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Contents

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Editorial

Gitanjali Chawla & Deepa Sharma

It is even more pertinent now when India is making rapid strides towards leading global economies in every field, be it galloping GDP or economic growth, be it digital revolutions or self-reliance, that we focus on the fundamentals of our own culture and traditional knowledge systems which propelled us towards our current prowess. The Indian Knowledge systems (IKS) focused on an interdisciplinary, multidisciplinary and holistic approach encompassing all segments of society leading to a welfare state in both letter and spirit. These "comprise of Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis"[1]. Rooted in ancient practices, traditions and texts, embedded in interconnectedness and sustainability, these systems were all encompassing. Not only were they based on scientific principles but also factored in the relationship between man and nature, progress and environment, neither exclusive of each other but interdependent and symbiotic. It promoted a cultural identity which was neither cohesive nor unitary, it celebrated heterogeneity and the local in the global. Science and spirituality sat well with each other and radical enquiry was at peace with the mystic.

Arthaśāstra gave insights into political systems and statecraft and Natyaśāstra was a treatise in performing arts and architecture. The Vedas and Upanishads were the pillars on which IKS stood, guiding with practical wisdom that emerged out of dialogue and logic. Be it metaphysics or epistemology, reason or ethics, the six key Darśanas or schools of philosophy (Nyaya, Vaisheshika, Sankhya, Yoga, Mimamsa, Vedanta) established the tenets of Indian philosophy. These were not just intellectual pursuits but ways of life, they governed the material, the spiritual and lived reality.

In the colonial and post-colonial times, the study and practice of these and more were pushed to the margins as a Eurocentric education system was firmly established in Macaulay's Minutes and English eroded regional dialects and the IKS became a fading memory. The National Education Policy 2020 sought to redress this, as it saw the immense potential in systemic integration of ancient wisdom and knowledge with the contemporary ecosystem. Digitisation paved the way towards preservation and dissemination. What was lost and forgotten was excavated and restored in a meaningful way making it potent and pertinent. Every language that became extinct also meant loss of an entire knowledge system, its practices and traditions. It was imperative to leverage this deep reservoir and to reinforce modern education and scientific enquiry to make India, the Vishwaguru. NEP 2020 set out to integrate IKS at the very outset, at a young age in schools itself.

> Knowledge of India will include knowledge from ancient India and its contributions to modern India and its successes and challenges, and a clear sense of India's future aspirations with regard to education, health, environment, etc. These elements will be incorporated in an accurate and scientific manner throughout the school curriculum wherever relevant; in particular, Indian Knowledge Systems, including tribal knowledge and indigenous and traditional ways of learning, will be covered and included in mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as in governance, polity, conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available. An engaging course on Indian Knowledge Systems will also be available to students in secondary school as an elective. (NEP, p. 16, 4.27)2

Both curriculum and pedagogy was reformulated to include the regional and the local, the indigenous and traditional be it in sciences or humanities. To make education more "relatable, relevant, interesting and effective" (NEP, p. 16, 4.29) and at the same time entrench a strong cultural identity and instil national pride. A roadmap was laid out, phased progression from schools to colleges to universities, as the way forward was to include what was left behind. Multilingualism replaced teaching of one dominant language replacing the erstwhile belief that English was the language of empowerment. The monolith

was discarded for the continuum as the community, the artisanal and the tribal undergirded research in every field be it linguistics or medicine, architecture or engineering, performing arts or astronomy and more. What was to be integrated was not just the knowledge of various fields but the ability to solve problems, critical thinking, logic and reasoning embedded in IKS.

The focus now shifted to inquiry based learning and experiential learning; classroom engagements enriched with internships leading to entrepreneurship, vocational skills with development, theory with practice, lectures with field trips and projects, all leading to holistic development, the underlying tenet of NEP 2020. This of course is not without challenges in the Indian classroom where the student teacher ratio is at best dismal, infrastructural support limited to the urban, teacher training not yet tailored, and budgetary support a distant dream. However, this is a step in the right direction and it is high time we took cognisance for what is ours before it is completely appropriated by others.

The focus of the research papers included in this issue are varied and diverse, each pertinent and insightful. Prof. Sidharth Mishra and Dr. Sumedha Dhasmana seek to examine the extent to which fake political-news becomes viral online during the election time-period and also assess the strategy adopted by the fact-checking platforms in exposing misleading content. The authors find the privately-owned platforms performing better on various parameters. Against the backdrop of persistent challenges faced by rural India, there is a dire need to change the urban-centric approach towards rural development. In an attempt to evaluate the impact of rural development programmes initiated by the Indian Government, Dr. Vijeta Pundir, Dr. Pratibha Rai, and Prof. Anup Mishra seek to unfold various issues, implementation challenges, and policy-gaps and have proposed the way forward for sustainable progress in this direction.

Even small interventions can enable a significant change in behavior and decision making. The decision to opt for ESG investments, is an act of socially responsible behavior, as put forth by Prof. Gayatri and Dr. Surendra Kumar in their paper. Apart from tracing the development of ESG framework, they provide a comparative assessment of the past, present, and future behavior of ESG mutual funds.

Artificial Intelligence (AI) in education brings with itself a radical change in the way how students consume and retain content. Dr. Shruti Goel and Dr.

Ekanshi Gupta seek to critically examine the role of AI in media education in terms of redesigning pedagogy, influencing literacy and critical thinking levels. They discuss the consequential challenges and opportunities as also the implications involved therein. Dr. Latesh Kanoujia, in her research paper on AI and Education, seeks to explore the scope and to assess the potency of AI and its applications in enabling change in the Indian educational system. A number of policy implications have been identified.

The issue of identity for South African Indians is not the same as other segments of Indian-diaspora globally. Dr. Sushmita Rajwar and Prof. Ritu Kohli seek to evaluate the role of print media, social media, and Bollywood in shaping the identity of South African Indians, in particular.

We hope that the readers find the articles useful and gives them food for thought. Several experts spared their precious time and made available their expertise in reviewing the manuscripts received for publication and provided critical comments and suggestions for improving the quality of these papers. Our sincere thanks to each one of them.

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1. https://www.education.gov.in/en/nep/indian-knowledge-systems

2. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

Debunking Election Misinformation: A Comparison of Fact-Checking Platforms

Sidharth Mishra & Sumedha Dhasmana

Abstract

India is home to the world's largest democracy. The lynchpin of this vibrant democracy is free and fair elections. The year 2024 witnessed substantial political dynamism with General Elections in April, followed by Legislative Assembly Elections in the consequent months. As the election period gained momentum, the media started to brim with political news stories. Given this evolving landscape, it is crucial to examine how different media platforms circulated election-related news. Researchers emphasize that the election period brought a surge in fake news, misinformation, and disinformation. The Election Commission of India has launched the Myth vs Reality Register to combat this mounting challenge and to uphold electoral integrity. Against this backdrop, this research examines how ECI's Myth vs Reality Register and other leading Indian independent fact-checking agencies, such as Alt News, Boom, and Vishvas News combat the challenges posed by the fake news circulated by the ever-growing online media. Analysis of content has been performed to understand the manner in which fake news is tackled. It is identified that the news items that are presented on these sites are majorly presented as false news, fake news, and misleading news.

Keywords: *Fact check, Fake news, Elections, Model code of conduct, Myth vs Reality Register*

Introduction

The 18th Lok Sabha Elections or the General Elections 2024 were prodigious, it involved 96.8 crore total electors, 1.5 crore polling officials and 10.5 lakh polling stations spread across India (Kulkarni, 2024). In succession, came the Legislative Assemblies Elections in the seven Indian states of Arunachal Pradesh, Sikkim, Andhra Pradesh, Odisha, Haryana, Jharkhand, Maharashtra and the Union Territories of Delhi and Jammu and Kashmir. All of this is parallel to a time when India is witnessing unprecedented levels of internet penetration.

According to the Reuters Institute's 2024 digital news survey, about 71% of Indians prefer online news sources. Additionally, it stated that 49% of Indians rely on social media, with 54% getting their news from YouTube, 48% from WhatsApp, and 35% from Facebook (TOI News Desk, 2024). With such political dynamism and the ever-increasing utilization of online platforms, it is crucial to notice how political activities are covered, especially because online platforms foster crowdsourced content. This upsurge of user-generated content and the increased competitiveness in news circulation have given birth to a wide range of informational risks. Additionally, the perils of misinformation and disinformation increase during the election season. The Hindu newspaper (2024) underlines the existence of knowledge gaps and the difficulty of distinguishing between AI and real, thereby making people vulnerable to deception and disenfranchisement.

Literature suggests that elections in 2024 have noticed a surge in misinformation and attract Indian voters with a level of cleverness that is difficult to detect and even more difficult to control. Added to this is the generative AI boom that brings Indian voters to a high level of risk of disinformation (Lakshané, 2024). The arrival of social media has transformed the manner of public communication, this includes the spread of fake news which now spreads rapidly with the click of a button (Rahmanian & Esfidani, 2023). Social media is a major factor in the fake news dilemma, as it provides a multitude of platforms and channels for the dissemination of material that is portrayed as news in order to profit financially and ideologically (Talukdar & Dutta, 2021).

Ortega-Fernández et al. (2021) highlight the paradox of current times that provides the greatest amount of information and yet doesn't ensure increased

knowledge and awareness among people. In many instances, the users of online information also lose the freedom to choose their sources of information because it is the algorithm that decides, filters and suggests the type of information for its users. This is almost like hacking of the human brain.

> Fake news is a form of news fabrication and carries deception with the intention to mislead. Fake news refers to intentionally false or misleading information that is trying to appear like real news while being low in facticity and high in the immediate intention to deceive. A key difference between misinformation and disinformation is whether the false and misleading information is intended to mislead. Disinformation is false information that is deliberately created or disseminated with the express purpose to cause harm' whereas misinformation is information that is false, but not intended to cause harm. From that perspective, fake news should be conceptualized as one form of disinformation, but not as misinformation. (Broda & Strömbäck, 2024, p. 5)

Mishra (2025) differentiates between misinformation and disinformation as also defined by the American Psychological Association,

> Misinformation is false or inaccurate information—getting the facts wrong. Disinformation is false information which is deliberately intended to mislead—intentionally misstating the facts. Fake news is misleading information intentionally published and presented as news which has the function of deliberately misleading its recipients about its status as news. (para. 6)

Indian Elections & Combating Fake News

The Model Code of Conduct as notified by the Election Commission of India-ECI, which remains in force during the election, clarifies that "the misuse of official mass media during the election period for partisan coverage of political news and publicity regarding achievements to further the prospects of the party in power shall be scrupulously avoided" (Press Council of India, 2024, p. 1). This way, ECI establishes the standard for media reporting in India. To strengthen the mechanism to counter misuse of media, ECI has launched a Myth vs Reality Register with the aim to combat the spread of misinformation and uphold the integrity of the electoral process. This register is available for the public on the Election Commission's official website (https://mythvsreality.eci.gov.in/).

Privately-owned/ Independent Fact-checking Platforms

However, in the non-government domain, there are several agencies working towards ending the menace of fake news. While many television channels run programmes which examine the day's 'viral videos', there are others who carry out the job in a more focused manner. Three such agencies working in this area have been taken up here for discussion. Alt News is a fact-checking platform that claims to have no political affiliations. The legal entity behind Alt News is a not-for-profit company called Pravda Media Foundation. It fact-checks news largely from the political spectrum. Depending on the nature of the fact-check required, the platform uses internet tools like reverse image search or source data from official sources (Alt News, 2025).

BOOM Fact Check is an independent digital media venture aimed at eliminating disinformation, clarifying issues and promoting internet safety through verified facts. As one of India's first fact-checking websites, it is certified by the International Fact-Checking Network (IFCN). BOOM, which operates in English, Hindi, and Bengali, is present in India, Myanmar, and Bangladesh and it also administers the Mediabuddhi media literacy campaign (Boom, 2025). Vishvas News is a fact-checking and verification portal operated by MMI Online, the digital branch of Jagran Prakashan Limited. It refutes fake news and misinformation in Hindi, English, and ten other Indian languages. Certified by the IFCN, it uses a qualified team of fact-checkers who verify viral claims across text, images and videos. It also conducts fact-checking awareness workshops through its flagship effort, Sach Ke Sathi, which uses Dainik Jagran's network to combat disinformation among digitally vulnerable communities (Vishvas News, 2025).

Theoretical Underpinnings of Media Literacy

We are living in a world of information overload and media saturation which has its own newer forms of demands, especially when fake news, misinformation, manipulation, and misrepresentation are developing as a global threat. Media literacy has three-dimensional purposes: preventative, creative, and interactive. The preventative function focuses on preventing and protecting the user from the threats online, the vulnerabilities to be misdirected by some

> false information or any loss thereto. The creative aspect brings in the user as a creator and contributor to the communication process. The interactive aspects of media literacy focus on enabling the user to interact responsibly as well as to add to knowledge generation and to be able to use constructive dialogue. (Chandola, 2020, p. 26)

"Media literacy is the ability of the citizen to access, analyse, and produce information for specific outcomes" (Aufderheide, 1993, p. 1). "Media literacy is defined as an augmented literacy skill that responds to the culture of multimodal information, ideas and communication media that people experience" (Talukdar & Dutta, 2021, p. 74). The dimensions of communications have been transformed in the present time. People are communicating, taking information, learning and getting influenced by the variety of online platforms like YouTube, Facebook, Twitter, WhatsApp and X. This advancement in technology has provided a fresh perspective to media literacy and most now prefer to use the term New Media Literacy.

James Anderson highlighted how media literacy is connected with communication. His article published in 1980, "The Theoretical Lineage of Critical Viewing Curricula", talked about the theoretical foundations of media literacy education related to critically viewing television. He argues that the theoretical foundations of this process most closely align with mass media research, such as behavioural effect research that involves studying how media influences people's actions, uses and gratification research that includes understanding why people consume media and what they get from it and research on cultural understanding concerned with examining how people interpret media messages based on their culture and background. Different theories have influenced media literacy education. Earlier, media literacy was taught in a protectionist way—meaning it focused on protecting people from the bad effects of media. But now, the approach has changed to a more democratic method. This new method is more student-centred and promotes open and equitable learning, reflecting and thinking carefully, and gaining proficiency in critical thinking (Schilder, 2013).

Objectives and Methodology

This research aims:

- To examine the presence and type of political fake news that gets circulated over the internet during the election period.
- To identify the frequency of debunked news by fact-checking platforms during the election period.
- To identify the platforms on which fake news generally gets amplified.
- To study the process of debunking fake news by different fact-checking platforms.

This study analyses four fact-checking organizations, namely Myth vs Reality, Alt News, Boom and Vishvas News English. The researchers analysed their political fact-checking articles from April 1, 2024, to Jan 31, 2025.

Tabulation and Analysis

The 18th Lok Sabha elections took place from April 19 to June 1. This is followed by Assembly elections in Arunachal Pradesh, Sikkim, Andhra Pradesh, Odisha, Jammu and Kashmir, Haryana, Jharkhand, Maharashtra, and Delhi. The Model Code of Conduct is a set of codes that attempts to ensure free and fair elections across the country. It provides guidelines for political parties, politicians and media must adhere to throughout the election period. The Code remains in effect until the completion of the entire election process.

Table 1

States and Date of Elections

State	Election Date
Delhi	February 5, 2025
Maharashtra	November 20, 2024
Jharkhand	November 13 and 20, 2024
Haryana	October 5, 2024

Jammu and Kashmir (UT)	September 18 to October 1, 2024
Odisha	May 13 to June 1, 2024
Andhra Pradesh	May 13, 2024
Sikkim	April 19, 2024
Arunachal Pradesh	April 19, 2024
General Elections	April 19 to June 1, 2024

Understanding the Frequency of Updates

Table 2

Fake/ False News Debunked

Month	Myth vs Reality	Alt News	Boom	Vishvas News English
Jan	0	6	1	01
Dec	0	4	10	09
Nov	0	4	22	10
Oct	0	8	10	06
Sept	0	14	7	07
Aug	1	4	7	03
July	1	8	12	07
June	0	14	15	08
May	5	16	16	13
April	13	18	12	12
Total Stories	20	96	112	76

The above analysis is done from April 1, 2024, considering the time of announcement of the Myth vs Reality register. On careful noting, it is identified that ECI's register debunked only 20 fake news during the selected time. On the contrary other privately owned fact-checking agencies exposed the falseness in a higher number of stories being circulated online. Alt News debunked 96, Boom debunked 112 and Vishvas News debunked 76 election-related stories in

the selected time duration. The register provides a reliable resource to verify the authenticity of information. However, the platform is only debunking such fake news which relates to its functioning. Since the political campaign is very much part of the election process, the register fails to cover a major process of false opinion building on the digital media platforms through fake news.

Verification of Fact-Checking News Items

It is identified that out of the total 304 fact check news items, a total of 293 news items verified information from multiple sources, 3 news items verified information from at least two sources and 8 news items verified information from 1 source. It is further identified that all 304 facts check news items are transparent, they explain, they expose the morphed or manipulated and bring to light the fake and incorrect claims. These items take a neutral stand, simply presenting facts and figures after clearly highlighting the information that is incorrect. In attempting to understand the platforms where the misinformation was spread, the researchers identified that the misinformation has spread on several platforms including WhatsApp, Facebook, YouTube, X, Instagram, WhatsApp and Threads. Among these, it is identified that the maximum number of misinformation has been spread on Facebook and X (90.46%). And these stories were shared least on Instagram and Threads.

Figure 1

Explaining how fact-checking is performed

image prepared with https://www.wordclouds.com/ (Wordclouds, 2025)

In an attempt to understand what verification methods were used to clarify the news and fact-check the viral claim, each debunking report has been carefully studied. It is identified that a wide variety of techniques have been utilized to cross-check the misleading information. Some of the common techniques include reverse image search which is performed by uploading the viral image on a search engine, official statements including statements from company representatives or police, official documents, and official YouTube Channels including that of political figures like the President, Prime Minister and the Leader of Opposition, news reports from newspapers, news agencies, news channel video, news website, magazines.

Framing of Information on Fact-checking Platforms

The method by which news outlets organize and present information to influence public opinion is known as media framing. It may emphasize some parts of the topic covered while moderating others. This provides a lens to the audience and guides them to understand the story in a certain manner. Dhasmana and Raj (2024) pointed out,

> Frames are continuously presented to news media audiences. All forms of media, including social networking sites, newspapers, OTT platforms and news channels, offer frames to their audience. Once the media establishes frames, the audience can further socially develop them. Therefore, it is possible that people's behaviour towards disseminated information can result from the frames constructed by the media. (p. 5)

It is identified that none of the fact-checking stories in the Myth vs Reality register utilized quotes of any political figure/ journalist to clarify the debunked news. On the other hand, 98.68% stories of Vishvas News utilize quotes. Alt News and Boom made use of quotes by 48.95% and 46.42% respectively. For instance, Vishvas News states that it,

> contacted Congress national spokesperson Akhilesh Pratap Singh regarding one of the viral videos. He called it BJP's propaganda and said, In the video clip that BJP leaders are sharing, Rahul Gandhi can be heard talking about the scuffle with Mallikarjun Kharge. The claim of the BJP leader who is currently hospitalised should be investigated. (Parashar, 2024, para. 14)

Table 3

Framing Frequency

Alt News

Alt News	N
Unrelated	2
Scripted Video	1
AI-Generated	1
Misreport	1
Old Video	7
False News	40
Fake News	11
Morphed	5
Fact Checked	5
Doctored Video	3
Misleading	15
Clipped	4
Edited	1

Table 4

Framing Frequency Boom

Boom	N
False News	71
Fake News	28
Misleading News	13

Table 5

Framing Frequency Vishvas News

Vishvas News	N
Fake News	59
Misleading News	17

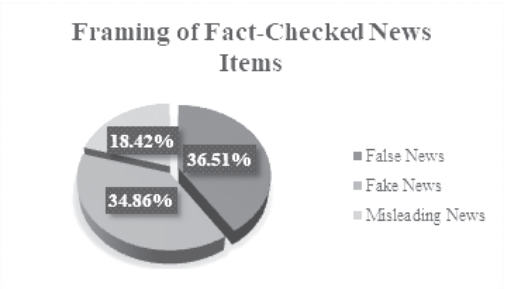
Table 6

Framing Frequency: Myth vs Reality

Myth vs Reality	N
Fake	8
Fake & Misleading	8
False & Misleading	3
Incorrect & Baseless	1

Figure 2

Overall Framing Proportion of Fact-Checked News Items



Upon analysis of the four fact-checking platforms, it is identified that these presented the videos in a variety of ways which are false, fake, misleading, AI-generated, edited, scripted, unrelated, misreported, clipped, and morphed. It is highlighted that false news, fake news (39%) and misleading news are the most common framing of news.

Table 7

Manner of Information Presentation on Fact-checking Platforms

Features	Myth vs Reality	Alt News	Boom	Vishvas News
Debunking of misinformation by clarification	Yes, correct news is provided immediately after the mention of disinforma-tion	Yes, the headline itself quashes the misinf ormation.	Yes, the headline itself quashes the misinf ormation.	Yes, the headline itself quashes the misinf ormation.
Information was provided on how the fact-checking was conducted	No information provided	Yes, enough clarity on the process	Yes, enough clarity on the process	Yes, enough clarity on the process
Hyperlinks of the photo/video where the misinformation is viral	No	Yes	Yes	Yes
Comparison of Original/Fake	No	Yes	Yes	Yes
Presence of Content with Value-Added Information	No	Yes	Yes	Yes

Quotes of person concerned	No	Yes	Yes	Yes
Presence of Tipline Number	No	Yes, in the Contact Us Section	Yes, at the end of each news item.	Yes, at the end of each news item.

Findings

It is identified that, in Myth vs Reality Register; a lot of emphasis is placed on providing clarification regarding the misinformation. These are provided through the official fake news busting X posts of ECI, ECI spokesperson or electoral officers. In a maximum number of news items published on the page of the Myth vs Reality register, information or learning is provided only through reposting and a very minuscule percentage contributes by providing additional information with written/photo/audio or video content. It is only at two instances where a little effort was made to educate the users regarding matters of election. In the first case, the news item explains the process of counting votes and in the second instance, the news item educates about the importance of the voter's name in the voting list and that the voter is eligible to vote with a voter ID or any of the 12 documents specified by the ECI. However, this explanation is not much in detail and is presented through just two to three lines only. Further, bits of information are provided through three other news items, informing the readers that ECI EVM cannot be hacked or manipulated, government officials on election duty can cast their vote through postal ballot and the election schedule is announced by ECI through a press conference. It is identified that out of the total 20 posts by Myth vs Reality register, it is only 5 times that some attempt has been made to provide additional information or education related to the election process. However, it can't be overlooked that debunking information shared through handles does subtly inform and educate the users on election-related information.

