ISSN (Online): Applied

International Journal of Educational Research and Library & Information Science

Vol. 1 | Issue 1 | October - December 2025
Available online at: https://ijerlis.com

Ethical and Privacy Challenges of Artificial Intelligence in Educational and Library Information Systems

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Abstract

The rapid integration of Artificial Intelligence (AI) into educational environments and library information systems has transformed learning, research, and information access through personalization, automation, and data-driven decision-making. While these developments enhance efficiency, engagement, and service delivery, they also introduce complex ethical and privacy challenges that require systematic examination. This paper critically explores the ethical implications of AI adoption in education and libraries, with particular emphasis on privacy, autonomy, fairness, equity, transparency, and governance. Drawing on contemporary literature and ethical frameworks, the study analyzes how algorithmic decision-making, learning analytics, recommender systems, and intelligent tutoring tools affect learners, educators, librarians, and institutions. It highlights tensions between personalization and privacy, efficiency and human agency, and innovation and social justice. The paper further examines issues of bias, accessibility, and the digital divide, emphasizing the risk of reinforcing existing inequalities if AI systems are poorly governed. Governance mechanisms, stakeholder participation, institutional policy development, and fairness auditing are discussed as essential components of responsible AI deployment. By synthesizing ethical principles with methodological approaches such as impact assessments, evidence-based evaluation, and transparency measures, the study proposes a human-centric pathway for ethical AI adoption. The findings underscore the need for continuous oversight, inclusive design, and privacy-conscious practices to ensure that AI serves educational and library missions without compromising fundamental rights and values.

Keywords: Artificial Intelligence; Educational Technology; Library Information Systems; Ethics; Privacy; Algorithmic Fairness

1. Introduction

Artificial Intelligence in education and library information systems enhances learning and service delivery by providing timely and relevant information. Substantial research has identified ethical concerns associated with AI in these contexts, but little attention has addressed privacy. The two aspects may be interrelated. Privacy issues in education and libraries often relate to improved hits on information-retrieval systems. These improvements frequently occur at the cost of privacy, reflecting a potential tension between the two domains. To understand and examine the challenge of privacy, core concepts and stakeholder roles of AI in education and libraries require analysis.

Emerging AI-based applications and technologies employ numerous core concepts, including algorithmic decision-making, automation, and personalization (Lakkaraju et al., 2024). Machine-learning algorithms employ feedback from diverse sources, often determining when users require

information. Library services, intelligent tutoring systems, and recommendation engines constitute the primary focus of AI in these domains. Bibliometric analyses and learning-analytics systems trace, monitor, and evaluate learning interactions, while library catalogues track patron searches. Information-systems architecture also determines governance-technology boundaries between institution, vendor, and user.

Within the broader category of automation, two widely examined subcategories are algorithmic decision-making and recommender systems (Bubinger & David Dinneen, 2021). Recommender systems are distinguished from traditional information-retrieval algorithms, which return results not tailored to the user. Privacy-related issues arise from the data required to tailor the recommender and the feedback mechanism permitting continuous personalization. Algorithmic-decision-making examples include automated suggestions of suggested hyperlinked documents and models for predicting student grades in educational contexts or library situations. AI-enhanced learning, discovery, and access remain at the forefront of schooling and scholarship, prompting professional societies, advisory groups, and researchers to devote greater attention to ethical frameworks and privacy-oriented safeguards than envisaged by earlier AI enthusiasm (Latham & Goltz, 2019).

2. Conceptual Foundations of AI in Education and Libraries

The rapid proliferation of AI tools in various sectors has brought about major changes in the way daily tasks are conducted and has ignited interest in their characterization, concerns, and potential future directions. In the education sector, AI provides timely, tailored guidance to learners, aids teachers in identifying misconceptions, and frees time for routine tasks. Libraries offer recommendation systems for literature and information, improving the discovery of materials. Such tools raise ethical issues regarding student and patron autonomy, fairness in receiving guidance, and potential misuse, prompting research to clarify their ramifications on educational and library settings (Radanliev et al., 2024).

