secondary (11-12)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2018-19	97.8	100.8	99.3	72.4	91.1	81.5	47.2	56.6	51.7
2019-20	102.3	105.0	103.6	76.8	96.1	86.3	50.1	60.6	55.2
2020-21	108.7	110.4	109.5	82.0	100.8	91.2	53.3	64.0	58.5
2021-22	107.8	109.1	108.5	83.4	93.2	88.2	53.7	70.6	62.0
2022-23	102.8	104.2	103.5	92.5	98.6	95.5	57.3	78.0	67.5
2023-24	105.8	107.6	106.7	98.5	104.2	101.3	57.0	75.5	66.1

Source: UDISE+, Govt. of India

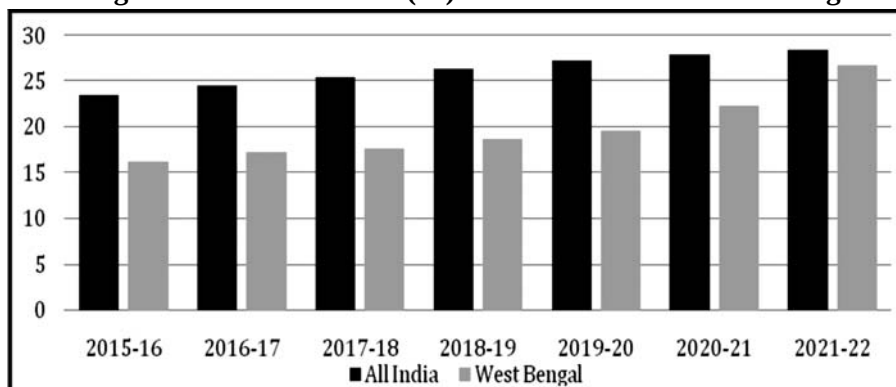
Tables 3 and 4 show that West Bengal's female literacy rate at primary (1–8), secondary (9–10), and higher secondary (11–12) school levels is better than the all-India female literacy rate. Now let's look at the gross enrollment ratio (GER) in higher education in West Bengal in comparison with India. Table 5 and figure 2 capture that GER of females in West Bengal from 2015-16 to 2021-22 is always lower than the national rate.

Table 5: Gross Enrolment Ratio (GER) in Higher Education (18-23 years)

Year	All India			West Bengal		
	Male	Female	Total	Male	Female	Total
2015-16	25.4	23.5	24.5	19.1	16.2	17.7
2016-17	26.0	24.5	25.2	19.8	17.2	18.5
2017-18	26.3	25.4	25.8	19.9	17.6	18.7
2018-19	26.3	26.4	26.3	20.0	18.7	19.3
2019-20	26.9	27.3	27.1	20.3	19.6	19.9
2020-21	26.7	27.9	27.3	20.3	22.3	21.3
2021-22	28.3	28.5	28.4	25.9	26.8	26.3

Source: AISHE Reports, Ministry of Education, Govt. of India

Figure 2: Female GER (%) in All India and West Bengal



Source: AISHE Reports, Ministry of Education, Govt. of India

As a whole, girls in West Bengal are in better position than national rate in terms of literacy and GER at all levels of school education but in higher education, girls in West Bengal lag behind the national rate in terms of GER. However, the Government of West Bengal has intimated a number of schemes for accelerating the educational achievements of boys and girls in formal education. Government initiatives to make West Bengal a hub for women empowerment are noteworthy. The Education Department, Government of West Bengal has launched several schemes to ensure the education of girls and boys, especially for the education of girls. The important schemes for women empowerment through in West Bengal are listed below Table 6.

Table 6 : Educational Schemes in West Bengal

Women Empowerment Scheme	Aims / Objectives
Kanyashree Project (2013)	With this scheme, a financial benefit is provided to the women of West Bengal to sustain them in education on a regular basis. The main objective of this project of the Department of Child and Women Development, Govt. of West Bengal was to end child marriage and provide regular education for women empowerment.
Rupashree Prakalpa (2018)	It gives financial assistance to parents during the legal marriage of daughter.
Swami Vivekananda Merit-cum-Means Scholarship Scheme (revamped in the year 2016)	The initiative aims to provide higher education opportunities to a large number of meritorious and economically backward students (higher education in regular mode from Class XI) in the state.
Aikyashree Scholarship (2018-2019)	Providing financial assistance to economically weaker minority students.
Shikshashree (2014-2015)	The scheme provides scholarships for education up to Class VIII to children belonging to SC and ST communities in West Bengal whose family income is <2.5 Lac for per annum.
Sabooj Sathi (2015-2016)	The scheme encourages girls to pursue higher education by providing them with bicycles, reduces dropouts, facilitates girls' schooling and promotes girls' empowerment.
Mid-Day-Meal Programme(2003)	The Mid-Day Meal Scheme is an important one for school going students. It was started only for class I-IV But later it was upgraded to higher primary level (Class: VI-VIII). The aim of the scheme is to improve student health and school orientation.
Taruner Swapna (2022)	Financial assistance of Rs.10,000 to all students studying in class 11 and 12 in government and government aided schools in West Bengal for purchase of smart phones/tabs.

Source: Department of women & Child Development and Social Welfare, and Chief Minister's Office, Government of West Bengal, 2025.

Despite these schemes and programmes in the field of education in West Bengal, women's empowerment through education is still marginal. It is pertinent to unpack the barriers to their empowerment from the contemporary research evidences. Let's have a glance at the following hurdles in this regard.

BARRIERS TO WOMEN EMPOWERMENT FROM THE PERSPECTIVE OF EDUCATION

Education is the main tool for women empowerment. However, women's empowerment is also hindered due to some reasons. The barriers to women empowerment through education in West Bengal are diverse in nature. Some of these barriers are common across India. What the research speaks are;

1. **Illiteracy and Lack of Awareness of Parents :** Most of the parents in our society are not aware of the education of their girl child. "Negligence of parents and child marriage are the main reasons for hindering women's education" (Mukhopadhyay, 2008, p.221). We know every human being has potential, whether is a man or woman. From the time of birth, parents think of their marriage without giving priority on the desires, tastes, interests, tendencies, and abilities of the girl child. As a result, many talents of the society go into darkness prematurely.
2. **Poverty and Early Marriage :** Many girls who enrolled in education dropped out of educational institutions due to various reasons such as poverty, early marriage, etc." Early marriage is another common feature leading parents to withdraw their girls from school, and once they are gone, very few girls return to school" (Mukhopadhyay, 2008, p.221). Child marriage is prohibited in Indian society. Marrying a girl under 18 is a punishable offense under Indian law. But many parents are giving marriage to their daughters, by ignoring this law. The people of the village believe that if girls get married early, the family gets financial relief. 58% of illiterate girls are married before the age of 18, compared to only 4% of highly educated girls. "In rural India almost 70% of girls are getting married before they are 18 and nearly 56% of married girls bear children before they are 19" (Sarkar, 2018, p.97). Moreover, rural uneducated, poor parents do not attach much importance to girls' education.
3. **Inadequacy of Girls Schools and Teacher:** Some parents in the society who are not willing to send girls to co-educational schools. They are only interested in sending to girls' schools. Another thing is notable that many girls are also comfortable attending girls' school. The amount of girls' school is very less compared to their demand in West Bengal. Moreover, "The large number of teacher vacancies, poor quality of education and inadequate funds is a common factor in West Bengal" (Marie Lall, 2005; Sahoo 2024). According to WBCHE, there are about 681 girls' schools, 3441 Co-ed schools, and 302 boys' schools out of a total of 6771 schools at higher secondary level in West Bengal. Inadequacy of girls' schools is becoming an obstacle to women's education. Where women education is less important, there is a difficulty in finding female teachers for girls' education. Even in West Bengal lack of adequately trained female teachers is a major challenge for female education.
4. **Lack of Hostels:** It is common to see that in the 21st century Indian education system up to higher secondary level, girls can complete their studies from home by

going to nearby educational institutions. But most rural areas do not have schools close to girls' homes. Even for the next level of education, they have to travel to educational institutions far away from home. "Distance of school from habitation in rural area of west Bengal is big problem to regular attend the school" (Sahoo, 2024). Due to lack of hostel facilities, sometimes girls have to drop out at the midway of their education.

5. **Discrimination in Curriculum:** "Girls will not be good at learning math when they enter middle school. People believe that women are good at linguistics, history, and similar art subjects that hinge on the capability of language or memory, while men are good at math, physics, and similar science subjects that require logical reasoning" (Xie & Liu, 2023). It is believed that girls are less intelligent than boys. They are not good at mathematics. Hence they are deprived of studying all these subjects along with many subjects of scholarship and technical education like computers, electronics, graphics, land surveying etc. Women's education is largely hindered due to this discrimination.
6. **Lack of school infrastructure:** Although there are some co-educational schools or girls' schools for the education of girls, there is a lack of proper infrastructure. Like-toilets, common room, proper classroom, separate drinking water system etc. "Many schools are not properly equipped with laboratory facilities, necessary teaching aids and appliances" (Sahoo, 2024). Due to lack of proper school infrastructure, many girls do not feel comfortable going to school. As a result, their education is disrupted.

THE WAY FORWARD

The difficult task is to find ways to solve ongoing problems in techno-global society. Education is the only path that can be properly used for the development of women. Education is one of the main pillars of national development. The direction of women development should be viewed through social conditions, positive aspects of education, positive view of the people etc. The following are the pathways to women empowerment through education -

- Ongoing curriculum at all levels of education needs to be diversified and reformed. According to National Curriculum Framework – 2005, "improving classroom processes and school management to implement the curricular and pedagogic shift for enhancing participation in learning process and providing success experience to all learners". A more pragmatic approach needs to be introduced at the time of framing curriculum. A diversified curriculum for girls should be developed keeping in mind the needs of home life along with general education.
- Attention must be paid to establishing equal rights for men and women in society. It is necessary to increase the employment of girls to become economically independent. For this, suitable girls' schools need to be established in rural areas. Nutritious food should be provided through mid-day meals in schools. Parents need to be made aware

of the need for women education in rural areas. Illiterate people need to be made aware of the ill effects of child marriage. West Bengal's Kanyashree Project through education should be further strengthened to stop child marriage and prevent girls from dropping out of school.

- Gender related content within the curricular needs to be addressed in a manner which promotes gender equality. Teachers must also be oriented towards overall gender sensitization in the education sector.
- Successful implementation of the Right to Education (RTE) Act, 2009 & its extension for 3-6 and 14-18 age-groups, Samagra Shiksha Abhiyan (SSA) and NEP 2020 all over India. Government should encourage ICT tools and the use of internet for the study and research by women. Issues like gender-sensitization, gender mainstreaming in the educational programmes should be incorporated.
- We should make a shift in approach towards women based on sex discrimination and change our attitudes towards female education and by raising the social consciousness of the country through national media and communication effort.
- Government should also make availability of exclusive women's institutions at all levels. Gender mainstreaming perspective should be introduced in all developmental process. Equality of sexes as a major value to be inculcated through the educational process at all levels.

CONCLUSION

Considering the above discussions, it can be said that women's education is plagued with various societal barriers. The Government of West Bengal has provided many facilities for the development of women's education. In the field of education of girls, we face various problems from various aspects like political, social, economic complications etc. We have seen the lack of proper planning and implementation of girls' education. Several strategies can be devised to empower women through education. After independence, many committees and commissions have been formed for women education and empowerment in India, but women education and empowerment is still a concern in our society. But it is true that women education and empowerment will surely progress only if positive attitude is awakened among the common people of our society. Change in the attitude of the people, the awakening of values, and implementation of the Acts and laws, the main barriers to women's education and empowerment will be eradicated. Last but not the least, girls need to have confidence in themselves and be aware of all forms of violence. We hope to be able to get out of this situation and we can say it again, "The destiny of India is being shaped in her classroom". A change in people's attitude, awakening of values is expected to help overcome the root problems of women's education and

empowerment. As a result, women in West Bengal are expected to achieve more empowerment in terms of gender equality, political, social and economic etc. through education.

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RELEVANCE OF VEDIC TEXTS AS A SOURCE OF VALUES AND CULTURE IN CONTEMPORARY EDUCATION

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ABSTRACT

Literary meaning of values can broadly be identified as moral principles that control or influence a person's behavior or a system of moral principles or rules of behavior/ principles which affect a person's behavior in a positive sense. The Indian subcontinent is the one of the oldest civilizations of the world which was well aware of improving the quality of life through these means and has significantly emphasized on these very normative principles of moral conduct. NEP 2020 has also placed great importance on inculcation of values through education at various levels. This paper remains a humble attempt at exploring ancient Indian texts as a source of timeless values and culture that remain relevant in the modern education system. The study principally focusses on the Upanishads in tandem with other ancient Indian texts as a valuable source of values much needed for a balanced synchronized modern society.

Keywords: Ancient India, Values, Culture, Relevance, Education

INTRODUCTION

Literary meaning of values can broadly be identified as moral principles that control or influence a person's behavior or a system of moral principles or rules of behavior/ principles which affect a person's behavior in a positive sense. These principles have a great, definite and undoubtedly a great deal of direct influence on a normal human behaviour. This refers to the mental faculty which enables a man to probe, distinguish and choose from the good and bad in positive sense which comes to a person with inward concentration.

NEP 2020 and Perception of Value Education

In alignment with the goals of NEP 2020, the NEP places equal importance on value education which includes moral values, Indian values and universal values like:

- **Ethical values:** NEP 2020 seeks to cultivate in students ethical values such as empathy, respect, integrity, and responsibility, and recommends their infusion in the curriculum, co-curricular activities and assessments.
- **Traditional Indian values:** As per the NEP 2020, core traditional Indian values such as ahimsa, swachchhata, satya, nishkam karma, shanti and sacrifice should be included in the education tasks.
- **Basic human values:** In the same vein the NEP 2020 acknowledges importance of certain basic human values such as tolerance, diversity, pluralism, righteous conduct, gender sensitivity etc in education.

- **Curriculum:** The broad aim of NEP 2020 is to redefine the curriculum framework to one that is contextually Indian and local. It is expected of the curriculum to help shape the students into responsible individuals imbued with the values of regularity, punctuality, and self-control.
- **Teachers' training:** Similarly, the NEP 2020 intends to empower teacher training institutions and programs in order to support incorporation of ethical values.

The Indian subcontinent is the one of the oldest civilizations of the world which was well aware of improving the quality of life through these means and they have much been talked about through Indian poetry, drama, prose and fictions. The entire ancient Indian literature, in one way or the other way, have significantly emphasized on these very normative principles of moral conduct. Values eventually lead to a realization of life as a journey of self-emancipation or the process of becoming from being. An individual, who is on the path of self-realization and who has to achieve his objective yet, is a bundle of imperfections and only through these means of moral corrections, he can achieve the final destination. Therefore, it is a process of becoming from being or coming to the real existence. This very process of becoming is revealed through moral up-righteousness on which all of the Upanishads have categorically emphasized upon to a great extent. The Upanishads not only emphasize on the ultimate reality that is the final destination of human life but also provide the substantial guidelines and code of conduct for the seeker who is on this very path of self-realization.

OBJECTIVES

The research paper has the following objectives:

- i. To explore the normative principles of moral conduct embedded in the ancient Indian Vedic and Upanishadic texts
- ii. To study the modalities of self-realization suggested by the Vedic and Upanishadic literature.
- iii. To explore how values and morality are perceived as optimal ways of self-liberation and a peaceful existence in the ancient Indian Literature
- iv. To investigate how ethics are perceived as integrated into personal and social life in the ancient Indian texts
- v. To enquire how mental equanimity achieved through systematic mediation and control of senses have been suggested by the ancient Indian texts as an essential virtue and value necessary for a healthy and meaningful life.

RESEARCH METHODOLOGY

This paper has a qualitative research approach that is aligned with historical inquiry, focusing on descriptive and analytical methodologies to provide a nuanced view of ethics, morality and values, in tandem with modalities of attaining the same as suggested by the ancient Indian texts. Both primary and secondary sources have been used. External criticism (authenticity verification) is done to assess the reliability of the sources used, while internal criticism (interpretative analysis) has been done for a critical examination of the content, biases, and

underlying assumptions within these texts. The approach employed is essentially descriptive-analytical, aiming to reconstruct and interpret contributions of the Vedic and Upanishadic texts to the understanding and conceptualization of personal and social value systems and the assessment of the same as a mode of attaining a meaningful healthy life.

ANALYSIS

The Upanishads and values

The ethics of Upanishads can be divided in to two major categories, namely

- **Social Ethics:** Ethics of Upanishads which contribute towards the stability of the healthy human society. It includes the qualities such as sense of Unity, negation of malpractices etc.
 - **Personal Ethics:** Ethics of Upanishads which contribute to the onlooker in the spiritual progression in the life such as longing for goodness in life, negation of escapism, penance, chastity, compassion, truthfulness etc.
- a. **Social Ethics:** The *Ishavasya Upanishad* makes a distinctive and clarion call for synergy, unity and harmonious co-existence. It urges all the people, disputing with each other over a small piece of land, to give up every type of niggardliness and consider the whole of the earth as the abode of the Lord. It is proclaimed when the Supreme Being prevails in every biotic and abiotic manifested form, it is a trivial matter of no importance to quarrel over the transient material gains. The *Ishavasya Upanishad* asks the human beings to renounce the selfishness or the meanness by which the future of this world may be changed :
- i. *îûâvâsyamida Asarvam* [All this, whatsoever moves on earth, is enveloped by the Lord,” establishes the fundamental principle of divine immanence. It suggests that the divine is not separate from the world but is inherent in it.]
 - ii. *yastusarvâ Gibhâtâniâtmanyevânupaúyati, sarvabhûtecucâtmânaA* [He who sees all beings in the Self and the Self in all beings, ceases to hate”. This highlights the core teaching of recognizing the unity of all beings through the Self.]
 - iii. *agnenayasupathârâyeyasmânviúvâni deva vayunânividvân yuyodhyasmajjuhurâ GamenobhûyicmhâCte nama uktiCvidhema* [O *Agni*, lead us by the good path to the enjoyment of the fruits of our deeds, knowing O God, all our deeds. Remove the sin of deceit from within us. We offer thee many prostrations by word of mouth].
- b. Again, the Shantipatha or the prayers made in the beginning of all of the Upanishads denote the longing for the peace “serenity that yields the understanding to all”, thereby reflecting a profound emphasis on peace, harmony and synergy as innate values of cardinal significance. The *KathaUpanishad*, again, indicates the sense of oneness at common platform but also, on the contrary, shows the selective sense of sharing which enables the person to transcend the unworthy ideas of meanness and self-domination. The *IshaUpanishad* on the other hand, tries to concentrate on the concept of cosmic unity through proclamationslike “ One, who sees all beings in self and self in all beings,

he never hates anyone at all". Needless to say that the idea of hate emerges in a situation when one does not consider himself as a part of a comprehensive community in positive sense and separates or individualizes himself from the other on the basis of selfishness, greed, lust and other unworthy ideas. But as one considers and realizes the other beings as his own integral part, in such a case, whole of the picture takes turns topsy-turvy in positive sense and presents itself in a different perspective.

The *Aitareya Upanishad* begins with the one Spirit creating the universe out of its being. As guardians for the worlds, Spirit made the Purusha (person). Out of the cosmic egg came speech, breath, eyes and sight, ears and hearing, skin, hair, and herbs; from the navel and outbreath came death, and from the organ of pleasure seed and waters were born. In the last chapter of this Upanishad the it is asked who is this Spirit by whom one sees and hears and smells and speaks and knows? The answer is the following:

That which is heart, this mind—that is, consciousness, perception, discernment, intelligence, wisdom, insight, persistence, thought, thoughtfulness, impulse, memory, conception, purpose, life, desire, will are all names of intelligence.

This intelligence comes close the supreme consciousness that permeates all beings. All things are guided by and based on this intelligence of Spirit (Brahman). Ascending from this world with the intelligent soul one obtains all desires in the heavenly world even immortality.

The *Chandogya Upanishad* denounces unethical social practices and warns the entire society not to make mistakes. The *Chandogya Upanishad* emphasizes ethical conduct through the concept of interconnectedness and the importance of self-realization. It highlights the principle of non-harm (ahimsa) and the recognition that all beings share the same essence (Atman), which is ultimately Brahman. Treating all with love and compassion, understanding the unity of existence, and striving for self-knowledge are core ethical principles are suggested as essential values :

- a) rayodharmaskandhâyajño' dhyayana Adânamitiprathamastapaevadvitîyobrahma câryâcâryakulavâsât [tîyo'tyantamâtmânâmcâryakule' vasâdayansarvaetepu Gyalokâbhavantibrahmasastho'm[tatvameti]] [There are three divisions of dharma: Sacrifice, study and charity form the first. Austerity is the second. Dwelling in the house of the teacher as a brahmacharin, always mortifying the body in the house of the teacher, is the third. All those who practise these dharmas attain the worlds of the virtuous. But one who is established in Brahman obtains Immortality.]
- b) yo ha vaijyeshthamchshreshthamchvedjyeshthasch ha vaishre [When a man knows the best and the greatest, he becomes the best and the greatest.]
- c) o vaiuttamamveda, uttamabhavati/Yovaisthiramveda, sthirabhavati/Yovai siddhi veda, siddhi bhavati/o vaig[hamveda, g[hambhavatipara% [He who knows excellence, becomes excellent/He who knows stability, becomes stable/He who knows success, becomes successful/He who knows home ,becomes home for others.]

Thus, moral guidelines provided by the Upanishadic literature not only set guard the human society against all odd practices but on the contrary to it asks the society to be aware of such damaging vices which are avoidable and are not demanded in a healthy society.

Vedic scriptures, particularly the *Rigveda* and *Atharvaveda*, emphasize values like truth, compassion, and self-awareness. The importance of selfless action, living in harmony with nature, and recognizing the divine within oneself and all beings is repeatedly highlighted in these two Vedas. The *Brihadaranyaka Upanishad* asserts: “Sarva parabasangdukkhangsar vama tmabasang” or One should, perform karma with nonchalance without expecting the benefits because sooner or later one shall definitely get the fruits. This is a value asserted in the *Bhagbad Gita* as well. The *Manusmriti* reiterates that highlights a core concept in Indian philosophy: the idea that true happiness and well-being are found within oneself, while relying on external factors or other people for happiness leads to suffering. It emphasizes the importance of self-reliance and inner peace as a path to liberation from suffering :

“sarvamparavasamdukhkamsarvamatmavasamsukhametadvidyatsama senalaksa nam sukhaduhkhayoh”.

Self-reliance and peace emerges through the value of selflessness and lack of greed. The *Brihadaranyaka Upanishads*, chapter IV, documents a conversation between Yajnavalkya and Maitreyi where the inanity of material wealth and mindless pursuit of the same has been denounced in favour of the virtue of a synchronized pursuit of inner knowledge of self-realization and self-emancipation:

“ 2.4.2 Thereupon Maitreyi said: “Venerable Sir, if indeed the whole earth, full of wealth, belonged to me, would I be immortal through that?” “No,” replied Yajnavalkya, “your life would be just like that of people who have plenty. Of Immortality, however, there is no hope through wealth.” 2.4.3 Then Maitreyi said: “What should I do with that which would not make me immortal? Tell me, venerable Sir, of that alone which you know to be the only means of attaining Immortality.” [...] “Verily, not for the sake of wealth, my dear, is wealth loved, but it is loved for the sake of the self. “Verily, not for the sake of the brahmin, my dear, is the brahmin loved, but he is loved for the sake of the self [...] “Verily, not for the sake of the gods, my dear, are the gods loved, but they are loved for the sake of the self. “Verily, not for the sake of the beings, my dear, are the beings loved, but they are loved for the sake of the self. “Verily, not for the sake of the All, my dear, is the All loved, but it is loved for the sake of the self. “Verily, my dear Maitreyi, it is the Self that should be realized-should be heard of, reflected on and meditated upon. By the realization of the Self, my dear-through hearing, reflection and meditation-all this is known.”

Self-realization implies the realization of the oneness of the inner consciousness with the Supreme consciousness after which all manifested forms are perceived as reflections of the one and only Absolute Being. This paves the way to eradication of discrimination, violence and vices of hatred and envy:

Verse 2.4.12 – “As a lump of salt dropped into water becomes dissolved in water and cannot be taken out again, but wherever we taste the water it tastes salt, even so, my dear,

this great, endless, infinite Reality is Pure Intelligence alone. This self comes out as a separate entity from these elements and with their destruction this separate existence also is destroyed. After attaining oneness, it has no more consciousness [...]” For when there is duality, as it were, then one smells another, one sees another, one hears another, one speaks to another, one thinks of another, one knows another. But when everything has become the Self, then what should one smell and through what, what should one see and through what, what should one hear and through what, what should one speak and through what, what should one think and through what, what should one know and through what? Through what should One know That owing to which all this is known-through what, my dear, should one know the Knower?”

c. Personal Ethics: It is said that one who has realized his true inner self is the genuinely ethical person. Thus, as far as the achievement of the self-realization is concerned, the entire Upanishadic literature provides the necessary guidelines for the onlooker. Dr. Radhakrishnan, in his book titled *Indian Philosophy* speculates that “In one sense, Upanishadic morality is individualistic for its aim is self-realization.” Again, the Kena Upanishad repeatedly emphasizes life’s greatest virtues like chastity, desire-less action, faith etc. as profound personal values by rendering various stories to the one who is on the path of self-realization. The *Katha Upanishad*, surprisingly is very conscious about the spiritual progression of every one when it proclaims suggestively “Arise, awake and get the final objectives and realize them.” The ancient Indian texts are resonant with references that reveal that the process of self-realization is a process of becoming from being in which one has to uplift himself by means of these very basic qualities of human life for self-liberation and this only can be done by means of adopting the greatest virtues of human life. The *Kathopnishad* asserts that the human mind encounters relentless and confounds to choose from the good, better, best and pleasant and *Kathopnishad*, very subtly, has presented the discrimination in this regard by proclaiming the idea that “The better is one thing, the pleasant may be other. Both of these, having different aims, bind the person.” And at the same time, subtle difference is also made clear through proclamation “These both, come to man’s will. The wise person makes the discrimination after judging both of them and opts for the best for him and the fool chooses the reverse.” Almost all of the Upanishads like *Katha*, *Kena*, *Ishavasya*, *Chaandogya* etc. repeatedly stress upon the life’s greatest virtues as selfless service and lack of lust as is the pre-requisite for everyone who are on the path of self-liberation. The *Ishavasya Upanishad* categorically asserts in this regard – “Yearn for not the wealth of anyone at all.” Again, we find an illuminating conversation between Yama and Nachiketa in *Kathopnishad* where the lord of death Yama tells Nachiketa that man can never be satisfied with wealth no matter how vast that is. The Upanishads repeatedly direct the entire humanity, irrespective of caste or creed, to be aware of the innumerable hazards present in the path of self-liberation and provides a set of innate personal yet universal values that would serve as a beacon of light in the shrouding darkness of temptations, perplexities and conflict.

The Upanishads clearly put forth the idea of not giving up one’s life in order to escape from performing actions. Escapism is treated as a vice and thus ancient Indian texts set a premium upon taking responsibility and negotiating oddities of life with integrity and honesty.

The *Ishavasya Upanishad* argues that Satanic are these worlds that celebrate escapism and with blinding darkness are they covered. One who puts forth his prayer for selfish gains and comfort, falls prey to this darkness and warns all men that it is sinful to develop the tendency of escapism. On the contrary, one may wish to live a full life while performing the sensible actions, guided by both personal and social values. Dedicated honest work is important. The *Brihadaranyaka Upanishads* clearly assert that “just like one acts, accordingly one conducts himself, so does he become. One becomes virtuous by performing worthy and virtuous deed and other becomes evil by performing the unworthy deeds.” The Upanishad does not restrict itself here only but goes one step further by arguing that human willpower is omnipotent and a man made of desires engages in deeds born out of his own deep-seated desires. Hence it is obvious that a person desirous of attaining the spiritual growth, would naturally perform the right and just actions always and would get the best results accordingly. Thus, values are considered to be integral to human character, in the form of purity of thoughts and intention and not a simple mechanical code of conduct.

Virtues related to meditation and asceticism (tapas)—self-control, tranquillity, self-denial or renunciation (nysa), desirelessness, fasting also figure in the list of values reflected by the *Taittiriya Upanishads I.9*, *Brihadaranyaka Upanishads (Book IV, verse 4.6-7, 4.22, Book VI.2.16)*, *Chhandogya Upanishad II.23*, and *Kena Upanishad (Book IV, 8)*. Two moral virtues are repeatedly highlighted as important, namely, truthfulness (satya-vachana). The closest the Upanishads come to suggesting that morality is required on the path to liberation from rebirth is in the *Katha Upanishad*, where it is asserted that the self is not grasped by a man who has not quit misbehaviour (dushcharitra), is not tranquil, and is without a stilled mind (Book II. Verse 24). In the medieval *Mahabharata*, the term “dushcarita” means bad or wrong behaviour or wickedness and refers to what is considered the chief forms of misbehaviour, namely, murder, theft, lying, covetousness, envy, and so forth. The action-guide is given in the context of personal cultivation and does not suggest an other-regarding concern. That is, we need to cease committing selfish acts in order to make progress towards attainment of knowledge of brahman and such a change in conduct would orient us away from self-centeredness and towards the reality underlying everything. Self-control, not external control, remains the centre of concern.

Control of anger is also seen as a virtue that needs to be mastered as a value. The *Naradaparivrajaka Upanishad* highlights “akrodha”, meaning non-anger, as essential for self-knowledge and liberation. It emphasizes enduring harsh words and treating everyone with respect, even those who are angry. The Upanishads teach that controlling anger is a significant aspect of self-control, which in turn is crucial for controlling the mind and preventing harmful actions. Swami Budhananda (1917-1983) of the Ramakrishna Mission, noted in a series of talks on anger published in *Vedanta Kesari*: “The evil effects of anger are innumerable. The first thing that happens to an angry person is that he forgets the lessons of wisdom he has learnt in life. After that, he loses control over his thoughts and emotions. He becomes overactive, with his highly charged ego as his only guide. He loses his power of discrimination, sense of proportion, and becomes aggressive in manner, hostile to his own welfare. When anger becomes the second nature of a person, physical health and equanimity of mind suffer, and inner peace

vanishes in a trice. Anger can destroy friendships, families, business partnerships, professional prospects. Communal and ethnic riots, arsons, wars, suicides, murder and many other forms of crime are basically products of anger. In fact, anger makes even a handsome person look ugly. I suggested to a friend, who is remorseful about his flashes of anger, that he keep a large mirror facing his office desk. In case the anger-prone person has a lively sense of humor, this mirror-therapy is likely to work.”

DISCUSSION

The enlightened state is a spiritual state and is the supreme value and goal of self-development. Value-systems, like all cultural phenomena, have a rich history and the ancient the Upanishads provide an insight into the cultural perception of self-emancipation as a prolonged austere journey towards enlightenment that constitutes value system of our society. The modern society rift with mindless materialism, pursuit of personal comfort and a deeply confused perception of life as a mindless accumulatio of material wealth and instant sense gratification seems to resemble a radar less boat in a tumultuous ocean as evident from the ever escalating cases of depression, self-harm, violence in variegated forms and a deep-seated lack of joy and satisfaction. The Upanishadic and ancient Indian cultural echoes of innate values could perhaps provide an understanding of the journey of life and provide direction to an otherwise lost wayfarer. A well-planned and systematic integration of ancient Indian wisdom into the modern curriculum emerges as the need of the hour as material success and gains have evidently failed to provide peace, contentment and succour to the struggling generations blinded by alien cultural invasions and deviations from their own roots.

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GLOBALISATION: A MECHANISM FOR GENERATING DISPARITIES IN THE SOCIETY

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ABSTRACT

Globalisation is a process of interaction and integration among people, companies, and governments worldwide. It is a process that influences every sphere of our life. The ripple effects of globalization affect every nations of world. The nature and magnitude of globalization has been changing time to time. Technological revolution makes the magnitude of globalisation faster and in virtual form. Globalization functionally erases the political boundaries of different regions and creates a global village. The study is qualitative and conceptual in nature. The researcher has used primary and secondary data in the study. Mainly content analysis technique has used. The study reveals that globalization has positive as well as negative impact on different aspects of life. It helps to create a conducive environment for economic development, societal upliftment, political maturation and environmental concern. Economically, politically, and technologically advanced nations are more benefitted due to the globalization. Developing nations or the regions which are not developed economically, politically or technologically gradually become dependent on the develop nations. Globalization creates extreme competitive markets that directly influence the global economy. Individuality of nations gradually extinct. Small business, native culture, regional languages, and customs are gradually abolishing. It creates an inequality within and between societies. It should be remembered, globalization is necessary for the progress of civilization but it is also necessary to re-think about our native culture, customs, languages, and individuality. Therefore, we can nourish the local issues and promote globalisation.

Keywords: Disparities, Developed and Developing nations, Environment, Globalization, Society etc.

INTRODUCTION

Progress is the nature of civilisation. The rate of advancement of civilisation differs from time to time. At the initial stage, the progress of civilisation started with the invention of the wheel. Then, the journey was catalysed with the introduction of agriculture, industry, and technological invention. At the initial stage of civilisation, human beings aimed to collect food for their survival. After meeting the basic needs of human beings, they started to focus on other secondary issues. They created religion, culture, and patterns of settlement. As a result, human beings started to fulfil their needs from adjacent areas. Initially, it was confined to the region, but then due to the invention of the transport system, the areal boundary gradually increased. However, due to the invention of the internet, the revolution occurs in the field of globalization.

To collect or distribute anything to anywhere in the world has become possible without physical movement due to the internet.

In India, the rate of globalisation varies from time to time. The effects of globalisation influence trade, education, culture, medical sciences, technology, and occupation. In India, due to the facilities of surface ways, waterways and airways, it is effortless to connect with the people of the world. In India, real globalisation started its journey in 1991 due to the adoption of the '*new economic policy*'. The new policy abolished the rigidity of licences and permission from the government. A flexible policy was adopted regarding licensing for business or trade. As a result, a revolutionary change occurred in the trade and commerce of India. Therefore, the Indian economy became stronger and more progressive. Foreign Direct Investment (FDI) has increased manifold, and different Multi-National Companies (MNCs) have set up their business in India. Therefore, it can be stated that the real impact of globalisation started in India after new economic reform (1991).

Globalisation connects the nations physically and virtually. Globalisation impacts the economic sectors of every nation of the world directly or indirectly. Globalisation helps to create a uniform global economy. It directly influences Gross Domestic Product (GDP), Gross National Product (GNP), and National Income (NI). Economically strong and stable nations are more benefitted by globalisation. The existence of raw materials, skilled labour and advanced technology helps develop nations to become economically dominant. Scarcity of raw materials, availability of unskilled labour and traditional technology make developing nations economically weak and dependent on developed nations. Developed nations hire skilled labour from developing nations at minimal prices. As a result, they can produce goods or things at minimal cost. Therefore, an invisible line is created between two regions. That may generate inequality that creates hindrance mainly for underdeveloped and developing nations.

GLOBALIZATION : AN OVERVIEW

Globalization refers to the increasing interconnectedness and interdependence of countries and their economies. It involves the exchange of goods, services, information, and ideas across borders. The exchange is facilitated by advancements in technology, transportation, and communication. Because of this tendency, economies, cultures, and communities have become more integrated. People from all around the world come together because of it. Opportunities for trade, cooperation, and cross-cultural interaction are brought about by globalisation. It affects how nations engage and collaborate in the modern world, as well as how many facets of our lives are shaped.