Alt News shares a simple format, it explains what the viral photo or video is all about. Elucidation is done by uploading the original photograph or through the

screenshots from actual footage. If required, it doesn't hesitate to showcase a comparison of the original photograph with the viral one. For instance, in one of its investigations, the Alt News fact-checking team cross-checked a deceptive viral video by carefully examining the official YouTube channel of the President of India. Another investigation presented a comparative proof of fake notice that had gone viral with the original notice. Alt News also translates content, if required, for clarification of hoax information. It also refers to reports of news websites for cross-checking purposes. It does its investigations and reaches out to concerned authorities or police officials. Overall, the Alt News approach is more on providing the clarification of the disinformation and less on providing value-added information. Alt News also has a WhatsApp helpline number which it shares on its contact page where readers can send viral content that needs to be fact-checked.

It is analysed that Boom actively does fact-checking on the basis of information shared by the users. Boom utilizes a variety of ways to enhance the understanding of the users on the subject matter, it provides background information- for instance "Feast of Tabernacles – also called as 'Gudarala Panduga,' in local parlance at Gorantla village in Andhra Pradesh is an annual Christian festival that is organised by Hosanna Ministries in March" (Alphonso, 2024, para. 7). It explains in detail the process of verification of misinformation and clearly explains how the fact-checking was conducted. Whenever required, Boom publishes political information like the total number of seats in a constituency, election phases, election date and result date. Boom claims to do its investigation through processes like reverse image search and keyword search. In case it is unable to conduct an independent investigation, then it also takes the initiative of interviewing the concerned person. The platform openly invites the general public to join them in their mission to fight misinformation and shares its Tipline Number (+917700906588) where the users can send their misinformation messages.

Researchers identified that Vishvas News doesn't hesitate to provide value-added information in detail. For instance, while debunking a news article it published,

> A postal ballot allows individuals who are unable to vote in person at their constituency due to job commitments to cast their vote via mail. The Lok

> Sabha elections (Lok Sabha Election, 2024) are scheduled in seven phases, commencing on April 19, 2024, with results announced on June 4, 2024. (Mishra, 2024, para. 8)

> It educates its readers about the process of verification, for example, Vishvas News initially utilized the Google Open Search tool to verify the authenticity of the viral post (Maharishi, 2024, para. 4).

The platform conducts its investigation and whenever required, interviews the person concerned including journalists, political leaders or police officials. Background information is provided on the election,

> It is noteworthy that Mahua Moitra is contesting from the Krishnanagar Lok Sabha seat of West Bengal, where voting is scheduled for May 13, 2024, in the fourth phase. According to the Election Commission's notification (archive link), voting is to be held in seven phases for a total of 42 Lok Sabha seats in West Bengal. The first phase of voting began on April 19, 2024, for a total of 102 seats. (Parashar, 2024, para. 8)

Like Alt News, Vishvas News also does comparative analysis wherever required and shows the difference between real and fake. Vishvas News invites its readers to participate in the fact-checking process. It shares its WhatsApp No i.e. 9205270923, and email-id, contact@vishvasnews.com where the readers can share the doubtful information. It is examined that the misinformation related to elections spread on a number of platforms including WhatsApp, Facebook, YouTube, X, Instagram, WhatsApp and Threads. Out of these, Facebook and X are the most exploited platforms (90.46%). However, in comparison, such misinformation is less on Instagram and Threads.

The researchers identified that a variety of methods are being utilized by fact-checking platforms to cross-check the misleading information. Some of these include reverse image searches, official statements, official documents, official YouTube channels, and news reports.

It is identified that Vishvas News supported their articles with quotations with at least 98.68% of stories providing quotes that aimed at providing correct information. It is brought to light that false news, fake news and misleading

news are the most common framing of news.

The frequency of debunking posts in Myth vs Reality is very low in comparison to the fake news that is being generated on various social media platforms. It is difficult for a user to completely trust the platform for pinpointing all or maximum possible fake news related to elections. Additionally, the Myth vs Reality register does not get regularly updated, bringing its utility to an extremely low level. Random posts are identified during the election period and it is only during general elections that the Myth vs Reality register focuses on updating readers. Updates of fake news circulating during Assembly elections are not provided on the Myth vs Reality register. Press Note by PIB calls the Myth vs Reality register a "comprehensive repository of factual information to dispel myths and falsehoods circulating during the election period and thereby empowering them to make informed decisions" (Press Information Bureau, 2024, para. 3). Researchers however identified the contrary.

Conclusion

Myth vs reality register thus fails to debunk all circulated disinformation, especially during the election period. Its limited approach in debunking news items makes information seekers yearn for other platforms which could match up with the speed of misinformation spread during election season.

The citizens can't be empowered by providing limited information and a notable percentage of fake news related to politics is still not covered in the register. This endeavour by the Election Commission of India to protect the electoral process against misinformation is yet to bloom.

Overall, it is evaluated that Alt News, Boom, and Vishvas News fit well into the three-dimensional purposes of media literacy as also pointed out by Chandola (2020) which includes preventative, creative, and interactive features. These fake news debunking items help the reader (who also may be a voter) to stay informed about the online misinformation which may lead to dangers like incorrect knowledge, hate spread, and social divide.

The creative dimension is met as all three fact-check platforms provide links to the social network page where the reader can actively participate and present their opinions on the matter. All three fact-check platforms also provide a phone

number where the readers share information regarding any viral video which appears to be false or fake. The interactive aspect is met because all three of these platforms focus on explaining the background context along with providing value-added information on the news item being clarified. This in a way teaches readers to communicate responsibly, contribute to knowledge, and engage in meaningful discussions. However, news items in the case of the Myth vs reality register display the presence of only one dimension that is preventative.

This research is limited to the understanding of four fact-checking platforms, however, future research can be conducted on more fact-checking platforms especially, if any, working in specific geographical regions.

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Native Ecology and Rural Development in India: Missed Connections and Future Directions

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Abstract

Rural India is vulnerable to most of the 21st century developmental challenges like the vast and continuing environmental as well as ecological damage, large-scale migration and mobility, international competition, rising income-inequalities, increased instances of natural disasters and technological disruption. In order to navigate these complexities, a long-term guiding framework that emphasises on rural sustainability is essential. India has implemented various Rural Development Programmes (RDP), each with specific objectives, resulting in a fragmented policy framework and disjointed implementation. These initiatives seem to have been conceived from an urban perspective, ignoring the unique needs of diverse rural and peri-urban regions. Even though 44.72% of the world's population resides in rural areas, mainstream development policies often underestimate their potential. Rural areas can play an important role in sustainable development by harnessing indigenous resources, promoting local industries and tourism, and contributing to renewable energy production. This paper explores the effectiveness of integrated rural development initiatives in India, evaluating their impact on livelihoods, basic infrastructure, and community empowerment. Drawing from programme documentation and stakeholder perspectives, the paper seeks to identify key bottlenecks and policy-gaps. The findings underscore the need for context-specific interventions, stronger community-participation, and convergence across schemes for holistic development.

Keywords: *Rural development, Sustainable development, Integrated rural development, Social innovation, Smart villages*

Introduction

The rural regions are often vulnerable because of persistent poverty traps, social inequalities, population migration, reliance on nature-based livelihoods, administrative shortcomings, weak planning, and geographical isolation (DISD, 2013). To address these internal vulnerabilities, it becomes crucial to establish a development framework that ensures sustainability of rural areas amidst rapidly changing risk landscapes. Many platforms have long advocated for synergistic frameworks that prioritize both natural resource conservation and well-being of communities to achieve sustainable development. The ecological sustainability in the development narrative remains in discourses but is not reflected in practice. If governance is people-centric alone, catering to immediate needs with complete disregard for the larger ecology, sustainable development goals cannot be expected to be achieved. The saddest part is that even humanitarian goals are far from being achievable. This needs to be reversed; the focus should be to find a way through innovative localised approach. The study undertakes a review of the Rural Development Programmes (RDP) launched by the Indian government, with a focus on understanding the underlying factors contributing to the uneven pace of growth in rural India.

Rural development is generally understood as the overall development of rural areas to ensure a better quality of life for people residing there (Naldi et al., 2015). It must be understood as a multi-level process anchored in historical traditions. The Agenda 21's "sustainable development" paradigm is based on three conceptual foundations: Economic sustainability, Social sustainability, and Environmental sustainability (Kahn,1995). Economic sustainability revolves around the traditional concept of growth and development. Its characteristics have been market resource allocation, sustained growth and consumption levels, the premise that natural resources are limitless, and the belief that economic growth will 'trickle down' to the poor. 'Sustainable development' expands development's concern with monetary capital to consider natural, social, and human capital and expects conscious use of resources to last for consumption by future generations. Social sustainability encompasses equity, empowerment,

accessibility, participation, sharing, cultural identity, and institutional stability. It seeks to preserve the environment through economic growth and poverty alleviation.

Researchers particularly those in support of the 'Environmental Kuznets Curve', are of the view that poor countries must accept environmental degradation as a short-term consequence of economic development. Others have argued that an enabling environment that optimizes resource allocation can obviate the need for such a trade-off (Kahn, 1995). In the most basic sense, 'social sustainability' implies a system of social organization that alleviates poverty. In a more fundamental sense, however, 'social sustainability' establishes the nexus between social conditions such as poverty and environmental decay (Ruttan, 1991). Environmental sustainability involves ecosystem integrity, carrying capacity, and biodiversity. Natural capital must be maintained as a source of economic inputs and a sink for waste. Resources must be harvested no faster than they can be regenerated. Wastes must be emitted no faster than they can be assimilated by the environment (Kahn, 1995). Only by 'integrating' and 'interlinking' economic, social, and environmental 'sustainability' can negative synergies be arrested, positive synergies fostered, and real development encouraged.

The nation cannot progress sustainably unless the aim is set for balanced rural development, a modernised rurality in terms of environmental protection, economic stability, and equitable opportunity for all. The unfortunate part of rural Indian growth programmes is that they are less focused on ensuring the use of native resources and maintaining long-term cultural and ecological sustenance in the decision-making process. Conceptually, rural-ecology sustenance is concerned with achieving a balance between rural people and local natural resources. The economic aspect of rural development for policy makers till the 1980s meant 'basic-needs-approach' i.e. provisioning of opportunities for rural people and their capacity to participate in the growth process. It included strategies for reducing income-inequality. The social dimension was incorporated much later and embraced growth of poor, marginalised communities, and disadvantaged groups. Political dimension has been incorporated into recent trends in a developmental discourse, including provisions for low-income people, women, ethnic minorities to participate in the

decision-making process. India had followed the path of decentralisation long before, yet proper incorporation of the political dimension into the development discourse, grassroot implementations did not occur until constitutional amendment of 1992, when the three-tier Panchayati Raj system, a form of local self-government, was given constitutional validity (Balwant-Rai-Mehta-Committee-Report)[1] . The three-tier system comprises Gram-Panchayats at the village level or at the bottom, the Panchayat Samiti at the block level or in the middle, and the Zilla Parishad at the district level. Although Subramanyam (1976) put forward the Integrated Rural-Development (IRDP) concept, it was not implemented in letter-and-spirit. The priorities should be to prepare a village centric unique blueprint as a policy document catering to village specific problems that opens perspectives for rural people, preserves rural-complex as a cultural complex, develops prerequisites for new jobs to make 'Atma Nirbhar Bharat' along the Saansad Adarsh Gram Yojana (SAGY) guidelines.[2]

This study seeks to examine how Integrated Rural Development Programmes (IRDP) impact the socio-economic status of rural communities in India. The primary research question is: 'To what extent do IRDPs enhance sustainable livelihood and provide access to basic services among rural populations? In an attempt to answer the research question and narrow the research gap, the study proposes a policy framework for rural sustainable development.

Review of Literature

Despite a significant share of the Indian population living in villages, rural areas continue to face considerable developmental challenges that impede the broader progress of the national economy (Divi et al.,2024). There exists substantial disparity in the development of villages, with most falling far short of desired standards. There is hence an urgent need for village-specific planning to address the welfare needs of local communities. Local Economic Development (LED) should play a pivotal role in promoting the establishment of new rural industries to achieve a sustainable rural landscape (Liedholm & Kilby, 1989). This should be accompanied by greater inclusion of rural people in economic and political processes and improved telecommunication services (Oladipo, 2008) for wider reach and knowledge. It is essential to ensure that such changes do not compromise the local agricultural and village resource base (Oni, 2008)

and that land and other rural resources are distributed more equitably to uplift the poorest sections of the rural population (Ujo, 2005). It is crucial to include marginalized groups such as women, national and ethnic minorities, and the elderly in the development process (Gusztáv, 2005). Neglecting their suffering has led to mass emigration from rural areas to urban centres (Usoroh, 2018).

Innovation in rural areas has received limited attention, despite national initiatives (Yin et al., 2019). There is a growing emphasis on the empowerment of women. The role of Self-Help Groups (SHGs) in enabling economic independence for rural women is important. Rashidpour, et al. (2011) have emphasized the importance of Community-based Management (CBM) in sustainable rural development. Their study indicates that latent variables such as "Stakeholder's Role" and "Affecting Factors" have a positive impact, while "Obstacles" have a negative role in designing CBM. Pandey and Soodan (2012) have elaborated on the role of leadership in rural intervention. Their study, which compared leadership styles in two NGOs, HIFEED and HESCO, in Uttarakhand, India, emphasized the need for effective leadership in implementing strategies and driving change.

Despite the awareness of the importance of public participation in making environmental decisions democratic, legitimate, and acceptable, meaningful public involvement has often been compromised. For instance, in the context of the Allain Duhangan[3] hydropower project in northern India and the social impact of developmental interventions in villages like Chikapar village in Odisha (which houses the Hindustan Aeronautics Limited), there have been social and environmental impacts due to development interventions.

However, case studies from drought-prone regions like Hiware Bazar[4] and Ralegan Siddhi in Maharashtra reveal that a localized economic development approach has lifted these regions out of extreme poverty and restored natural resources to sustainable levels. The success story of Punsari[5] as a model smart village in Gujarat is attributed to customised planning based on identifying the unique gifts of nature and specific village problems, serving as an exemplary model for emulation. Similarly, Piplantri[6] village in Rajasthan plants 111 trees every time a family welcomes a girl child, promoting gender equality and enhancing the village's biodiversity.

The efforts of Tarun Bharat Sangh (TBS)[7] in organising villages and local communities across the country, has resulted in the formation of Rashtriya Jal Biradari (National Water Community-RJB). RJB is a network of like-minded individuals, farmer groups, social organizations, research institutions, and water experts, all deeply concerned about water-related issues, with more than 200 organizations and 10,000 individuals as members.

In light of this background and in alignment with sustainability and resilience goals, this research aims to outline a framework for the future-ready development of rural regions, particularly at the Gram Panchayat level, which serves as a fundamental governing institution in Indian villages. This research responds to India's rapidly evolving economy and the sustainability challenges faced by rural communities. India's growing and dynamic economy, on track to become the world's third largest by 2030 (World Bank, 2018), has evolved through government-led economic reforms emphasizing liberalization, privatization, and deregulation (Kim & Panchanatham, 2021). Over the years, the government's goals for rural development (RD) have shifted from mere survival to safety and, more recently, to sustainable development (NITI Ayog, 2018) across various sectors, including agriculture, infrastructure, microfinance, community development, and environmental conservation. Consequently, to realize the vision of Sustainable Rural Development, the government of India has proposed numerous policies, schemes, and programme initiatives under the aegis of Ministry of Rural Development (MoRD, 2021).

Rural Development Programmes, Impact, and Gaps

India has launched several rural development programmes as listed in Table 1. Table 1 is subdivided into three parts to trace the rural development policies chronologically. It can be seen that our government has initiated several programmes quite consistently over the considered period. The successful and effective implementation of these programmes is critical to achieving long-term development in rural areas. Since independence, the government has reformed and remodelled these programmes to increase their reach and popularity. On the other hand, the issues, obstacles, and concerns related to their implementation have remained largely unchanged.

Table 1(i)

Key Rural Development Programmes in India from 1950-1990

Rural Development Programme/Year-Objective/Description
Community Development Programme (CDP)-1952 -Overall development of rural areas with people's participation.
Accelerated Rural Water Supply Programme (ARWSP)-1972-73-For providing drinking water in villages
Crash Scheme for Rural Employment-1972-73-For rural employment
Draught Prone Areas Programme (DPAP)-1973-74-Minimize the adverse effects of drought productivity of land and livestock leading to drought proofing of the affected areas
Twenty-Point Programme-1975-Poverty eradication and raising the standard of living
National Rural Employment Programme (NREP)-1980-provide profitable employment opportunities to the rural poor
Development of Women and Children in Rural Areas (DWCRA)-1982-To provide suitable opportunities for self-employment to the rural women who are living below the poverty line
Rural Landless Employment Guarantee Programme (RLEGP)-1983-For providing employment to landless farmers and labourers
National Fund for Rural Development (NFRD)-1984-To grant 100% tax rebate to donors and also to provide financial assistance for rural development projects.
Service Area Account (SAA) -1988-A new credit policy for rural areas.
Jawahar Rozgar Yojana-1989-For providing employment to rural unemployed.
Agriculture and Rural Debt Relief Scheme (ARDRS)-1990-To exempt bank loans up to Rs. 10,000 for rural artisans and weavers.

Table 1(ii)

Rural Development Programmes in India from 1991-2015

District Rural Development Agency (DRDA)-1993-To provide financial assistance for rural development.
Mahila Samridhi Yojana-1993-To encourage the rural women to deposit in Post Office Saving Account.
Swarna Jayanti Gram Swarozgar Yojana-1999-For eliminating rural poverty and unemployment and promoting self-employment.
Indira Awaas Yojana-1999-To help construction of new dwelling units as well as conversion of unserviceable kutcha houses into pucca/semi-pucca by members of SC/STs, freed bonded labourers and also non-SC/ST rural poor below the poverty line by extending them grant-in-aid.
Pradhan Mantri Gramodaya Yojana-2000-To fulfil basic requirements in rural areas.
Pradhan Mantri Gram Sadak Yojana (PMGSY)-2000 and 2015: To line all villages with pakka road
Annapurna Scheme-2000-To ensure food security for all create a hunger free India in the next five years and to reform and improve the Public Distribution System so as to serve the poorest of the poor in rural and urban areas.
Sampoorna Gramin Rozgar Yojana-2001-To provide additional wage employment in the rural areas as also food security, along with the creation of durable community, social and economic infrastructure in rural areas.
Bharat Nirman Programme-2005-Development of Rural Infrastructure including six components: irrigation, Water supply, Housing, Road, Telephone and Electricity.
National Rural Employment Guarantee Scheme (NREGA)-2006-To provide at least 100 days wage employment in rural areas.
National Social Assistance Programme-2009-Old age pensions are granted under three schemes to destitute persons- (i) Indira Gandhi National Old Age Pension Scheme (IGNOAPS) (ii) Indira Gandhi National Widow Pension Scheme (IGNWPS) (iii) Indira Gandhi National Disability Pension Scheme (IGNDPS)

National Livelihood Mission-2009-10-To reduce poverty among rural BPL by promoting diversified and gainful self-employment and wage employment opportunities which would lead to an appreciable increase in income on a sustainable basis?
Pradhan Mantri Adarsh Gram Yojana (PMAGY)-2010-Integrated development of scheduled castes dominated villages in the country.
National Rural Livelihood Mission-2011-Scheme is focused on promoting self-employment and organization of rural poor. The basic idea behind this programme is to organise the poor into SHG (Self Help Groups) groups and make them capable of self-employment.
National Food Security Scheme (National Food Security Act)-2013-Aims to provide subsidized food grains to approximately two thirds of India's 1.2 billion people.
Deen Dayal Upadhyay Grameen Kaushalya Yojana (DDUGKY)-2014-to drive this national agenda for inclusive growth, by developing skills and productive capacity of the rural youth from poor families.
Digital India Programme (2015) has helped improve rural governance by making it more transparent, efficient, and cost-effective. Digital initiates include provisioning of broadband connectivity, digital literacy, and e-governance services, digital payments etc.

Table 1(iii)

Rural Development Programmes in India from 2016 onwards

Pradhan Mantri Awaas Yojana- Gramin (PMAY-G)-2016-to provide pucca houses with some of the basic amenities.
Shyama Prasad Mukherji Rurban Mission (SPMRM)-2016-to deliver integrated project-based infrastructure in the rural areas, which will also include development of economic activities and skill development.
Mission Antyodaya-2017-18-convergence and accountability framework that aims to ensure optimum utilisation and management of resources to ministries/ departments under various programmes for the development of rural areas

Saansad Adarsh Gram Yojana (SAGY) Phase 1: 2014-19; Phase II:2019-24-to develop three Adarsh Grams by March 2019, Later five such Adarsh Grams (one per year) will be selected and developed by 2024. The programme aims at holistic development of villages that improves the standard of living and quality of life for all.
Gram Panchayat Development Plan (GPDP) - Sabki Yojana, Sabka Vikas[8] . The GPDP focuses on providing support for development of rural products like Bamboo, Honey and Khadi as a cluster-based approach. During 2019-20 this scheme promoted rural industry and entrepreneurship and supported 75,000 entrepreneurs. Swamitva Yojana- The scheme focused on land ownership by availing advanced technology and was tested by the Panchayati Raj Ministry of the Union Government before its launch in 2020

The evaluations of rural development programmes, both qualitative and quantitative in nature—as highlighted by Mansuri and Rao (2013) reveal persistent challenges such as limited engagement from local institutions, inadequate stakeholder participation, and sluggish dissemination of development schemes. These shortcomings, coupled with strategic and managerial disconnects, have hindered efforts to establish self-reliant village communities.

Progress under Some Key Rural Development Programmes

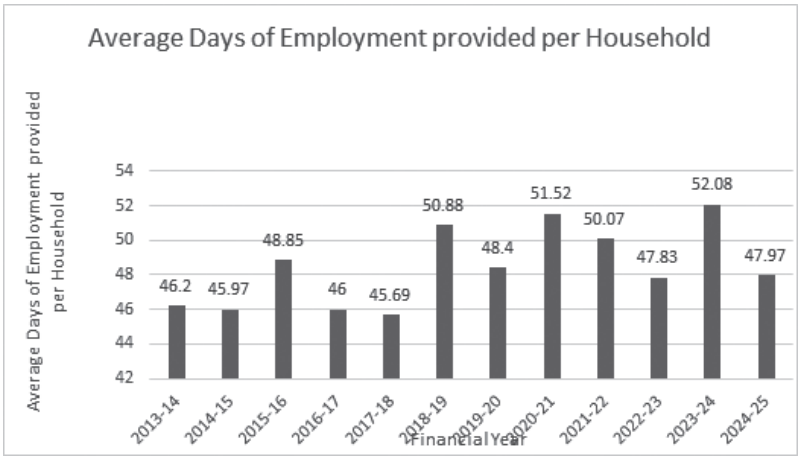
i. Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA)

The scheme's success in providing an employment guarantee of at least 100 days to rural households can be traced through Figures 1, 2, and 3. The average days for which rural households were employed fluctuated over the period 2013-14 to 2024-25. It, however, hovered around the 50 days mark falling well short of the target to guarantee employment for at least 100 days to rural households (Figure 1). The average wage increased over the period, rising from ₹ 132.7 per person in 2013-14 to ₹ 250.24 in 2024-25. This rise may not be considered sufficient as it has not compensated the employees for the increased inflation witnessed during the period (Figure. 2). The number of households that enjoyed the benefit

of 100 days of employment under the scheme was about 46 lakhs in 2013-14 but reduced to 40 lakhs in 2024-25. The number of beneficiary households was largest in 2021-22 with about 71 lakhs getting employment. (Figure. 3).

