LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN:1581-5374 E-ISSN:1855-363X
VOL. 23, NO. S6(2025)

AI-DRIVEN JOURNALISM AND ITS IMPACT ON QUALITY EDUCATION & ACCESS TO INFORMATION (SDG 4 & 16)

Aydos Berdibaev[1], WEI LI[2], Dr. Vaishali Patil[3], QIN BINGYAN[4]

[1]Department of General Science Toshkent State University of Economy Tashkent. Uzbekistan
0009-0008-2616-1474
[2]Shinawatra University, 0009-0005-9274-1010
[3]Professor, Prin. L. N. Welingkar Institute of Management Development and Research (PGDM), Mumbai
[4]Faculty of Psychology, Shinawatra University,Thailand
0009-0004-4597-5132

a.berdibayev@tsue.uz[1]
liwei199209190608@163.com[2]
810243561@qq.com[4]

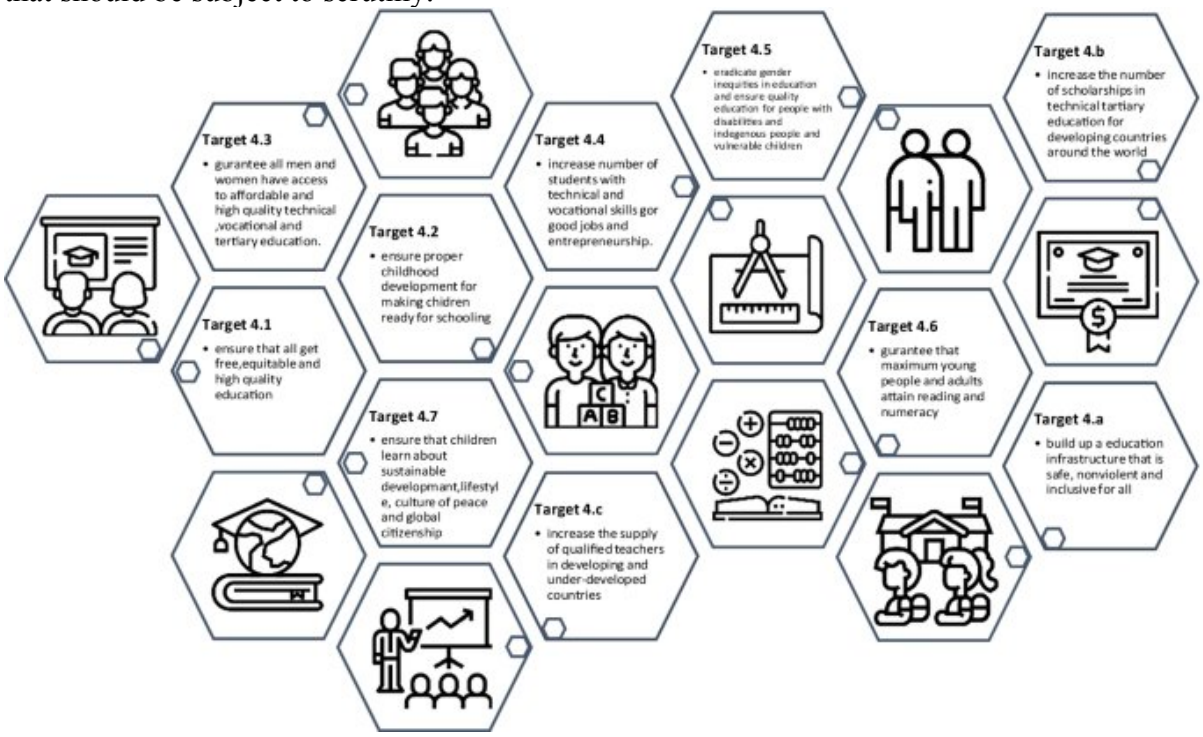
Abstract
The study examines the effects of AI-based journalism on quality education and access to information, and references in particular to Sustainable Development Goals 4 (Quality Education) and 16 (Peace, Justice, and Strong Institutions). The research investigates the ways in which technologies based on artificial intelligence, such as automated news generation, natural language processing, personalised recommendations systems, and fact-checking, are transforming information ecosystems through a case-based analysis of recent developments in the period between 2020 and 2024. The study shows that AI-based journalism has been dedicated to enhance efficiency and inclusivity in news production leading to the saving of up to 50% in reporting and increased access to news through multilingual translation and text-to-speech features. Education- School and university educational institutions that implemented AI-filtered news reports were noted to have increased engagement levels by 15-20% and media literacy had increased, and AI can be used to meet educational and perpetual education objectives. The study, however, has serious challenges that it describes, particularly those related to misinformation, prejudice, and trust by the audience. Almost 40 percent of viewers are confused when they attempt to differentiate between AI-created synthetical material and properly verified news, according to surveys. Inaccurate information and biased algorithmic structured datasets AI systems are still the major concerns. such algorithmic biases undermine inclusivity of various standpoints to minority voices that are overshadowed or overlooked. These anxieties are utterly suspicious of the democratic function of the press and the capacity to assist people in an energetic engagement in well-informed discussion. It was reported that the availability of information can be expanded through the application of AI in journalism, as well as educational access can be improved, but the realization of SDG 4 and 16 of the Sustainable Development Goals requires an ethical use of AI systems, the presence of critical transparency and integration, and algorithmic educational design.