Globalization is the word used to characterise the rising interdependence of the world's economies, cultures, and inhabitants, brought about by cross-border trade in goods and services, technology, and flows of investment, people, and information. Countries have developed economic relationships to assist these movements over many generations. However, as these cooperative agreements influenced contemporary daily life, the term is acknowledged in the early 1990s following the end of the Cold War.

It is true that improvements in communication, transportation, and information technology have facilitated greater human interaction and made the world more accessible. Every aspect of modern life is a direct result of globalisation, which has necessitated active cooperation, goodwill, and peaceful coexistence between nations, cultures, and religions. On the other hand, it has also raised the likelihood of ruthless rivalries, mistrust, confrontations, and unease among the people living in different countries. As a result, it is imperative that individuals everywhere rise above sectarian thinking, naive patriotism, and the urge to take advantage of others for personal gain or other nefarious purposes. Stated differently, global citizens need to be schooled to develop a sense of global solidarity and intercultural understanding in addition to receiving an education that prepares them for living in the world as members of a global community.

REVIEW OF RELATED LITERATURE

The researcher has reviewed different literatures regarding globalization. Sitlani & Jain (2013) stated, "Enormous opportunities have emerged during last two decades, resulting from reforms in various sectors of economy supported by increasing use of information and communication technology. After Liberalization, Privatization and Globalization policy adopted by Government of India in early nineties, Indian economy has witnessed tremendous reforms." Bairagya & Maity (2014) stated, "In the Indian context this implies opening up the economy to foreign direct investment by providing them several facilities, removing constraints and obstacles to the entry of multinational corporations in India, allowing Indian companies to set up joint ventures abroad, carrying out massive import liberalization programmes through the abolition of import restrictions etc. By means of LPG, there is a significant increase in inequality and environmental degradation." Gaikwad & Dhokare (2020) stated, "Globalization in India is usually taken as integrating the economy of the country with the remainder of the planet. This successively implies that opening up the economy to foreign direct investment by providing facilities to foreign companies to take a position in several fields of economic activities in India." The studies showed the mixed effects of globalization in different aspects of life.

OBJECTIVES OF THE STUDY

The researcher has stated the objectives of the study in the following ways :

- O₁: To discuss the role of globalization on the economic growth of a region.
- O₂: To discuss the role of globalization on cultural diversity and the preservation of local tradition.
- O₃: To discuss the role of globalization on educational opportunities and systems.
- O₄: To discuss the impact of globalization on environment and resource management.

RESEARCH QUESTIONS

The researcher has framed the following research questions to fulfil the research objectives:

- (i) How does globalization affect the economic growth of a region?

- (ii) How does globalization influence cultural diversity and the preservation of local tradition?
- (iii) How does globalization affect the educational opportunities and system?
- (iv) How does globalization impact the environment and resource management?

METHODOLOGY

The study employed a qualitative and conceptual approach. Primary and secondary data were used. The study was descriptive. The researcher used qualitative and quantitative data in the study. The researcher gathered data from government reports, journals, periodicals, and electronic content. The researcher used the content analysis technique of qualitative data analysis. The study was conducted in the context of India.

ANALYSIS AND DISCUSSION

The researcher analysed and discussed the data based on the following points:

Globalization and Economic Growth : The nature of economic growth depends on the stage of the economy of the nation. The rate of economic growth is slow if the country depends on a primary economy, and there is a probability of a high rate of economic development when the economy of the nation depends on a secondary, tertiary, or quaternary economy. Economic development is slow in India due to dependency on the primary economy. Singh (2021) stated “Prior globalisation, there were so many restrictions on inflow of foreign investment in the country. After 1991, the rules regarding foreign direct investment (FDI) have been relaxed. Now many any sectors of the economy are opened for 100 per cent FDI. These measures are attracting various progressive multinational organisations in India. Government has liberalised its norms related to the import of technology in the country.”

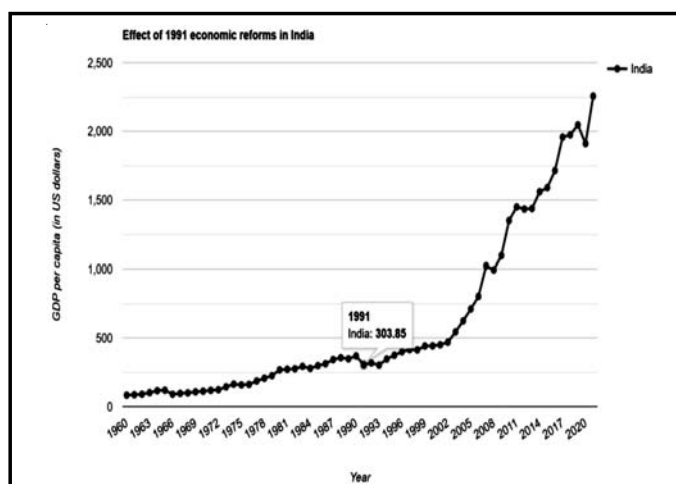
Globalization affects the economic growth of the nations globally. It opens the door to connections and collaboration. It works as a catalyst for development. Globalization creates inequalities in economic growth among different nations. Developed nations (US, Canada, Germany, etc.) can optimally use the technological advantages and human resources for development due to globalization. Developing and underdeveloped nations also take advantage of globalization, but due to the weak economy and low human resources, countries are unable to use optimum utilisation of the globalization. Globalization also creates regional imbalances within a region or nation. In India, regional imbalances are also found due to globalization. Urban areas are more benefitted as compared to rural areas. It can be stated that the impact of globalization creates an imbalance in economic growth.

Per capita income is one of the main determinants that reflect the living status of the people. Due to the effects of globalisation, the income of the people has increased manifold. Sources of income also increase. As a result, the disparities increase between nations. A massive difference found in per capita income between developed and developing nations. Income inequalities also found at regional levels. In India, per capita income is high among the people of Goa, Sikkim, and Delhi and low in Bihar and Uttar Pradesh. Therefore, due to the

waves of globalization, income inequality increases at the regional, national, and international levels.

Raw materials, human resources, and advanced technologies are essential for industrial development. Globalization makes it easy to transfer and exchange the mentioned materials. As a result, economically stable and rich nations easily benefit from it. It automatically creates inequality among nations as well as regions. Globalization helps to transfer and exchange ideas and knowledge that are helpful to adopt the latest and updated ideas and knowledge that would promote a sustainable economy. A huge number of 'brain drain' from developing nations to developed nations creates a knowledge crisis in the developing nations. Figure 1 shows the impact of new economic policy (1991) on the GDP of India. The figure shows how the Indian economy changes with the introduction of new economic policy.

Figure 1 : Impact of New Economic Policy (1991) on GDP of India



Source : https://www.reddit.com/r/IndiaSpeaks/comments/13qj1bw/indias_gdp_and_effect_of_1991_economic_reforms/

Globalization and Cultural Diversity: The existence of different cultures inside a society or group referred to as cultural diversity. It includes acknowledging and appreciating various cultural groups, their customs, values, and behaviours, as well as their contributions to the larger cultural environment. Cultural diversity is the reflection of cultural richness. It indicates the importance of a distinct culture. Cultural diversity shows the status and levels of development of the society. Crozet (2017) stated, “Globalization and culture will keep interacting in nonlinear and unpredictable ways. Interactions between both will keep navigating between universalizing and localizing tendencies.”

Cultural diversity started due to colonization and migration. Due to globalization, the importance and needs of migration increases manifold. The rate of immigration plays a role in the creation of mixed or heterogeneous cultures. Therefore, developed nations face more

problems in preserving or nourishing traditional culture, customs, and rituals. Rural or economically weak regions maintain or nourish their rituals and customs mainly due to homogeneity. Therefore, the waves of globalization changed and improvised the native culture of the region but it also helped to remove stereotypical practices of the culture of the region.

Media plays a major role in the expansion of the rate of globalization. Media shows different cultures of different nations or regions. Mixed culture forms due to the impact of Media. As a result, it is hardly possible to preserve and nourish native culture and customs in the age of globalization.

Globalization and Preservation of Local Tradition: Globalization largely influences the native culture, traditions, and customs. Culture is the symbol and identity of communities or groups. It creates integrity and cohesion among the people. It promotes and establishes unity among the people. Due to urbanization and migration heterogeneity of people increases rapidly. As a result, the practice of cultural beliefs and customs gradually becomes scarce. Globalization adversely affects native culture, rituals, and local traditions. Urban areas are more critical for the preservation of the native culture and rituals. Developed nations and Central Business District (CBD) regions more influenced due to globalization. Mixed and heterogeneous cultures found in these regions. It can be stated that globalization creates a vivid demarcation between urban and rural areas, developed and developing nations towards the preservation of native culture and local tradition.

Impact of Globalization on Educational Opportunities and System: Globalization largely impacts educational opportunities and systems worldwide. The waves of globalization imprint on curriculum, teaching methodologies, and evaluation systems. In India, from ancient times immigration and emigration have continued for quality education. Due to the technological revolution, physical movements of learners are not mandatory. Online platform completely changes the traditional landscape of the education system. Completion of degrees from foreign universities is very easy at present. The present education system is an emphasis on utilitarianism philosophy. The Indian education system also focused on the mentioned issues. National Education Policy 2020 (NEP 2020) stated, “An education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high quality education to all, and thereby making India a global knowledge superpower.” (p. 6)

Globalization and education cooperation are closely intertwined. Globalization has brought education to the forefront, recognizing the value of knowledge in society. It means not that before globalization the quality of education was very poor. Globalization accelerates the rate of quality education and its utility very fast. Globalization makes easy the process and need of emigration. A large number of students and professionals left their native places for better opportunities in the developed nations. It enhances the process of ‘Brain drain’. As a result, developing nations lose the resources, and developed nations gain the resources. Therefore, globalization fosters unequal distribution and utilization of resources. Gradually it would create an inequality of knowledge between two regions. Chaudhary (2016) stated that “In the 21st

century, education systems face the dual challenge of equipping students with the new knowledge, skills and values needed to be competitive in a global market while at the same time producing graduates who are responsible adults, good citizens both of their country and of the world. Thus globalization challenges us to rethink not only how much education is needed but also its ultimate purposes.”

At present time due to the invention of the internet, revolutionary change occurs in the field of education. Developed nations improvised various new courses, methods of teaching, and online materials. Comparatively, developing nations are engaged in developing the quality of education. Methods of teaching and courses are comparatively theory-based. Job-orientated courses are less in developing nations compared to developed nations. MOOCs help to develop education systems all over the world with different platforms. NEP 2020 stated, “Research/teaching collaborations and faculty/student exchanges with high quality foreign institutions will be facilitated, and relevant mutually beneficial MOUs with foreign countries will be signed.” (p. 39)

Impact of Globalization on Environment and Resource Management: Environment means the surroundings that include natural and cultural components. Environment (natural and cultural) evolves from time to time from the origin. The rate of changes in the environment was slower in ancient times, but at the present changes is very fast due to urbanisation and industrial expansion. The waves of globalization create a global awareness of the environment. It helps to develop a positive attitude towards responsibility for the environment. It helps to execute sustainable practices. The National Policy on Education, 1986 emphasised the need to create awareness of environmental concerns by integrating it in the education process at all stages of education and for all sections of society.

Technological advancement and transfer of technology affect the environment and resource management. Due to environmental awareness and international treaties, emphasis has given to the conservation of fund resources, and the focus shifted towards flow resources (non-conventional resources). Technological gradation helps to adopt renewable practices, reduce emissions of greenhouse gases, and improve energy efficiency. Karatas (2016) mentioned, “Globalization contributes to economic growth and thereby affects the environment in many ways. It accelerates structural change, thereby altering the industrial structure of countries and hence resource use and pollution levels.”

Theoretically, developed nations have always been concerned regarding environmental issues, protection and conservation, but practically, developed nations produce maximum amounts of greenhouse gases and consequently have a negative impact on the environment and resources. The capital region or the central business district produces more pollution as compared to rural areas. Therefore, a vivid anomaly has been found between rural and urban regions regarding environmental issues.

FINDINGS

Globalization reduces the barriers between nations. It creates flexibility to import or export any things or goods to any nations. Globalization is the symbol of the advancement of

a nation. It has both types of results, positive and negative (Gaikwad & Dhokare, 2000). It brings revolutionary changes in each and every sphere of life. A mixed culture is formed due to the waves of the globalization. At present time the world has become a '*global village*'.

Globalization has changed the landscape of nations' economy. It has changed the structure of the economy (Sitlani & Jain, 2013). Different international economic forums or institutions (International Monetary Fund, World Bank, World Trade Organization) have been formed for better cooperation and collaboration among the nations. However, due to globalization, small nations are adversely affected. They are struggling to maintain the standards of the internal production. Globalization creates income inequalities between the rich and the poor and between urban and rural areas. It increases dependency on foreign markets and adversely affects occupations or job structures. Different domestic industries, such as the manufacturing and textile industries of India, struggle for their existence due to international competition and standards.

Globalisation has a significant impact on culture and education. It is very difficult to maintain and practise native culture at present. Globalization propagates different cultural exchanges and diffusion. It leads to cultural homogenization that erodes local traditions and languages and creates hybridity and a new cultural forum.

Waves of globalization largely influence education (Chaudhary, 2016). Information is readily available now, and AI technology brings revolutionary changes to the landscape of education. Therefore, accessibility of education becomes easier for everyone. It enhances the global collaboration and exchange of ideas. It also develops a positive attitude towards the responsibilities of a global citizen. India will be promoted as a global study destination providing premium education at affordable costs, thereby helping to restore its role as a Vishwa Guru (NEP 2020, P. 39).

The environment is largely affected by globalization (Karatas, 2016). Due to the development of the economy and trade, the rate of urbanisation, and transportation, there have been immense effects on the environment. The greenhouse effect, the ozone hole, global warming, and pollution are the major concerns of the environment. Different international treaties (United Nations Framework Convention on Climate Change, Kyoto Protocol, Montreal Protocol, Paris Agreement etc.) take major roles in these issues. It should be remembered that a pro-environmental attitude is of utmost importance to preserve the environment. Therefore, it should be conscious regarding the adoption of any policy regarding environmental issues.

Globalization has many negative sides. It creates a divide between developed and developing nations. Developing nations are getting benefits from globalization, but there is a vivid difference that exists between regions of a nation. One of the important issues of globalization is that it does not nurture regional identity, culture, and values. It is one of the major concerns regarding the effects of globalization. India may be a country that believes in "*vasudhaiva kutumbakam*" and globalisation may be a live example of this (Gaikwad & Dhokare, 2000).

CONCLUSION

As a sovereign and democratic nation, globalization influences different physical and cultural components of the environment. In the present time, India has become one of the most important fast-growing economies in the world. A paradigm shift is taking place in technology, trade, economy, education, and culture. India is also taking different population-friendly policies for the internal development of the nation. Globalization is bringing a drastic change in the internal issues of India. Although it should be remembered, it is important to conserve the native culture, values, and regional practices of the nation. Therefore, at the age of globalization, it is of utmost importance to conserve our local practices, values, and local culture along with the adoption of foreign culture and practices for the holistic development of the nation. There is another concern, to take such internal policies that promote the integrated development of the nations and maintain positive relations with the international organisation and foreign nations. Therefore, with the adoption of such policies, the country would become one of the leading nations of the world.

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BUILDING A GREENER AND FAIRER CLASSROOM: ROLE OF INCLUSIVE EDUCATION FOR SUSTAINABILITY

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ABSTRACT

Inclusive education is a crucial theme in global society for ensuring equitable access to quality education for all. Now nations are turning towards achieving the Sustainable Development Goals (SDGs), Specifically SDG 4. SDG4 focuses on providing quality education through inclusion. This study examines the link between inclusive education services and sustainable development at the present situation. The article focuses on the significance of inclusive education in promoting social inclusion, economic empowerment and environmental sustainability. The researcher reviews the role of inclusive education services in promoting sustainable development, exploring key challenges, policies, and practices that contribute to achieving a more inclusive and sustainable world. This research reviews current literature and empirical findings. Tackling obstacles to inclusion while advancing diversity, equity, and social justice in education can greatly aid in creating more inclusive, resilient, and sustainable communities.

Keywords: Sustainable Development, Inclusive Education, SDG 4, Social Inclusion, Economic Growth, Equity

INTRODUCTION

Sustainable development is the development that meets the needs of the present without jeopardizing the needs of future generations (Dasmohapatra, 2007, P. 28). Sustainable development has a very broad meaning depending on the dimensions being considered. It helps to promote a sustainable world for every generation (Ozili, 2022, 260). It is a process of development that takes into account the environmental, social, and economic dimensions of human activity.” Education is the process of living through a continuous reconstruction of experiences. It is the development of all those capacities in the individual which will enable him to control his environment and fulfill his possibilities (John Dewey)”. Education plays a pivotal role in this process, particularly in achieving social inclusion, economic development, and environmental sustainability. In this context, inclusive education refers to the practice of ensuring that all children, regardless of their abilities or disabilities, have equal access to quality education. “Inclusion in Education is an approach to educating students with special educational needs (Uddin, 2024, 37).” Inclusive education is a set of values, principles and practices that seeks more effective and meaningful education for all students, regardless of whether they have exceptional labels or not (By Giangreco, M. F., 1997). This study explores how inclusive education services contribute to sustainable development and its challenges that arise in the

implementing services. Sustainable development is a holistic approach that aims to meet the needs of the present without compromising the ability of future generations' to meet them. The concept of sustainable development was first introduced in the 1987 report "Our Common Future," also known as the Brundtland Report. It encompasses economic growth, environmental protection, and social justice, balancing these often competing interests.

Inclusive education is an education system that includes all learners irrespective of their caste, gender and abilities (UNICEF, 2017). Inclusive education is not just about including students with disabilities in the general education classroom. It is about creating a learning environment where all students feel welcomed, respected, and supported. This includes students from all backgrounds, regardless of their race, ethnicity, gender, sexual orientation, or socioeconomic status. The Concept of Inclusive education involves integrating children with special needs, disabilities, and marginalized groups into the mainstream education system (Qian and Rong, 2023). It aims to create learning environments where all students can learn together, regardless of their individual differences. This approach aligns with the values of equity, justice, and respect for diversity, which are essential for sustainable development.

Sustainable Development Goals and Education The United Nations 2030 Agenda for Sustainable Development outlines 17 goals, with SDG 4 specifically focuses on inclusive and equitable quality education (United Nations). This goal emphasizes ensuring equal access to education for all, promoting lifelong learning opportunities, and reducing discrimination based on gender, disability, and other factors. The United Nations Sustainable Development goals consider the importance of inclusive education in achieving sustainable development by promoting lifelong learning opportunities, promoting social inclusion and empowering marginalized groups. The Mission Statement is "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". The intersection of inclusive education and sustainable development is evident in how education systems are change to accommodate diverse learners, fostering social cohesion and economic growth.

OBJECTIVES OF THE STUDY

1. To analyse the role of inclusive education in promoting sustainable values.
2. To explore the pedagogical strategies that integrate inclusivity and sustainability.
3. To access challenges that opportunities in building equitable, Eco- conscious classrooms.
4. To suggest policy and curriculum reforms for holistic sustainability education.

METHOD

This study is based on a qualitative research design and utilizes an analysis of regulatory documents in the fields of inclusive education, sustainable development and current approaches to education. The researcher reviews existing literature, focuses on bridging inclusive education and sustainable development for future. The study considers the problems of incorporating values of inclusion in education. The researcher assesses the influence of inclusive education on sustainable development of society through articles, journals and online based sources.

HISTORY OF INCLUSIVE EDUCATION

Inclusive education has evolved significantly since the mid-20th century, driven by civil rights movements that advocated for equal educational opportunities for all children, especially those with disabilities. Initially, students with special needs were often segregated into special schools.

Landmark legislation in the United States, such as the Education for All Handicapped Children Act (1975), mandated free and appropriate public education for children with disabilities. The Salamanca Statement (1994) reaffirmed the right to inclusive education, calling for mainstream schools to accommodate all children regardless of their physical, intellectual, social, emotional, or linguistic status. Global commitment emphasized the need for adaptive learning methods and policies. The draft “The United Nations Convention on the Rights of Persons with Disabilities” (2006) further cemented the commitment to inclusive education as a human right. Today, inclusive education aims to create equitable learning environments that celebrate diversity and meet to individual needs.

INTEGRATION OF SUSTAINABILITY AND INCLUSIVE EDUCATION

Naukkarinen and Jouhkimo (2021) in their study discussed about the collaboration between schools and universities to promote integrated and inclusive education for sustainability. This study revealed the need for integrated approaches to address the interrelated challenges of social justice and environmental sustainability in the Anthropocene Era (Leach, et.al., 2018). Sustainable development has three important interdependent components (Dasmohapatra, 2007, P.28).

Social Sustainability

Social sustainability highlights equitable wealth distribution and community well-being, which can foster economic growth by creating a healthy workforce and fostering innovation.

Economical Sustainability

Economic sustainability depends on natural resources for production and services; thus, it must consider environmental impacts to ensure long-term viability.

Environmental Sustainability

Environmental sustainability is essential for maintaining the ecosystems that support human life and economic activity, highlighting the need for responsible resource management.

Together, these pillars form a holistic framework where the failure of one can undermine the others, requiring a balanced approach to achieve true sustainability

Inclusive Education and Social Sustainability

Inclusive education approach fosters a resilient and inclusive community. Inclusive education is crucial for maintaining social sustainability and inclusive community. This approach promotes equality, social justice, and the empowerment of marginalised groups. Schools implementing

inclusive practices help their stakeholders break down barriers to participation, giving all children the opportunity to contribute to society. By meeting the needs of all learners, inclusive education creates a more just and equitable society, reduces inequality and promotes sustainable social development.

Inclusive Education and Economic Sustainability

The economic aspect of sustainable development emphasizes the generation of wealth as well as its fair distribution. Inclusive education initiatives play a pivotal role in promoting economic sustainability by equipping every student, including those with disabilities, for significant engagement in the job market. By providing individuals with essential employment skills, inclusive education serves to diminish poverty, enhance economic self-sufficiency, and foster community economic growth. Ultimately, inclusive education cultivates a labor market that is more accessible, enabling individuals of all abilities to both contribute to and gain from the economic system.

Inclusive Education and Environmental Sustainability

Inclusive education contributes significantly to environmental sustainability by increasing equitable access to education for all, including marginalized groups. It promotes social inclusion, which is vital for building resilient communities capable of addressing environmental challenges. Education raises awareness of climate issues and equips students with skills to adapt to environmental change, thus contributing to Sustainable Development Goal 4 (Quality Education) and other SDGs. Inclusive education empowers people with disabilities to participate in sustainability efforts, ensuring diverse perspectives in climate action.

CHALLENGES IN IMPLEMENTATION OF INCLUSIVE EDUCATION FOR SUSTAINABLE DEVELOPMENT

Despite the importance of inclusive education for sustainable development, several challenges hinder its effective implementation

Lack of Resources and assistive devices

Many schools lack the financial, human, and material resources needed to accommodate diverse students.

Limited access to Education

Rigid, test based curricula and Inaccessible school environments for learners.

Teacher Training

Inadequate teacher preparation and professional development prevents teachers from effectively teaching in inclusive classrooms. Limited teacher training and support for students with diverse learning needs.

Cultural and Societal Attitude

Social stigma and discrimination against children with disabilities or marginalized groups creates barriers to inclusion.

Policy Gaps

Although many countries have policies promoting inclusive education, gaps in implementation and monitoring often lead to inconsistent practices.

Case Studies of Inclusive Education Services and Their Impact on Sustainable Development

Several countries have implemented successful inclusive education models that contribute to sustainable development. For Example:

Finland

Finland's inclusive education model prominances equity, personalized learning, and collaborative learning. This approach has donated to higher education outcomes and social cohesion in the country.

India

India has made significant progress in inclusive education through the implementation of the Right to Education (RTE) Act. The law mandates free and compulsory education for all children, including those with disabilities, which has had a positive impact on reducing educational inequality. As India's approach to inclusive education evolves, the National Education Policy (NEP) 2020 aims to transform the country through equitable and inclusive education (NGIFEIE). The goal is to ensure that all students, especially those with diverse learning needs, can thrive in an inclusive environment with equal opportunities.

South Africa

In South Africa, the Inclusive Education White Paper 6 aims to transform the education system by removing barriers to learning and creating an inclusive school environment. This policy has helped improve access to education for students from marginalized communities. case study provides an insight into the implementation status of inclusive education across South Africa. It was introduced in 2001 to establish a system where learners with disabilities can learn close-by their peers with appropriate supports(Inclusive Education in Action case studies,2019).

POLICY RECOMENDECTIONS

Chakraborty, S., Yerramilli, S., and Kumar, P., (2022). explores the policies and frameworks for sustainability in inclusive education pointed at dispensing equitable education opportunities for differently-abled students, highlighting the importance of sustainable and inclusive educational practices.

To ensure that inclusive education services effectively contribute to sustainable development, the following recommendations are proposed:

Inclusive Curriculum Design

1. The developing and implementing curriculum includes sustainability concepts across all subjects.

2. Ensure that the curriculum is inclusive of diverse learning needs and backgrounds accessible to students.

Increased Investment in Education

Governments and international organizations need to allocate more resources to support inclusive education services, including infrastructure development and teacher training. Invest in inclusive education technology.

Capacity Building for Educators

Ongoing professional development for equipping teachers with the necessary skills to work in inclusive classrooms is essential. Therefore, teacher training programs should be organised by government authorities to sustain inclusive education environment.

Community Engagement

Changing societal attitudes towards inclusive education through creating awareness and community participation and advocacy are provital for overcoming cultural barriers. Educators should connect classroom learning with real world sustainability challenges through community project.

Monitoring and Evaluation

Governments should implement vigorous monitoring and evaluation mechanisms to evaluate the impact of inclusive education policies and practices on sustainable development.

DISCUSSIONS:

We have explored the difficulties associated with putting inclusive education into practice for sustainable development along with relevant policy suggestions. It is important to understand that inclusive education is structured uniquely. A key point to remember is that flexibility is a fundamental characteristic of inclusive education. We should consider what is necessary to create a suitable inclusive environment for sustainability and how educators can assist diverse learners.

Educators have to create an inclusive classroom that supports global sustainability. Students will show high levels of collaborative behaviour and remain empathic toward diverse learners. Educators should build strategies that prepare learners to address the global challenges. Here, how to build a welcoming classroom environment for students where they feel comfortable, equal and supported in sustainability. To promote diversity and equality in classroom, educators celebrate cultural differences, break stereotypes, and use regional languages.

Educators should apply universal Design for Learning in classroom environment. Universal Design ensures that all students can actively participate and access learning. Foster collaborative learning methods is essential for learning, using group work, project based learning to encourage students, problem- solving skills, which are essential for addressing sustainability issues.

An inclusive classroom uses technology for accessibility in learning. Adaptive technology and materials support students with disabilities and diverse learners. An inclusive classroom

for global sustainability not only supports academic achievement for all students but also cultivates social inclusion, economic empowerment, and environmental consciousness—essential for building resilient and sustainable societies

After our discussion, we can say that inclusion is a societal concept. When students participate in group work, and project based learning with diverse learners, they feel encouraged and more comfortable. Researchers experiences in their studies, showed that students exhibited a reduction in fear of diverse learners and simplification of interactions with them (Fayzrakhmaniva, 2014).

CONCLUSION

Inclusive education services are not only a matter of social justice but also a key driver of sustainable development. The traditional focus of many schools has been to develop around standardized educational programs rather than to accommodate individual needs. By ensuring that all children, regardless of ability or background, have access to quality education, we can build a more equitable, inclusive, and economically viable society. However, successful realisations of this study are the challenges identified in inclusive education for sustainability. The intersection of inclusive education and sustainable development emphasizes the need for policies and practices that promote social inclusion, economic growth, and environmental sustainability. In case study, this research finds that India can provide efforts to overcome the problems of the education system and contribute to empowering the integration of inclusive education for sustainable development.

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YOGA AS A HOLISTIC PRACTICE FOR PROMOTING HEALTH AND WELLNESS

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ABSTRACT

Yoga is an ancient practice that originated in India, combining physical postures (asanas), breathing techniques (pranayama), meditation and ethical principles to promote overall health and well-being. It is both a physical and spiritual discipline aimed at achieving balance in the body, mind and spirit. Yoga enhances flexibility, strength, relaxation, and mindfulness, making it a powerful tool for holistic wellness. It is an ancient system of relaxation, exercise and healing with origins in Indian philosophy. Yoga has gained a popularity around the world during the last century. Yoga, as many people often agree to, is not merely a method to attain mental peace, but also a powerful technique to get rid of ignorance which causes various kinds of suffering in human life. Swamiji wanted to see man-making education. It emphasizes on life-building, man-making, character-making, assimilation of ideas. The very essence of education is concentration of mind, not the collecting of facts. In ancient times, people used to go to sages to learn wisdom and to get answers to the fundamental questions of life. This was seen in all ancient civilisations - India and China, in particular. However, over the century's education has retreated from that position. We no longer claim to give wisdom, we give only information, our schools no longer give moral and spiritual values, only secular subjects are taught. The very much need of the education system by which character is formed, strength of mind is gained, the intellect is expanded, and by which one can stand on one's own feet. Yoga is not simply Asanas and Pranayama's, it's much deeper than this. It also involves certain moral and ethical practices. These moral practices are known as Yamas and Niyamas. No educational system is effective unless it incorporates into itself these virtuous practices. This paper aims to explore how Yoga can become an inclusive and holistic practice for developing physical, social, mental, emotional and spiritual well-being of human being. To develop these aspects of human being, various postures (asanas), breathing exercises (pranayama), and meditation have been integrated to promote flexibility, strength and relaxation for reducing stress, improving cardiovascular health, enhancing mental clarity and boosting overall quality of life.

Keywords: Yoga, Holistic Practice, Health, Wellness

INTRODUCTION

Yoga is a practice of mental and physical exercise, which aims to acquire a good health in life an individual. Holistic health, integrative treatment and mind, body medicine are some of the current buzz words in health care originated from yoga, which took its birth some 5000 years ago in India and is one of the elements of Ayurvedic medicine as the healing science.

Yoga practices are gaining popularity and have the potential to make a significant contribution to the field of health sciences. Having a wide array of practice, all essentially including breathing exercises, physical postures and meditation, the science and art of yoga is reaching new heights. Associated with a series of behavioural modifications that contribute to a healthy lifestyle, traditional yoga is a philosophy for living.

The practice improves mood and reduces stress utilising mind and body strategies designed to promote good health that covers relaxation techniques, hypnosis, visualisation, feedback, meditation, autogenic, cognitive behavioural therapy, group therapy and spirituality. Recently, scientists have explored its consistent beneficial biochemical, physiological, psychological effects in human beings. Yoga based training normalises the functions of the autonomic nervous system by maintaining both sympathetic and parasympathetic indices toward normal.

World Health organisation and other policy makers on Healthcare system are striving a lot to adopt holistic healthcare measures which can be effective in the prevention of lifestyle and psychosomatic diseases such as insomnia , diabetes mellitus, obesity, hypertension etc.

Yoga is an ancient Indian practice and a way of life that includes regulated breathing, maintaining various postures and meditation. The word Yoga comes from Sanskrit and means "to yoke or join". The focus is on the union of mind and body or the harmony of body, breath, and mind. Patanjali formally described the practice of yoga in the treatise of Yoga. He defined yoga as the process of eliminating all thoughts in the mind and allowing it to settle down to silence. Attainment of such an equanimity, ultimately leads to a balanced and healthy mind and body. Yoga is a systematic process of calming down the mind and Maharshi Patanjali advocated systematic practice which include yama (external ethics), niyama (internal ethics), asanas (postures), pranayama (regulated breathing), pratyahara (detachment), dharna (concentration), dhyana (meditation), and samadhi (detached awareness of self) aimed toward attainment of self-realisation or the inner blissful state.

Ashtanga yoga of sage Patanjali is one of the most comprehensive methodologies for the development of holistic healthcare model-based sustainability for global health, peace and environmental concerns. The research in yoga has shown that its therapeutic values are helpful for health promotion and disease prevention. Social approach, cost-effective and eco-friendly characteristics are the important factors for sustainability of any system, and these are effectively achieved in yoga for gaining numerous health benefits on multiple dimensions of health concepts.

RELEVANCE OF YOGA IN SOCIAL HEALTH

Yoga is not just a personal practice; it also plays a significant role in enhancing social health. Social health refers to an individual's ability to interact harmoniously with others, build strong relationships and contribute positively to the community. Yoga fosters these qualities by promoting mindfulness, empathy, and emotional stability.

One of the key ways yoga enhances social health is by reducing stress and promoting emotional balance. When individuals practice yoga, they develop greater self-awareness and emotional control, leading to better communication and healthier relationships. Additionally, yoga

encourages a sense of community and belonging. Yoga also promotes compassion and empathy, which are essential for social well-being. Through mindfulness and meditation, individuals become more attuned to the emotions of others, strengthening their ability to build meaningful and supportive relationships.

Moreover, yoga encourages social responsibility and inclusivity. Many yoga philosophies emphasize kindness, non-violence (ahimsa), and respect for all beings, leading practitioners to engage in acts of service and contribute to the well-being of society

YOGA FOR DIFFERENT AGE GROUPS

Yoga is a versatile practice that benefits people of all age groups by promoting physical health, mental well-being, and emotional balance. It can be adapted to suit different age-related needs, ensuring everyone can enjoy its advantages.

For **children**, yoga helps improve flexibility, coordination, and concentration. Playful and engaging poses, such as animal-inspired asanas, make yoga fun while enhancing motor skills and emotional regulation. It also helps children manage stress and anxiety, promoting a sense of calm.

For **teenagers**, yoga is beneficial in managing academic stress, improving posture, and boosting self-confidence. Since adolescence can be a challenging phase, yoga aids in emotional stability, focus, and self-discipline. Breathing exercises and meditation help teenagers handle peer pressure and anxiety.

For **adults**, yoga plays a crucial role in maintaining physical fitness, reducing stress, and preventing lifestyle-related diseases. It strengthens muscles, improves posture, and enhances flexibility. Regular practice helps to manage stress, anxiety, and mental fatigue, promoting work-life balance and emotional well-being

For **seniors**, yoga focuses on gentle movements, joint flexibility, and balance to prevent falls and injuries. Additionally, meditation and breathing exercises support cognitive function and emotional well-being, helping seniors stay active and engaged.

PHYSICAL BENEFITS OF YOGA

Yoga is a holistic practice that offers various physical benefits including enhancing flexibility, strength, balance, and overall well-being. Through a combination of postures (asanas), breathing exercises (pranayama), and relaxation techniques, yoga supports a healthy body and mind.

One of the primary physical benefits of yoga is increased flexibility. Many yoga poses stretch and lengthen muscles, improving range of motion and reducing stiffness. Over time, this helps prevent injuries and enhances mobility, making daily activities easier.

Another key advantage is improved strength. Yoga involves holding and transitioning between poses that engage different muscle groups. Poses like plank, warrior, and downward dog help build core, leg and upper body strength. Unlike weightlifting, yoga strengthens muscles using body weight, reducing the risk of strain and injury.

