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SOCIAL MEDIA ALGORITHMS AND THEIR INFLUENCE ON INFORMATION CREDIBILITY

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ABSTRACT

Social media algorithms play a significant role in determining which information users encounter, how frequently content appears, and which messages receive greater visibility across digital platforms. Although algorithmic personalization can improve user experience by presenting relevant information, it may also contribute to selective exposure, information imbalance, and the circulation of misleading content. This article examines the influence of social media algorithms on information credibility, focusing on content recommendation, source evaluation, misinformation exposure, user engagement, and digital media literacy. Previous research has demonstrated that algorithmic systems can influence the information people encounter and shape opportunities for exposure to diverse perspectives (Bakshy et al., 2015; Pariser, 2011). Research on online misinformation also highlights the importance of understanding how platform structures and user behavior affect the distribution of unreliable information (Vosoughi et al., 2018). The article adopts a qualitative, literature-based approach to examine existing scholarship and identify the principal opportunities and challenges associated with algorithmic content distribution. The discussion considers the role of engagement-based recommendations, personalized feeds, algorithmic transparency, and users' ability to evaluate information independently. The article argues that information credibility depends not only on the accuracy of individual messages but also on the systems that determine their visibility and circulation. It concludes that transparent recommendation practices, effective media literacy, and responsible platform governance are essential for strengthening information credibility in digital media environments.

KEYWORDS

Social Media Algorithms, Information Credibility, Algorithmic Personalization, Misinformation, Digital Media Literacy, Content Recommendation, Information Disorder

INTRODUCTION

Social media platforms have become important channels for accessing news, exchanging opinions, and participating in public discussions. Millions of users depend on these platforms to discover information about education, health, politics, entertainment, and current affairs. However, the information presented to users is not always displayed in chronological order or according to its accuracy. Instead, recommendation algorithms frequently determine which posts, videos, and news stories receive visibility based on factors such as previous interactions, predicted interests, and engagement patterns. These systems can make information discovery more convenient, but they can also influence users' perceptions of which information is important, trustworthy, or widely accepted. Pariser (2011) introduced the concept of the filter bubble to describe how personalization may limit exposure to information outside an individual's established interests. This concept provides an important starting point for examining the relationship between algorithmic content selection and information credibility.Social media algorithms influence the information environment by ranking and recommending content according to platform-specific objectives. These systems may consider likes, shares, comments,

viewing duration, and users' previous activity when determining what appears in a personalized feed. Although engagement can indicate user interest, it does not necessarily establish the accuracy or credibility of a claim. Consequently, content that provokes strong emotional reactions or attracts substantial interaction may receive considerable visibility even when its reliability has not been established. Bakshy et al. (2015) examined how social media algorithms and individual choices influenced exposure to ideologically diverse news on Facebook. Their research demonstrated that both algorithmic ranking and users' own selection patterns were associated with the information individuals encountered. This finding suggests that information exposure results from an interaction between technological systems and human behavior rather than from algorithms alone.

Information credibility refers to the extent to which information is perceived as accurate, trustworthy, and supported by reliable evidence. On social media, users may evaluate credibility through source reputation, factual consistency, evidence, presentation style, and recommendations from other users. However, popularity indicators such as likes, comments, and shares can sometimes be mistaken for evidence of accuracy. When misleading content receives extensive engagement, its visibility may create an impression of legitimacy among audiences who have not independently verified its claims. Vosoughi et al. (2018) examined the diffusion of true and false news stories on Twitter and found that false news spread farther, faster, deeper, and more broadly than true news in their dataset. Although their study did not establish that recommendation algorithms alone caused this pattern, it demonstrates why the mechanisms that distribute information deserve careful examination when studying credibility and misinformation.Another important concern is the relationship between algorithmic personalization and selective exposure. Personalized recommendation systems are designed to predict what users may find relevant or engaging, potentially increasing the amount of information that aligns with their interests. However, repeated exposure to similar viewpoints may reduce opportunities to encounter alternative explanations and independent evidence. This possibility is often discussed through the concepts of filter bubbles and echo chambers, although research does not support the assumption that all users experience these effects to the same extent. Bakshy et al. (2015) found that individual choices played an important role in limiting exposure to cross-cutting information, alongside the effects of algorithmic ranking. Therefore, the relationship between personalization and information credibility should be examined through both platform design and users' information-seeking behavior.

The influence of algorithms also raises questions about misinformation and information disorder. Misleading posts may gain attention through sensational headlines, emotionally charged claims, or content that encourages users to react quickly. If recommendation systems prioritize predicted engagement without sufficiently accounting for content quality, unreliable information may reach audiences who would not otherwise encounter it. Vosoughi et al. (2018) demonstrated the distinctive diffusion patterns of false news, while Lazer et al. (2018) emphasized that addressing fake news requires interdisciplinary research involving technology, psychology, communication, and political science. These studies suggest that misinformation cannot be understood solely as a problem of individual judgment. It is also shaped by the broader systems through which information is produced, selected, circulated, and evaluated.

