FOSTERING MEDIA LITERACY IN THE AGE OF AI: EXAMINING THE IMPACT ON DIGITAL CITIZENSHIP AND ETHICAL DECISION-MAKING

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ABSTRACT

In today's interconnected and technology-driven world, examining the impact of artificial intelligence and digital media on individuals' understanding and engagement with information is imperative. This research aims to explore the intersection between these mediums and investigate the role of the media literacy education in the context of AI and the digital media. By doing so, the study seeks to understand how promoting critical thinking and ethical awareness can enhance individuals' abilities to navigate the digital landscape responsibly. The research questions explore how the media literacy education contributes to the critical thinking skills and ethical decision-making among individuals interacting with AI-driven media, the potential risks and challenges associated with AI in creating and spreading disinformation, and how the media literacy interventions can mitigate these risks. The methodology for this research will be divided into three parts. The first includes a literature review to examine existing research on media literacy, AI, digital citizenship, ethical decision-making, and analysis of case studies. The second incorporates online surveys with individuals, to assess their media literacy levels, critical thinking abilities, and ethical awareness. The third part employs an experimental approach, involving the creation and dissemination of a simulated fake news article generated by AI. The goal is to observe and analyse the reaction of the individuals, and the extent of fact-checking conducted in response. Expected outcomes include identifying the impact of the media literacy education on critical thinking, ethical decision-making, and digital citizenship in the context of AI-driven media, understanding risks and challenges posed by AI in disinformation creation and spread, highlighting the relationship between the media education and the civic engagement, addressing ethical considerations and proposing AI integration guidelines for media literacy education, and offering recommendations for enhancing and sustaining media literacy initiatives amidst rapid AI advancements.

Keywords: media literacy education, artificial intelligence, AI-driven media, critical thinking, ethical decision-making.

INTRODUCTION

The rise of contemporary media environments heavily influenced by Artificial Intelligence (AI)[23] integration, has heightened the importance of the media literacy education. Due to the significance of the relationship between the Artificial Intelligence, it's essential to highlight how media literacy can act as a driving force in transforming digital citizenship in the context of AI-influenced media environments. For those reasons, this research aims to assess critical thinking skills and ethical decision-making among the individuals interacting with AI-driven media.

The rapid spread of content generated by Artificial Intelligence (AI) has guided a transformative era of information consumption and distribution. As AI algorithms tailor digital experiences to individual users, the authenticity, credibility, and ethical considerations of such AI-driven media have become increasingly important. This study examines the complex nature of the media literacy, with the objective to understand how people's interactions with AI-generated content shape their perceptions and influence their decisions when interacting in the digital world.

The way we used to consume media passively has now changed into a more active and empowering skillset that fits today's information environment. At the core of the media literacy education lies the empowerment of individuals with tools for judiciously evaluating the veracity and contextual essence of online information. This research resolutely positions media literacy as a pivotal agent, instrumental in nurturing responsible digital citizenship, combating the proliferation of disinformation, and supporting ethical decision-making in the age of AI.

The pursuit of comprehending the intricate dynamics linking media literacy, AI-driven media, critical thinking, and ethical decision-making, warrants a multifaceted and rigorous methodology. The study employs both quantitative and qualitative approaches, comprising an online survey and experiment. The notable experimental dimension entails the exposure of participants to a simulated AI-generated fake news article, examining their responses to misinformation their tendency to engage in fact-checking, and their ability to decipher AI-generated media—an encapsulation of the broader challenges posed by AI-propagated disinformation.

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23 Artificial Intelligence, abbreviated as "AI", refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

LITERATURE REVIEW

We observe a significant interaction, in the vast digital landscape, where technological advancements have given rise to artificial intelligence (AI) and intricate media structures. This interaction signals transformative shifts in our understanding of information, engagement with content, and ethical decision-making. The literature review delves into the realms of AI, media literacy, and ethical decision-making, spotlighting their dynamic intersection and the fresh opportunities they present for contemporary digital citizenship.

Misinformation is rampant in the digital world, highlighting the critical need for digital media literacy. Pennycook and Rand (2018) put forth the concept of the 'implied truth effect'.[24] Their research suggests that adding warnings to fake news articles can increase our perceived accuracy of them. Media literacy becomes our compass on this "journey", enabling us to navigate through the fog of falsehoods and distinguish between authenticity and deception.