Yoga also promotes better posture and balance. Many poses require proper spinal alignment and core engagement, which can correct poor posture and alleviate back pain. Additionally, balancing poses such as tree pose and eagle pose enhance coordination, reducing the likelihood of falls and injuries.

A significant physical benefit of yoga is enhanced respiratory function. The practice emphasizes deep, mindful breathing, which strengthens lung capacity and oxygenates the body. This improves endurance, cardiovascular health, and energy levels.

Yoga also plays a crucial role in boosting circulation and cardiovascular health. Certain poses, such as inversions, encourage blood flow to different areas of the body, improving heart function and lowering blood pressure. Regular practice can reduce the risk of heart disease and improve overall circulation.

Moreover, yoga supports joint health and pain relief. Gentle stretching and controlled movements lubricate the joints, reducing stiffness and discomfort. This is particularly beneficial for individuals with arthritis or chronic pain conditions.

Additionally, yoga aids in weight management by promoting a healthy metabolism and reducing stress-related eating habits. More dynamic styles, like Vinyasa and Power Yoga, also provide cardiovascular benefits, helping with calorie burn.

YOGA FOR MENTAL AND EMOTIONAL WELL-BEING

Yoga is a powerful practice that enhances mental and emotional well-being by promoting relaxation, self-awareness, and inner peace. Through a combination of physical postures, breathing techniques, and meditation, yoga helps individuals manage stress, anxiety, and emotional imbalances effectively.

One of the key benefits of yoga is its ability to reduce stress and anxiety. The practice encourages deep breathing and mindfulness, which activate the parasympathetic nervous system, promoting relaxation and reducing the production of stress hormones like cortisol. Regular yoga practice helps calm the mind, making it easier to handle daily challenges with clarity and resilience.

Yoga also supports emotional balance and self-awareness. Meditation and mindfulness techniques used in yoga help individuals become more in tune with their thoughts and emotions. This self-awareness allows people to manage negative emotions, cultivate a positive mindset, and improve their overall emotional stability.

Additionally, yoga is known to boost mood and alleviate symptoms of depression. Certain poses, such as backbends and heart-opening postures, stimulate the release of endorphins and serotonin, the body's natural "feel-good" hormones. This can lead to improved mood, increased motivation and a greater sense of joy.

Furthermore, yoga encourages better sleep and relaxation, which are crucial for emotional well-being. Practices like Yoga Nidra and deep breathing exercises help release tension and promote restful sleep, reducing symptoms of insomnia and mental fatigue.

YOGA FOR RESPIRATORY HEALTH

Yoga is a powerful practice that enhances respiratory health by improving lung capacity, strengthening respiratory muscles, and promoting efficient breathing. Through pranayama (breath control techniques) and asanas (postures), yoga helps in deepening the breath, reducing stress, and increasing oxygen intake.

Pranayama techniques like Anulom Vilom (alternate nostril breathing) and Bhastrika (bellows breathing) enhance lung function and clear respiratory passages. These practices are particularly beneficial for individuals with asthma, bronchitis, and other respiratory disorders. Yoga also aids in reducing inflammation and strengthening the diaphragm, leading to better oxygen exchange and overall lung efficiency.

Furthermore, yoga reduces stress and anxiety, which are often linked to shallow and irregular breathing. Asanas such as Bhujangasana (cobra pose) and Matsyasana (fish pose) expand the chest and improve lung function. Regular yoga practice increases respiratory endurance, enhances immunity, and fosters overall well-being.

YOGA FOR CARDIOVASCULAR HEALTH

Yoga is a holistic practice that significantly benefits cardiovascular health by improving circulation, reducing stress, and enhancing heart function. Regular practice of yoga helps lower blood pressure, regulate heart rate, and improve overall cardiovascular efficiency. It promotes relaxation and reduces stress hormones like cortisol, which can contribute to heart disease when chronically elevated.

Pranayama (breathing exercises) such as Anulom Vilom (alternate nostril breathing) and Bhramari (humming bee breath) enhance oxygenation and reduce blood pressure, supporting heart health. Asanas (yoga postures) like Tadasana (mountain pose), Setu Bandhasana (bridge pose), and Bhujangasana (cobra pose) improve circulation and strengthen the heart muscles.

Yoga also plays a vital role in reducing risk factors such as obesity, diabetes, and high cholesterol. It encourages mindful eating, better sleep, and improved physical activity levels, all of which contribute to heart health. Furthermore, meditation and relaxation techniques in yoga help regulate the nervous system, reducing the strain on the heart.

YOGA FOR DIGESTIVE HEALTH

Yoga plays a vital role in improving digestive health by stimulating the digestive organs, enhancing metabolism, and reducing stress, which is often linked to digestive issues. Through specific asanas (postures) and pranayama (breathing exercises), yoga promotes better digestion, alleviates bloating and prevents gastrointestinal disorders.

Asanas such as Pawanmuktasana (wind-relieving pose), Ardha Matsyendrasana (seated spinal twist), and Bhujangasana (cobra pose) massage the abdominal organs, improving blood flow and aiding in the efficient breakdown of food. Twisting postures help detoxify the digestive system by stimulating the liver and intestines, promoting smoother bowel movements.

Pranayama techniques like Kapalabhati (skull-shining breath) and Nadi Shodhana (alternate nostril breathing) enhance oxygenation and reduce stress, which can prevent issues like indigestion, acid reflux, and irritable bowel syndrome (IBS). Stress is a major contributor to digestive problems, and yoga's relaxation techniques help regulate the nervous system, promoting gut health.

Regular yoga practice also encourages mindful eating and better absorption of nutrients. By integrating yoga into daily life, individuals can naturally improve digestion, enhance gut function, and maintain overall digestive well-being.

THERAPEUTIC ASPECTS OF YOGA

Yoga is widely recognized for its therapeutic benefits, promoting physical, mental, and emotional well-being. It serves as a holistic healing practice that supports the body's natural ability to recover from ailments and maintain balance. Through asanas (postures), pranayama (breathing exercises), and meditation, yoga addresses a wide range of health concerns.

Physically, yoga enhances flexibility, strengthens muscles, and improves circulation, aiding in the management of chronic pain conditions like arthritis, back pain, and migraines. It also supports cardiovascular health by reducing blood pressure and improving heart function. Specific postures and breathing techniques enhance lung capacity, benefiting individuals with respiratory conditions such as asthma and bronchitis.

Mentally, yoga helps reduce stress, anxiety, and depression by regulating the nervous system and promoting relaxation. Meditation and mindfulness practices cultivate emotional resilience, improving mood and cognitive function.

Yoga also plays a therapeutic role in managing lifestyle disorders such as diabetes, obesity and digestive issues by promoting healthy metabolic function. Additionally, it supports the immune system, enhances sleep quality, and boosts overall vitality.

YOGA FOR REGULATION OF EMOTIONS

Emotional regulation is the ability to manage and respond to emotions in a healthy and balanced way. It plays a crucial role in mental well-being, relationships and overall quality of life. Effective regulation involves recognizing, understanding and controlling emotional responses rather than being overwhelmed by them.

Various strategies can help to regulate emotions, including mindfulness, deep breathing, cognitive reframing, and physical activity. Mindfulness practices, such as meditation and yoga, promote self-awareness and emotional stability. Cognitive reframing helps shift negative thought

patterns into more constructive perspectives, reducing stress and anxiety. Deep breathing techniques activate the parasympathetic nervous system, calming the mind and body.

Emotional regulation is also influenced by lifestyle factors such as sleep, nutrition, and social support. A well-balanced routine contributes to emotional resilience and better stress management. Additionally, expressing emotions through journaling, art, or talking to a trusted person helps process feelings constructively.

Developing emotional regulation skills leads to improved decision-making, stronger relationships, and greater overall happiness. With consistent practice, individuals can cultivate a balanced emotional state, enhancing both mental and physical well-being.

YOGA FOR HEALTH IN SPIRITUALITY

Yoga is essentially spiritual discipline. Spiritual health includes a purposeful life, transcendence, actualisation of different dimensions and capacities of human beings. Spiritual health creates a balance between physical, psychological and social aspects of human life. Health in spirituality is about the connection between your mind, body, and soul, influencing overall well-being. It involves finding inner peace, purpose, and balance in life, which can positively affect physical and mental health.

The sages and saints have walked the great path to fulfil the aim of the meaningful life which is filled with inner harmony and happiness.

Mindfulness and Meditation in Yoga

Mindfulness and meditation are integral components of yoga that promote mental clarity, emotional balance, and overall well-being. These practices involve cultivating awareness of the present moment and training the mind to remain calm and focused.

Mindfulness in yoga is about being fully present in each movement, breath, and sensation. It enhances self-awareness, reduces stress, and improves concentration. Practicing mindful breathing (pranayama) and mindful movement (asana) helps individuals to develop a deeper connection between the body and mind, fostering inner peace.

Meditation, a key aspect of yoga, involves techniques such as breath awareness, mantra chanting, and guided visualization. Popular forms include mindfulness meditation (Vipassana), loving-kindness meditation (Metta), and transcendental meditation. These practices activate the parasympathetic nervous system, reducing anxiety, lowering blood pressure, and enhancing emotional resilience.

Regular mindfulness and meditation in yoga improve mental clarity, emotional stability, and overall well-being. They help manage stress, improve sleep quality, and cultivate a sense of inner harmony. By integrating these practices into daily life, individuals can experience greater peace, improved focus, and a deeper connection to themselves and the world around them.

THE ROLE OF DIET AND LIFESTYLE IN YOGA

Yoga is more than just physical postures; it is a holistic approach of well-being that integrates diet and lifestyle for overall health and spiritual growth. The ancient yogic texts emphasize the importance of a balanced diet and a disciplined lifestyle to enhance the practice of yoga and to achieve mental clarity.

A yogic diet is based on the principles of sattva (purity), which promotes fresh, natural, and plant-based foods. Consuming fruits, vegetables, whole grains, nuts, and dairy products in moderation nourishes the body and mind, keeping them light and energetic. Avoiding processed, excessively spicy, or heavy foods helps one to maintain digestive health and inner harmony. Hydration is also crucial, as clean water aids in detoxification.

Lifestyle plays a vital role in supporting yoga practice. A disciplined daily routine, including early rising, regular physical activity, and mindful breathing, enhances physical endurance and mental focus.

Beyond individual habits, yoga encourages ethical living through the yamas and niyamas—the principles such as non-violence (ahimsa), truthfulness (satya), and self-discipline (tapas). These guidelines shape a positive and conscious way of living, fostering harmony with oneself and the environment.

CONCLUSION

Yoga is a powerful practice that promotes overall health and wellness by integrating physical, mental, and spiritual well-being. Through regular practice, yoga enhances flexibility, strength, and balance while reducing stress, anxiety, and depression. It fosters mindfulness, helping individuals to cultivate inner peace and emotional stability. Additionally, yoga supports better respiratory function, cardiovascular health, and immune system strength, making it an effective tool for disease prevention.

Beyond physical benefits, yoga encourages self-awareness and a deeper connection with the body and mind. It improves concentration, boosts mood, and enhances the quality of life by promoting relaxation and reducing tension. Whether practiced for fitness, mental clarity, or spiritual growth, yoga serves as a holistic approach for well-being. By embracing yoga as a daily habit, individuals can achieve a balanced and healthier lifestyle, ensuring long-term physical and mental harmony. Ultimately, yoga is a timeless path for wellness and self-discovery.

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HOLISTIC DEVELOPMENT OF PERSONALITY: A PERSPECTIVE OF INDIAN PEDAGOGY

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ABSTRACT

In ancient India, indigenous education was imparted at Chatuspathis and Gurukuls. Ancient Indian Education was dominated by strict moral codes of conduct. Learners used to accomplish self-reverence, self-knowledge and self-control, which lead to the transformation in life. The actual meaning of education was self-culture and self-realization - the realization of the ultimate truth. 'Personality' means a combination of values which form the distinct character of man. How learners of ancient India inculcated humane values from their Acharyas which helped them to develop their holistic personality is the theme that has unfolded in this academic endeavour.

Keywords: Pedagogy, Ethology, Oral transmission of knowledge, Memorisation, Oral repetition, Parable-telling, Monophobia, Divinity, Animal-man, Convocation

INTRODUCTION

The concept of Pedagogy is widely used in the sense of the 'Science of Teaching'. Teaching is a process of contribution to the growth of knowledge, skill, literature or art, etc. It is an activity to train the students for creative thinking to face the challenges in their future lives. Pedagogy, in the area of educational sciences, plays an important role with regard to elevating the all-round development of the learners. In the ancient Indian educational system, Pedagogy was there. However, it was not considered distinctly and separately in education. After the introduction of Modern Education in India by the Europeans, Pedagogy was considered to be the most essential component in the teaching-learning process and teachers today have been ensueing contemporary methods of teaching, which are said to have evolved in the Western countries. But it is a pang of conscience that we seldom search for such a fundamentally indigenous philosophy of learning and teaching, which evolved in India long back. So it is crucial to explore Indian Pedagogy enshrined in the ancient Indian Education System.

SIGNIFICANCE OF INDIAN PEDAGOGY

Each country has its own Philosophy of Education. Unlike the educational philosophies of Greece and China, which separated Education and Religion, in the Indian educational philosophy, the two were intertwined. On analysing the Pedagogy of ancient India, it may be said that developing character was more important in India than enhancing intellect. In the ancient Indian education system, "culture, not literacy, was the highest aim of Education" (Venketeswara, 1980, pp. 240-241). This core area of educational philosophy has been reflected in the ancient

Indian teaching-learning process. If we do a careful and exhaustive investigation of the ancient Indian teaching process with an objective of advancing knowledge, we will find a lot of basic teaching principles which are being placed as the primary tenets of Indian Pedagogy. The key characteristics of Indian Pedagogy are *oral transmission of knowledge, teacher-questioning, memorisation, oral repetition, parable-telling, etc.*, that have been used since the Vedic times.

One of the most important epicenters of ancient Indian education was Nabadwip, and the traditional education system was patronized by the Maharaja of Nadia. In the time of Raja Rudra of A.D. 1680, the numbers of students learning at Nabadwip were 4,000 and the numbers of teachers were 600. These numbers are a testimony to the excellence of the academic culture of the then Nabadwip. The learning centres where such academic excellence blossomed were known as Chatuspathis ('schools' in modern terminology). It appears that all these schools were for advanced Sanskrit studies and that students seeking them spent nearly twenty years at these schools. They generally got by heart the texts they studied. These schools conducted classes in the form of seminars or colloquiums, where two teachers would start a debate on an abstruse topic, which the students had to follow and supplement with their own questions. The advancement of knowledge by means of learned open debates had been India's indigenous method of education through the ages. (Mookherji, 2022, p. 601)

AIMS OF EDUCATION IN ANCIENT INDIA

Building the character of the students was one of the most important aims of Education during the age of the Upanishads. 'Character-training', in fact, means the training of the will, which is the mental force. The willpower must be strengthened and properly directed, which is possible through the practice of concentration, self-control, and culture of refined and lofty sentiments. The willpower of the students was strengthened and also directed towards good things alone, while they lived in the house of their preceptors. There, they had to live as Brahmacharins, who, besides their daily duties, had to practice concentration, self-control and training of the sentiments. During the period of studentship they were to sincerely practice (Taittiriya Upanishad, 1. 9. 1):

- i. Righteousness
- ii. Truth
- iii. Austerity

The students had to live under the direct supervision of their preceptors, who were held responsible not only for their intellectual progress but also for their psychophysical acts. The severe rules which they had to follow in the preceptors' house were to develop their character in such a way that they could become pure in their ideas, words and deeds. Their everyday lives followed the etiquettes and good manners towards their elders, equals and juniors. They were trained to become well-adjusted members of the society and also to be gainfully employed in various works on the completion of their education.

UNIVERSALISATION THROUGH SELF-REALISATION: AN UNIQUE APPROACH OF ANCIENT INDIAN EDUCATION SYSTEM

The chief goal of the ancient Indian education system was 'Self-realisation'. Self-realisation springs from the resolute practice of a lot of good habits. Residential learners were not only imparted mere lessons by their Acharyas but also directed to follow a set of good habits so that they can become healthier, saner and integrated members of the society. Through education, the learners were inspired by their preceptors that they have 'Divinity' within themselves. At the same time they were provided the training of unselfishness. How to achieve adaptive behaviour, how to work and live together - learners used to follow such core human values, instructed by their facilitators. Indian Pedagogy did not mean letting people know what they know, but teaching people to behave how they do not behave. In ancient India, through taking lessons from Acharyas, learners achieved those values, which can be defined operationally to include norms of right conduct, good intellectual and moral habits.

Today, at the dawn of economic globalisation, when education has become a commodity, its goal is to be a useful citizen. But the aim of the ancient Indian Education system was Self-realization, to be concerned for others, to become an Universal Being. In this perspective, we can mention that Indian Pedagogy (Science of Teaching) and Ethology (Science of Character), go hand in hand. We must retrospect our ancient Indian Education System. We must try to understand the current Education System with reference to the past.

PRINCIPLES OF STUDENTSHIP

In ancient India, the period of studentship was considered as a preparatory period for the gaining of the knowledge of the Absolute. When the students would graduate, thus beginning a new journey after having gone through years of rigorous schooling, the teachers would offer some invaluable Principles that they were supposed to follow throughout their lives:

First Principle

शरीमाद्यं खलु धर्मसाधनम् - इति नीतिवाक्यमवधार्य श्रमक्षमनीरोगशीराय
स्वास्थ्यविधिपालनपरो भवितुमहं यथासाध्यं यतिष्ये। (कुमारसम्भवम्, यत्र शिवपार्वतयोः)

Literal meaning

This body is the only means to spiritual practice. From an educational perspective, the body is the only instrument to achieve all kinds of knowledge.

Social Interpretation and Significance

The primary existence of human life springs from the body with its multiorgan structure. We should keep it in order. Though we know the body is ephemeral, not permanent, yet, we can never ignore it. We have come to know from modern science the two parts of the structural body of a computer. It has hardware, which is the outer physical structure and software, which is the locomotive force of the unit. Though software is the key concern of the machine, hardware is the supporting container to functioning software. Like this, though the human body is ephemeral, and the human mind is the chief concern to know everything, to achieve knowledge,

the mind exists in the body. For achieving knowledge we need a sound mind, and a sound mind rests in sound health. If health is not in order, the mind will be unable to act properly, because we have a body-mind complex. So, we should keep and protect this gross body properly by providing necessary nutritious food, physical movement (exercise) and needful rest. For the holistic development of the personality, physical awareness and protection of the learners is urgently needed. This was mentioned in our ancient Indian education system, following the teaching of Upanishad; and its present-day relevance is accepted by all stakeholders of Education (administrators, teachers, learners, guardians and community).

Second Principle

छात्राणामध्ययनं तपः - इति स्मृतिवाक्यमवधार्य प्रतिभाविकाशार्थमाचारनिरतोऽध्ययनपरो भवितुमहं यथासाध्यं यतिष्ये। (छान्दोग्योपनिषत् - २.२३.१)

Literal Meaning

It simply means that learning is the fundamental task of learners. Persevering incessantly is the virtue of learners.

Social Interpretation and Significance

Continuous persevering with patience is the key concern for the success of learners. According to the educational philosophy of Swami Vivekananda, all knowledge exists in our mind, and the learner has to uncover it by his own effort. Sister Nivedita, in her famous book 'Religion and Dharma' (1915), in the chapter 'The Teacher' (pp. 73-76), tried to focus the views of Swamiji on teachers, pointing out that the true teacher knows that no one can really aid another. All that a teacher can do is to stimulate the learner to help himself, and remove from his path the real obstacles to his doing so. In this perspective, we have come to know that in Education, teachers act as facilitators and counsellors to help the learners so that they can express or manifest their potential within themselves. The learners' own effort, struggle, and perseverance is urgently needed to bring success.

Though attentive learning is the tapas or austerity of the learners, they also have another three kinds of tapas/austerity to practice, which have been enshrined in Bhagavad Gita. Verses 14-16 of the 17th chapter of Gita mentions austerity of body, austerity of speech and austerity of the mind :

(1) देवद्रिजगुरुप्राश्रपूजनं शौचमार्जवम्।

ब्रह्मचर्यमहिंसा च शारीरं तप उच्यते॥ १४

i.e., to pay deep regards to Gods, Acharyas, Guru and Wise, cleanliness, straightforwardness, continence and non-injury are called the austerity of the body.

(2) अनुद्वेगकरं वाक्यं सत्यं प्रियहितं च यत्।

स्वाध्यायाभ्यसनं चैव वाङ्मयं तप उच्यते॥ १५

i.e., speech which causes no vexation and which is true as also agreeable and beneficial and regular study of the holy texts— these are said to form the austerity of speech.

(3) मनः प्रसादः सौम्यत्वं मौनमात्मविनिग्रहः।

भावसंशुद्धिरित्येतत्प्रपो मानसमुच्यते॥ १६

i.e., Serenity of mind, kindliness, silence, self-control, honesty of motive — this is called mental austerity.

If a learner wants to excel, he has to honour the above mentioned austerities and try to practice these meticulously. At present, the civil society is suffering from Monophobia - fear of being alone (a disease which appears due to the dislocation of mobile phones). The Restless Mind in today's digital world is a burning problem. The minds of the learners' are infected as they are being fed unhygienic 'mental food'. Artificial silence creates an isolated life, and the condition of staying away from each other. In this perspective, apart from learning as tapas, austerity through another three tapas as prescribed by Bhagavad Gita, are important to be practiced by all learners for their all-round success.

Third Principle

सत्यमेव जयते नानृतं सत्येन पन्था विततो देवयानः।

(मुण्डकोपनिषद् , नृतीय-मुण्डक-प्रथमखण्डः ६)

Literal Meaning

Truth wins in every aspect of life and the path of divinity moves forward by truth only.

Social Interpretation

A life which is based on truth is honoured by all. Realising the purity and importance of truth, Mahatma Gandhi referred to Truth as God. Truthfulness is Godliness indeed. Sri Ramkrishna said the person who is steadfast in truth is dwelling in the lap of God. Pure thought, speaking the truth and right conduct makes a man Rishi (Wise Man). Divinity, which is our real nature, rests hidden in the cavity of mind. For the impurity, restlessness and cynical attitude of the mind, the mind can not realise the nature of divinity which is within itself. As soon as, by regulating meaningless talking, the mind becomes calm, the infection of the mind by negative impacting factors gets reduced, the power of the truth is revealed. If a learner wants to be a man of character, a man of perfection, he has to practice truth (in thinking, speaking and behaving) and as a result of this, their life will be transformed. Hence the aim of education is to bring transformation of life - from mere animal man to a social man, and a human being to a human resource.

Fourth Principle

स्वर्थो यस्य परार्थ एव स पुमानेकः सतामग्रणी :- इति मनीषिवाक्यमवधार्य
नीचताकुरतादाम्भिकतादिमलिनस्वार्थसन्ततीर्विहाय उदारचेता विनयी श्रद्धावान् देशभक्तो
नरनारायणसेवानिष्ठो भवितुमहं यथासाध्यं यतिष्ये। (सुभाषितरत्नाकरः)

Literal Meaning:

The person whose interest is only to be concerned for others, he is the best fellow of all noble persons of the society.

Social Interpretation

Human society exists by division of labour and the success of division of labour depends on specialisation and cooperation. As individuals can never survive alone, they always depend on others in various aspects, so cooperation, coordination with the spirit of sympathy and empathy must be practiced by all. But unfortunately we find that society is overwhelmed by selfish fellows. Narrowness, cynical attitude, violence, conflict are the common maladies by which human society is being vulgarised.

The modern materialistic world raises our standard of living but declines our standard of life, i.e., value of life. On account of population explosion, knowledge explosion, and material explosion, man has started moving towards the wrong path by considering the material comforts of the world as sources of real happiness. Religion and morality are being threatened and the power of man is being misused. Today, the existence of a joint family is going extinct. Collectiveness, living together and working together, values that spring from the joint-family system, are withering away. Society has been suffering from a contaminated disease that is breaking joint families and giving birth to nuclear families. This is a social environment in which values are ignored, and humanity suffers.

Amidst this social calamity there are a few organisations like Ramakrishna Mission and Akhil Bharat Vivekananda Yuva Mahamandal, where a lot of youth are trying to be concerned for others. They have been shouldering their accountability to rejuvenate society by doing unselfish work, serving the impoverished section (slum children, street children, children belonging to vulnerable sections of the society, etc.) and living an ideal life silently by providing them food, medical, academic, educational support. If the Nation State is a body, citizens are the important cells of that body, and as a healthy body is needed for bright and fresh cells, a nation body is needed for enlightened and committed citizens. The way to becoming an enlightened citizen involves not only developing cognitive abilities but also expanding the heart and developing a sense of connection with others, feeling for others. In the classical book 'Dharma and Religion' (1915, p. 74) by Sister Nivedita, in the chapter 'The Teacher', following the educational philosophy of Swami Vivekananda it has been distinctly mentioned that, "Education is not only mere the form of knowledge but it is the training of selflessness, that can make man a rishi."

Unselfishness is the highest value to be the best noble person - this mantra, which is derived and uttered in the convocation of our ancient Indian Education system, must be cultivated by the modern-day learners in any civil society of any part of the world, if we want to make this globe 'a land for all' and consider that 'all beings are our friends indeed' - *Vasudaivakutumbakam*.

Swami Vivekananda considered selflessness as the highest human virtue or highest religion of man. He meticulously pointed out that "Unselfishness is God".

Fifth Principle

सुपरिचालितसंहतिशक्तिरेव समाजकल्याणनिदानम्। (स्वामी, २०२२, पृ: १८२)

Literal Meaning

The strength of organisation is the only means of the welfare of the society.

Social Interpretation

This verse helps us remind ourselves that through education we learn adaptive behaviour for living together and working together. We have come to know, from the opinion of C. Lloyd (as cited in Mahapatra, 2001, p. 99), that, 'nationalism is the religion of the modern world' and the meaning of nationalism is 'sentiment of similarity and solidarity'. The fundamental component of nationalism is 'sense of unity' upon which the survival of a State depends. The words 'unity' and 'fraternity' have been enshrined in our Constitution as national values as well as fundamental duties. But in reality we are far away from the practice of these values. On account of the advancements in science and technology, our heads are being expanded but our hearts are being contracted. Ignoring living together and collectiveness of life we are living our lives with the spirit of selfishness. As a result of this, jealousy, competition, conflict, violence, regionalism, secessionist movements are taking place. In this perspective, the importance and utility of collective life, idea of living and working together which was echoed in the words uttered by the Acharyas during the convocation in the ancient Indian Education system, should be elicited and propagated. The Acharyas of ancient Indian educational schools referred to the hymn uttered by Vedic rishis:

संगच्छध्वं सं वदध्वं सं वो मनांसि जानताम्।

देवा भागं यथा पूर्वे संजाताना उपासते।।

समानो मन्त्रः समितिः समानी समानं मनः सहचित्तमेषाम्।

समानं मन्त्रमभिमन्त्रये वः समानेन वो हविषा जुहोमि।। (ऋग्वेद १०.१९१.२-४)

i.e., we will move forward unitedly, will talk collectively and will build our minds with a common tune. Swami Vivekananda said, "expansion is life and contraction is death". For bringing 'expansion' in our lives, we should try to follow the 5th verse of the Classical Convocation as the magna carta of united life.

Life is a struggle; life is a great battle, full of challenges. A fully bloomed and excellent being alone can boldly and bravely fight this battle and overcome the challenges of life. Such a person alone can enjoy the pleasure of life. The values offered by the Convocation of the ancient Indian Education system have immense importance in the lives of the current generation learners too. It is also to be mentioned here that these values are already within us. If one wants to excel in life, one has to honour these values which are dormant inside invisible cavities of the mind and the brain. Such values are neither 'taught' nor 'brought' but 'caught', and are to be carried out throughout life.

FINDINGS

- (1) Pedagogy is the 'Science of Teaching' which is a process of contribution to the growth of knowledge, skill, literature or art, etc. It is an activity to train the students for creative thinking to face the challenges in their future life.

- (2) In the Classical Indian Education System of the Upanishadic age, a unique pedagogical concept was there. In accordance with the state of mind to which the learners belonged, different teaching methods were applied by the teachers. The Upanishadic system of teaching was done at that time at all the three levels viz, memory, understanding and reflective. The emphasis was laid on discussions, questioning, induction and deduction. Commentaries, illustrations, descriptions, narrations and practical demonstrations could be easily inferred from the text of Upanishads.
- (3) Values offered by the Acharyas (Teachers) in the time of Convocation were the guiding principles for being an enlightened social being.
- (4) Democratic principles and the norms of harmony of life were practiced in the Classical Education System of India.
- (5) Ancient Indian Education System gifted 'Ethology' (Science of Character) to human society for making it free from shortcomings.
- (6) Today teachers should help the learners to understand the current-day education system with reference to the past.

CONCLUSION

The Indian Education System has a great and glorious past, in which, the quest of knowledge was the virtue or 'dharma' of learners. Teachers were ever curious but never satisfied. They used to take teaching as the sacred task of life, and had deep compassion for their pupils. There was no monetary relation between the two units. The fundamental principle of education was to modify the behavior of the learners, not merely achieving a certain amount of knowledge. Pedagogy was imparted according to the interest and needs of the learners. The teacher, i.e., the Acharya, was himself a curriculum. His behavioural demonstration was the chief concern of learning for his learners. As a result, Ethology (science of character) was revealed across the course of studies, and the system of education produced learners who were not only learned but also responsible and committed citizens to the advancement of society. Today, when we are habituated to follow Western Pedagogy ignoring our indigenous pedagogy, we should look back to our past glorious education system and draw a set of inspiring principles which are ever-relevant, and apply the same in the modern education.

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REFORMING INDIA'S EXAMINATION SYSTEM: A STUDY OF GLOBAL ALIGNMENTS IN NEP 2020

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ABSTRACT

Evaluation plays a pivotal role in ensuring students' academic accountability, promoting students' success and preparing them for future challenges and opportunities. NEP 2020 is introduced to catalyze a paradigm shift in India's education system. The objectives of this study are to explore the evaluation and examination reforms proposed by NEP 2020 followed by Vedic philosophy, identify potential implementation hurdles and suggest strategies for effective execution. The research design of this study is qualitative, incorporating a range of sources, namely research articles, policy documents, governmental reports and empirical data. The findings of this study indicate that the holistic assessment (Purna), competency based progression (Swadhyay), focus on critical thinking (Tarka), emphasis on experimental learning (Anubhava) and continuous evaluation are the main features of the evaluation system as discussed in NEP 2020. The investigation revealed some challenges like infrastructural requirements, teachers' training, attitude and cultural problems and its possible actions to ensure the effective execution of the reforms. The adaptations and subsequent modifications in NEP 2020 evaluation system clearly aim to transform India's education system to create a more inclusive and student centred evaluation process.

Keywords: NEP 2020, Evaluation System, Vedic Philosophy, Holistic development, Examination reforms.

INTRODUCTION

The ancient Indian Education System, which dates back to the Vedic period, emphasized holistic development, spiritual growth and intellectual exploration of the students. The evaluation strategies utilised during this period were unique and focused on assessing students' knowledge, skills and character. National Education Policy 2020 is a comprehensive framework for education in India, formulated by Ministry of Human Resource Development. This policy marks a revolution in Indian Education, aiming to transform the country's education system by 2040. India's educational landscape was transformed with the introduction of the first National Education Policy in 1968 by Prime Minister Indira Gandhi, followed by the second Policy in 1986 under Prime Minister Rajiv Gandhi's leadership. As the landscape of knowledge evolves, NEP 2020 emerges as a vital replacement for the 1986 policy, catalyzing transformative change. NEP 2020 introduces comprehensive evaluation and examination reforms in India aiming to transform the assessment landscape. NEP 2020 seeks to establish an Indian ethos-driven education system

that fosters equitable, holistic development, and making India a beacon of knowledge excellence worldwide. The present study will explore NEP 2020's evaluation and examination system reforms.

Among its myriad provisions, the policy's examination and evaluation reforms stand out as a bold attempt to revitalize the assessment framework, shifting the focus from rote learning to competency based evaluations. This paradigm shift aims to alleviate the long standing ills of India's examination system, including exam stress and inadequate emphasis on skills development.

REVIEW OF RELATED LITERATURE

Chandramana, & Kurien (2010) have advocated a study on NEP 2020, followed by its impact, challenges etc. It outlined notable features of NEP and analysed how the policies' recommendations inspire the present education system.

Aithal & Aithal (2020) emphasized different initiatives declared in the higher education system and compare them presently implemented system. They have discussed numerous transformations and estimated implementation strategies of NEP 2020 on the Indian Higher Education System.

Hemant Kumar & Joshi (2021) have analysed the importance of examination reforms suggested by NEP 2020. They have focused on changes required in the examination strategies and also highlighted multilingualism in school education. Finally the paper has suggested the necessities of proper planning and plotting new achievement cards in a new fashion.

Jayadeeshwaraiah (2023) has identified assessment and evaluation reforms of NEP 2020 and emphasized policy's aim in examinations' reforms. The study also analyzed the opportunities and challenges in implementation of NEP 2020 in present education system.

Bandgar (2024) in his research emphasizes that implementing assessment reforms in India's education system, as outlined in NEP 2020, poses significant challenges, including inadequate teacher training, technological limitations which must be addressed to align with global standards and achieve successful reform outcomes.

RATIONALE OF THE STUDY

The present study on evaluation and examination reforms under the National Education Policy (NEP) 2020 contributes significantly to the transformation of India's Education Landscape. By examining the policy's provisions for competency-based assessments, reduction in exam stress, and promotion of holistic development, this study provides valuable insights into the potential impact on students' learning outcomes and teachers' professional development. The rationale behind this research lies in addressing the long-standing issues plaguing India's examination system, including rote learning, high-stakes testing, and inadequate emphasis on skills development. By investigating the efficacy of NEP 2020's reforms, this study informs policymakers, educators and stakeholders on strategies to enhance the quality, equity and

accessibility of education in India. Ultimately, this aims to bridge the gap between policy intent and implementation reality, ensuring that NEP 2020's vision for a student-centric, flexible and innovative evaluation system becomes a tangible reality.

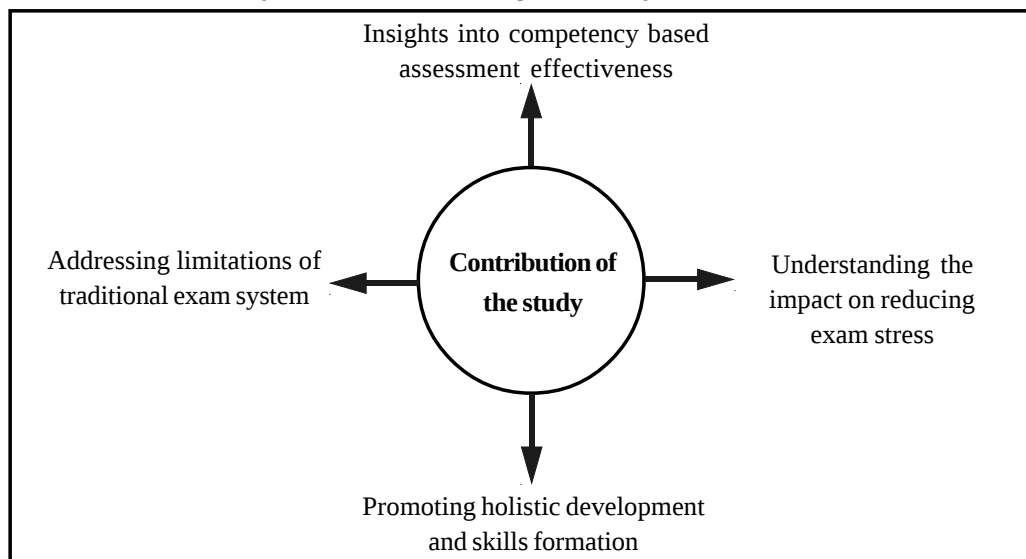


Figure 1 : Contribution of the Study

OBJECTIVES

- To find out the evaluation and examination reforms in the light of Vedic philosophy.
- To find out the potential implementation hurdles to be faced by the institutions.
- To find out strategies to overcome the challenges.

