

Synopsis On
**INFORMATION LITERACY SKILL AMONG COLLEGE STUDENTS IN BIRBHUM
DISTRICT IN THE CONTEXT OF FAKE NEWS ON SOCIAL MEDIA: AN
ASSESSMENT STUDY**

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1. INTRODUCTION

The way we consume information has fundamentally transformed over the past decade. Social media platforms like Facebook, WhatsApp, YouTube, and Instagram have become primary sources of news and information for millions, especially among young people. While these platforms offer unprecedented access to information and facilitate global connectivity, they've also created serious challenges around the authenticity and reliability of content. Fake news—deliberately false or misleading information presented as legitimate news—has emerged as one of the most pressing concerns of our digital age.

What makes this situation particularly dangerous is how social media algorithms work. These systems aren't designed to prioritize truth; they're designed to maximize engagement. Content that triggers strong emotions or generates heated debates gets pushed to more users, regardless of whether it's accurate. This means sensational false stories often spread faster and reach more people than carefully reported factual news. Platforms like Facebook amplify this problem through their recommendation systems, while WhatsApp creates unique vulnerabilities because misinformation arrives through trusted family and friends rather than strangers, making people less likely to question what they're seeing. College students represent a particularly important demographic in this context. They're among the most active social media users, spending considerable time on these platforms daily. Many rely on social media not just for entertainment and social connection, but as their primary source of news and information. This heavy dependence, combined with often underdeveloped critical evaluation skills, makes them especially vulnerable to misinformation. The consequences extend beyond personal confusion—when students accept and share false information, it affects their academic work, shapes their civic participation, and influences their understanding of important social and political issues. In India, where social media usage has exploded alongside rapid smartphone adoption and affordable internet access, the fake news

problem has become particularly acute. Incidents of misinformation leading to real-world harm—including communal violence, public health crises during COVID-19, and electoral manipulation—have highlighted the urgent need to understand how young people navigate this complex information landscape. Despite growing awareness of the problem, there's a significant gap in localized research that examines how students in specific regional contexts encounter, evaluate, and respond to fake news.

This study focuses on college students in Birbhum District, West Bengal—a region that combines rural and semi-urban characteristics and has experienced its own struggles with misinformation-fuelled tensions, notably the 2022 communal violence where misleading social media narratives spread rapidly despite fact-checking interventions. By examining how these students identify fake news, what sources they trust, and what strategies they use (or don't use) to verify information, this research aims to provide concrete insights into their information literacy capabilities. The findings should help educators, librarians, and policymakers design more effective interventions that equip students with the critical thinking skills they need to navigate today's digital information environment successfully.

2. BACKGROUND OF THE STUDY

The digital revolution has dramatically changed how information flows through society. Traditional gatekeepers like newspapers and television broadcasters once controlled what news reached the public, applying editorial standards and fact-checking processes. Social media has disrupted this model entirely. Now, anyone with internet access can create and distribute content that looks like news, regardless of its accuracy. The algorithms that determine what content users see prioritize engagement over truthfulness, which means sensational false stories often spread faster and farther than accurate but less dramatic

reporting. India presents a particularly challenging landscape for these issues. With over 800 million internet users and nearly 500 million active social media users as of early 2025, the country represents one of the world's largest digital markets. The rapid expansion of internet access, driven by affordable smartphones and cheap data plans, has brought millions of first-time internet users online—many without the digital literacy skills needed to navigate this environment critically. Studies have documented how misinformation spreads through Indian social media, often with serious consequences, from mob violence triggered by false rumors to widespread confusion about COVID-19 treatments and vaccines.

Birbhum District offers an instructive case for studying these dynamics. Located in West Bengal with a population of approximately 3.5 million, the district includes both rural agricultural areas and urban centres. It has a literacy rate of around 71%, with notable gaps between male and female education levels. The district has sixteen government-aided colleges serving undergraduate students across arts, science, and commerce streams—institutions that represent the educational aspirations of families from diverse socioeconomic backgrounds. Recent years have seen increased internet penetration even in rural parts of Birbhum, bringing social media into daily life for many young people who previously had limited access to diverse information sources.