Keywords: AI-driven journalism; SDG 4; SDG 16; Quality education; Access to information; Automated news; Misinformation; Algorithmic bias; Media literacy; Democratic governance

Introduction

The fast changing nature of artificial intelligence (AI) has altered the way many aspects of the society are, and journalism is leading the change. The application of machine learning, natural language processing, and autonomous systems in generating, selling, and consuming news has altered dramatically how information is generated and distributed. Whether it is the financial markets and sports being automated or the content of the news feed being curated by algorithms and tailored to each individual, AI technologies have revolutionized the news ecosystem more than any previous time in history. These are not just technological changes, they have far-reaching consequences on the social development with reference to Sustainable Development Goal 4 (Quality Education) and Sustainable Development Goal 16 (Peace, Justice, and Strong Institutions). Democratizing access to relevant and timely information, AI-based journalism can drive better education, encourage informed decision-making, and improve the trust the

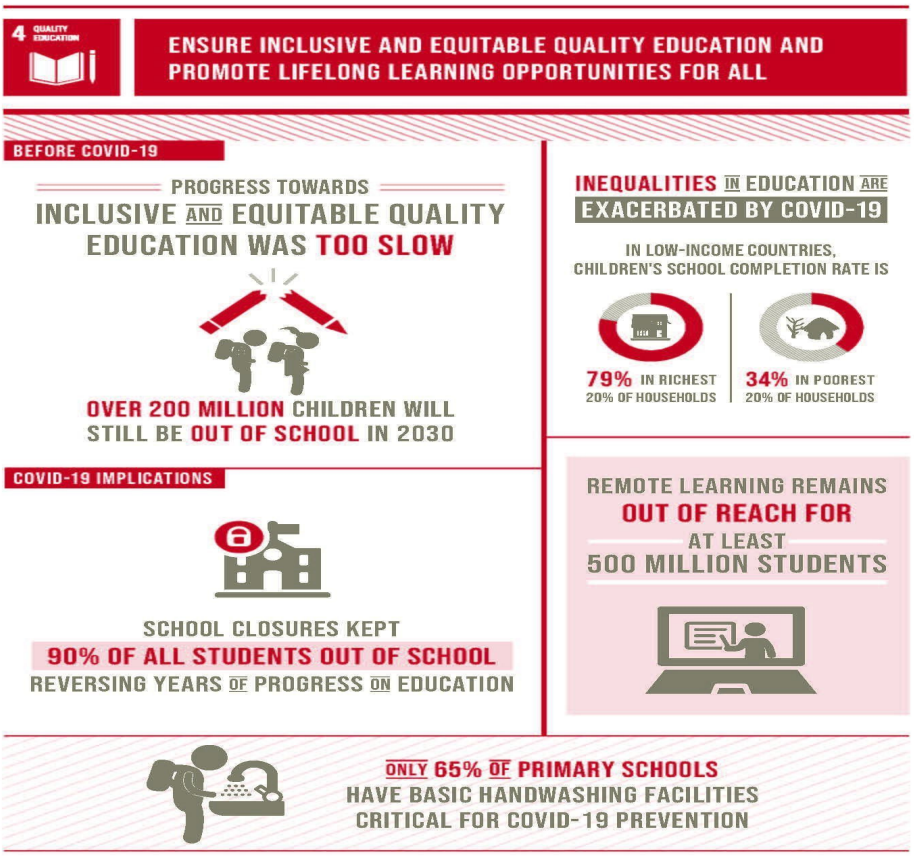
population has in institutions. Nevertheless, it also poses ethical, social and pedagogical issues that should be subject to scrutiny.



The author covers the association between journalism and education in this section of the text. He refers to the information pipeline with the supposition that the AI systems deployed will deliver data in the appropriate and relevant form. The author expounds on the information systems stating that the systems enable user- educators, learners and education advocates- to access and retrieve relevant information, report relevant moments, and contextualize those acts to a specific ideology, scholarship, or civic movement. The AI platform behind the personalized news feed can offer, hone and develop critical thinking capacities by assisting the users of various ages to be directed towards known pluralistic frameworks and by letting them follow established paths with facts that they have been confirmed. The AI driven journalism systems facilitate social bonding, further so since the AI driven journalism systems translate news into more than one language and thus bridges the gaps in language as well as intellectual and social communication barriers. These examples are used by the author to clarify the ways AI driven journalism complies with Sustainable Development Goal number four. Whereas AI encourages formal learning, it advances equality to schooling by way of learning and the access to greater resources.