METHODOLOGY

The present study employs a qualitative research methodology to explore the examination and evaluation reforms outlined in the NEP 2020. The study incorporates journal articles, policy documents, Government reports etc. Overall the study follows comprehensive and holistic discussion on illustrating the essence of examination reforms suggested by NEP 2020.

ANALYSIS AND DISCUSSION

The National Education Policy 2020 (NEP 2020) introduces significant reforms to India's assessment and examination system, aligning with global best practices. By shifting from rote-learning to competency-based assessment, the policy emphasizes critical thinking, creativity & problem-solving skills. This holistic approach to assessment, coupled with formative evaluations and flexibility in subject choices, aims to foster a more comprehensive understanding of student abilities. As India integrates its education system with global standards, the reforms will enhance the international recognition and comparability of Indian qualifications, ultimately preparing students for a more interconnected & competitive world.

OUTLINE OF NEP 2020, ITS EVALUATION AND EXAMINATION REFORMS

The National Education Policy (NEP) 2020 is indeed a comprehensive and visionary plan that aims to transform India's education system from the Ground up. It is established on five core principles : Access, Equity, Quality Affordability and Accountability, with the ultimate goal of making India a global knowledge super power. NEP 2020 seeks to overhaul the existing education structure, introducing a new framework that's more flexible, inclusive and focused on developing both cognitive and social skills. This includes a major shift from the traditional 10 + 2 model to a more modular 5 + 3 + 3 + 4 design covering students from ages 3 to 18.

NEP 2020 priorities the overhaul of outdated assessment procedures, embracing innovative evaluation methodologies, enhancing competency based evaluations. It revolutionizes evaluation by shifting from traditional exam-centric assessments to a diverse, holistic framework. This transformation reflects India's dedication to equipping students with 21st century skills, aligning with international education benchmark.

VEDIC ELEMENTS IN NEP 2020 EVALUATION REFORMS

It is notable that Vaidik wisdom meets modern evaluation and examination reforms suggested by NEP 2020. NEP 2020's aim is the transform India's education landscape. Its evaluation and examination reforms prioritize competency-based learning, critical thinking and holistic development. Interestingly, these reforms resonate with the ancient Vedic philosophy, which emphasises, self-realisation, inquiry and balance.

Atma-Sakshatkar	➡	Self-realisation
Vichara	➡	Inquiry and Critical Thinking
Panch Kosha	➡	Holistic Development
Advaya	➡	Interconnectedness
Rita	➡	Balance and Harmony

NEW EDUCATION POLICY 2020: FEATURES OF ASSESSMENT

NEP 2020 priorities on transforming assessment for optimizing learning with a focus on the following :

Features of Assessment

- Regular, formative and competency based progression.
- Promoting learning and development of students.
- Testing of higher order skills (analysis, critical, thinking and conceptual clarity)
- Revising persistently the teaching learning processes to maximise academic achievements.

Aims of Assessment

- 1) Continuous, formative, competency based evaluation.
- 2) Foster learning and development of students.

- 3) Fostering a culture of assessment for learning.
- 4) Test high order skills (analytical and critical analysis)
- 5) Revising teaching learning process to optimise learning.

BRIEF DISCUSSION ON EVALUATION REFORMS SUGGESTED BY NEP 2020

1. Continuous Comprehensive Evaluation

NEP 2020 involves a continuous and progressive assessment of students' development throughout the academic year. This approach prioritizes frequent monitoring of students' progress.

Continuous assessment

Rather than relying on occasional assessments, this continuous and comprehensive evaluation component involves ongoing evaluation and tracking of students' development throughout the academic period. This component replaces intermittent testing with consistent, longitudinal monitoring of students' growth and achievement.

Comprehensive Evaluation

NEP 2020 emphasises comprehensive evaluation to assess students' learning outcomes. This comprehensive evaluation shifts from summative to formative assessments. It emphasises on continuous and comprehensive evaluation by focusing conceptual understanding and application and makes an integration of 21st century skills and values. Regular feedback and self-assessment are necessary in this concern.

Continuous Comprehensive Evaluation evaluates students comprehensively, integrating academic achievements with extracurricular engagement, interpersonal skills, conduct and emotional intelligence.

It assesses students' development beyond grades, considering extracurricular involvement, character, social abilities and mental health for a complete picture.

Continuous Comprehensive Evaluation seeks to empower students and teachers with prompt, constructive evaluations, highlighting strengths and weaknesses to inform supportive strategies.

This innovative model synthesises the strengths of Continuous Comprehensive Evaluation and introduces a holistic evaluation paradigm. This NEP 2020s' evaluation reform promotes a broader range of educational experiences and shifting focus from summative assessments (Sengupta, 2020).

2. Vedic Concepts Supporting Continuous Assessment

In Vedic philosophy, knowledge is considered a continuous process, echoing the concept of continuous assessment. SWAHYAYA (Self-study) encourages continuous learning and self-assessment. SATSANGA (association with wise ones) fosters continuous feedback and growth. ATMA NIVEDANA (Self-surrender) promotes humility and openness to continuous learning. Vidya (knowledge) emphasises self-awareness (Atma-Vidya) and introspection (Antar-mukha) mirroring continuous assessments which focus on self-evaluation.

3. Holistic Report Card

The new report card, recommended by NEP 2020, adopts a multidimensional approach, recording students' cognitive, affective and psychomotor progress in nuanced detail. It enhanced on 360-degree evaluation of learners' growth.

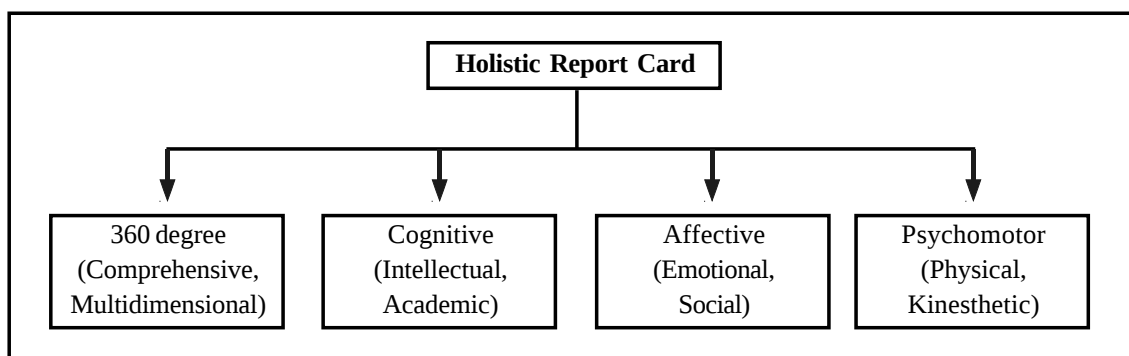


Figure 2: Holistic Report Card

The assessment framework governed by NEP 2020 will integrate self- assessment, peer feedback and ongoing monitoring of students' performance in projects, group work, quizzes and inquiry based activities, alongside teacher evaluations.

4. Practical Evaluation

The National Education Policy 2020 emphasizes practical evaluation as a crucial aspect of assessing students learning outcomes, shifting focus from rote memorization to hands-on application. To achieve this NEP 2020 recommends integrating project based assessments, experiments, internships and vocational training into the curriculum. This approach encourages students to apply theoretical knowledge to real world problems, fostering critical thinking, creativity and problem solving skills. By incorporating practical evaluation, NEP 2020 aims to prepare students for the work force, entrepreneurship and lifelong learning, aligning with the policy's vision of developing knowledgeable, skilled and empathetic individual.

Here it must be mentioned that experimental learning embodies Vedic thoughts which focus on direct experience (ANUBHAVA).

5. Simplifying and Making Board Examination Easier

While the NEP 2020 offers valuable suggestions for board exams, the core emphasis should be on assessing essential skills rather than simplifying the assessment. Reducing exam pressure through subject choices and repeated attempts may alleviate exam stress, and meaningful education reform hinges on revitalising examination questions to assess deeper understanding. It is to be noted that when students consistently score 10% in literature, it signals failure in assessment methodology, particularly in question formulation and model answer creation.

Here are showing Revitalising Assessment Structure for grades 9 – 12, incorporating

board exams.

- Simplified assessment framework prioritises core capacities.
- Multitiered evaluation framework : annual / semester / modular assessments.
- Standard and regulations will be drafted by NCERT, in collaboration with SCERT, BoEs and PARAKH.
- Educators must be equipped for assessment reform by 2022–23 academic session.
- Each Board maintains parity in academic achievement standards.
- PARAKH National Center sets educational quality benchmarks like standards, norms and guidelines. It encourages institutions to adopt new assessment patterns of the 21st century.

6. 360 Degree Multidimensional Report Card for all Students :

The 360-degree multidimensional report card recommended by the National Education Policy (NEP, 2020) is a comprehensive assessment tool that evaluates students' holistic development.

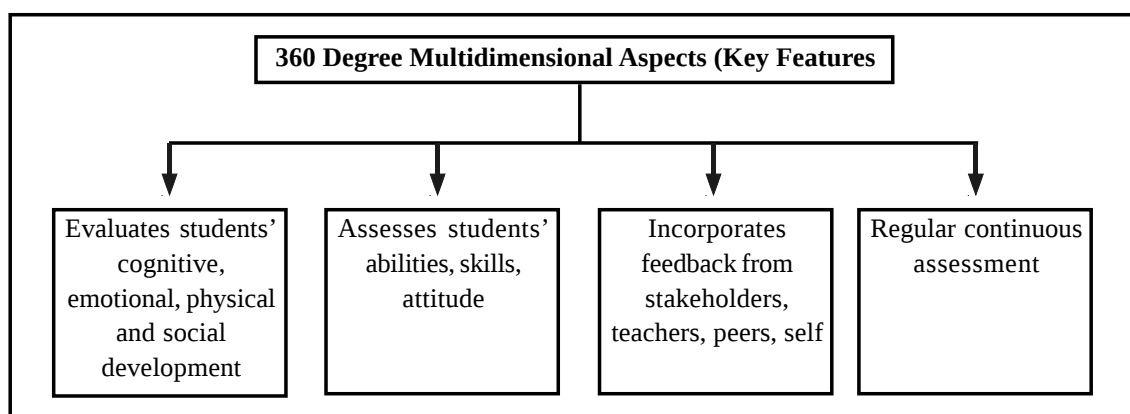


Figure 3: 360 Degree Multidimensional Evaluation

Table 1: Components of 360 Degree Evaluation

Area	Components
1. Academic Performance	→ Subject-wise grades. → Skill based assessments, i.e. critical thinking, problem-solving.
2. Co-Scholastic	→ Life Skills (communication, team work). → Values and attitudes (empathy, integrity). → Physical Education and sports. → Arts and cultural activities.

Area	Components
3. Personal and Social Development	→ Self-awareness and Self-management → Social awareness and relationships, emotional intelligence.
4. Extracurricular Activities	→ Participation in clubs, societies and community service. → Leadership and initiative.
5. Self-assessment and reflection	→ Students' self-evaluation of strengths, weakness and goals.

7. Digital or Technology Enhanced Assessment Tools

The National Education Policy 2020 emphasises the importance of technology-enabled assessment tools to enhance the evaluation process in education technology based assessments will improve the objectivity and efficiency of evaluation activities. The online and offline assessments, both may cater to diverse students' needs. Apart from these –

- AI-powered assessment tools for adaptive testing.
- Automated evaluation systems to reduce manual errors.
- Data analytics for insights on students' performance. Blending of technology in assessment recommended by NEP 2020.

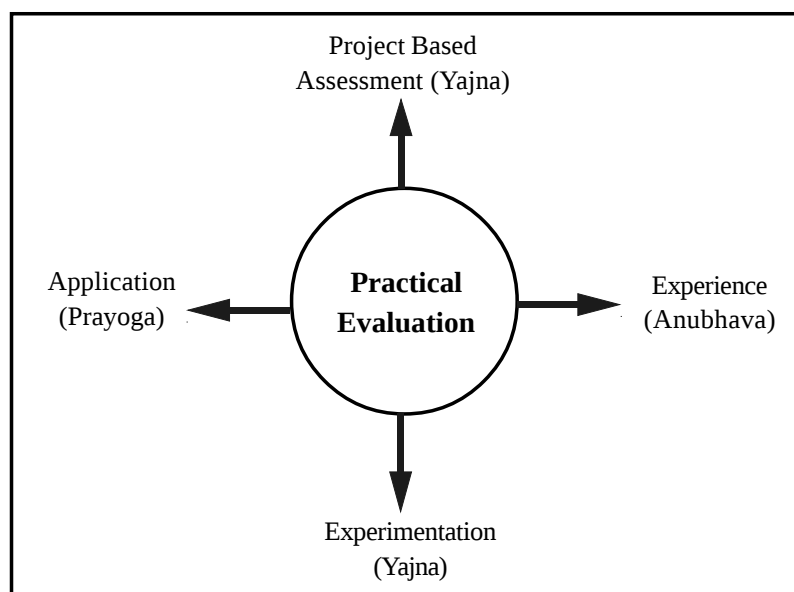


Fig. 4 : Practical Evaluation

IMPLEMENTATION OF NECESSARY STRATEGIES FOR COMBATING HURDLES

NEP introduces transformative examination reforms, shifting focus from summative to formative assessments, but faces significant implementation hurdles. The reforms aims to promote

competency-based progression, holistic progress cards and redesigned assessment frameworks, emphasising conceptual understanding over rote learning. However, infrastructural gaps, inadequate teachers' training and funding constraints pose significant challenges. Additionally, resistance to change, capacity building and technology integration issues must be addressed.

1. Teachers' Training

Implementing examination reforms poses some challenges. Teachers' training hurdle is one of them. It includes capacity building of educators, enhancing content knowledge, leveraging Edtech for effective assessment, sufficient pedagogical training mindset shift etc.

To address these hurdles, the policy recommends continuous professional development programs, workshops and training sessions. Effective implementation requires collaborative efforts between governments, educational institutions and teachers. This policy also proposes a bold overhaul of Indian teacher education with a 4 year integrated B. Ed. becoming mandatory by 2030.

2. Infrastructural Gaps

The National Education Policy 2020 introduces transformative examination reforms, shifting focus from summative to formative assessments, to promote competency based progression, holistic progress cards, and redesigned assessment frameworks. However the effective implementation of evaluation reforms faces significant infrastructural gaps including inadequate classrooms, laboratories, technology infrastructure, libraries and sports facilities.

These limitations hinder the conduct of project based evaluations, technology-enhanced assessments and experiential learning, essential for developing critical thinking problem solving and creativity skills.

To bridge these gaps, NEP 2020 recommends investing in school infrastructure development, leveraging public-private partnerships and implementing digital initiatives. Prioritising inclusive and accessible infrastructure is crucial to ensure equitable access to quality education.

Table 2 : Hurdles and Strategies

Hurdles	Strategies
● Inadequate classrooms and labs. ● Insufficient resources and libraries. ● Invest in infrastructure development. ● Implement digital initiatives.	● Limited technology infrastructural. ● Poor sanitation and hygiene facilities. ● Leverage public-private partnerships. ● Prioritize inclusive and accessible infrastructure.

3. Harmonizing with Established Assessment Framework

The alignment with established examination board and system is another remarkable challenge in the implementation of assessment reforms. This alignment may minimize disruption, enhance credibility and improve comparability across boards and institutions.

To ensure seamless integration, NEP 2020 aligns with existing examination boards, such as CBSE, ICSE and state boards, by mapping objectives to existing curricula, integrating competency-based progression with assessment frameworks, and harmonizing competency-based progression with assessment frameworks and also harmonizing holistic progress cards with report card systems.

Effective alignment will facilitate a smooth transition for students and teachers, leveraging existing resources and infrastructure while promoting innovative assessments.

4. Cultural and Societal Mindset of Assessment

NEP 2020 introduces transformative assessment reforms face implementation hurdles. Cultural and Societal mindset and perception is one of the significant obstacle which includes resistance to change from traditional rote learning, emphasis on grades over learning outcomes, and societal pressure for high stakes examination, and teachers' mindset pose significant hurdles.

Addressing these hurdles requires awareness campaigns, stakeholders engagement, teachers' training, community outreach, emphasising skills development and life-long learning.

Effective implementation demands a cultural shift prioritising competency-based progression and inclusive assessments that value diversity and promote equity. Apart from policy makers and educational institutions should involve parents and community members in educational decision-making.

NEP 2020'S EXAMINATION REFORMS AND THEIR ALIGNMENT WITH GLOBAL APPROACHES

The National Education Policy 2020 introduces transformative examination reforms, aligning with global best practices. Shifting from Summative to formative assessments, NEP 2020 emphasises competency-based progression, reduces high-stakes exams and integrates technology-enhanced assessments. These reforms mirror global approaches, such as Finland's competency-based assessments, Singapore's technology-enhanced assessments and Australia's authentic and performance tasks. By adopting these international standards, India aims to improve learning outcomes, enhance employability increase global competitiveness. This policy focus on self-assessment, peer review and inclusive evaluation methods also resonates with UNESCO's and OECD's recommendations. Effective implementation of these reforms will require stakeholder engagement, resource allocation and addressing equity and accessibility concerns.

CONCLUSION

The National Education Policy (NEP) 2020 marks a transformative shift in India's education landscape, introducing competency based progression, holistic progress cards and redesigned assessment frameworks. These evaluation and assessment reforms aim to cultivate critical thinking creativity and skills development aligning with global best practices. Effective

implementation requires addressing cultural and societal perception hurdles, investing in teachers' training and leveraging technology. NEP 2020's global focuses include inclusivity, equity and sustainability, mirroring UNESCO's Sustainable Development Goal 4 (SDG4). As India strides towards a knowledge-based economy, NEP 2020's reforms will foster a future-ready workforce, enhance international collaborations and solidify India's position as a global leader in Education. At last it may be said that NEP 2020's emphasis on global perspectives cultivates the idea of global family.

‘AyamBandhurayamNetiGananaLaghuchetasam
UdaraCharitanam to VasudhaivaKutumbakam
(Mundak Upanishad)

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EMPOWERING WOMEN THROUGH LIFE SKILLS EDUCATION FOR ENVIRONMENTAL SUSTAINABILITY

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ABSTRACT

Education in life skills is crucial for equipping people to handle problems in the real world, especially when it comes to environmental sustainability. Prior to the 18th and 19th centuries, women were excluded from all important spheres of society and were seen to have no role in promoting and preserving the environment. However, after becoming more aware of their rights and obligations and assessing their surroundings, people made a concerted effort to speak out against environmental degradation. Women started a number of campaigns advocating for better environmental preservation and the protection of natural resources. Since women are frequently in charge of household resources, agriculture, water conservation, and energy consumption, they have a significant role in promoting sustainable behaviour, particularly in rural and developing countries. The relationship between life skills education and women's roles in environmental sustainability is examined in this study, with a focus on how life skills empower women to lead community projects, represent sustainable legislation, and make informed decisions. In order to optimize women's contribution to environmental sustainability, the study also highlights the need to facilitate female access to economic opportunities, education, and decision-making processes. Secondary data was used in the study. Women combine critical thinking, resource management, leadership, and communication skills to make significant contributions to sustainable development at the household and community levels. A combination of life skills education and women's active participation is critical for creating a more sustainable and fair future.

Keywords: Life Skill, Life Skill Education, Environment, Environmental Sustainability.

INTRODUCTION

Environmental sustainability remains one of our time's most pressing challenges, fuelled by human activities such as deforestation, pollution, and resource overexploitation. These actions have resulted in environmental degradation, including climate change, biodiversity loss, and water scarcity, which endanger ecosystems and future generations (Intergovernmental Panel on Climate Change [IPCC], 2021). Addressing these challenges requires a multifaceted approach that includes technological advancements, policy reforms, and behavioural changes. Life skills education is emerging as an important strategy for encouraging sustainable practices. It

encourages individuals and communities to adopt environmentally friendly behaviours by developing critical thinking, problem-solving, and decision-making skills (UNESCO, 2017). It provides people with the knowledge and competencies needed to address complex environmental issues and embrace sustainable living (Tilbury, 2011). Women play an important role in sustainability, especially in rural and indigenous communities, where they function as main carers, resource managers, and community leaders (Agarwal, 2010). Their strong interaction with natural resources—developed via work in agriculture, water management, and domestic energy usage—gives them unique insights on ecosystems and sustainable practices (UN Women, 2020). However, institutional impediments, such as restricted access to educational and decision-making platforms, often impede their ability to contribute effectively (United Nations Development Programme [UNDP], 2016). Integrating life skills education with gender empowerment initiatives can help close these gaps and empower women to drive environmental sustainability (UNESCO & UN Women, 2021). Women who are educated and empowered have the potential to lead grassroots movements, influence policy, and implement innovative resource management strategies (Leach et al., 2018). Several global initiatives have demonstrated the efficacy of combining life skills training with gender-specific strategies to increase women's contributions to sustainability (OECD, 2022). Creating a sustainable future requires addressing the intersectionality of education, gender equality, and environmental stewardship. This comprehensive approach promotes equity and resilience, empowering communities to effectively address pressing environmental challenges. Educating and empowering women not only improves their individual capacities but also strengthens larger efforts to protect and preserve the environment (World Bank, 2020).

REVIEW OF LITERATURE

Mofrad et al. (2013) examined life skills among 500 Malaysian youth aged 18 to 25, focusing on identity development, decision-making, interpersonal communication, and health maintenance, and found significant gender disparities in health-related skills. Pujar and Patil (2016) studied 120 rural adolescent girls in Karnataka, India, revealing that life skills interventions significantly improved critical thinking (94.16%), problem-solving (70%), creative thinking (50%), empathy (57.5%), and stress-reduction (79.12%). Monfared and Nejad (2016) conducted a quasi-experimental study in Shiraz, Iran, with 100 Class IX students, showing that life skills training enhanced achievement motivation, problem-solving abilities, and reduced anxiety. Salonen et al. (2017) analysed seventh-grade students' perceptions of science-related careers and found a disconnect between science education and 21st-century work skills like creativity, ICT, and innovation. Rani et al. (2018) assessed life skills of undergraduate students across gender, institution type, and academic stream, concluding that private school students and males had significantly higher life skills, with no major differences among streams. Istiyono et al. (2019) evaluated physics problem-solving skills among 466 students and found female students outperforming males, with most students showing moderate (48.28%) or high problem-solving proficiency. Banajawad and Adi (2020) emphasized the importance of rural youth skill development in India for employment, productivity, poverty alleviation, and sustainable rural growth, urging integration of industry-linked education and policy reforms. Swain and Swain (2020) analyzed National Skill Development Corporation data and highlighted India's demographic dividend,

underscoring the need for entrepreneurial training through programs like PMKVY and DDU-GKY under the “Skill India” initiative. Salah et al. (2021) investigated kindergarten students’ life skills from the perspective of 200 teachers, revealing that while learning skills ranked highest overall, only learning skills showed a gender difference, favouring boys. Patil and Charantimath (2021) examined employability through skill development programs, identifying significant gaps between employer expectations and job seeker capabilities, and called for targeted education, training, and short-term courses to align skills with national initiatives like Make in India, Atmanirbhar Bharat, and the Rs 5 lakh crore economy goal.

OBJECTIVE OF THE STUDY

The main objectives of this study were to find out the importance of Life Skills Education and analyse the role of women in environmental sustainability. By synthesising existing research, this study explores how to link Life Skills Education to Women’s Empowerment in Sustainability.

RESEARCH QUESTION

1. What is the concept of Life skills Education?
2. What is the Role of Women in Environmental Sustainability?
3. How Life skills Education Integrates Environmental Sustainability?
4. What are the challenges and barriers in life skills education and the role of women in environmental sustainability?

METHODOLOGY

In the present study I used text and document analysis. The study is on the basis of secondary sources of data like research articles, journals, websites, theses, expert opinions, books, university news, Newspaper etc.

ANALYSIS AND DISCUSSION

1. Life Skills Education and Environmental Sustainability:

In the words of M. J. Herkovits, “The environment is the sum total of external conditions that surround a person, along with the inter-relationship between these conditions and human beings, other living creatures, plants, micro-organisms, and property” (Herkovits, as cited in Singh, 2006). Sustainability is conceptualized as a vision for a world where both present and future generations enjoy good health; communities and nations experience security, peace, and prosperity; economic opportunities are accessible to everyone; and the integrity of the biosphere, which supports life, is both restored and maintained at a level essential for realizing these objectives. To fulfil this vision, it is imperative to address all four dimensions of sustainability (Cortese & Rowe, 2012).

Environmental sustainability refers to the capacity to preserve ecological equilibrium within the Earth’s natural systems while ensuring the conservation of natural resources. This approach aims to support the health and prosperity of both present and future generations (UNESCO, 2017).

The term “life skill” has been defined in different ways and one of the most acceptable definitions is the one given by the World Health Organisation – “Life skills are a group of psycho social competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, emphasise with others and cope with and manage their lives in a healthy and productive manner” (World Health Organization, 1999). Some of the characteristics of life skills are –

- Life skills are cross-cutting application of knowledge, skills, values and attitudes, important for individual development and lifelong learning.
- Life skills are part of a right-based approach to learning.
- The concept of life skill includes – critical thinking, creative thinking, decision making, problem solving and interpersonal relationships.

The ancient Indian system of education was both knowledge and skill based but somewhere in the course of the development of the nation, our education system mainly focussed on imparting knowledge and the practical application of knowledge or skill based learning lost importance; although the different commissions, committees and National Educational Policies mentioned the need for imparting vocational and skill based education but they were could not be The World Health Organization (1999) has spoken about ten (10) core life skills and the UNICEF (2012) has also spoken about some skills in its report. The ten core life skills are –

- Self awareness
- Empathy
- Creative thinking
- Critical thinking
- Decision making
- Problem solving
- Effective communication
- Interpersonal relationships
- Coping with stress
- Coping with emotion

Core Life Skills for Environmental Sustainability

- I. Critical Thinking and Problem-Solving:** Helps individuals assess environmental challenges and devise innovative solutions.
- II. Decision-Making:** Enables informed choices about resource use and waste management.
- III. Interpersonal Communication:** Facilitates advocacy for sustainability within communities.
- IV. Empathy and Self-Awareness:** Cultivates respect for nature and an appreciation of biodiversity.

Need for life skills in environmental sustainability

Core life skills are crucial for promoting environmental sustainability by empowering individuals to make informed decisions, collaborate, and adapt to ecological challenges. Critical thinking and problem-solving enable people to analyze issues like climate change and innovate sustainable solutions. Empathy and interpersonal skills foster support for marginalized communities and community-driven projects. Decision-making and adaptability encourage conscious choices, such as reducing waste or transitioning to renewable energy. Effective communication and advocacy drive collective action for sustainability goals. Systems thinking and creativity help design holistic solutions to environmental problems. Collectively, these skills cultivate a mindset of collaboration, ethical responsibility, and resilience, essential for addressing climate challenges. By incorporating these skills into education and development, societies can better create a sustainable and regenerative future.

2. LIFE SKILLS AND WOMEN'S ROLE IN ENVIRONMENTAL SUSTAINABILITY WITH REFERENCE TO NEP 2020

India's National Education Policy (NEP) 2020 places significant emphasis on fostering life skills education and environmental sustainability while advocating for gender equity and women's empowerment. The policy's holistic approach aligns with the principles of equipping individuals—especially women—with the knowledge and skills to contribute to sustainable development.

A. Life Skills Education in NEP 2020

NEP 2020 recognizes the importance of developing critical life skills to prepare learners for real-world challenges.

- **Focus on Holistic Learning:** The policy emphasizes on the development of skills like critical thinking, problem-solving, decision-making, and creativity—skills essential for addressing environmental issues.
- **Integration of Sustainability:** NEP 2020 mandates the inclusion of environmental education, focusing on sustainability and ecological literacy to instil responsible behaviors from an early age of the child.
- **Vocational and Skill-Based Training:** Practical life skills, such as sustainable farming, water conservation, and renewable energy management, should be promoted to bridge the gap between education and action.

B. Women's Role in Environmental Sustainability under NEP 2020

Women have long played an integral role in environmental stewardship. In rural areas, they manage essential resources such as water, fuel, and food, making them uniquely positioned to implement sustainable practices. Examples such as the Chipko Movement in India, where women organized to protect forests, underscore their historical contributions to environmental conservation. Women continue to lead sustainability efforts across various domains:

National Development: National development encompasses the advancement of a nation's economic, social, and political conditions, aimed at enhancing the overall quality of life

for its citizens (Todaro & Smith, 2020). It involves enhancing the quality of life for citizens through improved infrastructure, healthcare, education, and employment opportunities. Economic development is central, focusing on increasing national income, reducing poverty, and achieving sustainable growth. Social development includes addressing issues like inequality, human rights, and access to basic services. Political development entails strengthening governance systems, promoting democracy, and ensuring rule of law. National development also emphasizes environmental sustainability, ensuring that growth does not compromise natural resources or the welfare of future generations. Overall, it requires coordinated efforts from the government, businesses, and civil society to build a stable, prosperous, and inclusive society. By fostering innovation, improving living standards, and ensuring social justice, national development seeks to create a balanced and equitable future for all citizens (Acemoglu & Robinson, 2012). NEP 2020 stresses gender inclusion and empowerment as key pillars for national development-

I. Gender Inclusion :

The policy prioritizes equitable access to education for girls and women, ensuring they have opportunities to acquire life skills and environmental knowledge.

II. Empowering Women through Vocational Training

NEP 2020 encourages skill-building in areas like agriculture, renewable energy, and resource management, enabling women to lead sustainability efforts in their communities.

III. Leadership and Advocacy

By fostering life skills, NEP 2020 prepares women to take on leadership roles in environmental conservation and policymaking.

Women's Leadership in Sustainable Development

Several Indian women leaders have made significant contributions:

- Dr. Vandana Shiva is an Indian scholar, Advocates for organic farming and biodiversity.
- Sunita Narain, Director of CSE, focuses on pollution and climate change.
- Ela Bhatt, Founder of SEWA, empowers women through sustainable livelihoods.
- Madhuri Dixit Nene, Indian actress, promotes waste management and water conservation.
- Rukmini Devi Arundale, Indian dancer, preserved traditional knowledge and promoted sustainable practices in the arts and education.
- Wangari Maathai (Kenya), showcased the global impact of female leadership through the Green Belt Movement.

Resource Management: Women in rural communities apply traditional knowledge to manage water resources, reduce waste, and promote energy efficiency.

Education and Environmental Advocacy: As educators within households and communities, women instill environmental values in future generations.

3. INTEGRATING LIFE SKILLS EDUCATION AND ENVIRONMENTAL SUSTAINABILITY

The integration of life skills education with environmental sustainability focuses on equipping individuals with the abilities to make informed, eco-conscious decisions while fostering behaviours that promote sustainable living (UNESCO, 2017). This methodology guarantees that students not only recognize environmental challenges but are also equipped to engage in significant initiatives.

KEY ASPECTS OF INTEGRATION

Some of the key aspects of integrating life skills education and environmental sustainability are –

Incorporating Environmental Themes into Life Skills Education

- Topics such as climate change, biodiversity, waste management, and renewable energy should be embedded into life skills lessons.
- Learners should be taught to analyse environmental challenges and develop sustainable solutions.

Practical Applications of Skills

- Activities like tree planting, water conservation projects, and recycling programs should be integrated into the curriculum.
- Inclusion of real-world problem-solving exercises would encourage learners to apply their knowledge in everyday situations.

Fostering Behavioural Change

- Life skills like critical thinking, decision-making, and empathy help individuals adopt sustainable practices.
- Education as an aim to develop may encourage a shift from harmful habits to eco-friendly behaviors.

Community and Collaboration Focus

- Collaborative projects, such as clean-up campaigns and community gardens, promote teamwork and collective responsibility for environmental health.

BENEFITS OF INTEGRATION

- **Environmental Awareness:** Environmental awareness refers to understanding and recognizing the impact of human activities on the environment. It involves knowledge about issues like pollution, climate change and resource depletion. Promoting environmental awareness encourages responsible behaviour, sustainable practices, and a collective effort to protect natural resources for future generations. Increases understanding of sustainability issues and solutions.

- **Empowerment:** Empowerment refers to the process through which individuals or groups are equipped with the necessary tools, resources, and self-assurance to assume control over their lives, make well-informed choices, and realize their objectives. It fosters self-reliance, promotes equality, and encourages participation in societal, political, and economic activities, leading to personal and collective growth. Provides individuals with the confidence and skills to lead eco-friendly initiatives.
- **Community Impact:** Community impact refers to the positive or negative effects that actions, initiatives, or policies have on a local community's well-being. It involves changes in areas like health, education, economy, and social cohesion. Positive community impact promotes growth, inclusivity, and sustainability, enhancing the quality of life for all members. Encourages collective action to address environmental challenges.

Long-Term Sustainability : Long-term sustainability encompasses strategies and regulations that address present requirements while ensuring that future generations can fulfil their own needs without hindrance. It involves balancing economic, environmental, and social factors, ensuring resource conservation, reducing waste, and fostering resilience, thereby maintaining a healthy and thriving planet for years to come. Install lifelong habits that support environmental conservation.

4. ADDRESSING CHALLENGES THROUGH NEP 2020

Despite the transformative potential of life skills education and the significant role women play in environmental sustainability, several challenges and barriers hinder their progress. These challenges are rooted in educational, socioeconomic, cultural, and institutional factors. Some of them are discussed below:

I. Educational Barriers

- **Limited Access to Education :** Many women, particularly in rural and underserved communities, lack access to quality education, including life skills training.
- **Inadequate Integration of Environmental Themes :** Life skills curricula often fail to include environmental topics, limiting the ability of individuals to connect daily decision-making with sustainability.
- **Gender Gaps in Education :** In many regions, societal norms prioritize education for boys over girls, restricting women's opportunities to acquire life skills and environmental knowledge.

II. Socioeconomic Challenges

- **Poverty and Resource Constraints :** Financial limitations prevent women from accessing education and technologies that support sustainable practices, such as clean energy solutions or sustainable agriculture tools.
- **Lack of Economic Opportunities :** Women often face restricted access to credit and markets, which limits their ability to engage in sustainable enterprises or lead conservation projects.

