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CHAPTER 7

AI and Communication Research: Ethical Concerns and Recommendations for Best Practices

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The fourth industrial revolution has spurred the emergence of technologies that breed an exponential advancement in the digital technology terrain, triggering the increasing proliferation of artificial intelligence (AI) and propelling unprecedented transformation of the human society in all ramifications. The AI transformation has penetrated the academia heralding significant opportunities and challenges in research and development. Generative AI platforms like ChatGPT, Gemini, Copilot, Unriddle, Jenni.AI, Humata, Chatpdf,

Quilbot, Elicit, Scispace and the like have revolutionised research activities, teaching and learning, among other important aspects of the academia (Khan, 2021; Stahl et al, 2023). Hence, AI tools are increasingly being incorporated into the research domain. However, despite the increasing relevance of AI, there are growing ethical and legal concerns (Thomas et al, 2023). This chapter attempts to highlight some key ethical issues, provide a guide to best practices for the integration of AI scholarly research, and recommend comprehensive, workable solutions to ensure the maintenance of reputation and trustworthy academic work.

The Emergence of AI

Artificial intelligence (AI) was coined in 1955 by emeritus Stanford Professor John McCarthy, who defined the term as the science and engineering of making intelligent machines that learn and behave like human beings (Manning, 2020). It is a computer system capable of performing tasks that ordinarily require typical human intelligence, such as decision-making, speech recognition, visual perception, and language translation (Monika & Divyavarsini, 2023). Artificial intelligence is initially a critical branch of cognitive science. Still, it has spread to other fields, becoming a cross-disciplinary technology that increasingly influences and transforms how businesses, communications, and research work while exploiting human-like tools (Ramsey et al, 2014). It also refers to the ability of machines to adapt to unusual situations, solve complex problems, respond to questions, plan activities, and perform multiple and multifaceted functions that require a degree of typical human-like intelligence (Chen & Chen, 2020). Sarker (2022) sees AI as a branch of science and engineering concerned with understanding, simulating, and performing various intelligence tasks, tackling complex issues, and other functions such as thinking, learning, and adapting new abilities and challenges in the field of human intellect. Verma (2023) observes that the quality of data used in training an AI model influences the systems' pattern recognition, prediction,

and general performance capabilities and efficacies. Information communication and computing technologies have evolved significantly in recent years, leading to an upsurge in artificial intelligence.

Artificial intelligence (AI) technology emerged in the 1950s rooted in the “universal machine” to test machine intelligence that gradually metamorphosed into sophisticated systems for solving complicated analyses in various. At the initial stage, the artificial intelligence project was bedevilled due to inadequate computational power, funding, and interest in venturing into the novel invention, which slowed down its growth and efficiency. However, in the 1980s, research recorded a landmark achievement with the invention of specialised systems, particularly medical and financial problem-solving. Hence, this era has been termed the era of the machine learning surge. Moreover, advancements recorded in computer and Internet technologies in the 2000s significantly improved machine learning and big data (Luke et al, 2023).

Thence, AI started achieving certain superhuman tasks, including the AlphaGo program in 2016 (Silver et al, 2016). Sarker (2022) classifies AI into 10 different forms, including machine learning, deep learning, and neural networks; data mining, knowledge discovery, and advanced analytics; rule-based modelling and decision-making; fuzzy logic-based approaches; knowledge representation, uncertainty reasoning, and expert system modelling; case-based reasoning; text mining and natural language processing; visual analytics, computer vision, and pattern recognition; and hybridisation. Today, algorithms like deep learning, neural networks, decision trees, and support vector machines allow machines to predict and decide based on the available data. Similarly, Natural Language Processing (NLP) enables machines to generate, comprehend, and interpret human language using applications like language translation and

sentiment analysis (UNESCO, 2023), while AI chatbots empower machines to interact with humans seamlessly. 'Computer vision' allows machines to comprehend and interpret the visual world, performing functions like facial recognition, object recognition, and autonomous vehicles (Kim, 2023). These technologies cut across natural language processing and advanced language models, including highly sophisticated chatbots capable of understanding, analysing, and generating human-like text (Wang & Zang, 2024).