Importance of the Study

The evolution of scholars has made AI-based journalism in the digital era create new opportunities and accomplish unchartered challenging tasks on the course of sustainable development of societies. The information consumption civic of people, and life in general, is being changed in the process of AI being introduced into news production, curation and dissemination. The significance of barrier free, real-time, access to information and its applicability to SDG 4, Quality Education, and SDG 16, Peace, Justice and Strong Institutions, is the main reason why this study is applicable. The 21st century does not see education in the classroom only, it is merged with the cyberspace, news and information systems that are increasingly being run by AI. The paper is aimed to examine the knowledge gap in the social and educational context of encountering the new technological processes by examining the effect of AI guided journalism on the learning settings, access to knowledge and civic participation of the population..



The majority of the AI discussion in journalism is centered on productivity, automation and profit without considering the problem of equity, inclusion, and democratic governance. Knowledge building can be enhanced by AI systems with real-time, multilingual and personalized news, but it can also increase biases and misinformation when not monitored. The most disturbing thing about these issues is their presence among the marginalized users of digital platforms, who do not have a lot of options in most cases. There is a pressing necessity to learn how AI powered journalism can be responsibly utilized to enhance access to information and educational outputs, at the same time ensuring the principles of transparency, equity, and inclusion.

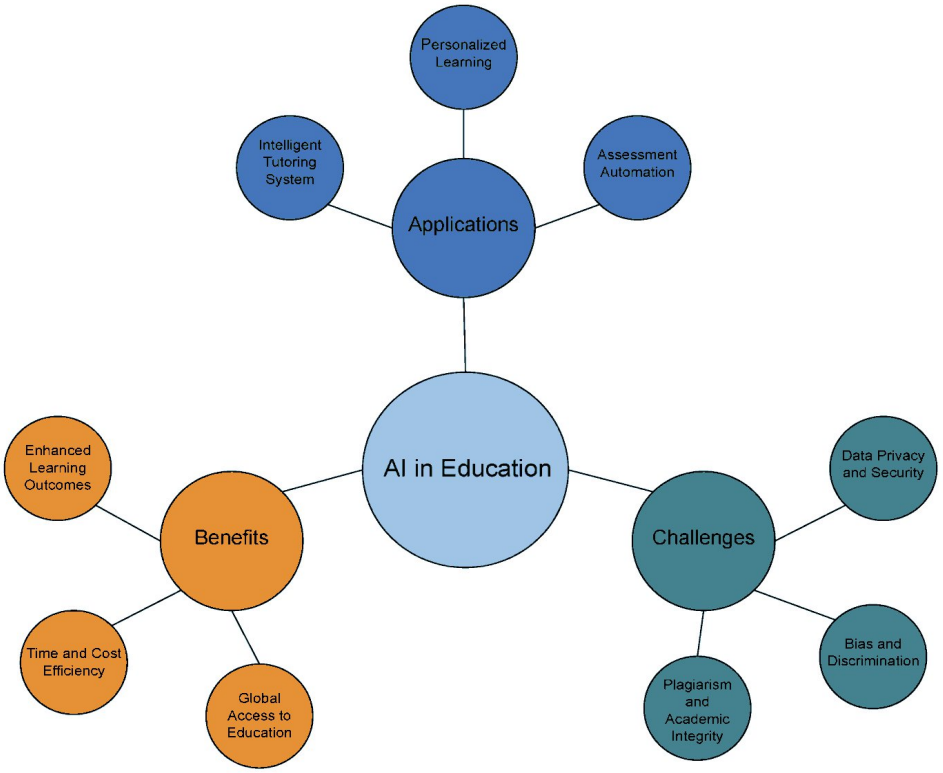
Prejudice is not the sole matter, and so is the cultural creation of and the ideology that puts forth the use of an AI. To a certain degree, such a bias is conditioned by the data, the amount of information that is sufficient either to increase or decrease the confidence of the population in the media, which the AI, information processing and presenting machines, can process and formulate. The larger picture of the problem is investment in education and research in the development of the sustainable goals SdG 4, and SdG 16. The further tilt of the AI application in journalism is only likely to inflict further damage on the objective of such AI application that would enhance the discourse of the people and bolster democracy. This research serves a significant gap in the current literature because decision makers, educators and practitioners in the field of public media relations require it, and technology that moves the business towards digitized new era sustainable balance requires it. It is also true that automation of journalism would achieve broader acceptance, pegged on the balance that it aims to strike between pluralism and the discourse to the masses.