The district has also experienced firsthand how misinformation can fuel real tensions. False narratives spread through social media have contributed to communal conflicts, creating an environment where students must navigate not just abstract concerns about "fake news" but concrete local experiences of its harmful effects. This makes Birbhum an ideal setting for understanding how college students—at a crucial stage of developing their critical thinking abilities and civic identities—are managing the challenges of information literacy in the social media age.

3. STATEMENT OF THE PROBLEM

Despite widespread recognition that fake news poses serious challenges, there's limited understanding of how college students in districts like Birbhum actually encounter and handle misleading information. Most students use social media as their primary news source, yet we don't know what verification strategies they employ, how often they're deceived by false content, or whether they understand basic information literacy concepts.

The problem becomes more complex when we consider specific platform vulnerabilities. WhatsApp's closed-network structure, where information circulates through trusted family and friends rather than public feeds, creates conditions where students are less likely to question what they receive. Facebook serves as both students' primary news source and their primary exposure point for fake news, creating confusion about reliability. The combination of heavy social media reliance, limited exposure to formal media literacy training, and platform-specific vulnerabilities creates conditions where misinformation can spread rapidly among student populations. Perhaps most concerning is the confidence-competence gap—many students believe they can identify fake news when they actually cannot. This false sense of security means they don't seek help or improve their skills because they think they're already doing fine. Recent incidents in Birbhum, where social media misinformation contributed to real-world tensions and violence, demonstrate that these aren't just theoretical concerns but immediate practical challenges affecting local communities. Without clear evidence about students' current capabilities and gaps, their confidence levels versus actual abilities, platform-specific vulnerabilities, and verification gaps, educators and institutions cannot design effective interventions. This study addresses that knowledge gap by systematically assessing information literacy skills among college students in Birbhum District, examining their exposure to fake news, their confidence versus actual ability to

identify false information, and the methods they use to verify content they encounter on social media.

4. RESEARCH OBJECTIVES

The study pursued the following specific objectives:

- To evaluate the level of information literacy skills among college students in Birbhum district regarding fake news on social media.
- To examine the discrepancy between students' self-assessed confidence and actual ability in identifying fake news.
- To study the demographic parameters (age, gender, academic discipline) of students and their influence on information literacy.
- To examine students' usage patterns of social media platforms and their impact on exposure to fake news.
- To identify the primary sources and strategies students utilize to validate the authenticity of social media news.
- To determine the most common categories of fake news encountered by students.
- To study the extent to which students rely on fact-checking tools or websites.
- To investigate students' confidence in distinguishing between real and fake news on social media.
- To understand students' reactions upon encountering fake news and assess their ability to handle such content.

- To explore students' perceptions of how social media and technology have influenced their information literacy.
- To recommend strategies to improve the information literacy skills of college students to counteract fake news effectively.

5. RESEARCH QUESTIONS

The study sought to answer these key questions:

- What is the current level of information literacy among college students in identifying and evaluating fake news on social media?
- How do demographic characteristics (age, gender, academic discipline) affect students' information literacy skills?
- Which social media platforms do students primarily use, and how do these platforms expose them to fake news?
- What methods and sources do students utilize to verify the authenticity of news on social media?
- What are the most common categories of fake news encountered by students on social media?
- To what extent do students use fact-checking tools or websites to verify news?
- How confident are students in distinguishing real news from fake news on social media, and how does this compare to their actual ability?
- What are students' typical reactions upon encountering fake news on social media?

- How do students perceive the influence of technology and social media on their information literacy skills?
- What strategies can be implemented to enhance students' ability to combat fake news on social media?

6. METHODOLOGY

Research Design

The study employed a mixed-methods approach, combining quantitative surveys with qualitative semi-structured interviews to gain comprehensive insights into students' information literacy skills and fake news encounters.