AI encompasses systems endowed with human-like cognitive capabilities to perform language and image processing, reasoning, planning, and interaction with the real world. The magnitude of AI, educational content, and learning materials addresses essential needs, yet the mid-20th-century vision of automated learning has only partly materialized in daily educational practice (Latham & Goltz, 2019). Traditional information systems disseminate knowledge and information according to custom selected rules, with little intervention after deployment. AI assists individuals in making informed decisions for personal learning, resource acquisition, and more, thus joining configuration-complex systems. Consequently, instead of solely providing knowledge and information shaping (like traditional systems), it extends support for learning and acquisition through feedback intervention and additional personnel configuration (an essential component in pedagogy) (Lakkaraju et al., 2024). The capacity of pedagogical systems to handle such matters defines the boundary of a pedagogical information system.

3. Ethical Frameworks and Governing Principles

Ethical considerations of artificial intelligence in education and libraries derive from normative frameworks sustaining human autonomy, justice, and transparency (Korobenko et al., 2024). Three core principles pertain to learner and library patron perspectives: respect for rights and agency, equitable access to opportunities, and amplification of human capabilities. Ethical concerns extend to a latency dimension, with a legacy of human experiences (versus contemporary activity data) amplifying or diversifying risks.

Respecting human autonomy, beneficence, and non-maleficence emerges as a prominent ethical framework for artificial intelligence in education and library information systems. These principles are challenging to implement and heterogeneous in normative basis. Merging autonomy (informed consent, agency, risk governance) with beneficence and non-maleficence (harms to wellbeing or dignity) raises normative and operational questions. Determining the proper boundaries of agency and the role of data retention in pedagogical and library settings, characterizing specifics of educational or

referential wellbeing, and highlighting trust or security as primary learner or patron concerns require further examination.

Educational and library systems cultivate fairness and equity, safeguarding vulnerable populations from discriminatory algorithms. Implementation challenges distinguish types and modalities of injustices, representation or process biases, and methodological deficits in identifying and mitigating algorithmic bias. Accessibility—especially for individuals with cognitive disabilities—similarly requires attention, as artifacts developed with attention to the principle remain under examined; automatic readability assessment and diverse text-to-speech operability illustrate relevant challenges. Equity concerns extend to differential resource endowments, data richness, and access to generic services; sustaining conditions under which underserved populations benefit merits recognition.

Technical and administrative safeguards boost accountability by enhancing operational transparency and clarifying sources of agency within the educational and library ecosystem. Transparency encompasses two dimensions: the capacity of individuals to comprehend algorithmic logic (explain ability, interpretability) and the availability of audit trails detailing agent activities during system operation. Accountability—ensuring that individuals responsible for decisions acted suitably—presents a parallel challenge. A formal consideration of safeguards involves specification of accountability targets and configuration of transparency measures correlatively; providing auxiliary documentation augmenting user-facing explainability and outlining channels for reporting accountability breaches aids operationalization.

Artificial intelligence mandates a human-centric paradigm rooted in empowerment and agency, augmenting individual capabilities rather than supplanting them. The technology enables more equitable and reliable targeting of individuals for freedom of choice and support of collaborative learning scenarios; constraints that suppress exploration and experimentation forestall the realization of fundamental human faculties by possibility. Enabling wider availability of material and flexible pathway design enhances curricular diffusion, yet arrangements that disallow proactive engagement of secondary mechanisms—such as consultation with an instructor or reference librarian—risk reducing rather than amplifying agency.

3.1. Autonomy, Beneficence, and Non-Maleficence

Implementing AI in education offers substantial benefits, but ethical and privacy concerns accompany these powerful tools. The introduction of AI technology permits innovative, individualized learner interactions and is evident in intelligent tutoring systems, assessment programs, and homework services. Data-driven applications have proliferated in library discovery and recommendation systems. However, these advancements are clouded by uncertainties about student and patron well-being, privacy, potential anxiety, algorithmic bias, security, data stewardship, and equitable resource distribution. Who determines acceptable risks, which opportunities may be forfeited in pursuit of safety, and who bears the consequences if harm does occur? The profound tension between promoting growth and protecting welfare is critical to all AI applications in education and libraries.