AI has become a modern architect of content creation, showcasing impressive capabilities that also raise ethical questions. Zellers et al. (2019) shed light on AI's dual nature. Their work reveals AI's potential to generate neural fake news while emphasizing the need for vigilance. In this challenging landscape, media literacy acts as our beacon, fostering alert minds capable of distinguishing the truth from the manipulated content.

In this changing landscape, the media literacy education is undergoing a significant transformation. We have moved from being passive consumers of media to becoming discerning critics. Hobbs and Jensen (2018) lead us through this evolution, showing the growth of media literacy. Media literacy serves as our tool in this journey, equipping us with the ability to distinguish between AI's truths and fabrications.

AI-generated content introduces creative flair but conceals ethical complexities. Dubose and Havens (2019) underscore the ethical considerations inherent in AI's capabilities. Media literacy serves as our guide, helping us understand and make ethical decisions about AI-generated content.

Critical thinking emerges as the cornerstone guiding us through AI's enchanting yet perplexing creations. Ennis (2011) invites us to embrace the essence of inquiry. In the world of AI, critical thinking helps us understand and evaluate the information we encounter.

AI can create fake information that spreads online. Allcott and Gentzkow (2017) highlight how social media plays a role in spreading false information and stress the need for action. The media literacy helps us tell what is true from what is not, allowing us to engage responsibly with online content.

As we navigate the digital world, we become citizens of a virtual community. Livingstone's (2009) provides guidance on how to be responsible digital citizens. Media literacy helps us understand our responsibilities in this virtual community, preparing us to engage in this virtual democracy and make ethical choices about AI-generated content.

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24 *The 'implied truth effect'* is a phenomenon where the presence of warnings on some, but not all, false information can lead people to believe that information without warnings is true.

RESEARCH METHODOLOGY

In essence, the research problem revolves around understanding how media literacy education can empower the individuals to critically engage with AI-generated media, make ethical decisions, and contribute to responsible digital citizenship in an era where AI is increasingly shaping the media landscape.

The participants have their critical thinking abilities checked, but similarly, through questions about their ethical decision-making and digital footprint, this research discovers how people aged 15 - 35, navigate the current digital space. Through the research survey, the participants give insight into their perceptions and behaviours when encountering fake news, AI-generated media, and everything that has to do with the ethics around it.

COLLECTION OF DATA

The data was collected using an online survey, which received 174 responders. from 26 different countries, and 6 continents, Europe, North America, South America, Asia, Africa, and Australia. The ages of the participants are 15- 35. This group of individuals is relevant as they are the ones most familiar with the usage of AI models in modern usages.

The survey was divided into 3 parts:

1) Demographic Questions: Age, Country of Living, and Gender;

2) Questions about assessing Media Literacy and AI knowledge, as well as behaviours when encountering media usage, fake news, and their perceptions of AI-generated content;

3) Experiment - AI-Generated News: Participants are asked to evaluate the credibility and truthfulness of a fake news article, explaining the reasoning behind their assessment. Unaware that the news article they are reading is AI-generated, the aim is to capture their most genuine perceptions of its validity and whether they can discern its AI-generated nature. The news content was created using the application ChatGPT.[25]

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25 ChatGPT is an artificial intelligence model developed by OpenAI. It's designed to generate human-like text based on the input it's given.

RESULTS

The research, in response to the significant global influence of AI, has broadened to a global scale, involving 174 individuals from a diverse array of 26 countries across six continents. Given the widespread use of AI, it is crucial to conduct this quantitative research beyond the confines of a single country to gain a broader perspective. The geographical region played a minimal role, indicating that AI is a global phenomenon and should be approached as such.

The survey comprised three separate sections: demographics, questions about AI and media literacy, and an experimental segment. In the second section, participants' responses were systematically classified into five main areas.

SECTION 1: DEMOGRAPHICS

The demographic analysis revealed some interesting statistics, which would later contribute to the type of respondents gained:

- 53.5% of participants were in the 18-24 age group.
- 27.9% were in the 15-17 age group.
- 18.6% were in the 25-35 age group.

In terms of education and occupation:

- A significant 74.3% were involved in education, ranging from high school (32.9%) to university (bachelor's at 35.7%), with a smaller segment (5.7%) pursuing advanced degrees such as a master's or a PhD.
- The remaining 25.7% consisted of individuals who were either employed (including both corporate and self-employment) or seeking employment opportunities.