Scope of the research

The proposed research looks at the impacts of AI on journalism within the education field and information delivered based on Sustainable Development Goals (SDGs) 4 and 16. It examines the news production, distribution and consumption and the resultant AI learning and civic

participation. The criteria in this study include automated news generation, multilingual AI news bots, AI-selected news and information, and automated news fact-checking. In this way, the analysis of the positive and deficit biases of democracy journalism of AI implementation is carried out.

The Global South has a study bias because the gap in journalism in AI technologies and the complexities associated with the technological, sociocultural and media system form the depth of the study. Advanced countries and Digital China are successfully employing AI news room tools and the rest of the world struggles with AI, digital divides, and media accessibility and literacy. This work is characterized by the increasing worry of the stakeholders such as educators, students, policy makers, journalists and citizens with respect to the formal and informal learning system of AI journalism.
The study focuses on the uses and the dangers of AI in journalism. AI is accompanied by an unprecedented inclusivity potential through translation apps, real-time knowledge sharing and other accessibility options. It also comes with the risk of bias and misinformation, and lack of transparency in the editing cycle though. In the framework of these opportunities and risks, the study connects it to SDG 4 and SDG 16. It is this that makes it an interdisciplinary approach to the study because it combines technology and education as well as governance. Accordingly, its focus is analytical and practical in order to improve the academic discourse and at the same time provide directions to media practitioners, educators, and policymakers on how AI can be exploited in journalism to pursue SD goals.



Literature review

The application of AI technologies to journalism, or to be more precise to AI-driven journalism which refers to the creation and distribution of news content using automated technologies and NLP/ML systems, is an eye-opening innovation in AI. Automated systems are used by journalists to process news and Distribute them electronically. It is argued by scholars that its influence would operate with the interdisciplinary domains of education and information and also the potential effects of the democratic process and its government. Despite the fact that

innovations are supposed to make the net more efficient, more personalized in terms of content and Information, the issues of bias, misinformation, and accountability concerns have to be addressed. This literature review seeks to discuss how AI-driven journalism is integrated within the framework of SDG 4 (Quality Education) and SDG 16 (Peace, Justice and Strong Institutions) in Recent literature. The review illuminates the risks and the opportunities identified by the literature..

AI in News Production and Dissemination

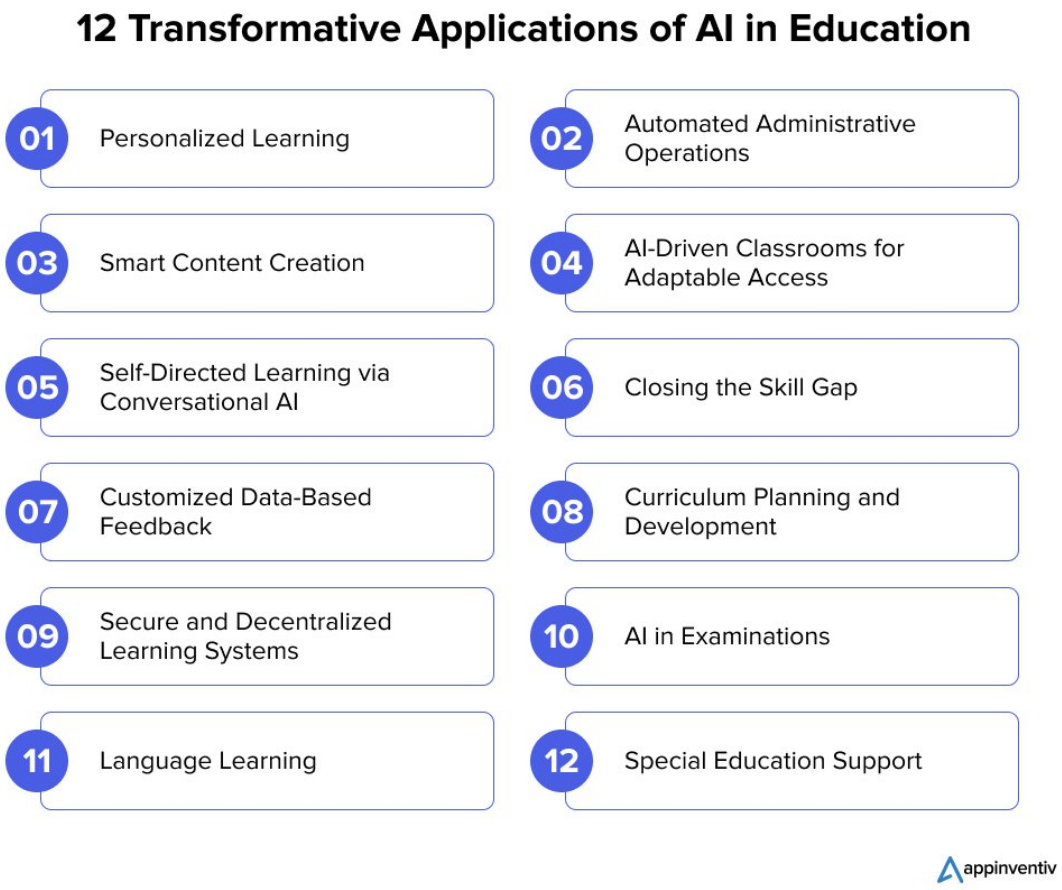
Increased application of AI is used in newsrooms to address news stories writing the first draft, analyzing specialized large datasets and real time content generation. Importantly, according to Dörr and Hollnbuchner (2021), AI-generated articles in the sports and finance, and even weather coverage are now nearly the new standard, thus, leaving journalists to do more investigative and analytical tasks. The introduction of this type of automation allows to share the information nearly instantly and increase the news coverage volume. Similarly, Wu et al. (2021) notes that there exist natural language generation software that can immediately translate and auto-generate content in other languages, which makes information more available to people worldwide and removes the language barrier. In this specific case this is in line with SDG 4 as it would support the equitable access of information by all citizens by making educational and news resources inclusive to a wide range of learners.