3.2. Justice, Equity, and Fairness

Bias in artificial intelligence (AI) can stem from various sources and disproportionately affect particular groups, potentially leading to unjust outcomes. Systems may promote the interests of privileged populations while neglecting or compromising those of marginalized communities (Leavy et al., 2020). The pressing need for equitable access to information and knowledge motivates inclusive design that mitigates systemic bias, thus fostering fairer AI adoption (Lakkaraju et al., 2024). Research identifies bias and discrimination in AI, often demanding novel ethical frameworks; however, foundational principles of social justice remain vital and can guide improved data collection and curation practices. These challenges compel consideration of justice, equity, and fairness in deploying AI educational and library information systems.

Equity extends beyond mere equality to emphasize fairness in proactivity and compensation for past disadvantages; a just outcome may not equate to an equal one (Latham & Goltz, 2019). Consideration of equity entails interrogating knowledge, comprehension, access, service availabilities, and resource levels; equitable access to education, read-aloud services, information, and digital resources underscores the domain's significance. Consequently, proactive measures to guarantee equitable learning opportunities for all and adequate resource allocation for vulnerable populations are crucial.

Perceived equitable treatment does not wholly capture fairness; even a suspicion of bias, exclusion, or insufficient support may avert individuals from educational institutions or libraries. Comprehensively addressing these concerns preserves AI's transformative potential in personalized learning, content adaptation, and remote tutoring—especially for individuals in low-opportunity settings. Commitment to fair and just outcomes consequently determines the domain's viability and the maintenance of wider access to information and learning.

Artificial intelligence (AI) systems sometimes exhibit biases that disadvantage specific segments of the population. Disparate treatment can manifest through algorithm outputs and design processes within educational software provision and library recommendation technologies. Biases originating in historical patterns, preferences, pernicious stereotypes, or mischaracterization of sociocultural backgrounds exacerbate maladaptive learning trajectories while adversely influencing engagement and self-confidence. Consequently, educational institutions and libraries incur a heightened ethical obligation to govern AI adoption judiciously, safeguarding against these risks throughout life courses.

3.3. Human-Centric Design and Empowerment

Educational and library institutions have an obligation to protect user autonomy, ensuring AI systems designed to benefit learners and patrons remain under human control and that individuals can disempower the systems if they choose. Educational AI systems should not replace human educators, instead complementing their contributions and enhancing agency by providing information about learners that teachers can use to interpret their own positions relative to those learners (Radanliev et al., 2024). AI-driven library services should likewise augment patron choice rather than reduce it. System design should therefore enable users to identify and disengage from such services, consistent with safeguarding informational privacy and supporting liberty, agency, and freedom (Latham & Goltz, 2019).

Mechanisms supporting disempowerment should also allow adjustment of the power transferred to AI systems, such that individuals can deliberately select assistance levels that maintain control over their engagements. The involvement of libraries and educational institutions opens novel avenues for human oversight, governance, and control of AI systems provided by third-party vendors, yet individuals and their communities face considerable potential expenses and time requirements in deciding whether to embrace, limit, or reject such AI tools (Lakkaraju et al., 2024). Some learners welcome AI assistance to facilitate the attainment of established community goals for broader engagement, but extra effort is required from those seeking mutually beneficial involvement. Designing educational and library AI systems to enable rather than curtail user agency across such dimensions as adoption, restriction, and disengagement can help maintain oversight, governance, and control by individuals and their communities.

4. Equity and Access in AI-Enhanced Learning and Library Services

The rise of Artificial Intelligence (AI) has triggered important ethical and privacy challenges for the educational and library sectors. The automation of algorithms has undeniably increased the relevance of machine learning (ML) systems based on a large data corpus across most sectors, and education is no exception.. Algorithms accommodate massive amounts of data to determine a user's characteristics through cycling time input, reading speed, and comprehension and then graphically depict large data sets, allowing teachers to pursue their understanding of a learner's interests without relying only on tests and quizzes. Enhanced BI and learning analytics support intelligent tutoring, the

level of concern for infringement of privacy on data produced and consent for data collection is high.. Data in libraries enhances discoverability; recommender algorithms save time by suggesting relevant material based on previously accessed material across e-books, articles and journals to interlibrary loans requested. The incorporation of AI in education and libraries creates scope for substantial moral reflection since power lies in the hands of both the institutions implementing this technology and the private companies providing the systems. The consequences of the use of AI and has led to various recommendations that encourage a careful consideration of ethical deployment (Bubinger & David Dinneen, 2021).