Following this demographic analysis, the survey also sought to examine participants' familiarity with Artificial Intelligence (AI) and its current applications, providing intriguing insights:

When asked the question, "How familiar are you with AI (Artificial Intelligence) and its modern uses?", the responses showed clear patterns:

- A notable portion, 23.3%, stated they were "Very Familiar" with AI.
- A large majority, 72.1%, indicated they were "Somewhat Familiar" with this technology.
- A small but significant 4.7% admitted they were "Not Familiar at all" with AI.

Further analysis of this data revealed interesting variations related to age. The "Very Familiar" category was mainly composed of participants aged 18 to 24, mostly university students pursuing bachelor's or master's degrees. Interestingly, even within this age group, a small fraction (4.1%) claimed to be "Not Familiar at all" with AI, despite being undergraduate students. In contrast, the participants who were employed or job-seeking stated that they exhibited "Somewhat Familiar" levels of knowledge about AI, highlighting the varied perspectives among the global participants.

The data highlights a positive correlation between age and familiarity with AI and its modern applications. It emphasizes the substantial variation in AI familiarity among the university students, ranging from those who are highly familiar to those with minimal knowledge. This suggests that factors beyond age and educational background, such as personal interest, exposure, and motivation, influence participants' AI familiarity.

Nonetheless, the primary conclusion is that the majority of respondents (72.1%,) fall into the category of "Somewhat Familiar" with AI principles and their modern applications. According to a survey conducted by The Verge (2023), only one in three people have used AI-powered tools, indicating a need for greater awareness about companies and start-ups in this field. This collective "Somewhat Familiar" stance may be attributed to the complicated nature of ethical AI system design, a complex task due to the ambiguity surrounding ethics' definition, implementation, and enforcement.

An interesting pattern emerged from this analysis. The participants aged 18 to 24 who indicated a high degree of familiarity with modern AI applications exhibited a noteworthy trend. Approximately 90% of these individuals responded affirmatively to the importance of media literacy education in decision-making, particularly in discerning AI-generated content. They also displayed confidence in their ability to differentiate AI-generated content from human-generated content, attributing a significant part of this knowledge to media literacy education. This alignment between their knowledge, attitudes, and behaviour forms a central focus of this study.

This observation underscores the significance of prior AI knowledge in shaping individuals' perceptions and behaviours regarding media literacy education and AI-generated content recognition. It suggests that a strong foundation in understanding AI's modern applications can enhance the recognition of AI-generated content and emphasize the role of media literacy in this process.

On the contrary, the participants who self-reported a lack of familiarity with modern AI applications tended to express uncertainty in their ability to discern AI-generated content from human-generated content. This finding aligns with the expectation that a foundational understanding of AI plays a pivotal role in individuals' confidence and competence in identifying AI-generated media.

The second section of the survey focuses on participants' consumption of news and information, revealing intriguing insights into their media preferences and the platforms they rely on.

SECTION 2: AI, MEDIA LITERACY, FAKE NEWS

Group 1: Platform Preferences

The participants were asked about the platforms they primarily use to consume news and information, with the option to select multiple choices, instead of one singular choice. Notably, 86% of respondents indicated "Social Media Platforms (e.g., Twitter, Facebook, Instagram, Reddit...)" as their primary source of news, significantly surpassing other options. The next most selected choice, "News Websites (e.g., New York Times, BBC, Time.mk)," received 41.9% of the votes.

Here it is important to note that 33% of the participants (aged 15-35), relied solely on social media platforms as their primary news source. This data is very important when we take into consideration the type of information people consume on these platforms. Free speech enables social media platforms to freely distribute fake news, including media generated by AI and allows inaccurate news to be widely spread across multiple platforms. A prime example of this is the phenomenon of deepfakes [26].

A notable case is the deepfake video of former President Barack Obama, created by American actor and filmmaker Jordan Peele in 2018. In this video, Peele's voice impersonates President Obama's, while the visuals convincingly depict the President uttering statements he never actually made. This deepfake video was produced as a public service announcement to underscore the dangers of deepfakes and highlight the potential for such technology to propagate misinformation on social media platforms (Peele, 2018).

The survey data suggests that younger individuals tend to favour sources that are easily accessible and familiar, such as social media platforms. This trend aligns with recent studies indicating that young people often opt for sources that are user-friendly and widely available.

A recent study by the Reuters Institute for the Study of Journalism found that social networks have steadily supplanted news websites as a primary source for younger audiences overall, with 39% of social natives (18–24s) across 12 markets now using social media as their main source of news, compared with 34% who prefer to go direct to a news website or app (Reuters Institute for the Study of Journalism, 2022). The study also revealed that social natives are significantly more inclined to access news using 'side-door' sources such as social media, aggregator sites, and search engines than older groups (Reuters Institute for the Study of Journalism, 2022).