Sarker (2022) and Khan (2021) observed the capabilities of various artificial intelligence tools can be divided into: **Analytical AI** specialises in analysing, interpreting, and communicating meaningful patterns, relationships, variances, or dependencies in data and making decisions, recommendations, and suggestions based on the data. Hence, the capabilities of this AI model are relevant to research, particularly in analysis, interpreting, visualising research findings, and concluding research data. **Functional AI** performs similar functions as analytical AI but goes the extra mile to execute actions instead of recommendations, making them most relevant for their capabilities to automate data mining, data tracking, or data categorisation. **Interactive AI** allows real-time interaction and automation of communication, such as chatbots and smart personal assistants like chatGPT, Gemini, and Siri, which play a vital role in answering questions verbally and textually, helping researchers to solve many problems through interaction to get answers to many questions about their research. **Textual AI** tools allow text generation, translations, and speech-to-text conversion, which makes them good for researchers who exploit the tools to write, edit, paraphrase, and review research papers. **Visual AI** tools can recognize, sort, and classify items and convert videos and images into insights. They can be used for data visualisation, augmented reality, and semiotic analyses in research. However, the most common AI used in education

among students and scholars' research is generative artificial intelligence (Gen AI), which is described as algorithms that can be instructed to generate new and multiform content such as text, images, audio, video code, and simulations using natural language processing. These include ChatGPT, Perplexity, Copilot, Jenni.AI, Humata, Unriddle, Gemini, and Althor (Miao et al, 2024; McKinsey, 2024).

Generative Artificial Intelligence (GenAI)

Generative AI, alias (*gen AI*) refers to mighty machine learning algorithms capable of creating real content text, images, audio, video, or software code as a response to a user's question or request with the aid of deep learning models that simulate learning, predictions, and decision-making processes typical of the human brain. GenAI technology generates content automatically based on prompts written in natural-language interactive interfaces, instead of curating existing content on web pages (Chan, 2023). Lim et al. (2023) added that generative AI technologies leverage deep learning models to generate human-like content responding to instructions, questions, and requests. The model also identifies and encodes the patterns, relationships, and dependencies in large data that shape the tools' understanding of natural language prompts and respond by providing new relevant content (though it cannot generate new ideas) (Hu, 2023). Ortiz (2024) observes that generative AI models usually create new content and predictions based on the data used in their training.

The launching of ChatGPT in 2022 and the capabilities of the model to imitate human dexterity in producing multiple forms of outputs such as text, images, videos, music, and software codes contributed immensely to the fast growth and popularity of the application (UNESCO, 2023). Chatterjee & Dethlefs (2023) observe that ChatGPT is the fastest-growing AI model the world has ever seen, with millions of users of varying backgrounds

adapting GenAI tools in their daily lives. Hu (2023) added that ChatGPT attracted over a million users within its first five days, and the number skyrocketed to 100 million after a couple of months. Thenceforth, the ChatGPT, continues to record successes that triggered a competitive surge of similar innovations and increasing adaptations of the GAI tools. Research revealed that one-third of organisations have incorporated generative AI, which they use regularly in business functions and research analysis (McKinsey, 2024). Therefore, artificial intelligence technology has penetrated, becoming a new normal in the daily activities of almost all fields, such as healthcare, governance, security, environments, and academia (Bouhouita-Guermech et al., 2023). The generative artificial intelligence models have some astonishing features suitable for academic research. Stryker & Scapicchio (2024) note that the GAIs can generate text including articles, reports, papers, even creative writings, and draft summaries. Today, artificial intelligence is becoming increasingly popular in the academic circle due to the proliferation of free and cost-effective data mining, language processing, machine learning, deep learning, paper reviewing, text generation, text citation, text paraphrasing, content extraction, content reviewing, and proofreading tools.

AI, Technology Acceptance Model and Communication Research

The advancement in digital technologies resulted to rapid growth in the area of AI whose deployment have revolutionise communication research processes, particularly with the advent of strong generative AI technologies ((Nurtayeva et al, 2024). However, it has been a tradition that new inventions often face resistance until reality neutralises the confrontation. Hence, Artificial intelligence is not an exception, as it was prima facia seen by many as destructive with little or no benefit, particularly in academia, where it was seen as a threat to education and research (Humble & Mozelius, 2022). Therefore the acceptance

and use of AI technologies are motivated by factors as proposed by Fred Davis Technology Acceptance Model (TAM) of 1989. The theory explains how new technology acceptance occurs and the factors that underlie the acceptance and usage. The theory posits that there is a causal correlation between technology features, adoption and use. Thus, new technologies are not naively accepted, consideration of certain factors determines the acceptability possibilities or otherwise among groups. The assessment of technology is done based on perceived usefulness (PU), perceived ease of use (PEU) attitude toward use (ATU), and behavioural intention to use (BI) (Davis, 1989; Davis, 1993). Marikyan & Papagiannidis, (2023) added that TAM represents the behaviour, as the outcome predicted by perceived ease of use, perceived usefulness and behavioural intention. Studies in the area have indicated that AI tools are relevant in communication research, although many expressed ethical concerns about incorporating AI tools in research.