III. Cultural and Institutional Barriers

- **Gender Norms and Roles :** Societal expectations regarding appropriate behaviours for individuals are often dictated by their gender, commonly referred to as gender norms. These norms dictate roles, behaviours and appearance, often reinforcing stereotypes. They can limit personal freedom and contribute to inequality. Challenging these norms is crucial for promoting gender equality and creating a more inclusive society. Traditional gender roles often confine women to domestic responsibilities, reducing their participation in environmental decision-making.
- **Underrepresentation in Leadership:** Women are frequently excluded from leadership positions in policymaking and environmental governance, limiting their influence on sustainability initiatives.
- **Discrimination and Bias:** Systemic discrimination restricts women's access to resources, education, and opportunities to contribute to sustainability efforts.

IV. Technological and Awareness Gaps

- **Limited Access to Technology:** Women in remote areas may lack exposure to technologies essential for sustainable farming, renewable energy, or resource management.
- **Low Awareness Levels:** A lack of environmental awareness, due to inadequate education and outreach, limits women's ability to engage in sustainability practices effectively.
- **Bridging Educational Gaps:** NEP 2020 aims to eliminate gender disparities in education, particularly in rural and underserved regions, providing women with equal access to life skills education.
- **Community Engagement:** The policy promotes localized education initiatives where women can act as educators and sustainability advocates.
- **Promoting Environmental Responsibility:** By integrating sustainability into curricula, NEP 2020 encourages women to adopt eco-friendly practices and influence others in their communities.

CONCLUSION

The intersection of life skills education and women's roles in environmental sustainability presents a transformative pathway for addressing global challenges. By empowering women through education and skill-building, societies can unlock their potential to lead sustainable practices, promote equity, and ensure the well-being of future generations. Women's contributions to environmental stewardship—ranging from grassroots initiatives to global leadership—are pivotal in creating a resilient planet. To achieve this vision, there must be a systemic approach that integrates life skills education into all facets of society. Partnerships between governments, private organizations, and communities should focus on creating inclusive opportunities for women to contribute meaningfully to sustainability efforts. Fostering gender equity in decision-

making processes will also ensure a balanced and holistic approach to tackling environmental issues. Women's empowerment, fuelled by life skills education, has the power to transform societies and inspire a global movement toward environmental responsibility. By investing in this synergy, humanity can secure a healthier and more sustainable future for generations to come.

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REVITALIZING SUSTAINABLE PRACTICES THROUGH INDIGENOUS KNOWLEDGE: A PATHWAY TO ENVIRONMENTAL STEWARDSHIP WITH SPECIAL REFERNCES TO MADHYA PRADESH

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ABSTRACT

Indigenous communities possess the traditional knowledge and practices that have sustained ecosystems for centuries. This study highlights the importance of integrating indigenous knowledge into modern sustainability frameworks. We explored how indigenous practices, such as agroforestry, permaculture, and spiritual conservation, promote biodiversity, efficient resource use, and climate resilience. This research demonstrates that indigenous knowledge offers valuable insights into sustainable natural resource management, climate-change mitigation, and cultural preservation. Recognizing and supporting indigenous rights and knowledge systems is crucial for achieving the United Nations Sustainable Development Goals. By adopting indigenous perspectives and practices, innovative solutions for environmental sustainability, social justice, and human well-being can be created. By embracing indigenous perspectives, we can protect the environment, culture, and biodiversity. This study explores the importance of indigenous knowledge in shaping a sustainable and equitable future in the fil

Keywords: Indigenous Knowledge, Sustainable Practices, Environmental Stewardship, Traditional Ecological Knowledge, Climate Resilience.

INTRODUCTION

Just about a week ago, when I went to the forests of Pachmarhi to be close to nature or to live in the shadow of nature, I felt a sense of belonging. The same is true of a child who feels in his mother's lap. When my conscience started to stir as to why this environment was not there in the city, I got only one answer, perhaps because of us humans. However, despite many efforts, we have not been able to achieve the best technology with the help of a scientific approach by which we can improve our environment. In our biosphere, there is diversity not only at the species level, but also at all levels of biological organization, from the macromolecules of cells to the biome. The term biodiversity was coined by social biologist Edward Wilson to denote the diversity present at every level of biological organization. The most important of these is as follows -

(a) Genetic diversity: A species may show great genetic diversity across its distribution area. The genetic diversity of *Rauvolfia vomitoria*, a medicinal plant found in various ranges of the Himalayas, may be related to the potency and concentration of the active chemical reserpine

produced by it. India has more than 50,000 genetically diverse rice varieties and 1,000 mango varieties.

(b) Species diversity: This difference occurred at the species level. For example, the diversity of amphibian species in the Western Ghats is higher than that in the Eastern Ghats.

(c) Ecological diversity: This diversity is at the ecosystem level; for example, India's deserts, rain forests, mangroves, coral reefs, wetlands, estuaries, and alpine meadows have greater ecosystem diversity than Scandinavian country, Norway. This rich biodiversity of nature took millions of years of evolution to accumulate; however, if species loss continues at this rate, we may lose this wealth in less than two centuries. Biodiversity and its conservation has become an urgent and important international environmental issue for most people in the world today, for our life and survival on this planet

After analyzing my memory, I came to the conclusion that not only in India but also throughout the world, there are some tribes and communities that conserve the environment through indigenous and ancient practices. Thus, we should use these practices and techniques to correct our mistakes and save the environment. We became so engrossed in industrialization and comfort that we did not even realize when we moved ahead by trampling on our love for the environment. From natural and man-made disasters, deteriorating health and other activities that are adversely affecting our health, we got a hint that there is still time to save the environment

The rustle of the fresh breeze, chirping of the birds, rustling of the trees and plants, and sound of the waves of the waterfalls all felt as if someone was singing a song. The world is facing unprecedented environmental challenges, including climate change, biodiversity loss, and ecosystem degradation. Despite efforts to address these issues using modern scientific approaches, the pace of environmental degradation continues to accelerate. On the other hand, indigenous communities have lived in harmony with nature for centuries, possessing traditional knowledge and practices that promote environmental sustainability. The International Day of the World's Indigenous people celebrated on 9th August every year. Tribal communities have played a crucial role in the preservation of the erosion of indigenous knowledge and practices, coupled with the dominance of modern scientific approaches, have led to :-

- Loss of traditional ecological knowledge and practices
- Disconnection of indigenous communities from their ancestral lands and natural resources
- Continued environmental degradation and loss of biodiversity
- Inadequate recognition and incorporation of indigenous knowledge in environmental policy and practice.

This study explored the potential of revitalizing sustainable practices through indigenous knowledge as a pathway to environmental stewardship by examining the traditional ecological knowledge and practices of indigenous communities.

OBJECTIVES

- O1:** To explore the traditional ecological knowledge and practices of indigenous communities.
- O2:** To analyze the importance of indigenous practices in environmental conservation.
- O3:** To examine the challenges and limitations of incorporating indigenous knowledge into modern environmental policies and practices.

RESEARCH QUESTIONS

- RQ1:** What are the traditional ecological knowledge and practices of indigenous communities in Gwalior region?
- RQ2:** What is the role of indigenous practices in environmental conservation?
- RQ3:** What are the major challenges and barriers in incorporating indigenous knowledge into modern environmental policies?

RESEARCH METHODOLOGY

As part of the methodology of this qualitative research, we purposefully selected indigenous knowledge systems and sustainable practices prevalent in Madhya Pradesh. The focal point was on understanding how these practices contribute to environmental stewardship within local communities. The study involved extensive fieldwork, including interviews with tribal members, local leaders and environmental activists who are engaged in the practices of sustainability. We utilized a content analysis approach to analyze the data collected through interviews, discussions and existing literature review. This design was deemed justified as it allows for an in-depth knowledge of the complexities surrounding indigenous practice and their impact on environment stewardship. To lead the analysis of incorporation in indigenous practices, the study extracts the frameworks established by UNESCO that elucidate key areas appropriate to environmental stewardship. These areas are –

- Inquired how cultural practices of indigenous contribute to sustainable development.
- Analysis the scope of involvement of local communities in decision-making processes related to environment.
- Observing the role of traditional ecological knowledge in preserving biodiversity.

This research primarily focused on these three areas to understand how indigenous knowledge systems can be revitalized and integrated into contemporary environmental practices, thereby encouraging passage to effective environmental stewardship in Madhya Pradesh.

ANALYSIS AND DISCUSSION

The analysis systematically compiled data on indigenous practices in M.P, focusing on cultural heritage, community participation and traditional ecological knowledge. Data was categorized, coded and analyzed using memoing techniques. Findings revealed sacred groves as biodiversity hotspots, Gram Sabhas fostering community-driven resource management and TEK

enhancing sustainable agriculture. Challenges included limited interest of youth, lack of cooperation between policy makers and community members. Recommendations include addressing socio-economic barriers.

O1 & RQ1: Analysis & Discussion Regarding traditional ecological knowledge and practices of indigenous communities in Gwalior Region.

Tribal communities have played a crucial role in the global preservation of ecosystems and serve as long-standing managers of the environment. For incalculable generations, tribes of India have cultivated practices that safeguard natural habitats and foster conservation efforts. Their sustainable practices for farming, fishing, and coexistence with wildlife demonstrate a deep understanding of ecological balance. These practices, often passed down through generations, represent a wealth of traditional ecological knowledge that is priceless for biodiversity preservation. Additionally, the cultural and spiritual beliefs of many indigenous communities are deeply interwoven with nature, further enhancing their commitment to environmental protection. There are following indigenous practice of the tribes of Madhya Pradesh, that we should follow to protect the environment and these are:-

“Halma” Practice¹ — This practice is followed by the most prominent indigenous community BHIL. The Bhil tribes, mostly resides in Jhabua and Alirajpur districts of Madhya Pradesh, respired new life into “Halma,” their ancestral practice for the preservation of environment. Halma is a tradition of helping the Bhil Community.

This system provides indefinite benefits, particularly in the realms of environmental conservation and social annexation. This system is admired for generations and proposes a sustainable and community-driven approach to address critical issues such as groundwater depletion and deforestation.

Groundwater conservation: The halma system plays a pivotal role in the conservation of groundwater. This indigenous practice focuses on the strategic digging of contour trenches along the slopes of the hills. These trenches are located along the slopes of the hills. These trenches act as channels, intercepting rainwater runoff and slowing its descent, thereby allowing rainwater to percolate into the soil and replenish the groundwater table. Additionally, Halma encourages the digging of pits specifically for plantation purposes. These pits act as miniature reservoirs, collecting rainwater and promoting localized water retention.

Promote afforestation: Besides water conservation, the Halma System actively promotes afforestation, contributing significantly to environmental restoration. This Practice encourages community members to participate in the collective planting of trees within the excavated pits. This fosters a sense of shared responsibility while increasing green cover in the area. Once grown, trees provide numerous benefits, including acting as natural carbon sinks, combating climate change, preventing soil erosion, and providing habitat for local fauna.

¹Available at: <https://academicjournal.ijraw.com>, last visited on 2 Jan 2025

Community Participation: As we know, the practice of halma embodies the spirit of community participation, a foundation of the Bhil Societal structure. It encourages collective responsibility for environmental stewardship, encouraging both men and women to actively engage in the process. This shared endeavor strengthens the bond of the community, promotes cooperation, reinforces the traditional knowledge system, and promotes a sense of unity and purpose.

Cost-Effective: The Halma system stands out for its cost-effectiveness, relying primarily on locally available resources and traditional knowledge. The community members themselves carry out the majority of the work, reducing the need for external assistance and empowering them to manage their resources effectively.

Utera Farming²: Utera farming also known as paira farming, is a long time-tested agricultural practice deeply rooted in the agriculture heritage of India. This method involves simultaneous cultivation of multiple crops on the same piece of land, with a vital focus on harvesting them in a serial manner. This complex system optimizes resource utilization and lowers the risks associated with single-crop dependency. In the Rabi season, this cropping system was adopted. This farming is adopted for rice crops by sowing seeds 15-20 days before harvest when the grains of rice are in the dough stage. Adequate moisture is crucial during sowing for seeds to adhere to the soil; however, excess water should flow out to prevent scattering.



Figure 1: Image of Uttara Farming

²Available at: <https://www.khetivyapar.com>, last visited on 2 Jan 2025

Example : The process begins with sowing the seeds of a subsequent crop directly into a maturing rice crop. As the rice crop reaches its harvesting stage, the seeds of the next crop, mainly a legume or pulse, are already established and are ready to thrive. This seriated harvesting ensures that the land remains productive throughout the year, enhances output, and reduces fallow periods.

Benefits of Utera Farming: soil conservation, Water Conservation, Biodiversity conservation, and improved livelihood.

Challenges before Utera Farming : Intensive labor, Limited Scalability, and climate change.

Podu Farming — Podu farming also known as “slash and burn” agriculture is a traditional farming practice deeply ingrained in the culture and agricultural practices of tribal communities residing in the heart of India, specifically in Madhya Pradesh. This method has passed down through generations and represents a harmonious mixture of traditional knowledge and resource management. The key features of Podu farming are given as follows³ —

- This process commences with tribal communities selecting a parcel of forest land for cultivation. They then carefully cleared the selected area by cutting down the trees, shrubs, and other vegetation. This step is typically performed by using traditional tools.
- Once the cut vegetation had dried sufficiently, it was collected and burned in a controlled manner. It transforms dried plant matter into a nutrient-rich layer of ash that acts as a natural fertilizer for the soil.
- Subsequently, the farmers sow a variety of crops.
- After cultivating a particular plot of land for to 2-3 years, the soil was allowed to regain its fertility naturally. This practice is known as shifting cultivation.

Benefits of Podu farming: Sustainable livelihood, biodiversity conservation, and soil conservation.

Challenges facing Podu Farming: Deforestation, climate change, and government policies

- **ETHNO –FORESTRY** ⁴— Ethno forestry refers to the traditional forest management practices of indigenous communities, which involve the sustainable use and conservation of forest resources. In the Ethno forestry the following practices are being followed –

Agroforestry: Indigenous farmers practice agroforestry, where they combine three crops with agricultural crops. This helps to improve soil fertility, conserves water, and creates habitats for wildlife. For example, they plant mango trees, bamboo, and tamarind alongside crops, such as millet and wheat, promoting biodiversity while maintaining sustainable farming practices.

³Available at: <https://www.thehindu.com>, last visited on 2 Jan 2025

⁴Available at: <https://www.egyankosh.ac.in>, last visited on 2 Jan 2025

Selective logging: Indigenous communities generally practice selective logging, which is a sustainable harvesting technique that removes only specific tree species, leaving the majority of the forest intact. This practice minimizes disturbances to the forest ecosystem and allows natural regeneration.

Forest restoration: Ethno-forestry encompasses traditional practices for sustainable development.

Benefits of Ethno-Forestry: Sustainable livelihood, biodiversity conservation, Climate Change mitigation, and cultural conservation.

Challenges faced by Ethno-Forestry: Land Rights, External Pressure, Climate Change.

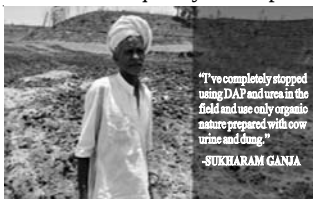
• **Sacred Rivers and Water Sources** — Rivers such as the Narmada, considered sacred by many indigenous groups in M.P. Communities living along these rivers engage in rituals and practices that ensure the health and purity of the water bodies. Traditional ceremonies and offerings are made to honor rivers, which foster an atmosphere of respect and protection of the environment. These rituals includes –

Narmada Parikrama : Communities like Gonds and Bhils follow this ritual, where people walk around the river, following its course from its source in Amarkantak to its mouth. Offered flowers, rice, fruits, and sacred water on riverbanks symbolize purification and spiritual renewal.

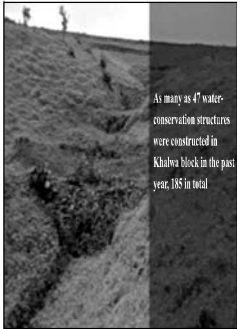
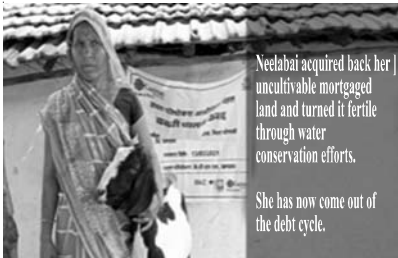
• **Traditional Water Conservation Methods⁵**

Indigenous groups have built check dams, johads, and small reservoirs to conserve water.

The Gonds tribe uses **phad** irrigation, which is a traditional water distribution system.

SL. NO.	DISTRICT	INDIGENOUS TECHNOLOGY	DESCRIPTION	BENEFITS
1.	Jhabua	Agroforestry	Integrating trees and shrubs with crops & livestock	- Increased crop yields - Improved soil fertility - Enhanced ecosystem services
2.	Alirajpur	Organic Farming	Natural methods to control pests and diseases	- Reduced chemical use - Improved the health of soil - Increased the quality of crop  "I've completely stopped using DAP and urea in the field and use only organic manure prepared with cow urine and dung." -SUKHARAM GANJA

⁵Available at: <https://indiantribalheritage.org> , last visited on 4 Jan 2025

SL. NO.	DISTRICT	INDIGENOUS TECHNOLOGY	DESCRIPTION	BENEFITS
3.	Khandwa	Water Harvesting (Bundhis) 	Bundhis are constructed by building a series of earthen bunds across seasonal streams and rivers. Creating a catchment area to retain moisture.	By adopting this method the level of water of the wells rose from 0.5ft to 3ft.   Neelabati's innovative approach to rainwater harvesting has led to a remarkable increase in crop Yield. By creating a catchment area in her fields, she is able to collect and conserve rainwater, Resulting in a doubling of her crop income.
4.	Chhindwara	Sustainable Forest Management	Harvesting timber & and non-timber forest products.	• Maintains forest ecosystem • Support local livelihood • Promote biodiversity conservation
5.	Betul	Crop Rotation & Intercropping	Planting different crops in a sequence on the same land. Intercropping is growing two or more crops simultaneously in the same fields.	• Improve the health of soil • Reduce pests & diseases • Enhance the utilization of resources.

6.	Mandla	Ecofriendly gear Biodegradable fishing lures Stones tidal weirs	Biodegradable fishing nets made from cotton, jute or hemp. These net can decompose quickly.	- Sustainable fishing methods to Maintain fish populations. - Maintains fish populations - Support local livelihoods - Promote healthy aquatic ecosystem
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Table 1... In this table we described the indigenous practices followed in the district of Madhya Pradesh, their benefits with current experiences of the inhabitants.

O2 & RQ2: Analysis & Discussion of importance of indigenous practices in the conservation of environment –

“TRADITIONAL INDIGENOUS KNOWLEDGE HOLDS THE KEY TO UNLOCKING THE SOLUTIONS OF ENVIRONMENTAL PROTECTION”

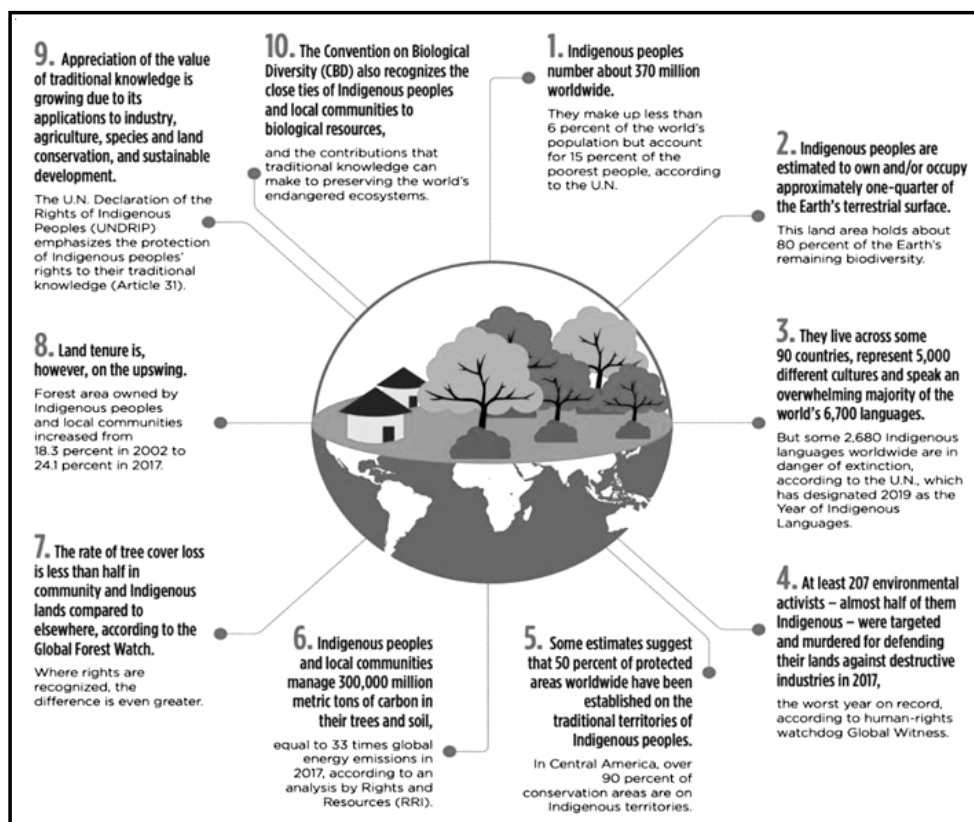


Figure 2: Importance of indigenous practices

As per the research and analysis, indigenous practices play a vital role in the conservation of the environment and their importance cannot be overstated and as per the aforesaid discussion there are following common importance of indigenous practices in the conservation of environment and these are —

Biodiversity Conservation: Podu Farming, Ethno-Forestry, and Utera Farming can contribute to biodiversity conservation. The cyclical nature of shifting cultivation allows forests to regrow in fallow plots, providing habitats for a variety of plant and animal species.

Climate change mitigation: Indigenous forests and land use practices can sequester significant amounts of carbon, helping mitigate climate change.

Cultural Significance: For indigenous communities, the environment is not merely a resource, but an integral part of their cultural and spiritual identity. Their practices, beliefs, and ceremonies are often deeply intertwined with the natural world, fostering a profound sense of respect for and responsibility for the environment.

Preservation of endangered species: Traditional knowledge and practices play a crucial role in protecting endangered species. Safeguarding habitats prevents overhunting and respects the fine balance of ecosystems.

O3 & RQ3: Analysis & Discussion of challenges and limitations of incorporating indigenous knowledge into modern environmental policy and practice —

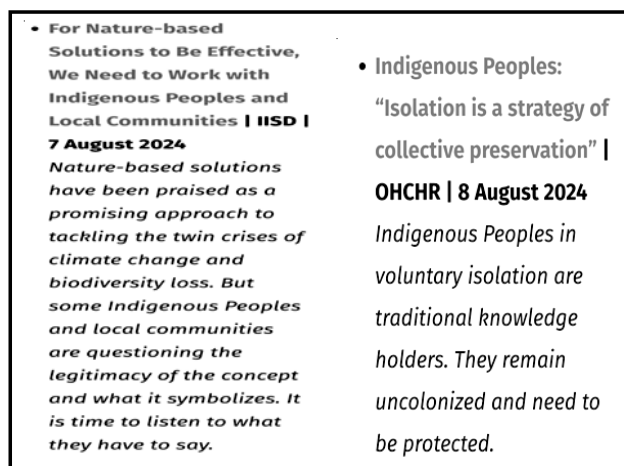


Figure 3 & 4: Challenges in incorporating indigenous practices

Incorporating indigenous knowledge into modern environmental policy and practice can lead to several challenges and limitations. Some key issues include the following :—

Lack of Legal Recognition: Many legal frameworks do not formally recognize indigenous knowledge, making its integration into policies difficult.

Intellectual Property Rights: Indigenous knowledge is often shared collectively, whereas modern legal systems emphasize individual ownership. Without proper safeguards, there is a risk of misappropriation.

Power imbalance: Governments and institutions often prioritize Western scientific methods, leading to the marginalization of indigenous voices in decision-making.

Language and Communication Barriers: Indigenous knowledge is often passed down in native languages, which may not have direct translations in policy.

The erosion of Indigenous Knowledge: Rapid urbanization, climate change, and socio-economic pressures threaten the transmission of traditional knowledge systems.

MAJOR FINDINGS

Revitalizing sustainable practices through indigenous knowledge is vital for environmental stewardship. The major findings for the future reference are briefly mentioned below :-

- As we know that the whole world is facing different types of environmental crises so in this situation indigenous knowledge and practices are essential for achieving sustainable development, particularly not in regions like Madhya Pradesh while in whole of the World.
- In the greed for profit, harmful fertilizers are being used in crops so in such a situation indigenous agricultural knowledge has the potential to provide a viable alternative to modern agricultural practices.
- The fusion of indigenous methods with modern agriculture holds tremendous potential for a sustainable future. By combining traditional knowledge with scientific advancements, we can create a harmonious approach to farming that achieves both objects, i.e., productivity and sustainability.

CONCLUSION AND SUGGESTIONS

Based on the findings of this study, it is clear that revitalizing sustainable practices through indigenous knowledge presents powerful pathways to environmental stewardship, particularly in states like the M.P, which are rich in biodiversity and home to several indigenous communities. Indigenous knowledge has passed down through generations, encompassing traditional agricultural methods, forest conservation techniques, water management systems, and biodiversity preservation practices that align modern sustainability goals.

However, the diminishing role of indigenous knowledge due to modernization, urbanization, and policy neglect poses significant challenges. Recognizing and incorporating these traditional practices into mainstream environmental governance can create a resilient framework for sustainability.

The suggestions are given as follows —

- The state government should recognize indigenous knowledge systems in environmental policies and promote them through legal frameworks and incentives.
- The government should strengthen the role of the tribe and local communities in decision-making processes related to natural resource management.
- Introducing indigenous environmental practices into schools and colleges' curricula.
- Establishing research centers that focus on documenting and validating indigenous knowledge can aid in its mainstream adoption.

By revitalizing indigenous knowledge and integrating it with sustainable development efforts, Madhya Pradesh can serve as a model for environmental stewardship, ensuring both ecological and cultural preservation.

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VISUALIZING NEW INDIA: TAGORE'S VISION AND LEGACY IN NATIONAL EDUCATION MOVEMENT

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ABSTRACT

Rabindranath Tagore was more inclined to prioritize the socio-economic and educational changes especially of the rural folks. He stressed on social and educational reforms. During the Swadeshi movement in Bengal, Tagore played a valuable role and took the leadership of the mass movement against British imperialism. He became critical about imperialistic and materialistic attitude of the European nations. He was the first to propose the concept of non-cooperation. Tagore in his essay University Bill (1904) strongly criticized the Lord Curzon's Higher Education Bill. Rabindranath was included as a member constituted for drawing up a provisional scheme of National Council of Education. In the inaugural ceremony of the Bengal National College and School, Rabindranath was present reconciling his differences of opinions with most of the members of National Council of Education.

Keywords: National Education Movement, National Education Council, Swadeshi movement, Vernacular education.

INTRODUCTION

Rabindranath Tagore (1861-1941) was a poet educationist and a humanist philosopher. He had a nationalistic ideology which he received from his father Maharshi Devendranath Tagore (1817-1905), his elder brother Jotirindranath Tagore (1849- 1925). Rabindranath imbibed the concept of self-help and self-reliance from the days of Hindumela. He was also exposed to secret revolutionary society established by Jyotirindranath and Rajnarayan Bose (1826-1899). Dwijendranath Tagore (1840-1926), eldest brother of Rabindranath, was serving as its secretary for several years. He also composed patriotic and devotional songs for the Hindumela. Another brother Satyendranath Tagore (1842-1923), the 1st Indian ICS, also played a significant role in the Hindumela. Rabindranath was greatly inspired by the Brahmo Samaj and hence he later produced many literary works that instilled a feeling of nationalism amongst the masses. During his lifetime, he wrote more than two thousand songs. His compositions were adopted as the national anthems for India (*Jana Gana Mana*) and Bangladesh (*Amar Sonar Bangla*). He was more inclined to prioritize the social and educational changes especially of the rural folks. He stressed on social and more on educational reforms and wanted to spread vernacular schools throughout Bengal as English education, according to him, could never reach to the Indian mass. Apparently Tagore wanted vernacular education with mother tongue as the medium of instruction to be established everywhere in the country for mass education. Tagore earnestly reiterated what Pandit Iswar Chandra Vidyasagar (1820-1891) said about fifty years ago with respect to mass education through

mother tongue. Tagore wanted an education that was in touch with all strata of life: economic, intellectual, aesthetic, social and spiritual.

OBJECTIVES

- To study Tagore's concept of education inspired by ancient Vedic literature.
- To discuss the major issues addressed by Tagore in his philosophy of education.
- To understand the impact of Tagore in national education during Swadeshi Movement.
- To understand Tagore's vision of nationalism in the context of national education.

RESEARCH QUESTIONS

- Why was Tagore interested in gurukul system of education?
- What are the major issues addressed by Tagore in his philosophy of education?
- What was the role of Tagore in national education movement during Swadeshi agitation?
- What was Tagore's vision of nationalism in the context of national education?

METHODOLOGY

The present study related to 'national education' belongs to the area of historical as well as philosophical research. It is in particular a case study of Tagore's impact on national college and national education during the swadeshi days (1903-1908). All data are therefore taken from written records and printed sources.

ANALYSIS & INTERPRETATION

R 1: Why was Tagore interested in gurukul system of education?

Tagore visualized a system of education which would be based on the national tradition and established a school known as "Brahmacharya Asram" at Santiniketan near Bolpur in the district of Birbhum in 1901. The school was modelled along the lines of classical gurukul system of ancient India called 'Tapabana' from which emerged the great literary, philosophical and spiritual classics like Vedas and Upanishads. Tagore gathered the Tapabana ideas from the epic writings of Kalidasa.

R 2 : What are the major issues addressed by Tagore in his philosophy of education?

In his educational philosophy, Tagore wanted a true synthesis of the East and West. He strongly advocated the study of European literature, and science and technology. To him these were essential studies, but he proclaimed that the literature and science of Europe should be blended with our national consciousness based on the century-old-literary, cultural spiritual and moral heritage of India. He believed and advocated that the vernacular should be the medium in every stage of education and all official activities and proceedings of the country.

R 3 : What was the role of Tagore in national education movement during Swadeshi agitation?

During the period of swadeshi movement in Bengal (1902- 1908) Tagore played a valuable role and took the leadership of the struggle of mass against British Imperialism. The University Bill of Lord Curzon had the imperialistic design of curtailing higher education in the country in the name of improvement of quality. Tagore in his essay University Bill (1904) strongly criticized this.

Anti-partition (1905) upsurge swept Bengal. Slogans of *swaraj* (self-rule), *swadeshi* (use of indigenous goods), *boycott* (of all foreign goods and manufactures) and *jatiyashiksha* (national education) emerged vigorously during the anti-partition campaign. Rabindranath worked for the emotional integration of the Bengalis. Besides essays, pamphlets and speeches, he composed innumerable *swadeshi* (national) songs – to rouse the consciousness of the Bengalis against British domination and to instill in them a sense of fearlessness and self-reliance. Many of these songs, he sang himself in the anti-partition meetings in the street agitations or in other public gatherings.

The ‘Carlyle Circular’ was published in the *Statesman* on October 22, 1905. The circular prohibited students’ participation in political rallies, *swadeshi* picketing and meeting and ordered rigorous disciplinary actions against the students. The heads of the schools and colleges were warned by the magistrates that if their students were found to be taking part in the *swadeshi* agitations their grant-in-aid would be cancelled. In a public meeting held on October 27, 1905 in central Calcutta, Rabindranath in his presidential address spoke against the circular, supported the students’ pledge to boycott the educational institutions and establishment of national education system for national consciousness.

Rabindranath pointed out the need for mass education for bridging the gulf between the educated elite and the masses. Instead of national education at the collegiate level, he thought that it would be wiser to concentrate on primary and secondary education with which should be combined training in useful crafts. Similar views of mass education were also forwarded by many contemporary intelligentsias. On November 4, 1905, a school was started for the rusticated students from Mufassil in the residence of Krishna Kumar Mitra (1852-1936), the editor of *Sanjibani*, a Bengali journal. Several zamindars / landlords and elite people like Subodh Chandra Mallik (1879-1920), Brajendra Kishore Roy Chowdhury, Zemindar of Gouripur, Mymensingh (1874-1957) and Maharaja Suryakanta Acharya Chowdhury of Muktagacha, Mymensingh (1851-1908) promised donation of huge sums for the establishment of a national university in Bengal. On November 5, 1905 Rabindranath lectured to a large gathering of students in a meeting held at the Dawn Society organized by Satishchandra Mukherjee (1865-1948). Again he stressed on national education for national consciousness. The National Education Movement progressed rapidly and the first National School was established at Rangpur on November 8, 1905 for imparting both general and technical education. The anti-Circular Society was established by the student leader Sachindraprasad Basu (? – 1941) in collaboration with Krishna Kumar Mitra and Ramkanta Roy.

R 4: What was Tagore’s vision of nationalism in the context of national education?

Rabindranath’s vision of nationalism was extended beyond the boundaries of the nation-state, embracing a broader concept of internationalism that emphasized cooperation and natural respect between different cultures and nations. He believed that true progress required a spirit of unity and understanding that transcended national boundaries. In essence Tagore’s nationalism was a call for a more humane and spiritual understanding of national identity that emphasized cooperation, understanding and the pursuit of shared human values. He saw the Western model of nationalism as a flawed and divisive force and he advocated for a more inclusive and harmonious vision of national unity.

Rabindranath was present in the Educational Conference of November 16, 1905 held at the Bengal Land-holders Association. The conference resolved to establish a National Council of Education – a system of education – literary, scientific and technical – on national lines under national control. Rabindranath was included as a member constituted for drawing up a provisional scheme of National Council of Education. The scheme was completed and considered in the second meeting of the conference held on December 10, 1905. A small Ways and means Committee was constituted to draw up a detailed report on the schemes and to fix course – curricula of the proposed National Education. Rabindranath (1861-1941), Taraknath Palit (1831-1914), Satish Chandra Mukherjee, Hirendranath Dutta (1868-1942), Narendranath Sen (1843 - 1911), Abdul Rassul (1874-1917), Subodh Chandra Mallik, Manamohon Bhattacharyya (?) and Dr. Nilratan Sircar (1861-1943) were appointed as members.

Rabindranath formulated a National Education scheme following the ancient ‘Tapaban’ model initiated in his Brahmyacharya Ashram at Santiniketan. In brief his proposals were:

1. National school should be residential so that the students and teachers would be in close contact with each other.
2. These schools should be established in the villages, that they would be self-sufficient, economically from the agricultural earnings of the land.
3. He recommended different course-curricula for boys and girls.
4. He strongly advocated the Upanishad based spiritual background in running the school.
5. Tagore advocated vernacular as the medium of instruction in all stages of education – primary to University levels. He advocated learning of European science and technology through the mother tongue.

The National Council of Bengal was formally constituted with 92 members including 6 Muslims covering a large number of Bengali intelligentsia along with Rabindranath. The National Council of Education gave affiliation to all National Schools of rural Bengal and established a school and a college in Calcutta, the Bengal National College and School which was inaugurated in a meeting held at Town Hall on August 14, 1906.

Tagore was the first to propose the concept of non-cooperation. By non-cooperation, he meant ‘non-requesting’ (begging) the British for reforms of rights, but starting earnestly to uplift the nation by Indians themselves. He wanted to build up a ‘Swadeshi Samaj’ as a policy of non-cooperation with the Government – a society which would function as ‘a State within a State’. Indian society was mostly village oriented, but the leaders were urban educated intelligentsias. To bridge this gap, he suggested organization of ‘Swadeshi Samaj’ on a vast scale.