4.1. Bias in AI Systems and Outcome Disparities

AI systems, driven by data and algorithms, enhance productivity and decision-making across various sectors. Nevertheless, these systems can introduce bias, resulting in damaging decisions affecting education, employment, creditworthiness, policing, social services, and more (Leavy et al., 2020). AI bias arises not only from training data reflecting human prejudice but also from the design of the algorithms themselves. The stakes are especially high when marginalized groups face outcome disparities, as this exacerbates existing inequities. To mitigate these risks, it is vital to investigate the sources of bias, modelling of the decision-making processes, and standardization of quality and accessibility metrics across the sector.

AI-enhanced services in education and libraries rely on a diverse array of systems that process personal data. The core functions of these tools govern the nature and extent of the data involved. Certain systems, such as intelligent tutoring systems, learning analytics, and e-portfolio applications, engage in algorithmic decision-making, producing tailored content and formative feedback adapted to individual needs. Others fulfil a personalizable function—adding content, tools, materials, or services—yet remain fully within the agency and control of the user. For example, systems offering recommendations, e-reserve suggestions, or collection-sharing insights augment rather than dictate the content, context, and curriculum established by educators. These differing service models correspond with distinct AI capabilities and result in disparate ethical and accountability requirements.

4.2. Accessibility and Universal Design for Learning

Academic institutions frequently adopt the principles of Universal Design for Learning (UDL), while K-12 education and post-secondary institutions increasingly express a commitment to accessibility and inclusivity. Accessible educational content enables an equitable learning experience, thereby improving the learning and retention of students. UDL emphasizes awareness of learner variability in the planning of educational activities to reduce unnecessary barriers. Similarly, library services should foster greater discovery and engagement of resources.

Perception of completeness, cognition engagement, comprehension, clear organization, reasoning, and logical flow impact inclusiveness and accessibility in the discovery of information and library resources. Consequently, the user experience surrounding library catalogues and e-resource finding aids should receive careful attention, as AI applications influence these services. For example, some library interfaces employ chat interfaces to interact with patrons and have been demonstrated to enhance the discoverability of information (Radanliev et al., 2024).

4.3. Digital Divide and Resource Allocation

Many AI systems have been accused of perpetuating bias, increasing inequities, or privileging certain demographics (Radanliev et al., 2024). The need for assistance, intervention, and resource allocation tends to vary based on multiple factors, including social determinants. Those factors can incorporate living conditions, learning environments, and other factors, creating an increased risk of disparate impact unless unnecessary hurdles are mitigated (Lakkaraju et al., 2024). Institutions must clearly delineate user populations and the contexts influencing setup, access, and continued engagement, securing equitable, ongoing access even when initial implementation may receive the most focus and attention (Latham & Goltz, 2019).

5. Governance, Oversight, and Stakeholder Involvement

Artificial intelligence (AI) educational applications increasingly leverage personal user information. Such data-intensive settings present diverse ethical and privacy challenges. The significance of ethics in AI development control is widely acknowledged. Systematic governance of AI components is essential and necessary from both management and technical perspectives (Bubinger & David Dinneen, 2021). Embedding stakeholder involvement in the regulatory process is fundamental for ensuring responsible AI deployment (Sunrise Winter & Davidson, 2019). Educators, librarians, and administrators play a key role in policy definition and feedback provision, while active participation of learners and information seekers enhances accountability and project refinement.

Governance entails the formulation of institutional policies, regulation development, and the establishment of associated accountability procedures. Such internal norms are critical for students in formal education and information-seeking individuals beyond it, serving as a basis for deploying AI-enhanced services. Making information freely accessible online does not diminish the requirement for diffuse governance mechanisms. Educational and library systems have long been governance-intensive environments with diverse, complex policies influencing applications, such as the Management of Information Technology Resources Institutional Policy. Therefore, tackling governance challenges is paramount for institutional leaders wishing to incorporate AI in pedagogical approaches and library strategies.