Perceived Usefulness (PU): This refers to the degree to which communication researchers believe integrating Artificial Intelligence (AI) will enhance their research performance. For example, Chubb et al. (2022) argue that using AI is relevant and crucial in transforming the way academic research is conducted. AI tools can help analyse large datasets quickly, identify trends, and generate insights that would be difficult to achieve manually (Khalifa & Albadawy, 2024). Moreover, Monika & Divyavarsini (2023) found that most researchers preferred using AI tools in research writing, and many confirmed to have used AI for paraphrasing, grammar checking, and citation.

Perceived Ease of Use (PEOU): Integrating AI models is easy due to the user-friendliness and flexibility of the tools. Using AI tools will ease and hasten research processes, hence communication researchers are likely to incorporate AI into their research processes. Monika & Divyavarsini (2023) conclude that AI tools

are vital in easing and hastening research processes. Sullivan et al. (2023) added that Artificial Intelligence allows academics to easily skim through extensive materials and summarise them in a manner that speeds up academic writing, and research processes, enhancing teamwork and provisioning new perspectives for the academic community. Moreover, a study revealed a strong public perception that the proliferation of AI deployment will impact the future of research, suggesting that AI could outsmart humans by 2045 (Bostrom, 2017).

Behavioural Intention (BI): Intention to use AI in mass communication research, is motivated by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Thus, the accessibility, usefulness and adaptability of AI make researchers embrace them in their research processes. A study conducted in Germany reveals that the majority of students expressed positive attitudes towards the use of chatbots in research and other academic writings (Stöhr et al., 2024).

Actual Use (AU): The actual adoption and use of AI tools in mass communication research is an offshoot of a strong predictor of AU. (Stöhr et al., 2024) found a broad awareness and adoption of generative AI among students German students. The versatility of AI technology propelled its adoption in many sectors, including education, where the systems have the potential to play a pivotal role in reshaping instruction delivery and academic research. Schmidt (2023) observed that AI can immensely transform academic research processes, scientific innovations, and scholarship in general in the next decade, considering the rate of its advancement, flexibility, and seeming limitless adaptability in scientific inquiry. Ardiyansyah, M. (2023) notes that for several years, AI has been nurturing the ability to generate fluent language, grinding out content that is hardly distinguished from human-generated texts or writing. More so, AI technologies can potentially address some of the biggest educational research

challenges, bolster innovative teaching and learning processes, and hype progress towards achieving SDG four (UNESCO, 2023). The accessibility of AI tools makes them increasingly important and impactful in the education domain (Chiu, 2023). Springer Nature notes that several scientists used chatbots to organise thinking, generate content and feedback, write code, and summarise literature in their research (Ardiyansyah, M., 2023).

Moreover, Hauer (2022) argues that responsible adaptation of AI is key to transforming academic activities by leveraging the capabilities of models to contribute profoundly to building a future where human experiences and AI capabilities concert in fostering societal growth. Hence, in 2019, the *UNESCO conference in Beijing yielded a consensus on incorporating artificial intelligence (AI) into education, which is stated as follows:*

The consensus affirms that the use of AI technologies in education should enhance human capacities for sustainable development and effective human-machine collaboration in life, learning, and work. It also calls for further actions to ensure equitable access to AI to support marginalised people and address inequalities while promoting linguistic and cultural diversities. The consensus suggests adopting whole-of-government, intersectoral, and multistakeholder approaches to the planning of policies on AI in education. (UNESCO, 2023)