In his presidential address at the Pabna Provincial Conference in 1908, he reiterated this and delivered his lecture in Bangla which caused a great stir among the English educated intelligentsia. Rabindranath along with some friends and relatives went ahead and organized a Swadeshi Samaj with some mottos, which were :—

1. We will educate our children in Swadeshi Schools as far as practicable.
2. We will buy our daily necessities from swadeshi stores.

In the inaugural ceremony of the Bengal National College and School Rabindranath was present reconciling his differences of opinions with most of the members of National Council of Education. He read his famous essay 'Jatiya Vidyalaya' (National School) in the meeting and hailed the National School as an achievement of the Bengalis, as an autonomous institution independent of Government's control and was the reflection of our 'Atma Shakti' (self-reliance). Rabindranath, however gradually became detached from the National Education Movement. In his political and educational thoughts, he sometimes did not agree with the moderates. The moderate approach of the ways and means was not acceptable to him. He wanted to do something 'new' following national tradition, as an alternative to English education provided by Indian universities. Later he remarked that those who had formal English education and became successful in life due to such education, they were unable to accept his new concept of education.

FINDINGS AND CONCLUSION

In his letter to Ramendra Sundar Trivedi (1864-1919), he wrote – "I was not a leader or director in any association, but in any time country may again call me for working on National School then I would join it". Whenever required, Rabindranath cooperated with the National College and School which was evident from his participation in activities of the National Council of Education and the School. He delivered extension lecture to the students and teachers on Comparative Literature during 1906 – 1908. He was also appointed as a paper setter of Bengali for the Public Examination of the fifth and seventh standard conducted by the National Council of Education in 1906 and 1907. Even after this stint he continued his writings on education and some of the notables are: Tapabana (1909), Religious Instruction (1911), Education Act (1912) Goals and Education (1912), Female Education (1915) Medium of Instruction (1915), Controlling students (1915). In these articles and others, he relentlessly expressed his views on character, goal and methods of National Education, futility of English as the medium of instruction, necessity of education through mother tongue, defects of our instruction procedures, ideas of Santiniketan schools, female education and universal education. In his efforts to educational reform and development of rural societies he did not get much support from the contemporary intelligentsia.

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EFFECT OF PRANAYAMA ON PEAK EXPIRATORY FLOW RATE & FORCED VITAL CAPACITY AMONG MIDDLE AGED FEMALES

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ABSTRACT

The purpose of the study was to investigate the effects of Pranayama on Peak Expiratory Flow Rate (PEFR) and Forced Vital Capacity (FVC) among middle aged female (Age ranging 30 to 60 years). There was an Experimental Group and a Control Group. According to age the subjects were divided into two groups i.e., Young Adult (YA) age ranging from 30 to 45 years and Elderly Adult (EA) age ranging from 46 to 60 years. In the present study, all the subjects (34 volunteered Female) of the Experimental groups were brought under a Pranayama training programme for 18 weeks. All the parameters i.e. Peak Expiratory Flow Rate (PEFR) and Forced Vital Capacity (FVC) were measured before and after the Training Programme. For statistical analysis and interpretation of data 't-test' was conducted. Result showed a significant change in PEFR and FVC among both YA and EA of the experimental subjects.

Keywords: Pranayama, Experimental, Control, PEFR and FVC

INTRODUCTION

Every human society, be it rural or urban, industrial or technologically advanced, is affected extremely by pollution of the air. The expiratory system takes oxygen from the atmospheric air and conveys it through circulation of blood to all body cells, and tissues according to their needs. The bronchi and bronchiole are air pathways that may cause respiratory distress if they become constricted or narrowed for any reason (Williams, 1985). Any obstruction in the respiratory passages causes insufficient aeration of lungs and sometimes it may lead to malformation of chest (Rathbone, J. L: 1939) and weakness in the intercostal muscles restricting the movement of diaphragm which plays a very important part in breathing. Obstruction in normal breathing also leads to irritation of the mucous membranes in the nasal pharynx, and cardio pulmonary insufficiency develops leading to loss of capacity of motor abilities. Pranayama is one of the best remedies to tackle respiratory illness caused by air pollution and other naturally occurring respiratory illness (Krishnan, 2003). Pranayama is one of the most important aspects of Yoga. It is nothing but a controlled breathing exercise. According to Patanjali, Pranayama is 'the regulation of incoming and outgoing flow of breath with retention'. Pranayama helps in strengthening the immune system. Regular practice of Pranayama helps in improving the mechanical efficiency of our breathing and makes the most of our lung capacity (Sripriya Venugopal). Pranayama brings deeper benefits than the simple mechanics effect of exercising

the lungs. It teaches us to use every part of our lungs, stimulates our lungs tissue, relax our chest muscles and energize the entire system. The success of pranayama depends on proper ratios being maintained between inhalation, exhalation and retention. Study may encourage the people to use of pranayama as preventive, curative and rehabilitative measures especially related to the respiratory disorders.

REVIEW OF LITERATURE

Murthy and Sahay (1984) experimented the effect of Pranayama on asthma patients. They observed significant improvement of PEFR after conducting 12 weeks of pranayama training programme. Singh et al. (2009) observed significant increment of PEFR among 120 bronchial asthma patients after conducting a Pranayama training programme of 15 weeks.

Chaiet et al. (1965), Bhole (1982), Sodhie et al. (2009), Behera (1998), Joshi et al. (1992) also founded significant improvement of PEFR among asthma patients. Gaurav Swami et al. (2009) observed significant improvement of PEFR among hypothyroid patients. Joshi (2003) has found significant improvement of FVC among college going student age ranging from 18–25 years following Pranayama training programme.

Significant increment of FVC among asthma patients were also observed by Candy Sodhi et al. (2009), Chaiet et al. (1965), Bunch (2001), Bhole (1982), Vedanthan P. K. et al. (1998), Dr. Sripriya (2003), Behera (1998).

MATERIALS & METHODS

Group: There were two groups, Experimental and Control Groups. Experimental group consist of 34 female staff (age 30 to 60 years) of a CBSE school, Purba Medinipur. Control Group consist of 20 female staff (Age 30–60 years) from a secondary school, Purba Medinipur. All the subjects were selected randomly. According to age, all subjects were divided in two sub-groups, i.e. young adult and elderly adult. Young adult consists of 30 to 45 years of age and elderly adult consists of 46 to 60 years of age.

Parameter: Physiological parameter selected for the study were Peak Expiratory Flow Rate (PEFR) and Forced Vital Capacity (FVC).

Data Collection: The present study has three separate parts i.e pre-test, the specific training programme and the post-test.

Pre-test: Pre-test was conducted in a single day before the onset of exercise programme of 18 weeks. PEFR and FVC of both the Experimental & Control group were measured by a physician. Hand held Electrical Spirometer was used to measure PEFR and FVC.

The specific training programme: All the subjects of the experimental group were brought under a common training programme which consists of specific Pranayama i.e., Vastrika, Anuloma-Viloma, Bhramari and Bahya for five days a week, for 45–60 minutes/day with gradual increase of intensity, sets and repetitions for eighteen weeks. The training period was

divided into five phase, viz. first two weeks, 3rd and 4th weeks, 5th and 6th weeks, 7th and 8th weeks and 9th to 18th weeks. After the completion of 18 weeks planned programme.

Post-test : The post test was conducted in the similar fashion with that of pre-test. However the Control group did not participate in the training programme of eighteen weeks but their post test was conducted along with the Experimental group in the same day.

Statistical analysis: 't' test was conducted to interpret the data.

RESULTS & DISCUSSIONS

Table – 1: Mean, SD of Peak Expiratory Flow Rate (litres) and Comparison of t-test Between Pre and Post-test Means of YA and EA Groups

Age Group	Group	Pre-test Mean $\pm$ SD	Post test Mean $\pm$ SD	Mean difference	t-value	Level of Significance
YA	Experimental	2.06 $\pm$ 0.23	2.51 $\pm$ 0.33	0.45	20.30**	0.00
	Control	2.01 $\pm$ 0.12	1.97 $\pm$ 0.12	0.03	0.78	0.46
EA	Experimental	1.57 $\pm$ 0.17	1.77 $\pm$ 0.22	0.21	16.08**	0.00
	Control	1.48 $\pm$ 0.13	1.51 $\pm$ 0.13	0.03	1.61	0.14

Fig. 1: Graphs Showing Peak Expiratory Flow Rate Between Pre and Post-test Means of YA and EA Groups

Table–1 shows that mean PEFR during pre-test was 2.06 with a variation of ± 0.23 . Following eighteen weeks participation in planned Pranayama training programme the mean PEFR increased to 2.51 with a variation of ± 0.33 in experimental YA group and t-value (20.30) was found significant at 0.01 level. But in control YA group t-value (0.78) appeared insignificant. In experimental EA group during pre-test the mean PEFR was 1.57 with variation of ± 0.17 . During post-test the mean PEFR increased to 1.77 with a variation of ± 0.22 and t-value (16.08) was found significant at 0.01 level. But in control EA group t-value (1.61) appeared insignificant. Table–3.1 was illustrated through graphical representation (Fig. 1) for clear understanding of this study.

A significant increment of PEFR was observed in both the young and elderly experimental subjects which was similar to the findings of Murthy K. R. J.; Sahay B. K. et al. (1984) who experimented the effect of Pranayama on asthma patients. Sheema Singh et al. (2009) observed significant increment of PEFR among 120 bronchial asthma patients. R. Nagarathan, H. R. Nagendra (1985), Chalet et al. (1965), Bhole (1982), Vedanthan et al. (1998), Sodhie et al. (2009), Behera (1998), Joshi et al. (1992) also founded significant improvement of PEFR among asthma patients. Swami et al. (2009) observed significant improvement of PEFR

Table –2: Mean, SD of Forced Vital Capacity (litres) and Comparison Between Pre and Post-test Means of YA and EA Groups by t-test

Age Group	Group	Pre-test Mean $\pm$ SD	Post test Mean $\pm$ SD	Mean difference	t-value	Level of Significance
YA	Experimental	2.49 $\pm$ 0.30	3.04 $\pm$ 0.40	0.55	20.79**	0.00
	Control	2.33 $\pm$ 0.15	2.25 $\pm$ 0.17	0.08	1.37	0.20
EA	Experimental	1.96 $\pm$ 0.22	2.22 $\pm$ 0.27	0.26	15.24**	0.00
	Control	1.82 $\pm$ 0.16	1.83 $\pm$ 0.17	0.01	0.46	0.66

** Sig. at 0.01 level.

Fig. 2: Graphs Showing Forced Vital Capacity Between Pre and Post-test Means of YA and EA Groups

Table–2 indicates that in experimental YA group, during pre-test the mean FVC was 2.49 with a variation of ± 0.30 and during post-test the mean FVC elevated to 3.04 with a variation of ± 0.40 . t-value (20.79) obtained was significant at 0.01 level and in control YA group t-value (1.37) appeared insignificant. In experimental EA group the mean difference was 0.26 and t-value (15.24) was found significant at 0.01 level. t-value was found (0.46) insignificant in control EA group. Graphical representation (Fig. 2) also indicates similar trend of this study.

Significant improvements in FVC with response to Pranayama training have been reported by many leading researchers and are similar to that of the present study. Joshi (2003) has found significant improvement of FVC among college going student age ranging from 18–25 years following Pranayama training programme. Murthy, K. R. J.; Sahay B. K. et al. (1984) observed significant improvement of FVC among perennial Asthma patients. Significant increment of FVC among asthma patients were also observed by Candy Sodhi et al. (2009), R. Nagarathan, H. R. Nagendra (1985), Chalet et al. (1965), Martin J. Bunch (2001), Dr. M. V. Bhole (1982), Vedanthan P. K. et al. (1998), Dr. Sripriya (2003), Behera (1998).

CONCLUSIONS

Based on the result of the present study and within the limitation, the following conclusions may be drawn.

1. PEFR increased significantly in both (YA & EA) experimental groups following Pranayama training programme of eighteen-weeks. However, the magnitude of increment was more in YA group. No significant change was found in both (YA & EA) control groups.
2. Pranayama training resulted in significant increase in FVC in both (YA & EA) experimental groups. The magnitude of increment was more in YA groups. In case of control group no significant change was observed in both (YA & EA) groups.

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EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE IN EDUCATION FOR THE 21ST CENTURY: A TRANSFORMATIVE APPLICATION

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ABSTRACT

Artificial Intelligence (AI) is revolutionizing education in the 21st century by offering innovative solutions to traditional challenges and improving teaching methods, personalized learning, and administrative automation. AI-driven tools are reshaping education through machine learning, natural language processing, data analytics, intelligent tutoring systems, automated assessments and streamlined administrative functions. These technologies are transforming conventional learning environments, making them more adaptable, individualized, and efficient. As technology evolves rapidly, AI is redefining the ways students learn, teachers instruct, and institutions operate. Traditional, uniform teaching approaches are being enhanced by AI innovations that cater to diverse learning styles, preferences, and needs. As AI continues to progress, it holds the potential to reduce educational inequalities, foster inclusivity, and enrich learning experiences. AI is poised to address significant challenges in education, improve teaching and learning practices, and support efforts toward achieving Sustainable Development Goal 4 (SDG-4). However, the swift pace of technological advancement also presents risks and challenges that often outstrip the development of policies and regulations. This paper explores AI's transformative impact on education, emphasizing its ability to improve accessibility, engagement and learning outcomes. It also examines ethical concerns, potential obstacles and future prospects, concluding with recommendations for effectively integrating AI to shape the future of education.

Keywords: Teaching and Learning, Artificial Intelligence, SDG-4

INTRODUCTION

Education in the 21st century is experiencing a significant shift, largely driven by rapid technological progress and the increasing emphasis on personalized learning (Luckin et al., 2016). The 21st century marks a period of accelerated technological progress, with Artificial Intelligence (AI) playing a pivotal role in reshaping numerous sectors, including education. The global educational landscape is experiencing a profound transformation, largely fuelled by the need to tailor learning experiences, refine teaching methodologies, and prepare students for a digitally connected and rapidly evolving world. In this transformative era, AI's integration into education is not just a novel development but a fundamental shift in how education is delivered and experienced. Traditional education systems, which often rely on standardized curricula and conventional instructional methods, frequently fall short in addressing the varied needs and preferences of modern learners (Holmes et al., 2019). In response, artificial intelligence (AI) has become a transformative force, fundamentally altering how education is both delivered and experienced (Zawacki-Richter et al., 2019).

AI comprises a range of technologies like machine learning, natural language processing, intelligent tutoring systems, and adaptive learning platforms that emulate aspects of human thinking & decision-making. These tools allow AI to process extensive datasets, identify trends and provide personalized learning experiences that meet the needs of individual learners. Whether through virtual learning environments, automated evaluations, or smart content distribution, AI is increasingly instrumental in fostering student engagement, boosting academic performance & aiding educators in creating adaptive & effective learning ecosystems. Additionally, AI-based assessment solutions streamline grading and evaluation processes, reducing educators' administrative workload while ensuring objectivity and precision (Jordan, 2020). One of the most impactful aspects of Artificial Intelligence in education is its ability to promote inclusivity (Baker & Smith, 2019).

AI-driven assistive technologies—such as speech recognition tools, adaptive learning systems, and virtual assistants—support students with disabilities, language challenges and learning difficulties (Luckin, 2018). The advancements in Artificial Intelligence foster a more inclusive and equitable learning environment, making education more accessible to diverse student populations (Selwyn, 2020). Furthermore, Artificial Intelligence demonstrates growing effectiveness in promoting inclusive education, addressing learning disparities, and enabling ongoing formative assessments. It has the capacity to expand access to high-quality education across geographical, cultural, and socio-economic boundaries. Furthermore, AI-enabled analytics offer educators valuable insights into student participation and engagement, helping them refine teaching methods and better address learning gaps (Chen & Xie, 2021). However, despite AI's potential to revolutionize education, its adoption also presents significant challenges (Zawacki-Richter et al., 2019). Concerns around data privacy, ethical use and the digital divide must be thoughtfully addressed to ensure the responsible deployment of AI technologies (Holmes et al., 2019). This article offers a critical evaluation of AI's role in education, considering its alignment with the needs of 21st century learners. It delves into the transformative applications of AI, reviews existing research on its outcomes, and discusses the opportunities it presents as well as the challenges it poses in various educational settings.

REVIEW OF RELATED LITERATURE

Over the past several decades, numerous scholars have explored the impact and role of Artificial Intelligence (AI) in educational settings. Key contributions from various researchers include:

Luckin et al. (2018) stressed the importance of integrating AI into education to facilitate personalized learning and enhance teacher-student interactions. They also introduced the concept of an "Intelligence Infrastructure" to meaningfully embed AI tools in the learning process. Holmes et al. (2019) categorized AI applications in education into adaptive learning technologies, intelligent tutoring systems, and learning analytics, emphasizing that their success hinges more on sound pedagogical strategies and student engagement than mere technological advancements. Similarly, Chen et al. (2019) studied Artificial Intelligence based essay evaluation, finding it reliable in mirroring human grading while minimizing biases and easing teachers' workloads.

Baker & Smith(2019) have explored that by exploring AI applications, advantages, challenges and future prospects, the discussion offers key insights into the changing educational landscape. Selwyn (2019) has mentioned that how effectively leverage AI can empower educators, policymakers, and stakeholders to build a more flexible, inclusive and innovative educational system.

A broad review by Zawacki-Richter et al. (2020) on the use of Artificial Intelligence in higher education pointed to a growing focus on adaptive learning systems and predictive analytics for tracking student performance. Smutny&Schreiberova (2020) discussed the significance of AI-powered chatbots and virtual assistants, especially during the COVID-19 pandemic, in providing effective learner support in online settings. Baker & Smith (2021) argued that Artificial Intelligence should enhance rather than replace human instruction and noted its potential in reducing administrative burdens, allowing educators more time to personalize teaching.

Chassignol et al. (2021) brought attention to ethical challenges in AI's implementation, such as bias, privacy concerns, and the need for transparency. Popenici & Kerr (2022) explored the influence of AI on developing students' critical thinking and creativity, suggesting that effective AI tools should promote intellectual development instead of merely automating tasks. Kose et al. (2022) assessed AI-enabled learning management systems, revealing notable benefits in student engagement, retention, and satisfaction due to real-time feedback features.

In 2023, Woolf et al. expanded on AI's role in supporting social-emotional learning and inclusive education, particularly for students with disabilities. Nguyen & Duong (2023) highlighted AI's transformative impact on competency-based learning, noting its ability to help educators identify learning gaps and customize instruction aligned with 21st-century skill requirements. Singh et al. (2024) reported that AI-enhanced educational platforms can lead to better learning outcomes when guided by clear teaching frameworks and supported by human facilitators.

The UNESCO Report (2024) reaffirmed AI's potential to improve educational access, equity, and quality, provided it adheres to ethical standards and strong governance. In a meta-analysis, Zhang & Patel (2025) demonstrated that AI applications, especially in K-12 STEM education, boost student achievement through real-time assessment and adaptive learning tools. Finally, the World Bank (2025) emphasized AI's transformative power in educational reform globally, especially in underserved regions, where AI tools have helped address teacher shortages and enabled remote learning. After reviewing the above mentioned research articles the investigator is very much interested to explore the effectiveness of Artificial Intelligence in educational perspective.

OBJECTIVES OF THE STUDY

The main objectives (O) of the present study are as follows :-

- O1 : To explore the various roles of AI in educational sectors for 21st century
- O2 : To discuss the challenges in adoption of AI in educational institutions
- O3 : To discuss about the ethical considerations in adoption of AI in educational institutions

RESEARCH QUESTIONS OF THE STUDY

The research questions (RQ) associated with the present study are as follows :-

RQ1 : What are the roles of AI in educational sectors for 21st century?

RQ2 : What are the challenges in adoption of AI in educational institutions?

RQ3 : What are the ethical considerations in adoption of AI in educational institutions?

METHODS OF THE STUDY

This study employs a qualitative research methodology to delve into the role of artificial intelligence in educational fields for 21st century and its transformative applications. The methodology integrates an extensive analysis of previous studies, drawing insights from a diverse range of secondary sources including academic journals, research papers, books, magazines etc.

ANALYSIS AND DISCUSSION

The present research paper deals with the various roles of Artificial Intelligence in educational sectors for 21st century. Some of the challenges as well as some ethical considerations have also been mentioned briefly.

O1 & RQ1: Analysis & Discussion on Various Roles of AI in Educational Scenario

AI plays various roles in the educational sectors for the effective teaching-learning process in 21st century and some of the key roles are as follows:

i) AI in Early Childhood Education: AI-driven toys and applications assist young learners in developing motor skills and cognitive abilities. By using tactile, visual, and auditory stimuli, these tools encourage specific actions and tasks. Interactive games and activities powered by AI help children grasp fundamental concepts such as cause-and-effect relationships, sequences, and patterns.

ii) Personalized Learning Through AI: AI-powered learning platforms customize educational content based on each student's unique learning style, strengths, and areas for improvement. Adaptive systems like Knewton, Dream Box, Khan Academy, and Coursera tailor their curricula to individual needs, enhancing engagement and comprehension. AI chatbots and virtual tutors provide immediate feedback and support, ensuring students learn at their own pace, improving retention and academic achievement.

iii) AI-Enabled Adaptive Assessment: AI-driven adaptive assessments evaluate students' prior academic performance and learning preferences to personalize content and task difficulty. These systems challenge high-performing students with advanced material, while offering additional support and scaffolding for those needing extra help.

iv) Automated Assessment and Grading With AI: AI streamlines grading and assessment processes in large educational systems, ensuring fair and consistent evaluations. Tools such as Gradescope and Turnitin use AI to automate grading, detect plagiarism, and

deliver instant feedback, significantly reducing educators' workloads while maintaining accuracy and fairness.

v) Intelligent Tutoring Systems (ITS): AI-powered Intelligent Tutoring Systems offer real-time, step-by-step guidance, similar to human tutors, and are available 24/7. These systems provide targeted support to help struggling learners bridge knowledge gaps and reinforce complex concepts for advanced students.

vi) AI in Educational Administration: AI increases administrative efficiency by automating routine tasks such as grading, scheduling, enrolment, and tracking student performance. AI chatbots are widely used in universities to manage student inquiries and provide instant support, reducing administrative burdens. AI analytics also assist institutions in improving student retention rates (Johnson, 2023; Holmes et al., 2019).

vii) AI for Inclusive and Accessible Education: AI promotes inclusivity by addressing diverse learning needs, including those of students with disabilities. Technologies such as speech recognition, text-to-speech, and other assistive tools enhance learning experiences for individuals with visual, auditory, and cognitive impairments. AI also supports students with autism and learning disabilities, promoting equitable education opportunities.

viii) Smart Educational Content Creation With AI: AI facilitates the creation of digital textbooks, quizzes, flashcards and practice questions tailored to varying difficulty levels. Educators can quickly generate comprehensive lesson plans and curricular units, saving time and effort in instructional design.

ix) AI Enhances Virtual and Augmented Reality Learning: AI integrates with virtual and augmented reality to create immersive educational experiences. Tools like Google Expeditions and Microsoft Holo Lens enable virtual field trips, laboratory simulations, and historical reconstructions, making learning more engaging and interactive.

x) Predictive Analytics Associated with Student Performance: AI-driven predictive analytics can forecast student performance, enabling early interventions to enhance learning outcomes. These tools also support institutions in improving student retention by identifying at-risk learners and addressing their needs proactively.

xi) AI in Language Learning: AI applications offer real-time translation and speech recognition for language learners. Platforms like Google Translate, Duolingo and Grammar aid in learning new languages, while AI chatbots provide conversational practice and pronunciation feedback, enhancing language acquisition.

xii) AI for Bias Detection in Education: AI plays a crucial role in identifying and mitigating biases within educational content, grading systems, and assessment tools. By ensuring fairness and inclusivity, AI contributes to creating an equitable learning environment and curriculum design.

xiii) Enhancing Learning Experiences and Decision-Making With AI: AI enriches learning through interactive features like gamification, virtual reality, and augmented reality (Selwyn, 2020). AI analytics equip educators and policymakers with valuable insights to inform curriculum development and optimize student support systems (Siemens, 2013).

xiv) AI Bridging Educational Gaps and Facilitating Skill Development: AI reduces educational disparities by providing scalable and affordable learning solutions, particularly in underserved areas. It also supports lifelong learning by offering continuous access to educational resources, helping professional's upskill and reskill in an evolving job market (Aoun, 2017).

xv) AI-Powered 24/7 Learning Support: AI-powered "study buddies" or tutor bots are increasingly popular for delivering personalized, round-the-clock academic support. These conversational AI assistants answer student queries, assess responses, and provide customized recommendations based on individual learning patterns and past performance, particularly when human tutors are unavailable.

O2 & RQ2: Analysis & Discussion on Challenges in Adoption of AI in Educational Institutions

There are numerous obstacles hinder the widespread adoption of AI technologies in educational settings. Some of the key challenges are as follows:

i) Inadequate Technological Infrastructure: Many schools and universities, particularly in developing nations or under-resourced areas, lack the essential digital infrastructure and stable internet connectivity needed to effectively implement AI-driven tools and platforms.

ii) Substantial Implementation Expenses: Deploying AI solutions often entails heavy financial outlays for purchasing advanced software, upgrading hardware, and conducting specialized training programs for faculty, which can strain institutional budgets.

iii) Insufficient Teacher Training & Limited Adaptability: A considerable number of educators lack familiarity with AI concepts and tools, resulting in difficulties when integrating AI into their teaching methods and course content.

iv) Concerns Over Data Privacy & Security: AI systems typically gather vast amounts of personal data from students, raising serious concerns about potential data breaches, cyber-attacks, and violations of privacy regulations.

v) Algorithmic Bias and Fairness Issues: AI applications can perpetuate or even amplify existing social biases, particularly if the algorithms are trained on unbalanced or prejudiced datasets. This may lead to unfair outcomes in areas like student assessments or learning recommendations, often to the detriment of disadvantaged groups.

vi) Inequitable Access and Inclusivity Challenges: Not all students have equal opportunities to benefit from AI-based educational tools. Those from low-income backgrounds may face barriers to accessing the necessary devices or internet services, deepening the digital divide and exacerbating educational inequality.

vii) Resistance to Technological Change: Some educators and institutions remain hesitant or reluctant to embrace AI in the classroom. This reluctance often stems from limited understanding, fear of job displacement, or concerns that AI might diminish meaningful human interaction in education.

viii) Overdependence on AI Technologies: Excessive reliance on AI systems in teaching and learning processes could potentially undermine students' critical thinking abilities and problem-solving skills, making them overly dependent on automated assistance.

ix) Quality Assurance and System Reliability: Maintaining the effectiveness and accuracy of AI tools requires continuous updates, performance monitoring, and refinement. Without these, the quality of automated grading, feedback, and personalized learning may decline, affecting trust and reliability.

x) Difficulty Aligning AI With Existing Curricula: Integrating AI technologies into pre-established curricula can be complex. Ensuring that AI tools support current educational goals and standards without disrupting course design poses significant challenges for educators and administrators.

xi) Evolving Role of Educators: The integration of AI in education necessitates a redefinition of the teacher's role—from being primary knowledge providers to acting as facilitators, mentors, and guides. This paradigm shift calls for extensive professional development and adaptability among educators.

O3 & RQ3 : Analysis & Discussion on Ethical Considerations for Adoption of AI in Educational Scenario

Some of the ethical considerations for implementing AI in educational settings are as follows :—

i) Safeguarding Student Data Privacy & Security: Educational institutions are responsible for clearly communicating to students and their families how AI technologies gather, store, and handle personal information. Strict measures should be in place to prevent data misuse or unauthorized access.

ii) Ensuring Fairness and Eliminating Bias: AI systems must be carefully designed to be inclusive and unbiased, avoiding discrimination based on race, gender, socioeconomic status, disability, or any other factor. Promoting fairness in AI decision-making is essential.

iii) Promoting Transparency & Responsibility: It is important for institutions to explain how AI algorithms work and the reasoning behind their decisions. This transparency helps students and teachers understand AI's influence. In cases of errors or unfair outcomes, clear accountability should exist to address and resolve these issues.

iv) Supporting but Not Replacing the Educators: AI should act as a tool to assist teachers, not as a substitute for human instruction. Educators must continue to play a central role in the learning process and should retain authority over key educational decisions.

v) Ethical Use of AI in Student Evaluation: AI applications in student assessments should aim to enhance learning outcomes rather than impose unnecessary surveillance. Automated grading systems need to be accurate, fair, and free from errors that could negatively affect students.

vi) Encouraging the Students Autonomy: AI should serve as a guide to support learning but must not take over decision-making for students. Learners should be empowered to think independently and make their own informed choices.

vii) Protecting Students' Mental and Emotional Health: Feedback provided by AI systems should be constructive and encouraging, fostering a positive educational experience. AI should not create undue stress or pressure through constant monitoring or automation.

viii) Ensuring Equal Access to AI Resources: Educational institutions should strive to provide equitable access to AI-driven tools and resources for all students, regardless of their financial situation, to prevent widening the digital divide.

ix) Upholding Academic Integrity and Preventing Misuse: AI-generated content and chatbots should not facilitate cheating or plagiarism. Schools and colleges need to implement clear policies and guidelines to prevent improper use of AI technologies.

x) Ongoing Evaluation and Ethical Oversight: AI systems must undergo continuous assessment to ensure they are operating ethically and contributing positively to education. Regular audits can help maintain trust and accountability.

xi) Fostering Critical Thinking and Creativity: AI tools should be leveraged to promote skills such as critical thinking, problem-solving, and creativity. The aim is to enhance active learning rather than encourage passive absorption of information.

CONCLUSION

The integration of Artificial Intelligence (AI) in education has demonstrated transformative potential in reshaping learning experiences for the 21st century. AI-driven applications enhance personalized learning, automated administrative tasks and provide intelligent tutoring, fostering efficiency and inclusivity in educational settings. As AI continues to evolve, it is expected to bridge learning gaps, improve accessibility, and optimize student engagement through adaptive technologies. AI-driven technologies offer numerous benefits that improve educational outcomes among students. Despite its numerous advantages, challenges, ethical considerations, data privacy concerns and the digital divide must be addressed to ensure equitable access and responsible AI deployment. Educators, policymakers, and technology developers must collaborate to create frameworks that balances innovation with ethical responsibility. The role of Artificial Intelligence in education is not only a technological advancement but also a paradigm shift that redefines traditional learning methodologies. Future research and policy efforts should focus on ethical AI deployment in education, adopting human centric approach, ensuring equity and quality learning experiences for all.

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**SCHOOL EDUCATION AND NEO-LIBERALISM WITH SPECIAL
REFERENCE TO GEOGRAPHY CURRICULUM:
A THEORETICAL PERSPECTIVE**

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ABSTRACT

India's economic reform in 1991, globalization, and privatization affect the education system. Neoliberal thinkers support a market having free economy, which describes the establishment of private organizations. These private institutions have the freedom to establish market prices whatever they want. Neo-liberalism supports a laissez-faire economy and short intervention by the government. It deals with increasing the effect of privatization and decreasing the effect of direct government involvement. The efficiency of market competition receives significant emphasis. The researcher wants to see the history of school education in West Bengal and also teaching-learning strategies for geography classes in the schools. The researcher purposively selected the three districts in West Bengal. The current study's technique is grounded in qualitative research. To collect primary and secondary sources of data, the researcher used a historical research design for this study. It finds that after 1991's economic reform, private educational institutions have continuously grown. Private schools maintain the qualities that help to strengthen students' content knowledge more than that of government schools.

Keywords: Globalization, Geography Curriculum, School Education, Neo-liberalism

INTRODUCTION

Neo-liberalism means a free market capitalism policy. Where every individual has the freedom to establish market focus upon privatization and global trends. For education purpose, neoliberalism deals with the establishment of private institutions with respect to globalization. After 199, India's reform, globalization, and privatization affected the education system. Neoliberal thinkers support a market having free economy, which describes the establishment of private

organizations. These private institutions have the freedom to establish market prices whatever they want. Neo-liberalism supports a laissez-faire economy and short intervention by the government. Neoliberalism deals with increasing the effect of privatization and decreasing the effect of direct government involvement. It is greatly emphasized on the efficiency of the market competition. In India, the government provides financial support for the school education system, but in the era of globalization and technology-oriented education system, many private schools have grown up. Globalization also discusses the quality education and skill-based education system with the basis of curriculum innovation. The term globalization is also frequently used in geography. It is used to describe how trade and information technology have made the entire world into a connected and interdependent place. In the geography curriculum, economic, social, regional, and so on portions are there; these all reflect upon globalization, and private institutions provide quality and skill-based education to the learners.

LITERATURE REVIEW OF THE STUDY

- a) Banerjee (2006) had conducted a study on “Geography education in Indian schools”. The aim of the study was to see the development and to investigate the dynamics and practicality of geography as a subject that is taught in the schools. Research focused on some thought that was a geography textbook written by an Indian or regional geographer, not as much quality as the foreign author. Women were getting more interested in admission in geography than men. But in the post-1991s, Indian men were also interestingly attracted to geography with the revolution of IT sectors, GIS, etc., for getting jobs. Geography curriculum is examined, and global issues are incorporated into it.
- b) Alam (2010) had conducted his study on “Recent trends in school geography in India”. The aim of this study was to see the trends of geography in Indian schools with the help of NCFSE and NCF. This research was fully based upon a qualitative study that had focused on secondary data. The result showed that NCERT had focused upon students’ geographical skills and knowledge. Integration of geography under social science may have a negative effect on the quality of geography in the school curriculum. Geography should reflect some of the major issues about the world; it will make the students aware of the world. At the end, both the policies had ignored ‘world geography’ and its implications in terms of developing an international perspective among schoolchildren. Geography curriculum should be included with world geography so that students could know about the world and different territorial knowledge, particularly in the field of globalization.
- c) Butt (2011) had conducted his study on “Globalization, geography education and the curriculum: what are the challenges for curriculum makers in geography?”. The objective of the study was to see the challenges for curriculum makers in geography education. This study was analytical and qualitative in nature. In the conclusion, results showed that geography curriculum makers faced the challenges of seeking to conceptualize globalization and the present opportunities for curriculum makers in geography and

beyond. Creating a conflict between globalization and global capitalism. If schools explore themes related to globalization, they will have to face challenges, but it will be helpful for their lifelong learning. Another thing was globalization should not be the main focus area in the part of the geography curriculum.

- d) Mondal & Basak (2017) had conducted their study on “Private vs. Public school in the present scenario of basic education-a case study of Barasat Municipality, North 24 Parganas”. The objective of this study was to evaluate the comparison between public and private schools at the basic education stage in Barasat. The researcher used qualitative research methodology for conducting the study. The result showed that infrastructure, quality of education, and quantities of teaching staff are poorer in public schools than in private schools, and it had accelerated mushroom growth of primary schools.
- e) Singh (2020) had conducted his study on “Geographic education in Indian schools: development, trends and issues”. The aim of this study was to track down the evolutionary history of geographic education in India at the school level. The researcher had conducted this study with a descriptive analytical view. At the conclusion, it was seen that geography and geographical awareness were very well developed in ancient India. Geography is facing a crisis of survival in India. That’s why the future of Indian geography is not so bright. It needs some positive redesign.