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26 Deepfake: a video of a person in which their face or body has been digitally altered so that they appear to be someone else, typically used maliciously or to spread false information.

These studies suggest that young people are increasingly turning to social media platforms for their information because they are easy to use and accessible. Given the ubiquity of social media in daily communication, it's unsurprising that young people prefer to consume information from these familiar platforms. Rather than subscribing to paid news services or dedicating time to searching for news on a web browser, they choose the convenience and immediacy offered by social media.

Not only in the context of AI but regarding the spread of fake news, social media platforms, while fostering free expression, can inadvertently become conduits for misinformation and fake news. This issue is especially pronounced on platforms like Twitter and TikTok, where fake news has occasionally permeated mainstream news outlets (Vosoughi et al., 2018).

A study by Vosoughi, Roy, and Aral (2018) found that false news diffused significantly further, deeper, and more broadly than the truth on Twitter. The effects were more pronounced for false political news than for other categories of information. The study also revealed that false news was more novel than true news, which could explain why people were more likely to share it.

Relying on the social media for news consumption presents its own set of challenges. These platforms enable the users to post personal opinions and information, which can sometimes lead to the spread of misinformation and fake news. The key difference between the social media and the traditional news sources lies in the credibility of the source and the author. When it comes to AI-generated media, the content often lacks identifiable authors. This anonymity can inadvertently facilitate the spread of misinformation, as users are not directly held accountable for the content they disseminate. On the other hand, traditional news outlets are obligated to uphold the credibility of their content, providing a layer of accountability that is often absent in the realm of AI-generated media.

Group 2: Public Perception of AI-Generated Content

In response to the question "Do you think that AI technology can generate content, including news articles, images, and videos?", a striking 89.9% of participants firmly believe that AI is fully capable of generating content, encompassing news articles, images, and videos. Only a mere 7.9% expressed scepticism, suggesting that AI may not possess such capabilities. It is noteworthy that these skeptics were a diverse group, spanning from high school students to university students and even employed individuals.

AI-generated content is a rapidly growing field that has the potential to revolutionize the way we consume and produce news, images, and videos. This uncertainty reflects the complex and evolving nature of AI-generated content. AI's capacity to produce content, including news, challenges our ability to discern authenticity from manipulation, particularly in the context of fake news. Nevertheless, it also poses significant challenges to media literacy and trust, as AI-generated content can be easily manipulated and spread through the social media platforms (NewsGuard. 2023). According to a study by NewsGuard, nearly 50 news websites are "almost entirely written by artificial intelligence software". These sites publish hundreds of articles daily that are written by AI, using the app "ChatGPT", and accordingly, many of them contain false information, titles containing clickbait [27], and are packed with ads. (NewsGuard, 2023)

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27 Clickbait refers to content, such as headlines or thumbnails, designed to attract attention and encourage clicks.

However, the more important question is whether people can distinguish AI-generated content from relevant and accurate information. This can be observed through the survey question "Can you easily identify content that has been generated by AI (Artificial Intelligence) when you encounter it in media?". The survey data reveals a considerable degree of uncertainty among respondents regarding their ability to identify AI-generated content. According to the data, 57.9% of participants indicated that they can sometimes, but not always, tell if the content is AI-generated. None of the participants claimed the ability to never discern AI-generated content, and only two individuals confessed to rarely being able to do so.

This data points to the pressing need for comprehensive media literacy education. While some participants demonstrated proficiency in identifying AI-generated content, a significant portion remains challenged by this task. This further emphasizes the importance of equipping the public with the necessary skills and knowledge to recognize the hallmarks of AI manipulation.

A subset of the respondents, 17.1%, expressed confidence in frequently identifying AI-generated content. This group unanimously agreed on the necessity of mandatory media literacy education for all students. All of the individuals from this group, when asked another question, answered that they had never been misled to share false information online. This finding further proves the point that media literacy education plays a crucial role in enhancing individuals' ability to recognize AI-generated content and prevent the inadvertent sharing of fake or misleading information online.

The question of whether AI-generated content can be trusted, or even be more accurate than human-generated content, elicited a wide range of responses. In response to the question "Do you think AI-generated media content is less trustworthy than content created by humans?", a substantial 43.1% of participants maintained a neutral stance, neither affirming nor negating the reliability of AI-generated content. This suggests a level of uncertainty regarding the trustworthiness of AI-generated content, which could point to several possibilities.