Additional measures for promoting fair AI operation include collaborative fairness auditing. Independent scrutiny within institutions verifies learner and patron needs and societal welfare considerations are acknowledged. External oversight through third-party examinations of formal governance documents and activities ensures comparable transparency. Public reporting on adherence and responsible AI implementation fosters trust toward institutions and vendors providing AI-enhanced tools and systems.

5.1. Roles of Educators, Librarians, Administrators, and Students

Responsible governance of AI initiatives in educational and library information systems requires accountability and feedback loops across the institution. Educators guide curriculum design and learning processes, serve as liaisons between students and administrators, and provide information on emerging tools. Librarians curate information resources, structure library services, and ensure fidelity to the institutional mission of promoting literacy and ethical information usage. School administrators support faculty technology adoption, assess academic program effectiveness, allocate budgetary resources, and champion institutional educational goals. Students offer direct feedback on system operation and impacts, enabling monitoring of equity and access (Bubinger & David Dinneen, 2021).

5.2. Institutional Policy Development and Implementation

Educational institutions and libraries are deploying artificial intelligence (AI) decision-making and personalization systems to support learning, research, library access, and campus management. Concerns have arisen about the potential negative impacts of AI on individuals and society. The sheer number of stakeholders involved—students, educators, staff, librarians, administrators, libraries, vendors, and policymakers—obfuscates and complicates discussions of the ethical challenges. Educational, governmental, and non-profit organizations have all issued reports identifying ethical principles governing AI. Common concerns across institutions include accountability, bias, fairness, privacy, security, transparency, and welfare (Bubinger & David Dinneen, 2021).

Systems for data-driven education can improve the analysis of learning content, resources, and individual learners. They can augment and extend conventional systems for learning support. Examples include learning analytics, bibliometrics, recommender systems, and intelligent tutoring systems. As in other domains such as finance and law, the widespread adoption of AI for education and libraries has raised concerns about inappropriate, harmful, or biased outcomes. Issues of transparency, fairness, and accountability are acutely relevant to these sectors.

5.3. Collaborative Fairness Auditing and External Oversight

Algorithmic decision-making, personalization, and automation are three core capabilities associated with artificial intelligence (AI) and machine learning technologies (Henri & Casse, 2020). While these capabilities have been embedded in many applications encountered on a daily basis, AI and machine learning technologies are progressively finding their way into education and library settings (Russo et al., 2021). The broader adoption of AI and machine learning technologies in these settings raises significant ethical and privacy concerns (Bubinger & David Dinneen, 2021) such as equity and access, governance and oversight, and the convergence of ethically sound AI and responsible student monitoring.

Equity and access concerns centre on the risk that AI-enhanced learning and library services may generate further disparities between different student populations and groups of patrons, while governance and oversight discussions focus on determining appropriate stakeholder involvement and the establishment of feedback mechanisms. Additional ethical challenges arise when educational institutions seek to combine responsible student monitoring with the adoption of AI or algorithmically driven solutions; transparency becomes critical when data are captured from monitoring systems to avoid undermining an institution's commitment to responsible data stewardship. Consequently, additional stakeholders should participate in the overall governance of AI pedagogy and learning analytics initiatives—notably including students, library patrons, and AI vendors. External reviews and third-party assessments may also play a role in governance, facilitating additional scrutiny of new AI initiatives before they undergo formal institutional reviews.

These topics frame a discussion of AI's impacts on education and libraries that considers the ethical and privacy challenges associated with these relatively new uses. With AI becoming increasingly prevalent in educational environments, library services, or institutional endeavours in AI, the need for ethical, responsible, and privacy-conscious approaches to AI adoption is increasing. External governing structures and collaborative fairness auditing provide mechanisms to embed such an approach alongside the implementation of AI education and service technologies. Fairness audits performed by external parties, whether on campus or by third parties outside the institution, facilitate examinations of implementation before deployment. Public reports demonstrating alignment with institutional commitments on responsible or ethical AI accompany these auditing activities, ensuring structural support for the adoption of AI while maintaining a clear commitment to responsible practices.