NEED AND SIGNIFICANCE OF THE STUDY

Given the prevailing global worldview of neo-liberalism, which emphasizes individual responsibility, market-driven policies, privatization, and deregulation, the necessity and usefulness of geography curricula in schools assume new significance. Critical thinking about the global system and understanding of issues like urbanization, migration, and climate change—all of which are frequently depoliticized in neoliberal discourse—are fostered by geography education. Other factors include the ongoing expansion of private schools, the provision of teaching-learning strategies, and the impact of global challenges on the educational system of both public and private educational institutions. The provision of a skill-based education system is also essential. Therefore, in light of neo-liberalism, it is thought important to carry out a study on the geography curriculum in schools.

OBJECTIVES OF THE STUDY

1. To know the history of neo-liberalism in school education.
2. To know about the teaching-learning strategy of geography classrooms in the schools in the light of neo-liberalism.

METHODOLOGY

The approach of the current study is grounded in qualitative research, which includes the historical research technique with primary data sources (reports from the Indian government

about school education) and secondary data sources (books, journals, websites, etc.). Analysis of objective 1 is delimited to West Bengal only.

NEO-LIBERALISM AND EDUCATION POLICY

In the neo-liberal era, education is constantly evolving. By privatizing as many government functions as possible, including education, neo-liberals hope to reduce the size of the state. Furthermore, companies, non-profit groups, and philanthropic organizations have a greater influence on policymaking since the government's role is diminished and local control is weakened. Last but not least, the outdated bureaucratic structures that are thought to be too sluggish to react to market forces are to be replaced by market-based institutions in education and other government agencies. Neoliberals aim to privatize things like transportation, healthcare, and education. Education has been radically changed under the ascendancy of neoliberal ideologies. The emphasis on markets affects how government's role is conceived and policy is developed. By privatizing as many government functions as possible, including education, neo-liberals hope to reduce the size of the state. Furthermore, companies, non-profit groups, and philanthropic organizations have a greater influence on policymaking as a result of the diminished role of government and the erosion of local control. Last but not least, market-based institutions are to replace government agencies and educational institutions. Furthermore, the new public management replaces the outdated bureaucratic structures that are thought to be too slow to react to market forces, changing the way schools are run. With the help of standardized tests and other quantitative metrics, new public administration places more importance on output and performance than on inputs and procedures, such as funding and standards. "Governance through numbers" refers to the use of standardized tests to hold teachers and students accountable. Neoliberals also aim to replace bureaucratic, hierarchical administration with governance, which is the power of adaptable, diverse networks. It is now easier for the wealthy and well-connected to influence and profit from the decision-making process because of the rise of networks and the replacement of hierarchical public policy-making with hierarchical and frequently private policy-making. Additionally, decision-making has shifted from local and provincial levels to national and international levels (Ball and Junemann, 2012).

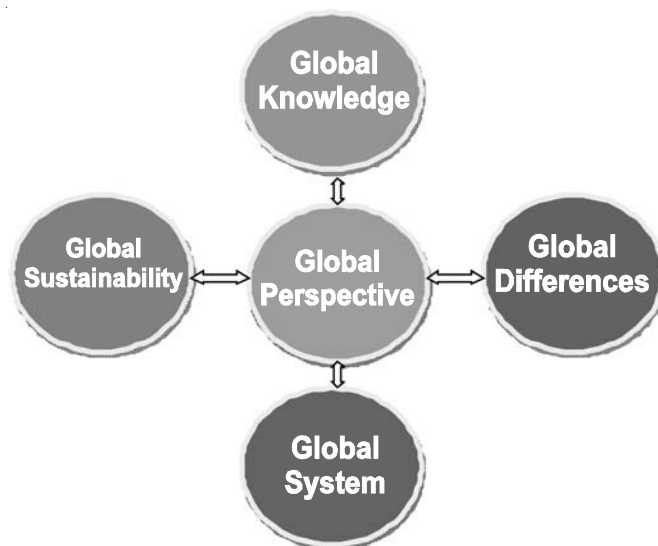
EFFECT ON NEO-LIBERALISM ON INDIAN EDUCATION SYSTEM

In 1994, India ratified the General Agreement on Trade in Services (GATS), which was part of the World Trade Organization (WTO), entered in 1995. The World Trade Organization's policy recommendations opposed using public funds to expand higher education. Due to financial limitations imposed on state governments by several neoliberal fiscal "reforms" and fiscal concessions to capitalists, the quality of public institutions has begun to decline. Universities are supposed to provide the world market with skilled labour. It should come as no surprise that the deplorable condition of public higher education has caused private institutions to proliferate (Patnaik, 2007). Higher education, according to the World Bank's report "Higher Education: Lessons of Experience," is a private and quasi-private product that enables students to demand a larger market for their abilities. These are private profit-making organizations that are in the business of teaching in order to make money, not private charity organizations that have

operated with some degree of independence from the government. The neoliberal shift in higher education was aided by the Private Universities Act of 1995. A notable example of how private capital has increased its participation in higher education is the rise in deemed universities, the opening of private universities, and the resulting rise in enrolment in these establishments. Subsidies for higher education were subsequently cut in 1997. It was suggested that subsidies be reduced from 90% to 25% over a five-year period. The Ambani-Birla Report from 2000, which suggested that the subsidized system be completely retracted by 2015, supported this plan. Aside from the push to raise an increasing amount of funds from non-state actors, privatization is flourished at various levels, even within universities, such as through the contractualization of the teaching and non-teaching staff. Here, the intelligentsia's role becomes important. They develop into important tools that foster agreement in support of areas. It will be necessary to usurp the role of intellectuals and everyone who is eager to keep higher education a place where independent and critical thought can flourish.

GLOBALIZATION AND CURRICULUM CHANGE

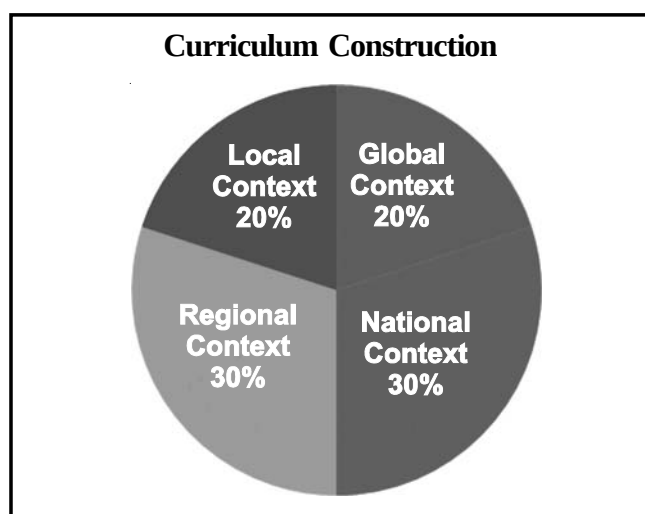
Continuous educational changes are happening due to the direct effect of globalization. The blurring of geographic borders to embrace diversity in educational practices, resources, and culture in order to take advantage of the global educational treasure trove is known as globalization in education. India's international boarding schools support global education by giving students access to the greatest staff members and an extensive, limitless library of learning materials. In order to eliminate regional barriers to education and unite cultures, races, faiths, and traditions from throughout the world, schools accept international exchange students. By teaching them about current events, global concerns, and issues, students are ready to become global citizens and learn from their peers. Let's study more about how globalization affects education.



(Source: Turk & Atasoy, 2020, p: 70)

Figure 1: Global Awareness in Education

For students to remain educated and establish their own opinions in the present period, they must be exposed to the social, economic, political, and cultural agendas on a global scale. Additionally, it fosters a sense of community rather than loneliness. To make wise decisions, it is essential to have a global perspective. The organization of contents must use the 'Thematic approach', which means contents under curriculum construction must be from local to regional and from national to global context (NCFSE, 2023). According to NCFSE 2023, curriculum must contain-



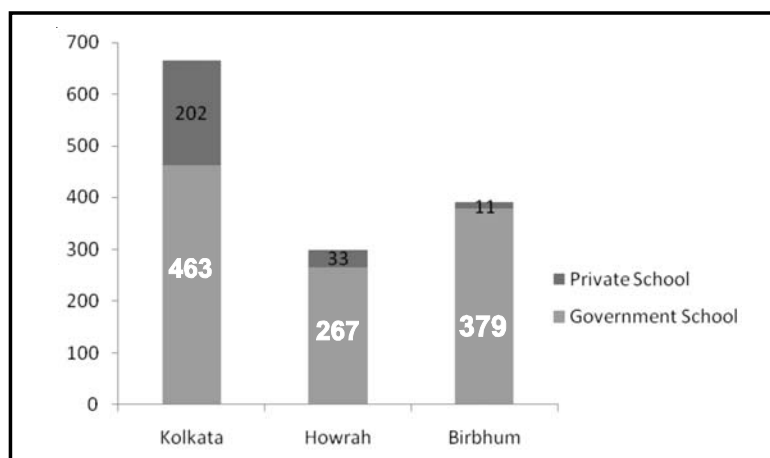
(Source: NCFSE: 2023)

Figure 2: Curriculum Construction based on NCFSE: 2023

FINDINGS AND DISCUSSION

Objective 1: To know the history of neo-liberalism in school education

An essential component of any generation's development is education. Free market capitalism is a component of neo-liberalism. This strategy entails integrating private organizations into society. Compared to government educational institutions, private colleges offer top-notch educational facilities at higher profit margins through tuition increases. Talk primarily about school education. West Bengal was a major contributor to the creation of India's current educational system. West Bengal introduced Western educational models to India. William Carey, Iswar Chandra Vidyasagar, Raja Ram Mohan Roy. David Hare were instrumental in the successful founding of contemporary schools in West Bengal. The data was gathered by the researcher from the aforementioned three West Bengal districts: Howrah, Birbhum, and Kolkata. The researcher selected three districts in West Bengal's government and private secondary and upper secondary schools for this topic. These are Birbhum, Kolkata, and Howrah. For this purpose, data is gathered from government-affiliated secondary and higher secondary schools as well as private institutions between 1900 and 2020, or before and after independence.



(Source: Sengupta & Divyagunananda, 2020)

Figure 3 : All public and private schools in three West Bengal districts

In conclusion, it is evident from the aforementioned research that, in comparison to Howrah and Birbhum, Kolkata has the most government and private secondary and upper secondary schools out of the three districts. The bar graph above further demonstrates how advanced private institutions are in the districts of Kolkata and Howrah, with the majority of private schools emerging as a result of the Indian economic reforms of 1991. Numerous studies have demonstrated that, in comparison to government schools, private schools offer higher-quality education, and many members of the middle and upper classes wish to demonstrate their social standing by enrolling their kids in private schools. Data also showed that, due to economic status, private school education—primarily secondary and higher secondary—is expanding more quickly in Kolkata and Howrah than in Birbhum. The districts of Birbhum are undoubtedly in worse financial shape than Kolkata and Howrah. Following India's economic reforms in 1991, West Bengal and India both saw the full impact of neo-liberalism. Consequently, private educational institutions entered the market with the intention of making as much money as possible while still offering high-quality instruction.

Objective 2: To know about the teaching-learning strategy of geography classrooms in the schools in the light of neo-liberalism.

Teaching-learning techniques or strategies are most important while engaged in a subject curriculum. Child-centred pedagogy, as defined by NCF-2005, prioritizes children's experiences, voices, and active engagement. According to this strategy, geography teaching and learning strategies should be centred on assisting students in gaining information and skills in a dynamic setting. It is crucial that the process of learning encourages both teachers and students to be creative and inquisitive. Geography instruction has to embrace approaches that foster critical thinking, creativity, and aesthetics. As a key facilitator of curriculum implementation, the geography teacher must clarify ideas in a way that students can understand and work to make learning

more interactive by moving beyond merely teaching facts to include students in debate and discussion. The main objective of the NCFSE 2000 was to reduce the study pressure on the school children (Singh, 2020). Curriculum load is very harmful for school students. Students learning based on investigation in the field are also an important part of the students' cognitive development (Aliman et al., 2019). According to NEP 2020, the main focus goes on students' skill development and strengthening students' constructive knowledge. Both government and private educational institutions should provide less emphasis on input but greater emphasis on learning outcomes and also reduce the curriculum content to enhance essential learning and critical thinking.

Table 1 : Constructive students' improving learning outcome

Factors	Impact upon students' learning
Subject Knowledge	Teachers with their subject knowledge and understanding should focus on students' learning. They should think about how students learn the contents very precisely and also should identify the learners learning drawbacks from the topics.
Quality teaching instruction	Proper questioning and the use of proper assessment by the subject teachers are also important for the students' quality learning through providing clues and extra time to solve the problems.
Climate of the classroom	The interaction between students and teachers should be of high quality.
Classroom management	The effective use of learning time and good quality of school managing behaviour

(Source: Coe et al., 2014)

Some key teaching-learning strategies for geography classes are given below :

1. Interactive maps and globes-Use physical maps and digital maps for students' spatial awareness, which visualize locations and regions.
2. Excursion-Visit to the geographical places (river, mountain, plain land areas, etc.) to provide real-world learning experiences.
3. Project-based learning- Encourage the geography students to participate in the project by instructing them to develop a model, presentation, or research- related project to strengthen the content knowledge.
4. Uses of technology-Use of technology in terms of uses of projectors, digital print materials is also helpful to students, which helps them to acquire constructive knowledge.

5. Case studies and current information provide knowledge about real-world geographical events like earthquakes, floods and deforestation to connect theoretical knowledge to practical application.
6. Group discussion and debates-organize inter and intra quiz, debate competitions to help the students to acquire information beyond the syllabus. Group discussion also strengthens student concepts about the subject.

Private schools provide much more qualitative teaching-learning strategies in terms of technology assistance, projects/ assignments, extracurricular activities for students' learning than government schools.

CONCLUSION

In India, school geography was first taught using a disciplinary colonial framework. Like everywhere else, particularly in Europe, its content was heavily influenced by regional and physical landscape. Following the nation's independence, goals were reassessed, and educational practices changed over time. Only when geography is taught so that the components of the social and physical sciences are examined within the regional framework can the subject's true educational value be realized. Global processes may impact local events, while local events may influence global processes in the age of globalization. In West Bengal, private schools are growing up here and there. After 1991's economic reforms in India, private educational institutions have continuously grown. Private schools maintain the qualities that help to strengthen students' content knowledge. Due to high in-school fees, many people cannot afford this. So, the government should take initiatives for updating government school teachers teaching abilities through organized workshops, seminars, etc.

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TRIBAL EDUCATION IN WEST BENGAL WITH SPECIAL REFERENCES TO EKALAVYA MODEL RESIDENTIAL SCHOOLS: A CASE STUDY

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ABSTRACT

India has the largest tribal population in the world, accounting for 8.6% of the total population. According to the 2011 Census of India, this accounts for 8.6 percent of the total population of the country. Various initiatives and schemes of the central government and various state governments in India cover the aspect of education for the scheduled tribes. Eklavya Model Residential School (EMRS) is a Government of India scheme for a model residential English medium school, specifically for Scheduled Tribes across India. EMRSs started in 1997–98 to impart quality education to ST children. The schools focus not only on academic education but also on the all-round development of the students. Each school has a capacity of 480 students, from Class VI to XII. The study objective is to assess the functionality of the Eklavya model residential schools situated in West Bengal, taking into consideration different aspects of a school-system and any other important aspect presented. This study will help to know the present condition of the Eklavya Model Residential School Program and help to look beyond the ambiguities concerning the status of these schools. The methodology followed was qualitative in nature. The study has different sources, like data that was gathered through interviews (both with teachers and students), observation by the researcher, and official documents from the Government of India's Ministry of Tribal Affairs. This study can serve as first-hand data on all the Eklavya Model Residential Schools in West Bengal and their current status.

Keywords: Tribal Education, EMRS, Scheduled Tribes, Different Aspects.

INTRODUCTION

Education is the most vital prerequisite for the overall development of a nation, with special importance given to the development of its human resource. But the target is still far from being reached if the right to education is not given to all sections of society. It is particularly necessary to give chances of education to socially and economically backward classes so that they are given educational chances equal to their social and economic status. In the Indian context, priority must be given to the education of backward classes. Since the Scheduled Tribe children are in a disadvantageous position, they must be given the priority. Despite various initiatives and schemes having been initiated by the central as well as state governments for education among the Scheduled Tribes, the implementation is inadequate. The weak implementation of such initiatives is visible in the bad educational condition of the Scheduled Tribe children year after year, as reported in various government and non-government reports.

Scheduled Tribes in India are the most economically as well as socially deprived communities in India. A population of around 10.45 crores makes own tribal population as the largest in the world. This makes them 8.6% of the country's total population, which includes 5.25 crore males and 5.20 crore females. This population was recorded for the decadal growth of 24% from 2001 in the next census, which will take place in 2011.

When any government goes for a plan to improve educational provisions for citizens, those plans mostly address distance from the facilities provided and the population size they are catering to. But these do not usually match the needs of tribal areas. Hence the national and provincial governments of India have realized the need of policies, norms and approaches which are flexible while addressing education of tribal people. So, there is an evident need to apply innovative strategies like community schools or special schools. In response, the government of India took the initiative of establishing Eklavya Model Residential Schools (EMRS) at localities where the scheduled tribe population is incidentally higher.

EMRS is a Government of India scheme for a model residential English medium school, specifically for Scheduled Tribes across India. EMRSs started in 1997-98 to impart quality education to ST children. The schools focus not only on academic education but also on the all-round development of the students. Each school has a capacity of 480 students, from Class VI to XII. The EMRSs in West Bengal (Total 7) were established in two phases. In the districts of (Jalpaiguri, Burdwan, Purulia, Bankura and Jhargram) the EMRSs are functioning since the academic year 1997-98 and the rest two EMRSs of Dakshin Dinajpur and Birbhum district are functioning since the academic session 2005-06. In the midst of the conflict between a very noble initiative by the government which is reportedly running successfully and the reports and research outcomes on the same which reflects a different story it is essential to point out the actual case and dig deeper.

OBJECTIVES

- To find out if the objectives stated by Ministry of Tribal Affairs for Eklavya model residential school program are being fulfilled by the schools under this program.
- To assess the functionality of the Eklavya model residential schools taking in consideration different aspects of a school-system, namely;- Teaching-Learning-Evaluation, Infrastructural Facilities, Human Resources, Student Progression, Co-curricular Activities and any other important aspect presented.
- To explore the prevalent problems these schools are facing at present and the probable solutions for the problems at hand.
- To know how much the educational provision provided by these schools help their students in attaining achievement in higher education or placement in future life.
- To study how much these schools help their students to be acquainted with their tribal culture.

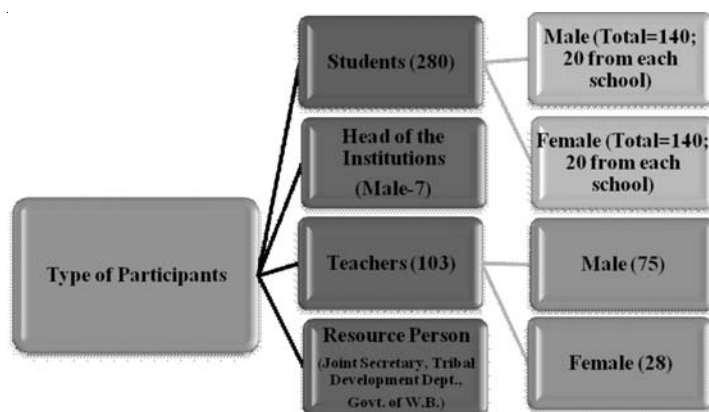
METHODOLOGY

Case study method was adopted by the researcher for this particular study. The study was qualitative in nature. It was an intrinsic organizational case study.

Target Institutions

Sl No	Name of the Institution	Location	District
1	Eklavya Model Residential H.S. School	Nagrakata	Jalpaiguri
2	Eklavya Model Residential School	Kuarsal, Buniadpur	Dakshin Dinajpur
3	Eklavya Model Residential High School	Kankutia, Bolpur	Birbhum
4	Eklavya Model Residential School	Raghunathpur	Burdwan
5	Eklavya Model Residential School	Susunia, Manbazar-II	Purulia
6	Eklavya Model Residential School	Mukutmonipur, Gorabari	Bankura
7	Ramakrishna Mission Vidyamandira (EMRS)	Satyaban Palli, Jhargram	Jhargram

Participants



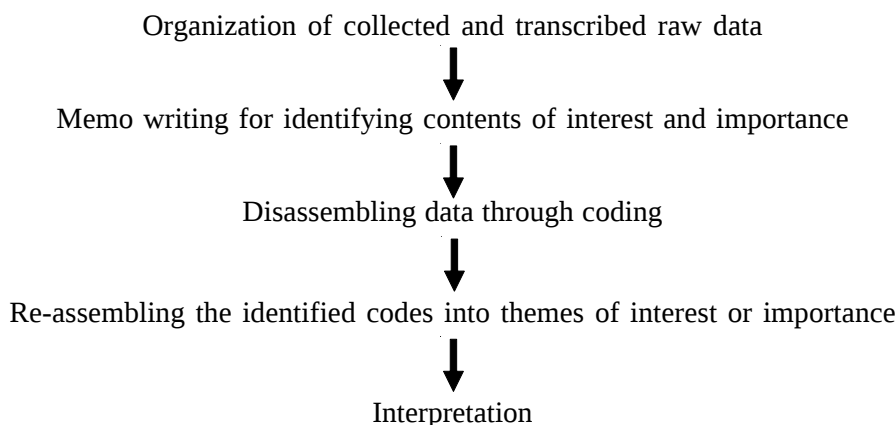
Tools

- Observation as a Tool
- Information Bank for HOI
- Open-ended Questionnaire for the Teachers
- Open-ended Questionnaire for the Students
- Interview Schedule for the Resource Person

Techniques of Data Analysis

Collected data in the form of data bank with the help of observation was analyzed by comparing data obtained from different institutions and presented in tabular forms.

All other data collected in written form using open-ended questionnaire or interview-schedule was analyzed by qualitative content analysis through the following steps;



Then corroborated using data collected from the resource person.

Comparative representation of data gathered using information blank is done. The data gathered in written form (data collected from participants) are analyzed by qualitative content analysis through generation of relevant codes and themes. Data collected from resource person through interview is presented and used for corroboration of previously collected data.

FINDINGS OF THE STUDY

Findings with respect to Research Question Q₁: *Do the schools aim at overall development of the students as stated in the objectives for the Eklavya Model Residential School program by the Ministry of Tribal Affairs?*

- The teachers of EMRSs of West Bengal are found to be very much concerned about the overall development of the students. Not only cognitive development through teaching-learning, but also physical and social aspects of developments are taken care of by regular physical activities, ensuring timely intake of food, involvement in various cultural programs, different exposure programs, inter-school tournaments and making them confident to express their own thoughts.
- The Tribal Development Department of West Bengal government takes various initiatives regularly to improve the condition of EMRSs from the inception of this school programme in this state keeping in mind all-round development of the students belonging to Scheduled Tribes.

- One of the objectives of EMRS programme is to provide children belonging to Scheduled Tribes with quality education. In West Bengal the district of Maldah has one of the higher ST populations. Yet, there is no EMRS established till date.

Findings with respect to Research Question Q₂: *Do the schools provide educational support to students according to their different levels?*

- According to the objectives of EMRS scheme, these schools are to provide educational support to the students of VI to X standard separately from the students of XI-XII standard. Among the seven EMRSs present in West Bengal, Birbhum and Dakshin Dinajpur till now don't have any Higher-Secondary standard students. Apart from these two, all other EMRSs have facilities for providing Higher-Secondary students with special coaching. Special exposures are given to H.S. students of Paschim Medinipur by making them participate in camps, institution visits, providing them with information about job and career, making them seat in competitive examinations. In Purulia too, the H.S. level students are provided with career and job-oriented information. The Higher Secondary level students need a proper laboratory set up, which is absent in most of the EMRSs of West Bengal.

Findings with respect to Research Question Q₃: *Does the fund provided is being properly used or sufficient for providing remuneration to the staff and upkeep of the educational facilities?*

- According to the teaching and non-teaching staff of the all seven EMRSs of West Bengal the salary provided to them is not sufficient and it is much lower than same category staff of other government or government-aided schools. The dissatisfaction concerning salary is supported by the resource person too. The overall condition of educational facilities from the school building itself to the teaching-learning materials is not very good in these schools, except Birbhum and Paschim Medinipur.

Findings with respect to Research Question Q₄: *Does the infrastructural facilities satisfy educational, physical, environmental and cultural needs of students?*

- Infrastructural facilities such as school building, learning materials, hostel building etc in the EMRSs of West Bengal need much more improvement if it is to satisfy the educational needs of students. The laboratories are in a sorry state in most of these institutions. No proper library facility provided in some of them. The teachers and students of all these institutions expressed the need of integrating ICT into the classrooms.
- The physical and environmental condition of all these institutions is basically good. But in some of them there exists lack of proper maintenance and needs immediate renovation and regular cleaning. All these schools are situated in locations far from crowded cities. All of these institutions have huge compounds. The EMRSs of Burdwan, Bankura, Purulia, Jalpaiguri, Dakshin Dinajpur need more maintenance of the school compounds outside school building by decorative gardening or more plantations of trees, clearing of the bushes etc. The school and hostel buildings of Burdwan, Bankura and Purulia are also in a very sorry state.

- All the EMRSs of West Bengal take initiatives to make the students culturally aware. In all these institutions students take part in cultural programmes organized by themselves with the help of teachers on occasions like observation of days with national or cultural importance, annual function, Saraswati Puja etc.

Findings with respect to Research Question Q₅: *Do the schools under Eklavya model residential school program function properly in the aspects of teaching, learning and evaluation?*

- Admission process in all the EMRSs involves taking admission test. Age-appropriate admission policy is not found in practice in most of these institutions.
- Although the schools under EMRS scheme are built as English-medium schools, in West Bengal, English is not used as the only medium of teaching in EMRSs.
- In most of the schools TLMs are not available as required. Even in schools which have a good number TLM, those are not used regularly by teachers. In EMRSs of Burdwan, Bankura, Dakshin Dinajpur TLMs are not used at all.
- Use of computers is a part of modern education system. There are computer laboratory present in each of the EMRSs. But in some of the institutions the computer laboratories are not maintained or upgraded making them unusable.
- All the schools are found to maintain provisional routine on daily basis.
- Less importance is given to class-test or remedial examination in most of these schools. The resource person interviewed informed the same. But, in all of them special classes are taken for weaker students. These data is supported by the resource person's feedback. Also, the teachers try to inform guardians about progress or problems of their wards either in parent-teacher meetings or by meeting the guardians personally.
- In all the EMRSs the summative evaluation is purely internal. No questions are borrowed or examiners are hired in any of these institutions.

Findings with respect to Research Question Q₆: *Do the schools under Eklavya Model Residential School program are involved in any innovative or best practices concerning teaching, learning or evaluation?*

- Very few innovative approaches are found concerning teaching-learning-evaluation in EMRSs of West Bengal. In some of them there are special classes or courses provided to students of Jalpaiguri, computer-assisted foreign language learning facility in Burdwan, special exposure programmes for students of Paschim Medinipur etc. But overall innovation is less. Most of the teachers of these schools follow the chalk and talk method only.

Findings with respect to Research Question Q₇: *Do the schools under EMRS program function properly in the aspects of providing proper infrastructural facilities?*

- In all of EMRSs the infrastructural facilities of the school building are found to be good. There are some problems considering maintenance of those existing facilities as observed and reported by the resource person. Specifically in Bankura and Burdwan the building was well-structured learning but now in bad condition due to zero maintenance. There are issues with proper level of cleanliness in Purulia too. In South Dinajpur and Bankura there is a shortage of water supply in school building.
- The infrastructural conditions of class rooms in Jalpaiguri, Dakshin Dinajpur, Birbhum, Bankura and Paschim Medinipur are observably good. There are issues with maintenance of classroom furniture in Purulia and Burdwan. Cleanliness of the class rooms is not properly maintained in EMRSs of Burdwan, Purulia and Bankura. No multipurpose hall, prayer room and students' common rooms in school building of any of the EMRSs. All the schools have a specific area dedicated for assembly of students before commencement of school. Paschim Medinipur EMRS has a well-structured and well maintained prayer room in hostel premises.
- The library facilities are running properly only in Birbhum and Bankura EMRSs and found to have various types of books in them. In Paschim Medinipur and Purulia various books are present, but students are not found issuing books on regular basis. In Burdwan there is a facility mentioned as library, but actually it is a book bank having only text books. In Dakshin Dinajpur and Jalpaiguri this facility is completely absent.
- No language or Mathematics laboratory present in any of the EMRSs. Overall condition and availability of equipments in laboratories vary between EMRSs of West Bengal. The computer lab of Burdwan is very well equipped but other laboratory set-up is not usable due to absence of power and water supply. In Paschim Medinipur, very well structured Life Science Laboratory set-up with advance equipments present. All the other lab infrastructure and equipments are newly brought, but yet to be set-up. Science laboratory facilities are totally absent in Jalpaiguri and Dakshin Dinajpur. In Purulia and Bankura laboratory instruments are present, but separate space for laboratory of each subject is not available.
- There are some recurring problems in hostel buildings of each EMRS like; one boys' hostel outside main campus in Dakshin Dinajpur, insufficiency of rooms in Burdwan, unhealthy condition of rooms in Purulia, Bankura and Burdwan, problem of water supply in Purulia and Bankura etc. Hostel facilities of Paschim Medinipur and Birbhum are found to be in good condition. According to the resource person, all the schools have proper sanitation facility in school buildings except Purulia. There is water problem in school building of Dakshin Dinajpur and in hostel buildings of Purulia and Bankura. In Purulia and Bankura there are issues with cleanliness of the sanitation facilities in school building. In Paschim Medinipur, the sanitation facility for teachers is excellent. Special facilities available for students in hostels of Birbhum are commendable.

Findings with respect to Research Question Q₈: *Do the schools under Eklavya model residential school program function properly in the aspects of human resource management?*

- Human resource shortage is present in most of the EMRSs of West Bengal. Managing the human resource available depends upon efficiency and good relationship of school management or head of the institution with rest of the staff. At present only in Paschim Medinipur this situation is as per expectation. In all other EMRSs of West Bengal there are one or more issues concerning relationship of head of the institution or the management or the government officer in charge with rest of the staff. This particular problem is mirrored in the opinion of the resource person. Although in Dakshin Dinajpur, Birbhum and Paschim Medinipur the teaching and non-teaching staffs are found to be very much enthusiastic and have good relationship among them.

Findings with respect to Research Question Q₉: *How do the schools under EMRS program function in the aspects of student progression?*

- There are small initiatives like giving students special coaching during the evening, special coaching for students appearing in board examinations in Bankura and Purulia etc. There are special initiatives too like special lectures by army officials in Jalpaiguri, special exposure programmes and classes by resource persons in Paschim Medinipur, special talks by professionally successful ex-students in Purulia, foreign language learning facility in Burdwan etc. There are very few initiatives observed or noted regarding students' progression beyond curricular and co-curricular activities in Dakshin Dinajpur.

Findings with respect to Research Question Q₁₀: *How do the schools under Eklavya model residential school program function in the aspects of co-curricular activities?*

- The students are on regular basis involved in various co-curricular activities in all the EMRSs of West Bengal. All the EMRSs have facilities of games and sports for both girls and boys. Although according to the students and the resource person interviewed, the facilities are not upto the mark. Some of the EMRSs organise inter-school tournaments. Students of Burdwan and Birbhum participated in various sports meets up to national level and succeeded. Although in some of the EMRSs sports equipments are not sufficiently present which creates problem for the students. According to the resource person interviewed, initiatives to promote students' potential in matters of sports is less. The students are involved in organizing cultural programmes in various occasions throughout the year. In many EMRSs guest teachers or trainers are hired for giving students song, dance or painting lessons. Students of Paschim Medinipur participated in Republic Day march-past in Kolkata and got special recognition for the same.

Findings with respect to Research Question Q₁₁: *What are the prevalent problems in running of the schools under EMRS program?*

- There is a problem regarding administration in most of the EMRSs except Paschim Medinipur. In some cases like Dakshin Dinajpur and Jalpaiguri the requirements of

students and teachers are put forward to management but the materials don't reach the school on time.

- There is a major dissatisfaction among all teaching and non-teaching staff regarding salary. Without proper remuneration the staff of these schools may become reluctant.
- There is another problem regarding appointment of teachers. The teachers are appointed on contract basis. They have a constant fear of losing their jobs.
- There is problem with up-gradation of teaching-learning process in most of the cases, as most of the teachers till now follow only lecture method in the class.
- Library is an important part of any educational institution. There is an immediate need of improving the library facilities in all the EMRSs of West Bengal.
- Proper and sufficient residential facilities for teachers are not available in most of the EMRSs of West Bengal.
- Students coming from feeder sections for admission are of very low quality in general. These students come with almost no orientation about English language making it a hard job for teachers to teach them in English.
- The feeder school system funded by the state government is not yielding expected results at present. As an effect of corruption in local authorities, the students coming from the feeder schools don't even get the basic knowledge of English which create a problem when those students get admission in EMRSs.

Findings with respect to Research Question Q₁₂ : *What can be the probable solutions for the problems present in running of these schools?*

- Job security should be provided to teachers by making their posts permanent.
- Salary increment needed for making the job satisfactory for all staff.
- More communication and exchange of ideas needed between all the EMRSs of West Bengal. It has already started in forms of meetings on regular intervals.
- More importance should be given on development and maintenance of laboratory facilities.
- Supply of materials and making new facilities needed for improvement of teaching-learning should be taken care of immediately.
- Students coming from primary feeder sections should be given basic knowledge of English, so that they can adopt quickly after admission to these schools in sixth standard.

Findings with respect to Research Question Q₁₃ : *How much does the educational provision provided by these schools help their students in attaining achievement in higher education or placement in future life?*

- Data regarding placement or achievement of students after leaving school is not present in Burdwan and Jalpaiguri. Birbhum and Dakshin Dinajpur are two newly functioning EMRSs and no batch of students has yet faced the higher secondary board exams from these two schools. In Paschim Medinipur and Purulia serious initiatives are taken to provide students with information about competitive examinations and they are given proper career guidance. In Bankura special coaching is given to students who want to appear in state-level joint entrance examination after completion of higher secondary examination.

Findings with respect to Research Question Q₁₄ : *Do the schools under EMRS program help students to be acquainted with their tribal culture?*

- Most of the students enrolled in EMRSs of West Bengal are first generation learners. Their guardians were found to be either farmers or daily labors. But their ward, the present students of EMRS aspire to be teachers, doctors, nurses, police men, army personnel etc. Almost all of them said they want to continue their study beyond school level. This can be said that the schooling of these students in EMRS built their urge to modernize themselves through education and be more sanskritized themselves.
- The students of these schools are made aware of cultures outside their tribal culture through various curricular and co-curricular activities. They are made accustomed to English language. Besides this, in most of the schools under EMRS in West Bengal, the students are supplied with musical instruments of their culture to perform in cultural programmes. In many cases, they are provided with training in tribal dance by professionals. Hool Day is observed in most of the schools and many other occasions are celebrated which have relevance in tribal culture of India. So, it can be said that the students of EMRS are re-tribalized by making them aware of their own rich culture in depth.