Sampling Procedure

A multi-stage sampling design was employed, combining census sampling at the institutional level with systematic availability-based sampling at the individual level. All sixteen government-aided colleges in Birbhum District were included as primary sampling units, representing the three subdivisions: Suri Sadar, Bolpur, and Rampurhat. This census approach at the college level eliminated sampling error related to institutional selection and ensured representation across urban, semi-urban, and rural educational settings.

At the student level, however, no comprehensive enrollment lists were available due to privacy policies, and the inclusion criterion of "active social media users" could not be pre-identified from institutional records. Within each college, students who were present during data collection periods, met the inclusion criteria (currently enrolled undergraduates who

actively use social media), and were willing to participate were systematically approached to ensure diverse representation across academic years and streams.

Sample Size

The study successfully collected data from 1,178 undergraduate students across the sixteen colleges. The target was approximately 100 students per college, though actual participation varied based on institutional cooperation, student availability, and accessibility, resulting in an average of 74 students per college. This substantial sample size provides adequate diversity across different academic streams (arts, science, commerce), year levels (first through third year), and genders for meaningful analysis, while the variation across colleges reflects the practical realities of field research in educational settings.

Data Collection Tools

Quantitative Component: A structured questionnaire was developed based on extensive literature review and validated through pilot testing with 25 students. The pilot revealed significant challenges—academic terminology like "verification" and "credibility assessment" was poorly understood, requiring substantial simplification. The original plan to use Google Forms was abandoned after pilot participants repeatedly needed clarification. The final questionnaire was reduced from 25 to 20 items plus demographics, using accessible language while maintaining construct validity. Face-to-face administration became necessary to ensure comprehension, with occasional Bengali translation of key terms.

The questionnaire covered:

- Demographic information (age, gender, academic stream, year of study)
- Social media usage patterns (platforms used, time spent, primary purposes)
- News consumption behaviours (preferred sources, types of content encountered)

- Fake news awareness (frequency of encounters, platforms involved, topics)
- Verification practices (methods used, confidence levels, fact-checking tool usage)
- Actual ability to identify fake news (testing with real examples)

Qualitative Component: Semi-structured interviews were conducted with selected students who provided particularly insightful responses in the open-ended survey sections. These interviews explored their thought processes when encountering potentially false information, challenges they face in verification, and personal experiences with fake news.

Data Collection Process

After obtaining necessary approvals from college authorities, the researcher visited each institution personally to administer the questionnaire. Students were informed about the study's purpose, assured of confidentiality, and given the option to participate voluntarily. The data collection took place during regular college hours to maximize student availability.

Data Analysis

Quantitative Analysis: Survey data from 1,178 respondents were systematically organized in Excel spreadsheets and analyzed using descriptive statistics. Frequencies, percentages, and cross-tabulations were calculated for key variables including platform usage patterns, verification behaviours, and demographic correlates. Results were presented through tables, bar charts, pie charts, and other visual representations to facilitate interpretation and identify patterns.

Qualitative Analysis: Interview transcripts and open-ended survey responses were analyzed using thematic analysis. Responses were coded systematically, patterns identified, and major

themes developed to capture students' perspectives on fake news and information literacy challenges.

Ethical Considerations

The study followed established ethical guidelines for research involving human participants. Students provided informed consent before participating, their responses remained confidential, and all identifying information was removed from the data. Students could withdraw at any point without consequences.

Methodological Transparency

This study acknowledges several methodological constraints that shape interpretation of findings. The sampling approach, while providing comprehensive institutional coverage, relied on availability-based student selection rather than random probability sampling, which limits strict statistical generalizability but provides sufficient descriptive power for understanding patterns. Face-to-face questionnaire administration, though necessary due to comprehension challenges, may have introduced social desirability effects where students adjusted responses when speaking directly with a researcher. The assessment of actual fake news identification ability relied on only two test items, providing indicative rather than comprehensive measurement. These limitations are offset by the substantial sample size (n=1,178), institutional diversity (16 colleges across three subdivisions), and triangulation of quantitative survey data with qualitative interviews.