Figure 1

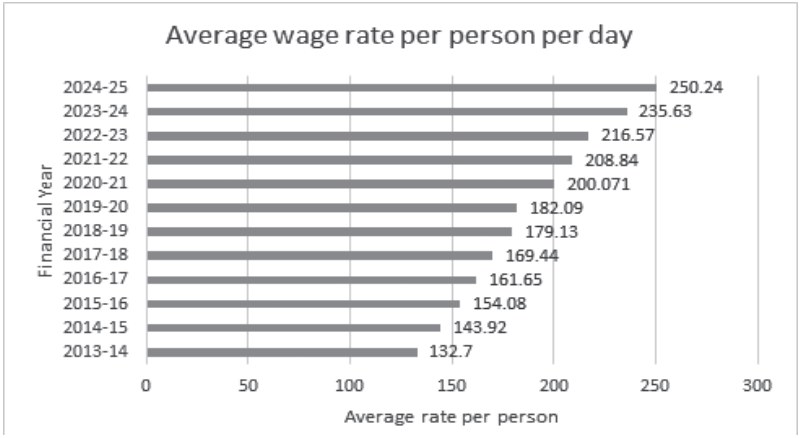
Average Number of Days of Employment Provided under MGNREGA



Source: https://nrega.nic.in/MGNREGA

Figure 2

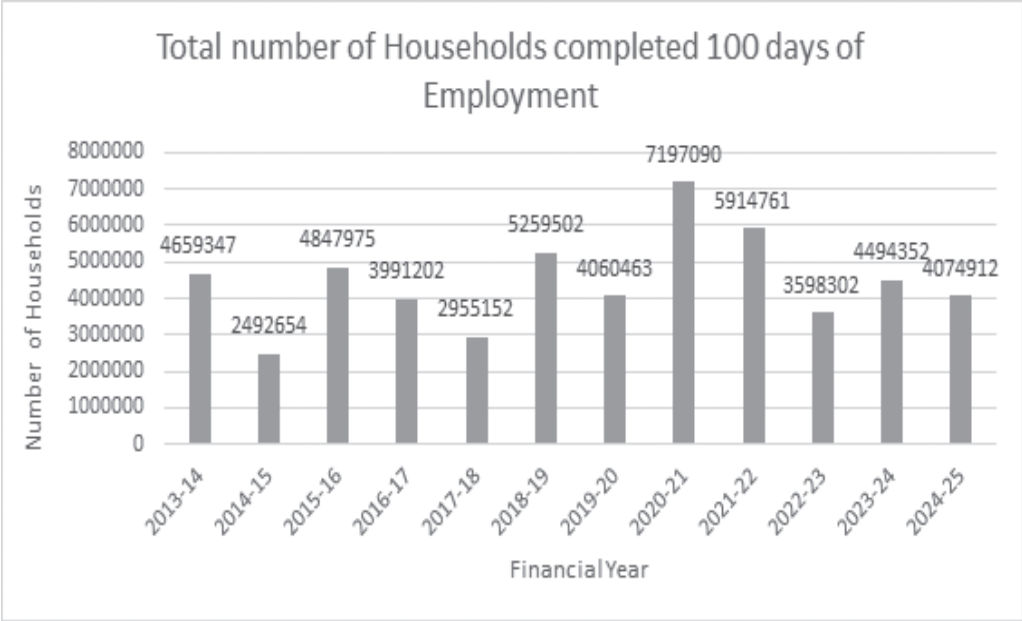
Average wage Rate per Person Since 2013-14



Source: https://nrega.nic.in/MGNREGA

Figure 3

Growth in the Number of Households that Completed 100 days of Employment Guaranteed under MGNREGA



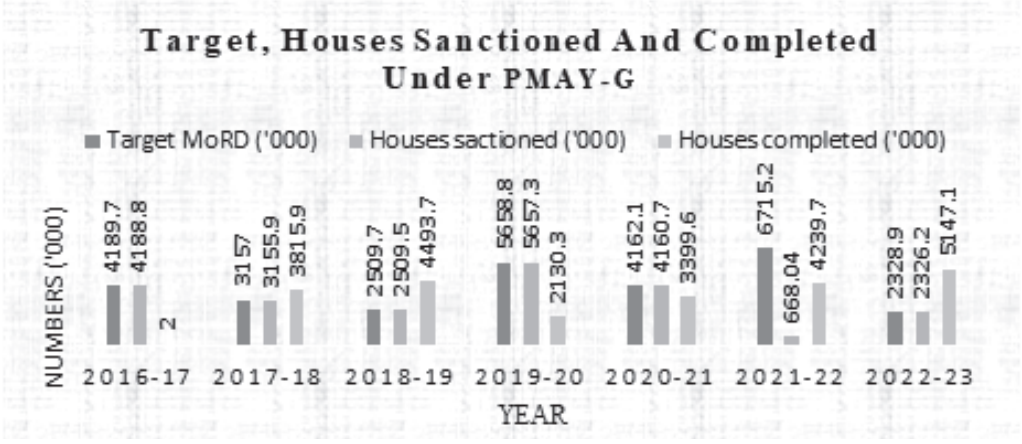
Source: https://nrega.nic.in/MGNREGA

ii. Pradhan Mantri Awaas Yojana- Gramin (PMAY-G)

The implementation of the Pradhan-Mantri Awaas Yojana for rural people through the years is depicted in Figure 4. It can be seen that the target number of houses provisioned to the rural poor by the Ministry of Rural Development is equal to the number of houses sanctioned for all years except 2020-21. This deviation can easily be attributed to the Covid-19 pandemic. The number of houses completed under the scheme shows a promising trend. However, what needs to be seen is the delivery time of this benefit to the rural poor which would be large as provisioning of houses is not an easy and quick job by any means.

Figure 4

Target and Sanctioned Houses under the Scheme



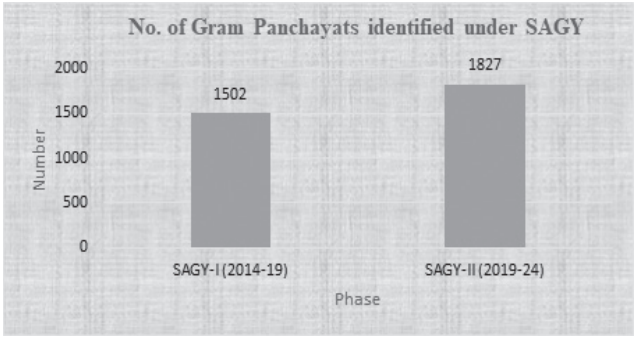
Source: https://pmayg.nic.in

iii. Saansad Adarsh Gram Yojana (SAGY)

The SAGY is a relatively new scheme launched in 2014 that recognises the potential of the rural sector in overall sustainable development of the country. The progress of this scheme in terms of the number of Gram Panchayats identified under the scheme is highlighted in Figure 5. Total number of Gram Panchayats identified till date to implement the SAGY are 3333, with the total number of projects identified under this scheme being 246066, out of which 200750 have been completed.

Figure 5

Implementation of SAGY



Source:

https://saanjhi.gov.in/

iv. National Social Assistance Programme (NSAP)

The programme launched in 2009 provides social assistance in the form of pension to the rural old and destitute under three schemes namely:

a. Indira Gandhi National Old Age Pension Scheme (IGNOAPS)

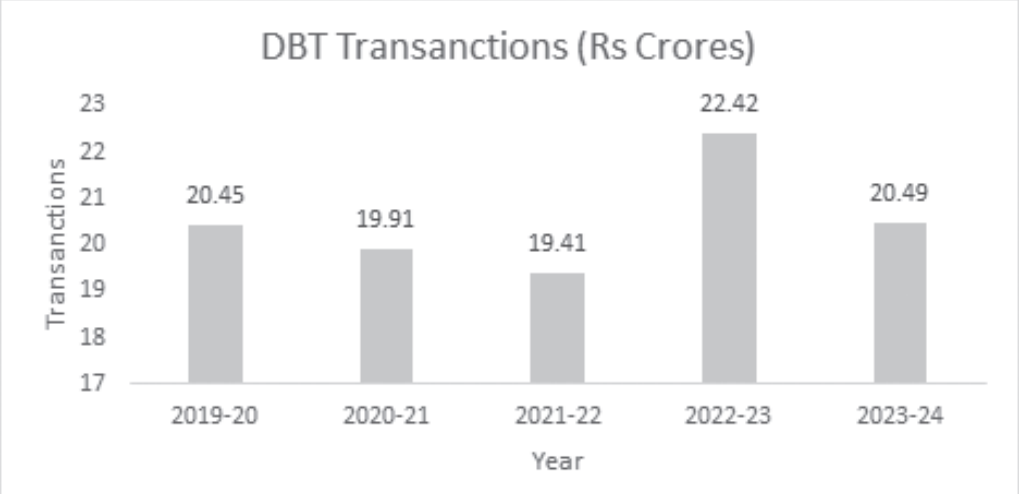
b. Indira Gandhi National Widow Pension Scheme (IGNWPS)

c. Indira Gandhi National Disability Pension Scheme (IGNDPS).

The direct-benefit transfer under the scheme over the years is depicted in Figure 6.

Figure 6

Direct Benefit Transactions under NSAP



Source: https://nsap.nic.in

v. Progress under other Schemes

Mission Amrit Sarovar: This was launched in 2022 to conserve water for the future. It aimed at developing or rejuvenating 75 ponds also called 'Amrit Sarovars' in each district. About 68,843 ponds have been developed so far.

Jal Jeevan Mission: This was initiated in 2019 with the aim of providing all

rural households with clean and sufficient drinking-water. As on January 2025, a total of 12.2 crore households were provided with tap water connections.

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM): This mission was started in 2011, to empower rural poor women by organizing them into Self Help Groups (SHGs) and supporting both farm and non-farm economic activities with the objective of enhancing their incomes and quality of life. The scheme has so far mobilised 10.02 crore rural households into 90.90 lakh SHGs, 5.96 lakh Village Organisations, and 32,419 Cluster Level Foundations.

Since India's independence, rural development policies have primarily centred around poverty eradication. The predominant approach has been to boost agricultural productivity, assuming it to be the primary livelihood option for rural communities. Although numerous initiatives have emerged over time, such as NRHM for healthcare, NLRM for livelihood, and NSAP for social upliftment, the lingering concern remains: if these programmes were truly adequate and successful, their primary goal of poverty eradication in rural areas would have been accomplished (Pathak and Deshkar, 2023). The Ministry of Rural Development has come out with a vision document (2019-24) which recognises that the transformation of rural communities is important to achieving SDGs 2030 and lays down the road map to poverty-free India.

Insights from Select Studies on the Evaluation of Rural Development Initiatives and the Identified Gaps

India's rural development trajectory has been shaped by a series of ambitious government initiatives aimed at improving the socio-economic well-being of its vast rural population. Empirical studies reveal that while these programmes have delivered notable successes, challenges remain in ensuring equitable outreach and long-term sustainability. A cornerstone in this space is the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which has significantly increased household incomes by offering employment during the agricultural lean season. Its efficacy in reducing seasonal migration and generating communal assets is demonstrated by case studies from Tamil Nadu and Chhattisgarh (Panda and Majumder, 2013). However, results are impacted by differences in administrative performance across rural areas. According to a study by Kumar, et al. (2021), MGNREGA has helped about 29.3 crore rural workers, underscoring its effect on rural unemployment.

Rural people now have better housing options and skills because of two parallel programmes like the Pradhan Mantri Awas Yojana-Gramin (PMAY-G) and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY). Over 1.4 crore pucca houses were built with PMAY-G assistance (Kumar et al., 2021), while DDU-GKY made it possible for young people in rural areas to receive training. However, GRAAM (2020) indicates that low pay and placement in inconvenient locations are the top reasons why women quit their jobs, underscoring the necessity of training aligned with the local job requirement.

Institutional financing is also a significant factor. Mathavan and Prema (2004) discovered a high association between improvements in rural infrastructure and incomes and NABARD's financial operations, underscoring the significance of strong banking institutions in maintaining progress.

Access to benefits is still skewed by socio-economic differences in spite of these initiatives. Welfare programmes disproportionately benefit households with higher castes (Reddy et al., 2022). Stronger last-mile delivery mechanisms are required, which show that structural disparities limit the reach of even well-designed projects. Agricultural initiatives such as Telangana's Seed Village Programme (SVP) provide a more focused success story. Using regression analysis and 'Difference-in-Differences' (DiD), Bhavani et al. (2022) found that SVP participants' agricultural-earnings increased due to characteristics including farmer education and irrigation access.

Initiatives adopted at Community-level like *Kisan Melas* under Shri Kshethra Dharmasthala Rural Development Project (SKDRDP) also indicate some potential. These melas have increased awareness about agricultural policies and improved financial literacy, leading to creation of social capital through grassroots mobilization (Venkatraja & Prasad, 2019).

Studies by Bhagat (2009) and Mukherji (2013) stress the need for participatory models tailored to local contexts. Their work shows that policies must include marginalized groups and women in both planning and execution. Rural-to-urban migration persists due to limited local opportunities. Scholars recommend rural employment rooted in Traditional Knowledge Systems (TKS), with community support to maintain ecological balance.

To promote sustainable rural development, environmental aspects must

be considered with economic planning. Promoting green jobs and Local Economic Development (LED) involving low-cost projects is one approach. The challenge is in aligning such initiatives with current policy frameworks while overcoming limits posed by inaccessibility, particularly in employment training, transportation, and service delivery. A renewed attention on participatory governance, decentralization, and ecological sustainability is important to address these continuing gaps.

A Contextual Framework for Tailored Rural Development: The Way Forward

Rural development must start by classifying villages according to their developmental stage. This allows for tailored strategies that address each group's specific needs. Under-developed villages need basic amenities like roads, electricity, schools, and healthcare. The moderately developed ones should focus on improved farming, irrigation, and rural industries. Well-developed villages can adopt sustainable technologies, promote green jobs, and support rural tourism or decentralized energy like solar power. A uniform model is outdated. Programmes must support agro-industrial growth, promote suitable technologies, and build capacity for innovation and entrepreneurship. Both farm and non-farm sectors should be integrated through targeted interventions reflecting the strengths and gaps of each village.

True development must rest on sustainability—environmental, social, and economic. Programmes should minimize negative externalities and ensure fair benefit distribution. As observed by Bicalho and Peixoto (2016), integrating farmers' experiential knowledge with scientific understanding plays a crucial role in strengthening the resilience of agro-ecological systems. Yet, translating global frameworks like the 2030 Agenda, Paris Accord, and Sendai Framework into village-level strategies remains a challenge in India.

Success hinges on participatory and transparent governance. Grassroot engagement, combined with institutional backing allows communities to shape their development. Regular awareness drives, community feedback, and strong monitoring systems are vital to track funds and measure outcomes. A major barrier is the low motivation among officials in remote postings, often viewed as punishment. These roles must be reframed as opportunities, offering benefits like hardship pay, fast-track promotions, or priority postings after set tenures.

This comprehensive, context-aware approach, rooted in differentiated planning and empowered governance—can drive sustainable rural transformation. Rather than imposing external models, development should evolve organically, aligned with local realities and aspirations.

Key Strategies for Rural Development Framework

Stimulating a meaningful rural-development requires a diverse, integrated approach. One effective method is employing labour-intensive technologies in rural industries to reduce disguised unemployment in agriculture. Educational workshops and seminars should also raise awareness among rural entrepreneurs about government and non-government schemes promoting enterprise development. Access to low-interest credit with flexible collateral norms is crucial, and financial institutions must adopt a proactive stance. Government support is equally vital—covering infrastructure, storage, marketing, and export facilitation. Renewable energy, particularly solar and wind, should drive sustainable rural-electrification. Supporting ancillary units around existing enterprises can boost productivity, while SHG-led microcredit programmes can expand employment and diversify rural economies.

Spreading knowledge of market trends, technology, and price updates empowers rural entrepreneurs. Tools like SWOT analysis, reliable credit systems, and infrastructure access help unlock financial and innovative potential. Establishing Innovators Clubs, Entrepreneurship Development Cells, and Rural Marketing Cells—coupled with management and skills training—can foster youth entrepreneurship.

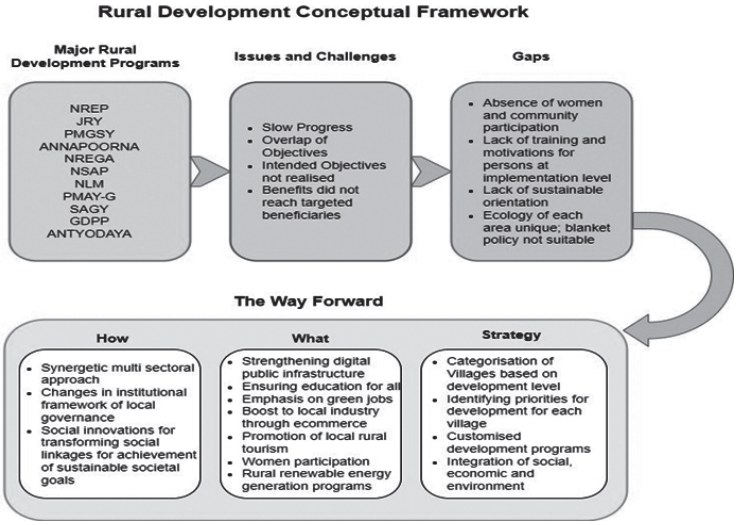
Investment in modernization, diversification, and agro-processing, especially in non-farm sectors, must increase. The OPS (Opportunity, Problem, Solution) framework helps identify regional issues, attract skilled returnees, and engage NRIs and affluent locals. Efficient local markets, product grading, and flexible manufacturing can boost rural commerce. Strengthening small enterprises with finance, marketing, research, and advisory services is essential for a resilient rural entrepreneurship ecosystem. Aligned with the 2030 Agenda, rural initiatives can advance SDG 1 (No Poverty), SDG 6 (Clean Water), SDG 7 (Clean Energy), SDG 11 (Sustainable Communities), and SDG 13 (Climate Action). Under the Paris Agreement, sustainable farming and clean energy in rural areas can cut emissions and improve climate resilience.

The Sendai Framework underscores the importance of disaster preparedness in safeguarding rural livelihoods. Each region needs tailored development plans based on its resources, stage of growth, and unique needs. A one-size-fits-all strategy is ineffective. The broader goal is a coordinated, multi-sectoral model integrating agriculture, rural industry, eco-tourism, biofuels, infrastructure, and green energy. For a resource-constrained country like India, avoiding duplication is key. This underscores the urgency of integrated governance, aligning stakeholders under a shared development vision.

The methodology and proposed framework for achieving convergence in rural development planning is illustrated in Figure 7. It has been developed based on implementation challenges as observed in various programme evaluations discussed above. The proposal is based on categorization of villages based on their development level and working out tailor made strategies to ensure sustainable development. The framework highlights the role of community-level institutions, inter-departmental coordination, and the integration of digital monitoring tools in enhancing the efficiency and inclusiveness of development outcomes.

Figure 7

Conceptual Framework of Rural Development



Conclusion

A holistic approach to local development should stem from the concept of bottom-up or endogenous growth (Gkartzios & Lowe, 2019), which emphasises local resources and internal capacities to build territorial capital. This demands a sectional approach, prioritising territorial coherence over isolated sectoral actions. A more effective model is the neo-endogenous method, blending internal potential with selective external (physical and digital) links, while minimizing ecological disruption. The six dimensions of the rural web—endogeneity, innovation, institutional arrangements, social capital, market governance, and sustainability—remain underused. This framework promotes interlinked actors, common standards, and cooperation. Successful rural innovation hinges on continuity, collaboration, and communication.

A reliable, updated rural database is crucial for informed policymaking. Bridging the planner-community divide requires local orientation, participatory methods, and the inclusion of Traditional Knowledge Systems (TKS). The envisioned model involves a bi-directional Citizen-Government (G2C2G) interface with feedback loops and geo-tagging—key elements in modern e-governance (Malhotra et al., 2006). Women, despite their key role in rural economies, remain under-represented in Local Economic Development (LED). This calls for gender-sensitive planning backed by gender analysis and budgeting.

The Smart Village model, introduced under Saansad Adarsh Gram Yojana (2014), supports inclusive rural transformation. Based on six pillars—Governance, Technology, Resources, Services, Livelihoods, and Tourism—it adapts to regional needs (Aziiza & Susanto, 2020). SMART villages are Sustainable, Manageable, Adaptive, Responsible, and Technologically advanced. Regulatory and governance reforms are essential for this model to thrive (Castro-Arce, 2020). Social innovation is central here, fostering collective action toward shared goals. When scaled, it can drive governance reform and regional resilience.

Agricultural technology is transforming rural economies. Tools like precision farming, drone-based soil analysis, AI crop forecasting, and blockchain traceability improve yields, cut costs, and open markets. When aligned with local knowledge, these technologies enhance productivity and reduce environmental impact, supporting sustainable development. Globally, the energy transition offers rural opportunities. Small-scale, community-owned renewable systems

can deliver both power and income (Clausen & Rudolph, 2020). This is timely as India promotes rural industries and eco-tourism, aligning with SDGs 8, 12, and 15. The urban-centric view that sees rural areas as mere resource suppliers must change. A new paradigm should value rural vitality and embrace the urban-rural continuum. Urban areas must invest in rural renewal, fostering self-sustaining economies and ensuring the rights and dignity of various segments of rural population. A coherent implementation-framework with local ownership, real-time monitoring, and inter-departmental convergence is crucial. Future policies should account for regional disparities and prioritise community engagement to ensure the sustainability of outcomes.

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Endnotes

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Nudging for Sustainable and Responsible Behaviour: Analysing ESG Mutual Fund Investments in India

Gayatri & Surendra Kumar

Abstract

'Prithvi shanti', meaning 'let the forces of nature be in balance', is an ancient Indian wisdom, coming from the Upanishads. Ever since the Rio de Janeiro conference took place in 1992 in Brazil, the world has improved compared to what it would have been without this conference. This nudging for sustainable and responsible behaviour has continued since then, but the question remains as to how effective it has been. The effectiveness of nudging to perform sustainable behaviour can be assessed in several ways, including global investment in environmental sustainability, improvements in environmental, social, and governance (ESG) metrics, and a reduction in environmental degradation. Presently, it has evolved into a full-fledged ESG sector, encompassing compliance and investment This paper attempts to trace the evolution of the ESG framework in India. Further, it seeks to analyse the performance of the Nifty 100 Index with the Nifty 100 ESG Index and ranks the ESG mutual funds in India based on their last 3 years' performance. The tendency to invest in sustainable and responsible investments is rising, albeit slowly. A comparison of the broad market index, Nifty 100, with the Nifty 100 ESG shows that the latter has outperformed.