CONCLUSION

The magnitude of tribal education is not at all limited in providing the tribal children with formal way of education. It expands beyond the field of formal education. The true aim of tribal education is to make children belonging to Scheduled Tribe communities capable of earning their livelihood, ensuring their over-all development and nurturing their skills.

The EMRS programme conceived by Ministry of Tribal Affairs of Government of India is such a path in which aim of tribal education described in the previous paragraph can be achieved, if the programme is run properly. At state level in West Bengal EMRS programme is run under the supervision of Tribal Development Department, Government of West Bengal. Official documents and information collected from the department indicate that from inception of the EMRS scheme in West Bengal, concerned authorities took numerous initiatives to run the programme systematically in this state. Yet, at the time of study many problems are found to exist concerning the swift running of these schools.

In spite of the existing problems the EMRSs of West Bengal can be considered as having a very good prospect in the field of tribal education. In these institutions ST children not only from this state, but also from neighboring states get the opportunity of good quality education upto Higher Secondary level totally free of cost. There is always room for improvement for any institution, but at present the facilities provided in all the EMRSs are not average or bad. For instance in Birbhum, Paschim Medinipur and Jalpaiguri the school environment is very good. The hostel facilities of two out of seven institutes are very good, three institutions have average hostel facilities and rest two institutions need lots of improvement in the aspect of hostel facilities. The institutions need to improve various aspects of teaching and evaluation. But it can never be said that the teaching and evaluation system at present is awful. Much more exposure and guidance is needed by the students to achieve in future life. Although instances of success of ex-EMRS students in competitive examinations and work-sectors are not very rare.

Hence it can be concluded that although the present condition of EMRSs of West Bengal exhibit many problems in different aspects of school education and administration system, these institutions, upon which the institutional case study is performed, also show the potential to excel in the field of tribal education.

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BOOK REVIEW

THE POWER OF YOUR SUBCONSCIOUS MIND

Authored by Dr. Joseph Murphy



Murphy, J. (2015). *The power of your subconscious mind* (Paperback ed.). Amazing Reads, An imprint of India Book Distributors (Bombay) Limited, 312 Pages, ¹ 199, Paperback, Non-fiction, ISBN:978-81-929109-63

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Keywords: Conscious Mind, Subconscious Mind, Happiness, Success, Healing, Will Power

INTRODUCTION

The book under review is titled 'The Power of Your Subconscious Mind' by Dr. Joseph Murphy. It is one of the best-selling self-help classics of all time, blending spiritual wisdom, psychology, and practical techniques rooted in belief and subconscious programming. Filled with practical examples and testimonials, it teaches that the subconscious mind has immense creative and healing powers and can shape your reality when guided by thoughts, affirmations, and visualisation. Murphy explains that thoughts are seeds, and the subconscious is the fertile soil. By consistently planting positive, confident, and faith-filled thoughts, one can heal illnesses, attract success, improve relationships, and find inner peace. First published in 1963 by Prentice-Hall in English, the book was later published by Penguin, Hay House, and BN Publishing, among others, and translated into multiple languages worldwide. It is widely available in print, audiobook, and eBook formats. During the early 1960s, when the book was written, the world was experiencing significant psychological and cultural changes. People sought more control over their inner and outer lives—this book aimed to equip ordinary people with techniques to consciously work with the subconscious. It remains a foundational text in self-help literature and is often recommended alongside works by Napoleon Hill (*Think and Grow Rich*) and Norman Vincent Peale (*The Power of Positive Thinking*). This paperback edition is pleasantly portable, well-printed, and generally durable, with a well-bound cover and spine that holds up over time. It is printed in modern, easy-to-read English, suitable for a broad audience. The typeface is

generally standard serif or sans-serif, promoting comfortable, sustained reading. The overall reading experience remains positive. It's a reliable, everyday carry option for anyone interested in metaphysical self-help.

THE AUTHOR

Dr. Joseph Denis Murphy (1898–1981) was born in Ballydehob, County Cork, Ireland, in 1898. He studied for the priesthood in the Jesuit tradition in Ireland. He immigrated to the United States in the 1920s. He obtained degrees in chemistry, psychology, philosophy, and religious science (including Ph.D., D.D., LL.D.). He extensively studied Eastern religions, New Thought, Christian Science, Hinduism, and Metaphysics. He eventually became a New Thought minister and led the Church of Divine Science in Los Angeles for nearly 30 years. Murphy travelled to India and spent considerable time with Indian sages, learning Hindu philosophy. He later founded a new church in America based on Hindu ideologies. He was influenced by thinkers like Ernest Shurtleff Holmes, Emmet Fox, and Ralph Waldo Emerson. Murphy combined spiritual principles from the Bible with metaphysical ideas from the East and modern psychology, asserting that all people have the power to direct their lives through the subconscious. Murphy claimed to have healed a malignant tumour (sarcoma) using subconscious belief and visualisation, which laid the groundwork for his faith in the mind-body connection. He was inspired by the success stories he witnessed from his congregation and counselling sessions. His studies in autosuggestion, hypnotherapy, and biblical metaphors led him to develop a practical model of subconscious reprogramming. Dr. Murphy was a prolific author with over 30 books. Some key titles include: 'Believe in Yourself', 'How to Attract Money', 'Your Infinite Power to Be Rich', 'The Magic of Faith' and 'The Miracles of Your Mind'.

CHAPTER-WISE REVIEW AND DISCUSSION

In the introduction section (How This Book Can Work Miracles in Your Life), Dr. Murphy affirms that miracles occur when one learns to harness the 'magic power' of the subconscious mind. According to him, this book aims to explain the dual nature of the mind-conscious and subconscious and how mastering this relationship can bring about health, wealth, happiness, and success. Murphy asserted that thoughts are causes, and conditions are effects. What one consistently thinks and feels impresses upon the subconscious and ultimately manifests as experience. While depicting the reasons for writing this book, he writes, "*What motivated me to write this book was a deep desire to share with others the answer I have discovered to those and many similar questions*" (p.viii). There are 20 chapters in this book, and each chapter is ornamented by various thought-provoking and inspiring stories. Pertinent take aways are presented at the end of each chapter.

Chapter 1: The Treasure House Within You

In this chapter, the writer expresses that wholly good thinking, complete happiness, and very positive energy are within us. We are the treasurer of your success. Here, the author gives some real examples of why a person is happy and another is unhappy, one is full of faith and confidence, and another is anxious and fearful. All are the process of your mind. We have to

choose the right way, a sound environment, and positive company, and then we will succeed. He also says, if we think, 'I will fail', 'can't afford it', 'it's not possible for me', then our mind will accept it, and we must achieve our failure. But if we think 'I can do it', 'can afford it', 'can achieve it', we achieve it. So, we have to work with your marvellous subconscious mind. The author talks about the duality of the mind, which is conscious and subconscious. He articulates that every individual is the gardener of his/her mind. If we plant the seeds of all positive energies in our subconscious mind, our conscious mind will demonstrate thoughts of peace, happiness, right action, goodwill and prosperity. He gives an example of a singer who has overcome all his barriers by using his subconscious mind appropriately. Here is the experience that before going to sleep, if we think about waking up at 6 am, it must happen that your conscious mind will wake up without any alarm on your mobile or any other device. He writes, *"Every thought is a cause, and every condition is an effect"* (p.15).

In a nutshell, it can be said that this chapter introduces the concept that infinite riches lie within each individual, accessible through the subconscious mind. It emphasises the duality of the mind—the conscious and subconscious—and explains how habitual thinking shapes one's destiny. The subconscious mind is likened to a treasure house, capable of solving problems, healing, and attracting success. The chapter encourages readers to implant positive thoughts and beliefs to reap desirable outcomes.

Chapter 2: How Your Mind Works

In this chapter, the author explains how we can use our subconscious mind. He provides so many examples of different people, and he elucidates different incidents that he experienced in diverse situations. He said that our subconscious mind has no idea of right or wrong, but our conscious mind has the power to choose the right way. It can discriminate between positive and negative thoughts or attitudes. The conscious mind gives order to the subconscious mind; it is like a custodian in our lives. He uses two other names of the mind, the objective and subjective mind. The author stated that a hypnotist can manipulate another person according to his will, and he ensures this by using that person's subconscious mind. In our daily life, many people give suggestions, most of which are very negative, and often we are affected by those comments. But we cannot change the thoughts of those people. In that condition, we can use the infinite power of our subconscious mind. We can discard all those negative suggestions, also reflect positively and do positive things every day, every moment, like those sailors who have no impact on the listener about seasickness. Here, the author bounces the idea of auto-suggestion to do every decent work and live happily in our daily life. He said if we accept a positive way of living and also use all positive words in our daily life, our subconscious mind also accepts that way of living. On the other hand, if we use negative words at all times, our subconscious mind also follows that attitude of living. By following that positive rule of life, we can manage our temperament in every situation. So, we should follow the positive way of living in every situation. He reminds us, *"Remember, you have the capacity to choose. Choose life! Choose love! Choose health!"* (p. 33).

So, the chapter explains the interaction between the conscious and subconscious mind. The conscious mind reasons and chooses, while the subconscious mind executes ideas and stores emotions. Negative thoughts lead to failure, while harmonious thinking results in health and prosperity. Techniques like auto-suggestion and visualisation are introduced to impress positive ideas on the subconscious mind.

Chapter 3: The Miracle-Working Power of Your Subconscious

This chapter highlights the subconscious mind's ability to heal, inspire, and solve problems. It explains how the subconscious works tirelessly to maintain bodily functions and fulfil desires. Techniques such as affirmations and visualisation are recommended to convey ideas of health and success to the subconscious. Real-life examples illustrate the transformative power of the subconscious mind.

The subconscious mind has infinite power. It controls our body, mind, and intellect, which means our total life. It never takes a break, but we have to discover how it is working on us. The author says all artists have used their infinite power and created new art, novels, and sculptures. Here, the author gives an example of Dr Esdaille, a Scotch surgeon, who was a surgeon in Bengal during the 1840s. He performed approximately 400 major surgical operations like amputation, removal of tumours and cancerous growth without using any chemical anaesthesia. All these operations have been done under mental anaesthesia only. His patients also said that they felt no pain during the operation. Only the subconscious mind gives that type of independence to us. The subconscious is the manuscript of the life of every individual. If we write inside positive words and thoughts, we will experience the outside. We will be a happy, energetic, ideal person in our world. The American philosopher Ralph Waldo Emerson said, "Man is what he thinks all day long". William James, the father of American psychology, supports the idea of the unlimited power of the subconscious mind with infinite intelligence and boundless wisdom. All measures come from our subconscious mind. This truth was supported by Moses, Isaiah, Jesus, Buddha, Zoroaster, Lao-tze, & all the illumined seers of the ages. When an individual equilibrates the two parts of their mind, he/she knows the art of living. Here the author expresses one incident that how prayer can help to vanish skin malignancy or that type of critical disease. That means our subconscious mind controls all the functions of our body. When the subconscious mind follows stress or negative energy, our body can easily get into that position. On the other hand, when we engage our conscious mind with positivity, naturally. Our subconscious mind follows that beautiful way of life. He writes, "*Keep your conscious mind busy with your expectation of the best, and your subconscious will faithfully reproduce your habitual thinking*" (pp.53-54).

Chapter 4: Mental Healings in Ancient Times

Since ancient times, we have realised that many priests, priestesses, and holy people use the subconscious mind of people to cure numerous types of physical and mental diseases. In many cases, medical science fails, but these people achieve success in curing common people.

In many cases, we can realise that those holy people use the power of the subconscious mind of common people. By using positive energy or positivity, or positive living of life, they try to save those common people from all these complex diseases. When we pray in various temples, mosques or churches, we get the result of our prayers, that is, we become what we want, may be relief from a complex disease or relief from a complex situation. Here, the author has given several examples of such incidents, and he wants to say that when we pray in temples, churches or monasteries, we use our subconscious mind with full faith, and we believe that what we pray for here will happen; that's why we achieve success. The author says that all groups, psychiatrists, psychologists, osteopaths, chiropractors, physicians, and religious groups, have succeeded in their work by harnessing the incredible power of the subconscious mind. He writes in the 'Healing Points in Review' section of this chapter, "*All disease originates in the mind. Nothing appears on the body unless there is a mental pattern corresponding to it*" (p.69).

The chapter explores historical accounts of healing through faith and subconscious belief. It discusses how ancient practices, such as rituals and prayers, activated the subconscious mind to bring about healing. Biblical teachings on faith and belief are emphasised as tools for mental healing. The chapter concludes that the subconscious mind is the universal healing principle.

Chapter 5: Mental Healings in Modern Times

In this chapter, modern mental healing techniques are discussed, emphasising the role of faith and belief in activating the subconscious mind. The chapter explains how prayer therapy works by harmonising the conscious and subconscious mind. Examples of faith healing and scientific prayer demonstrate the effectiveness of these methods in overcoming illness and achieving success.

How can we get rid of something, i.e. any obstacle, any sorrow? This question is eternal. Since ancient times, religious leaders have been searching for a remedy for this sorrow. And almost everyone has acknowledged that this medicine for healing is hidden in our subconscious mind. A doctor can solve our physical problems, and a psychiatrist can remove our mental blocks. But the healing power is hidden in our subconscious mind. In his own words, "*No mental-or religious-science practitioner, psychologist, psychiatrist, or medical doctor ever healed a patient*" (p.71). And now psychologists remove these mental blocks and clear the way for healing. It has been given different names at different times: Nature, Life, God, Creative Intelligence, etc. But actually, it is the power of the subconscious mind. There are many ways to get rid of or cure sorrow. But the only principle or power that humans have is the Life Principle. And we can achieve this Life Principle with our faith. Only by believing in ourselves and having this faith can we overcome all obstacles, and we can fulfil all the desires of our mind. When we believe in God or any supreme power and think that power will help us to overcome any obstacle or help us become something, it increases the power of our mind; that is, indirectly, it works tremendously in the subconscious mind. Only then we can overcome all obstacles and fulfil all the desires of our lives by believing in ourselves. Nowadays, in many

cases, prayer therapy or the scientific prayer method is used. Actually, through this therapy, the conscious and subconscious minds are used to drive away various negative thoughts. And whenever we can drive away these thoughts, we can get rid of any sorrow. Many times, we blindly believe in something and get countless results. In many cases, it is seen that when a superior person touches someone, a disease gets cured. Many diseases get cured by using a magnet, and we hear that someone gets rid of a complex disease by holding a stone. The author wants to say that these are all the severe games of the conscious and subconscious mind. In this chapter, he has described many such incidents.

Chapter 6: Practical Techniques in Mental Healings

When an engineer builds a bridge, he first makes a plan mathematically using scientific methods. In the second step, he mentally familiarises himself with the plan to execute it, and in the third step, he executes the plan. When these three steps are finished properly, he is successful in building a bridge. Similarly, nothing in our life happens by chance; everything happens according to the rules of law and order. Therefore, here the author has discussed how we can achieve success by scientifically using prayer. He did not speak or want to speak about any religious method in general. Here, prayer is the desire or wish of your soul. He is saying that how hungry we have to fulfil that desire and how desperate we are to get it, we should work on that hunger to fulfil that desire, which will be the true nature of prayer. If we can fulfil that desire, our life will be filled with peace, harmony, health, joy and other blessings. We have to be an engineer who uses the conscious and subconscious mind to make the right plan to fulfil our needs and desires, and then execute that plan. In this chapter, the author talks about several practical techniques. The first technique is the 'Visualisation technique'. Here, a person will visualise that he has been able to do what he wants. For example, here the author says that before I give a speech to an audience, I think that I am giving a very good speech and the audience is listening to me very well. The next methods are the 'Mental movie method', the 'Baudoin technique', the 'Sleeping technique', the 'Thank You technique', the 'Affirmative method', the 'Argumentative method', the 'Absolute method' and the 'Decree method'. He concludes this chapter by saying, "*Generate waves of harmony, health, and peace by thinking of the love and the glory of God*" (p.104).

So, this chapter provides practical methods for mental healing, including visualisation, affirmations, and the thank-you technique. It explains how to impress the subconscious mind with positive ideas to achieve desired outcomes. Techniques like the mental movie method and the Baudoin technique are introduced to help readers overcome challenges and manifest their goals.

Chapter 7: The Tendency of the Subconscious is Lifeward

The subconscious mind is described as inherently constructive and lifeward. The chapter explains how negative thoughts interfere with the subconscious's natural harmony. It emphasises the importance of feeding the subconscious with positive ideas to maintain health and vitality. Real-life examples illustrate how faith and belief can lead to miraculous healings.

Dr Murphy starts the chapter by saying, “Over ninety percent of your mental life is subconscious, if you fail to make use of this marvelous power, you condemn yourself to live within very narrow limits” (p.105). The subconscious always drives towards the lifeward, and it is very constructive. Our strength is our subconscious mind. Which inspires us, shows us new paths, determines the meaning of life, and expands our various thoughts and ideas. So, just as a gardener spreads good seeds and a good tree grows, that tree bears delicious fruits or flowers, similarly, if we disseminate the seeds of positive thoughts in our subconscious mind, our life will become positive. On the other hand, if we spread the seeds of jealousy, fear, or anxiety in our subconscious mind, our life will be filled with them and our nerves, the various glands in our body, and above all, our mental state will never be normal. So, we should always fill our subconscious mind with the energy of life, and if we want to live well, we should learn to look at life with a positive outlook.

Chapter 8: How to Get the Results You Want

We all know that we do not get answers to our prayers. We do not get what we want, but what is the reason for this failure? It is the lack of confidence. When we pray and we cannot pray with full faith, that prayer does not prosper. Because of this failure, we keep thinking various negative thoughts. Like, everything is going bad, we will not get any answer, there is no way in front of me, there is no hope, we do not even know what to do, we will probably ruin everything. When we keep saying such things, negative thoughts are desperately expressed. In fact, at this time, a conflict is created between our conscious and subconscious minds. Here, the author says imagination is much more useful in this regard than willpower, and that imagination must be highly disciplined. In this chapter, the author has given three steps to Success in Prayer. First, we have to acknowledge the problem; in the second step, we have to find a solution to it; and in the third step, we have to imagine that the solution has been found. The author also says that if we can complete these three steps appropriately, our prayer will be efficacious. We want peace, but then we think, will we not get peace? We want something very much, but then we think, will we not get it? When such a conflict arises between us, then prayer starts working oppositely. If a driver of a car is told about many roads, in many cases, he cannot decide which road to take. In this case, too, conflict arises between two minds. He summarised, “You avoid conflict between your conscious and subconscious in the sleepy state. Imagine the fulfillment of your desire over and over again prior to sleep. Sleep in peace and wake in joy” (p.125).

This chapter focuses on overcoming failure by aligning the subconscious mind with positive thoughts and beliefs. It explains the law of reversed effort, where excessive mental coercion leads to failure. Techniques like disciplined imagination and relaxation are recommended to achieve harmony between the conscious and subconscious mind.

Chapter 9: How to Use the Power of Your Subconscious for Wealth

The chapter explains how wealth is a mental conviction and can be achieved by impressing the subconscious mind with ideas of abundance. Techniques like affirmations, visualisation, and

the 'sleep and grow rich' method are introduced to build a wealth consciousness. It emphasises the importance of avoiding negative thoughts about money and celebrating others' prosperity.

Our subconscious mind is our wealth, or in other words, our wealth is in our mind. If we think in our mind that the money we earn is enough for us, there is no conflict between our conscious and subconscious minds. Formerly, that person's life becomes much easier, and he/she can enjoy his/her life properly and happily. But many times, some people think that if we could earn more, it would be better for them. In that case, a conflict is created between his conscious and subconscious minds. Which is not pleasant for any person. In this chapter, the author talks about some methods on how to create wealth by using the subconscious mind. He says that this conflict should always be overcome, and some words should be said in mind or out loud that there will be no conflict. For example, someone who wants a little more wealth will only pronounce the word 'wealth' in his mind or out loud or say that I have enough wealth. According to the author, using this method will finish the conflict between the conscious and subconscious mind, which will enable the person to use the power of the subconscious mind correctly. He writes at the end, "*Envy and jealousy are stumbling blocks to the flow of wealth. Rejoice in the prosperity of others*" (p.134).

Chapter 10: Your Right to Be Rich

In this chapter, the author emphasises that it is everyone's right to be rich. There is nothing dishonourable about wanting wealth; in fact, the desire to be rich is natural and valid. When a person has enough money to fulfil their desires, they can lead a happy and fulfilling life. Wealth is not only acceptable - it is a respectable necessity. Money, the author explains, is a symbol of freedom. Just as good blood circulation indicates a healthy body, having sufficient money allows a person to move freely and live life on their terms. Such a person can be considered economically healthy. To walk this 'royal road' to wealth, the author stresses the importance of effectively using the subconscious mind. Only by doing so can a person become spiritually, mentally, and financially balanced. Some people claim that money leads individuals down the wrong path, but the author disagrees. Wealth itself is not evil. If a person can maintain a balanced and disciplined life even after becoming rich, money will never be harmful. The author argues that poverty is not a virtue - it is a form of mental illness. He writes, "*There is no virtue in poverty. It is a disease of the mind. You should heal yourself of this mental conflict or malady at once*" (p.145). Why, then, do people criticise money? According to the author, it is because of the wrong attitude toward it. When approached with the right mindset, money becomes a powerful tool for good. This chapter also outlines practical methods for attaining wealth by harnessing the power of the subconscious mind with full faith, ultimately leading to a happy and prosperous life.

This chapter asserts that it is everyone's right to be rich and live abundantly. It explains how money is a symbol of exchange and should be viewed positively. Techniques for attracting wealth include affirmations and mental imagery. The chapter encourages readers to align their thoughts with abundance and avoid condemning money.

Chapter 11: Your Subconscious Mind as a Partner in Success

Success is defined as living harmoniously and achieving one's goals. The chapter outlines three steps to success: finding work we love, specialising in your field, and ensuring your work benefits humanity. It emphasises the role of the subconscious mind in achieving success through sustained imagination and positive thinking.

Success means living a fulfilling and meaningful life. When you can live in peace and happiness, you are truly successful. To flourish in any field - whether it is business or any other profession - you must do your work with love and dedication. Without peace of mind, true success cannot be accomplished. In this chapter, the author shares several real-life stories of people who have achieved success through the power of prayer and complete faith. For instance, if someone desires a promotion, they should visualise themselves already promoted, fully believing it to be true, and imagine their colleagues congratulating them. In such cases, the person's subconscious mind influences the conscious mind to take the necessary actions, controlling them toward making that success a reality. According to him, "*A successful man possesses great psychological and spiritual understanding*" (p.162).

Chapter 12: How Scientists Use the Subconscious Mind

The chapter highlights how scientists and inventors have used their subconscious minds to solve problems and make discoveries. Examples include Nikola Tesla, Professor Louis Agassiz, Dr Lothar von Blenk-Schmidt and Dr Frederick Banting, who relied on their subconscious for inspiration. Techniques like relaxation and focused attention are recommended for tapping into the subconscious mind's creative power.

We should remember that our subconscious mind helps us to achieve success in all scientific endeavours. When the conscious mind pays attention to a problem with full concentration, the subconscious mind provides all the necessary information to the conscious mind to solve that problem. Here, the author also says that in some cases, even if we cannot solve a problem, before going to sleep, we can give a command to the subconscious mind to solve this problem. If we don't get an answer after one night of sleep, we will continue to make this request to the subconscious mind every night before going to sleep until the problem is solved. We have no problem believing that the subconscious mind will find the answer for us, and we will find happiness. He writes, "*The subconscious mind will always answer you if you trust it*" (p.173). The subconscious mind is a storehouse of memories. Here, we can record all our childhood experiences. Scientists have solved many problems by giving orders to this subconscious mind. We believe devotion helps the subconscious mind do all things with full faith.

Chapter 13: Your Subconscious and the Wonders of Sleep

Every person spends about eight hours of sleep every day of their lives; this is a general rule. But when we are exhausted or do not get a solution to any problem, we can sleep very well and the problem gets solved or our tiredness goes away completely. In this chapter, the author says that when we sleep, all the systems of our body do not take rest, such as if we eat before sleeping, the food is getting digested, our skin secretes perspiration, our nails and hair start growing. Similarly,

our subconscious mind also never takes rest; it is always active and controls all our vital forces. However, this healing process is very good during sleep because the conscious mind does not interfere with all these processes. We can see how important sleep is; every person needs sleep as much as they need to work mentally or physically. To overcome this tiredness or to recharge the body, very well. When we sleep less, we become very irritated, depressed, and lose our temper. Medical science has repeatedly proven that sleep can sometimes cause insomnia, a person's life expectancy can be reduced, and various cell damage can occur in the body. A good night's sleep helps our subconscious mind regain new liveliness. He completes, *"Sleep is essential for peace of mind and health of body. Lack of sleep can cause irritation, depression, and mental disorders. You need eight hours' sleep"* (pp.186-187).

Sleep is described as a time when the subconscious mind works actively to solve problems and heal the body. The chapter explains how to use sleep to receive guidance and answers to challenges. Techniques like affirmations and visualisation before sleep are introduced to harness the subconscious mind's power.

Chapter 14: Your Subconscious Mind and Marital Problems

In this chapter, the author discusses how we can spend our married life happily and peacefully by utilising the power of the subconscious mind. He says that a girl often thinks that she does not feel like working hard and earning money anymore, she will get married, her husband will fulfil all her needs, and she will be very happy. It is not like this; happiness can never be achieved depending on others. If there is a very good understanding between the two in a marital relationship, then that marriage is happy. He also says that if the husband and wife pray together and their needs and desires are met, their married life will be very happy. Therefore, it is much better to choose a life partner by making a mental match before entering into married life than to get divorced to get out of that relationship after entering into married life. Many times, the comments of people around us break the relationship between two people. In these cases, if there is any problem, we need to go to a proper trend counsellor for counselling instead of taking the help of any friend or relative. It is true that in married life, if two people maintain faith, division, and respect for each other, the relationship will last very well and their lives will be very happy. He delightfully argues, *"Marriage is the union of a man and woman who are bound together by love. Their hearts beat as one, and they move onward, upward, and Godward"* (p. 201).

The chapter addresses marital issues caused by ignorance of mental laws. It emphasises the importance of mutual love, respect, and understanding in marriage. Techniques like prayer and affirmations are recommended to attract the ideal partner and resolve conflicts. The chapter concludes that harmonious relationships are built on spiritual values.

Chapter 15: Your Subconscious Mind and Your Happiness

Happiness is described as a state of mind that can be cultivated through positive thinking and faith in the subconscious mind. The chapter explains how to choose happiness by focusing

on constructive thoughts and affirmations. Real-life examples illustrate how individuals have overcome unhappiness by changing their mental attitudes.

William James, the father of American Psychology, said that the greatest discovery of the 19th century was the realisation that the subconscious mind is the seat of infinite power. If we can realise that all your problems, whether mental or physical, can be healed by our subconscious mind and freed from all your problems, we will be the happiest person on earth. Many times, we feel happy when someone else appreciates us, and some people feel happy by establishing their place among everyone. But after some time, that happiness does not remain in us because it depends on others. There are also many times when a person does something very good, and they might want to get a little appreciation from others. But no one appreciates him, so he becomes demotivated. So, instead of depending on others, you have to appreciate yourself, motivate yourself, and think positively that yes, I can do it myself. If we can use the unlimited power of our subconscious mind, we can do all these things very easily. Here, the author says that if someone believes in God, they can be happy by relying on that belief. But if not, if we believe in ourselves, think positively, keep negative thoughts away, and avoid people with negative minds. We should be happy and we should use our subconscious mind, which is the source of happiness. He also said, *"Happiness is the harvest of a quiet mind. Anchor your thoughts on peace, poise, security, and divine guidance, and your mind will be productive of happiness"* (p.214).

Chapter 16: Your Subconscious Mind and Harmonious Human Relationships

In this chapter, it is said that if you want to maintain a humane relationship with everyone, you should pray for yourself and want for everyone else what you want for yourself. This is the golden rule of harmonious relationships. How you think about others is a manifestation of your thoughts. If you think negatively, it means that your subconscious mind is full of negative thoughts, and if you are filled with positive thoughts, if you follow a positive lifestyle, then this positivity will be expressed in your work and even in your relationships with the people around you. This is not just about thinking well of others; we see this thought reflected in the path of our Lord Chaitanya, the path of Buddha, the path of other great men, even Gandhiji's path of non-violence. That even if others treat you badly, behave peacefully with them, maintain good relations and try to spread your positive thoughts among them. If you can forgive those who have treated you badly, tried to harm you, and spoken to you in a very bad way, then you will be very happy. Love is the only path through which we can keep ourselves and the entire environment around us very beautiful. He mentioned in summarising the 'Profitable Pointers to Improving Human Relationships' in this chapter, *"You are responsible for the way you think about the other. Remember, the other person is not responsible for the way you think about him or her. Your thoughts are reproduced"* (p.230)

The chapter explains how the subconscious mind influences relationships. It emphasises the importance of thinking positively about others to create harmonious interactions. Techniques like empathy, forgiveness, and the Golden Rule are recommended to improve human relations and resolve conflicts.

Chapter 17: How to Use Your Subconscious Mind for Forgiveness

In this chapter, the author says that many people blame God for their own bad or unhappy state. They are often heard saying that God wants them to go through such a difficult time. According to the author, this is never right. Such thoughts are a manifestation of the negative thoughts hidden in their subconscious mind. Life always forgives us, paving the way for us to move forward. For example, if our hand is cut, the life principle tries to repair our tissues and heal the damage. If any part of our body is burned or any other wound is caused, the life force immediately tries to heal us physically as well as mentally. This is the religion of life, and because life forgives us, it continues to do this work without hesitation. We should also make it a trend to walk on this path of a forgiving mind. If we can learn this step by step from the life principle, then only we will be able to keep ourselves happy and well. We know this ourselves, or not only from this book, but from other books or our experience, that if we decide in our hearts that we will not be hurt by someone's words or behaviour, then under no circumstances will they be able to touch us. If my subconscious mind thinks that these words will not touch me in any way or someone's bad behaviour will not touch me. Our conscious mind also follows that golden rule. He writes, *"To forgive is to give something for. Give love, peace, joy, wisdom, and all the blessings of life to the other, until there is no sting left in your mind. This is the acid test of forgiveness"* (p. 247).

Forgiveness is described as essential for mental peace and health. The chapter explains how resentment and hostility block the flow of life and cause negative conditions. Techniques like affirmations and visualisation are introduced to release negative emotions and achieve forgiveness. Real-life examples illustrate the transformative power of forgiveness.

Chapter 18: How Your Subconscious Removes Mental Blocks

When we find ourselves in a difficult situation and cannot find a way out of it, we break down, but various experiences help us understand that the solution lies within that problem. With our subconscious mind's infinite intelligence and power, we can free ourselves from any situation. In this chapter, the author explains through various examples how to find that path or overcome that mental block when we find ourselves in different situations or when we lose our way while looking for a way out of that difficult situation. Dr Murphy pointed out that *"The only obstacle to your success and achievement is your own thought or mental image"* (p. 262). We need to create a habit, how we will build ourselves with positive thinking, how we will face any difficult situation without breaking down, and no negative energy will be able to consume us, and we can develop this habit through prayer or practice every day. Just as habits can inculcate good habits in us, through these habits we can prevent our tendency to be attracted to bad habits or bad energy.

The chapter explains how mental blocks are created by negative thinking and can be removed by aligning the subconscious mind with positive ideas. Techniques like visualisation, affirmations, and focused attention are recommended to overcome obstacles. Real-life examples demonstrate how individuals have achieved success by changing their mental attitudes.

Chapter 19: How to Use Your Subconscious Mind to Remove Fear

Fear is described as a thought in the mind that can be overcome by replacing it with positive ideas. The chapter explains how fear paralyses individuals and prevents them from achieving their goals. Techniques like affirmations, visualisation, and the law of substitution are introduced to conquer fear and build confidence.

Fear is the biggest enemy of our life, fear of failing before an examination, fear of going on stage before a performance, fear of the dark and fear of losing. When many such fears surround us, we try to escape from there and protect ourselves. The author has mentioned many techniques to overcome these fears here. For example, if someone is afraid of swimming, he should sit in a relaxed place, close his eyes and imagine that he is swimming very well and his friends or many people are appreciating him very much while swimming. If we do this day dreaming, then we will be able to overcome the fears in our minds. We know that it is all mental, that is, a person is afraid because that fear is consuming him. The author says that we can conquer this fear by harnessing the power of the subconscious mind. We know that if a person wants to, he can conquer all his fears with mental strength. We do this many times. We love the work that we are afraid of doing, and take it as a challenge and want to complete it successfully. And if we can overcome that fear, we can do the same work in our future life with great joy. Dr Murphy clinched, *“Give your immediate attention and devotion to your desire, which is the opposite of your fear. This is the love that casts out fear”* (p.278).

Chapter 20: How to Stay Young in Spirit Forever

The chapter emphasises that the subconscious mind is timeless and ageless. It explains how positive thinking and spiritual qualities like love, joy, and wisdom keep individuals young in spirit. Techniques like affirmations and visualisation are recommended to maintain vitality and enthusiasm. Real-life examples illustrate how individuals have remained active and productive in old age.

In many cases, the fear of getting old consumes us. Many people use various pills, remedies, etc. to avoid getting old, and in the end, they are never able to stop their ageing. In this chapter, the author says that if we keep positivity, i.e. full of joy, enjoyment, happy life, in our minds, we can stay young throughout our lives. Grey hair is an experience for us, and retirement from a regular job is a new chapter in life. If we look at life and live it this way, we can stay young for the rest of our lives. We see many such news on TV screens or in the pages of newspapers that after retirement, someone has completed a new master's degree, someone has completed a PhD, someone is studying with their son or daughter. Someone is joining a new research work after sixty, starting work with new enthusiasm. Trying to enjoy life by taking the new chapter of life as a challenge. He concluded this chapter with these inspiring lines, *“Your retirement is a new venture. Take up new studies and new interests. You can now do the things you always wanted to do when you were so busy making a living. Give your attention to living life. Your grey hairs are an asset. You are not selling your grey hairs. You are selling your talent, abilities, and wisdom that you have garnered through the years”* (p.296).

CONCLUSION

The book is about harnessing the power of the subconscious mind to create positive changes and miracles in one's life through effective prayer and mental techniques. This book emphasises the transformative potential of the subconscious mind in shaping one's life and experiences. By understanding and harnessing this power, individuals can achieve happiness, health, and success. It emphasises the limitless power within each individual and the importance of aligning thoughts with positive ideas to achieve health, wealth, happiness, and success. 'The Power of Your Subconscious Mind' explores how thoughts influence reality through the subconscious. Dr. Joseph Murphy explains the mind's dual nature - conscious and subconscious and emphasises belief as the key to health, wealth, and happiness. By using affirmations, visualisation, and scientific prayer, we can reprogram our subconscious to manifest success. Drawing from spiritual traditions, psychology, and real-life examples, the book offers practical techniques for overcoming fear, healing illness, attracting prosperity, and improving relationships. Its central message is clear: by aligning conscious thoughts with positive intention, individuals can transform their lives from within using the unlimited power of the subconscious mind. The book concludes by encouraging us to apply the principles of the subconscious mind to create the life we desire and reminds us, as of his own words, "You are wonderful!" (p. 297)

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