The integration of the novel technology into academic terrain marks a crucial paradigm shift in scholarly investigations (Jackson, 2024). AI has led to a transition in the world of scientific research as the tools are user-friendly and proficient in data classification and analyses; modelling complex processes and systems, image and data aggregation; predictive hypotheses generation; theory suggestion and application; designing

physical materials; scientific literature review; writing and proofreading academic can explore perspectives and analyse research proposals and full-fledged papers (Luke et al, 2023; Kim, 2023). The AI tools have the potential to enhance and hasten academic writing, data generation and analyses, literature and peer review processes, language correction, and methodology suggestions (Miao et al., 2024). Scholars unanimously agree that AI innovation has a crucial role to play in academic research making it relevant to media and communication research. Thus, the following beneficial roles have been highlighted:

Facilitating Idea Generation and Brainstorming:

Conventionally, research activities rely on the ability of a researcher to observe situations, happenings, behaviours, changes, and development and think deeply, explore relevant literature, and brainstorm to identify research problems and gaps and come up with research ideas. However, the advent of artificial intelligence, particularly generative AI, seems to have placed the processes under revolutionary metamorphoses (Lims 2023). The AI can explore perspectives and analyse existing literature to identify research gaps and generate ideas, hypotheses, and directions. The technologies can also formulate research questions and suggest methodologies (University, 2023).

Facilitating data collection and analysis:

Data collection and analysis is a fundamental aspect of research that enables a researcher to answer research questions and gain insight based on the research questions. Its processes usually involve the use of experiments, questionnaires, content analysis, interviews, discussion, and observation. However, today AI tools can be instructed to suggest questionnaire items, experiment tools, interview templates, and coding sheets (Sullivan et al, 2023). More so, machine learning models, natural language processing, deep learning, and Artificial neural networks among others are capable of mining, sorting, cleaning, organising, and categorising

data from large datasets from various sources and databases (Sarker, 2022). Similarly, artificial intelligence technologies can also analyse, interpret, visualise, and draw inferences as per the available data efficiently. In addition, the algorithms identify patterns, relationships, and trends in a matter of seconds, as opposed to weeks in a traditional research method (Miao et al, 2024). Generally, the technologies simplify and hasten research data collection, sample processing, lab experiments, and analysis in academic research. Abbadia (2023) stresses that researchers can use Natural Language Processing (NLP) techniques to analyse large volumes of numerical and textual data, extract insight, summarise documents, and identify sentiments that are relevant to the arts, literature, linguistics, and social sciences.

Facilitating literature review: The literature review process is one of the most tedious, time-consuming, energy-depleting, and straining activities, simplified by AI technologies by assisting researchers in discovering, collating, reviewing, and synthesising relevant information from large volumes of books, research journals, term papers, patents, conference proceedings, newspapers, magazines, and other academic sources (Lim et al, 2023). The tools review literature, identify research gaps, generate new insights from data, and generate citations of all styles automatically and quickly, particularly employing models like Nvivo, Atlas ti ChatGPT, Perplexity, Copilot, and Elicit, Scite, SciSpace, Consensus, Connected Papers, Unriddle, Jenni.AI and Gemini among other numerous models are very relevant in sourcing, reviewing and synthesising literature (Abbadia, 2023; Danler et al., 2024).

Facilitating editing and proofreading: Artificial intelligence assists the research community in content enhancement such as editing grammar and structure improvement, readability, clarity, coherence, and general quality check of academic content. The AI tools are so fast in analysing content, detecting errors, and

suggesting corrections and enhancements of style, language, punctuation, spelling, and usage (Chiu, 2023). Other tasks include simplifying complex sentences and aligning the language with the relevant terminologies that resonate with the audience's taste and academic requirements. For instance, AI tools like Quilbot, Grammarly, Hemingway, ClickUp, SlickWrite, WhiteSmoke, Ginger, ProWriting AI, PaperRate, and ChatGPT are efficient in performing such functions (Brain, 2024).

Facilitating dissemination of research outcomes: Artificial intelligence plays a very significant role in communicating and facilitating outreach by summarising, visualising, synthesising, and translating research findings (Verma, 2023). The AI is used by databases like RDiscovery, Google Scholar, Researchgate and academia to analyse scholars' fields of endeavour and areas of research interests to notify each researcher of the new publications relevant to their respective areas of interest which boosts the visibility of the papers. The tools allow filtering and customisation of searches or requests on various literature sources for download (Luke et al., 2023).