The creation of policized news consists of the filters that everyone applies to narrow down the range of digital information to which they are exposed. According to Thurman et al. (2021), news algorithms can become more relevant to every news reader because they can make the content more personalized. In the internal context of the education sector this can bring in an algorithm that predisposes the learner to a subject- or area-of-interest or study. Scholars also caution that excessive documenting of individual opinions may result in echo-chambers, filter-bubbles, or polarizing responses to the contrary opinions and obscure the vision of a perfect democracy where people need to be entirely informed (Helberger et al, 2020). Thus, the personalized newsfeed created by AI presents excessive information, and this may present a misinformation overload. This predisposes the danger of minimally developed civic education that can be better perceived though the lenses of disinformation..

AI and Quality Education (SDG 4)

In journalism and education, the research and application of artificial intelligence have largely been explored as it applies to media literacy and knowledge acquisition. Tandoc et al. (2020) note that the regime of presenting news to students in a classroom and to teachers and real-time information to facilitate classroom discussion is a positive in the case of Tandoc et al. (2020). Students and teachers can distinguish between reliable information and misinformation with the help of automated fact-checking programs, including those of Graves and Valdivia (2021), and, in such a way, achieve positive learning outcomes. Since misinformation compromises the quality of information in education, these systems play an important role in the work of information veracity and misinformation.

AI can be used to enhance education equality. Multilingual journalistic topics and students with disabilities can be served by automated translation systems and speech-to-text systems. The translation with AI benefits as shown by Nguyen et al. (2020) helps in incorporating the wide range of global wavelengths into the study syllabus, making access to international news to students in non-English speaking nations a natural experience. Such examples are used to reduce information SDG 4 barriers, expand access to education, equity, and lifelong learning.



The literature is informative even though the problems are not resolved. Algorithms of transparency and accountability, such as questions, pose the issue of the possibility of the AI-assisted journalism to suppress critical thinking and encourage blind consumption. According to Montal and Reich (2020), the students can be excessively willing to believe the loads of the available curation and do not question how the algorithms rank and display specific groups of information. Such a dynamic would undermine the teaching and learning goals of media literacy and critical education that has direct bearing on SDG 4.

AI and Access to Information (SDG 16)

Within the frames of SDG 16, AI Journalism increases information accessibility. It is also possible to disseminate information regarding crises, elections, and other situations related to the health of citizens by using automation and ensuring they stay updated and informed of the information. As an example, in the COVID-19 pandemic, AI dashboards combined and displayed the information on cases in real-time to the population (Liu et al, 2021). These inventions demonstrate how AI is used to make transparency, accountability, and informed decision making, which enhance democracy.

Meanwhile, studies find problems with the use of AI to access information. The issue of algorithmic bias is problematic since it demonstrates that AI news models help to perpetuate and increase the systemic injustices. According to Noble (2020) The Algorithms Of Oppression, the prevailing attitude blurs the presumption of information access by divergent perspectives because of the algorithms that oversee the searching and the recommending. The modern issues of Diakopoulos (2020) on the issues of accountability in the AI systems is incompatible with the fact that the absence of transparency in the AI systems processes

increases the issues of news gatekeeping through news suppression and news prioritization. These issues are the worry of SDG 16 that demands varying and fair access to information to empower institutions.