Firstly, the field of AI is rapidly evolving, and many people may not be fully aware of the capabilities and the limitations of current AI technology. This lack of understanding could lead to uncertainty regarding whether AI can reliably generate accurate and trustworthy content. Secondly, there have been instances where AI has been used to generate misleading or false information, such as deepfakes or fake news articles. These instances could lead to a general scepticism or wariness towards AI-generated content. Lastly, the nature of AI itself, being a non-human entity, might prompt some people to find it difficult to trust content generated by an entity that does not possess human qualities like judgment and ethics.

Correspondingly, a combined 42.1% of participants expressed scepticism towards AI-generated content, indicating that they believe it to be less trustworthy than human-generated content. Conversely, a minority of 13.2% held an opposing view, asserting that AI-generated content is not inherently less trustworthy than that produced by the humans.

These diverse responses underscore the complexity of public perceptions towards AI and its role in content generation. Key takeaways from the data include the critical importance of media literacy education in enabling individuals to identify AI-generated content, the challenges in consistently recognizing such content,

and the prevalent scepticism regarding the trustworthiness of the AI-generated media. The findings further emphasize the urgency of continued research and education on the evolving landscape of AI-generated content to ensure a digitally literate and discerning public.

Group 3: Media Literacy and AI

One noteworthy observation emerges from the survey responses: the connection between individuals' familiarity with the artificial intelligence (AI) and their perceived impact of media literacy education. Participants who claimed to have high knowledge of AI consistently stated that the media literacy education had a high or very high impact on their ability to identify AI-generated content. Contrariwise, the individuals who admitted to being somewhat familiar with AI indicated that the media literacy education had only a moderate impact. This correlation underscores the critical relationship between the media literacy education and the knowledge of AI.

This finding suggests that people who possess a deep understanding of AI are more likely to value their media literacy skills when evaluating AI-generated content. It highlights the importance of integrating the media literacy education with the AI education, as it can significantly enhance individuals' capacity to navigate the complex digital landscape and make informed judgments about the content they encounter.

A significant portion of the survey focused on credibility assessment, looking into the factors that matter most to the respondents when evaluating the credibility of an online news source. Notably, a staggering 80% of participants singled out the reputation of the source as the most influential factor. This insight raises questions about the intersection between credibility and AI-generated media.

One compelling question that arises is whether credible news sources risk losing their reputation and trustworthiness if they publish AI-generated content. The concern here is that the public might perceive AI-generated content as less trustworthy, and potentially impacting the credibility of the news outlet. As noted from the findings, only one-fifth believe that AI-generated media is more (or equally as) trustworthy than human-generated content.

The survey probed participants about what would motivate them to fact-check information before sharing it. A substantial 63% of respondents indicated that having better fact-checking resources would increase their motivation to fact-check news and media. The second-highest vote, 32% favouring "interactive tools," suggests a desire for more engaging and user-friendly fact-checking methods.

This finding signals the need to invest in developing and promoting high-quality fact-checking resources and interactive tools. These resources should be grounded in rigorous research, maintain transparent methodologies, and adhere to ethical standards. In addition, they should also be easily accessible, available in multiple languages and formats, and regularly updated to remain relevant in addressing emerging challenges in the media landscape.

Incorporating AI-based tools and gamified platforms into media literacy education can be a promising approach. AI can be used to automatically detect fake news and deepfakes, while gamified platforms can engage users in fun and educational activities related to media literacy and fact-checking. Such innovations can empower individuals to navigate the digital landscape effectively and make informed decisions about the content they encounter.

Group 4: Dealing with Fake News

A noteworthy 57% of participants consistently fact-check information before sharing it on social media, revealing a commendable dedication to maintaining content accuracy. Contrarily, 4.5% admitted to never fact-checking before sharing, raising concerns regarding the unchecked propagation of information. Is there a correlation between fact-checking habits and news consumption patterns? Interestingly, the data suggests that those who always fact-check are also more likely to read the full article when confronted with a compelling headline, indicating a deeper level of engagement with news content. Likewise, the opposite is true for the group of individuals who never fact-check before sharing any type of media.