Algorithmic influence is particularly important for digital media literacy because users may not understand why specific content appears in their feeds. When recommendations are personalized, individuals may assume that visible content represents the most accurate, popular, or relevant information available. In reality, recommendations reflect platform objectives and predictions that may not directly correspond to factual accuracy. Users therefore need the ability to recognize personalized content, investigate original sources, compare independent reports, and distinguish popularity from credibility. Lazer et al. (2018) argued that understanding fake news requires attention to the technological and social conditions of information production and circulation. Digital media literacy can help users develop these skills while encouraging them to question how platform design affects the information they encounter.

Algorithmic transparency and platform accountability are also central to the credibility debate. Users, researchers, and policymakers may have limited access to information about recommendation systems, ranking criteria, and the reasons particular content receives increased visibility. This lack of transparency can make it difficult to assess whether platform systems contribute to information imbalance or whether interventions improve information quality. Gillespie (2014) examined the role of algorithms in shaping public relevance, explaining how algorithmic systems participate in selecting and organizing information that becomes visible to audiences. This perspective highlights that algorithmic ranking is not simply a neutral technical process; it can influence which voices, topics, and claims receive public attention. Greater transparency, independent research access, and clear platform policies can support more informed evaluations of algorithmic effects.This article examines social media algorithms and their influence on information credibility through a review of existing academic literature. It focuses on algorithmic personalization, information exposure, misinformation circulation, source evaluation, and digital media literacy. The article also considers the importance of transparent platform practices and responsible recommendation design. By bringing together research on algorithmic ranking, selective exposure, and online misinformation, the study seeks to explain how social media systems can influence users' judgments about information without assuming that algorithms determine every outcome. Its central argument is that improving information credibility requires a combination of responsible platform design, independent verification, critical media literacy, and greater awareness of how personalized information environments operate.

RESEARCH OBJECTIVES

1. To examine the influence of social media algorithms on information credibility and users' perceptions of online content.
2. To identify how algorithmic personalization and content recommendations contribute to misinformation exposure and selective information consumption.
3. To explore the role of digital media literacy and algorithmic transparency in promoting credible information sharing.

RESEARCH QUESTIONS

1. How do social media algorithms influence information credibility and users' trust in online content?
2. How do algorithmic personalization and recommendation systems affect exposure to misinformation?
3. How can digital media literacy and algorithmic transparency improve information credibility on social media platforms?

LITERATURE REVIEW

Social media algorithms have become an important subject of research because they influence the selection, ranking, and distribution of online information. Pariser (2011) introduced the concept of the filter bubble to explain how personalized information environments may limit users' exposure to alternative viewpoints. This concept raised important questions about whether personalized recommendations provide balanced information or reinforce existing interests. Bakshy et al. (2015) investigated the relationship between algorithmic ranking and users' exposure to ideologically diverse news on Facebook. Their findings indicated that both algorithmic selection and individual choices influenced exposure to cross-cutting information. This research suggests that information credibility cannot be understood independently of the systems that determine what users see and the choices they make when engaging with digital content.Research on misinformation has further demonstrated the importance of examining how information spreads through digital networks. Vosoughi et al. (2018) analyzed the diffusion of true and false news stories on Twitter and found that false news spread farther, faster, deeper, and more broadly than true news in their dataset. Their findings established an important basis for understanding the potential consequences of rapid online information circulation. However, misinformation diffusion involves several interacting factors, including user behavior, social networks, emotional reactions, and content recommendation. Lazer et al. (2018) argued that addressing fake news requires an interdisciplinary approach that combines computational research with insights from psychology, communication, and political science. Their work supports the view that credibility problems should be examined through both technological systems and the social conditions in which information is shared.

More recent research has investigated the direct contribution of recommendation algorithms to misinformation dissemination. Pathak et al. (2023) examined recommendation algorithms using misinformation-related datasets and simulations of information diffusion on social networks. Their findings indicated that popularity-based and network-based recommendation approaches could contribute substantially to misinformation diffusion under the conditions studied. The authors also highlighted the influence of highly active users on algorithmic performance and the spread of misleading content. This research demonstrates that recommendation systems do not necessarily affect all types of content equally. The way a platform ranks information, identifies influential users, and responds to engagement can affect which claims receive greater visibility. The relationship between engagement and information credibility has also received attention in recent research. McLoughlin and Brady (2024) examined how human attention to moral and emotional information interacts with algorithms that curate social media feeds. Their review argued that engagement-oriented algorithms may increase the visibility of emotionally engaging

content, creating conditions that misinformation can exploit. This perspective suggests that users' emotional reactions and recommendation systems can reinforce one another. Content that attracts strong reactions may receive further exposure, while repeated exposure can influence users' judgments about its importance or credibility. Consequently, efforts to reduce misinformation should consider both user behavior and the design of recommendation systems rather than concentrating exclusively on correcting individual false claims.