Ethical Concerns

Communication research is guided by established conventional procedures and ethics to ensure originality, credibility and reliability of research outcomes. Therefore, notwithstanding the role of artificial intelligence in communication research, the tools come with ethical implications. For instance, Chubb et al. (2022) observed that while the deployment of AI can increase research productivity, impact and interdisciplinarity, it might derogate the established traditional roles of scholars and academic institutions. Similarly, Stöhr et al. (2024) majority of students surveyed expressed concerns about the future of chatbots in educational research. Watermeyer et al, (2024) argue that since its introduction in 2022, ChatGPT attracted rumbles among the UK academic community about the credibility of research

authorship, the integrity of scientific writings, and the conduct or misconduct of academics and learners.

Moreover, many scholars express concern about the ethical implications of generative AI tools, particularly in assessing originality and plagiarism in research outputs (Chatterjee & Dethlefs, 2023). Chichekian & Benteux, (2022) feared that the legal and ethical issues surrounding the use of AI technologies in the education sectors could decimate research outputs and soil the image of educators. Similarly, a survey of 457 students and 180 teachers at Hong Kong universities revealed that both students (mean 3.67) and lecturers (mean 3.93) are concerned that AI technologies could be misused in institutions of higher learning (Chan, 2023). Michael T. Nietzel, (2023) found that 43% of college students used AI tools for assignments and cheated in exams. Moreover, the University of Wisconsin-Madison, (2023) highlighted concerns like bias perpetuated in the training data and code, inequitable access based on socioeconomic status, language, location, etc., use of personal data and intellectual property without consent or permission, environmental sustainability of big data systems, transparency in the use of generative AI, research responsibility, authorship, and copyright, inaccuracy and disinformation, unfair labour practices, academic integrity, and data security.

Although, the application of AI in education has been immediate and extensive, privacy, security, legal and ethical issues made many countries banned ChatGPT in tertiary institutions including Afghanistan, Bahrain, Belarus, Burma (Myanmar), Central African Republic, Chad, China, Cuba, Eritrea, Ethiopia, Iran, Kazakhstan, Korea, North (North Korea), Laos, Libya, Macedonia (North Macedonia), Marshall Islands, Mauritius, Micronesia, Federated States of Nauru, Nepal, Palau, Russia, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Somalia, South Sudan, Sudan, Syria, Tonga, Turkmenistan, Ukraine.

Uzbekistan Venezuela and Yemen (Conroy, 2023).

Academic integrity is a crucial concern expressed concerning the use of artificial intelligence in higher education and research due to increasing cases of plagiarism, overreliance on chatbots, research automation among scholars, and rampage of open AI usage in preparing projects and essays and even cheating in exams by students, which threaten the image and reputation of academics and desecrate the academic research output upon which policy formulation, inventions, discoveries, and solutions to certain problems rely (Sullivan et al, 2023). Additionally, perpetual explorations, fast advancement and competition among tech experts resulted in humanising some AI-generated content making it so difficult to detect, even by sophisticated plagiarism-checking tools. UNESCO IESALC, (2023) notes that this AI-driven complex situation led to the ban of generative AI use in many institutions of higher learning, while others reviewed the mode of research content originality checks and students' assessments in a bit to safeguard the integrity of academic research and the researchers.

Moreover, cognitive bias and fairness are key ethical concerns about the use of AI in educational research. As the tools are built and trained using certain datasets and information is processed strictly based on the training given, the biases and prejudices embedded in the training data can easily manifest in the outcome or information processed since the models are not capable of distinguishing right from wrong or true from false. Ghaz & Hendawy, (2023) observe that AI models can inherit biases and unfairness from training data with grave implications that can influence the validity of the outcomes. Moreover, learning such biases can lead to decisions that tend to reinforce and amplify existing cultural biases and promote discrimination and unfair treatment based on gender, sex, race, region, ethnicity, age, sociocultural, and political affiliations (Pazzanese, 2020).

Therefore, it is imperative for researchers to critically pre-process, clean, curate, analyse, and verify the results, decisions, and outputs provided by AI systems to mitigate bias and ensure fairness in AI usage. Therefore, it is essential to critically analyse the results it provides and compare them with other sources of information (Resnik & Hosseini, 2024).