The question "What factors matter the most to you when evaluating the credibility of an online news source?" unveils the criteria that participants use to assess the reliability of online news outlets. The majority, at 76.7%, prioritize the reputation of the source, highlighting the immense influence of a news outlet's standing and track record on perceived credibility. In contrast, social media sharing and follower count are given less consideration, suggesting that participants rely more on the traditional markers of credibility rather than social metrics. Despite that, this trend varies by age group: 90% of those who did consider social media sharing as a credibility factor were aged 15 to 24, suggesting generational differences in news consumption and sharing behaviours.

Many responders paired the answer "social media sharing" with factors like the reputation of the source and author. This prompts us to consider whether news shared online should be scrutinized by reputable news sources and whether AI-generated media is more readily disseminated via the social media compared to the traditional news outlets.

In terms of incentives to motivate fact-checking before sharing information, a substantial 62.4% highlight the importance of better fact-checking resources. This implies that participants believe enhancing the availability and accessibility of fact-checking tools could significantly boost their commitment to verifying information. Interactive tools also play a role, with 44% of respondents viewing them as a potential motivator. Surprisingly, incentives and social responsibility campaigns are perceived as less effective, with only 20% of participants selecting these options.

"Have you ever shared information online that you later discovered to be false or misleading?" - This question reveals the prevalence of unintentional misinformation sharing among the internet users. A significant 59.3% of the participants acknowledged having shared information online that they later discovered to be false or misleading. This highlights the prevalence of unintentional misinformation sharing among internet users, emphasizing the necessity for enhanced information verification practices.

What factors influenced their decision to share false or misleading information? According to the data, these include the initial credibility of the source and the content's attention-grabbing nature, suggesting that even individuals with the intention to share accurate information can be swayed by seemingly trustworthy sources or engaging content, leading to the inadvertent spread of misinformation.

Group 5: Media Literacy Education

The question, "Do you think media literacy education should be mandatory for all students?" was posed to address participants' perspectives on the necessity of compulsory media literacy education. The data reveals an overwhelmingly positive response, with 83.7% expressing support for mandatory media literacy education. This suggests a strong consensus among the participants regarding the importance of equipping students with the skills to navigate the complex digital media landscape.

In response to the question regarding the key ethical considerations when incorporating AI into media literacy education, participants highlighted several concerns:

- Misinformation Prevention (82.4%): A majority highlighted the role of AI tools in combating misinformation.
- User Privacy Protection (67.1%): Privacy concerns were evident, with a call for safeguards to prevent misuse of personal data.
- Unbiased Content Creation (61.2%): Participants emphasized the need for impartiality in AI-generated content.
- Transparency in AI Processes (56.5%): Participants expressed a desire for transparency in AI algorithms, meaning they want to understand and trust the mechanisms behind AI-driven media literacy tools
- Promotion of Diversity and Inclusivity (48.2%): Nearly half of the respondents emphasized the need for inclusivity in AI-driven media literacy education.

To address the ethical concerns raised by the participants regarding AI, it is suggested that the educational institutions incorporate modules on responsible AI use within their media literacy curricula. This strategy would not only enhance students' media analysis skills but also deepen their understanding of the ethical implications of AI in media.

The data strongly supports the need for mandatory media literacy education. It further illuminates several critical ethical considerations for integrating AI into media literacy education, including ensuring content impartiality, protecting user privacy, promoting diversity and inclusivity, preventing misinformation, and maintaining transparency in AI processes. These insights could serve as a valuable guide in developing ethical frameworks for effectively integrating AI into education.

SECTION 3: EXPERIMENT

The experiment was conducted with attention to the ethical considerations and potential biases. The participants, who remained anonymous, were informed at the outset of the survey that they might encounter fake news. However, this information was presented in a manner that did not influence their responses or introduce bias, thereby maintaining the integrity of the experiment.

In terms of bias, careful measures were taken to ensure that the experiment did not favour any particular outcome. The prompt given to ChatGPT was neutral and did not lean towards any specific topic or viewpoint. This helped in maintaining a balanced perspective and prevented any distortion of results based on preconceived notions or biases. The participants' responses were analysed objectively, without favouring any particular trend or pattern. This rigorous approach ensured that the findings of the experiment were reliable and free from bias.

For the generation of fake news, ChatGPT was given the following prompt: "Could you please generate a fake news article? Make the article sound believable and use a relevant topic to write the fake news on. Thank you." This approach allowed for an examination of AI's capabilities in generating believable news content while ensuring that ethical standards were upheld throughout the process.