Keywords: *Environmental, Social, and Governance (ESG), Indices, ESG Mutual Funds, Investments, Sustainable and Responsible Behaviour*

1. Introduction

The Rio de Janeiro conference, held in 1992, marked a milestone in drawing the world's attention to the pressing issues of climate change and the overexploitation of its resources beyond sustainable levels. Ever since, through various rounds of discussions and conferences, conscious collective efforts to save the planet have been nudging us towards sustainable and responsible behaviour. In 2004, in its report titled 'Who Cares Wins', the United Nations introduced the idea of Environmental, Social, and Governance (ESG) as understood in the modern context. This sustainable and responsible behaviour by individuals and nations can be reflected in diverse ways, including funding and investing in projects that aim to make the world better, i.e., strengthening the ESG sector and improving ESG metrics.

This section examines significant developments in ESG that have occurred at a global scale over the last three decades.

1.1 The 1992 Rio de Janeiro Convention on Biological Diversity

The 1992 Rio de Janeiro Convention on Biological Diversity (CBD), also known as the Earth Summit, was a landmark international agreement signed at the United Nations Conference on Environment and Development in Rio de Janeiro. It aimed to promote the preservation and sustainable use of biodiversity, along with the just and fair sharing of benefits derived from the use of genetic resources. CBD had three main objectives: the preservation of biological diversity, the sustainable use of its constituents, and the unbiased sharing of the benefits derived from the use of genetic resources. The CBD is a legally binding international treaty, meaning that countries that ratify it are obligated to implement its provisions. One hundred ninety-six countries are currently parties to the CBD. The CBD has led to the development of various protocols and initiatives, including the Cartagena Protocol on biosafety and the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation (Ashworth, 2022). Countries like India have established national bodies and legislation, such as the Biological Diversity Act of 2002 and the National Biodiversity Authority, to implement

the provisions of the CBD. In essence, the CBD is a crucial international agreement that recognises the importance of biodiversity for human well-being and the need for its conservation and sustainable use. Simultaneously, there are developments in the form of an alliance among nations for global sustainable investment.

1.2 Global Sustainable Investment Alliance (GSIA)

An alliance of regional sustainable investment organisations, the Global Sustainable Investment Alliance aims to promote and support the growth of sustainable investment practices globally. Its mission is to leverage the financial services industry to address key global challenges and accelerate the transition to a sustainable future. The GSIA also plays a role in influencing policy and building communities of sustainable investment practitioners.

The key highlights of the Global Sustainable Investment Alliance (GSIA) Report, 2022 are:

- The quantum of sustainable investing assets is a total of USD 30.3 trillion globally.
- Data published in the new GSIA report – Global Sustainable Investment Review 2022 – is the 6th edition of this landmark publication.
- In non-US markets, sustainable investment AUM have increased by 20% since 2020.
- Increased rigour in the US results in a decline in assets labelled as 'sustainable' (GSIA Report, 2023)

The findings of the report highlight the ongoing efforts by regulators, policymakers, and industry players to refine the scope of sustainable investments and address greenwashing risks, leading to more trustworthy measurements of global sustainable AUM. Launched to inform discussions at the Conference of the Parties of the UNFCCC, more commonly known as COP, sustainable investment organisations from around the world have made a series of policy recommendations f2.or the international community to consider.

1.3 GSIA Report 2044

The Global Sustainable Investment Alliance (GSIA) is expected to release a report in 2044 that summarises the state of SRI worldwide, building on previous reports that detailed the growth and trends in SRI practices. These reports typically analyse various investment strategies, including negative or exclusionary screening, ESG integration, and impact investing, and their impact on achieving sustainability goals, such as climate action and the Sustainable Development Goals (SDGs).

> Key aspects expected to be covered in the 2044 GSIA report are a review of sustainable investment assets, focusing on quantitative measures of total assets invested in sustainable and responsible investments. It will also incorporate regional and country-level analysis, emphasising the importance of robust and comparable disclosure methodologies for sustainability information, potentially recommending the adoption of global baselines for corporate sustainability disclosures and ESG ratings. The report might address barriers and challenges to scaling up SRI, potentially building on the Policy Vacuum, Interest, Valuation, Ownership, and Transition Misalignment (PIVOT) framework identified in previous analyses. The report will offer recommendations for policymakers to promote further and accelerate the adoption of sustainable investment practices (GSIA Report, 2023)

2. Literature Review

The relevant literature highlights various issues associated with what ESG investing is and what it is not. Given a particular definition of each component of ESG, how we measure them is itself a vast field of study.

2.1 ESG Metrics

Berg, Florian, et. al. (2022) investigate ESG data from six prominent ESG rating agencies.[1] : Kinder, Lydenberg, and Domini (KLD), Sustainalytics, Moody's ESG (Vigeo-Eisis), S&P Global (RobecoSAM), Refinitiv (Asset4), and MSCI. Different rating agencies employ varying taxonomies, which become integral to their ESG rating methodologies. The authors decompose the divergence into scope, measurement, and effect. Divergence on these three counts is not similar. Measurement divergence is the highest, compared to the divergence

in concept and effect. They also detect, in their study, the rater effect, where a rater's overall view of a firm influences the measurement of specific categories, which in turn affects the ratings assigned.

2.2 ESG Investment Performance

As part of their literature review, Aydoğmuş et al. (2022) give a whole list of research papers where either there is a positive relationship between ESG investments and firm value and performance, or there is a list where this relationship is not so unambiguous. The study presents data indicating a clear-cut positive relationship between ESG score and firm value and ESG score and profitability, taking data of the largest 5000 publicly listed companies from the Bloomberg database from 2013 to 2021, with an overall universe of 45000 panel data firm-year observations, and applies filters using ESG scores in the Refinitiv database and ends up with 1720 companies having 14043 firm-year observations. The sample consisted of firms with a market capitalisation of USD 2.85 billion or above.

Kraussl et al. (2024) examine the recent literature on the expectations, beliefs, and perceptions of investors who incorporate ESG considerations into investment decisions to achieve superior performance or social impact[2] . Kraussl et al. (2024) find strong empirical evidence in the literature that investors have a preference for ESG and that their actions can generate positive social impact through engagement.

Soni, T.K. (2023) examined the relationship between risk-adjusted returns and mutual funds operating in India over a 13-year period. He concluded that the financial performance of ESG mutual funds with higher ESG scores is not significantly better than that of ESG mutual funds with lower ESG scores, after adjusting for the Fama-French five-factor model.Vishali, M., MK, MS. (2024) posit that socially responsible investment is an emerging investment avenue in India. To evaluate the effectiveness of the ESG funds, they employed various risk-adjusted returns measures and compared them.

3. Objectives

The study aims to determine whether socially responsible investment, in the form of ESG investments, is prevailing in India. Furthermore, whether it is profitable or not, compared to other comparable investments. In this paper,

we focus on sustainable and responsible behaviour in terms of ESG investing in India, specifically limiting our discussion to ESG Indices and mutual funds. Thus, the specific objectives are:

- To examine the historical perspective on the evolution of the ESG framework in India.
- To analyse the performance of the Nifty 100 Index with the Nifty 100 ESG Index, and
- To rank the ESG mutual funds in India based on their last 3 years' performance.

4. Methodology

For this study, exploratory insights and empirical analysis have been blended to understand how ESG investing is evolving in the Indian financial landscape. The current and historical data have been obtained from the official websites of the National Stock Exchange (NSE), Bombay Stock Exchange (BSE), and various other verified websites, as duly credited in the references. Different ESG indices developed by NSE and BSE (in partnership with S&P) in collaboration with private financial data providers were checked. Then, only one index was solely focused on, namely the Nifty 100 ESG Index, and compared with the Nifty 100 Index. The returns and risk-adjusted returns of these two indices were compared over one year, five years, and since their inception. Different ESG mutual funds based on their financial performance, were also compared, evaluating their three-year returns and rankings.

5. The Evolution of the ESG Framework in India

Richard Thaler, a Nobel laureate in Economics, is known for his work on "nudge theory", which explores how subtle influences can affect people's choices and behaviours. He suggests that by understanding how people make decisions, we can design environments that encourage them to make better choices without restricting their freedom (Thaler, 2018). The evolution of the ESG framework, both globally and in India, can be viewed from this perspective. However, the idea here is nudge, not sludge. Sludge can take two forms. It can discourage behaviour that is in a person's best interest, such as claiming a rebate or tax credit, but imposes unimplementable conditions. Alternatively, it can encourage

self-defeating behaviour, such as investing in a deal that is too good to be true (Thaler, 2018).

For a long time, businesses have considered earning profits as their primary goal, necessary for survival and growth. However, as humanity's greed began to negatively impact the environment and its quality of life, with its associated side effects, voices were raised, forcing businesses to think beyond financial considerations and consider non-financial issues as well. The corporate sector is not only expected to take the blame but also play a crucial role in reversing the situation. Each one of us is now aware of the global challenges, including climate change and disasters, increasing economic and social inequalities, poverty, and discrimination, among many others. Businesses cannot ignore their responsibilities towards society. So, not only are regulators, but consumers and employees are now raising their voices, arguing that companies should responsibly manage both natural and social capital, in addition to managing financial capital. A proper governance framework must also be in place to support this.

At the conceptual level, ESG refers to a framework comprising three pillars: Environment, Social, and Governance, representing the topic areas that companies should report on, in addition to reporting on tangible assets and liabilities. The environmental section encompasses topics such as climate change, pollution and waste, energy, biodiversity, water management, resource utilisation and environmental compliance. The social part includes areas such as labour practices, diversity, equity and inclusion, health and safety, human rights, employee engagement, customer responsibility, and community impact. The governance section encompasses corporate ethics, regulatory compliance, board structure, internal audit and control, shareholder rights, executive compensation, and risk management. Put simply, a company's day-to-day activities, besides presenting financial risks and opportunities, also generate non-financial risks and opportunities. The purpose of ESG reporting is to capture these.

6. Findings

6.1 ESG-led Investing in India

In 2009, the Ministry of Corporate Affairs (MCA) issued voluntary guidelines for Corporate Social Responsibility (CSR). This was the formal start of ESG

investing in India. The Western world, by this time, had already laid the foundation, institutionalised and created formal frameworks in this direction. The 'Who Cares Wins', report of the United Nations, which introduced the idea of ESG, persuaded all stakeholders, including business managers, directors, investors, and analysts, to incorporate ESG principles into their long-term strategies and decision-making processes.

However, India was quick to catch up with global sentiments from here. Following the CSR guidelines, the MCA introduced the National Voluntary Guidelines (NVGs) in 2011, which outline the social, environmental, and economic responsibilities of businesses. The purpose of these guidelines is to provide Indian corporates with a framework of principles, enabling them to balance financial performance with positive social and environmental impacts and operate responsibly and sustainably. From practising ethics, transparency, and accountability to protecting the environment, respecting human rights, and supporting inclusive growth and equitable development, the nine principles of NVGs can be viewed as the formal entry of a similar framework, such as ESG, in India.

Using NVGs as a base, in 2012, the Securities and Exchange Board of India (SEBI) issued the Business Responsibility Report (BRR), a mandatory disclosure format for top-listed companies (100 from FY 2012, 500 from FY 2015, and 1,000 from FY 2019). Whereas NVGs helped shape ESG thinking, BRR structured ESG reporting for investors, other stakeholders, and regulators. Whereas NVGs urged all businesses to conduct their operations ethically across nine principles, BRR mandated top-listed companies to report on actions taken to uphold NVGs' principles (Business Responsibility Reports – FAQs).

The BRR was replaced by the Business Responsibility and Sustainability Report (BRSR) in 2021 by SEBI. BRSR is mandatory for the top one thousand listed companies from FY 2022-23. The introduction of BRSR marked a significant leap for India in meeting global standards for the ESG framework. Now the reporting style has become more structured and quantitative, making comparison and auditing of ESG data easier than before, when qualitative data was provided (SEBI, 2021). The BRSR is aligned primarily with the Global Reporting Initiative (GRI) (GRI, 2024). Its format covers most of the ESG factors in a structured way, although the 'ESG' label has not been used explicitly.

It not only focuses on policy-level disclosures but also emphasises performance indicators and becomes useful for regulators and investors.

6.2 Development of ESG Indices

The two national stock exchanges of India, the Bombay Stock Exchange and the National Stock Exchange, develop and maintain various stock market indices, including broad market indices, sector-specific indices, thematic indices, and market capitalisation-based indices. To measure the overall performance of the stock market, broad market indices are used, which also serve as indicators of the economy's health. Two important broad market indices developed by these two stock exchanges are Nifty and Sensex. The sector-specific indices track the performance of specific sectors, while thematic indices focus on specific investment themes, such as consumption or ESG.

Although the first ESG index was launched in the USA in 1990, India developed its first ESG-focused index in 2008. Standard and Poor, in collaboration with CRISIL and KLD Resources and Analytics, launched the S&P ESG India Index. The NSE has developed three ESG indices: the Nifty 100 ESG Index, the Nifty 100 Enhanced ESG Index, and the Nifty 100 ESG Sector Leader Index. The BSE has developed the BSE 100 ESG Index, the BSE CARBONEX Index, and the BSE GREENEX Index. These indices were launched between 2012 and 202020. However, the BSE CARBONEX Index and the BSE GREENEX Index were discontinued in September 2024.

6.3 Nifty 100 Index and Nifty 100 ESG Index

The Nifty 100 Index[3] is a broad-based index made up of the top 100 companies, chosen from the Nifty 500 Index, representing key sectors of the economy and ranked on full market capitalisation, "Nifty100 ESG Index is designed to reflect the performance of companies within the Nifty 100 index based on Environmental, Social and Governance (ESG) risk score" (NSE, 2019, p. 2). The Nifty 100 ESG Index was officially launched on March 27, 2018, and made publicly available for benchmarking and other purposes. The base date, the retrospective reference point used to construct the index historically, enabling investors to analyse the theoretical past performance, was kept as April 1, 2011, with a base value of 1000. There are 88 stocks out of the Nifty 100 Index in this. The list of 88 stocks is provided in Annexure 1.

To create the Nifty 100 ESG Index, the Nifty 100 Index serves as the universe, implying that all stocks listed in the Nifty 100 Index become eligible to be part of the Nifty 100 ESG Index. Out of these stocks, companies whose controversy score falls below 70 are excluded. Controversy score assesses how a company manages its controversies. Better handling of controversies means lower risks of negative reputation, litigation, and long-term performance volatility and hence higher scores. Thereafter, the sin stocks are removed. Companies involved in sectors such as tobacco, alcohol, gambling and nuclear weapons are excluded. The remaining companies are then evaluated based on their ESG performance. Companies with a valid ESG score (provided by SES[4]) are included in the Index (NSE, 2019).

6.4 Nifty 100 Index vs Nifty 100 ESG Index

For a better understanding, we can compare the two indices based on their construction philosophies, compositions, and financial performances.

6.4.1 Construction Philosophy

As discussed earlier, the Nifty 100 ESG Index is a subset of the Nifty 100 Index. When we compare the two based on their construction philosophies, it is evident that the Nifty 100 ESG Index considers the sustainability performance of companies, in addition to their financial size, liquidity, and other financial parameters. So, the Nifty 100 ESG Index is more aligned with the goal of sustainable and responsible investing.

6.4.2 Composition

Again, based on our previous discussion, we know that the Nifty 100 ESG Index excludes all companies from the top-listed large-cap 100 companies that form the Nifty 100 Index, which belong to the sin sectors, have high controversy, or a low ESG score. This means the Nifty 100 ESG Index represents a more sustainable and responsible universe compared to the Nifty 100 Index, as it excludes companies that may be high in profitability but low in ESG.

6.4.3 Performance and Risk

Figures 1 to 3 below present a comparison between the two indices, Nifty 100 and Nifty 100 ESG, for the complete period (since inception of Nifty 100 ESG), one year and five years (up to July 11, 2025) in terms of Returns.