Furthermore, the reason for methods and materials in any serious research is to provide details explanations to help readers understand how, why, and what each component of the research is as a means of ensuring transparency and interpretability of the research. However, AI systems lack these crucial elements of academic writing and research outcomes (transparency and interpretability). More so, AI is considered a black box whose process of data or content generation and decision-making is vague and semantically elusive, particularly compared to human decisions guided by real-world consideration and rationality. This transparency issue hinders trust and acceptability of the research findings and conclusions, particularly in critical fields like healthcare and surgery, finance and economy, agriculture, and legal systems (Lim et al, 2023). In addition, some algorithms make erroneous predictions and opaque decisions that are difficult to interpret and digest, which renders the outcome irrelevant and dangerous to rely on. Similarly, the lack of regulation governing AI use or compliance with ethical principles to contain the anarchic nature of artificial intelligence despite the rapid advancement of the tools attracted the concern of over 1,000 academics and private sector leaders who jointly made a clarion call in an open letter calling for a suspension of the development and training of powerful AI systems devoid of due regulations (UNESCO, 2023).

Similarly, AI systems often process, collect, and analyse extensive sensitive data and information, causing significant privacy and security concerns about violations, and unauthorised access to

sensitive information poses threats to individuals and organisations as malicious users can exploit AI systems to unleash colossal damage or cause harm. These privacy issues led to the ban of ChatGPT by the Italian government in April 2023 to cushion the effect of the unguarded model on the illegal collection and storage of personal data (Amdan et al, 2024). In addition, ethical concerns were also raised about the tool's inability to verify users' ages, potentially exposing minors to inappropriate content. This example underscores broader issues regarding data collection, its custodians, and its application in AI. Similarly, the use of AI in generating research outputs raises significant questions about intellectual property and authorship (Resnik & Hosseini, 2024). As AI systems become more autonomous, issues of accountability and liability emerge, necessitating that researchers consider the ethical implications of their AI systems and be cognisant of the potential risks and consequences associated with their deployment, particularly concerning intellectual property rights, data ownership, and the sharing of AI models and code among researchers (UNESCO, 2023). In addition, over-reliance on GenAI technologies, and content in education can have grave effects on human development capacities such as creativity and critical thinking skills.

The role of human judgment is crucial in decision-making and research exploration; notwithstanding the ability of AI to assist academic researchers in producing useful text and other outputs, achieving the desired results often requires multiple iterations of prompts (Pazzanese, 2020). There is also a concern that young learners, due to their lack of expertise compared to teachers, might uncritically accept GenAI outputs that are superficial, inaccurate, or even harmful (UNESCO, 2023).

Chan (2023) observes that the automation of research tasks through AI can enhance productivity but may also lead to job displacement, especially of routine and repetitive tasks,

potentially causing unemployment and economic disruption in certain sectors. This displacement may disproportionately affect low-skilled workers, highlighting the need for workforce retraining and upskilling (Resnik & Hosseini, 2024). Therefore, AI technologies developed for academic research can have both positive and negative applications. Moreover, there is also an issue of AI misuse, as the technologies can be misused for harmful purposes, such as surveillance, discrimination, or creating deepfakes (Alshater, 2022).

These concerns led UNESCO to design “ethics of artificial intelligence” in 2021, a framework for addressing the multiple issues and controversies surrounding generative AI, including those related to education and research domains (UNESCO, 2021a). These include the protection of academic research integrity and safeguarding human research skills, responsibility, data governance, transparency, consent, privacy, safety, reliability, and justice (Bouhouita-Guermech et al, 2023).

AI in Communication Research: Recommendation for best practice

It is an indisputable fact that the unfettered integration of AI into research has grave intended and unintended consequences. Hence, the need for strong and concerted efforts of national and international relevant agencies; governmental regulatory agencies, developers and providers of AI-enabled tools, academic institutions; human rights groups and individual users is crucial in checking and neutralising the ethical issues and controversies surrounding adaptation of AI technologies in academic research through adaptation and religiously implementation of UNESCO “Recommendation on the Ethics of Artificial Intelligence”; UNESCO “Guidance for generative AI in education and research” and; other ethical frameworks to ensure maximum exploitation of AI technology ethically (Chen et al., 2020) (UNESCO, 2021a).

However, the most important actors in the ethical use of AI are individual users including teachers, researchers and students all forms of educational institutions should be aware of and apply terms of Gen AI references (Chan, 2023). All information generated by AI should be appropriately cited to avoid plagiarism and use AI tools responsibly to avoid harming other people's reputations and rights while protecting the integrity of academic research. Moreover; they desist from unethical use of the technologies and report to the relevant regulatory agencies should any unlawful use be noticed (UNESCO, 2023).