Creation of Fake News with AI

Using the AI generative tool "ChatGPT," a fabricated news article was created, titled **"Researchers Develop Artificial Intelligence Algorithm that Predicts Heart Disease with High Accuracy."** The article presented a ground-breaking development in predicting heart disease using AI algorithms trained on extensive medical data. It claimed an impressive 92% accuracy rate in identifying individuals at risk up to five years before symptoms manifest. The generated text is as follows:

"Scientists have announced a major breakthrough in cardiovascular health with the development of an advanced AI algorithm that can predict the likelihood of heart disease with remarkable accuracy. The algorithm, trained on extensive medical data, examines a range of factors including genetic predisposition, lifestyle, and medical history. Initial tests reveal an impressive 92% accuracy rate in identifying individuals at risk of heart disease up to five years before symptoms manifest. This innovation could revolutionize early intervention strategies and significantly reduce heart disease rates in the future."

Believability and Shareability of the Fake News

Survey participants were asked about their likelihood of sharing the fabricated news article on their social media profiles or with friends. Intriguingly, a significant majority (approximately 85%) chose neutral positions (3 on a scale of 1 to 5), indicating indecision regarding sharing. Only 10.6% of participants leaned towards "very likely" or "likely" to share, while the remaining respondents leaned towards "very unlikely" or "unlikely."

A noteworthy observation is that the participants who leaned towards "very unlikely" or "unlikely" to share (choosing 1 or 2 on the scale) were the same individuals who mostly responded with "Sometimes, but not always" when asked about their ability to identify AI-generated content. In other words, these participants found it challenging to distinguish AI-generated content, and this uncertainty seemed to influence their decision not to share the news.

Assessing the Believability of the Fabricated News

The participants were asked to evaluate the believability of the fabricated news article on a scale of 1 to 5, with 1 being "Not Believable at All" and 5 being "Very Believable." The majority of responses, 55.3%, took a neutral stance with a rating of 3, indicating mixed opinions about the article's believability. Most respondents aged 18-24 gave ratings between 2 and 3. Both extremes of the scale, 1 and 5, received about 2.4% of the votes each, suggesting a broad distribution of responses as most participants' opinions ranged from 2 to 4. Ratings of 2 and 4 each garnered 20% of the responses. This suggests that while AI has become sophisticated enough to generate news-like content, discerning its credibility remains a complex task for many.

The distribution of responses across the scale further underscores this complexity. It shows that opinions on the believability of AI-generated news span a wide spectrum, from outright disbelief to high credibility. Notably, the age group of 18-24 showed a tendency towards lower believability ratings (between 2 and 3), indicating that younger individuals might be more sceptical of AI-generated content. This could be attributed to their higher digital literacy, which is evident throughout the survey, and familiarity with the capabilities and limitations of AI.

Perceptions of Believability

The most crucial aspect of the experiment was the participants' reasoning behind their conclusions about the news article's believability. Those who chose 1 (very unlikely to share) and those who leaned towards 4 and 5 (likely to share) cited different reasons for their beliefs. This aspect provides valuable insights into how people form opinions when encountering news, particularly when it comes to AI-generated content.

A recurring trend was that many participants believed the text because it was well-written and cohesive (56%). This observation underscores the AI's ability to produce content that closely resembles human-generated text, often indistinguishable from it. Some participants acknowledged that they suspected the news might be fake but were uncertain whether it was AI-generated. In response to the question asking them

to explain why they thought the article was fake, the most common answer was "There are no clear sources mentioned (80.6%)," followed by "The details in the article sound too unbelievable (30.3%)" and "The article lacks a personal touch (28.9%)."

Consideration of Fact-Checking

The participants were also asked whether they would consider fact-checking the information in the article before sharing or liking it. Strikingly, individuals who chose 1 on the sharing scale (indicating a strong reluctance to share) were the same individuals who selected options that indicated they would "definitely" or "probably" fact-check the information. This suggests that their scepticism about sharing was linked to a desire for verification, stressing their commitment to information validity.

On the contrary, individuals who chose 4 or 5 on the sharing scale (indicating a strong inclination to share) were more likely to select options that indicated they would "probably not" or "definitely not" fact-check the information. This suggests that their confidence in sharing was based on a lack of critical thinking or a confirmation bias.[28]

This experiment reveals how fact-checking considerations can influence people's decisions to share or like news articles. It shows that participants who were more sceptical of the article's veracity were more likely to seek verification, while those who were more trusting of the article's accuracy were less likely to do so. This finding has implications for how fact-checking tools and initiatives can be designed and promoted to encourage more critical consumption of news content.