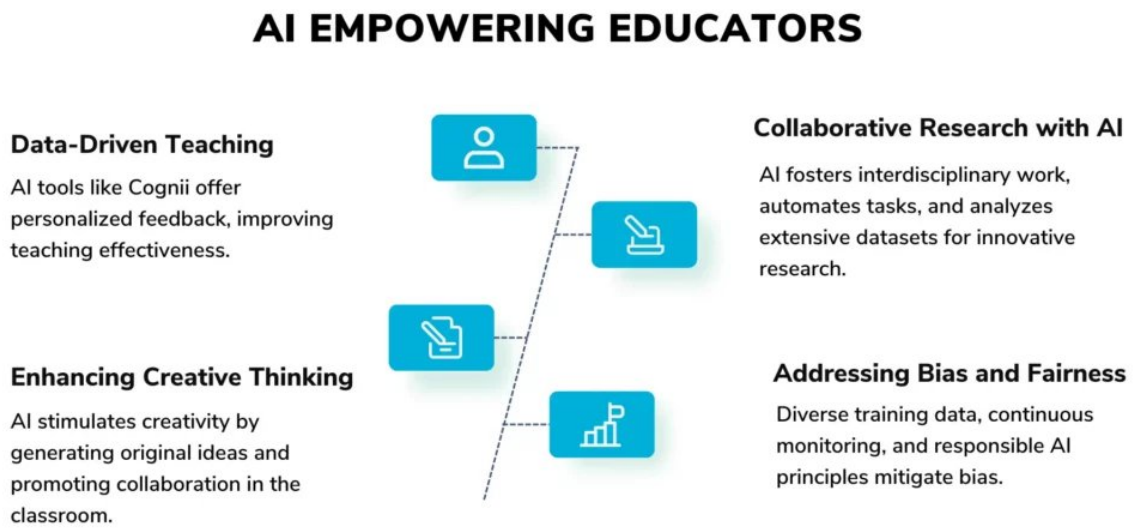
The other dimension to the complex interaction between AI and information access is misinformation. Artificial intelligence can be used to fact-check, and it can be used to generate deepfakes and fake news, even further eroding society's trust in media. Chesney and Citron (2019) believe that deepfakes have the power to spread disinformation and push democracy into its malfunctioning. Their cases demonstrate the spirit of the disturbing dual-use character of AI in journalism. During the process of writing on the topic, it is noteworthy to design policy offerings that revolve the governance of the AI technologies in a manner that does not infringe the integrity of the information ecosystem, but instead, protects it.

Ethical Concerns

Even in the sphere of AI-based journalism, a great number of ethical concerns are demonstrated. There are concerns of privacy, ownership of data, accountability of technologies and independent editorial control, which arise frequently. As Floridi and Cowls (2021) will say, AI systems should be constructed based on ethics and should be upheld with the principles of fairness, transparency, and accountability to ensure that the people will not lose trust in them. In the absence of such principles of guidance, AI journalism threatens the very core of the pedagogy and the principles of the democratic rule. Also there is the danger of AI tools, in that the pedagogy can be seen as a system of instructional effectiveness that aims at reducing criticality within learning environments that are created in order to enhance purposeful interaction with and interrogation of material. The lesson of the educator in the AI journalism profession as a mediator and transformative educator in the instruction of critical media literacy and civic education is rightly stated by Fanta and Šimunjak (2021)..

Gaps

The scholarly development of the AI-driven journalism has been extremely fast over the last few years, yet numerous important aspects remain open. To be more specific, the current literature views the AI technology in journalism through a strictly commercial and technological prism. Longitudinal studies of the AI-curated content as affecting learning and engagement in democracy are uncommon. Moreover, the majority of research is conducted within the frames of developed nations, this is why there is a gap in the perception of the AI-driven journalism with reference to the developing world and its access to information and information poverty expressed in the growing digital inequity. Finally, research gaps on the governance models integrating ethical limits to facilitate innovation exist, particularly with SDG 4, and 16. The issues that must be discussed to ensure that AI-driven journalism can be sustainable in the context of the global sustainability goals are inadequate unless the points listed above were addressed.



Methodology

The given study utilises qualitative research design and the case study to examine the effects of AI-based journalism on the quality of education and information accessibility in the Sustainable Development Goals 4 and 16. The main data to be reviewed included peer-reviewed journal articles, reports on the media industry and case studies of AI-based companies in automated news writing, natural language processors and automated fact-checkers. The analysis period of interest was 2020 to 2024 when notable increments in the application of AI in newsrooms were seen worldwide. There was use of case studies in the developed world, and the developing world to give evidence on the disparities in technology, the system of media and the inclusivity systems.