7. SCOPE AND LIMITATIONS

Scope

This research focuses specifically on undergraduate students in government-aided colleges within Birbhum District, West Bengal. It examines their experiences with fake news on social media platforms including Facebook, WhatsApp, YouTube, Instagram, and others. The study covers various aspects of information literacy including source evaluation, verification behaviours, and critical thinking skills as they relate to identifying false or misleading information in digital environments.

Limitations

- **Geographic Limitation:** The study is confined to Birbhum District, which limits generalizability to other regions with different socio-cultural contexts, infrastructure, or educational systems.
- **Institutional Limitation:** Only government-aided colleges were included; private institutions were excluded, which may have different resources, student demographics, or technology access patterns.
- **Self-Report and Social Desirability Bias:** Much of the data relies on students' self-reported behaviours and confidence levels, which may not perfectly align with their actual practices or abilities. Students may have overestimated their information literacy skills to present themselves favorably, particularly regarding fake news identification abilities. The confidence-competence gap identified (70.54% felt confident vs. 21.90% correctly identified fake examples) may partly reflect this tendency.

- **Cross-Sectional Design:** Data were collected at a single point in time, preventing analysis of how information literacy skills develop or change as students progress through their education.
- **Academic Stream Imbalance:** Arts students comprised the majority of the sample (87%), with lower representation from science and commerce streams, potentially skewing findings toward humanities perspectives.
- **Platform Evolution:** Social media platforms and fake news tactics constantly evolve, which means findings reflect conditions at the time of data collection (2024-2025) and may shift as the digital landscape changes.
- **Face-to-Face Administration Effects:** While necessary for ensuring comprehension, face-to-face questionnaire administration may have introduced interviewer bias, with students potentially adjusting responses because they were speaking directly with a researcher.
- **Limited Assessment Tools:** Only two fake news examples were used to test actual identification skills, which may not thoroughly assess the full range of identification abilities across different content types and formats.

8. SIGNIFICANCE OF THE STUDY

This research makes several important contributions to understanding information literacy challenges in the digital age:

- The findings provide concrete evidence about specific gaps in students' ability to evaluate online information, particularly the striking confidence-competence gap where most students believe they can spot fake news but actually cannot. This helps

colleges design targeted interventions rather than generic awareness campaigns, with specific attention to platforms students actually use and content types they frequently encounter.

- The study identifies practical areas where library services and information literacy programs can address students' most pressing needs, particularly regarding verification strategies and fact-checking resources. The complete absence of fact-checking tool usage among all 1,178 students points to clear opportunities for instruction and resource promotion.
- Understanding how fake news affects students in a specific regional context, including the role of local incidents like the 2022 Birbhum violence, helps inform policies around digital literacy education, curriculum reforms, and support for information literacy initiatives in higher education.
- By highlighting the gap between perceived confidence and actual abilities, the research creates awareness that can motivate students to develop stronger critical evaluation skills.
- The study contributes to the limited body of district-level research on information literacy in India, providing granular insights that national studies cannot capture and establishing a methodology that other researchers can adapt for similar regional assessments.
- By documenting how fake news circulates among educated young adults and identifying the platforms and topics most affected, the research provides actionable intelligence for combating misinformation at the community level.
- Birbhum's mix of rural and semi-urban contexts offers insights into how geography and infrastructure affect students' information literacy development, which matters for planning interventions in similarly diverse districts.

- By documenting how different platforms (WhatsApp, Facebook, YouTube) serve different functions in students' information ecosystems and present distinct misinformation risks, the research provides actionable intelligence for designing platform-tailored interventions rather than generic digital literacy programs.