Universities and other tertiary institutions should endeavour to set rules for the ethical adaptation of AI and device-viable mechanisms of monitoring and detecting unethical use by researchers (staff and students) in the institutions (Stahl et al., 2023). Tools like I'Thenticate and Turnitin should be incorporated to check plagiarism and AI probability levels to ensure the publication of original, honest and reliable research outcomes birthed by human critical thinking and expertise. The educational authorities and institutions need to peruse the capabilities and limits of the existing AI tools to determine which types of AI models should be procured and deployed for researchers to use (Resnik & Hosseini, 2024)

Governmental regulatory bodies should be responsible for the evaluation and classification of the various relevant AI tools to gauge the benefits, efficacy, safety and potential risks of several Gen AI before granting their deployment to educational institutions for research and other academic writings (Hauer, 2022). More so, the bodies need to coordinate in designing, aligning and implementing rules and regulations for GenAI that can guide the ethical use of AI in a manner that strikes a balance between the regulations and the promotion of innovations and adaption of innovative technologies in research institutions. They should also partner with other relevant agencies to nurture

the development of trustworthy models; encourage the building of open eco-systems to foster the sharing of super-computing resources and high-quality pre-training datasets; and foster the practical application of GenAI in institutions for the creation of high-quality content for the public good (UNESCO, 2023).

The Tech expert needs to set rules governing ethical, transparent and prudent use of the Gen AI technologies in academia and devise a practical mechanism enforcing the rules and adherence to the ethical principles. Organizations and individual developers of AI tools should be ethically conscious in designing the tools to satisfy ethical and legal requirements of usage and mitigate the potential harm of the technologies in education and research (UNESCO IESALC, 2023). This can be done through programming the tools and “application programming interfaces” (APIs) in a manner that the content, graphs, images and videos generated can be clearly labelled “GenAI-generated content” per relevant laws or regulations on the AI-assisted synthesis of online information. The Gen AI providers should provide clear specifications on the appropriate audience for, and purposes of, their services to help the tools users make rational and responsible decisions. There is also a need to review and update AI versions regularly to contain the emerging challenges in the AI usage circle (Resnik & Hosseini, 2024).

National and international relevant non-government agencies should make regulations and monitor the various Gen AI used in academic institutions for research to ensure the safety, security, legality and ethicality of the applications. More so, they should organise, seminars, conferences, workshops and retreats to sensitise educationists and learners on the best way to incorporate Artificial Intelligence AI in their respective domains without violating laws and ethics of research in the country. Bodies like UNESCO should monitor and observe the manner of the technologies usage in member countries for designing

proportionate rules and regulations, sanctions and punishment violations by both AI developers and owners and academic actors to ensure sanity in artificial Intelligence ecosystems (UNESCO, 2021b).

Conclusion

Artificial Intelligence has come to stay and has a vital role to play in communication research and other related activities, unlike many scholars who think that Generative Artificial Intelligence in its entirety harmful to education and research, the ethical consciousness of researchers is invaluable. Although the applications might be insensitive or scarcely sensitive to research principles at this early stage, the tools are not inherently harmful to the academic community as many scholars might have thought (Taddeo & Floridi, 2018). Hence, serious laws, ethical principles and policies need to be formulated to guide the blameless integration of Artificial Intelligence into communication research for meaningful contribution to the haste, ease, quality and cost-effective research. (UNESCO, 2021a).

The relative newness of GenAI tools suggests the need for sensitisations, promoting AI literacy, training users and setting usage parameters are crucial for the ethical deployment of the technologies in the research domain for good! More so, a collaboration of all relevant players within and outside the academia to employ all necessary and viable measures to forestall misuse of the tools by educationists, tech experts, and conglomerates among others and sanctioning unethical users across all levels is significant to the smooth and healthy use of the technologies. These and other cogent steps nurture responsible, transparent, legal, ethical and helpful deployment of AI technologies for research at all levels of education particularly, tertiary institutions (Peters et al, 2020). Historically, innovations such as Radio, Television and the Internet faced the same challenges in their novelty day, particularly, they were seen as

usurpers of the previous inventions that have already become part of people's lives and societies (Neuman, 2010). However, today, all these technologies cohabit symbiotically with one complementing the work of the other, in a manner that, the AI technologies should be observed, learned and embraced for maximum exploitations of the goods of the technologies while, carefully respecting academic research etiquette, rights of other research, Institutional and societal rules and regulations (UNESCO, 2021b).

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