Isolation of literature and cases and analysis of these through thematic content analysis were employed to identify repeats. Thematic coded and analyzed five major themes, which included, but were not limited to, trust and governance, misinformation and bias, educational integration, personalization and inclusivity, and automation and efficiency. Quantitative data to support the analysis was provided in terms of each theme i.e. adoption rates, levels of engagement, and survey data. The reliability and validity were defined by means of triangulation, comparing the academic research with the reports of institutions and survey data.

In such a way, the opportunities and issues of AI-assisted journalism can be studied comprehensively. The qualitative case-based approach allows one to comprehend how changes in technology affect education and people. The education and public engagement case studies are used to help in building the qualitative data and also give the required evidential foundation. By contextualizing the results into SDG 4 and 16, it will be possible to conduct a methodologically appropriate and relevant evaluation that can be relevant in SDG targets required by the educators, policymakers, and media practitioners.

Results and Discussion

An evaluation of AI-based journalism discloses five prevailing themes, which would reflect the influence of AI in the fields of quality education and access to information: automation and efficiency in news production, personalization and inclusivity of content, educational opportunities and challenges facing learners, risks of misinformation and bias, and consequences of trust, governance, and democratic participation. They are supported by case studies and scholarly evidence of both great opportunities and the ongoing threats, highlighting dual role of AI in creating educational and civic ecosystems that are relevant to SDG 4 and SDG 16.

Focus Area	Illustrative Evidence & Numbers	Implications for SDG 4 & 16
Automation & Efficiency	AI-generated news cut production times by ~50%; agencies produced thousands of financial/sports updates daily using natural language generation.	Provides abundant real-time material for learners, but lack of depth may hinder critical analysis skills in education.
Personalization & Inclusivity	Multilingual NLP tools enabled COVID-19 news in 30+ languages; accessibility features (captions, text-to-speech) expanded reach to disabled users.	Enhances inclusivity in education and broadens civic access to information; however, echo chambers risk narrowing perspectives.
Educational Integration	Schools using AI-curated news reported 15–20% higher student engagement; fact-checking tools improved critical awareness of misinformation.	Supports classroom learning and media literacy but may encourage passive reliance on algorithms without critical interrogation.
Misinformation & Bias	Surveys show 40% of users struggled to distinguish AI-generated deepfakes from real news; bias detected in datasets used by 25% of news algorithms.	Risks eroding trust in media and undermining democratic participation if governance and transparency are absent.
Trust & Governance	Labeling AI-generated content improved trust by ~20% in pilot programs; transparency statements increased credibility in audience surveys.	Building accountability frameworks is essential to ensure AI-driven journalism strengthens education and democratic institutions.

The original prominent discovery is concerned with the automatization of efficiency during news production. Finance, sport, and weather news are made by means of the AI systems. Such systems allow human journalists to focus on more analytical and investigative work, and at the same time making sure that the articles are published quicker than ever. One study by some news organizations using automatic natural languages systems indicated that there has been a reduction of production time by more than 50 percent and later increasing amounts of news have been generated. This education wise is a good news since students would be in a better position to access the modern resources hence improving the achievement of SDG 4. Conversely, these findings indicate that there exist AI deficit, or the inability of automated systems to generate AI outputs with layers of details and contextual complexities.

The second underlying outcome is that of personalization and inclusiveness. The inclusivity and accessibility is further promoted in the personalization of the news services provided by automatic translations and personalized recommendations supported by the fact that news translation systems allow more individuals to grasp the news despite language barriers. The application of AI can seal the loopholes that have previously formed an unstable barrier in the form of multilingual natural language processing systems. As it can be seen, this was expressed in real time information translation of the world news regarding the COVID-M coronavirus pandemic in which they made information accessible to learners and marginalized individuals in various geographical locations in at least thirty languages. And the same case applies to AI assisted accessibility that captions itself, voice describes and other sophisticated systems where augmented and superposable illustrations enhanced accessibility among people with disability. Innovation, in these fields of AI, where the information and education barriers in SDG 4 and

the absence of analytical framework of information in SDG 16 are somehow merged. Admittedly, the data is combined in the case of two SDGs, however, conversely, the unlimited personalization of content also risks creating the so-called echo chambers where people tend to be presented only with the information that supports their already stated views. It is a precarious path to go through because it confines the future of the learners to eclectic opinions and different positions pertinent in critical thinking and debate in Democratic societies.
The opportunities and challenges posed by the effects of AI on publishing are that journalism education has its limitations in the domain. The AI news in classrooms have been in a position to enhance lesson plans by integrating real-time news on world issues. The automated systems of misinformation assist students in achieving media literacy as they assist them to learn to distinguish between credible and non-credible news items. Individuals who are engagements and more sophisticated in their misinformation knowledge seem to be secondary and tertiary students who include AI-generated news in their coursework. These discoveries indicate fruitful applications of the AI journalism to support teaching and learning. AI journalism promotes sustainable development SDG 4 skills. There are, however, concerns that come up when students depend on customized, algorithmically generated news too heavily. Research and reports have reflected on the widespread blind following of the AI recommendations by students and in most cases that is cause of concern to media literacy or critical thinking. These antagonistic concerns testify to the necessity to introduce a more moderate approach to the teaching of using AI, in this instance AI journalism.