Empirical investigations of algorithmic amplification provide additional insight into the relationship between content visibility and credibility. Corsi (2024) examined the amplification of low-credibility content on Twitter using approximately 2.7 million posts concerning COVID-19 and climate change. The study found that, in the datasets examined, tweets containing links to low-credibility domains received greater visibility on aggregate, with the pattern largely attributable to high-engagement posts from users with large followings. These findings suggest that the relationship between algorithms and misinformation may depend on the interaction between content credibility, engagement, and user influence. However, observational findings from a particular platform and time period should not automatically be generalized to every social media service. Research published in 2025 has also examined the broader relationship between algorithmic influence and media legitimacy. Hastuti et al. (2025) conducted a systematic review of research on algorithmic influence in digital journalism, considering news production, public trust, misinformation, polarization, and the role of platform transparency. Their review highlighted the significance of engagement-based curation and the potential consequences of opaque recommendation systems for news credibility and media legitimacy. The findings suggest that users' trust may depend not only on the information presented but also on how understandable and accountable the recommendation process appears to be. This makes transparency an important consideration for platform governance and responsible information distribution. Research on algorithmic ranking and misinformation has continued to develop in 2026. Germano et al. (2026) examined how engagement-based ranking interacts with user behavior and misinformation through a theoretical model and supporting survey evidence concerning Facebook's 2018 algorithmic update in the United States and Italy. Their study suggested that increasing the weight assigned to social interactions could increase misinformation and ideological polarization under the model's conditions. It also considered how changes to platform incentives might reduce these negative effects. This research reinforces the importance of evaluating recommendation systems against information-quality objectives, rather than assuming that increased engagement necessarily improves the quality of users' information environments. Overall, the literature indicates that social media algorithms can influence information credibility by shaping content visibility, reinforcing engagement patterns, and affecting users' exposure to diverse information. However, the effects vary across platforms, recommendation methods, and user behaviors. Existing research supports a balanced approach that combines algorithmic transparency, independent evaluation, responsible recommendation design, and digital media literacy. Users need to understand that popularity is not equivalent to accuracy and that personalized feeds do not necessarily provide a complete picture of available information. Further research is needed to determine how different algorithmic designs affect credibility across platforms, languages, and social contexts.

METHODOLOGY

This article adopts a qualitative, literature-based methodology to examine the influence of social media algorithms on information credibility. Relevant scholarly publications were identified through Google Scholar and academic publishing databases using search terms such as social media algorithms, algorithmic personalization, information credibility, misinformation diffusion, recommendation systems, and digital media literacy. The literature considered includes peer-reviewed research, systematic reviews, and theoretical studies relevant to algorithmic ranking, information exposure, and misinformation. Priority was given to publications that directly addressed the research objectives, including studies published between 2011 and 2026 where their foundational or contemporary contributions were relevant. The selected studies were examined to identify recurring themes concerning personalization, engagement-based recommendations, selective exposure, misinformation amplification, and transparency. The article relies on existing published evidence rather than newly collected survey responses, interviews, or experimental observations. Its conclusions therefore represent a qualitative synthesis of previous research rather than original empirical findings.

RESEARCH DESIGN

The study employs a qualitative descriptive research design based on a thematic review of existing academic literature. This design is suitable for examining how algorithmic systems influence the visibility and perceived credibility of information across digital media environments. The selected literature is organized around three dimensions: algorithmic personalization and information exposure, recommendation systems and misinformation circulation, and the role of media literacy and transparency in supporting credibility. Studies are compared according to their objectives, research methods, principal findings, and relevance to the research questions. Empirical investigations, theoretical analyses, and systematic reviews are considered in relation to their respective contributions and limitations. Particular attention is given to differences between observational evidence and theoretical predictions so that potential algorithmic effects are not presented as universal outcomes. The design does not involve direct participant recruitment or experimental manipulation and is intended to develop an organized understanding of the existing research.

DATA ANALYSIS

The study uses qualitative thematic analysis to interpret the selected literature. Relevant findings are grouped into themes concerning content ranking, personalization, engagement-driven recommendations, selective exposure, misinformation amplification, credibility judgments, and algorithmic transparency. The analysis compares evidence from studies of user behavior with research examining the operation and outcomes of recommendation systems. Findings concerning misinformation circulation are examined alongside studies of exposure to diverse viewpoints and the role of engagement in content distribution. Differences in research methods, platforms, datasets, and study contexts are considered when interpreting the evidence. The

identified themes are then related to the research questions to establish how algorithms may influence credibility and which strategies may help address associated challenges. Since the study does not collect primary data or conduct an independent statistical analysis, it does not calculate original effect sizes or claim to establish new causal relationships. The analysis instead synthesizes published findings and identifies priorities for future research.