6. Methodological Approaches for Ethical AI Adoption

Educational and library institutions increasingly adopt artificial intelligence (AI) technologies. An extensive literature attests to both the potential benefits of AI for learning and information access and the ethical, privacy, and equity concerns accompanying these opportunities (Bubinger & David Dinneen, 2021). To complement policy and governance analyses of such challenges, this section outlines methodological approaches for the responsible, ethical deployment of AI systems. The practices recommended centre on risk-awareness, evidence-based assessment, stakeholder engagement, and continuous iterative refinement.

Institutional policies and regulations set out broad strategic goals for the introduction of AI applications, yet specific deployment practices vary extensively between systems and contexts. Therefore, approaches must combine high-level ambition with granular technical execution, involving knowledge of institutional priorities, automated decision criteria, usage data, and machine learning processes. Well-established frameworks for technology evaluation and impact assessment provide starting points for developing tailored, institution-specific procedures that can improve accountability, identify and mitigate harms, and secure informed buy-in from stakeholders. Proposals include requirement, impact, and risk assessments linked to institutional values, formal definitions of intended use supported by concrete quantitative metrics and data collection, monitoring of data provenance and system behaviour to facilitate agile learning, and documentation of operational logic and user-facing explanations (Radanliev et al., 2024).

6.1. Impact Assessments and Risk Mitigation

A sound methodological approach is key to the responsible integration of AI in educational and library settings. Many institutions already incorporate AI tools, yet implementation often occurs irrespective of institutional objectives. A series of recommendations presents a more mindful strategy for AI engagement while remaining attuned to institutional missions. Implementing impact assessments and risk mitigation plans aligned with education or library-based goals enable stakeholders to make more ethical, evidence-based decisions about the adoption of AI (Bubinger & David Dinneen, 2021).

Assessment methodologies examine proposed AI tools' potential positive and negative impacts to inform practice, refine usage patterns, and identify required adjustments in advance. Reuse of existing frameworks, supplemented by additional risk and mitigation strategies identified in the literature, streamlines the documentation process. Specific evaluation criteria and metrics that agencies aim to promote, date and methods for collecting supporting evidence, and further acceptable data or evidence enable iterative refinement of the framework, improving its overall effectiveness. The decision-making rationale for tools already in use, including evidence for alternative approaches considered, agrees with end-user understanding, fosters inclusivity, and preserves agency (Latham & Goltz, 2019).

6.2. Evaluation Metrics and Evidence-Based Practice

Data-driven practices in learning and library systems can benefit from an evidence-based perspective, whereby the consequences of actions are monitored and the information obtained influences subsequent decision-making. The literature identifies specific evaluation metrics for education and library services. However, for artificial intelligence (AI) applications, these metrics are not well established. If such metrics can be developed, AI initiatives can be routinely scrutinised, and the potential for verification against legislative and institutional requirements increases accordingly. Evidence-based practice requires relevant data to be collected, thus data collection probability and methods should be defined in advance. With AI, data flow often extends beyond typical systems, which complicates effort scoping; accordingly, stakeholder responsibilities should be clarified.

In education, the demand for artificial intelligence (AI) is high (Latham & Goltz, 2019). Technologies such as intelligent tutoring systems adapt learning experiences according to the individual pupil. In libraries, AI is used to recommend reading materials and enhance discoverability—exemplified in discovery layer systems that facilitate information retrieval across diverse resources. AI can boost personalisation and support learning in diverse contexts. However, earlier generations of learners relied on non-personalised services and gained numerous social and cognitive benefits from paper-based materials. How AI modifies the educational experience, especially for learners in various developmental stages, raises several consequences—among them new privacy-related risks. Similar challenges exist for library services, as users engage not only with content but also with library structures and the broader information environment, especially within pedagogical discovery contexts (Bubinger & David Dinneen, 2021).