Figure 1

Performance of Nifty 100 and Nifty 100 ESG index since April 1, 2011

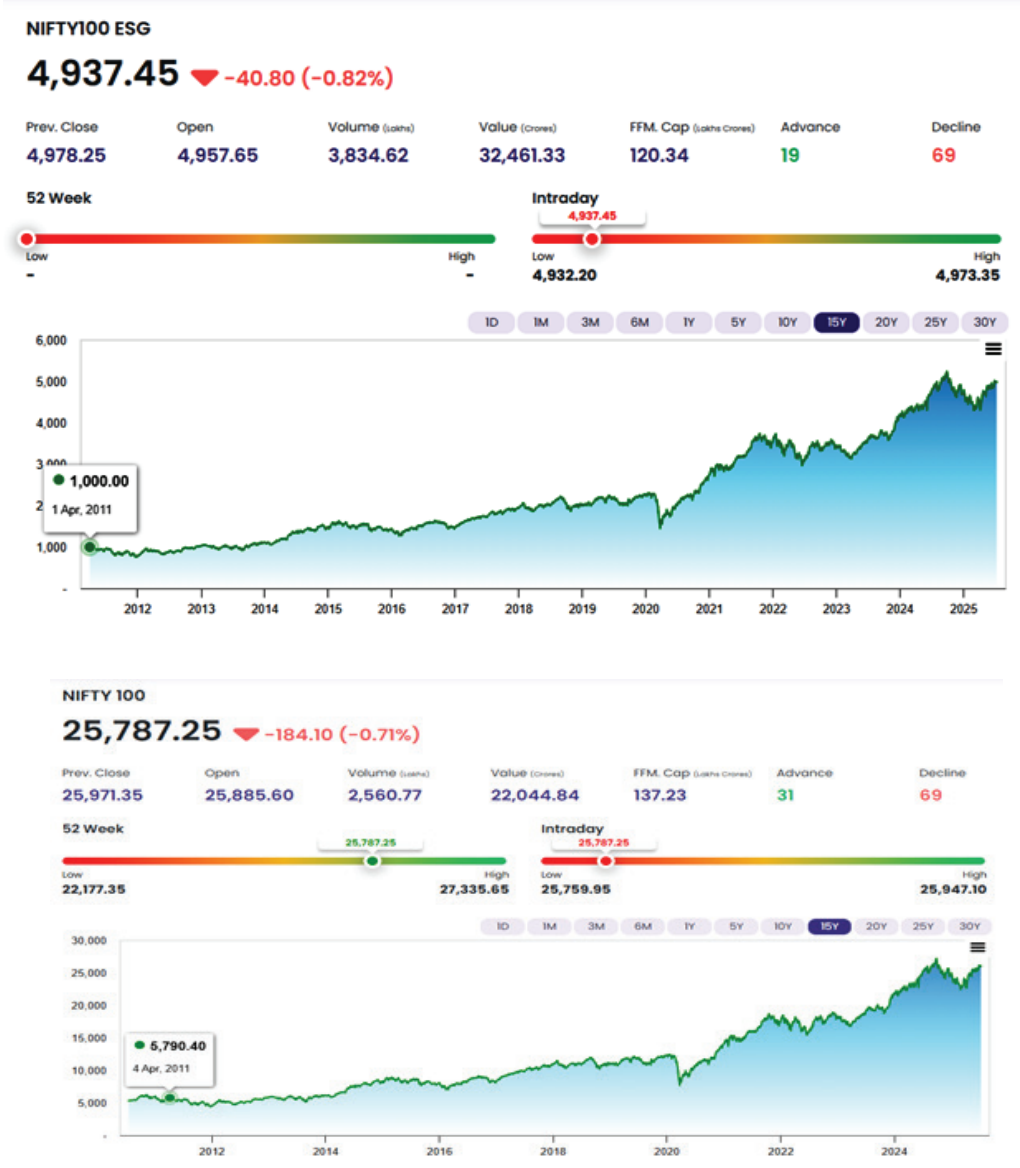


Figure 2

One-Year Performance of Nifty 100 Index and Nifty 100 ESG Index

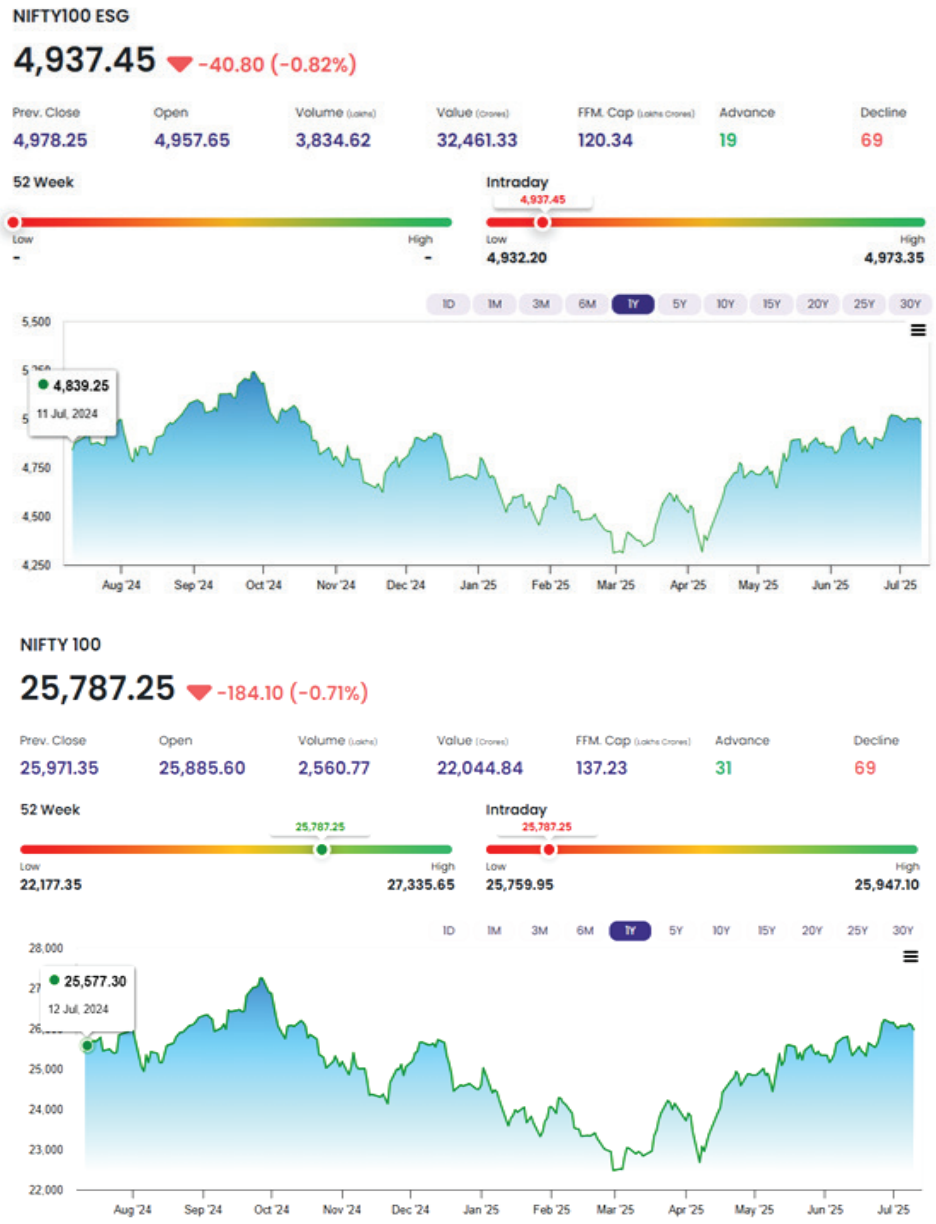
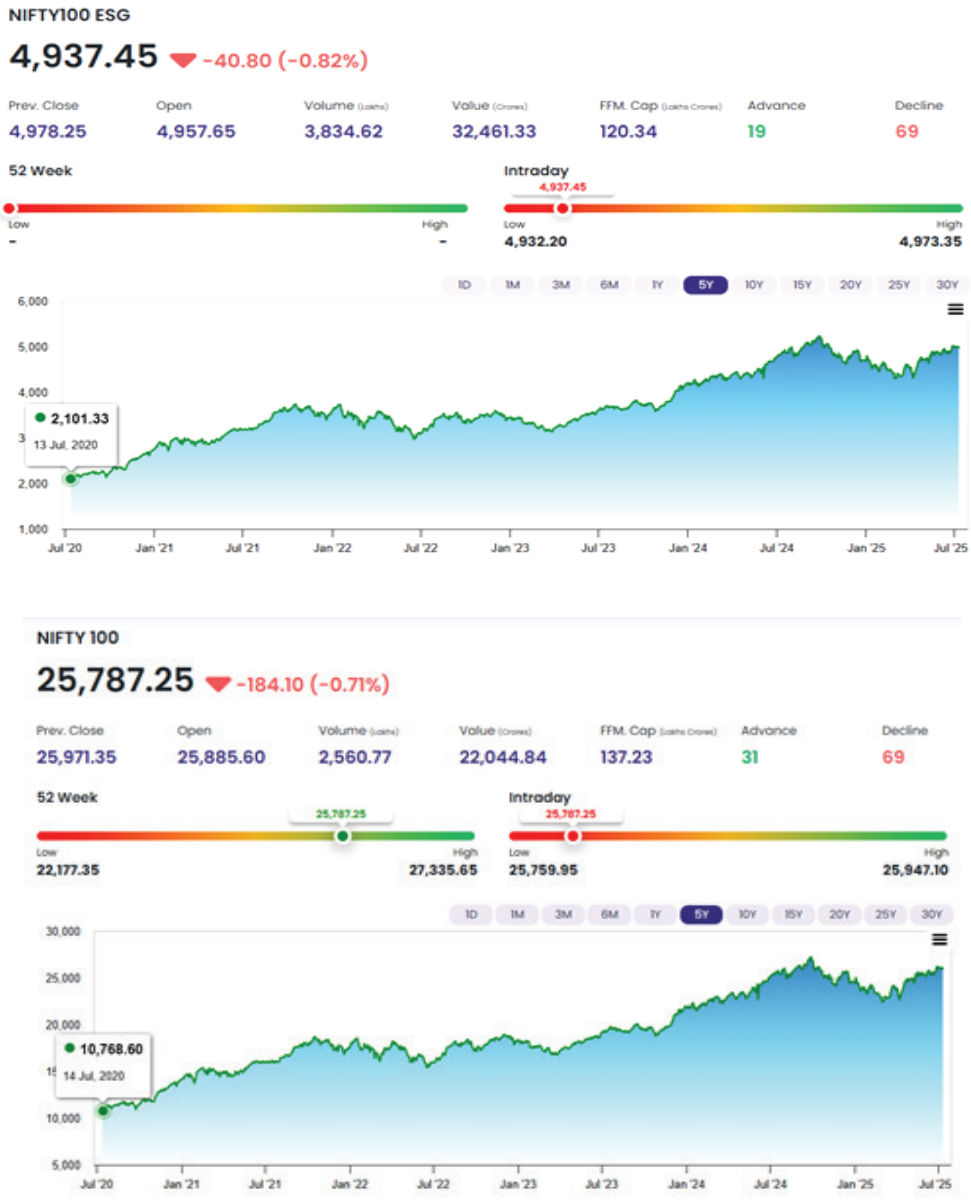


Figure 3

5-Year Performance of Nifty 100 Index and Nifty 100 ESG Index



The Nifty 100 ESG Index has outperformed the Nifty 100 Index by a slight margin.

Table 1 presents a detailed comparison of the performance of the two indices in terms of returns (both price and total), risk (measured by volatility), and the Sharpe ratio, which measures risk-adjusted returns.

Table 1

Return, Risk and Sharpe Ratio of Price and Total Return (Nifty100 v Nifty100 ESG)

S. No.	Plan/Index	CAGR	Risk[5]	Sharpe Ratio[6]
1	One-Year Nifty100 Price Return	4.53	14.1	-0.125531915
2	One-Year Nifty100 Total Return	5.68	14.1	-0.043971631
3	One-Year Nifty100 ESG Price Return	5.63	14.55	-0.04604811
4	One-Year Nifty100 ESG Total Return	6.64	14.55	0.023367698
5	5-Year Nifty100 Price Return	20.04	14.69	0.935330157
6	5-Year Nifty100 Total Return	21.41	14.69	1.028590878
7	5-Year Nifty100 ESG Price Return	20.06	14.56	0.389423077
8	5-Year Nifty100 ESG Total Return	21.42	14.56	1.038461538
9	Since Inception, Nifty100 Price Return	15.6	21.26	0.437441204
10	Since inception, Nifty100 Total Return	17.22	21.26	0.51364064
11	Since Inception, Nifty100 ESG Price Return	11.97	16.73	0.822474597
12	Since Inception Nifty100 ESG Total Return	13.44	16.73	0.426778243

Source: Authors' compilation from NSE Factsheet from www.nseindia.com and authors' calculations.

As evident from the data presented in the table and illustrated in the charts, a comparison between the Nifty 100 ESG Index and the Nifty 100 Index reveals that the returns are comparable or slightly higher for the Nifty 100 ESG Index.

Not only this, the ESG Index also has lower risk (volatility). The exclusion of high-risk stocks (sin sector or controversial) is the reason for this.

It is also worth noting that comparable /higher returns with lower volatility result in a higher Sharpe Ratio, indicating more efficient risk-adjusted returns for the Nifty 100 ESG Index. The credit goes to the Nifty 100 ESG Index's portfolio, which emphasises a stronger environmental focus, better governance, and superior social concerns. In times of economic and social uncertainty, these practices offer greater resilience and better stability.

Thus, it is safer to say that the Nifty 100 ESG Index has not compromised on financial performance by delivering stable and balanced returns while prioritising sustainability goals and exhibiting responsible behaviour.

6.4.4 ESG Mutual Funds in India

ESG Mutual Funds may be evaluated on the following parameters:

6.4.4.1 Based on Suitability:

Investors seeking to diversify their portfolios by investing in companies that demonstrate sustainable practices across ESG parameters, with high returns, and aim for long-term wealth creation. With a long-term investment horizon, those investors who are comfortable with market fluctuations consider this option.

6.4.4.2 Based on Taxability of Earnings:

A higher rate of tax is levied on the entire amount of gains if the mutual fund units are sold within one year of the date of investment. If the units are sold after one year from the date of investment, a portion of the gains may be exempted from tax. In contrast, gains exceeding the specified limit, are usually taxable, at a specified, lower rate. No tax is applicable if the investor continues to hold the units.

6.4.4.2 Based on Dividends:

Dividends, as part of an investor's income, are taxed according to the specified rates and are deducted at source if the investor's dividend income exceeds the specified limit in a financial year.

Ten funds were operating at the time of writing. Of these 10 funds, one fund[7] was of recent origin and, therefore, was excluded from analysis. Table 2 provides a summary of ESG mutual funds in India. ICICI Prudential ESG Exclusionary Strategy Fund Direct – Growth was ranked number one in ESG Mutual Funds in India. Moreover, the Mirae Asset Nifty 100 ESG Sector Leader Fund was ranked ninth, the lowest among ESG Mutual Funds in India. Annualised returns varied from 24 per cent for the top-ranking ESG mutual fund to 17 per cent for the bottom-ranking ESG mutual fund in India.

Table 2

ESG Mutual Funds in India

S.No	MF/Index Fund	NAV	AUM % Retail	Exp Ratio	Type G/D	Exit Load(%)	Exit n Days	3 Year Returns	CAGR	Rank
1.	ICICI Prudential ESG Exclusionary Strategy Fund Direct – Growth	24.18	1525.27	1.00	G	1.00%	365	90.84%	0.24	1
2.	Quant ESG Equity Fund Direct – Growth	36.28	298.68	0.87	G	1.00%	15	86.42%	0.23	2
3.	Quant ESG Equity Fund Direct - IDCW Payout	36.23	298.68	0.87	D	1.00%	15	86.42%	0.23	2
4.	Quant ESG Equity Fund Direct - IDCW Reinvestment	36.23	298.68	0.87	D	1.00%	15	86.42%	0.23	2
5.	Kotak ESG Exclusionary Strategy Fund Direct – Growth	18.66	875.25	0.88	G	0.50%	90	69.27%	0.19	3
6.	Kotak ESG Exclusionary Strategy Fund Direct – IDCW	18.66	875.25	0.88	D	0.50%	90	69.27%	0.19	3
7.	Kotak ESG Exclusionary Strategy Fund Direct - IDCW Payout	18.66	875.25	0.88	D	0.50%	90	69.27%	0.19	3

8.	Invesco India ESG Integration Strategy Fund Direct – Growth	19.35	490.84	0.97	G	1.00%	365	67.53%	0.19	4
9.	Invesco India ESG Integration Strategy Fund Direct - IDCW Payout	15.78	490.84	0.97	D	1.00%	365	67.53%	0.19	4
10.	Aditya Birla Sun Life ESG Integration Strategy Fund Direct – Growth	19.28	636.56	1.42	G	1.00%	30	67.22%	0.19	5
11.	Aditya Birla Sun Life ESG Integration Strategy Fund Direct – IDCW	16.81	636.56	1.42	D	1.00%	30	67.22%	0.19	5
12.	Quantum ESG Best In Class Strategy Fund Direct – Growth	25.73	104.28	0.75	G	1.00%	365	63.37%	0.18	6
13.	SBI ESG Exclusionary Strategy Fund Direct Plan – IDCW	95.34	5715.13	1.33	D	1.00%	365	62.10%	0.17	7
14.	SBI ESG Exclusionary Strategy Fund Direct Plan -Growtha	265.56	5715.31	1.33	G	1.00%	365	62.10%	0.17	7
15.	Axis ESG Integration Strategy Fund Direct – Growth	23.20	1245.58	1.30	G	1.00%	365	60.11%	0.17	8
16.	Axis ESG Integration Strategy Fund Direct - IDCW Payout	16.53	1245.58	1.30	D	1.00%	365	60.11%	0.17	8
17.	Mirae Asset Nifty 100 ESG Sector Leaders FoF Direct – Growth	19.24	100.33	0.05	G	0.05%	15	58.35%	0.17	9
18.	Mirae Asset Nifty 100 ESG Sector Leaders FoF Direct - IDCW Payout	19.23	100.33	0.25	D	1.00%	15	58.35%	0.17	9

Source: *Compiled from publicly available documents from brokers' apps, like MOSL, GROWW, Paytm, and www.amfi.com*

7. Discussion

ESG investment guidance has been encouraging responsible behaviour among investors in India. We have divided the discussion of this fund comparison into three parts: past behaviour (2018-2022), present mood (2023-2025), and future possibilities (2025 onwards).

7.1 Past Behaviour (2018-22)

Most ESG mutual funds in India have emerged post-2019. One apparent reason could be the COVID-19 pandemic, which aroused strong sentiments towards the need for sustainable and responsible behaviour. The BRR and BRSR mandates also expedited the trend. At their inception, these funds were targeted at specific niches and were viewed as idealistic. The initial returns were low. Retail participation was also poor due to the unawareness and scepticism of retail investors.

7.2 Present Mood (2023-25)

The replacement of BRR with BRSR by SEBI has led to improved ESG disclosures, encouraging investors to make more informed decisions. Meanwhile, private players like Zerodha, Government organisations like SEBI, and other Institutions like nationalised banks are investing heavily in educating investors towards responsible investing. Additionally, Gen Z investors are more conscious of sustainability. So, investors' perceptions about ESG funds are gradually becoming favourable, and these funds are now viewed as a balanced and risk-mitigated investment strategy.

7.3 Future Expectations

The ESG mutual funds are expected to attract higher levels of investment, both institutional and individual. These funds are unlikely to remain backstage even if they do not move to the mainstream soon. More rigorous disclosure mandates from regulatory bodies, which boost transparency and comparability, as well as a broader range of fund options and increased sensitivity towards individual and collective responsibility, will increase total investments in ESG funds as sustainability becomes a core life value.

A contrasting development can be observed in the form of the 'One Big Beautiful Bill Act' (OBBB Act), signed into law in the USA by the Trump administration on July 4, 2025, which may have global implications for ESG investments.

The legislation reverses many of the clean energy incentives introduced under the Inflation Reduction Act (IRA), including those covering renewable power generation, electric vehicle (EV) infrastructure and commercial efficiency upgrades. For businesses that rely on high-density computing, the changes could significantly alter the economics of integrating clean power.

The performance of ESG funds[8] has improved compared to their previous performance, as reported in a recent study[9]. Such results indicate that not only are ESG investments sustainable and responsible, but also profitable.

8. Conclusion

The growing concern to save the planet has led to various steps, including adopting socially responsible and sustainable behaviour. One way to practice socially responsible and sustainable behaviour is to opt for ESG investing. With the development of ESG indices by the BSE and NSE, as well as the offering of ESG mutual funds by leading companies, India has taken steps towards ESG investments. A comparison of the broad market index, Nifty 100, with the Nifty 100 ESG shows that the latter has outperformed.

By understanding how people make decisions, we can design environments that encourage them to make better choices without restricting their freedom. The evolution of the ESG framework, both globally and in India, can be viewed from this perspective. ESG investment guidance has generally been inducing responsible behaviour on the part of investors in India. ESG mutual fund investments have grown more rapidly than many other types of investments. However, more needs to be done.

Annexure I: List of ESG stocks included in Nifty 100 ESG Index

Company	Industry	Mkt Cap (Cr)	CMP	PE
Reliance Industries Ltd	Refineries	₹ 20,22,901	₹ 1,495.2	29.04
HDFC Bank Ltd	Banks - Private Sector	₹ 15,20,969	₹ 1,983.7	21.49
Tata Consultancy Services Ltd	Computers - Software - Large	₹ 11,81,450	₹ 3,266	23.98

Bharti Airtel Ltd	Telecommunications - Service Provider	₹ 11,52,551	₹ 1,921.9	40.51
ICICI Bank Ltd	Banks - Private Sector	₹ 10,14,913	₹ 1,421.9	19.89
State Bank of India	Banks - Public Sector	₹ 7,21,555	₹ 808.65	9.3
Infosys Ltd	Computers - Software - Large	₹ 6,62,564	₹ 1,594.9	24.99
Hindustan Unilever Ltd	Personal Care - Multinational	₹ 5,92,120	₹ 2,519.6	56.81
Life Insurance Corporation of India	Life Insurance	₹ 5,83,322	₹ 922.4	12.07
Bajaj Finance Ltd	Finance - Large	₹ 5,80,010	₹ 933.5	34.8
HCL Technologies Ltd	Computers - Software - Large	₹ 4,44,226	₹ 1,638.3	25.53
Sun Pharmaceutical Industries Ltd	Pharmaceuticals - Indian - Bulk Drugs & Formulation	₹ 4,01,288	₹ 1,672	35.03
Maruti Suzuki India Ltd	Automobiles - passenger cars	₹ 3,95,439	₹ 12,574	27.27
Mahindra & Mahindra Ltd	Automobiles - passenger cars	₹ 3,82,378	₹ 3,073.2	29.58
UltraTech Cement Ltd	Cement - Major - North India	₹ 3,68,164	₹ 12,495	60.18
Axis Bank Ltd	Banks - Private Sector	₹ 3,64,021	₹ 1,173.8	12.97
NTPC Ltd	Power Generation And Supply	₹ 3,32,159	₹ 342.7	14.18
Bajaj FinServ Ltd	NBFC-Holding Companies	₹ 3,22,191	₹ 2,017.2	36.21
Adani Ports & Special Economic Zone Ltd	Miscellaneous - Large	₹ 3,09,040	₹ 1,431.7	28.64

Oil & Natural Gas Corp Ltd	Oil Exploration / Allied Services	₹ 3,04,254	₹ 241.76	8.37
Titan Company Ltd	Diamond Cutting / Jewellery - Large	₹ 2,98,202	₹ 3,361.6	89.38
Adani Enterprises Ltd	Trading - Large	₹ 2,95,741	₹ 2,558.7	73.04
Power Grid Corporation of India Ltd	Power Generation And Supply	₹ 2,77,716	₹ 298.55	17.89
Wipro Ltd	Computers - Software - Large	₹ 2,70,501	₹ 258.3	20.66
Avenue Supermarts Ltd	Trading - Large	₹ 2,64,451	₹ 4,064.2	97.67
Eternal Ltd	E-Services	₹ 2,54,093	₹ 263.35	478.73
JSW Steel Ltd	Steel - Large	₹ 2,53,642	₹ 1,037.2	65.36
Tata Motors Ltd	Automobiles - LCVs/ HCVs	₹ 2,50,928	₹ 681.8	8.89
Asian Paints Ltd	Paints / Varnishes	₹ 2,34,005	₹ 2,439.2	59.58
Adani Power Ltd	Power Generation And Supply	₹ 2,32,978	₹ 603.95	17.99
Nestle India Ltd	Food And Dairy Products - Multinational	₹ 2,31,629	₹ 2,403.5	75.45
Interglobe Aviation Ltd	Transport - Airlines	₹ 2,28,805	₹ 5,917.5	31.52
Bajaj Auto Ltd	Automobiles - Scooters and 3-Wheelers	₹ 2,25,091	₹ 8,067	30.73
Indian Oil Corporation Ltd	Refineries	₹ 2,12,665	₹ 150.65	17.55

Jio Financial Services Ltd	NBFC-Others	₹ 2,06,990	₹ 325.8	128.27
DLF Ltd	Construction - Housing - Large	₹ 2,01,713	₹ 815.1	44.05
Tata Steel Ltd	Steel - Large	₹ 1,99,549	₹ 159.84	55.89
Trent Ltd	Trading - Large	₹ 1,90,271	₹ 5,364	131.38
Grasim Industries Ltd	Diversified - Large	₹ 1,87,987	₹ 2,762	48.49
SBI Life Insurance Company Ltd	Life Insurance	₹ 1,83,906	₹ 1,835.2	76.19
Divis Laboratories Ltd	Pharmaceuticals - Indian - Bulk Drugs	₹ 1,81,397	₹ 6,835	82.8
Indian Railway Finance Corporation Ltd	Finance - Term-Lending Institutions	₹ 1,76,882	₹ 135.28	27.18
Vedanta Ltd	Metal - Others	₹ 1,73,073	₹ 442.75	12.9
HDFC Life Insurance Company Ltd	Life Insurance	₹ 1,63,508	₹ 759	98.3
Adani Green Energy Ltd	Power Generation And Supply	₹ 1,61,383	₹ 995.2	92.26
Tech Mahindra Ltd	Computers - Software - Large	₹ 1,56,967	₹ 1,602.5	39.74
LTIMindtree Ltd	Computers - Software - Large	₹ 1,54,402	₹ 5,206	33.57
Eicher Motors Ltd	Automobiles - Motorcycles / Mopeds	₹ 1,53,793	₹ 5,612.5	32.48
Varun Beverages Ltd	Food - Processing - Others	₹ 1,52,947	₹ 452.25	54.95

Bajaj Holdings & Investment Ltd	NBFC-Holding Companies	₹ 1,52,892	₹ 13,752	23.45
Pidilite Industries Ltd	Chemicals - Speciality - Large	₹ 1,52,571	₹ 3,000.8	72.84
Hindalco Industries Ltd	Aluminium	₹ 1,50,766	₹ 670.95	9.07
Bharat Petroleum Corporation Ltd	Refineries	₹ 1,49,613	₹ 344.85	10.99
Ambuja Cements Ltd	Cement - Major - North India	₹ 1,44,240	₹ 587.15	34.88
Power Finance Corporation Ltd	Finance - Term-Lending Institutions	₹ 1,42,151	₹ 430.95	6.18
Lodha Developers Ltd	Construction - Housing - Large	₹ 1,39,741	₹ 1,400.1	50.55
Britannia Industries Ltd	Food And Dairy Products - Multinational	₹ 1,38,588	₹ 5,758.5	63.07
Godrej Consumer Products Ltd	Personal Care - Indian - Large	₹ 1,31,456	₹ 1,285	69.35
TVS Motor Company Ltd	Automobiles - Motorcycles / Mopeds	₹ 1,30,789	₹ 2,754.5	59.29
Cholamandalam Investment & Finance Company Ltd	Finance - Large	₹ 1,28,838	₹ 1,532.5	30.22
Punjab National Bank	Banks - Public Sector	₹ 1,26,479	₹ 110.21	6.84
Shriram Finance Ltd	Finance - Large	₹ 1,25,730	₹ 668.25	15.32
Bank of Baroda	Banks - Public Sector	₹ 1,22,664	₹ 237.44	5.93

ABB India Ltd	Electric Equipment - General - Large	₹ 1,21,886	₹ 5,756.5	64.52
Cipla Ltd	Pharmaceuticals - Indian - Bulk Drugs & Formulation	₹ 1,19,948	₹ 1,485	23.31
GAIL (India) Ltd	Gas Distribution	₹ 1,19,633	₹ 181.89	11.33
Shree Cement Ltd	Cement - Major - North India	₹ 1,12,733	₹ 31,210	100.41
Torrent Pharmaceuticals Ltd	Pharmaceuticals - Indian - Formulations	₹ 1,12,127	₹ 3,314.2	58.54
Siemens Ltd	Electric Equipment - General - Large	₹ 1,10,936	₹ 3,117.7	59.04
Bosch Ltd	Auto Ancillaries - Trading	₹ 1,07,684	₹ 36,525	53.46
Tata Consumer Products Ltd	Tea - Indian - Large	₹ 1,06,562	₹ 1,076.8	84.33
Samvardhana Motherson International Ltd	Auto Ancillaries - Others	₹ 1,06,107	₹ 150.75	27.93
REC Ltd	Finance - Term-Lending Institutions	₹ 1,05,605	₹ 401.05	6.65
CG Power & Industrial Solutions Ltd	Electric Equipment - General - Large	₹ 1,05,139	₹ 667.75	110.74
Adani Energy Solutions Ltd	Power Generation And Supply	₹ 1,04,956	₹ 874.05	44.33
Dr Reddy's Laboratories Ltd	Pharmaceuticals - Indian - Bulk Drugs & Formulation	₹ 1,04,656	₹ 1,254.7	18.86
Indian Hotels Co Ltd	Hotels - Large	₹ 1,04,636	₹ 735.2	63.59

Apollo Hospitals Enterprise Ltd	Hospitals / Medical Services	₹ 1,03,374	₹ 7,189.5	71.5
Canara Bank	Banks - Public Sector	₹ 1,01,455	₹ 111.92	5.79
ICICI Lombard General Insurance Company Ltd	General Insurance	₹ 99,920	₹ 2,012.2	39.83
Zydus Lifesciences Ltd	Pharmaceuticals - Indian - Bulk Drugs & Formulation	₹ 98,570	₹ 979.6	21.11
Havells India Ltd	Electric Equipment - General - Large	₹ 95,749	₹ 1,527.8	64.55
Jindal Steel & Power Ltd	Steel - Large	₹ 95,735	₹ 938.4	26.67
ICICI Prudential Life Insurance Company Ltd	Life Insurance	₹ 95,498	₹ 660.7	80.53
Dabur India Ltd	Personal Care - Indian - Large	₹ 94,262	₹ 530.85	53.52
JSW Energy Ltd	Power Generation And Supply	₹ 91,513	₹ 523.7	51.33
Info Edge (India) Ltd	E-Services	₹ 89,105	₹ 1,375.2	103.25
Hero MotoCorp Ltd	Automobiles - Motorcycles / Mopeds	₹ 84,229	₹ 4,218.7	19.24

Source: (www.nseindia.com)

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Endnotes

1. Presently, there are 13 global rating agencies. In addition to the six mentioned above, there are: CDP, ISS-oekom, Corporate Knights Global 100, LSEG FTSE Russell, Bloomberg ESG, RepRisk and Dow Jones
2. Kraussl, Roman, Tobi Oladiran, and Denitsa Stefanova (2024). A review on ESG investing: Investors' expectations, beliefs and perceptions Vol. 2024. Pp. 476-502.
3. NSE Indices, a subsidiary of the National Stock Exchange (NSE) creates and maintains all Nifty indices.
4. Stakeholder Empowerment Services (SES) is an ESG rating firm, which SEBI recognises, and its ESG ratings are officially used by NSE Indices to construct Nifty ESG Indices, including Nifty 100 ESG Index.
5. The risk-free rate was taken as 6.3 per cent.
6. Sharpe ratio

7. White Oak Capital ESG Best-in-class Strategy Fund Direct – Growth. As this is of recent origin, sufficient data were not available for analysis. And it had only Rs 64.6 crore AUM as of July 10, 2025. Although the expense ratio was low (0.57), the risk was very high, like other ESG funds.
8. Authors' calculation of the last 3-year performance of the ESG mutual funds in India.
9. Some of these funds were studied by Dutta, S., Sharma, D., & Singh, S. (2023). Performance Review Of ESG Investing in India. Journal of Economics, Vol. 27 (10).