FINDINGS

The literature synthesis indicates that social media algorithms play an important role in shaping the information users encounter. Personalized recommendation systems rank and select content according to predicted interests, engagement patterns, and platform-specific criteria. These processes can make information discovery more efficient, but they can also affect the diversity and credibility of the information presented. Bakshy et al. (2015) demonstrated that algorithmic ranking and individual choices both influenced exposure to ideologically diverse news. This finding suggests that users' information environments are shaped by interactions between platform design and personal behavior. Therefore, algorithmic influence should not be interpreted as the sole determinant of what users believe or share.A second finding concerns the relationship between engagement and misinformation visibility. Research by Vosoughi et al. (2018) demonstrated that false news spread more extensively and rapidly than true news in the Twitter dataset they examined. More recent work by Pathak et al. (2023) suggests that certain recommendation approaches can contribute to misinformation diffusion under particular conditions. Corsi (2024) also identified patterns of increased visibility for low-credibility content associated with highly engaging posts and influential users. Together, these studies indicate that engagement-based distribution can create risks when popularity and interaction are not accompanied by sufficient attention to information quality. However, the findings do not establish that all algorithms consistently promote misinformation or that every popular post is unreliable.

The review also identifies personalization and selective exposure as important considerations for information credibility. Users may repeatedly encounter information aligned with their interests, previous interactions, or preferred viewpoints. Although personalization can improve relevance, it may reduce opportunities to encounter alternative explanations when combined with selective information-seeking behavior. Bakshy et al. (2015) showed that individual choices also contributed to patterns of exposure, indicating that filter bubbles cannot be attributed exclusively to algorithms. The practical implication is that credible information environments require both responsible recommendation design and active efforts by users to consult diverse, reliable sources.Another finding concerns the influence of emotional engagement on information circulation. McLoughlin and Brady (2024) argued that human attention to moral and emotional content can interact with recommendation systems that optimize for engagement. Content that generates strong reactions may receive additional exposure, potentially increasing the circulation of misleading claims. This finding suggests that credibility assessments should consider the circumstances in which information becomes visible and the motivations that encourage users to interact with it. Media literacy can help users recognize emotionally manipulative content, investigate supporting evidence, and avoid treating widespread engagement as proof of accuracy.

The literature further highlights the importance of algorithmic transparency and accountability. When users cannot understand why particular posts are recommended, they may struggle to assess how their information environment is shaped. Research reviewed by Hastuti et al. (2025) connects algorithmic curation with questions of news legitimacy, public trust, and platform transparency. Greater transparency can support independent evaluation of recommendation systems and help researchers investigate the relationship between platform design and information credibility. Nevertheless, transparency alone may not eliminate misinformation. It needs to be accompanied by effective evaluation procedures, responsible platform policies, and meaningful opportunities for users to access reliable information.Finally, the findings suggest that digital media literacy is an important complement to technical and regulatory interventions. Users need the skills to evaluate original sources, compare independent reporting, distinguish evidence from opinion, and recognize the limitations of personalized feeds. Platforms can support these practices by providing clearer explanations of recommendations and accessible options for managing content preferences. Researchers can conduct independent audits, while educators can teach critical evaluation and responsible sharing. Overall, the literature supports a combined approach in which recommendation systems are designed responsibly and users are equipped to make informed judgments about online information.

CONCLUSION

Social media algorithms have become influential components of modern information environments because they determine how content is ranked, recommended, and distributed. Although algorithmic personalization can help users discover relevant material, engagement-oriented recommendation systems may also create risks involving misinformation visibility, selective exposure, and perceptions of credibility. The reviewed literature demonstrates that these effects depend on the interaction between platform design, content characteristics, and user behavior. It is therefore important to avoid treating algorithms as the sole cause of misinformation or assuming that personalization inevitably produces filter bubbles.The article highlights the need to distinguish popularity from credibility. A post receiving numerous likes or shares is not necessarily accurate, and repeated exposure does not establish the reliability of a claim. Users should be encouraged to verify information through independent sources, examine the evidence supporting claims, and seek perspectives beyond their personalized feeds. At the same time, platform providers should evaluate recommendation systems for their potential effects on information quality and provide clearer explanations of how content is selected and ranked.In conclusion, improving information credibility requires cooperation among platform providers, researchers, educators, policymakers, and users. Responsible recommendation design, independent algorithmic evaluation, transparent platform practices, and digital media literacy can complement one another in reducing the risks associated with misinformation. Future research should examine how algorithmic systems affect different communities, how transparency influences public trust, and which interventions most effectively support reliable information exposure. A balanced approach that combines technological accountability with critical media literacy can contribute to a more trustworthy and informed digital media environment.

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