6.3. Transparency and Explainability in Educational AI

Transparency and explainability within educational artificial intelligence merit rigorous examination because they shed light on bias, discrimination, and the underlying decision-making processes. By documenting and disseminating pertinent information about the development of AI systems such as algorithms, evaluation criteria, and training datasets, institutions facilitate the sharing of practices. Moreover, it is essential to consider transparency throughout the entire AI development pipeline (Ali Chaudhry et al., 2022). Articulating the underlying goals of educational AI—aiming to empower both teachers and learners—remains a priority, yet many systems operate in secret. The algorithms, operating principles, and even the specific limits of functioning are oftentimes elusive. Commitment to transparency applies not only to the algorithm itself but also to the system's design. Incorrect predictions can lead to detrimental consequences for both educators and learners, making the rationale behind algorithmic decisions even more critical. Despite substantial efforts to

promote algorithmic transparency in various domains, these initiatives are conspicuously absent in educational AI, which continues to grapple with broader ethical issues concerning intent, role, and equity. The formulation and dissemination of ethical frameworks pertaining directly to AI applications in education emerge as an urgent necessity, ensuring these technologies are employed beneficially and equitably.

7. Conclusion

As educational and library sectors increasingly adopt artificial intelligence (AI) to enhance teaching, learning, and service provision, the use of algorithmic decision-making raises important ethical and privacy issues for stakeholders across these domains. Questions of governance, accountability, and transparency are paramount, as are concerns over data ownership, consent, equity, and access. Practical implementation of ethical frameworks and key principles, along with managerial oversight and audit arrangements, are addressing these issues while helping to ensure available AI solutions are appropriately adopted. Educational and library institutions are utilizing AI in a variety of ways, including intelligent tutoring systems, automated essay scoring, and writing feedback; learning and bibliometric analytics; personalized content recommendations; and inquiry chatbots. Frameworks for establishing and maintaining ethical practice among decision-makers routinely differ—as does the corporate culture surrounding data-driven AI or "big data" applications and the degree to which a shared, community-based understanding exists concerning these matters. Further complications arise through the involvement of external partners, third-party platform providers, and proprietary vendors, as well as through AI's capacity to advance across multiple capabilities.

References:

1. Lakkaraju, K., Khandelwal, V., Srivastava, B., Agostinelli, F., Tang, H., Singh, P., Wu, D., Irvin, M., & Kundu, A. (2024). Trust and ethical considerations in a multi-modal, explainable AI-driven chatbot tutoring system: The case of collaboratively solving Rubik's Cube. https://arxiv.org/abs/2402.01760
2. Bubinger, H. & David Dinneen, J. (2021). Actionable Approaches to Promote Ethical AI in Libraries. https://arxiv.org/abs/2109.09672
3. Latham, A. & Goltz, S. (2019). A Survey of the General Public's Views on the Ethics of using AI in Education. https://ro.ecu.edu.au/ecuworkspost2013/6512/
4. Radanliev, P., Santos, O., Brandon-Jones, A., & Joinson, A. (2024). Ethics and responsible AI deployment. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11004481/
5. Korobenko, D., Nikiforova, A., & Sharma, R. (2024). Towards a Privacy and Security-Aware Framework for Ethical AI: Guiding the Development and Assessment of AI Systems. https://arxiv.org/abs/2403.08624
6. Leavy, S., O'Sullivan, B., & Siapera, E. (2020). Data, Power and Bias in Artificial Intelligence. https://arxiv.org/abs/2008.07341
7. Ali Chaudhry, M., Cukurova, M., & Luckin, R. (2022). A Transparency Index Framework for AI in Education. https://arxiv.org/abs/2206.03220
8. Sunrise Winter, J. & Davidson, E. (2019). Governance of artificial intelligence and personal health information. https://www.emerald.com/insight/content/doi/10.1108/DPRG-07-2018-0035/full/html

Cite this Article

Dr. Dev Kaniyal, "Ethical and Privacy Challenges of Artificial Intelligence in Educational and Library Information Systems", *International Journal of Educational Research and Library & Information Science, ISSN (Online): Applied, Volume 1, Issue 1, pp. 21-29, October - December 2025.* ***Journal URL:*** *https://ijerlis.com/*