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The Role of Artificial Intelligence in Media Education: Redesigning Pedagogy, Literacy, and Critical Thinking

Shruti Goel & Ekanshi Gupta

Abstract

The integration of Artificial Intelligence (AI) in media education is transforming pedagogical methods, media literacy, and the definition of critical thinking as it is perceived today. The employment of AI technologies facilitates learning through the provision of personalised content, the automation of the assessment process, and the development of analytical capabilities. This research delves into the implications of AI in education practice, its impact on media literacy and on developing critical thinking. The paper also briefly discusses ethical implications and data privacy concerns associated with AI. This research posits that AI technologies will be the most essential tools to equip students in order to navigate a digital world.

Keywords: *Artificial intelligence, Media education, Pedagogy, Media literacy, Critical thinking*

Introduction

India is reaching a tipping point on its path of development, with a focused and ambitious vision, i.e., Viksit Bharat @2047. The vision is to transform India into a completely developed nation in its 100th year of independence i.e., to strengthen the economy, promote social justice, develop technology, provide ecological balance, and promote good governance (Government of India, 2023). One of the most important factors in this transformation is the development of

human capital, i.e., education and literacy transformation and the development of critical thinking abilities. In this context, using AI and media has the potential to change the mode of teaching and provide access to information.

The use of AI technology is being applied more and more in tailoring learning-experiences, facilitating different pedagogical styles, and providing instant feedback. In the meantime, media continues to be crucial in the dissemination of knowledge and the creation of public awareness.

In today's digital age, education of the media assumes greater significance as it arms students with the requisite abilities to think critically regarding information of diverse types. Traditional media literacy based mainly on the critical consumption of the media must be supplemented with the awareness of algorithmic curation, production of synthetic media content, and study of automated content. AI has reconfigured teaching approaches by making it possible to use adaptive learning, intelligent tutoring systems, and better techniques for analyzing the media. While AI technologies redesign the way in which students learn about media, it becomes obligatory on teachers to balance the benefits with the correlative ethical considerations.

The conjunction of AI intertwined with media literacy puts forward crucial questions: How can scholars use the best of AI technologies to enhance media literacy education? What are the abilities and skills students must need to use the potential of AI-meditated information landscape? What are the ethical guidelines and practices that should be incorporated with AI technologies into media literacy education? This paper answers these questions via the assessment of current applications, theoretical models, and evolving practices.

Literature Review

AI technology has reconfigured how media education is imparted. Through the utilisation of tools like virtual reality (VR), augmented reality (AR) and interactive simulation, educators can design favorable learning experiences. In a study conducted by Johnson et al. (2021) students exposed to AI-powered VR experiences in media classes improved significantly in their comprehension of sophisticated media theories relative to conventional means. AI can assist teachers in grading assignments and giving insights along with feedback. Grammarly and Turnitin, for instance, utilise natural language processing

(NLP) to grade written assignments, scan for plagiarism, and provide feedback. This enables academicians to collectively engage in conventional methods of teaching (Brown & Green, 2019). AI based platforms such as Coursera and Khan Academy provide customized learning inputs and outputs. These models use student performance data to customize English to suit individual learning preferences. In media education, such platforms can help students in nuanced understanding of concepts such as digital storytelling, media production, and critical media analysis (Smith, 2020). AI-driven learning analytics provide valuable information about students, their behaviour, and their academic performance. Educators can use this data to enhance the recent sites to recognise struggle areas for resistance. For example, research by Lee et al. (2022) discovered that media students who received personalised feedback based on learning and analytics, improved by 20% in their merit.

AI-driven virtual classrooms can make real time collaboration on media projects possible by promoting a global learning community as it links students across geographical spheres (Taylor, 2023). Involvement of AI in learning frequently involves the collection and processing of student data. Privacy and security of such data is crucial. Educational institutes must comply with rigorous data protection policies to avoid misuse and breaches (Davis, 2020). AI is also increasingly used for Curriculum Development, AI-based tools allow educators to design adaptable and responsive syllabi. These AI systems predict learner needs and align educational materials with new trends, particularly in media studies where innovation is frequent (Holmes et al., 2022). Furthermore, AI aids multisensory learning experiences. A study by Kucirkova and Cremin (2021) suggests that visual, auditory and gesture-based learning environments embedded in AI can assist learners in engaging with the concept of media in more explicit and accessible manners. This increases the level of participation among students, particularly those whose learning preferences are diverse.

According to Liu and Pange (2020), AI-led gamification platforms like Classcraft and Smart Sparrow are more engaging and motivating, and learners find it easier to master complex media ethics topics such as algorithmic filtering, echo-chambers and content biases. According to Noble (2018), algorithmic biasness must form part of the learning on AI in media studies. Real world applications of algorithms that make the media skewed can be discussed by the analysis of specific situations: biased search results or skewed video recommendations.

Research Gaps

Even though there have been several studies on the use of AI in the field of education, there is a significant lack of research that specifically examines the use of artificial intelligence in media education. A large part of the available research is devoted to educational technology in general, with such aspects as adaptive learning, automated grading, or student performance prediction (Zawacki-Richter et al., 2019; Luckin et al., 2018). Nonetheless, the pedagogical complexities inherent in media pedagogy, e.g., how to teach critical media analysis, visual literacy, or ethical production in media using AI, are rarely explored in this body of research.

The other major gap is the lack of knowledge of how AI can facilitate critical thinking and extensive mental interactions in the field of media studies. In comparison to a large number of studies focusing on the effectiveness of AI in administrative and instructional roles (Holmes et al., 2022), relatively little attention has been paid to how AI-based tools can help students to identify misinformation, recognise algorithmic biases, and unravel complex news narratives (Selwyn, 2019; Noble, 2018). This shows that it is necessary to conduct additional studies regarding cognitive and reflective outcomes of AI-based interventions in media learning settings.

Furthermore, although data privacy, surveillance, and algorithmic fairness concerns have been a popular topic in computer science and policy literature (UNESCO, 2021; Burr & Christian, 2021), such ethical aspects do not get as much attention in the discourse surrounding media education. There is an absence of integrative pedagogical models to foster students' abilities to analyse media content and the broader paradigm of AI utilized in the creation of digital data realms (Schiff, 2021).

Research Objectives

- To examine how AI reshapes pedagogical methods in media education.
- To investigate the potential of artificial intelligence to improve media literacy.
- To learn the impact of AI on critical thinking capacity.

- To broadly identify the challenges and ethics of AI in media education.

Methodology

This paper adopts a qualitative research methodology, focusing on comprehensive understanding of the subject matter through in-depth analysis. The research relies on disruptive suites from existing literature reports and scholarly publications, with analytical approach being used to interpret the data to provide a nuanced exploration of the research objectives.

Sampling and Data Information Sources

The literature selection during the study entails purposive sampling. The sources that were used to get the data were academic journals, educational technology reports, government white papers, and the more recent global AI policy frameworks of 2018-2024. These sources were selected on account of their relation to AI in education and media literacy.

Analytical Framework

A thematic analysis framework was adopted to split the insights into four major sections, namely pedagogy, media literacy, critical thinking, and ethical challenges. NVivo was applied in tagging similar themes in the literature.

Validity and Reliability

In order to enable research validity, 'triangulation' was conducted for searching the literature through three fields, namely media studies, educational technology, and artificial intelligence. Peer reviewed and indexed sources were also preferred to enhance reliability.

Data Analysis

Media Education and AI: Redefining Pedagogy: There is an abundance of information available on the internet nowadays, thereby requiring the need to exercise caution about what we read. Media literacy must be taught in schools and colleges so as to enable students to better comprehend information. Media literacy keeps individuals from being deceived by false information and internet tricks. Workshops should be organized by the government and community groups to create awareness about digital issues, particularly in rural and small-town communities.

Personalised Learning and AI Pedagogy: AI-based learning tools like adaptive learning systems and chatbots, tailored-learning experiences to meet the needs of individual students (Luckin et al., 2018).

AI Content Generation and Automated Testing: AI facilitates the automatic generation of educational content, helping to improve and streamline curriculum. It also enhances assessment processes by providing instant feedback, allowing educators to devote their attention to advanced teaching strategies (Zawacki-Richter et al., 2019).

AI enabled Virtual Tutors: AI power visual teacher can assist students in understanding media theories and concepts. Using Natural Language Processing (NLP), these platforms can interact with learners to address misconceptions and reinforce knowledge outside the traditional organ classroom setting (Chen et al., 2020).

AI's Role in Detecting Misinformation: In the spirit of promoting media literacy, AI-driven checking tools such as Google's factcheck AI, help students critically evaluate online content (Shin & Thorson, 2017). These AI algorithms detect disinformation patterns and provide credibility.

AI Based Content Recommendation and Bias Detection: AI algorithms provide social media content recommendations, significantly influencing public opinion. Media education must tackle the ethical concerns surrounding how artificial intelligence is used to shape narratives and create ideological echo chambers (Brennen et al, 2020).

Media Literacy AI-based Deepfake Detection: Deepfake technology poses a major challenge to media literacy by making it difficult to distinguish between real and altered content. AI power detection tools such as 'Deepware' scanner help students to critically evaluate the authenticity of media (Chesney & Citron, 2019).

AI and Critical Thinking in Media Education, Building Analytical and Interpretive Skills

AI power data visualisation tools such as Tableau, and Google AI, help students grasp complex media trends more effectively, thereby shaping and strengthening their analytical and critical thinking skills (Selwyn, 2019). AI-based platforms enable organized debates through argument structure analysis and offering

counterarguments, thereby sharpening students' reasoning skills (Sumner et al., 2021). Even with the advantages that AI offers, there are significant ethical issues, such as data privacy, algorithmic bias, and excessive dependence on automation, which need to be resolved (Burr & Christian, 2021). Teachers need to incorporate critical AI literacy in order to enable students to understand AI's limitations.

Challenges and Future Directions

Ethical and Privacy Concerns: AI is dependent on large datasets, which creates privacy issues in the collection and protection of student data (West, 2018). Policymakers need to implement regulations to protect user privacy. Among the most important issues presented by the interconnection of AI with media education is that of ethical handling of the data concerning the students. The way AI systems work is generally presupposed on large amounts of data gathering of information about the academic results of the learners, their behavior, and even personal preferences. Although this data allows us to customize and take specific actions, the issue of confidentiality and unacceptable data use poses a considerable concern. Many learning spaces have been accused of having inadequate systems for protecting data, which results in data breach, surveillance issues, or misuse of student data. There is also a possibility that the learning behaviors conducted by automation could lead to profiling or unwanted discrimination in terms of race, sex or socio-economic status. Educational institutions and policymakers should thus implement stringent laws on the protection of data and brief learners and teachers on how their data is consumed, saved and secured

Teacher Training and AI Integration: Teachers need to be trained in AI literacy to enable them to incorporate AI in curricula, while still maintaining people-centered learning strategies (Schiff, 2021). The primary issue in integrating AI technologies successfully, is the proper training of educators. Although the use of AI tools could make the process of learning more straightforward and effective, educators are still developing an understanding of how to use them in the classroom, as a significant percentage of professionals are not equipped with the digital literacy skills necessary to implement the solutions that AI offers. Further, most of the teacher education programs focus on the traditional theories of pedagogy, which creates a significant gap

in AI-specific training. In order to minimize this gap, it is vital to create an ongoing system of professional development that equips teachers both with the practical knowledge needed to implement AI-based applications and a critical outlook needed to assess their ethical and pedagogical impact. In the scenario of a technology-enhanced environment, teachers must be able to use AI tools comfortably, possess knowledge about the logic of algorithms, and promote humanistic learning.

The Future of Artificial Intelligence in Media Education

The potential future of AI in media studies is the creation of explainable AI (XAI) models that provide transparent decision-making, thus ensuring accountability and fairness (Gunning et al., 2019). On the horizon, there is a great potential of using AI in media education. The new trends like explainable AI (XAI) tend to explain the algorithmic process to the educators and students alike, thus making it transparent and sensible. XAI technologies enable one to track the rationality of AI systems decisions, which may solve the problem of algorithmic transparency and equity. Moreover, breakthroughs in the fields of AI-generated immersive learning environments will lead to the development of virtual learning environments where students will embark upon exploring media creation, journalism ethics, and theory of communication together. A third possibility is in predictive analytics, where AI can become proficient in predicting failing learning needs and propose relevant work or intervention points to enhance student performance. The effectiveness of such future trends, however, will lie in the preservation of innovation and a balance that ensures accessibility, equity, and moral protection.

Application and Results

Encouraging Critical Thinking: Media analysis software based on AI now allows students to browse large archives of media while attempting to recognize patterns regarding representation, framing, and narrative. Such software also makes quantitative and qualitative media analysis easier to understand and makes discussion on media effects on a mass scale more feasible. In future, the use of AI in media education has great potential. New innovation including explainable AI (XAI) would “democratize” algorithmic processes by making it more transparent and understandable for educators and learners. XAI technologies enable users to follow how the logic of the AI

systems makes decisions, which may help deal with the problem of opacity and fairness in algorithms. Moreover, the development in the field of AI-generated immersive learning through AI-enabled media analysis tools is taking a central stage in imparting advanced thinking in children. All these tools are capable of handling large amounts of media material, allowing students to analyze themes in more detail and depth, including framing, story structure, and patterns of representation. Social platforms, such as automated analyzers of its content, enable people to monitor media biases and identify common tropes, as well as track the manner in which people discuss various issues and how they change over time. This enhances students' ability to engage in complex deliberations on the impacts of media, cultural representations, and ideology positioning in news and entertainment media. With the help of AI tools, such solutions would allow not only quantitative and qualitative methods of critical thinking but also entice learners to make their own conclusions by means of evidence-based research. The second possible use is predictive analytics, wherein AI will be able to predict learning gaps and make recommendations related to learning interventions or resource usage, so as to enhance the performance of students. However, balancing innovation with accessibility, equity, and ethical constraints, is the key to the success of such directions that are envisioned for the future of AI in media education.

Production and Creativity: These generative technologies have opened the level of complexity in specialized subdomains of the content creation process, enabling students to be contributors to content creation even without any technical skills. In education, these technologies include script writing aids, image generation, and interactive narrative technologies, where the student can introduce ideas and the AI does the rest.

The age of personalized education has led to a growing need of adapting the advanced AI learning systems according to the individual academic interests and career aspirations of college students. Such systems discover individual learning patterns and provide each student with his/her own personal learning pathways based upon their strengths, weaknesses, and objectives. This would be applied in the media education discipline through modules that are able to modify themselves according to the specialisation areas of the learners (e.g. journalism, advertising or digital media production), thereby providing them with specialised assignments, media case studies and practical projects. AI

systems may also help to discover knowledge gap on a real-time basis, provide supplementary resources, or tutorials through media interaction. Moreover, AI-based platforms pertaining to career counseling can guide students by matching their competencies with industry requirements, and make personalized suggestions based on their occurring internships, certifications, etc.

Career Oriented Peculiarity in Education: Adaptive AI based learning systems now make it possible for students to automatically generate media studies programs moderation, that are based on their interests, level of competency, and other learning traits. They can also detect holes in lessons, give media-based illustrations, and control the pace of learning through the viewing habits of the learners.

Misinformation Detection: With media manipulation becoming more complex, artificial intelligence has come to play a significant role in combating misinformation, disinformation, and deepfake material. The use of AI-driven tools has started becoming prevalent in many modern-day media literacy classes to teach students how to spot fake videos, fake news articles, curated social media posts, and other misinformative data. Such tools frequently employ sophisticated anomaly detection algorithms that report the inconsistencies, source of content and metadata interpretation to ascertain authenticity. In addition to detection, the tools can also train students on the workings of digital deception, which will enable them to assess their sources and become skeptical readers. This results in the emergence of individuals who are more empowered than before to deal with a complicated media landscape and are actively fighting the proliferation of misinformation. Media literacy increasingly employs AI-facilitated tools that enable students to detect potential misinformation, deepfakes, and manipulated media. Such learning technologies add depth to critical evaluation skills through identifying statistical abnormalities, source credibility characteristics, and manipulation.

Challenges and Opportunities

Equity and Accessibility in Technology: The embedding of AI in media studies settings poses considerable challenges to levels of access. Institutions with weak technological infrastructure are unable to provide their students with similar AI-supported learning opportunities, thus widening prevailing digital inequities.

Preparation of teachers: Teachers must be professionally trained, such that they are able to utilize AI tools effectively in media studies. In addition to technical skills, teachers should also be equipped with models of AI application, critical analysis skills, and technology- humanistic pedagogical principles.

Technological Immersion and Critical Distance: These technologies contain a paradox, namely the involvement of critical scrutiny about the impact of AI on media systems against the use of such technologies as teaching tools in their own right. Teachers have to navigate this tension by creating curricula that enable both critical distance and authentic engagement with current media technology.

Assessment Innovation: The conventional assessment models might be inadequate to assess the sophisticated skills involved in handling AI-based media literacy. Teachers are developing innovative assessment techniques that test students' proficiency in analyzing algorithmic design, detecting potential biases, and developing ethically sound AI-based media products.

Ethical Implications

The application of AI takes significant focus from the ethical perspective as well in media studies. Some of the relevant issues are:

Data Confidentiality and User Autonomy: These are major concerns within the context of computer- based learning systems, and which have, a tendency to hold detailed student records in order to tailor learning-experiences. Teachers are confronted with the problem of balancing pedagogic principles with the need for privacy, especially in offering full provision of access to data mining and ensuring students provide informed consent.

Social Discrimination Bias and Awareness: Media education must cover how automated systems enhance and intensify social discrimination. The curriculum must enable students to value AI-induced discrimination and educate them on technological determinism. The development of reality technologies and artificial intelligence calls for a greater focus on media literacy education with a wider scope, promoting media participation, and empowering information analysis with spatial computing.

Discussion

The increasing role of AI in media education is a drastic change in the learning process as students consume media, learn, and acquire key critical skills. AI technologies exist not just as secondary tools that are used conveniently; they are part of the whole education process, and they affect curricula development, evaluation, classroom experience, as well as the cognitive ability of learners. This paper examined the three dimensions that are related to each other, namely pedagogy, media literacy, and critical thinking, and offered a more nuanced perspective on both facilitation as well as the problem.

First, media education has undergone a radical change in the pedagogical approach with the use of AI. The introduction of adaptive learning systems and delivery platforms of individualized content enables educators to meet the needs of diverse students, modify their learning plans, and test material according to individual learning styles and indicators of performance and achievement. In contrast with the traditional, one-size-fits-all strategy, AI allows adaptive learning by providing immediate, granular feedback that can be acted upon. Virtual tutors and automated assessment of essay grading, helps to minimize the workload of educators, thereby leaving them with more time to focus on being interactive and allow valuable discussion in classes. In addition, AI algorithms also involve the application of immersive technologies in education, such as with Virtual Reality (VR) and Augmented Reality (AR) technologies that connect students with real experiences – a phenomenon that was impossible before. By means of these technologies, learners can also practice media concepts such as narrative construction, propaganda analysis, or media ethics through simulated real-life conditions, therefore, eliminating the divorce of theory and practice. Yet, the said change also means that educators should receive ample professional training to create conditions in which they can introduce AI into their classrooms, while remaining student-centered and reflective.

The second dimension of media literacy that is reviewed in this paper has also experienced massive reconfiguration with the help of AI-based tools. Algorithmic literacy and computational thinking are supplementing traditional models of media literacy which focused primarily on message deconstruction and source evaluation. The current generation of students will have to be

prepared to work in a highly complicated information landscape in which algorithms determine which news and other information they see. To aid and teach students to identify media falsehoods and bias in digital information, AI-based tools like fact-checking algorithms, bias detector systems, or deepfake detection mechanisms are being incorporated into school curricula more often. Such technologies allow not only identifying misinformation, but also make the students aware of the ways of how algorithmic curation is impacting the public discourse, leading to filter bubble and ideological echo chamber. However, moral issues that cannot be omitted include the biases hidden in the algorithms themselves, the absence of transparency in most AI systems, and the danger of excessive dependence on automated tools. These concerns have to be balanced by educators who should ensure that students build a critical, skeptical attitude to media content as well as to the technology employed in the analysis of this content.