9. KEY FINDINGS

The study revealed several striking patterns that illuminate the information literacy challenges facing college students:

- Every single student (100% of 1,178 respondents) reported encountering fake news on social media, with 82% having been fooled at least occasionally—31% monthly, 30% "too many times to count," and only 18% claiming never to have been misled. Yet not one student used dedicated fact-checking websites or tools. This complete absence of systematic verification resources, combined with heavy reliance on informal methods, leaves students vulnerable despite their awareness of the problem.
- While around 71% of students felt confident or very confident in their ability to spot fake news, only 21.90% successfully identified clear examples when tested—a striking 48.64 percentage point gap. This dramatic overconfidence means students often trust their judgment without seeking verification, precisely because they don't recognize their own limitations.
- WhatsApp achieved 100% usage (all 1,178 students), with 41% ranking it as their most-used platform. Facebook dominated both news consumption (51.88% of social media news seekers) and fake news encounters (52.29% of reported exposures). The closed-network nature of WhatsApp, where information arrives through trusted contacts rather than public feeds, creates particularly dangerous conditions for

misinformation spread. Facebook's dual role as both primary news source and primary fake news site creates confusion about reliability that students struggle to navigate.

- Approximately 74.28% of students (875 of 1,178) turn to social media first for breaking news, dramatically outpacing television (14.69%) and newspapers (9.25%). Among social media users for news, Facebook dominates at 51.88%, followed by YouTube (41.26%). Similarly, 81.66% rely primarily on Google for academic research rather than library resources (10.87%). This represents a fundamental shift in information-seeking behaviour that educational systems haven't adequately addressed.
- Political fake news comprised 47.28% of students' encounters (557 of 1,178), followed by humour/gossip (15.70%) and health information (14.94%). The prevalence of political misinformation is particularly concerning during election periods when students are forming civic identities and voting preferences.
- When encountering fake news, 76.91% of students (906 respondents) simply ignored it rather than reporting it (12.40%) or warning others (10.69%). Meanwhile, 35.31% (416 students) admitted sharing information without verifying it first, with males showing notably higher rates (230 vs. 186 females). This combination of passivity toward fake news others share and carelessness about what they themselves distribute creates conditions where misinformation circulates unchecked through student networks.
- None of the 1,178 respondents had ever heard the term "information literacy" or any related concept. This universal unfamiliarity indicates a complete absence of formal training in systematic information evaluation—students are developing coping strategies through trial and error rather than learning structured approaches.

- Over 82% of students had been fooled by fake news at least occasionally, with 31% deceived monthly and 30% "too many times to count." Only 18% claimed never to have been misled. This frequent deception occurs despite students being aware that fake news exists and represents a problem.
- While 62.64% expressed uncertainty about social media reliability, acknowledging it as "somewhat trustworthy," they continued consuming news from these sources without implementing consistent verification practices. Students recognize the problem intellectually but haven't translated that awareness into behavioural change.
- When students did attempt verification, they relied on cross-referencing multiple sources (32%), using search engines like Google (28%), or asking friends and family (14%). While these show some critical thinking, they're inadequate against sophisticated misinformation designed to pass such casual checks. Smaller proportions relied on personal knowledge (10%), source evaluation (6%), identifying characteristics of fake news (6%), or general scepticism (4%).
- Males were more likely to share unverified content (230 vs. 186 females) and encounter sports-related fake news, while females reported higher exposure to health/lifestyle misinformation (116 vs. 60 males for health, 122 vs. 63 for humour/gossip) and demonstrated greater scepticism about social media reliability. These patterns suggest that misinformation creators target content to audience interests and that effective interventions must account for how gender intersects with content type to shape vulnerability patterns.

10. CONCLUSION

This research reveals that college students in Birbhum District find themselves caught in a troubling paradox. They're aware fake news exists—in fact, they encounter it constantly—but they lack the systematic skills and resources needed to protect themselves effectively. The universal exposure to fake news, combined with zero usage of fact-checking tools and complete unfamiliarity with information literacy as a concept, paints a picture of a generation navigating a minefield without a map.