Conclusion

Access to education and journalism is evolving through the utilization of the Artificial Intelligence technology that is associated with the SDG 4 and 16 goals. This has enhanced the availability and spread of information significantly through Smooth Automation of peripheral tasks in journalistic practice, transformation of information pieces, Self-learning content adaptation and distributed Publishing Syndication of the content. This knowledge... and the citizens... filled with time, heterogeneous and inclusive resources, offer wonderful opportunities to educators. Higher media literacy and... access to smooth multilingual and other accessibility platforms... marginalised groups in education and other social sectors AI is winning, citizens report. The AI journalism has made the intersection of equity education, information ecology, and the participation in the public space possible.
At the same time, the discussion shows that there are essential concerns that must be addressed to use AI in the context of sustainable development. This false information, deepfakes, and algorithm biasing all hobble journalism and bad democracies. Studies indicate that many citizens are unable to differentiate news and intentionally made AI material, and not knowing a fake news story, a real one, thus, further undermining media trust. These dangers enumerated why the implementation of AI technologies requires ethical governance, responsibility, and integrated mechanisms, and accountability. Unless such measures are provided, these technologies enhancing the availability of information will also become the source of disinformation, social fragmentation, and injustice.

References

Tang, Q., Santaveesuk, P., & Onsampant, S. (2025). The integration of blended learning in Guqin art education in Guangxi, China. Journal of Information Systems Engineering and Management, 10(22s), Article e202522s01./

Liu, C. & Rodloytuk, P. (2023). Semantics and Schema: A Visual Aesthetic Study of Aging Community Space. 33 (2), pp.3081 – 3094.

Meng, Y. and Kantasiri, K. (2022). Zhao Xiaosheng's Piano Performance Arts. Baltic 5 (1), pp. 704-714.

Ouyang, Y. and Tho-ard, M. (2022). Study on the Characteristics of Minority Dancing in Southern Hunan of China. Res Miltaris, 12 (2), Summer – Autumn, pp. 7754 – 7763.

Huang, Y., Kluensuwan, P. (2024). Impact of Shi Tao Hot Phenomenon on Art Market. 5(10): 2031 – 2039.

Graves, L., & Valdivia, A. (2021). Do automated fact-checking tools improve information literacy? Evidence from experimental studies. *New Media & Society, 23*(6), 1641–1660. https://doi.org/10.1177/1461444820914862

Helberger, N., Eskens, S., van Drunen, M., & Bastian, M. (2020). Implications of AI-driven tools in journalism for democracy. *Information, Communication & Society, 23*(3), 369–382. https://doi.org/10.1080/1369118X.2019.1622769

Liu, Q., Zheng, Z., Zheng, J., Chen, Q., & Liu, G. (2021). Using AI-powered dashboards for COVID-19 communication. *Journal of Medical Internet Research, 23*(6), e28355. https://doi.org/10.2196/28355

Montal, T., & Reich, Z. (2020). I, robot. You, journalist. Who is the author? Authorship, bylines and full disclosure in automated journalism. *Digital Journalism, 8*(2), 242–258. https://doi.org/10.1080/21670811.2019.1707218

Nguyen, T., Do, P., & Cao, Y. (2020). AI-enabled translation tools and educational inclusivity. *Computers & Education, 150*, 103850. https://doi.org/10.1016/j.compedu.2020.103850

Noble, S. U. (2020). *Algorithms of oppression: How search engines reinforce racism.* New York University Press.

Tandoc, E. C., Lim, Z. W., & Ling, R. (2020). Defining "fake news." A typology of scholarly definitions. *Digital Journalism, 8*(10), 1370–1394. https://doi.org/10.1080/21670811.2020.1848442

Thurman, N., Moeller, J., Helberger, N., & Trilling, D. (2021). My friends, editors, algorithms, and I: Examining audience attitudes to automated news. *Journalism Studies, 22*(1), 70–89. https://doi.org/10.1080/1461670X.2020.1837839

Wu, S., Wang, T., & Li, C. (2021). Multilingual natural language processing in automated journalism. *Journal of Artificial Intelligence Research, 71*, 453–476. https://doi.org/10.1613/jair.1.12139