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28 Confirmation bias is a type of cognitive bias where people tend to seek out and interpret information in a way that confirms their existing beliefs or theories, and they may ignore or reject information that contradicts their beliefs

DISCUSSIONS

The data gathered through this survey provides valuable insights into the interplay between media literacy, artificial intelligence (AI), and the perception of AI-generated content. Several key points can be discussed based on the findings:

One significant observation is the correlation between the participants' familiarity with AI and their perception of media literacy's impact. Those with high AI knowledge believed that media literacy education had a substantial impact on identifying AI-generated content, while those somewhat familiar with AI perceived a more moderate impact. This underscores the importance of integrating media literacy education with AI education to enhance individuals' abilities to navigate the digital landscape.

The majority of participants considered the reputation of the news source as a crucial factor when evaluating the credibility of online news. This finding raises questions about how the credibility of news sources may be affected by the dissemination of AI-generated content. If credible news sources unknowingly publish AI-generated content, it could impact their trustworthiness.

Despite recognizing the importance of media literacy, a significant number of participants identified social media as their primary source of news. This suggests a potential need for more stringent fact-checking and credibility assessment on social media platforms to combat the spread of AI-generated content.

The data indicates that participants are motivated to fact-check information when provided with improved fact-checking resources and interactive tools. This presents an opportunity to invest in the development of high-quality fact-checking resources and AI-based tools to enhance media literacy.

The experiment involving a fake news article generated by AI revealed that participants had mixed opinions about its believability. The quality of the content, often closely mimicking human writing, played a significant role in participants' perceptions. The findings highlight the need for increased transparency about how AI works and the ethical considerations involved in its use. Additionally, it emphasizes the importance of media literacy education in assisting individuals to evaluate critically AI-generated content.

This experiment highlights the complexities of how individuals perceive and interact with news generated by AI. It shows that participants' abilities to identify AI-generated content can impact their willingness to share news articles. The believability of AI-generated content often hinges on the quality of the text, highlighting the AI's capacity to mimic human writing. These findings open avenues for further exploration into the evolving dynamics between AI-generated content, media literacy, and public perception.

CONCLUSIONS

This study sheds light on the complex relationship between media literacy, AI, and the public's perception of AI-generated content. Several conclusions can be drawn:

- Integrating media literacy education with AI education is crucial to empower individuals with the knowledge and skills needed to identify AI-generated content. This holistic approach can better prepare individuals to navigate the digital landscape effectively.

- As news sources rely on AI-generated content, maintaining credibility becomes paramount. News outlets must be vigilant in ensuring that AI-generated content aligns with the ethical standards and does not compromise their reputation.

- Social media platforms play a significant role in news dissemination. Efforts should be made to enhance fact-checking processes and credibility assessment on these platforms to counter the spread of AI-generated content.

- Investing in high-quality fact-checking resources and interactive tools is essential to motivate individuals to fact-check information rigorously. These resources should be accessible easily and regularly updated to address emerging challenges in the media landscape.

- AI's ability to mimic human writing poses a challenge in discerning AI-generated content. The public must be made aware of this capability to foster a more critical approach to the information they encounter.

This study emphasizes the need for a multi-pronged approach involving education, technology development, and media responsibility to effectively address the impact of AI-generated content on media literacy and public perception. By taking these steps, society can better navigate the evolving digital landscape and make informed decisions about the content they engage with and share.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

While this study offers valuable insights into the complex interplay between media literacy, artificial intelligence, and public perception of AI-generated content, several limitations need consideration.

The study relied on self-reported data, which can be subject to response bias and inaccuracies. Combining quantitative data with qualitative assessments, such as interviews or focus groups, could offer a more comprehensive understanding of participants' perceptions.

The study identified correlations between media literacy, AI knowledge, and behaviour. In spite of that, establishing causation would require further investigation. Future research could employ experimental designs to assess the impact of media literacy interventions on AI perception and fact-checking behaviour.

The study provides a snapshot of perceptions at a particular time. Given the rapidly evolving nature of AI and media, longitudinal research could capture how perceptions change over time.

The study did not consider the role of educational institutions in shaping media literacy. Future research could explore the integration of media literacy and AI education in schools and universities.

Future research endeavours should address these limitations to provide a more comprehensive understanding of the evolving dynamics between media literacy, AI-generated content, and public perception. These insights will be invaluable in developing effective strategies for navigating the digital information landscape responsibly and ethically.

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