The third prominent finding of this study is that individuals who develop critical thinking via AI-facilitated learning platforms, will face a greater degree of progress. Media education goes beyond mere action of pointing out the factual errors or evaluating the credibility of the sources. It includes the capacity to read and comprehend complicated works as well as establish tacit premises and establish autonomous, evidence-based opinions. AI also aids this process by offering data visualization, argument mapping, and automated support in the analysis of debates. For e.g., platforms such as IBM Watson or Google AI allow students to break down big data and establish patterns in media coverage and find its hidden narratives. In addition to this, AI-based writing tools make it possible to instruct students on how to create logical arguments as well as provide possible evidence, counterarguments, and structural consistency. Nevertheless, the utilization of AI in the development of critical thinking also has some dents. It is constantly possible that too much AI-based recommendations will de-motivate free thinking and healthy contemplation and this can result in intellectual laziness. To overcome this, teachers should implement methods of teaching that mix AI-compatible feedback with conventional techniques of counterargument, peer review, and reflections. In addition to these three focal dimensions, broader systematic issues are created too. One urgent issue is that AI technologies are not distributed equally among educational institutions. Pupils in undervalued schools or those lacking high-speed internet connections and

other sophisticated digital devices might be placed in a heavily disadvantaged position that would further widen the prevailing learning disparity. Such a digital divide highlights the necessity to establish policies that can encourage equal access to the AI-enhanced learning environment. Besides, ethically correct application of AI in education is a controversial issue. The issues of surveillance, data privacy, and algorithmic bias are even more present in situations where AI heavily relies upon personal information of students. Thus, institutions have to embrace stringent ethical principles, informed consent protocols and data governance systems that are transparent and aim to safeguard the rights of students, as well as derive the advantages brought by AI.

Looking to the future, it is evident that the combination of AI and media education is promising as well as problematic. A potential way forward to deal with some of such concerns is the development of 'explainable AI' (XAI) models that ensure that the process of decision making via algorithms can be rendered transparent and understandable. Moreover, the inclusion of AI ethics courses in the media education programs may allow the students to gain a more detailed view on the societal consequences of automation and machine learning.

To sum it up, this study supports the idea that AI can transform media education dramatically due to its ability to individualize the learning process and develop media literacy as well as critical thinking. Nevertheless, its adoption must be done cautiously, where ethical, social, and fairness considerations should be taken up with utmost priority in the design of media education. A coordinated effort is needed amongst media educators, policymakers, and developers of technologies to design AI-enhanced learning conditions that would enable students to be critical and informed responsible actors on the digital scene.

Conclusion

AI affects the learning mode in media education by reorganizing its pedagogy, augmenting its teaching and refining its critical thinking practice. While AI is highly useful, ethics are a massive cost factor that needs to be excluded for AI usage in education. More research should be focused on the assessment of AI's effect on cognitive abilities and media consumption habits in the long run.

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AI and Education: Transforming Learning for the Future

Latesh Kanoujia

Abstract

Artificial Intelligence (AI) is revolutionising classrooms by making learning efficient, accessible, and personalised. AI-enabled tools such as intelligent tutoring systems and adaptive learning software, monitor students' performance and provide customised study plans, allowing students to study at their own pace. Virtual assistants and chatbots offer instant feedback and guidance in communication, and computer grading lightens the administrative load for faculty members, permitting them to devote their time to teaching and advising. Outside the classroom, AI is transforming access to learning. Speech-to-text and text-to-speech functionality facilitate learning for disabled students, and text-to-language programs aid in breaking down multilingual classroom barriers. Such technologies promote accessibility and inclusion of foreign students in education. However, integrating AI with education may also be fraught with danger. Issues such as privacy of information, digital disparities, and reduction of the human element in education need to be addressed. AI technologies are not equally accessible to all, which may cause them to widen educational disparities instead of reducing them. It is emphasised that ethical AI innovation, wise policymaking, and digital infrastructure investments be used to ensure that AI is accessible to all students on an equal basis, irrespective of their backgrounds. This study examines the potential of AI to revolutionise learning into possibilities and opportunities intertwined. It is hoped that AI improves future learning and customised education as well as becomes inclusive, if policymakers, educators, and technologists join hands in a collective effort.

Keywords: *Artificial Intelligence, Personalised learning, Education technology, Digital accessibility, Adaptive learning*

Introduction

Artificial Intelligence (AI) is rapidly transforming the world's education industry through personalised learning, automation of administrative tasks, and forecasting from learning behaviour through data (Makinde et al., 2024). Monolithic and traditional pedagogical models are being replaced with adaptive and learner-centric models tailored to meet diverse learning needs (Kayyali, 2024). The application of AI in learning varies from smart tutoring systems, feedback systems in real-time, and learning analytics to facilitate greater interaction, accessibility, and optimisation of performance.

AI can be a useful tool in tailoring educational experiences to individual needs through the use of predictive analysis to study the existing data and forecast future trends. Given the newness of the AI technology, it is also important to address the ethical issues involved in the AI development and its use. This paper attempts to address these concerns about AI implementation.

Figure 1

AI Integration into Education

Literature Review

Scholarly discourse on AI has widened from initial enquiries into automation of learning systems to a concrete study of adaptive learning, learner analytics, affective computing, and the socio-ethical dimension of AI's introduction

into the learning process (Murayama et al., 2019). Adaptive and personalised learning, fuelled by AI-powered platforms, is one of the ubiquitous trends in the literature. Early formative works discussed here were some of the first to explore uses of AI to reshape the traditional one-size-fits-all instruction pedagogy into student-focused experiences. Dynamic variation of difficulty levels across material and structure by student activity and achievement allows adaptive systems to deliver engagement and mastery learning (Er-Radi et al., 2023). Evidence suggests that these systems can enhance student achievement vide adaptive teaching through student learning profiles (Walkington, 2013). These results are especially relevant to large, heterogeneous classes, in which differentiation and personalised approach, is difficult (Harris & Chapman, 2004).

Intelligent Tutoring Systems (ITS) is one of the most well-documented uses of AI in education (Akyuz, 2020). They mimic human tutoring through processes of delivering individualised feedback, scaffolding, and problem-solving support. Experimental studies have shown that ITS is as effective as one-to-one tutoring by human experts in the achievement of learning, most notably in STEM learning (Chi et al., 2001; Zhang et al., 2023). Recently, Natural Language Processing (NLP) has advanced to the point where marking and material preparation can be done automatically (Khurana et al., 2023). Computer programs may automatically tag open-ended questions, difficult text may be changed, and language support can be translated to assist multilingual students (Tojiboyeva, 2024). Summative and formative evaluation can be automated, thereby lightening the administrative loads of the teachers in addition to enabling learners to receive multiple and immediate feedback (Nazeef & Fareed, 2024). NLP functionalities are being integrated increasingly in Learning Management Systems (LMS), and real-time tracking of student behaviour and intervention windows (Pan et al., 2024).

There has also been a growing interest in learning analytic-architectures and predictive modelling research (Sghir et al., 2023). Analytic tools based on AI can be used to examine student engagement behaviours, forecast trends in performance, and alert students who are at risk (Nurlanuly, 2024). An ability to analyse the aforementioned allows educators and institutions to make informed, data-driven decisions that facilitate timely interventions as well as enhance grades and student retention (Gilson, 2023). Researchers, however, also warn

against placing excessive reliance on algorithm-heavy predictive analytics in place of human judgment, to mitigate risks associated with algorithmic obfuscation and bias.

There has been a new study in affective computing in which AI systems sense and respond to students' mood from multimodal input data such as facial expression, speech tone, and behavioural cues (Sangeetha et al., 2024). Shaping AI is a new and developing field, though it does promise to facilitate learner motivation and emotional well-being, especially in the case of hybrid and online teaching (Shkembi et al., 2024). Its capacity to learn adaptability not only on cognitive performance but also on emotional readiness brings a more hybrid approach to digital pedagogy (Suropov, 2024). While such improvement is being realized, literature critics also bring forward the ethical, legal, and equity issues of AI in learning. Among such issues are data privacy, consent, transparency of AI algorithms, as well as reproducing system injustices through discriminatory datasets (Mann & Matzner, 2019). The professional development and training of teachers is necessary to enable them to be well-equipped to employ AI tools.

With these steps in place, the gap in research regarding AI is critical. Most of the research studies do not give a comprehensive picture of how AI can be implemented inclusively and ethically so as to develop educational systems, especially in India. The existing research literature on this issue also overlooks the intersectionality of digital equity, teacher preparedness, and infrastructural viability—variables that are most essential to an impactful AI implementation in different socio-economic settings.

This study seeks to bridge this gap by exploring the promises of AI for bringing change to the Indian educational system. The central question in this research is that, how AI can be used to create inclusive, efficient, and future-oriented learning spaces in India. This paper sets out with the objective to assess current applications of AI in schools, to examine the structural and ethical issues towards the adoption of AI, as also to recommend fair, evidence-based strategies toward sustainable AI adoption in India's education system.

Methodology

A systematic review-based qualitative study approach has been used in the present research work to synthesise existing academic and policy literature on

implementing and applying AI in education, more specifically in developing economies like India.

The data was retrieved from peer-reviewed scholarly articles, white papers, government policy documents, institutional reports, and case studies of major educational and AI research organisations. The search was facilitated through databases like Scopus, IEEE Xplore, Springer Link, Google Scholar, and institutional repositories. For quality and recency, only those publications were accessed which had direct applicability to teaching and application of AI Industry-standard and with case studies, trends, or 2012-2025 frameworks, specifically in the context of the developing world. The literature was then coded, thematically labelled, and trends, gaps, and patterns were derived. These themes were categorised as: intelligent tutoring systems , automated feedback and assessment, predictive modelling and learning analytics, and administrative optimisation. These themes are the pillars of the analysis and policy implications of this paper. The present research design offers an empirical and tested approach to studying the potential and risks of AI to re-engineer the education system systematically.

Applications of AI in Education

Personalised and Adaptive Learning

AI provides adaptive technology by responding to the individual learner's performance and making learning decisions on how to present the content dynamically and in real-time. Dream Box, Carnegie Learning, and Knewton technologies have adapted instruction algorithms, encouraging learners, and establishing effective mastery (Walkington, 2013). Difficulty, speed, and formats change dynamically in the system, providing differentiated instruction for large and diverse classes.

Intelligent Tutoring Systems (ITS)

ITS simulates human tutoring assistance, comments, guidance, and scaffolding. It is comparable to human one-on-one tutoring in second language and maths learning (Chi et al., 2001). ITS can potentially maximise learning through the detection of misconceived knowledge and offering corrective cues for self-directed problem-solving skill acquisition.

Automated Feedback and Assessment

AI marking works well by employing NLP for students' assignments in both structured and unstructured form. Reduction in teacher workload, enhanced writing quality, and immediate feedback are the benefits of AI system-based marking (Khurana et al., 2023; Nazeef & Fareed, 2024). NLP techniques are also capable of checking the coherence of essays, grammar, and suitability of content, which increases the quality and quantity of models in formative assessment.

Predictive Modelling and Learning Analytics

The 'Learning Analytics Systems' track and report on student activity to predict instructions. The models include making adjustments and supporting predictive recognition of student struggle and guiding intervention (Sghir et al., 2023; Nurlanuly, 2024). Teachers may use such reports to guide evidence-based teaching, curriculum planning, and institution planning, thus supporting data-driven decision-making.

Administrative Optimisation

Rather than conventional pedagogy, AI provides learning management in the form of chatbots, smart scheduling, and auto-enrolment. Virtual assistants answer questions posed by students and also perform routine tasks so that teachers have more time to handle other matters (Bilal et al., 2025). The technology gets better at tasks and becomes familiar with the students over time, therefore adjusting to its new management role.

Challenges of Implementing AI

Ethical and Privacy Concerns

AI technologies penetrate a wide pool of students, but at the cost of individual data privacy, consent, and transparency of algorithms. Bias in training data is causing discriminatory prejudice to perpetuate systemic bias unless adequately regulated. The systems need to be strictly regulated and ethically configured to ensure that they adopt a fair and responsible approach.

The Digital Divide

Equity of access to AI-enabled learning technology remains a dream for the poor

and rural populations. Failure in adopting digital technology (Tojiboyeva, 2024; Suropov, 2024) can be attributed to poor infrastructure, unaffordability, and illiteracy. The shutdown of AI-enabled technology may be imposed to prevent further entrenchment of educational disparities through AI-transformational innovation.

Teachers' Readiness and Resistance

Most teachers are unprepared and are neither trained nor ready to use AI. There may also be resistance stemming from fears of job loss or scepticism towards newer technology. Periodic professional development and capacity building will be required to use AI in the classroom.

Cost and Infrastructure Restraints

AI requires enormous investment in hardware, software technologies, and infrastructure. Low and middle-income nations are not able to invest in advanced AI technology. Long-term lending agencies and public-private partnerships would be the parties that would engage in the mass adoption of AI.

Future Directions

Social-Emotional Learning as Emotional AI

Advances in affective computing enabled the AI technology to detect the mood of students through facial expressions, voice, and behaviour (Sangeetha et al., 2024). The technology must offer encouragement, happiness, and mediated support where hybrid or distance learning is involved.

Augmented and Virtual Reality (AR/VR)

AR and VR with AI offer immersive sensory-rich spaces that can be touched and explored, which enables interactive learning. They are used to recreate multi-dimensional situations in the education of science, technology, engineering, math, history, and medicine (Reimers, 2020). AI support allows the educators to react in real time to the feedback from students.

AI-Based Career Guidance

AI systems sift through students' process data, learning stream, and profile, in a bid to offer vocational and educational recommendations to the individual. The individual's strengths and interests are aligned with learning streams, and

the systems empower students and increase their employability (Zhang et al., 2023).

Synergetic AI Systems

Synergetic AI helps, but not to substitute teachers for the learning of the future. Synergetic AI can be an education co-pilot, eschewing drudgery and leaving room for teachers to provide mentoring, imagination, and reason (Strielkowski et al., 2024). Such collaborative policy is the promise of human-focused learning facilitated by technological progress.

Table1

Evolution of AI in Education: A Timeline Overview

Time Frame	Progress / Important Events	Explanation
1960s	PLATO System	Early computer-based learning system.
1980s–1990s	Intelligent Tutoring Systems (Auto Tutor)	Tutoring systems based on AI that emulate human conversation.
2000s	Knewton	A real-time data-based adaptive learning platform.
2010s	Dream Box Learning, Duolingo, Khan Academy with AI	Dream Box aids in mathematics, Duolingo aids in learning a language, and Khan Academy tracks proficiency.
2020–2022	Online Proctoring (COVID-19), Generative AI (ChatGPT), Emotion AI	AI for remote proctoring, content creation, and student emotion understanding.
2023–2024	AI Feedback Tools, Career Guidance, Multimodal Tutors, Special Ed AI, Classroom Copilots	Real-time feedback (Grammarly, Quill Bot), AI-guided careers, multimodal interactions, assistive AI, and teacher support.

AI can revolutionize education by offering interactive, efficient, and customized learning. The revolution, however, must be put in place carefully. It must be done by teachers and policymakers through the enforcement of responsible data usage rule systems and openness. Education and infrastructure must be improved so that it is able to support schools and teachers in adjusting to the adoption of AI. The digital divide has to be filled, and AI leverage has to be made inclusive.

The humanness of education has to be ensured and technology and AI can perform and deliver fact-oriented information, but cannot replace teachers' empathy, imagination, and counselling. Balanced blending of technology advancement with traditional values is the passport to sustained growth.

Conclusion and Policy Implications

Artificial Intelligence is transforming the education system at a breakneck speed by enabling personalised learning, enhancing operational efficiency, and facilitating data-driven decision-making. The policy implications of this research lie in enhancing the capacity of AI to redesign the geography of provisions, assessment, and education governance. All of this can be achieved by firstly, implementing a digital one-stop infrastructure in a manner so that the existing education disparities do not escalate. Governments would need to invest heavily in internet provisions, device allocation, and AI platforms, especially for disadvantaged groups.

Secondly, moral values through the culture of transparency, fairness, and responsibility need to be infused in the decision-making models of AI. This would be achieved through open data privacy law, auditing algorithmic decision-making, and providing access to AI tools for all. Thirdly, teachers must also be ready to utilize AI as an effective teaching tool. Further, they must use their tool-using expertise to enhance and augment their pedagogical practice, but not replace it. Fourthly, AI systems need to be localized. Learning technologies should be based on local curriculum, language, and learners' needs so that they will respond and serve accordingly. And lastly, there must be multi-stakeholder partnerships amongst governments, educators, technologists, and civil society to develop together inclusive, scalable, and sustainable AI solutions.

While immense opportunities await, the AI-fuelled future of education needs

to be rolled out gradually, with all due attention to ethics, infrastructure, and pedagogic needs. If planned and implemented cost-effectively, AI can potentially become a key stakeholder in shaping an inclusive and future-proof education system.

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Shaping Diasporic Identity: The Impact of Indian Media on Indians in South Africa

Sushmita Rajwar & Ritu Kohli

Abstract

Various researchers have discussed at length the story of Indians migrating to South Africa. There is quite a body of literature tracing the journey of Indians migrating to South Africa through different means. Through the different studies the question of 'identity' especially for Indians in South Africa, has been addressed time and again. South African Indian identity is the product of many different factors. Among the various factors that have led to the formation of this South Africa identity, perhaps the most significant is the media. Indians have been influenced with the Indian media, since the beginning of migration as indentured labour. This essay purports to analyze three types of Indian media that have been paramount in shaping Indian diasporic identity in South Africa: print media, especially newspapers; cinema, Bollywood; and social media, including Facebook, Instagram, and YouTube.

Keywords: *Migration, Indians, South Africa, Media, Identity*

Introduction

The takeover of India by the East India Company is an example of how western forces tried to dominate any broken polity that existed before the modern notion of nation-state and during that period Indian populace went through extreme suffering. East India Company had only one goal in mind, which was to exploit the natural resources of the region and earn profit.

The collection of land revenue by the Company aided in financing the wars of the Company. Along with the new trading system, India stopped being an exporter of processed goods and started being an exporter of raw materials and, in turn, a consumer of manufactured goods. This severely damaged the economy of India, so much that the GDP hit rock bottom. The British were also in the process of expanding their empire, and were looking to produce cash crops that could be sold in the international market. The global market had a high demand for sugar and rubber. For this reason, the East India Company colonized parts of Africa such as South Africa, Nigeria, and Ghana, as well as Gambia, due to their ability to cultivate such cash crops. What they lacked was a sufficient supply of inexpensive skilled and semi-skilled labor to work in the plantations.

Every time there was a call for labor, whether in agriculture or mining in the colonies, the appeal was for 'coolies'. These would be either Indians or Chinese, and collectively termed the 'Asiatics' (Tinker, 1974). It has been argued by scholars such as Freud (1995) and Hu-Dehart (1993) that the British had a marked inclination towards sugar cultivation in South Africa as they had already experienced success with Indian and Chinese labour in other parts of the world such as Jamaica, Trinidad and Mauritius.

At some level, indenture systems served as an escape route from the relentless social and economic difficulties that plagued these Asian regions for over a century. One of these challenges was the "Indian population explosion." Indian figures surged from an estimated 185 million in 1800 to 285 million by 1900 (Malharbe,1991). Many members of the rural peasantry in these regions faced enduring poverty from economic depressions alongside internal civil wars and colonial exploitation. Unemployment and overcrowded conditions, coupled with the unrelenting droughts, famines, diseases, and floods, made these two nations susceptible to the call for "coolie indenture" (Northrup, 1995). Regarding the Indian indenture narrative, it has been argued that "poverty was the omnipresent backdrop against which the South African recruiting companies worked," and that the interplay of poverty, rise in chronic ecological instability, and rebellion as Indian emigration drivers has been insufficiently explored. Northrup's depiction relates very closely to the plight of the Indians from fifty years prior.

Table 1

Indentured Indian immigrants by colony in the nineteenth and early twentieth centuries and Indian population by county, 1980

Colony	**Period**	**Indian Immigrants**	**Indian Population (Est.) 1980**
Mauritius	1834-1912	453,063	623,000
Natal (South Africa)	1860-1911	152,184	750,000
Reunion	1829-1924	118,100	125,000
East Africa (Kenya/Uganda)	1895-1901	39,771	79,000/430*
Seychelles	1899-1916	6,319	NA

* These figures are much lower than those prior to the expulsions of 1972. In 1970, the Indian population of Kenya was 1,82,000 while that of Uganda was 76,000.

Source: Clarke, Colin, Ceri Peach and Steven Vertovec (eds.) 1990. *South Asians Overseas: Migration and Ethnicity,* Cambridge: Cambridge University Press.

South Africa is one such colony where Indians were brought mainly as indentured labour to work under these plantations. The transfer of Indians to South Africa in different phases led to a presence of a considerable Indian population in South Africa.

In South Africa, people of Indian origin constitute about 1.6 million, making up 3% of the total population. About 80% of the South African Indian population is concentrated in KwaZulu-Natal, which includes Durban. This is followed by 15% in the Gauteng region, which includes Johannesburg, and the remaining 5% in Cape Town. South Africa is one of the countries where Indians migrated to from the 18th century onwards, most of them as indentured workers. South African cities which have a significant population of Indians are quite familiar with Indian culture and Indian food. Indian restaurants are not a novelty in Durban, Johannesburg, or Cape Town. South African Indians have diverse associations aimed not only at self-mobilization but also at the social cohesion

of the community. Just like any other Indian diaspora, the concept of identity is of great significance to South African Indians. With the help of some different factors, the Indians in South Africa have managed to preserve this identity. This is where the media has been quite helpful.

This paper deals with Bollywood and social media alongside newspapers also as an important source of media which makes it equally important to consider the violence against Indians in South Africa through the years. Therefore, the second section seeks to analyze the impact newspapers in South Africa have had on the social, cultural, economic, and political identity of Indians in South Africa.

Print media played a significant role in shaping the identity of Indians in South Africa during the colonial period, particularly when the indentured labourers lived and worked under British rule, united by a shared opposition to the colonial regime. Indian cinema has been a continuous cultural presence throughout the Indian diaspora's journey in South Africa. Although its influence was disrupted during the Apartheid era, it re-emerged strongly in the post-Apartheid period, leaving a deep cultural impact. In contrast, social media is a much more recent force, gaining traction in the 21st century. This paper explores how social media, as a contemporary tool, is influencing and redefining the identity of South African Indians today.

Indian Migration to South Africa

The history of the Indians in South Africa is not only well-known but it has been recorded very well in the documents as well. Indians migrated under different waves, the first wave was called the 'Indentured Indians'. Most of the Indians who travelled to South Africa during the British rule travelled under a special contract of indenture labour to work in the plantations. When the Britishers found the prospects of growing commercial crops, at first, they encouraged the natives to work in sugar plantations. But being dissatisfied they tapped foreign sources for such labour. The British needed semi-skilled and skilled labour. India was found to be the best option as many Indians were already taken to colonies like Mauritius and had shown their talent.

The first ship named Truro reached the port of Durban on 16 November 1860 from Madras with the first batch of 340 indentured labour out of which 197 were men, 89 women and 54 children. Amongst the Indians the composition

of Hindus was as follows: Brahmins (2%), Kshatriyas (9%), Vaishyas (21%) and Sudras (31%). The labourers started arriving one after the other, there was another batch that arrived on 26 November 1860 on a ship named Belvedere that came from Calcutta. In this batch there were around 61 Brahmins as well as 25 Kshatriyas. The labourers were brought under a contract which could be renewed after its expiry. There were large number of agents involved in the recruitment of labourers in and around the port of Madras, Calcutta and Bombay. In the year 1864, there were a total of 1000 labourers who came from Madras itself as can be seen in Table 2. The numbers of Indian indentured labourers kept increasing throughout the decade of 1860s, 70s and 80s, so much so that by the time indenture was abolished by the British government in 1911 after tremendous pressure from the Indian nationalists, the total number of migrants in South Africa was 152,184. Therefore, the Indian Diaspora forms a sizable portion of the population of South Africa. They have also played a very important role in the socio-economic as well as political structure of the country. While analysing this journey of the Indian Diaspora in South Africa, what interests the mind is the existence and the role of the Indian media in shaping the Indian Diaspora identity in South Africa.