The study reveals a deeper problem than simple lack of awareness. Students are simultaneously aware and vulnerable—they recognize fake news exists and can articulate concerns about its societal impact, yet they lack systematic tools and training to protect themselves. The universal absence of fact-checking tool usage (0% of 1,178 respondents), combined with complete unfamiliarity with "information literacy" as a concept (100% had never heard the term), indicates that students are developing coping strategies through trial and error rather than learning structured approaches.

The confidence-competence gap identified in this study represents perhaps the most dangerous finding. Students who believe they can already spot fake news effectively (70.54% felt confident) but actually cannot and only small number of participants correctly identified examples, have little motivation to improve their skills or seek help. Their current verification methods feel adequate until tested against actual examples, at which point the weaknesses become apparent. This false sense of security allows misinformation to pass through their filters repeatedly, shaping beliefs and influencing behaviours in ways students don't recognize.

The dominance of specific platforms creates concentrated points of vulnerability. WhatsApp's universal usage (100%) as a closed-network platform where information arrives through

trusted contacts reduces critical evaluation. Facebook's dual role as both primary news source (51.88% of social media news consumers) and primary fake news exposure site (52.29%) creates confusion about reliability. The overwhelming reliance on Google for academic work (81.66%) rather than curated library resources demonstrates how convenience consistently defeats verification across both casual and formal information-seeking contexts.

The dominance of social media as students' primary news source, particularly platforms like Facebook and WhatsApp, creates an information environment fundamentally different from what traditional media literacy education was designed to address. These platforms don't just deliver news—they curate it through opaque algorithms, present it alongside content from friends and family, and encourage rapid sharing that prioritizes emotional engagement over accuracy. Students have adapted to this environment, but their adaptations (quick scrolling, informal verification, passive consumption) leave them vulnerable.

What makes this situation particularly urgent is that these aren't peripheral issues affecting students' casual entertainment choices. Over half of students (53.82%) use social media specifically to find information and stay informed about current events. Political fake news dominates their exposure (47.28%), potentially shaping their understanding of governance, elections, and civic participation during a crucial developmental period. Health misinformation (14.94%) affects their decisions about physical wellbeing. The consequences extend far beyond being occasionally fooled by a false story—they involve the fundamental knowledge base students use to make important personal, academic, and civic decisions.

The study also reveals concerning social dynamics. Students largely ignore fake news when they encounter it (76.91%) rather than reporting or countering it, creating a culture where misinformation circulates unchallenged. Meanwhile, significant minorities (35.31%) share unverified content, becoming unwitting participants in misinformation's spread. These

patterns, multiplied across social networks, turn individual vulnerabilities into collective information crises.

Yet these findings, troubling as they are, also point toward actionable solutions. The research identifies specific platforms where interventions would have maximum impact (WhatsApp, Facebook, YouTube), particular content types that require targeted attention (political, health, humour/gossip), and concrete skill gaps that education can address (fact-checking tool usage, source evaluation, verification techniques). Students aren't beyond help—they're simply operating without adequate preparation for the information environment they inhabit. With systematic training that acknowledges the specific challenges of social media information evaluation, practical tools that reduce the friction of verification, and institutional support that makes information literacy central rather than peripheral to education, significant improvements are achievable.

The path forward requires recognizing that information literacy in the social media age isn't a specialized skill for academic contexts—it's a fundamental capability for functioning effectively in contemporary society. Just as reading comprehension undergirds success across all subjects, the ability to evaluate digital information critically now affects nearly every aspect of students' educational, civic, and personal lives. Educational institutions must respond accordingly, integrating information literacy throughout curriculum, providing ongoing rather than one-time training, and creating environments where verification becomes routine rather than exceptional.

This study of Birbhum District students offers more than a local snapshot—it reflects challenges that extend across India and indeed globally wherever young people rely heavily on social media for information. The specific percentages and platform preferences may vary by region, but the fundamental tensions between digital connectivity and information quality,

between access and accuracy, between confidence and competence, appear consistently. Addressing these challenges successfully in places like Birbhum can provide models for the broader educational reforms needed to prepare the next generation for thoughtful, critical participation in democratic society.