Table 2

Ports of Embarkation of Indian Indentured Labourers

Year	Calcutta	Madras	Bombay/Karachi
No. (% of total during that period)			
1856-61	14,533 (66.5)	6479 (29.6)	860 (3.9)
1871-70	1,22,241 (67.5)	56,356 (31.1)	2479 (1.4)
1870-79	1,42,793 (78.4)	19,104 (10.5)	NA
1880-89	97,975 (76.0)	21,653 (16.8)	NA
1891-1900	106,700 (63.3)	28,550 (16.9)	33,343 (19.8)
1907-16	66,839 (62.3)	32,369 (30.2)	8016 (7.5)

Source: *Brij V. Lal, Girmitiyas: The Origins of the Fiji Indians.*

Indians also migrated in the second category as 'Passenger Indians'. These were those Indians who had no intention of permanent settlement. This category of people started coming as free immigrants in the year 1870 and formed atleast 10

percent of the Indian migrant population. The first Indian trader who stayed in Natala in 1875 was Aboobakar Ahmod. Indian traders soon became very wealthy passengers and dominated the trade in the region. Their contribution was not only economic but also social. Many Indians funded religious events celebrating Indian festivals. Some of them contributed towards educational organisations as well. However, one could see the stark difference between Indian indentured labour and trader Indians. Indentured labourers were struggling with limited means at the mercy of their employer while passenger Indians were wealthy and did not have restrictions on them. They took several trips back to India in a year. While the Indentured Indians were mostly Hindus, the passenger Indians were largely Muslims who came from states like Gujarat and Bombay.

This paper seeks to discuss the role of media in shaping the identity of the Indian Diaspora in South Africa, and in order to do this the paper will highlight three major forms of media that have played an important role for the diasporic Indians- newspaper, Bollywood and social media.

> The basis of our governments being the opinion of the people, the very first object should be to keep that right; and were it left to me to decide whether we should have a government without newspapers, or newspapers without a government, I should not hesitate a moment to prefer the latter. But I should mean that every man should receive those papers and be capable of reading them (Boyd, 1787, p. 49).

Print Media as a Tool for Empowering South African Indians

Media played a very important role in defining what the Indian community constitutes in the early years. With the help of print media, the South African Indian community was able to refine their South African 'Indian' identity. The paper would firstly, discuss the print media especially the Indian newspapers. The print media is also known as an important pillar of a democratic nation because of the power they have over the electorates. The mass media can easily influence the public opinion by mobilizing the masses by bringing them together to address common concerns, educating the electorates by providing them reliable information, creating awareness about issues like human rights, creating an environment of coherence between different groups and also by

making the government accountable and transparent. The print media has proven to be an important tool that influences people's thoughts about ideas such as politics, religion, gender, race etc. The print media in South Africa has a long history in standing for the rights of the discriminated. Indian newspapers have been a powerful tool to mobilise the populations towards important ideas for the economy, society and polity of South Africa. The Green Pamphlet, The Grievances of the British Indians in South Africa: An Appeal to the Indian Public published in 1896 was the most important publication that brought into light the conditions and treatment of the Indians in South Africa. This document was also a very strong reply to some of the important newspapers in South Africa which referred to Indians in derogatory languages. As Gandhi (1896) mentions:

> The man in the street hates him, curses him, spits on him and often pushes him off the foot path. The Press cannot find a sufficiently strong word in the best English dictionary to damn him with. The Press almost unanimously refuses to call the Indian by his proper name. He is 'Ramysamy'. He is 'Mr. Samy'. He is 'Mr. Coolie'. He is 'the black man'. And these offensive epithets have become so common that they are used even in the sacred precincts of the court. (p. 4)

Image 1

Indian Opinion, March 2, 1912.

INDIAN OPINION

PUBLISHED WEEKLY

INDIA AFRICA INDIAN OCEAN

No. 9—Vol. X. Saturday, March 2nd, 1912. Registered at the G.P.O. as a Newspaper Price Threepence

FIFTY MEN GO TO GAOL

PASSIVE RESISTANCE BY INDENTURED INDIAN LABOURERS

ON Sunday, the 18th ultimo, a number of indentured Indians on Mr. Balcomb's estate at Kearsney, near Stanger, were asked to clean the barracks and the land about it.

One of the men refused to do such plaint, but the men felt so indignant that they would not listen to such a proposal, and so went "in a body," which the law says they must not do.

It was also stated that there was a condition of the contract of service which states that the immigrant was and engaged Mr. Dickinson to defend them.

The Magistrate, after hearing the complaints, cautioned Mr. Starr, and made an order that the wages of the Indians be paid at once and full rations given. He also ordered that

'Indian Opinion' is the newspaper that gained wide recognition and has always been referred to as the newspaper for Indians by Indians. But it doesn't mean that there were no others who started this initiative before Gandhi. There was certainly the 'Indian World' in 1898 by P. S. Iyer and also the 'Colonial Indian News' in 1901. 'Indian Views' was another newspaper which was published from 3 July 1914 by M.I. Meer and mainly catered to the interests of the Indian Muslims. There were many renowned Muslim businessmen also gave donations to run the newspaper, since it catered to the Muslim population. There were the Indians who migrated as passenger Indians.

Many Indians tried to start their newspapers to gain the attention of the Indian community but did not succeed. One important Indian newspaper that could succeed for a long period of time was called 'The Leader' by Dhanee Bramdaw. Bramdaw saw to it that the price of 'The Leader' was lower than the previous newspapers, so that the average Indian could also afford to buy this newspaper. His aim was to reach to a larger Indian audience than the 'Indian Opinion' had been able to capture. What was different in this newspaper from the earlier ones was its non-alignment to any political group. In its first issue itself, 'The Leader' declared that,

> it was an independent organ, owing no allegiance to any group or body but its columns will be open to all bodies which place the welfare of the Indian community in its entirety. This infact, will be the Leader's criteria of judgement of all public affairs affecting Indians. (Prashanta, 1994, p. 51).

The writers knew very well that passive resistance movement and its development was important for Indians, so it covered the movement diligently. The Indian community resisted the Ghetto Act and it was resounding in the columns of 'The Leader' also like "Natal's Determined Cry: No Indian Ghetto Bill" (Prashanta 1994, p. 53). Dhanee Bramdaw made sure that the news item which was important for Indians must be discussed on the editorial column. The phone lines were also open for the public to call and even express their discontent on any news piece. The newspapers brought out several political news but also didn't leave out other things like cooking recipes, fashion, education etc. Therefore, one can say that 'The Leader' served an important purpose in shaping the identity of the Indian South Africans. The publishing of 'The Leader' is also important because it was published at a time when there

was growing agitation by the Whites against the 'Indian Penetration'.

But the problem was none of these newspapers became successful in getting the attention of readers like 'Indian Opinion'. Indians were not drawn towards these papers and this brought down the sale to a large extent which made it difficult for them to survive. On the other 'Indian Opinion' was published in 1904 by Mahatma Gandhi and it became most successful in leading the political opinion amongst the Indian origin people of South Africa. This newspaper discussed all sorts of issues which were of concern to the Indians. It not only talked about racial discrimination but it also wrote about other issues being faced by Indians. Since, the time of arrival of Gandhi in South Africa the problem of racial discrimination was being discussed and talked about among the indentured labour population. Gandhi when himself faced racial discrimination on his arrival in South Africa, realized that the mobilization of Indians in this foreign land is a must. Gandhi understood that if Indians themselves do not stand up and fight for their rights, they would always be debarred of their rights. Therefore, starting a newspaper was the most logical step that Gandhi took to mobilise the large number of Indian populations which was also multi-lingual.

The various columns and articles published in newspapers like 'Indian Opinion' had been quite instrumental in shaping the identity of the Indian population in South Africa. In the first issue of 'Indian Opinion' Gandhi made himself clear to his readers that South African Indians would not be identified by their religious, regional or caste identities. Because of the simple reason that Indians in South Africa were divided among ethnic, caste, religious lines. He preferred not to refer to Indians as Tamils, Bengalis, Hindus etc. but always as British Indians (Pandey, 2018).

The formation of Natal Indian Congress was a very positive step towards bringing the Indians forward for negotiation. By this time the British also realized that Indians had their own demands and would not accept all the draconian passed the British government whether it was additional taxes or introduction of passes. Gandhi brought together the indentured labourers and made them understand the need of the British government for labourers in the sugarcane plantations. This he did to make Indians understand that the British will never put an end to indentureship, hence it has to be done from Indians. Gandhi demanded that, "We say with all earnestness, we can command: stop

the indentured immigration….It would furnish a practical demonstration as to whether the colony can or cannot dispense with such labour" (Gandhi. 11.06.1903).

Gandhi knew very well that the regional fragmentations that existed within the South African Indian community must be united and therefore, through his writing in 'Indian Opinion' he made clear that he wanted to carry forward the idea of Indianness. He united the Indians against the discriminatory practices of the British. Several attempts to negotiate with the colonisers were made in order to stand against racial discrimination in any form. The Indian community even started to expect humane and better living conditions from the British and not merely being treated as coolies, through the various columns of 'Indian Opinion'. Indian newspapers came to be known commonly as mouthpiece of the Indians in South Africa in respect to the charges levelled against the members of their community. These articles, gave the Indians a place to express themselves and justify their acts even if they had been to defy the existing rules.

'The Graphic' was a magazine that started in 1950 that published content on entertainment all dabbled with politics. It helped to shape the Indian identity to a great extent. Soon, the magazine changed from a monthly magazine to a weekly tabloid which started providing competition to its predecessors like 'The Leader'.

Bollywood and Belonging: The Influence of Indian Cinema on Diasporic Identity

The second form of media that this paper would talk about is the Bollywood or the Indian film industry. Bollywood has played an important role in the lives of the South African Indians. Indian movies have been very popular in South Africa and during the decades of 50s and 60s there were some cinema halls that were playing Indian films in Duban, South Africa for example, the 2400-seater Shah Jahan in Durban. The Indian population secretly watched the Indian movies which was illegal during Apartheid. But Bollywood being such an integral part of Indian households, continued to bring people together during Apartheid as well. There were also popular TV shows like Ramayana and Mahabharat that became household names for all Indians. But what is equally important is to look at how South African Indians have reacted to this Indianness displayed through films and music.

An individual recognizes himself with his home or the host culture which forms his cultural identity. As Jung and , have defined cultural identity as a "socially and historically constructed outcome of locating the self in relations to interactions with others as well as to socially and culturally conditioned communicative structures within a given society" (2004, p. 147). Identifying with a particular culture also gives people a sense of belonging and security. It has been seen that any individual's identity can be maintained through different social interactions with other people/groups/ associations as well as with media. The social interactions that individual has with his community, people, family have been known to play a very significant role in constructing and maintaining one's identity, particularly the identities of the diasporic communities (Moorti, 2003). Hence, it becomes interesting to study the role of Bollywood in influencing the identity construction among the third, fourth and fifth generation Indians in South Africa.

Films are the most common artifacts of modern popular culture that generate and reflect diverse cultures and the traditional values of a society (Beard, 1994). People are becoming aware of different cultures from all over the world through various films. This is cultural exchange that is happening at a very fast pace. Preserving and maintaining their Indian identity was a continuous challenge in other countries for the Indian Diaspora in South Africa. They were able to connect with their Indian identity with the help of various technological advancements. It is not just the print media in the form of newspapers, journals that helped Indians in advancement of their identity but also the electronic media through films, television etc, that made it easier for the Indians to connect with their Indian identity through the comfort of their homes (Appadurai, 1990).

The electronic media which in this case is the Hindi cinema commonly known as Bollywood became extremely popular amongst the Indian Diaspora. Therefore, the role of Bollywood in Indian identity construction is very important to analyse. There are many reasons for the popularity of the Indian cinema among Indians as well as for the Indian Diaspora. The largest number of films are produced by the Indian film industry and it is not just Bollywood that produces Hindi cinema but also other industries in regional languages in Kerala, Karnataka, Tamil Nadu. There are large number of diaspora that belongs to these regional states as well.

Thomas Blom Hansen 'In search of the Diasporic Self: Bollywood in South Africa' (2005) has written extensively on the role of Bollywood in the construction of diasporic Indian identity in South Africa. He says that the influence of Bollywood on the South Africans has for a long time been a type of mega-signifier of Indianness in South Africa. The only thing with his theory is that he sees all the South African Indians through the same eye. He doesn't see the class, religious and generational differences between them which many a times defines their actions and quest for identity.

Bollywood movies have gained popularity among the Indians abroad like never before. This fondness of Bollywood cinema began with films like Dilwale *Dulhaniya Le Jayenge (1995), Dil to Pagal Hai (1997), Kal Ho Na Ho (2003)* which were highly successful movies in foreign countries. The Bollywood movies gained popularity in the international market with the changes brought about by contemporary producers like the shortening of the long three hours movies into a one and a half or two-hour short movie. Many producers also collaborated with international filmmakers and brought our movies like *Namesake, American Born Confused Desi (ABCD)* that catered mainly to Indian immigrant populations. With the advent of globalization, the popularity of Bollywood movies increased in the overseas market and movies especially for the Indian diaspora were being made. Bollywood became a continued source of entertainment for Indians abroad. Scholars like Dissanayake (2006) have also argued that Indian diasporic communities are not just interested in regular Bollywood movies but also in movies showcasing Indian culture, history and heritage. Bollywood movies have continuously remained an important source for Indian diaspora to remain in touch with their culture and heritage as is being practiced in India. The Indian movies have been able to influence the dressing, language and rituals of the average Indian abroad in a huge way. There is a certain fan culture which is spread through the Bollywood movies in India and also amongst the Diasporic community.

Mobilising Culture: The Role of Indian Diaspora Institutions in Identity Formation

Among Indian communities in South Africa, religion, language, and caste have played an important role in preserving their cultural identity. Over the years, many Indian organisations and associations have helped keep these traditions

alive through their actions. For example, the Hindu Maha Sabha, founded in 1908, a very active organisation worked continuously to promote Hindu values, vegetarianism, and standardised religious practices for priests in South Africa.

There were also regional associations formed based on language and state identity as many amongst the diaspora belonged to non-hindi speaking states also. The South African Tamil Federation, set up in the early 1960s, focused on the protection of Tamil culture and language. Many Tamil families were worried about their children losing touch with the Tamil language due to the dominance of English. So, Tamil associations ran schools to teach Tamil and even started newspapers like *Viveka Banu* and *Senthamil Selvan*. The Natal Tamil Vedic Society also helped preserve Tamil culture and language and was very successful. The Tamils have been able to maintain their identity very well despite the Apartheid. Similarly, the Andhra Association of South Africa (AASA) which was formed in 2017 in Johannesburg to bring together Telugu-speaking people from Andhra Pradesh worked for their benefit. They have been organising cultural events, festivals, and community gatherings to keep Telugu traditions alive.

Majority of the Indians in South Africa live in KwaZulu-Natal region (around 800,000) and Gauteng (around 220,000). Among these Indians many belong to Gujarati families (about 40,000 Gujarati Hindus and 60,000–80,000 Gujarati Muslims) who belong to higher income groups. The Surat Hindu Association, formed in 1907, focused on Gujarati language education. There were also caste-based groups like the Pattani Soni Association (for goldsmiths), Mochi Mandar (shoemakers), Kumbhar Mandar (potters), and others. Eventually, in 1993, three of the main Gujarati groups came together to form the Gujarati Hindu Sanskruti Kendra, which continues to promote Gujarati culture in South Africa. The Gujaratis came together to strongly form one single Gujarati identity so that there is no bifurcation and there is no loss to their community. In short, cultural identity has always been deeply important for Indians in South Africa. Through various organisations, they have managed to hold on to their languages, customs, and traditions.

Among the younger generation Indians, those born and raised in South Africa with little direct connection to India, Bollywood has played a big part in shaping their idea of what it means to be Indian. From the 1950s to the 1970s,

Indian films were hugely popular. In Durban's Grey Street area, many cinemas screened Bollywood movies. One of the first Indian-owned theatres there was Rawat's Bio. Another, Shah Jahan cinema, had 2,400 seats and regularly sold out. Watching a Bollywood film was a major social event for which people came dressed in their best saris and kurtas to see stars like Dilip Kumar, Dev Anand, or Meena Kumari.

In 1955, the Rajab family opened the Shah Jahan cinema for screening of Hindi movies. At a time when there was no television, cinema was the biggest source of entertainment. But in the 1980s, the situation changed. Due to apartheid policies and India's boycott of South Africa, film imports were affected, and restrictions were placed on which movies could not be shown. Things began to change again in the 1990s after the end of apartheid. As restrictions lifted, Bollywood's popularity returned especially among younger South African Indians in the 21st century, who embraced Bollywood for its music, fashion, and glamour.

Even today, you can see Indian cultural influence in areas like Fordsburg in Johannesburg, where Indian food stalls sell dosas, samosas, and biryani. The Oriental Plaza shopping centre there has around 350 Indian-owned shops where people buy Bollywood music, clothes, and accessories. Many stores also sell replicas of outfits worn by Bollywood stars. In cities like Durban, jewellery stores import custom-made items from India. Wealthy Indian families, especially Gujaratis, often travel to India particularly Surat and Ahmedabad for wedding shopping. Bollywood continues to be a major cultural connection for third- and fourth-generation South African Indians, helping them stay connected to their roots and trends from India through movies, fashion, and music.

Netizens of Social Media

Another major form of media that has helped shape the identity of South African Indians is social media. Platforms like Facebook and Instagram have become powerful tools for people to connect, share, and celebrate their Indian roots. Many pages specifically focus on the South African Indian community and help younger generations stay connected to their culture.

One popular Instagram page is @thesouthafricandesi, which has over 11,000 followers. Since most young people today are on Instagram, this page has gained

a lot of attention among South African Indians. It regularly shares content about Indian festivals, traditions, and cultural practices. Posts often highlight how deeply Indian traditions—like reciting prayers, fasting during Navratri, and following a vegetarian diet on religious days—are still part of many Hindu households.

The page is linked to a website that sells Indian items such as clothes, jewellery, mugs, and more. This small business was started by a young woman to support her family. The goal is not just to sell products, but to promote pride in Indian heritage among the South African Indian community.

Other pages like @gnsa_ (Gujarati Network South Africa) are also active and share a wide range of cultural and religious stories. For example, they post about the Nori Nem fast (the story of the mongoose and snake), the tale of Goddess Katyayani, Sheetala Asthami, Nag Panchami, and even stories from Indian mythology like Samudra Manthan. These pages also explain the history of Indian migration to South Africa, such as the journey of indentured labourers and passenger Indians.

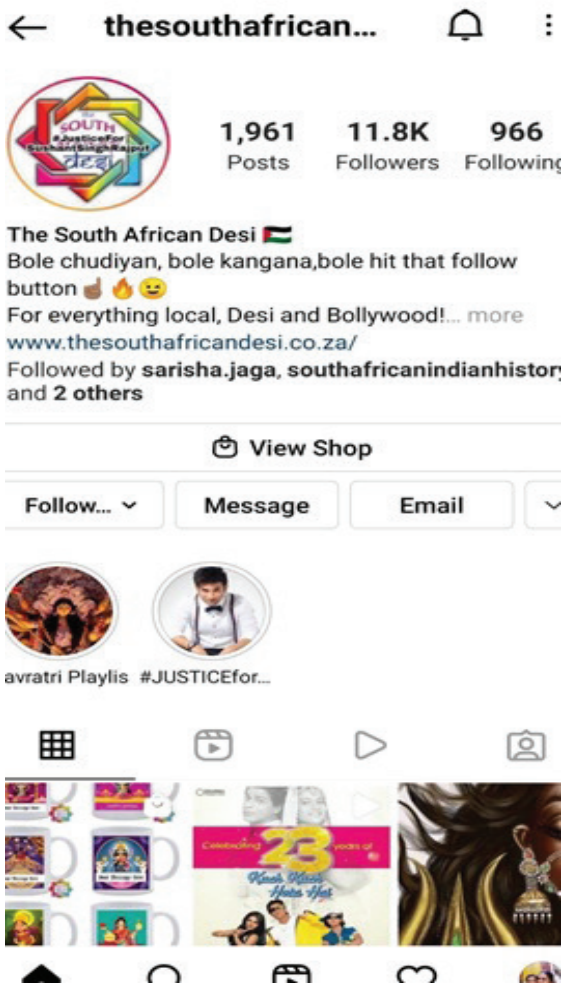
Alongside religion and history, these pages also celebrate Bollywood, which was discussed earlier, and local film productions. One example is the popular South African Indian movie "Kandasamy", which tells the story of a love relationship between a boy and a girl from different family backgrounds—one traditional and the other more modern. The film, with its local humour and familiar family dynamics, resonated more with South African Indian audiences than typical Bollywood films because it reflected their own lives.

Another widely followed page, @saindians, has over 32,000 followers. This page mainly shares funny memes and jokes, many of which play on common Indian stereotypes in a light-hearted way. While it may be more focused on humour, it still plays a role in keeping cultural identity alive. Besides community pages, there are also many South African Indian influencers who use platforms like Instagram and YouTube to speak about their experiences. One of them is Sandhira Chetty, a Tamil Indian from Durban, who runs a YouTube channel with nearly 10,000 subscribers. Her videos often explore stereotypes about South African Indians—especially Tamil families—and discuss common traits, behaviours, and family dynamics. Her content is aimed mainly at the younger generations—third, fourth, and fifth—who've grown up hearing stories from

their parents and grandparents. She compares life in Indian households with those of white or African families, but always with a sense of humour and respect. Her videos strike a balance between being funny and thoughtful, never mocking anyone's identity while still making people laugh.

Image 2

The South African Desi Instagram Page @thesouthafricandesi



Conclusion

This paper explores how three types of media—newspapers, Bollywood films, and social media—have each played an important role in shaping the identity of the Indian diaspora in South Africa. Newspapers were the first form of media available to the community and played a vital role in uniting South African Indians, especially during times of racial discrimination. They helped bring together diverse groups within the Indian community, encouraging them to work toward shared goals and a collective voice.

Bollywood, on the other hand, became a powerful cultural force over the years. For many South African Indians, it's hard to imagine growing up without Bollywood movies, music, and stars. It has been more than just entertainment—it has helped maintain a sense of connection to Indian culture, especially for second, third, and fourth generations.

More recently, social media has become the most accessible and fastest-growing form of media. Platforms like Instagram, Facebook, and YouTube have allowed young South African Indians to express their identity openly and creatively. These platforms not only connect people but also give space to celebrate, question, and reshape what it means to be Indian in a South African context. In conclusion, this paper argues that South African Indian identity is shaped by a mix of influences—no single factor or form of media can define it completely. By focusing on these three types of media, the paper highlights how each has contributed in its own way to keeping cultural identity alive and evolving across generations.

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